Statewide 5-Year Maternal and Child Health Needs Assessment

Alabama

Fiscal Years 2009-10

Statewide 5-Year Maternal and Child Health Needs Assessment

Alabama

Fiscal Years 2009-10

Prepared by:
Bureau of Family Health Services, Alabama Department of Public Health
Children's Rehabilitation Service, Alabama Department of Rehabilitation Services

Prepared for Submission to:
The Maternal and Child Health Bureau, Health Resources and Services Administration,
U.S. Department of Health and Human Services

Prepared as a Component of Meeting Federal Reporting Requirements
For the
Title V Maternal and Child Health Services Block Grant,

Along with the
Maternal and Child Health Services Block Grant Fiscal Year 2009 Report/Fiscal Year 2011 Application

Submitted in: September 2010

File ID: II_2011_AL_NA.docx

The Primary Title V Program Contact Person:

Chris R. Haag, MPH
Deputy Director, Bureau of Family Health Services
Alabama Department of Public Health

Phone: (334) 206-5331
Fax: (334) 206-2914
Email: chris.haag@adph.state.al.us

The Children with Special Health Care Needs Contact Person:
Melinda Davis, MS, CCC-A, CPHL
Assistant Commissioner, Children's Rehabilitation Service
Alabama Department of Rehabilitation Services

Phone: (334) 293-7049
Fax: (334) 293-7373
Email: melinda.davis@rehab.alabama.gov

Table of Contents

Topic	*Page*
Table of Contents	iii
List of Figures	vi
List of Tables	x
List of Technical Notes	xii
Section 1. Process for Conducting the Needs Assessment	**1**
Preview: Section 1	1
Vision, Purpose, Framework, Utilization, and Goals	2
Vision	2
Purpose	2
Framework	2
Utilization of the Full Needs Assessment Report	3
Goals and Key Tasks	3
Leadership	6
Overall Methodology	7
Overview of the Needs Assessment Process	7
Assurance of Ongoing Needs Assessment	8
Interface of Needs Assessment with *MCH Block Grant Annual Reports/Applications*	9
Allocation of Resources	9
The Needs Assessment Cycle	10
Involvement of Stakeholders	14
Methods for Assessing Three MCH Populations	17
Methods: Family Health Services	17
Methods: Children's Rehabilitation Service	30
Methods for Assessing State Capacity	33
Methods for Assessing Capacity: Family Health Services	34
Methods for Assessing Capacity: Children's Rehabilitation Service	34
Data Sources	35
Data Sources: Family Health Services	35
Data Sources: Children's Rehabilitation Service	38
Linkages Among Assessment, Capacity, and Priorities	39
Dissemination of Findings	40
Dissemination of Findings: Family Health Services	41
Dissemination of Findings: Children's Rehabilitation Service	41

Topic	*Page*

Strengths and Weaknesses of the Process..... 42

Section 2. Partnership Building and Collaboration Efforts..... 44

Preview: Section 2..... 44

Partnerships and Collaboration..... 45
- Collaboration Between Family Health Services and Children's Rehabilitation Service..... 45
- Collaborations with Other MCH Programs..... 46
- Certain Health Resources and Services Administration Programs..... 49
- Other Health Department Programs..... 50
- Other Partnerships..... 51
- Results, Strengths, and Weaknesses of Collaborative Efforts..... 54

Section 3. Strengths and Needs of Populations Served by the Maternal and Child Health Program..... 56

Preview: Section 3..... 56

Demographics and Characteristics of Families and Communities..... 57
- Geography, Total Population, and the Economy..... 57
- Infants, Children, and Youth: Race and Ethnicity..... 60
- Some Household and Family Characteristics..... 63
- Some Community Characteristics..... 69

Pregnant Women, Mothers, and Infants..... 74
- Live Births According to Race, Ethnicity, and Maternal Age..... 75
- Source of Payment for Delivery..... 79
- Relationships Among Demographic Characteristics..... 83
- Certain Pregnancy-Related Indicators..... 85
- Adolescent Pregnancy..... 88
- Abortion Rates..... 91
- Maternal Mortality and Morbidity..... 93
- Fetal Deaths..... 96
- Certain Risk Markers and Healthcare Issues..... 98
- Multiple Births and Very Low Birth Weight..... 106
- Infant Mortality..... 112
- Other Indicators or Data Sources: Pregnant Women, Mothers, and Infants..... 133

Children and Youth..... 134
- Race and Ethnicity: Children and Youth..... 135
- Access to or Utilization of Health Care: Children and Youth..... 136
- Health Status: Children and Youth..... 149
- Mortality: Children and Youth..... 160
- Youth Risk Behavior Survey..... 173
- Other Indicators: Children and Youth..... 174

Topic	*Page*

Access to Primary Care: Crosscutting Populations..... 174

Qualitative Findings: Family Health Services..... 176
- Eight Focus Groups Conducted by Family Health Services..... 176
- Latino Focus Groups Conducted by ADPH..... 185
- Web-Based Surveys of Healthcare Providers and MCH Organizations..... 186
- Web-Based Survey of Families..... 193
- Key Informant Interviews Conducted by Family Health Services..... 195
- Putting Quantitative and Qualitative Data Together: Family Health Services..... 196

Children and Youth with Special Health Care Needs..... 199
- Secondary Data: Children's Rehabilitation Service..... 199
- Primary Data: Children's Rehabilitation Service..... 215
- Overall View of Secondary and Primary Data Concerning CYSHCN and Their Families..... 245

Section 4. MCH Program Capacity by Pyramid Levels..... 247

Preview: Section 4..... 247

Overall MCH Program Capacity..... 248
- Direct and Enabling Services..... 248
- Population-Based Services..... 257
- Infrastructure-Building Services..... 261

Capacity to Address the Ten Selected MCH Priority Needs..... 269
- Priority Needs by MCH Population Level and Pyramid Level..... 269
- Capacity Assessment: Ten MCH Priority Needs..... 272

Section 5. Selection of State Priority Needs..... 293

Preview: Section 5..... 293

Potential Priorities and Methods Employed to Select Priorities..... 294
- Family Health Services' Selection Process..... 294
- Children's Rehabilitation Service's Selection Process..... 303

Priorities Compared with Prior Needs Assessment..... 307
- Comparison: Family Health Services..... 307
- Comparison: Children's Rehabilitation Service..... 309

Priority Needs and State Performance Measures..... 311
- Measures Developed by Family Health Services..... 311
- Measures Developed by Children's Rehabilitation Service..... 311

Section 6. Federal and State Outcome Measures..... 315

Preview: Section 6..... 315

Topic	*Page*
Performance and Outcome Measures and Activities: Family Health	316
Performance Measures: Family Health Services	316
Outcome Measures: Family Health Services	318
Performance Measures and Activities: CRS	320
Community Integration: Children's Rehabilitation Service	320
Promoting Access to Health and Related Services: Children's Rehabilitation Service	320
Partners in Promoting Health	321
Appendix 1: Acronyms and Abbreviated Names	**322**
References	**325**

List of Figures

No.	*Title*	*Page*
1.1	State Title V MCH Program Needs Assessment, Planning, Implementing, and Monitoring Process	11
1.2	Linkages Among Assessment, Capacity, and Priorities	40
3.1	Household with the Mother Present but No Father Present, According to Household Income, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007	66
3.2	Household with the Mother Present but No Father Present, According to the Child's Health Insurance Status, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007	67
3.3	Receipt by Household of Public Assistance, According to Family Household Structure, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2006-2008	69
3.4	Part I Juvenile Crime Arrests, According to Type of Offense, Persons 17 Years of Age or Younger, Alabama, 2008	71
3.5	Perceived Safety of the Neighborhood, According to Race and Ethnicity of the Child, 0-17 Year-Old Children and Youth, Alabama, 2007	73
3.6	Perceived Supportiveness of the Neighborhood, According to Race and Ethnicity of the Child, 0-17 Year-Old Children and Youth, Alabama, 2007	74
3.7	Race and Ethnicity of the Mother, Residential Live Births, Alabama, 2008	76
3.8	Source of Payment for Delivery, Alabama Residential Live Births, 2003-05 and 2006-08	80
3.9	Race and Ethnicity: Privately Insured Deliveries, Alabama Residential Live Births, 2003-05 and 2006-08	81
3.10	Race and Ethnicity: Medicaid-Funded Deliveries, Alabama Residential Live Births, 2003-05 and 2006-08	82
3.11	Race and Ethnicity: Self-Pay Deliveries, Alabama Residential Live Births, 2003-05 and 2006-08	82
3.12	Medicaid-Funded Deliveries, Total and According to Race/Ethnicity and Maternal Age, Alabama Residential Live Births, 2006-08	84

No.	Title	Page
3.13	Self-Pay Deliveries, Total and According to Race/Ethnicity and Maternal Age, Alabama Residential Live Births, 2006-08……	84
3.14	Adolescent Mothers, Total and According to Race/Ethnicity and Source of Payment for Delivery, Alabama Residential Live Births, 2006-08……	85
3.15	General Fertility Rates, Total and According to Race/Ethnicity, Alabama, 2000-2008…	86
3.16	Live Birth Interval of Less than 1 Year, Total and According to Race and Ethnicity, Alabama, 2000-2008……..	87
3.17	Live Birth Interval of Less than 1 Year, According to Source of Payment for Delivery, Alabama, 2000-2008……..	90
3.18	Adolescent Pregnancy Rate, 15-17 Years of Age, Total and According to Race/Ethnicity, Alabama, 2000-2008…….	91
3.19	Adolescent Pregnancy Rate, 18-19 Years of Age, Total and According to Race/Ethnicity, Alabama, 2000-2008…….	91
3.20	Fetal Death Ratio, Total and According to Race and Ethnicity, Occurrent Events Among Alabama Residents, 2000-2008……..	97
3.21	Tobacco Use During Pregnancy, Total and According to Race and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008……..	100
3.22	Tobacco Use During Pregnancy, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008…….	101
3.23	Inadequate Prenatal Care, Total and According to Race and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008…….	102
3.24	Inadequate Prenatal Care, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008…….	103
3.25	Very Low Birth Weight (VLBW) Births at Perinatal Centers, Total and According to Race and Ethnicity, Occurrent VLBW Live Births to Alabama Residents, 2000-2008……	104
3.26	Very Low Birth Weight (VLBW) Births at Perinatal Centers, According to Source of Payment for Delivery and Ethnicity, Occurrent VLBW Live Births to Alabama Residents, 2000-2008……..	105
3.27	Multiple births, Total and According to Race and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008…….	107
3.28	Multiple Births, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008…….	107
3.29	Very Low Birth Weight (VLBW), Total and According to Race and Ethnicity, Occurrent Live Singleton Births to Alabama Residents, 2000-2008……	109
3.30	Very Low Birth Weight (VLBW), According to Source of Payment for Delivery and Ethnicity, Occurrent Live Singleton Births to Alabama Residents, 2000-2008……	110
3.31	Risk of Infant (Under 1 Year of Age) Death, Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007…….	114
3.32	Risk of Neonatal (Under 28 Days of Age) Death, Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007……	115
3.33	Risk of Postneonatal (28-364 Days of Age) Death, Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007……..	116
3.34	Risk of Infant (Under 1 Year of Age) Death, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007……	118
3.35	Risk of Neonatal (Under 28 Days of Age) Death, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007……	119

No.	Title	Page
3.36	Risk of Postneonatal (28-364 Days of Age) Death, According to Source of Payment for Delivery and Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007……	120
3.37	Risk of Infant (Under 1 Year of Age) Death, Total and According to Perinatal Region, Occurrent Live Births to Alabama Residents, 1999-2007……	125
3.38	Infant Deaths According to Birth Weight, Occurrent Live Births to Alabama Residents, 2005-07……	126
3.39	Risk of Infant Death: Very Low Birth Weight Infants Weighing 500-749 Grams, Total and According to Race/Ethnicity and Source of Payment for Delivery, Occurrent Live Births to Alabama Residents, 2005-07……	127
3.40	Risk of Infant Death: Very Low Birth Weight Infants Weighing 750-1,499 Grams, Total and According to Race/Ethnicity and Source of Payment for Delivery, Occurrent Live Births to Alabama Residents, 2005-07……	128
3.41	Risk of Infant Death: Moderately Low Birth Weight Infants, Total and According to Race/Ethnicity and Source of Payment for Delivery, Occurrent Live Births to Alabama Residents, 2005-07……	128
3.42	Risk of Infant Death: Normal Birth Weight Infants, Total and According to Race/Ethnicity and Source of Payment for Delivery, Occurrent Live Births to Alabama Residents, 2005-07……	129
3.43	Infant Deaths According to Cause, Occurrent Live Births to Alabama Residents, 2005-07……	130
3.44	Lack of Health Insurance, Persons Under 18 Years of Age, Alabama and the U.S., 1998-2008……	137
3.45	Lack of Health Insurance Coverage, According to Age of Child, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	138
3.46	Lack of Health Insurance Coverage, According to Race and Ethnicity, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	139
3.47	Lack of Health Insurance Coverage, According to Household Income, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	140
3.48	Public Health Insurance Coverage, According to Urban Versus Rural Location, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	141
3.49	Lack of a Medical Home, According to Age of Child, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	142
3.50	Lack of a Medical Home, According to Race and Ethnicity, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	143
3.51	Lack of a Medical Home, According to Household Income, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	144
3.52	Lack of a Medical Home, According to Health Insurance Coverage, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	145
3.53	No Preventive Dental Care Visits, According to Age of Child, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	146
3.54	No Preventive Dental Care Visits, According to Race and Ethnicity, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	147
3.55	No Preventive Dental Care Visits, According to Household Income, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	148
3.56	No Preventive Dental Care Visits, According to Health Insurance Status, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	149

No.	Title	Page
3.57	Excellent/Very Good Health, According to Race and Ethnicity, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	150
3.58	Excellent/Very Good Health, According to Household Income, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	151
3.59	Excellent/Very Good Health, According to Health Insurance Coverage, 0-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	152
3.60	Teeth in Excellent/Very Good Condition, According to Age of Child, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	153
3.61	Teeth in Excellent/Very Good Condition, According to Race and Ethnicity, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	153
3.62	Teeth in Excellent/Very Good Condition, According to Household Income, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	154
3.63	Teeth in Excellent/Very Good Condition, According to Health Insurance Coverage, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	155
3.64	Teeth in Excellent/Very Good Condition, According to Urban Versus Rural Location, 1-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	156
3.65	Weight Status: Four Categories, 10-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	157
3.66	Weight Status: Obese, According to Race/Ethnicity, 10-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	157
3.67	Weight Status: Obese, According to Household Income, 10-17 Year-Old Children and Youth, Alabama and the U.S., 2007……	158
3.68	Weight Status: Obese, According to Health Insurance Coverage, 10-17 Year-Old Children and Youth, Alabama and the U.S., 2007……..	159
3.69	All-Cause Death Rate, Total and According to Race/Ethnicity, 1-4 Year-Old Alabama Residents, 2000-2008……	162
3.70	All-Cause Death Rate, Total and According to Race/Ethnicity, 5-14 Year-Old Alabama Residents, 2000-2008……	163
3.71	All-Cause Death Rate, Total and According to Race and Ethnicity, 15-24 Year-Old Alabama Residents, 2000-2008……..	164
3.72	Causes of Death, 1-4 Year-Old Alabama Residents, 2006-08…….	166
3.73	Causes of Death, 5-14 Year-Old Alabama Residents, 2006-08……	167
3.74	Causes of Death, 15-19 Year-Old Alabama Residents, 2006-08……..	167
3.75	Causes of Death, 20-24 Year-Old Alabama Residents, 2006-08……..	168
3.76	Motor Vehicle Crash Injury Death Rate, Total and According to Race/Ethnicity, 20-24 Year-Old Alabama Residents, 2000-2008……	169
3.77	Suicide Rate, Total and According to Race/Ethnicity, 20-24 Year-Old Alabama Residents, 2000-2008……	170
3.78	Drug- and Alcohol-Related Death Rate, White, Non-Latino Males, 15- 19 and 20-24 Year-Old Alabama Residents, 2000-2008……	171
3.79	Homicide and Legal-Intervention Death Rate, Black, Non-Latino Males, 15- 19 and 20-24 Year-Old Alabama Residents, 2000-2008……	172
3.80	Classification of Phrases According to Main Issue, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009……	177
3.81	Classification of Phrases Concerning the Healthcare System, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009……	178

No.	Title	Page
3.82	Classification of Phrases Concerning Health-Related Behavior or Mental Health, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009	182
3.83	Alabama's Black Belt Counties	200
3.84	Alabama's Geographic Regions by County	201
3.85	Alabama CSHCN by Geographic Region, 2005-2006	204
3.86	Youth Survey Respondents by County, Alabama, 2009	225
3.87	CYSHCN Family Survey Respondents by County, Alabama, 2009	229

List of Tables

No.	Title	Page
1.1	Goals and Key Tasks of the 2009-10 Needs Assessment	4
1.2	Perinatal Regions, Healthcare Providers Survey, Alabama, FY 2009	21
1.3	Scope of Practice, Healthcare Providers Survey, Alabama, FY 2009	21
1.4	Type of Practice, Healthcare Providers Survey, Alabama, FY 2009	21
1.5	Perinatal Regions, MCH Organizations Survey, Alabama, FY 2009	22
1.6	Main Focus of the Organization, MCH Organizations Survey, Alabama, FY 2009	22
1.7	Type of Organization, MCH Organizations Survey, Alabama, FY 2009	23
1.8	Geographic Scope of Services, MCH Organizations Survey, Alabama, FY 2009	23
1.9	Level of Services, MCH Organizations Survey, Alabama, FY 2009	23
1.10	Perinatal Regions, Family Survey, Alabama, FY 2009	24
1.11	Age Distribution, Family Survey, Alabama, FY 2009	24
1.12	Race Distribution, Family Survey, Alabama, FY 2009	25
1.13	Marital Status, Family Survey, Alabama, FY 2009	25
1.14	Education, Family Survey, Alabama, FY 2009	25
1.15	Annual Household Income, Family Survey, Alabama, FY 2009	25
1.16	Number of Household Members, Family Survey, Alabama, FY 2009	26
1.17	Age Distribution, Family Health Services' Eight Focus Groups, Alabama, FY 2009	29
1.18	Race Distribution, Family Health Services' Eight Focus Groups, Alabama, FY 2009	29
1.19	Perceived Basis of Invitation to Participate in Group, Family Health Services' Eight Focus Groups, Alabama, FY 2009	29
1.20	Self-Described Point of View, Family Health Services' Eight Focus Groups, Alabama, FY 2009	29
1.21	Household Income, Family Health Services' Eight Focus Groups, Alabama, FY 2009	29
1.22	Geographic Distribution of Alabama Residential Live Births Compared to Distribution of Respondents to Web-Based Surveys	37
3.1	Selected Facts About Race and Ethnicity, Alabama and the U.S., 2008	58
3.2	Estimated Population of 0-24 Year-Old Residents, According to Race, Alabama, 2000 and 2008	61
3.3	Estimated Population of 0-24 Year-Old Residents, According to Ethnicity and (in Some Cases) Race/Ethnicity, Alabama, 2000 and 2008	62
3.4	Family Structure of the Child's Household, National Survey of Children's Health, 2007, Persons 17 Years of Age or Younger, Alabama and the U.S	65
3.5	Births According to Maternal Age, Alabama Residential Live Births, Selected Years	77
3.6	Births According to Ethnicity of the Mother, Alabama Residential Live Births, Selected Years	78

No.	Title	Page
3.7	Births According to Race/Ethnicity of the Mother, Alabama Residential Live Births, Selected Years……	78
3.8	Medical Problems, Hospital Visits or Stays, and Bed Rest During Pregnancy, Among Women Who Reported a Medical Problem During the Pregnancy, Alabama PRAMS, 2007……	95
3.9	Provision of Certain Services, According to the Healthcare Provider Survey (123 Respondents) and the Family Survey (460 Respondents), Alabama, FY 2009……	175
3.10	Comparison of Counties with Highest and Lowest Percentages of SSI Recipients Under 18 Years, Selected Alabama Counties, Selected Years……	200
3.11	Selected Indicators by County Designation (Geographic Region and Black Belt), Alabama, Selected Years……	202
3.12	Prevalence of CSHCN Overall and by Geographic region, Alabama and the U.S., 2005-2006……	203
3.13	Summary of Findings by Broad Area, Percent Successfully Achieved, Alabama and the U.S, 2005-2006……	204
3.14	Family/Professional Partnerships: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006……	205
3.15	Family/Professional Partnerships: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006……	206
3.16	Medical Home: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006……	207
3.17	Medical Home: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006……	207
3.18	Adequate Insurance: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006……	208
3.19	Adequate Insurance: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006……	209
3.20	Early and Continuous Screening: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006……	210
3.21	Early and Continuous Screening: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006……	210
3.22	Organized Community-Based Systems: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006……	211
3.23	Organized Community Systems: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006……	212
3.24	Transition: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006	213
3.25	Transition: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006	213
3.26	Selected Indicators, CSHCN Versus non-CSHCN, Alabama Versus U.S, 2007……	215
3.27	Barriers to Receiving Services for CYSHCN and Families, Statewide, Alabama, Selected Years…… .	216
3.28	Top Five Barriers to Obtaining Services for CYSHCN and Families, by Geographic Region, Alabama, 2009……	217
3.29	Top Five Barriers to Obtaining Services for CYSHCN and Families, by Black Belt Designation, Alabama, 2009……	217
3.30	Statewide Service Availability, Alabama, 2009……	218

No.	Title	Page
3.31	Service Availability at Less than 90 Percent By County Designation (Within County or In Adjoining County), Alabama, 2009	219
3.32	Service Availability at Less than 90 Percent by Black Belt Designation (Within County or in Adjoining county), Alabama, 2009	220
3.33	Level of Difficulty/Burden in Obtaining Selected Services for CSHCN, Statewide, Alabama, 2009	221
3.34	Health and Community-Based Services Rated by Key Informants as "Harder Than You Would Expect" to Obtain for CYSHCN and Their Families, Alabama, 2009	222
3.35	Greatest Needs by Geographic Area and Black Belt Designation, in Rank Order, Alabama, 2009	223
3.36	Future Plans Reported by Youth with Special Health Care Needs, by "Received Help," Alabama, 2009	227
3.37	Future Plans Reported by Youth with Special Health Care Needs, by Severity, Alabama, 2009	227
3.38	Percentage of Families Reporting Non-Receipt of Needed Services, Statewide, Alabama, 2009	231
3.39	Barriers to Receiving Services for CYSHCN, Statewide, Alabama, 2009	232
3.40	Barriers to Receiving Services for CYSHCN and Families by Theme, Statewide, Alabama, 2009	232
3.41	Barriers to Receiving Services for CYSHCN, by Geographic Region and Black Belt Designation, Alabama, 2009	233
3.42	Top Five Barriers to Receiving Services for CYSHCN, by Geographic Region, Alabama, 2009	234
3.43	Top Five Barriers to Receiving Services for CYSHCN, by Black Belt Designation, Alabama, 2009	234
3.44	Future Planning Reported by Families of CYSHCN, by Severity, Alabama, 2009	236
3.45	Future Plans and Planning Reported by Youth with Special Health Care Needs and Their Families, by Severity, Alabama, 2009	236
3.46	Statewide Barriers to Obtaining Services for CYSHCN and Families—Provider and Family Responses, Alabama, 2009	245
3.47	Common Focus Group Themes and Concerns, Families, Alabama, 2009	245
3.48	Service Needs and Concerns Expressed—Providers, Families, and Key Informants, Alabama, 2009	246
5.1	Sixteen Potential MCH Priority Needs Initially Considered by Family Health Services, Along with Ranks (Beginning of Stage Two)	295
5.2	Ten Potential MCH Priority Needs Subsequently Considered by Family Health Services, Along with Mean Ranks (End of Stage Two)	301
5.3	Potential Priority Needs for CYSHCN	304

List of Technical Notes

No.	Title	Page
1	Technical Note #1: American Community Survey	63
2	Technical Note #2: National Survey of Children's Health	64
3	Technical Note #3: Out-of-State Reporting Issues	74
4	Technical Note #4: Race and Ethnicity of Live Births	75

No.	*Title*	*Page*
5	Technical Note #5: Source of Payment for Delivery……	80
6	Technical Note #6: The Adolescent Pregnancy Rate……	89
7	Technical Note #7: Estimated Fetal Losses……	90
8	Technical Note #8: The Abortion Rate……..	92
9	Technical Note #9: The Fetal Death Ratio…….	96
10	Technical Note #10: Occurrent Residential Live Births……	98
11	Technical Note #11: Rationale for Analyzing Infant Mortality Among Only Occurrent, Residential Live Births……	112
12	Technical Note #12: Birth and Death Files……	113
13	Technical Note #13: Data Issues When Analyzing Mortality Trends in Children and Youth…….	161

SECTION 1

Process for Conducting the Needs Assessment

Preview: Section 1

Section 1 is organized around the nine major topics specified in the Maternal and Child Health (MCH) Block Grant Guidance:[1] 1) goals and vision; 2) leadership; 3) methodology; 4) methods for assessing three MCH populations; 5) methods for assessing state capacity; 6) data sources; 7) linkages among assessment, capacity, and priorities; 8) dissemination of findings; and 9) strengths and weaknesses of the process.

The MCH Services Block Grant Program is a Federal-State partnership that serves three populations: 1) pregnant women, mothers, and infants; 2) children and youth; and 3) children and youth with special health care needs (CYSHCN), a subgroup of the overall population of children and youth. The Alabama Department of Public Health administers the State's Title V Program through its Bureau of Family Health Services. Family Health Services contracts with Children's Rehabilitation Service, located in the Alabama Department of Rehabilitation Services, to administer aspects of Title V that focus on CYSHCN.

Alabama's Title V Program envisions healthy families living in safe communities that promote the health and well-being of all citizens, including those with special healthcare needs. In abbreviated statements, the goals of the Fiscal Years 2009-10 MCH Needs Assessment were to:

- Assure collaboration among key stakeholders in the well-being of maternal and child populations.
- Implement new studies that collect quantitative and qualitative primary data.
- Analyze pertinent existing databases or reports.
- Select MCH priority needs.
- Develop the infrastructure for addressing the selected MCH priority needs.
- Report back to stakeholders.

A summary of methods employed for the Needs Assessment follows.

Family Health Services' Methodology

The main components of Family Health's process were: 1) assemblage and analysis of qualitative data from 10 community discussion groups; 2) implementation of three web-based surveys (primary providers of health care; nonmedical organizations; and parents or parent surrogates; 3) conduct of key informant interviews; 4) analysis of vital statistics and U.S. Census Bureau data; 5) child death review; 6) compilation of selected indicators from certain nationally conducted, state-level surveys (Pregnancy Risk Assessment Monitoring System; National Survey of Children's Health; Youth Risk Behavior Surveillance System); and 7) assemblage of and analysis of input from the MCH Advisory Group.

Children's Rehabilitation Service's Methodology

The Alabama Department of Rehabilitation Services, through the Division of Children's Rehabilitation Service, was the lead agency for the assessment of children and youth with special health care needs. Their Special Programs Coordinator led implementation of that organization's needs assessment components.

Vision, Purpose, Framework, Utilization, and Goals

In 1981, Federal legislation consolidated the Title V maternal and child health (MCH) programs and five other categorical health programs into the MCH Services Block Grant Program (MCH Program). The MCH Program is a partnership among the Federal government, states, and local communities to promote the health of children and youth, mothers, and their families. This entire report pertains to the 5-year MCH needs assessment that was conducted by the State of Alabama's (State's, or Alabama's) MCH Program in fiscal years (FYs) 2009-10. This needs assessment is subsequently referred to as the "2009-10 Needs Assessment" or as the "Needs Assessment." (Appendix 1 to this report lists and defines all acronyms and shortened terms used in the report.)

Material concerning the vision, purpose, framework, utilization, and goals was collaboratively drafted by the Needs Assessment Leadership Team, described later in this section, in April 2009. The draft was then emailed to 20 stakeholders, detailed under "Goals and Key Tasks," for input.

Vision

The State's MCH Program envisions healthy families living in safe communities that promote the health and well-being of all citizens, including those with special healthcare needs.

Purpose

The purpose of the Needs Assessment was to implement a process that would strengthen and focus efforts to promote the health of Alabama children and youth and their families.[a] As a corollary, the Needs Assessment was expected to address the health status of these populations, their health-related behavior, their access to health care, and the strengths and weaknesses of the healthcare system.

By accomplishing its purpose, the Needs Assessment helps to accomplish the missions of the State's MCH Program. The Alabama Department of Public Health (ADPH, or Health Department, or Department) administers the State's MCH Program through its Bureau of Family Health Services (Family Health Services, or Family Health). Family Health Services does not directly administer aspects focusing on children and youth with special health care needs (CYSHCN), but contracts with the Children's Rehabilitation Service (CRS), which is located in the State Department of Rehabilitation Services (ADRS) and administers services to CYSHCN. The mission statements of Family Health and CRS follow.

The mission of Family Health Services is to protect and promote the health and safety of women, infants, children, youth, and their families through assessment of community health status, development of health policy, and assurance that quality health services are available. The mission of CRS is to enable CYSHCN to achieve their maximum potential within a community-based, family-centered, comprehensive, culturally sensitive, and coordinated system of services.

Framework

The goals and related key tasks listed in Table 1.1 comprised the framework for the Needs Assessment. Because they are part of the framework, many of the tasks listed in Table 1.1 are discussed elsewhere in

[a] According to Federal guidance for the MCH Services Block Grant reports/applications,[1] the populations and services to be addressed by the Needs Assessment consist of: 1) preventive and primary care services for pregnant women, mothers, and infants less than 1 year of age; 2) preventive and primary care services for children and youth; and 3) comprehensive services for children and youth with special health care needs. Because the health of the family influences the health of its individual members, we are concerned about the health of the families of the preceding populations, as well as the populations themselves.

Section 1. The Needs Assessment was collaboratively conducted by ADPH, through Family Health Services, and ADRS, through CRS. Family Health's tasks pertained to assessing needs of infants, children and youth, women of childbearing age, and their families. CRS's activities focused on assessing needs of CYSHCN and their families.

Utilization of the Full Needs Assessment Report

This document, which is the full report of the 2009-10 Needs Assessment (Needs Assessment Report), serves as:

- Documentation of the process and findings.
- A reference for ADPH staff and other MCH stakeholders, including partnering organizations and members of the general public who seek detailed information on the process or findings.
- A reference for preparing brief, user-friendly reports tailored to specific readerships.
- A reference for Family Health's Bureau Management Team, CRS's Administrative Team, and CRS's State Parent Advisory Committee as they develop or revise action plans and allocate resources to address MCH priority needs.
- A means of meeting Federal reporting requirements for receipt of the *Federal MCH Services Block Grant (MCH Block Grant).*

This full report will be supplemented by annual needs assessment updates to the *MCH Services Title V Block Grant Annual Reports/Applications (MCH Annual Reports/Applications)*. Additionally, whenever feasible, additional reports on particular issues that have emerged during the 2009-10 Needs Assessment or in subsequent years will be prepared. The full report, the brief, user-friendly reports, and the additional reports will collectively inform the State's MCH Program staff and other stakeholders, including providers and consumers of care, in MCH.

Goals and Key Tasks

The goals of the Needs Assessment were developed based on the following: information needed by the State's MCH Program for planning and assessing policies and programs, this program's previous experience in conducting needs assessments, and the Federal MCH Block Grant guidance.[1]

In April 2009, Family Health Services emailed a draft of the vision, purpose, framework, utilization, and goals for the Needs Assessment to 20 stakeholders. These stakeholders included ADPH's 11 Public Health Area Administrators, a senior-level epidemiologist in the Jefferson County Department of Health, three university faculty members (two from the University of Alabama at Birmingham, one from Auburn University at Montgomery), the Alabama Medicaid Agency (Medicaid Agency, or Alabama Medicaid), the Alabama Hospital Association, the Alabama Primary Care Association, and two advocacy groups (the Alabama Chapter of the March of Dimes and the Alabama Partnership for Children).

In the emails, the stakeholders were invited to comment on the draft document and to provide input on the following three topics:

- Up to five issues that they felt should be researched during the Needs Assessment.

- A parent or parent surrogate to be invited to join Family Health Services' MCH Needs Assessment Advisory Group (MCH Advisory Group).

- Up to five additional high priority health concerns regarding families or communities.

Three of the twenty stakeholders emailed input prior to the MCH Advisory Group meeting. In October 2009, Family Health's Needs Assessment Coordinator provided a summary of the input for the Needs Assessment Leadership Team. The input provided by the three stakeholders did not indicate changes in the goals or key tasks of the Needs Assessment. Instead, the input concerned issues to research or prioritize as MCH needs. This input was considered by the Needs Assessment Leadership Team as the presentations for the MCH Advisory Group meeting, including the presentation on potential priority needs, were finalized. In particular, as draft presentations were streamlined to fit within the meeting's allotted time frame, key findings pertaining to issues that were important to the respondents were retained. As mentioned later in this section (under "Strengths and Weaknesses of the Process"), studying two of the research topics proposed by the respondents was not feasible during the 2009-10 Needs Assessment.

In addition to being invited to comment in April 2009, the 20 stakeholders were invited to the MCH Advisory Group meeting, which provided another opportunity for input concerning MCH priority needs.

Table 1.1. Goals and Key Tasks of the 2009-10 Needs Assessment

Goals	Key Tasks
Assure productive collaboration among key stakeholders in the health, safety, and well-being of women of childbearing age, children, adolescents, and their families.	1. Convene a Needs Assessment Leadership Team. 2. Convene two Needs Assessment advisory groups: one convened by Family Health Services and one convened by Children's Rehabilitation Service. 3. Include input obtained via ongoing collaborative processes or advisory groups, such as the State Perinatal Advisory Council, the Regional Perinatal Advisory Councils, and the State Parent Advisory Committee.
Implement studies that collect quantitative and qualitative primary data.	1. Collect primary data pertaining to infants, children and youth, pregnant women, and mothers. Family Health Services will collect these data via three web-based surveys,* key informant interviews, and focus groups. 2. Collect data focusing on children and youth with special health care needs (CYSHCN). Children's Rehabilitation Service is collecting these data via a web-based and a paper survey for families with CYSHCN, a web-based and a paper survey for youth with special health care needs, a paper survey for county providers of services to CYSHCN, and focus groups.
Analyze pertinent existing databases or reports.	Analyze the following databases or tables: 1. Vital statistics records. 2. The U.S. Census Bureau's detailed tables of

Goals	Key Tasks
	population estimates. 3. The U.S. Centers for Disease Control and Prevention's (CDC's) Youth Risk Behavior Survey. 4. CDC's Pregnancy Risk Assessment Monitoring System (PRAMS). 5. The federally sponsored National Survey or Children's Health. 6. Family Health Services' Child Death Review data. 7. Family Health Services' Fetal and Infant Mortality Review data.[T] Review available reports concerning the federally sponsored Survey of Children with Special Health Care Needs.
Select MCH priority needs, in collaboration with key stakeholders.	1. Prepare interim reports based on the previously mentioned studies and disseminate them to the Needs Assessment advisory groups. 2. Review selected pertinent literature. 3. Assess needs and desired outcomes and identify mandates. 4. Examine strengths and the capacity to address the priority needs under consideration.
Develop the infrastructure for addressing the selected MCH priority needs, in collaboration with key stakeholders.	1. Develop an action plan, which should include a plan for monitoring progress toward having an impact on outcomes. 2. Set performance objectives. 3. Seek resources.[Y] 4. Allocate resources.[Y]
Report back to stakeholders.	1. Develop a detailed, full report of the Needs Assessment for submission to the Federal MCH Bureau in July 2010. 2. Develop and disseminate relatively brief, reader-friendly reports that highlight key findings from the Needs Assessment, as well as priority needs. 3. Prepare periodic updates on progress concerning the action plan, and disseminate to the Needs Assessment advisory groups.

Goals	Key Tasks
	4. Provide members of the advisory groups with ongoing opportunity to comment on reports and priority or emerging MCH needs.

*The three web-based surveys include one of medical providers to Title V populations, one of non-medical organizations serving these populations, and one of families. According to Federal Title V guidance,[1] the populations and services to be addressed by the Needs Assessment consist of : 1) preventive and primary care services for pregnant women, mothers, and infants less than 1 year of age; 2) preventive and primary care services for children and youth; and 3) comprehensive services for children and youth with special health care needs.

[T]The enhanced fetal and infant mortality review process began during the 2009-10 Needs Assessment, but the program was in the early stages, so findings were not available for inclusion in the Needs Assessment.

[Y]These steps would occur by early FY 2011.

Leadership

The Needs Assessment Leadership Team (Leadership Team, or Team), formed by April 2009, consisted of five Family Health staff members and one CRS staff member. The Family Health staff members were Family Health Services' Deputy Director; the Director of the Division of Children's Health; the Director of the State Perinatal Program (Perinatal Program); the Director of the MCH Epidemiology Branch (MCH Epi Branch), who served as Family Health's Needs Assessment Coordinator and editor of the full Needs Assessment report; and the then Assistant Director of the MCH Epi Branch. (In November 2009, the Assistant Director of the MCH Epi Branch became the Assistant Director of the Division of Children's Health, but continued as a member of the Leadership Team.) The CRS staff member serving on the Leadership Team was that organization's Special Programs Coordinator, who coordinated CRS's components of the Needs Assessment.

As stated earlier, the Leadership Team collaboratively drafted the vision, purpose, framework, utilization, and goals of the Needs Assessment. Of the Leadership Team, the persons mainly responsible for implementing the various components of the Needs Assessment were the Director of Family Health's MCH Epi Branch; CRS's Special Programs Coordinator; and until mid-November 2009, the Assistant Director of the MCH Epi Branch. Throughout the Needs Assessment process, these three individuals consulted with one another as needed, to assure coordination of Family Health's and CRS's components of the assessment. As well, a Family Health Services' member of the Leadership Team or a designee of the bureau's Deputy Director attended each meeting of CRS's Needs Assessment Advisory Committee (CRS Advisory Committee); and CRS's member of the team attended Family Health's MCH Needs Assessment Advisory Group meeting. (Family Health's MCH Advisory Group and CRS's Advisory Committee are discussed later in this section, under "Involvement of Stakeholders.") Further, in March 2010 the MCH Epi Branch gained a new member, the branch's MCH Epidemiologist, who has played a key role in completing Family Health's components of the Needs Assessment and is a member of the Leadership Team.

The first face-to-face meeting of the entire Leadership Team was convened by the MCH Epi Branch in October 2009. At this meeting, the Team reviewed a list of potential MCH priority needs from an earlier 5-year needs assessment. Using this list as a springboard, but considering then available 2009-10 Needs

Assessment findings and overall knowledge concerning the first two Title V populations,[a] the Team developed a list of 14 potential MCH priority needs that would be presented to Family Health's MCH Needs Assessment Advisory Group (MCH Advisory Group) in November 2009. As well, the Team approved the overall approach, proposed by the MCH Epi Branch, to be used for ranking priority needs based on input from the MCH Advisory Group. (The process for final selection of 10 MCH priority needs that collectively pertain to all three Title V populations is detailed in Section 5.)

Four of Family Health Services' members of the Leadership Team (Family Health's Deputy Director, the Director of the Perinatal Program, the Director of the MCH Epi Branch, and the Assistant Director of the MCH Epi Branch) presented at the MCH Advisory Group meeting in November 2009. As well, two members of the Team (the Director of the Children's Health Program and the Director of the Perinatal Program) facilitated breakout group meetings held as part of this meeting. Following this November meeting, Family Health's members of the Leadership Team, along with other key Family Health staff, collaboratively developed the final version of the seven MCH priority needs selected by Family Health Services. Further, CRS's member of the Team planned and presented during meetings of CRS's Advisory Committee and coordinated CRS's final selection of the three priority needs concerning CYSHCN.

As previously stated, two members of the Leadership Team served as Needs Assessment Coordinators for their respective organizations: for Family Health, the Director of the MCH Epi Branch and, for CRS, the Special Programs Coordinator. The two coordinators jointly wrote this full report of the Needs Assessment.

Overall Methodology

As stated earlier, the 2009-10 Needs Assessment was collaboratively conducted by ADPH, through Family Health Services, and ADRS, through CRS. As also previously stated, each organization had a Needs Assessment Coordinator and each coordinator was on the Leadership Team. Further, as also previously discussed, Family Health was represented on CRS's Advisory Committee and CRS on Family Health's MCH Advisory Group.

Overview of the Needs Assessment Process

Family Health Services: Overview of Process

Family Health Services focused on the following Title V populations: pregnant women, mothers, and infants; and children and youth. Family Health's Needs Assessment process consisted of several components:

- Assemblage of and analysis of qualitative data from 10 community discussion groups.
- Implementation of three web-based surveys (one of primary providers of health care; one of non-medical organizations serving women of childbearing age, children and youth, or families; and one of parents or parent surrogates) and analysis of data from these surveys.

[a]The federally defined Title V population/type of service groups are as follows: 1) preventive and primary care services for pregnant women, mothers, and infants less than 1 year of age; 2) preventive and primary care services for children and youth; and 3) comprehensive services for children and youth with special health care needs. For abbreviated references, we sometimes refer to these three groups as the "Title V populations" or as "MCH Program populations." As a corollary, the first two Title V populations or MCH Program populations are: 1) pregnant women, mothers, and infants; and 2) children and youth.

- Conduct of key informant interviews.
- Analysis of vital statistics and U.S. Census Bureau (Census) data.
- Child death review.
- Review of certain information from user-friendly web sites (for instance, the Data Resource Center for Child and Adolescent Health web site, www.nschdata.org).
- Use of several indicators from the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Youth Risk Behavior Surveillance System (YRBSS), both of which are sponsored by the U.S. Centers for Disease Control and Prevention (CDC).
- Assemblage of the MCH Advisory Group, followed by analysis of the group's input pertaining to potential MCH priority needs.

In January 2009, Family Health Services' Perinatal Program implemented an enhanced (relative to previous efforts in the State) Fetal and Infant Mortality Review (FIMR) Program statewide. However, because the program is in the early stages of development, data from the review were not ready for use in the 2009-10 Needs Assessment. Infant mortality review is further discussed later in this section, under "Assurance of Ongoing Needs Assessment."

CRS: Overview of Process

CRS convened the CRS Advisory Committee, which met two times during 2009 to assist CRS in planning and implementing the CYSHCN portion of the Needs Assessment, as well as in analyzing and prioritizing the results. Updates were also sent to the committee members at strategic points during the process. CRS pursued three distinct methodologies, described later in Section 1 under "Methods: Children's Rehabilitation Services."

Assurance of Ongoing Needs Assessment

Family Health Services: Ongoing Needs Assessment

Ongoing needs assessment is crucial to informed policy-development and decision-making. One way that Family Health Services seeks to assure ongoing needs assessment is to recruit and retain personnel who can devote time to needs assessment: in particular, State-level analytic staff to focus on MCH Block Grant reporting and needs assessment, Regional Perinatal Coordinators, and staff focusing on review of unexpected deaths in infants and children. Discussion of each follows.

Since March 2010, Family Health's MCH analytic staff available for comprehensive, statewide needs assessment have consisted of the Director of the MCH Epi Branch, who is a doctor-level epidemiologist, and a masters-level epidemiologist who joined the branch in that month. In collaboration with the Leadership Team, the MCH Epi Branch will seek to prepare and distribute brief, user-friendly reports on key findings from the Needs Assessment to a variety of readerships. The frequency and nature of such reports will be influenced by the interest level of colleagues who network with potential users of the reports, as well as the time available to devote to preparing the reports.

In FY 2002, the State created and filled five Regional Perinatal Coordinator positions, one for each of the State's perinatal regions. Each of these positions is filled by a nurse and is administratively located in

Family Health's Perinatal Program. Each Regional Perinatal Coordinator's duties include regional needs assessment and infant mortality review. As previously mentioned, in January 2009 the Perinatal Program implemented an enhanced FIMR Program statewide. This program is a critical component of ongoing needs assessment.

The administrative location of the Alabama Child Death Review System (Child Death Review Program) in Family Health Services facilitates ongoing needs assessment. MCH Epi Branch, Perinatal Program, and Child Death Review Program staff consult as feasible regarding statewide and regional needs assessment.

Ongoing needs assessment will occur through several other means as well. First, emerging needs will continue being discussed as needed at the periodic meetings of Family Health Services' Management Team.[a] Second, the MCH Epi Branch will continue coordinating preparation of the *MCH Annual Reports/Applications*, which entails some aspects of needs assessment. Third, under the auspices of the State Systems Development Initiative (SSDI), the MCH Epi Branch will seek to continue increasing MCH data capacity through analysis and, when indicated, linkage of certain MCH databases.

Interface of Needs Assessment with *MCH Block Grant Annual Reports/Applications*

As stated earlier, preparation of *MCH Annual Reports/Applications* entails some components of needs assessment. For example, as previously stated, analysis of vital statistics data is one component of needs assessment. Family Health's analysis of vital statistics and Census data goes far beyond, but also includes, the multiple vital statistics- and Census-based performance measures, health status indicators, and health systems capacity indicators that comprise part of the *MCH Annual Reports/Applications*. As well, while coordinating the 2009-10 Needs Assessment, the Director of the MCH Epi Branch reviewed all pertinent *MCH Annual Reports/Applications* indicators that were available, regardless of the data source. Only the indicators deemed most pertinent to the identified priority needs and deemed not to overlap with more salient findings are reported here, however.

Further, the multiple roles of the two Needs Assessment Coordinators assure integration of needs assessment with the *MCH Annual Reports/Applications*. Specifically, the Director of the MCH Epi Branch, who serves as Family Health's Needs Assessment Coordinator, also serves as the Coordinator and Contributing Editor for the *MCH Annual Reports/Applications* and as the SSDI Project Epidemiologist. Further, CRS's Special Programs Coordinator, who serves as that organization's Needs Assessment Coordinator, writes the components of the *MCH Annual Reports/Applications* that pertain to CYSHCN.

Allocation of Resources

As stated in Table 1.1, one of the goals of the 2009-10 Needs Assessment was to develop the infrastructure for addressing the selected MCH priority needs, in collaboration with key stakeholders. Developing this infrastructure entails four key tasks. Only one of the tasks, setting performance objectives, was performed as part of the Needs Assessment. The development of State Performance Measures, based on Needs Assessment findings, addressed another of the four tasks to some degree: the task of developing an action plan, including a plan for monitoring progress on impacting outcomes.

[a] Family Health's Management Team consists of the Bureau's Director, Deputy Director, Directors and Assistant Directors of each of the five divisions, and three consultants, including the Director of the MCH Epi Branch. The Bureau's Deputy Director also serves as the State's Title V Director.

The remaining two infrastructure-related key tasks were to seek resources and allocate resources. These steps are expected to occur by early FY 2011, as part of ongoing needs assessment. To assure achievement of these tasks, as well as development and periodic assessment of an action plan, the Leadership Team will meet as needed (at least twice in FY 2010, and then at least annually).

The Needs Assessment Cycle

The cyclical nature of needs assessment, as described in the guidance for the *MCH Annual Reports/Applications*, has components shown in Figure 1.1.[1] Discussion of each component begins below and continues after Figure 1.1, which is on the next page.

As shown in Figure 1.1, the needs assessment process should strengthen partnerships and improve outcomes. Components of the needs assessment cycle follow. Elements of the needs assessment that are briefly referenced in this discussion of the cycle are detailed later in this section, under "Methods for Assessing Three MCH Populations."

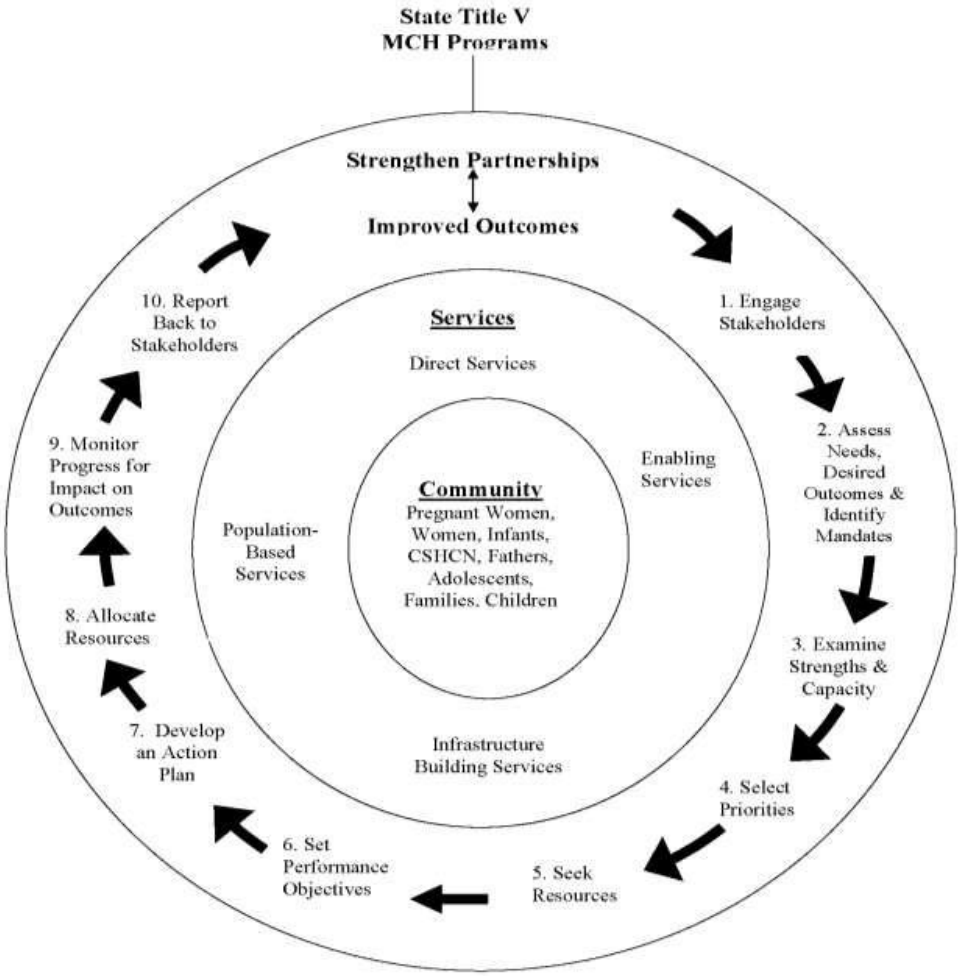
Engaging Stakeholders

Though shown as the first step in the cycle, engagement of stakeholders occurs at various phases of the needs assessment process. For example, as previously stated, in April 2009 Family Health Services emailed 20 stakeholders for input. Other ways that Family Health engaged stakeholders included convention of 10 focus groups in FY 2009, implementation of key informant interviews in FY 2009, implementation of three web-based surveys in FY 2009, and convention of the MCH Advisory Group in November 2009. Stakeholder involvement is detailed later in Section 1, under "Involvement of Stakeholders" or "Methods for Assessing Three MCH Populations."

Assessing Needs and Identifying Desired Outcomes and Mandates

As part of assessing needs, Family Health Services staff analyzed several pertinent databases, including ADPH vital statistics databases and newly collected ADPH databases. As well, they queried pertinent online databases to the degree feasible, reviewed online Census reports, and contacted several State organizations for findings on specific indicators. Key findings available by November 2009 were considered when developing Family Health's list of potential MCH priority needs. At the bureau's MCH Advisory Group meeting, held in November 2009, the key findings were presented, and then the potential priorities were presented. Following the presentation of potential priority needs, MCH Advisory Group participants ranked, added to, and/or revised the priority needs that had been presented. Thus, the findings from the initial analytic phase provided a backdrop for selection of MCH priority needs. As discussed below, the selected MCH priority needs, as well as the findings from newly collected ADPH databases (key informant interviews, focus groups, and three web-based surveys) were considered during examination of capacity. CRS utilized a variety of primary and secondary databases, which are described in various places in this report, and input from key stakeholders to assess needs and identify desired outcomes for CYSHCN.

Figure 1.1. State Title V MCH Program Needs Assessment, Planning, Implementation, and Monitoring Process



Copied from the following document: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Maternal and Child Health Services Title V Block Grant Program Guidance and Forms for the Title V Application/Annual Report. OMB NO 0915-0172. Expires March 31, 2012.

Examining Strengths and Capacity

MCH capacity was examined as described later in Section 1, under "Methods for Assessing State Capacity."

Selecting Priorities

A brief discussion of how MCH priority needs were selected follows, but the full discussion of how these needs were selected is located in Section 5.

Selection of Priority Needs: Family Health Services

Family Health's process for selecting priorities is detailed in Section 5. An overview of the process follows.

As previously discussed (under "Leadership"), stage one of developing MCH priority needs concerning the first two Title V populations occurred before the meeting of the MCH Advisory Group. To recap, in October 2009 the Leadership Team reviewed a list of potential MCH priority needs from an earlier 5-year needs assessment. Using this list as a springboard but considering then available 2009-10 Needs Assessment findings and overall knowledge concerning the first two Title V populations, the Team developed a list of 14 potential MCH priority needs. Although MCH capacity had not been assessed in a structured manner when the potential priorities were selected, the Leadership Team's collective perceptions of the State MCH Program's capacity were considered as priorities were selected.

In stage two of the selection process, the 14 potential MCH priority needs were presented to the MCH Advisory Group in November 2009. Members of the Advisory Group were asked to rank the needs: first individually and later consensually in several breakout groups. Both individuals and groups were given the options of adding new priority needs and/or revising the preselected potential priority needs. Consequently, the list of 14 potential priorities expanded to a list of 16 (shown in Table 5.1 in Section 5), with some suggestions for alternative wording. The MCH Epi Branch then quantitatively analyzed the individual rankings and the breakout groups' rankings. Based on these rankings, revised statements of need provided by some of the MCH Advisory Breakout Groups, and other considerations detailed in Section 5, Family Health's Needs Assessment Coordinator developed a list of 10 potential MCH priority needs (shown in Table 5.2 in Section 5). As well, based on considerations detailed in Section 5, she further narrowed this list to seven MCH priority needs for consideration by key Family Health staff.

In stage three of the process, Family Health Services' Needs Assessment Coordinator contacted several of the bureau's staff members and, based on input received, revised the wording of some of the seven needs under consideration. Based on input received, she finalized Family Health's seven priorities, subject to approval at an internal meeting held in early 2010. The purpose of the meeting was to secure the approval of key Family Health staff for the aforesaid priorities and to initiate a process for systematically assessing capacity to address these priorities. This meeting, including persons attending it, is discussed later in Section 1, under "Methods for Assessing Capacity: Family Health Services." The seven MCH priority needs, as developed in the aforesaid manner, were approved at the meeting. Family Health's mission and capacity, as well as input from the MCH Advisory Group, were considered when selecting the priority needs.

Seeking and Identifying Resources

As stated earlier, the Leadership Team will meet at least twice in FY 2010 and then at least annually. At these meetings, the Team will review the MCH priority needs, discuss whether sufficient resources have

been allocated toward addressing those needs, and discuss whether additional resources may be available to address the needs. Five of the six members of the Leadership Team have substantial input into major components of the State MCH Program's budget. The sixth member, the Director of the MCH Epi Branch, proposes the direction of the State's SSDI Project. Funds awarded to the State's SSDI Project have typically been used to partly support data-related aspects of needs assessment.

Setting Performance Measures and Objectives

State Performance Measures

The Needs Assessment Coordinators for, respectively, Family Health Services and CRS developed State Performance Measures for their respective organizations. Each coordinator consulted with the Leadership Team and collaborated with key staff in her organization when developing these measures. As well, each collaborated with key staff in her organization when setting targets for the State Performance Measures. (In this report, in the context of performance measures, the terms "targets" and "objectives" are used interchangeably.) Through such collaboration, the coordinators sought to develop measures that addressed one or more of the MCH priority needs. Further, each coordinator endeavored to set targets that challenged her organization but were cognizant of the healthcare environment, budgetary issues, political and socioeconomic issues, and other pertinent factors.

Targets for National Performance Measures

The two Needs Assessment Coordinators set targets for National Performance Measures in the same way that they set those for State Performance Measures.

Developing an Action Plan

Thus far, the 2009-10 Needs Assessment has focused mainly on the preceding steps in the needs assessment cycle. However, the five new checklist-based State Performance Measures for the 2011-2015 Needs Assessment Cycle constitute rudimentary action plans to achieve targets for those particular measures, which pertain to certain MCH priority needs. Each coordinator develops the checklist measure for her organization, the checklist itself, and the targets in collaboration with pertinent staff in her organization. Further, as previously stated, the Leadership Team will meet periodically. By early FY 2011, the Team will assure that a basic plan to address each of the State's MCH priority needs is in place or under development. (The 10 priorities selected for the 2011-2015 Needs Assessment Cycle are listed in the preview to Section 5.) The development of a feasible plan to address each of the priorities will require the participation of key Family Health Services and CRS program administrators. To facilitate the development of a comprehensive, seamless action plan for addressing the 10 priorities, the MCH Epi Branch will develop a template for use by Family Health and CRS.

Allocating Resources

As stated earlier, the Leadership Team will meet at least twice in FY 2010 and then at least annually. At these meetings, the Team will review the MCH priority needs, discuss whether sufficient resources have been allocated toward addressing those needs, and discuss whether additional resources may be available to address the needs.

Monitoring Progress for Impact on Outcomes

Each Needs Assessment Coordinator will monitor progress on State Performance Measures and any other salient indicators that are available and have implications concerning progress toward addressing priority needs. On an annual basis, the coordinators will inform the Leadership Team of progress according to the indicators. The indicators will include, but not necessarily be limited to, pertinent State

Performance Measures, National Performance Measures, Health Systems Capacity Indicators, and National Outcome Measures. The number and type of indicators that can be monitored will be influenced by the availability of analytic staff to track the indicators.

Reporting Back to Stakeholders

Both Family Health Services and CRS will make this full report of the Needs Assessment available to stakeholders: including members of the MCH Advisory Group, the CRS Advisory Committee, the State Perinatal Advisory Council (SPAC), and the State's five Regional Perinatal Advisory Councils.

As well, to the degree feasible, the MCH Epi Branch will prepare brief, user-friendly summaries or fact sheets concerning salient components of the 2009-10 Needs Assessment. If prepared, these reports will be offered to the stakeholders mentioned above. Contingent on staffing resources that can be allocated to the task, the MCH Epi Branch will update the State's MCH web page (which was launched circa FY 2006), post brief reports or fact sheets related to needs assessment on the web page, and provide a link to the full Needs Assessment report. Further, the full Needs Assessment report and any brief, follow-up reports will be provided to any participants in Family Health's various data collection enterprises (key informant interviews, focus groups, and web-based surveys) who requested copies and provided contacting information.

Involvement of Stakeholders

Family Health Services: Stakeholder Involvement

Overview of Stakeholder Involvement: Family Health

Stakeholder involvement in Family Health's components of the 2009-10 Needs Assessment, alluded to in several places earlier in this document, is briefly summarized below. Most of this involvement is detailed elsewhere in Section 1.

The primary ways in which Family Health Services involved stakeholder groups consisted of:

- Key informant interviews.
- Ten focus groups.
- Three web-based surveys of, respectively,
  - Medical providers of care to maternal and child populations.
  - Non-medical organizations serving Title V populations.
  - Families.
- The MCH Advisory Group, discussion of which follows.

MCH Needs Assessment Advisory Group: Family Health

Family Health Services convened the MCH Advisory Group one time, in November 2009. Family Health sought to assure that a variety of MCH stakeholders were included, by inviting organizations or individuals from four basic categories:

- Organizations or consultants outside of the Health Department, including State agencies, secular nonprofit groups, faith-based groups, civic groups, and academic institutions.
- Members of families with children ("Healthcare Consumers").

- Health Department staff from outside of Family Health.

- Family Health staff.

Of the 115 persons invited to the meeting, 92 replied that they would attend, and 81 registered attendance. Letters of invitation to professionals, both within and external to the Health Department, encouraged them to suggest healthcare consumers for Family Health to invite to the meeting. Seven healthcare consumers were identified and invited: Five of these replied that they would attend, but only four were able to attend. Family Health paid the travel and per diem for the two of these consumers who were not affiliated with an agency.

The 6-hour meeting (including lunch) was held at a hotel and conference center in Prattville, in south-central Alabama. The 81 individuals registering their attendance consisted of:

- 25 Family Health Services staff members.

- 16 other Health Department staff members, including central-office, Public Health Area, and county staff. (Alabama has 11 Public Health Areas.)

- 13 representatives from community organizations. Issues addressed by one or more of the 13 organizations included domestic violence, social justice, children's advocacy, family resources, children's health insurance, adolescent pregnancy, prenatal care for low-income women, children's mental health, community wellness, faith-based social services, and Latino interests.

- Four healthcare organizations, consisting of the Alabama Hospital Association, the Alabama Chapter of the American Academy of Pediatrics, the University of South Alabama's Children's and Women's Hospital, and the Primary Health Care Association.

- Four healthcare consumers.

- 11 representatives of State agencies—two from ADRS, two from the State Department of Human Resources, two from the State Department of Children's Affairs, one from the State Department of Education, one from the State Department of Child Abuse Prevention, and three from the Medicaid Agency.

- Eight representatives from universities—five from the University of Alabama at Birmingham, one from Tuskegee University, one from the University of Alabama, and one from Auburn University at Montgomery. Collectively, these academicians brought expertise in public health, adolescent health, pediatric pulmonary health, dentistry, nutrition, nursing, and demography.

The agenda for the meeting, as well as other needs assessment tools, is available upon request. (Throughout this document, documents said to be available upon request can be requested by emailing: anita.cowden@adph.state.al.us.) Following the welcome and overview of the day provided by Family Health's Deputy Director, several presentations were made. These presentations included the following: four on pregnancy and infancy, provided by Family Health's Needs Assessment Coordinator; one on the FIMR Program, provided by the Director of the Perinatal Program; one on the three web-based surveys, provided by the then Assistant Director of the MCH Epi Branch; one on the Latino focus groups, provided by the Director of the Department's Office of Minority Health; one on causes of death among children and adolescents (per vital statistics data), provided by Family Health's Needs

Assessment Coordinator; one on child death review, provided by the Director of Family Health's Child Death Review Program; one on childhood obesity, presented by a short-term epidemiology intern located in the MCH Epi Branch, one on adolescent behavior and well-being, presented by the Deputy Director of Family Health Services, and one on potential MCH priority needs, also presented by the Deputy Director. (In March 2010, the epidemiology intern joined the MCH Epi Branch as an ADPH employee.)

Following these presentations, participants individually ranked potential MCH priority needs, using forms provided for that purpose. Six breakout groups were then convened, and each group consensually ranked potential priorities, again using forms provided. The six breakout groups respectively consisted of: healthcare consumers, community organizations, healthcare providers and university affiliates, Family Health Services staff, other Health Department staff, and staff from other State agencies. When the full group reconvened, each breakout group briefly summarized its selected MCH priority needs, after which Family Health's Deputy Director adjourned the meeting.

Section 5 summarizes the individual and breakout-group rankings of priority needs and describes how Family Health Services utilized this input when selecting seven MCH priority needs.

Ongoing Stakeholder Involvement: Family Health

Stakeholder Involvement: Perinatal Program

As part of ongoing needs assessment, the Perinatal Program (whose Director serves on the Leadership Team) periodically convenes SPAC and the five Regional Perinatal Advisory Councils. The Regional Perinatal Advisory Councils make recommendations to SPAC regarding perinatal concerns, and SPAC advises the State Health Officer.

Stakeholder Involvement: Children's Health Programs

As part of ongoing needs assessment, Family Health Services seeks input by convening three State-level advisory groups that have consumer representation for persons affected by particular health issues. One of these advisory groups focuses on newborn screening, which includes hearing screening, as well as biochemical screening of blood samples. Another group advises Family Health concerning activities funded by the Early Childhood Comprehensive Systems Planning Grant, and the remaining group advises Family Health concerning its Child Death Review Program. Some members of these groups, which include consumers, are selected by Family Health and some by the State's Governor.

One example of how these advisory groups affect Children's Health programs pertains to the Newborn Screening Advisory Group. This group recommended criteria for the provision and distribution of metabolic foods and formula to infants and adults with phenylketonuria in FY 2008, as well as a standardized protocol for newborn-screening blood collection from infants in the neonatal intensive care nursery in FY 2009. Both recommendations were approved for implementation. Local Child Death Review Teams, as well as the Child Death Review Program's Advisory Group, are a critical part of Family Health's Child Death Review Program, which is further discussed later in this section.

CRS: Stakeholder Involvement

CRS involved stakeholders in a variety of ways discussed in several places in this document. These ways included:

- The CRS Advisory Committee.
- Key informant interviews.

- Five focus groups.
- A survey of families of CYSHCN (web-based and paper-based versions).
- A survey of youth with special health care needs (web-based and paper-based versions).
- A survey of providers of care to CYSHCN.

Methods for Assessing Three MCH Populations

This portion of the report describes the quantitative and qualitative methods used to assess health-related issues concerning the three federally defined MCH Program populations: 1) pregnant women, mothers, and infants; 2) children; and 3) children with special health care needs (CSHCN).[1]

Family Health Services focused on the first two of the MCH Program populations, expanding the second population to include children and youth. To assure that the Needs Assessment addressed the needs of CYSHCN, a subgroup of the general population of children and youth, Family Health partnered with CRS, who focused on CYSHCN. In actual practice, any given data-collection effort may pertain to two or three of the federally defined MCH Program populations, rather than to one population alone. As well, because the health of the family influences the health of its individual members, Family Health Services and CRS gathered data pertaining to the families of the MCH Program populations.

Particular analytic techniques varied according to the data source or reference, as well as personnel available for data analysis. Only some analyses included formal statistical assessment in the form of p-values or confidence intervals. Unless stated otherwise in the description of methods for particular findings, neither confidence intervals nor statistical testing was performed. Many analyses focused on general pictures and, if available, patterns over time or across groups, rather than statistical precision (as shown by confidence intervals) or significance (as shown by p-values).

The methods employed by Family Health Services are discussed next and followed by a discussion of methods employed by CRS.

Methods: Family Health Services

As previously stated, Family Health focused on two of the federally defined MCH Program populations and their families: 1) pregnant women, mothers, and infants; and 2) children and youth. The following discussion is organized according to these two populations, plus a third category, "Cross-Cutting Studies." The latter category is necessary because many databases utilized by Family Health cut across the two preceding populations.

Studies Concerning Pregnant Women, Mothers, and Infants

Pregnancy Risk Assessment Monitoring System

PRAMS is a mail survey of new mothers, with telephone follow up attempted on persons who do not respond to the mailed survey. PRAMS is supported by CDC, under cooperative agreement. Each month about 180-200 Alabama residents who had a live-born baby 2-4 months before the sampling date are selected for the survey sample. Mothers who gave birth to babies of low birth weight and mothers whose delivery was paid for through Alabama Medicaid are over sampled. Reported estimates are

weighted to represent all live births occurring in Alabama in the specified year. Rather than analyzing electronic PRAMS databases, MCH Epi Branch staff used publications prepared by the Health Department's Center for Health Statistics that showed PRAMS findings in 2004-2006 (the most recent years for which reports were available as of January 8, 2010). Confidence intervals reported in these publications were used when interpreting salient findings.[a]

Infant Mortality Review

As previously stated, in January 2009 the Perinatal Program implemented a statewide FIMR Program that is based on the national FIMR guidelines. Though findings from this program were not available for the 2009-10 Needs Assessment, the program is a critical component of ongoing needs assessment so is discussed here.

The program utilizes current Perinatal Program staff, who have been trained by the national FIMR trainers. In late FY 2009, the Perinatal Program's five Regional Perinatal Coordinators, who are nurses, began reviewing neonatal deaths. To review deaths, they abstracted data, prepared case summaries, and conducted maternal interviews. As well, they coordinated the State's five Regional Perinatal Advisory Councils, which served as case review teams. As of mid-November 2009, 205 neonatal deaths, which had occurred in 2009, had been reviewed. In addition, the Regional Perinatal Coordinators are working toward the formation of several Community Action Teams around the State. These teams are to facilitate community participation in development of strategies to reduce infant mortality within the communities where the deaths occurred.

Studies Concerning Children and Youth

Child Death Review

Legislation creating the Child Death Review Program was enacted in 1977 and mandated the review of all unexpected or unexplained deaths of children in Alabama from birth through 17 years of age. Under this mandate, deaths of children and youth due to such causes as motor vehicle incidents, drowning, fire, sudden infant death syndrome (SIDS), child abuse, suicide, and suffocation are reviewed. Deaths from prematurity, birth defects, and terminal illnesses are not reviewed under this mandate.

All of the State's 41 Judicial Circuits have a Local Child Death Review Team Chairperson. In FY 2009, there were 42 Local Child Death Review Teams, which are multidisciplinary, and all but one of these teams were active. In addition, there is a 28-member, multidisciplinary, State Child Death Review Team. The Child Death Review Program is administratively located in Family Health Services, and the program's staff assign all cases meeting mandated criteria to a local Child Death Review Team. The local team may submit their data collection forms to Family Health Services via postal mail, fax, or online. For calendar years (CYs) 2002-2006, as of mid-November 1999, the percentages of assigned cases that had been reviewed by the local teams ranged from 82 percent for CY 2002 deaths to 95 percent for CY 2004 deaths. CYs 2007-2008 cases have been assigned for review but, since 2 years elapses before some cases have been reviewed and reported, completion rates have not been computed for those years.

National Survey of Children's Health

The sampling and data collection for the National Survey of Children's Health (NSCH), 2007 were conducted using the State and Local Area Integrated Telephone Survey (SLAITS) Program. Telephone numbers were called at random to identify households with one or more children under 18 years of age.

[a] Confidence intervals for all PRAMS-based estimates are 95 percent intervals and were computed as: CI = percent +/- (1.96 x standard error). Percents and standard errors were calculated using SAS® and SUDAAN® statistical packages provided by CDC.

In each household, one child was randomly selected to be the subject of the interview. Survey results were weighted to represent the population of non-institutionalized children aged 0-17 years nationally and in each state. The MCH Epi Branch retrieved the findings from the web site of the Data Resource Center for Child and Adolescent Health, which is a project of the Child and Adolescent Health Measurement Initiative supported by a cooperative agreement from the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services.[2] Obesity-related findings used from this web site were retrieved and reported by a graduate student intern assigned to the MCH Epi Branch, from mid-August through mid-November 2009, by the MCHB's Graduate Student Internship Program.

Youth Risk Behavior Survey

The YRBSS consists of a national school-based survey conducted by CDC and state, territorial, and local school-based entities. The survey, which is conducted by health and education agencies, has been conducted in odd years, beginning with 1991. YRBSS data represent students in grades 9-12 in the 50 states and the District of Columbia.[3] The National YRBSS includes both public and private schools in the sampling frame. For state-level findings, the sampling frame includes only public schools.[4] Findings are weighted estimates based on samples of students. Each estimate therefore reflects some degree of random statistical error. Findings (point estimates and confidence intervals) and a full description of methods are obtainable from a CDC web site.[3]

In Alabama, the survey is conducted through the State Department of Education. Although Alabama participated in YRBSS during survey years from 1991-2007, the State had a response rate of less than 60 percent in 2007, so data for that year were not weighted by CDC.[3] As a corollary, year 2007 findings for Alabama do not represent all public school students in grades 9-12 in the State and are not shown on CDC's YRBSS web site. Therefore, until late June 2010, for YRBSS, only findings through 2005 were reviewed for the Needs Assessment. In June 2010, selected findings from the year 2009 YRBSS were reviewed and added to this report. Due to limited analytic resources and the lack of current YRBSS data throughout most of the Needs Assessment process, full review of YRBSS indicators was not feasible.

Crosscutting Studies

Census and Vital Statistics

In some cases, Census data were utilized as reported by the U.S. Census Bureau. For population denominators for certain rates, however, MCH Epi staff downloaded a detailed population estimate spreadsheet[5] from the Census Bureau's web site, for CYs 2000-2008. For each year, the spreadsheet showed population estimates for individual years of age and, for each year of age, according to race and ethnicity. From the detailed spreadsheet, MCH Epi staff selected the estimates for Alabama and calculated Alabama population estimates for the specific age/race/ethnicity groups of interest. The spreadsheet provided by the Census Bureau classified race into six groups: White alone, Black or African American alone, American Indian and Alaska Native alone, Asian alone, Native American and Other Pacific Islander alone, and two or more races. For Needs Assessment purposes, the MCH Epi Branch combined these into three racial categories: White alone, Black alone, and Other, which included multiple-race individuals. As well, the branch often analyzed Census estimates according to race and ethnicity, focusing on the following groups: White non-Latino, Black non-Latino, Other non-Latino, and Latino (where "Latino" corresponds to "Hispanic," the term used in Census reports).

Vital statistics data were analyzed using appropriate techniques, depending on the purpose of the analysis, the data source, and the number of events being reported. In many cases, 3-year rates, risks, or percentages were computed in order to minimize random statistical variation that often occurs with

state-level data, particularly mortality data. Whenever indicated, in this report, specific methods or sources pertaining to findings from the Census or from vital statistics are detailed in proximity to the presentation of those findings.

Key Informant Interviews

In February 2009, Family Health emailed 15 key stakeholders: 10 of whom were in other State agencies or institutions involved with the MCH population and five of whom were in private advocacy groups related to children's welfare, Latino interests, homelessness, domestic violence, and maternity care. These emails invited respondents to set up a telephone interview or complete an electronic questionnaire. Monthly reminder notices were sent out by electronic mail in both March and April 2009. Six key informants completed interviews, for a response rate of 40 percent. Two respondents were interviewed by phone, and four respondents submitted a completed electronic questionnaire. Questionnaires for the survey are compiled in an internal document, *Selected Tools for Alabama's 2009-10 Needs Assessment*, which is available upon request.[6]

All of the respondents were public-institution employees. Three of the respondents were affiliated with a State university and collectively represented schools of dentistry, public health, and nursing. Three respondents were from State agencies and collectively represented children's services in mental health and developmental disabilities, school readiness, and Head Start. Each respondent served in a highly responsible position within his or her agency and had decision-making authority concerning programs and services. The mean time that respondents had been in their respective positions was 12.3 years, with a range of 1.5 years through 32 years. Three of the respondents served all segments of the MCH Program populations. One respondent served only young children, including some with special healthcare needs. One respondent served children and youth, including those with special healthcare needs. One respondent served women of childbearing age, including mothers.

Web-Based Surveys

Family Health Services conducted three web-based surveys, using methods discussed below. All three of the surveys collected quantitative (per checkbox options) and qualitative (per open-ended questions) data. Questionnaires for each survey are in *Selected Tools for Alabama's 2009-10 Needs Assessment*.[6] Analysis of the web-based surveys was purely descriptive and basically consisted of proportions. Neither confidence intervals nor p-values were computed. Findings concerning demographic characteristics of survey participants are reported here in Section 1 (rather than in Section 3), since knowing who the surveys represent is critical to assessing the collective strengths and weaknesses of the surveys.

Healthcare Providers Survey

The Survey of Alabama Primary Healthcare Providers for Women of Childbearing Age, Children, and Youth (Healthcare Providers Survey) was a web-based survey conducted in February 2009. Invitations to participate were sent by postal mail to 1,451 physicians who specialized in pediatrics, family medicine, or obstetrics/gynecology and were members of the Medical Association of the State of Alabama. Additionally, invitations were sent to 68 County Nursing Supervisors: one supervisor in each of the 65 counties under ADPH, one nursing supervisor from the Mobile County Health Department, and two nursing supervisors from the Jefferson County Department of Health. The total number of individuals invited to participate was 1,519. The response rate was 12.1 percent. The numerator for this response rate was 182, the number of respondents. The denominator was 1,503: the 1,519 invitations minus 14 undeliverable mailings and two physicians who replied but were no longer in practice and elected not to participate.

The 182 respondents to the Healthcare Providers Survey represented 52 (78 percent) of Alabama's 67 counties. Distributions according to the State's five perinatal regions, scope of practice, and type of practice are respectively shown in Tables 1.2 through 1.4. As shown in these tables:

- Each perinatal region was represented to some degree (Table 1.2). (Later in Section 1, Table 1.22 compares this geographic distribution to the geographic distribution of live births.)

- Concerning scope of practice, most of the respondents practiced family medicine, pediatrics, public health, or obstetrics/gynecology (Table 1.3).

- Concerning type of practice, most of the respondents were in a group medical practice, one- or two-physician practice, or a county health department (Table 1.4).

Table 1.2. Perinatal Regions, Healthcare Providers Survey, Alabama, FY 2009 *(182 Respondents)*

Perinatal Region	Number	Percent
1	38	20.9
2	18	9.9
3	55	30.2
4	29	15.9
5	42	23.1

Table 1.3. Scope of Practice, Healthcare Providers Survey, Alabama, FY 2009 *(182 Respondents)*

Scope of Practice*	Number	Percent
Family medicine	49	26.9
Pediatrics	39	21.4
Public health	39	21.4
Obstetrics/gynecology	36	19.8
Gynecology	6	3.3
Neonatal medicine or pediatric subspecialty	5	2.7
Other	6	3.3
Inactive	2	1.1

*Respondents were asked to check the one phrase that best described the scope of their practice.

Table 1.4. Type of Practice, Healthcare Providers Survey, Alabama, FY 2009 (*182 Respondents)*

Type of Practice*	Number	Percent
Group medical practice	72	39.6
One or two-physician practice	51	28.0
County health department	41	22.5
Academic setting	7	3.8
Emergency department or urgent-care facility	4	2.2
Hospital-based ambulatory care	3	1.6
Community facility or rural health center	2	1.1
Inactive	2	1.1

*Respondents were asked to check the one phrase that best described their practice or facility.

MCH Organizations Survey

The Survey of Alabama Organizations Serving Women of Childbearing Age, Children and Youth, and/or Families (MCH Organizations Survey) was a web-based survey of non-medical organizations, conducted in March and April 2009. Invitations to participate were sent to 1,451 statewide and community organizations who served the targeted populations. The names and addresses of the organizations were provided by the 11 Public Health Area Social Work Directors. The response rate was 22.4 percent. The numerator for the response rate was 290, the number of respondents. The denominator was 1,292: the 1,451 invitations minus the 156 undeliverable mailings and the three respondents who elected not to participate. Of the three respondents who chose not to participate, two did not feel that the survey applied to their organization and one did not have Internet access.

The 290 respondents to the MCH Organizations Survey represented 58 (87 percent) of Alabama's 67 counties. Distributions according to the State's five perinatal regions, main focus of the organization, type of organization, and geographic scope of services are respectively shown in Tables 1.5 through 1.8. Levels of service provided are shown in Table 1.9. As shown in these tables:

- Each perinatal region was represented to some degree (Table 1.5). (Later in Section 1, Table 1.22 compares this distribution to the geographic distribution of live births.)
- Concerning organizational focus, most of the respondents focused on social services or on public education (Table 1.6).
- Concerning type of organization, most of the respondents were either private, non-profit businesses or services or public agencies (Table 1.7).
- Concerning geographic scope, half of the respondents were county-wide (Table 1.8).
- Concerning levels of services, 82 percent of respondents provided one-on-one services to individuals, 37 percent provided community-wide outreach or education, and 20 percent funded other organizations or individuals to serve Title V populations (Table 1.9).

Table 1.5. Perinatal Regions, MCH Organizations Survey, Alabama, FY 2009, (*290 Respondents)*

Perinatal Region*	Number	Percent
1	56	19.3
2	19	6.6
3	81	27.9
4	24	8.3
5	110	37.9

*Based on the location of the organization's main office

Table 1.6. Main Focus of the Organization, MCH Organizations Survey, Alabama, FY 2009 *(290 Respondents)*

Main Focus*	Number	Percent
Social services	141	48.6
Public education	69	23.8
Mental health services, including those for substance abuse	21	7.2
Housing	20	6.9
Physical health	19	6.6

Main Focus*	Number	Percent
Services for persons with disabilities	7	2.4
Transportation	5	1.7
Spiritual health	4	1.4
Training or employment	4	1.4

*Respondents were asked to check the one phrase that best described the main issue addressed by their organization.

Table 1.7. Type of Organization, MCH Organizations Survey, Alabama, FY 2009 *(290 Respondents)*

Type of Organization*	Number	Percent
Private, non-profit businesses or services	118	40.7
Public agencies	93	32.1
Public or private educational institutions	48	16.6
Associations, civic groups, or faith-based organizations	28	9.7
Private, for-profit businesses or services	3	1.0

*Respondents were asked to check the one phrase that best described their organization.

Table 1.8. Geographic Scope of Services, MCH Organizations Survey, Alabama, FY 2009 *(290 Respondents)*

Geographic Scope*	Number	Percent
County-wide	146	50.3
Local, serving a specific area within a county	58	20.0
Regional, serving more than one county	41	14.1
Statewide	35	12.1
Other, such as a local school within a school system	10	3.4

*Respondents were asked to check the one phrase that best described the geographic scope of their organization.

Table 1.9. Levels of Services, MCH Organizations Survey, Alabama, FY 2009 *(290 Respondents)*

Question	Number Answering Yes*	Percent*
Does your organization directly provide one-on-one services to individuals?	237	81.7
Do your organization's staff directly provide community-wide outreach or education, that is, reach beyond your facility to provide health-related services to groups of persons throughout the community?	108	37.2
Does your organization fund (for example, through contracts, grants, awards, or donations) other organizations or individuals who serve adult women of childbearing age, children, youth, or families?	57	19.7

*Respondents could answer yes to more than one question.

Family Survey

The Survey of Alabama's Families Pertaining to Services for Women of Childbearing Age, Children, and Youth (Family Survey) was a web-based survey conducted in May and June 2009. Participants were recruited through personal invitation and through distribution of about 30,000 flyers, with the flyers being distributed mainly to families receiving services through county health departments. As well, an invitation to participate in the survey was posted on the home page of the Health Department's web site. There were 622 respondents to the survey. A response rate cannot be calculated because the

denominator, Alabama parents or parent surrogates who were aware of the opportunity to participate in the survey, is unknown.

Respondents were collectively from 61 (91 percent) of Alabama's 67 counties and from all of the State's five perinatal regions (Table 1.10). Demographic characteristics of the respondents, most of which are respectively shown in Tables 1.11 through 1.16, are highlighted below. (Later in Section 1, under "Data Sources: Family Health Services," some of the respondents' characteristics are compared to certain referent groups for the State as a whole.) The survey did not require respondents to answer any of the demographic questions, so denominators for the following percents vary, depending on the number who answered the pertinent question:

- All perinatal regions were represented to some degree (Table 1.10).
- Over 90 percent (563, or 91.2 percent) of 617 respondents were female (not shown in tables).
- Eighty-nine percent of 604 respondents were 21-50 years of age, with more than 40 percent of the 604 respondents being 31-40 years of age (Table 1.11).
- Eighty-three percent of 600 respondents were White (Table 1.12).
- Just 2 percent (1.9 percent, or 11) of 593 respondents were Latino (not shown in tables).
- Eighty-three percent of 611 respondents were married (Table 1.13).
- Sixty-four percent of 607 respondents had a bachelor's degree or a higher degree (Table 1.14).
- Nearly half (48 percent) of 548 respondents had a household income of $70,000 or higher (Table 1.15).
- About three-quarters (78 percent) of 607 respondents lived in households consisting of four or fewer persons (Table 1.16).

Table 1.10. Perinatal Regions, Family Survey, Alabama, FY 2009 (*622 Respondents)*

Perinatal Region*	Number	Percent
1	104	16.7
2	56	9.0
3	241	38.8
4	46	7.4
5	175	28.1

*Based on the respondent's county of residence

Table 1.11. Age Distribution, Family Survey, Alabama, FY 2009 *(604 Respondents)*

Age in Years	Number	Percent
16-20	3	0.5
21-30	132	21.9
31-40	262	43.4
41-50	144	23.8

Age in Years	Number	Percent
51-60	55	9.1
61-76	8	1.3

Table 1.12. Race Distribution, Family Survey, Alabama, FY 2009 *(600 Respondents)*

Race	Number	Percent
White	495	82.5
Black	69	11.5
Other	20	3.3
Two or more races	16	2.7

Table 1.13. Marital Status, Family Survey, Alabama, FY 2009 *(611 Respondents)*

Marital Status	Number	Percent
Married	506	82.8
Divorced or legally separated	64	10.5
Never married	34	5.6
Widowed	7	1.1

Table 1.14. Education, Family Survey, Alabama, FY 2009 *(607 Respondents)*

Highest Level of Education Completed	Number	Percent
Less than high school	1	0.2
High school, including Graduate Education Diploma	34	5.6
Some college	121	19.9
2-year college degree	64	10.5
4-year college degree	254	41.8
Master's degree	109	18.0
Doctoral degree	11	1.8
Other professional degree (such as M.D. or J.D.)	13	2.1

Table 1.15. Annual Household Income, Family Survey, Alabama, FY 2009 *(548 Respondents)*

Annual Household Income	Number	Percent
Under $10,000	12	2.2
$10,000 - $29,999	56	10.2
$30,000 - $49,999	110	20.1
$50,000 - $69,999	107	19.5
$70,000 - $89,999	129	23.5
$90,000 - $99,999	49	8.9
$100,000 - $149,999	56	10.2
$150,000 or more	29	5.3

Table 1.16. Number of Household Members, Family Survey, Alabama, FY 2009 *(607 Respondents)*

Household Size (Number of Persons)	Number	Percent
1-2	100	16.5
3-4	372	61.3
5-6	116	19.1
7 or more	19	3.1

Focus Groups

The Health Department convened 10 focus groups in FY 2009. Eight of these groups were convened by Family Health Services. In addition, two groups of Latinas were convened by the Health Department's Office of Minority Health. The following discussion concerns, respectively, the eight groups convened by Family Health and the two convened by the Office of Minority Health.

Focus Groups: Family Health

Staff from several Family Health programs (the Perinatal Program, the Healthy Child Care Alabama Program, the Breast and Cervical Cancer Program, and the MCH Epi Branch) collaborated to plan and convene eight focus groups. The manual prepared by the MCH Epi Branch for use when conducting the focus groups is available upon request.[7] The manual includes checklists for planning and preparation, pre-discussion forms, questions for discussion, and post-discussion forms. The Alabama Chapter of the March of Dimes (Alabama March of Dimes) provided snacks for each group and, depending on availability, various promotional items (such as T-shirts and water bottles with the March of Dimes logo, pens, and lapel pins) for attendees. Except for the T-shirts and water bottles, which were not available for all groups, provision of incentives having notable monetary value was not feasible, however.

The eight focus groups convened by Family Health Services included a total of 65 discussants. Though Family Health staff sought to have from 6-12 individuals in each group, one "group" consisted of only one individual (partly due to weather conditions). The remaining seven groups each included from 6-14 individuals. Findings concerning the content of discussions occurring in the eight groups are described in Section 3, but the analytic methods and demographic composition of these groups are described here, since they pertain to the strengths and weaknesses of the Needs Assessment process. Analytic methods are described first, characteristics of groups next, and characteristics of individual discussants last.

Analytic Methods

Transcriptions of the eight groups were meticulously reviewed and classified into 2,189 key phrases (remarks or key word combinations). Each key phrase was treated as a unit of observation and classified into one of five main issues or an "unclear" category, one of several sub-issues or an "unclear" category, and one of numerous facets. Additionally, each phrase was classified with respect to whether it implied a strength or cause for concern. Further, based on the questions that each pertained to, some phrases could be classified according to certain populations (women of childbearing age, infants under 1 year of age, children 1-12 years of age, or teenagers). The phrases and their classifications were entered into a Microsoft® Access database,[8] which was imported into a SAS® database.[9] After having been classified and imported into SAS® in this manner, the qualitative data were then quantitatively analyzed. After the main issues had been identified, some statements that illustrated these main issues were selected to quote or paraphrase, in order to provide a qualitative dimension to the quantitative findings.

The data entry; classification of discussions into phrases, issues, sub-issues, facets, and strength versus weakness; and analysis of data were performed by two members of the MCH Epi Branch. Staffing resources and competing priorities did not allow assessment of intra-analyst variability or inter-analyst variability. That is, it was not feasible for a single analyst to classify the same material twice or for two analysts to independently classify the same material, so analyst variability could not be assessed.

Phrases, not individuals, comprised the unit of analysis. Therefore, characteristics of the eight groups are of interest, since a small group and a large group could conceivably generate about the same number of remarks.

Characteristics of Groups

The eight groups were collectively located in four of the State's five perinatal regions: one in Region 1, two in Region 3, two in Region 4, and three in Region 5. (One of the Latino focus groups conducted by the Office of Minority Health was held in Region 2, the remaining region.)

The eight groups respectively consisted of high school students convened at a child health center located in Pike County (south central-Alabama), college students convened at the same health center, adolescent mothers who received care at the Mobile County Health Department (southwestern corner of the State), a patient from the Fayette County Health Department (northwestern Alabama), members of a local Junior League (Madison County, in northern Alabama), a local Children's Policy Council Subcommittee (Etowah County, in northeastern Alabama), various professionals (Covington County, in southern Alabama), and individuals convened at the Poarch Band of Creek Indians Tribal Headquarters (Escambia County, in southern Alabama). Thus, generally speaking, a focus group was held in each major geographic area of the State except the southeastern corner.

Demographic information, per self report on the survey questionnaire provided to discussants, was available for most discussants from each of the focus groups. In the following list, the term "mainly" is used if 60 percent or more of the group members who answered the question had the stated characteristic. (The number of responses varied somewhat according to the question.) Partly due to weather conditions on the day of the meeting, one "group" consisted of only one discussant. Per self report, of the eight groups:

- Regarding sex, five of the groups were comprised solely of females. Of the remaining three groups, the high school group included nine females and four males, the college group three females and four males, and the Escambia County group ten females and two males.

- Regarding age, one group (the high school group) included teens only, and seven of the eight discussants in the adolescent mother group were 15-19 years of age. The college group included one 15-19 year-old discussant and six 20-44 year-old discussants (with all six being young adults). Only one group (the Junior League group) was solely composed of 20-44 year-old individuals. The four remaining groups were composed of 20-64 year-old individuals.

- Regarding race, four of the eight groups were composed mainly of White individuals. The group consisting of adolescent mothers consisted mainly of Black teens. The high school group included five White teens and seven Black teens. The group convened at the Poarch Band of Creek Indians Tribal Headquarters was composed of seven White individuals and five Native Americans. The discussant in the one-person group chose not to report her race.

- Regarding ethnicity, only two groups included Latinos: The adolescent mother group and the high school group each included one Latino.

- The survey tool asked whether the discussant was invited to the meeting as a member of a particular group and provided several checkbox options for those answering "yes." Discussants in the Junior League group indicated that they were invited as a member of a civic group. Discussants in two groups, the high school group and the college-age group, indicated that they were invited as a member of an "other" group. In the remaining five groups, per the survey itself, no particular group predominated as the basis for the invitation. However, two of these five groups were invited because they were patients in a county health department.

- Regarding point of view, discussants were asked, "Socially or politically speaking, how would you describe your point of view?" The five options respectively referred to a conservative, a moderate, or a liberal point of view; a mixture of the preceding views; or "other." No group consisted mainly of individuals having a particular point of view.

- Regarding annual household income, discussants were asked to check one of the following categories: less than $25,000, at least $25,000 but less than $35,000, at least $35,000 but less than $75,000, and $75,000 or more. Two groups were composed mainly of persons with an annual household income of less than $25,000, one mainly of persons with an annual household income of at least $35,000 but less than $75,000, and one mainly of persons with a household income of $75,000 or more. The remaining four groups were not mainly composed of persons from a particular income category.

Characteristics of Individual Discussants

The following information pertains to characteristics of individual discussants who replied to the survey question under discussion. Records for individuals who did not answer the particular question were excluded from analysis. Some of the findings are depicted in Tables 1.17 through 1.21.

- Regarding sex, most of the discussants (83 percent, or 52/63) were female.

- Regarding age, about three-fourths of the discussants were from 15-44 years of age, and the remainder were from 45-64 years of age (Table 1.17).

- Regarding race, 56 percent of the discussants were White, 27 percent Black, and 13 percent Native American (Table 1.18).

- Nearly all (97 percent, or 59/61) of the discussants were non-Latino.

- Regarding whether the discussant was invited as a member of a particular group, no particular group predominated (Table 1.19).

- Respondents most frequently described personal point of view as being either conservative (37 percent) or a mixture of points of view (32 percent) (Table 1.20). Nearly one-fourth of respondents (24 percent) described their point of view as being moderate.

- Annual household income was distributed among the four income-range options provided (Table 1.21).

Table 1.17. Age Distribution, Family Health Services' Eight Focus Groups, Alabama, FY 2009 *(62 Discussants)*

Age in Years	Number	Percent
Under 14	0	0.0
15-19	21	33.9
20-44	26	41.9
45-64	15	24.2
65 or older	0	0.0

Table 1.18. Race Distribution, Family Health Services' Eight Focus Groups, Alabama, FY 2009 *(62 Discussants)*

Race	Number	Percent
White	35	56.5
Black	17	27.4
Native American	8	12.9
Other	2	3.2

Table 1.19. Perceived Basis of Invitation to Participate in Group, Family Health Services' Eight Focus Groups, Alabama, FY 2009 *(58 Discussants)*

Response to Question: Were You Invited to This Meeting as a Member of a Particular Group?	Number	Percent
No	5	8.6
Yes, the community in which I live	9	15.5
Yes, a faith-based group to which I belong	0	0.0
Yes, an advocacy group to which I belong	3	5.2
Yes, a civic group to which I belong	4	6.9
Yes, a professional group to which I belong	10	17.2
Yes, other*	27	46.6

*Of those checking "Other," 16 were in the high school or college group, and one was invited as an adolescent mother receiving care at a local health department.

Table 1.20. Self-Described Point of View, Family Health Services' Eight Focus Groups, Alabama, FY 2009 *(59 Discussants)*

Point of View	Number	Percent
Conservative	22	37.3
Moderate	14	23.7
Liberal	4	6.8
Mixture	19	32.2
Other	0	0

Table 1.21. Household Income, Family Health Services' Eight Focus Groups, Alabama, FY 2009 *(55 Discussants)*

Annual Household Income	Number	Percent
Under $25,000	13	23.6
At least $25,000 but less than $35,000	6	10.9
At least $35,000 but less than $75,000	19	34.5

Annual Household Income	Number	Percent
$75,000 or more	17	30.9

Focus Groups: Office of Minority Health
At the request of Family Health Services, the Health Department's Office of Minority Health, located in the Department's Bureau of Professional and Support Services, conducted two focus groups for Latino individuals. Both groups were convened in FY 2009: one in Marshall County, located in northern Alabama, and one in Tuscaloosa County, located in central Alabama. In convening these groups, methods were adapted to accommodate the cultural characteristics of the participants. Proceedings were conducted in Spanish by a Latina Health Department employee.

The Marshall County focus group was composed of eight Latinas: seven from 20-44 years of age and one from 45-64 years of age. Annual household income was less than $25,000 for five discussants and at least $25,000 but less than $35,000 for two discussants.

The Tuscaloosa County group was composed of six Latinas, all from 20-44 years of age. Annual household income was less than $25,000 for four discussants, at least $25,000 but less than $35,000 for one discussant, and at least $35,000 but less than $75,000 for one discussant.

To summarize the age and income of the 14 Latina discussants, where the information was provided: Most (13/14) were from 20-44 years of age, and most (9/13) had annual household incomes of less than $25,000.

The content of discussions by these two Latina focus groups was qualitatively analyzed by the convener of the focus groups, based on her overall impressions of the discussants' comments and her notes from the proceedings.

Methods: Children's Rehabilitation Service

Planning for the portions of the Needs Assessment that focused on CYSHCN began in the summer of 2008. ADRS entered into agreements with Family Voices of Alabama (FVA) and the University of Alabama at Birmingham's (UAB's) School of Public Health to assist with the process. A leadership team selected by CRS directed these early planning efforts. Members of this team included the Director of the CSHCN Program, the coordinator of the CYSHCN portions of the Needs Assessment, the CRS State Parent Consultant/FVA Co-Coordinator, a CRS Local Parent Consultant, the CRS Audiology Program Specialist (who has a particular interest in MCH), and a professor from the UAB's School of Public Health.

As previously stated, CRS convened the CRS Advisory Committee, which met two times in 2009 (February and December) to assist CRS in planning and implementing the CYSHCN portion of the 2009-10 Needs Assessment, as well as with analyzing and prioritizing the results. Updates were also sent to the committee members at strategic points during the process. Members of the CRS Advisory Committee included representatives from other State agencies and providers critical to the system of care for CYSHCN, CRS administrative staff, members of the CRS Youth Advisory Committee, and parents of CYSHCN. The total membership of the Committee was 65, with about half of those attending the in-person meetings. With the input and varied expertise of the various stakeholders in the group, CRS analyzed existing secondary data and gathered quantitative and qualitative data to determine the priority needs of Alabama's CYSHCN. Secondary data were obtained from Federal, State, and local sources and included analysis of Alabama results from the National Survey of CYSHCN, 2005-2006 and

the NSCH, 2007. Primary data were collected using three distinct methodologies, discussion of which follows.

Focus Groups Concerning CYSHCN

Qualitative and quantitative data were gathered from the family, youth, and key State-level stakeholders' perspective through a series of focus groups held throughout the State at varying times and days of the week to accommodate family and youth schedules. Four family focus groups were held July through September 2009 at sites throughout the State. Focus groups were located in Huntsville, Birmingham, Tuscaloosa, and Jackson. One of the four groups (Birmingham) was conducted in Spanish. The youth focus group was held in June in Montgomery. The focus group for key State-level stakeholders was held in September, also in Montgomery. All sites were accessible public facilities, such as community meeting centers, churches, libraries, and local business establishments. The focus groups were hosted by FVA, which also provided refreshments, reimbursements for transportation and child care, and an advisory honorarium for participants. The logistics of the focus group, recruitment of participants, and facilitation of the sessions were coordinated through the MCH Department of UAB School of Public Health. A professor conducted the focus groups for English-speaking families and those for key State-level stakeholders and youth, while a doctoral student in the program facilitated the session for Spanish-speaking families. The UAB facilitators compiled a written summary report of findings from the family and youth perspective, including information from the focus groups and surveys. CRS held open family forums as a part of the 1999 MCH needs assessment methodology and added a youth forum and a forum conducted in Spanish language for the 2004-05 Needs Assessment. For the 2009-10 Needs Assessment, a session for key State-level stakeholders was added, and a shift was made to more formal focus groups instead of open forums. This shift allowed recruiting efforts to assure broader representation across socioeconomic, geographic, and disability-type variables as well as to reach out to families and youth not enrolled in CRS.

Surveys Concerning CYSHCN

Qualitative and quantitative data were gathered from the perspective of families of CYSHCN, youth with special health care needs, and county-level providers of care for CYSHCN through three separate surveys. The surveys for providers and for youth were modified from survey tools used in previous MCH needs assessments (providers in 1994, 1999, and 2004; youth in 2004) to facilitate analysis and comparison over time. The survey for families of CYSHCN was a new methodology. A fourth survey was originally planned, targeting medical and allied health providers for CYSHCN across the system of care in the State. However, many of those potential target providers participated in a county-level provider survey (Service Providers for CYSHCN Survey) through their contacts with local CRS offices. This local connection increased the response to the Service Providers for CYSHCN Survey, in part due to the established working relationships developed by local CRS staff. It did, however, tap into the target population for the planned fourth survey, envisioned to be a broader assessment of system-of-care issues from the perspective of this population. This significant overlap led CRS's leadership team to conclude that this fourth survey should be abandoned. In hindsight, had CRS planned to collapse these two surveys (the Service Providers for CYSHCN Survey and the latter, abandoned survey), CRS would continue to coordinate outreach efforts at the local level, given the established relationships, but the following adjustments would have been made: 1) The Service Providers for CYSHCN Survey tool would have been modified to include broader system-of-care issues in addition to its current content, 2) the methodology would have been expanded to allow electronic participation, and 3) all surveys would have been counted separately instead of collated into a response for the county.

CYSHCN Family Survey
The family survey conducted by CRS (CYSHCN Family Survey) was adapted based on research of tools utilized in other settings and mirrored questions from the Service Providers for CYSHCN Survey and the National Survey of CSHCN, 2005-06. The tool was piloted by CRS Local Parent Consultants and two to three Local Parent Advisory Committee members in each district. Modifications were made to the instrument based on feedback from the pilot group. Surveys were conducted in May through September of 2009. This survey was available via paper copy or electronic link using SurveyMonkey and was presented both in English and Spanish versions. Outreach was done using established listserv groups, a Facebook group, email, links on partner web sites, columns in newsletters, paper copies in the 15 CRS community-based offices and other locations frequented by families of CYSHCN, and postcards. Data gathered through the CYSHCN Family Survey included basic demographics and information on need for, receipt of, and satisfaction with health and community-based services; on perceived barriers to care; on medical home; on transition services; and on informational needs. There were a large amount of missing data for certain questions; however, lack of resources prevented follow up with respondents to clarify skipped questions and/or inconsistent responses. There were 1,103 surveys submitted, combining English and Spanish responses and both electronic and paper-copy submissions. A response rate of 39.3 percent was calculated from the hard copy results, though this is likely an underestimate as a partner agency printed additional surveys to use with their activities and CRS was unable to determine how many of these were unused. There were responses from at least one family living in each of Alabama's 67 counties. Results will be considered as a baseline for the next needs assessment cycle and any interim updates.

Youth Survey
CRS's youth survey (Youth Survey), first fielded in 2004, was adapted from a tool created by the North Carolina Title V Program as a part of their 1999 needs assessment process. The tool was modified for use in Alabama during 2004 and then again for 2009. The target population for 2009 consisted of 12-25 year-old youth with special health care needs. Surveys were conducted from May through September 2009. This survey was available via paper copy or electronic link using SurveyMonkey and was presented both in English and Spanish versions. The 2004 Youth Survey was available in paper, English version only. Outreach was done using established listserv groups, a Facebook group, email, links on partner web sites, columns in newsletters, paper copies in the 15 CRS community-based offices and other locations frequented by youth with special health care needs, and postcards. Data gathered through the Youth Survey included basic demographics and information on health and receipt of health care, transition, activities, future plans, and informational needs. There were 336 surveys submitted, combining English and Spanish responses and both electronic and paper-copy submissions (up from 229 in 2004). A response rate of 37.2 percent was calculated from the paper-copy results. There were responses from youth living in 57 of Alabama's 67 counties. Results were compared with the information obtained from the 2004 survey.

County-Level Service Providers for CYSHCN Survey
The Service Providers for CYSHCN Survey was first fielded in 1994 as a county assessment tool used in the MCH needs assessment (then conducted by UAB School of Public Health). This tool was used in the 1999, 2004-05, and 2009-10 MCH Needs Assessments, with modifications to better match the system of care for CYSHCN at those times. Data gathered through the Service Providers for CYSHCN Survey included information on the availability of health and community-based services within the county or in an adjoining county and on perceived barriers to care. The availability information assisted CRS in assessing the State's capacity to provide direct, enabling, population-based, and infrastructure-building services. Surveys were conducted from April through July 2009. CRS staff facilitated respondents'

completion of the survey through meetings with partner agencies in the counties, phone calls, faxed or emailed surveys to local contacts, and other solicited input. This broad directive for survey completion methodology allowed offices to manage this task in a way that best fit the local area; however, it also created some issues in counting respondents by county and in tallying information. There were 501 respondents counted across all counties, with results collated and/or averaged by CRS local staff to form one entry for the county. Commonly cited participants included representatives from ADPH, the State Department of Human Resources, the State Department of Mental Health, Alabama's Early Intervention System, local Boards of Education, and the juvenile justice system. Provider types included special education teachers, school nurses, probate judges, physicians, dentists, social workers, nurses, nutritionists, physical therapists, occupational therapists, and speech therapists. This survey was available via paper copy only. (A PDF of the survey was available for electronic mailing to participants who asked to download the survey and fax it back to local offices.) Follow up was conducted with CRS local staff for clarification and to address missing information. The responses were stored in a Microsoft Access database, and results were analyzed using both Microsoft® Access and Microsoft® Excel software. Results were compared with the information obtained from the 1994, 1999, and 2004 surveys.

Key Informant Interviews: CRS

Quantitative and qualitative data were also gathered from the perspective of key informants for each county. Following analysis of the Service Providers for CYSHCN Survey, CRS determined that gaps existed in the data and that additional clarification would be helpful in determining priority needs. To that end, a three-question interview was developed with input from UAB School of Public Health. Data gathered included assessments of the level of burden or difficulty faced by families living in the county in obtaining health and community-based services, the effectiveness of the overall system of care for CYSHCN and families in the county, and the three greatest service needs in the county. CRS District Supervisors and Office Coordinators were selected as key informants as they were considered experts in either providing or directing the provision of services for CYSHCN and families in each county. The results assisted CRS in assessing the State's capacity to provide direct, enabling, population-based, and infrastructure-building services. The responses were stored in a Microsoft® Access database and results were analyzed using both Microsoft® Access and Microsoft® Excel software.

Methods for Assessing State Capacity

As depicted in Figure 1.1, examining MCH capacity is the third component of the cyclical needs assessment process: occurring after assessment of needs and before the selection of priorities. Accordingly, prior to assessing capacity, State Title V staff completed the data collection component and much of the data analysis component of the 2009-10 Needs Assessment. Available findings from the analyses, as well as general perceptions regarding MCH capacity, were considered as the Leadership Team developed potential MCH priority needs.

However, according to MCH Block Grant Guidance,[1] discussion of MCH program capacity is to specify priority state concerns. As well, the Family Health members of the Leadership Team felt that the State's Title V Program should particularly focus on capacity to address the potential MCH priority needs that were highly ranked by Family Health's MCH Advisory Group or CRS's Advisory Committee. For this reason and because of limited staffing resources, completing the formal, systematic assessment of MCH capacity was delayed: until each organization had presented key Needs Assessment findings and potential MCH priority needs to its advisory group and obtained feedback from its advisory group.

Specifically, in November 2009, Family Health Services presented its then available, key Needs Assessment findings and potential MCH priority needs to its MCH Advisory Group and obtained input from the group concerning priorities. Similarly, CRS presented its key Needs Assessment findings and potential MCH priority needs to the CRS Advisory Committee and obtained input from the committee about potential priorities concerning CYSHCN. This input was considered as described earlier and in Section 5. Subsequently, examination of capacity was completed in early FY 2010, as described in Section 4.

Assessment of State capacity was jointly spearheaded by the two Needs Assessment Coordinators (one from Family Health Services and one from CRS). Assessment of capacity to address the 10 MCH priority needs that were selected during the Needs Assessment was organized around two grids developed by the MCH Epi Branch: the *Population and Pyramid Level Grid* (Worksheet 1) and the *MCH Capacity Grid* (Worksheet 2, which was adapted from two sources cited below). Worksheet 1 was developed in order to comply with MCH Block Grant Guidance[1] instructions to describe program capacity according to service levels depicted in the MCH Pyramid. Information from two sources was utilized in developing Worksheet 2: 1) material presented by Dr. Donna Petersen at a February 2009 technical assistance meeting on Title V needs assessment[10] and 2) materials produced by the Capacity Assessment for State Title V (CAST-5) Project, which was a joint initiative of the John Hopkins Women's and Children's Health Policy Center and the Association of Maternal and Child Health Programs.[11] These worksheets, as completed by Family Health and CRS, are located in Section 4. Any capacity assessment that the aforesaid grids did not cover was done by the two Needs Assessment Coordinators, in consultation with key staff from their respective organizations. Specific ways that the two Needs Assessment Coordinators obtained input when assessing capacity follow. Findings from their assessment of capacity are detailed in Section 4.

Methods for Assessing Capacity: Family Health Services

Family Health's Needs Assessment Coordinator completed the *Population and Pyramid Level Grid* and the "Identified Needs" column of the *MCH Capacity Grid* (Worksheets 1 and 2 in Section 4). Then, in early 2010, she convened a meeting of several Family Health Services' administrators: the Bureau Deputy Director, the Director and Assistant Director of the Children's Health Division, the Director and Assistant Director of the Women's Health Division, the Assistant Director of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Division, the Director of the Perinatal Program, and Family Health's Dental Education Consultant. At the meeting, after agreeing on the seven priorities selected by Family Health, attendees jointly developed tentative scores for one of the priority needs selected by Family Health, as a way of familiarizing attendees with the process. The group then agreed on who would take the lead in assessing capacity to address each of Family Health's seven newly selected MCH priority needs: which entailed completing Worksheet 2 for that priority and writing supporting narrative. Following the meeting, each assignee submitted his or her supporting narrative to MCH Epi Branch staff, who integrated the several narratives into a discussion (located in Section 4) of Worksheet 2. As well, the branch's staff contacted ADPH's Nutrition and Physical Activity Division (located in the Bureau of Professional and Support Services) for broader input concerning the capacity to address obesity.

Methods for Assessing Capacity: Children's Rehabilitation Service

The final CRS Advisory Committee meeting occurred in December 2009, focusing on a presentation of the analyzed data and a discussion of priority needs for CYSHCN. All eight CRS District Supervisors participated in this final meeting. Attendees were randomly divided into small groups to consider a list

of suggested priority needs and were allowed to add or alter based on their interpretation of the information presented. While in small groups, facilitators led discussions about the information and instructed members to select the top five priority needs for CYSHCN. A second ranking process was then facilitated, such that members ranked those top five priority needs according to their assessment of the feasibility of addressing that need [that is (i.e.), how likely it was that the State CSHCN program and the State system of care for CYSHCH could implement activities to address each proposed need]. Results were tallied for each group and then presented back to the assembled committee prior to the end of the meeting.

CRS State Office administrative staff, including the State Parent Consultant, and all eight district supervisors (CRS Administrative Team) participated in a follow-up meeting to review the input of the committee and their thoughts on the needs assessment data. The requirements for MCH Block Grant reporting, the six National Performance Measures for CYSHCN, and information concerning the development of performance measures were also discussed. The group sought to reach consensus on the top priority needs for CYSHCN in the State that CRS has the mission and the capacity to address. Based on the data gathered through the Needs Assessment process, available resources, input from the CRS Advisory Committee, and content areas of the National Performance Measures, the group identified three priority needs for further development and planning. Two of these three identified priority needs were re-worded from those presented to the advisory committee to be more inclusive and allow activities that more broadly addressed several separate potential needs, while the third was selected as it was originally written. Three State-negotiated performance measures were drafted, including appropriate measurement strategies. The priority needs and draft measures were then electronically sent back to the CRS Administrative Team for final comment and approval. Annual targets for the upcoming 5-year period were set, and annual plan activities were drafted to address the existing National and new State Performance Measures. The new priority needs, National and State Performance Measures, and annual plan activities were presented to the State Parent Advisory Committee.

Data Sources

Data sources have been detailed earlier. A recap follows.

Data Sources: Family Health Services

Data Sources Utilized: Family Health

Family health sources utilized the following data sources:

- Existing (secondary) data.
  - PRAMS, a CDC-supported mail survey of new mothers with telephone follow up for non-respondents.
  - Child death review database, collected and maintained by the Child Death Review Program, administratively located in Family Health Services.
  - The NSCH, sponsored by MCHB.
  - YRBSS, a school-based survey conducted by CDC and state, territorial, and local entities.
  - Census reports and spreadsheets, provided by the U.S. Census Bureau.
  - Vital statistics databases, collected and maintained by the Health Department's Center for Health Statistics.

- Newly collected (primary) data.

- Key informant interviews, conducted by Family Health Services.
- Web-based surveys, conducted by Family Health Services.
  - ✓ Healthcare Providers Survey.
  - ✓ MCH Organizations Survey.
  - ✓ Family Survey.
- Focus groups.
  - ✓ Eight conducted by Family Health Services.
  - ✓ Two, focusing on Latinas, conducted by the Health Department's Office of Minority Health.

Limitations and Strengths of Data Sources: Family Health

A single database rarely provides a comprehensive picture. Limitations and strengths of the secondary data sources mentioned above are described in various literature or web postings about these databases, so are not discussed here.

Family Health's databases were developed for specific purposes and, in some cases, specifically for the 2009-10 Needs Assessment. Limitations and strengths of these databases are not thoroughly described in widely available literature, so are discussed here.

As discussed earlier, the Child Death Review Program is designed to review all unexpected deaths of children in Alabama from birth through 17 years of age. Accordingly, the program's database does not capture, nor is it intended to capture, all deaths from birth through 17 years of age. As also mentioned earlier, fewer than 100 percent of the cases assigned for review are reviewed by local teams and, since reviews are time consuming, findings from child death review lag behind findings from vital statistics files by 1 or 2 years. Nevertheless, the child death review process yields information that is not available from death certificate files, so is a very important part of needs assessment.

The key limitation of primary data collected by Family Health Services for the Needs Assessment is that no single database is a representative sample of targeted MCH stakeholders. That is, the key informant interview respondents, web-based survey respondents, and focus group discussants did not respectively constitute a random sample of the target population. However, as shown in the earlier description of methods for these data collection efforts, when taken together, the primary data collected for the Needs Assessment cover a variety of MCH stakeholders: including healthcare consumers, as well as persons serving MCH Program populations and their families. Precise comparison of any one of the aforesaid primary datasets to the target population for that dataset was not feasible. However, a few relevant comparisons follow.

As shown in Table 1.22, the geographic distribution of respondents to the Healthcare Providers Survey, as measured by perinatal region, was similar to the distribution of Alabama residential live births. On the other hand, the corresponding distribution of respondents to the MCH Organizations Survey notably differed from that of live births and that of respondents to the Healthcare Providers Survey. Specifically, Region 5 was apparently overrepresented, and Regions 3 and 4 were apparently underrepresented.[a] The geographic distribution of respondents to the Family Survey very roughly approximated that of live births, but Region 5 was apparently somewhat overrepresented and Region 4 somewhat underrepresented.[a]

[a] These inferences rest on the assumption that the distributions of persons targeted for the respective surveys were roughly similar to the distribution of Alabama residential live births.

Table 1.22. Geographic Distribution of Alabama Residential Live Births Compared to Distribution of Respondents to Web-Based Surveys

Perinatal Region	Percent Falling Within the Specified Perinatal Region			
	Distribution of Residential Live Births, Alabama, 2008*	Distribution of Respondents to Healthcare Providers Survey, Alabama, 2009¶	Distribution of Respondents to MCH Organizations Survey, Alabama, 2009T	Distribution of Respondents to Family Survey, Alabama, 2009Y
1	19.6 %	20.9 %	19.3 %	16.7 %
2	7.7 %	9.9 %	6.6 %	9.0 %
3	34.4 %	30.2 %	27.9 %	38.8 %
4	15.5 %	15.9 %	8.3 %	7.4 %
5	22.8 %	23.1 %	37.9 %	28.1 %

*Per mother's residence
¶From Table 1.2
TFrom Table 1.5
YFrom Table 1.10

The geographic distribution of respondents to the Family Survey did not strikingly differ from that of live births. However, compared to referents for the State as a whole, respondents to the Family Survey were more likely to be White, more likely to be married, tended to have more formal education, and tended to have higher household incomes. Specifically, using available findings for the State as a whole, rather than precisely comparable data:

- 83 percent of the respondents to the survey were White (Table 1.12). On the other hand, per Census estimates for 2008, 68 percent of 15-44 year-old Alabamians were White.[12]

- 83 percent of respondents were married, and 17 percent were single (Table 1.13). On the other hand, per Census Bureau data for 2000, 30 percent of Alabama residents aged 0-19 years lived in households headed by a single parent.[13]

- For educational comparisons made here, the referent population is composed of Alabama mothers giving birth to a live-born infant in 2008.[a] Only one (0.2 percent) of the respondents had less than a high school education (Table 1.14), whereas 22 percent of the referent population had completed fewer than 12 years of school. Forty-two percent of respondents had completed a 4-year college degree, whereas only 13 percent of the referent population had completed 16 years of education. Twenty-two percent of the respondents had completed a master's degree, a doctoral degree, or another advanced degree, whereas only 9 percent of the referent population had completed 5 or more years of post-high school education.

- 68 percent of respondents had annual household incomes of $50,000 or above (Table 1.15). In contrast, in 2008, only about 50 percent of Alabama families had household incomes at or above around $48,000.[b]

[a] Here, the percentages stated for the "referent population" pertain to the maternal education among mothers of babies born alive to Alabama residents in 2008. Mothers of twins, triplets, etc. were counted more than once.

[b] Specifically, per the American Community Survey for 2005-2007, the median family income in the past 12 months, per 2007 inflation-adjusted dollars, for Alabama families was $47,910.

Collectively, the eight focus groups included persons of childbearing age, including youth, and beyond (Table 1.17); were racially diverse (Table 1.18); and reached both lower income and higher income households (Table 1.21). The number of lower income households represented was about five fewer than intended, however, because no one from one of the target groups (women seen at a family planning clinic in a local health department) joined the group.[a] The two Latino focus groups, held in addition to the eight other groups, provided ethnic diversity. Also, one of the eight focus groups included Native Americans.

As was true for the 2004-05 Needs Assessment, the 2009-10 Needs Assessment lacked data on homeless persons in Alabama. One effort to involve the homeless occurred circa 2007, when promotional items (knapsacks with smaller items inside—each telling how to contact Family Health Services) were given to a local shelter for the homeless, but no identifiable responses to that outreach occurred. As well, the director of one organization serving the homeless was invited to be a key informant during the 2009-10 Needs Assessment, but did not reply to repeated invitations. Family Health Services will consider contacting one or more individuals who directly serve or advocate for the homeless in the future, in an effort to determine if the State MCH Program can better serve homeless individuals.

To recap the limitations and strengths of databases utilized by Family Health, no single primary database represented all stakeholders well. However, with the exception of homeless families, the several secondary databases and the several primary databases collectively provided a comprehensive picture of health-related issues concerning the first two federally defined MCH Program populations and their families. A description of data sources concerning the third population, CYSHCN, follows.

Data Sources: Children's Rehabilitation Service

Limitations and Strengths of Data Sources: CRS

The weaknesses in CRS's Needs Assessment process were largely due to resource limitations or unexpected methodology issues and included:

- Difficulty in tallying results and counting respondents to the Service Providers for CYSHCN Survey due to differing methodologies of collection.
- Limitation to one Latino and youth focus group, respectively.
- The inability to obtain wider participation in the CYSHCN Family Survey and the Youth Survey from respondents who were not enrolled in the State CSHCN Program, so that results could be more generalized to all youth with special health care needs and families of CYSHCN in the State.
- Lack of resources to follow up with CYSHCN Family Survey participants to clarify skipped questions and/or inconsistent responses.

The strengths of the methodology utilized in CRS's component of the 2009-10 MCH Needs Assessment included:

[a] The meeting was held on site following the clinic appointments of the invited participants. Health Department staff had personally invited individuals; and two or more of the invited individuals had agreed to come but, perhaps partly due to inclement weather, did not join the focus group. One low-income female did join the "group," however, and clearly articulated her views.

- The collaboration of families and other key stakeholders in developing methods.
- The assurance of input of key stakeholders in the process, including families, youth, and providers.
- The addition of a CYSHCN family survey, in an effort to obtain wider family input than from forums or focus groups alone.
- The use of focus groups instead of forums to better target participants and increase generalizability of results across the State (to various socioeconomic groups, various types of disability, and participants not enrolled in the State CSHCN Program).
- The utilization of a similar Service Providers for CYSHCN Survey in 1994, 1999, and 2004 for comparison over time.
- The widespread participation and interaction of partner agencies in the completion of the Service Providers for CYSHCN Survey to generate a more accurate picture of the services available and the barriers to care in each county.
- The ability to compare information between providers and families—services, barriers, and needs.
- Information received from all surveys is a good representation of the State (respondents from most to all counties)—for families, youth, and providers.
- The addition of electronic media as an option to complete the CYSHCN Family Survey and the Youth Survey.
- The use of electronic outreach methods including email, listservs, and Facebook.
- The addition of offering surveys in Spanish to increase cultural competence in general, as well as the increased outreach to the Latino community.
- The addition of a key State-level stakeholder focus group.

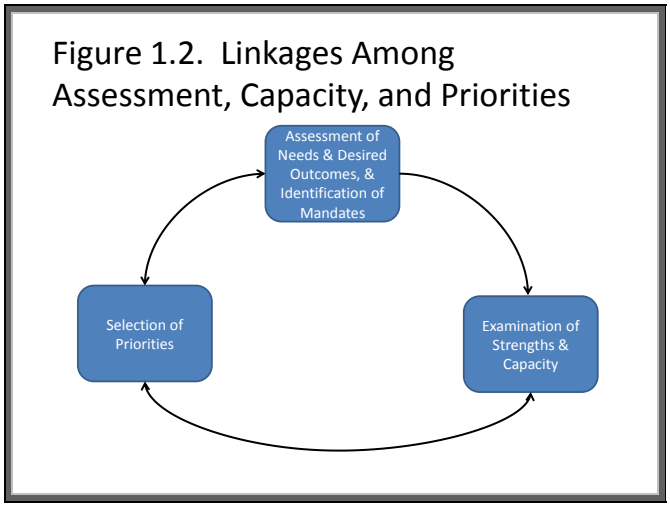
Linkages Among Assessment, Capacity, and Priorities

The specific ways that Family Health Services and CRS linked assessment of needs, assessment of MCH capacity, and selection of MCH priorities is discussed earlier in this section, under "Methods for Assessing State Capacity."

Conceptually, Figure 1.1, which is from the MCH Block Grant Guidance,[1] shows the needs assessment process as being cyclical: with assessment being step 2, examination of strengths and capacity being step 3, and selection of priorities being step 4. In our experience, however, the linkage between selection of priorities and each of the other two components is bidirectional. This bidirectional concept is depicted in Figure 1.2. An example of this bidirectional linkage follows, based on Family Health's experience. As previously stated, Needs Assessment findings that were available by January 2010 fed into both the selection of priorities and the examination of capacity. As detailed in Section 5, during the final selection of MCH priority needs, Family Health considered replacing its potential priority need to "assure appropriate primary care" with a priority concerning promotion of access to medical homes.

Before Family Health staff made this revision, however, their Needs Assessment Coordinator ascertained that a database was available to track progress in promoting access to medical homes for adult females of childbearing age. (Databases for tracking this indicator among children and youth were already known.) Though findings concerning medical homes for adult females are not presented here, they will be tracked as part of ongoing needs assessment. Findings concerning medical homes for children and youth are presented in Section 3. In other words, the selected priority concerning medical homes feeds into needs assessment content. Further, as discussed in Section 4, each selected priority became part of the framework for examining capacity.

On the other hand, Figure 1.2 depicts the relationship between assessment of needs and examination of strengths and capacity as unidirectional, rather than bidirectional. This is so because lack of capacity to address a priority need well does not discount the value of identifying potential priorities and mandates via the needs assessment process.



The CRS Advisory Committee and the CRS Administrative Team were vital links in the assessment of strengths and needs of CYSHCN and their families, as well as in prioritizing needs. The advisory committee considered the capacity of the State CSHCN Program and the State system of care in general in ranking priority needs. The CRS Administrative Team used this information to narrow down to three priority needs, to develop State Performance Measures, and to identify activities toward meeting established goals.

Dissemination of Findings

The overall strategy for disseminating findings from the 2009-10 Needs Assessment is to:

- Make the full report available to those who may wish to review a detailed description of methods, findings, and/or other aspects of the Needs Assessment.
- Using the full report as a reference, develop and disseminate relatively brief, reader-friendly reports that highlight MCH priority needs and key findings from the Needs Assessment.
- Disseminate the full report and the relatively brief reports via the State's MCH web page.

The underlying rationale for the above strategy follows. As stated earlier, one purpose of the full Needs Assessment report is to document the process and findings, and another is to provide a reference for ADPH staff and for MCH stakeholders who seek detailed information on the process or findings. Further, another purpose of the full report is to meet Federal reporting requirements: which, as described in the MCH Block Grant Guidance,[1] involve many, wide-ranging topics and a specified order. Achieving these aforesaid purposes is critical, but results in a lengthy document that many stakeholders may not have the time to review thoroughly.

Therefore, as also stated earlier, Family Health Services and CRS plan to use the full Needs Assessment report as a reference for preparing brief, user-friendly reports tailored to specific readerships. For example, one report could focus on pregnancy and infancy, another on the general population of children and youth, and another on CYSHCN. Further discussion of Family Health's and CRS's respective plans for disseminating findings from the 2009-10 Needs Assessment follow.

Dissemination of Findings: Family Health Services

One way that Family Health will disseminate the full report and any ensuing brief reports on the 2009-10 Needs Assessment will be to post the report(s) or links to the report(s) on the Health Department's MCH Services web page. As well, the full Needs Assessment report and any ensuing brief reports will be made available to SPAC, provided to any members of stakeholder groups (discussed earlier in this section) who requested copies, and offered to Family Health staff who may wish to disseminate the reports as they network with other organizations. For example, pursuant to previous collaboration, a copy of the full report will be provided to the Medical Director of Alabama Medicaid's Office of Clinical Standards and Quality. Whenever feasible, dissemination of reports will be by electronic means. However, a few paper copies of the full report and any brief report(s) will be made available and distributed as feasible. Also, if requested, slide presentations will be provided to such groups as SPAC, university student classes, etc.

The number, nature, and timing of brief reports by Family Health Services that draw from the full Needs Assessment report will depend on: 1) staffing resources available to the MCH Epi Branch, which has coordinated Family Health's components of the Needs Assessment; 2) the degree to which other Family Health staff utilize findings from the Needs Assessment as they network with external organizations; and 3) competing priorities.

Dissemination of Findings: Children's Rehabilitation Service

Notices of the completion of the Needs Assessment and key findings pertinent to CYSHCN have been shared via an article in the CRS Parent Connection newsletter. This article was sent to all CRS Advisory Committee members so they can disseminate information from the article via their electronic listservs, web sites, and newsletters. A report on the CYSHCN portions of the Needs Assessment is available for review in local CRS offices, as well as on ADRS's web site, and has been shared with all CRS Advisory Committee members. An executive summary will also be prepared, in conjunction with UAB and FVA. This document will be made available in a similar fashion. Both the report of the CYSHCN portions of the Needs Assessment and CRS's executive summary are available upon request. Each is clearly marked as "DRAFT" and as an "EXCERPT" from the entire submission from Alabama. A presentation of key findings for the CYSHCN population was given to the State Parent Advisory Committee, as well as local CRS staff. This presentation was made available to Local Parent Consultants so they could host Local Parent Advisory Committee meetings related to this topic. Notices of availability for the full Needs Assessment report will be made once the links are posted on MCHB's web site.

Strengths and Weaknesses of the Process

Overall, the chief strengths of the process were the:

- Involvement of stakeholders.
- Use of multiple, existing databases that collectively covered all three MCH Program populations and a variety of issues.
- Development and analysis of new databases, which collectively represented all three MCH Program populations, covered a variety of issues, and provided diverse public input.
- Utilization of quantitative and qualitative data.
- Detailed documentation of methods, including strengths and limitations of databases.
- Careful analysis of data, with findings presented in Section 3.

Except for data analysis and findings, all of the preceding components of the process have been detailed earlier in this section.

Most of the "weaknesses" of the Needs Assessment process are unavoidable limitations or challenges that were imposed by available databases, dollars, staff hours, and time. The involvement of stakeholders, use of multiple existing and newly collected databases, detailed documentation of methods, and careful analysis of data constitute major strengths of the process. A major challenge is the successful linkage of MCH priority needs, allocation of resources, and action plans. Nevertheless, the Needs Assessment process has provided a current, panoramic picture and a knowledge base to build upon in the future.

State MCH Program staff view most of the "weaknesses" (a term used in the MCH Block Grant Guidance[1]) of the process as unavoidable limitations or challenges that were imposed by available databases, dollars, staff hours, and time. Limitations of particular databases—both those used by Family Health and by CRS—have been detailed earlier in this section. As well, CRS experienced unexpected methodological issues, which have also been detailed earlier.

<u>One particular weakness concerning populations represented is evident: the lack of input from the homeless population or from a group advocating for the homeless.</u> This lack and Family Health's unsuccessful attempts to remedy it have been discussed earlier in this section. Additionally, two of the research suggestions made by three of the 20 stakeholders that Family Health emailed in April 2009 could not be implemented due to database limitations and time constraints. These suggestions pertained to methamphetamine use and to knowledge level concerning community resources available to maternal and child populations. Although methamphetamine use *per se* could not be studied during the Needs Assessment, drug- and alcohol-related deaths in youth were studied, and various drug-related indicators from the YRBSS were reviewed.

<u>A major overall challenge is the successful linkage of MCH priority needs, allocation of resources, and action plans</u>. Due to the time required to analyze data, present findings to stakeholders (the MCH Advisory Group and the CRS Advisory Committee), and obtain and analyze input from stakeholders, MCH priority needs could not be finalized until early CY 2010. From Family Health's perspective, this

time frame, coupled with concurrent reporting and analytic responsibilities,[a] left insufficient time to fully fully translate Needs Assessment findings and Family Health's seven MCH priority needs into decisions about allocation of resources and development of an action plan. However, as previously discussed, each checklist-based State Performance Measure constitutes a rudimentary action plan. Further, by early FY 2011, the Leadership Team will determine how the MCH priority needs should affect allocation of resources and be translated into action. Another major challenge, discussed earlier in this section, is the development and dissemination of relatively brief reports or presentations that would appeal to particular readerships or audiences.

Nevertheless, Family Health Services and CRS believe that the strengths of the 2009-10 Needs Assessment process outweigh the aforesaid limitations, weaknesses, and challenges. The methods, data sources, and collaborations that comprised the Needs Assessment process collectively provided a panoramic, current picture of the needs of maternal and child populations residing in Alabama. This picture has enabled Family Health Services and CRS to select priority needs in an evidence-based manner, and provides a knowledge base that both organizations look forward to building upon through ongoing needs assessment.

[a] Concurrent reporting and analytic responsibilities, all performed or coordinated by the MCH Epi Branch, are: the full, stand-alone report of the 2009-10 Needs Assessment, the *MCH Services Block Grant Fiscal Year 2009 Annual Report/Fiscal Year 2011 Application*, and the SSDI 2011 Application and associated data linkage and analysis.

SECTION 2

Partnership Building and Collaboration Efforts

Preview: Section 2

In order to accomplish their missions, Family Health Services and CRS have partnered with many programs on a variety of issues. These programs included other MCH programs, other HRSA programs, other Health Department programs, other governmental agencies, and private organizations. Some of these entities were represented on the MCH Advisory Group and/or the CRS Advisory Committee. The purposes of specific partnerships have varied, but include assessment of capacity and/or implementation of activities to help meet important MCH needs.

Collaboration Between Family Health Services and CRS

In Alabama, the Title V MCH Program is administered by the Health Department, through Family Health Services. Family Health does not directly administer aspects focusing on CYSHCN, but contracts with CRS, which administers services to this population. Given this relationship and organizational model, CRS performs needs assessment for Alabama's CYSHCN. Family Health and CRS collaborated extensively throughout the Needs Assessment process.

Family Health and CRS collaborate on a variety of other issues as well. For instance, CRS serves on the Alabama Newborn Screening Advisory Committee that is convened by Family Health and on the State Newborn Hearing Screening Advisory Committee, a subcommittee of the preceding committee. Additionally, Family Health and CRS alternately host inter-agency MCH meetings that occur three times a year. A variety of disciplines and organizations are represented at these meetings.

Other Collaborations

Most of the discussion in this section focuses on certain partnerships, mainly of Family Health Services and sometimes of CRS, with a variety of organizations. To avoid undue duplication, discussion here is generally limited to partnerships that are not fully discussed in other parts of the Needs Assessment Report or in Section III.E of the *2009 Report/2011 Application*. The collaborations discussed here include partnerships with a variety of MCH programs, certain HRSA programs, other ADPH programs, and several other private and public organizations.

Results, Strengths, and Weaknesses of Collaborative Efforts

Overall strengths and weaknesses of the 2009-10 Needs Assessment process are described in the conclusion to Section 1. As stated in the conclusion to Section 2, the MCH Advisory Group, CRS's Advisory Committee, and other partnerships described in Section 1 or Section 2 collectively comprise a dynamic, effective, and crucial part of the State's infrastructure for performing the core public health functions of assessment, policy development, and assurance.

Partnerships and Collaboration

In accordance with Federal guidance for this needs assessment report, "formal and informal collaboration processes and partnerships"[1] for the purpose of needs assessment have been discussed in Section 1. The collaborative processes described in Section 1 focused on collecting and analyzing quantitative and qualitative data, reporting and considering findings, and selecting and identifying MCH priority needs. General capacity to address needs was considered as the priority needs were selected, but assessment of capacity will continue as feasible, via collaborations within Family Health Services, collaborations among various Health Department units, and collaborations with external entities. Some MCH Advisory Group members will be invited to provide further comment as part of ongoing needs assessment. Discussion of overall strengths and weaknesses of the 2009-10 Needs Assessment process is located in Section 1.

Here in Section 2, additional partnerships of Family Health Services and/or CRS with other entities are discussed. Partnerships and collaborations discussed in Section 2 often included some components of the 2009-10 Needs Assessment, but were not developed for the specific purpose of a comprehensive, statewide needs assessment. These partnerships occurred in the context of Family Health Services and CRS seeking to accomplish their respective missions and identify and address MCH priority needs, rather than under an overall plan or method for partnering with particular programs.

In order to accomplish their missions, Family Health Services and/or CRS have partnered with many programs on a variety of issues. These programs included other MCH programs, other HRSA programs, other Health Department programs, other governmental agencies, and private organizations. (Many of these entities were represented on the MCH Advisory Group and/or the CRS Advisory Committee.) The purposes of specific partnerships varied, but often continue and include assessment of capacity and/or implementation of activities to help meet important MCH needs on an ongoing basis.

Discussion of some of these partnerships follows. Because many of the partnerships *preceded* formal identification of MCH priority needs through the 2009-10 Needs Assessment process, a given partnership does not necessarily address a specific priority need as formulated in Section 5. In the future, current partnerships will be enhanced as feasible to address newly identified priority needs. (Partnerships pertaining to specific priorities identified by Family Health Services are discussed in Section 4.)

Collaboration Between Family Health Services and Children's Rehabilitation Service

In Alabama, the Title V MCH Program is administered by the Health Department, through Family Health Services. Family Health does not directly administer aspects focusing on CYSHCN, but contracts with CRS, which administers services to this population. Given this relationship and organizational model, CRS performs needs assessment for Alabama's CYSHCN. As discussed in Section 1, Family Health's and CRS's respective Needs Assessment Coordinators collaborate with one another, and representatives from both organizations participated as part of the other organization's Needs Assessment advisory group. Further, the State Parent Consultant and a Local Parent Consultant for CRS were members of the MCH Advisory Group.

As well, the Needs Assessment Coordinators for Family Health Services and CRS collaborated in the preparation of the Needs Assessment Report. Specifically, CRS's Needs Assessment Coordinator wrote and submitted material pertaining to that organization's components of the Needs Assessment to Family Health's Needs Assessment Coordinator, who integrated CRS's material with Family Health's

material. The two coordinators collaborated with one another if any content-related issues arose as material was being integrated.

CRS serves as a member of the State Newborn Hearing Screening Advisory Committee, a subcommittee of the Alabama Newborn Screening Advisory Committee that is convened by Family Health. This group meets at least once a year to provide input to ADPH, the lead agency in Alabama for the Universal Newborn Hearing Screening Program. Member agencies meet throughout the year as the State Early Hearing Detection and Intervention Committee to address ongoing State needs. CRS also serves as the voice of CYSHCN and families on the State Newborn Screening Advisory Committee related to the implementation of expanded newborn screening, development of surveillance methods, and establishment of follow-up procedures. Family Health and CRS collaborated extensively with one another and many other organizations when conducting the Needs Assessment. These collaborations are detailed in Sections 1 and, with respect to selection of MCH priority needs, Section 5 of this report. For example, Family Health and CRS each convened an MCH advisory group or committee and collaborated with various organizations to hold focus groups around the State.

Family Health and CRS alternately host inter-agency meetings that occur three times a year. At these meetings, staff from Family Health Services, CRS, the Medicaid Agency, and several affiliates of UAB discuss MCH issues of interest. UAB affiliates represented at the meeting include the School of Public Health's MCH Program, the Children's Hospital of Alabama's Pediatric Pulmonary Center, the Leadership Education in Pediatric Nutrition Program (located in UAB's Department of Pediatrics), the Leadership Education in Child-Health Nursing Program (located in UAB's School of Nursing), and the MCH Leadership Education in Neurodevelopmental and Related Disabilities Program. The latter program is located in the Civitan-Sparks Clinics, which is a single organization that includes several clinics. The Civitan-Sparks Clinics serve individuals, including children and youth, with or at risk for developmental disabilities, as well as the families of these individuals. Other groups that participate in the inter-agency meetings include: FVA, Alabama's Early Intervention System, and Alabama State University's MCH Pipeline Training Program. The latter program seeks to promote the development of a culturally diverse and representative MCH workforce by training minority students in MCH, recruiting them into MCH careers, and retaining minority workers in MCH careers.

Collaborations with Other MCH Programs

The following discussion focuses on certain partnerships, mainly of Family Health Services but sometimes of CRS, with other organizations. To avoid undue duplication, this discussion is generally limited to partnerships that are not fully discussed in other parts of this document or in Section III.E of the *2009 Report/2011 Application* (exceptions are noted).

Teen Pregnancy Prevention

The Health Department's teen pregnancy prevention programs are administratively located in Family Health Services' Division of Children's Health. The Director and Assistant Director of this division are members of the Leadership Team, the MCH Advisory Group, and Family Health's Management Team. The division's Adolescent and School Health Program has formed partnerships with the UAB School of Public Health and Leadership Education in Adolescent Health program, the Action for Healthy Kids initiative, and the Campaign to Prevent Teen Pregnancy. Adolescent and School Health Program staff work with schools, parents, and community groups to promote healthy adolescent choices by providing resources and presentations to parents and educators to promote positive youth development. As well, the director of the program collaborates with community action groups to analyze data trends regarding adolescent risk behaviors.

Maternal and Infant Programs

Issues pertaining to maternal and infant health are addressed through the Perinatal Program, which is administered through Family Health Services. The Director of the Perinatal Program serves on the Leadership Team. As well, at the meeting of the MCH Advisory Group, she presented during the plenary session and facilitated a breakout group.

Family Planning

Family Health Services administers the State's federally funded Title X Family Planning Program. The Director of this program also directs the Women's Health Division, one of Family Health's five divisions. In this capacity, she is a member of Family Health's Management Team and the MCH Advisory Group—both of which have provided opportunity for involvement in the selection of MCH priority needs.

Family Health's Plan First Manager participates on the Quality Assurance Board of the Gift of Life, a Medicaid Maternity Care Program that provides services and education to pregnant women in 20 Alabama counties. (Plan First is the Family Planning Medicaid Waiver.) Women who reside in one of the 20 counties, have a documented positive pregnancy test, and are enrolled in Medicaid or want to apply for Medicaid can enroll in the Gift of Life Maternity Care Program. The program's multidisciplinary board meets quarterly and reviews various programmatic reports, including client grievances, in order to ensure that the program is meeting the expectations of those served as well as Medicaid standards of care.

Plan First family planning patients are also eligible for care coordination. Care coordinators assess patients to identify those at high risk for unplanned pregnancies and provide care coordination services to support and encourage the correct and consistent use of contraceptives.

WIC

The Alabama WIC Program maintains and supports collaborative relationships that enhance the referral and delivery of services to WIC participants and that promote healthy lifestyles for the citizens of Alabama. The program has memoranda of understanding with the Expanded Food and Nutrition Education Program and the Nutrition Education Program, both of which are administered through the Alabama Cooperative System.

In addition, many Alabama WIC Program nutritionists and nurses at the State, area, and county level, serve on various boards and organizations in a professional capacity. The following organizations have WIC staff as contributing members: the State's Obesity Task Force, the Alabama Breastfeeding Committee, the Central Alabama Breastfeeding Task Force, and the Alabama Lactation Consultant Association.

Alabama Child Death Review Program

The State Child Death Review Team is a 28-member, multidisciplinary team that serves as the policy arm of the Child Death Review Program, established by State statute in September 1997. Partner organizations that have permanent representation on the review team include ADPH, the State Department of Human Resources, the State Department of Mental Health, the State Department of Forensic Sciences, the Alabama Chapter of the American Academy of Pediatrics, the Alabama Academy of Family Physicians, the Alabama Network of Children's Advocacy Centers, the State Department of Public Safety, the Alabama Sheriff's Association, the Alabama Association of Chiefs of Police, the Alabama District Attorneys Association, and the Alabama Coroners Association. Nine members of the review team are appointed directly by the Governor.

The Child Death Review Program is administratively located in Family Health Services. The program's director presented at the November 2009 meeting of the MCH Advisory Group and helped with the assessment of MCH capacity. The program has Local Child Death Review Teams throughout the State, established by the same 1997 Child Death Review statute. There is at least one local review team in each judicial circuit to conduct in-depth, retrospective reviews of child deaths in their respective jurisdictions. Although the membership of the local review teams is more flexible than the statutory membership of the State Child Death Review Team, certain partners are almost always represented on these teams: the local Health Department, local units of the State Department of Human Resources and the State Department of Mental Health, local coroners and medical examiners, local physicians, local Child Advocacy Centers, local law enforcement, and the office of the District Attorney for that circuit (which is in charge of the Local Child Death Review Team).

The Child Death Review Program and the State Department of Forensic Sciences are the primary partners in Alabama's Sudden Unexplained Infant Death Investigation (SUIDI) Initiative. This effort, a state-specific continuation of CDC's nationwide SUIDI Initiative, seeks to train and educate first responders about infant death scene techniques and issues to ensure better scene investigations in order to obtain more accurate death diagnoses in these cases. The Alabama SUIDI Trainers were trained and began offering courses statewide in October 2008.

The State Department of Child Abuse and Neglect Prevention is the lead agency in the Infant Vitality Initiative, which began in 2008, and the initiative's Jefferson County Pilot Project related to preventing abuse-, neglect-, and sleep-related deaths among children aged 0-3 years, which began in 2009. The Child Death Review Program has been a vital partner in both the overall initiative and the pilot project.

The Child Death Review Program's Director has been serving on the State Department of Human Resource's Quality Assurance Committee and its Child Death Review Subcommittee since June 2009. Further, the program has worked with Voices for Alabama's Children on several issues over the years, starting at least as far back as March 2007.

Other MCH Programs

Other State MCH programs administratively located in Family Health Services include the Oral Health Program, the Newborn Screening Program (which focuses on newborn hearing screening as well as hematologic screening), the Alabama Child Lead Poisoning Prevention Program, and the Healthy Child Care Alabama Project. Directors of some of these programs served on the MCH Advisory Group. Further, the Director of the Healthy Child Care Alabama Project, who is also Assistant Director of the Division of Children's Health, was actively involved in the Needs Assessment and is a member of the Leadership Team. Family Health's Needs Assessment Coordinator annually collaborates with several of these program directors regarding the *MCH Annual Reports/Applications'* performance measures pertaining to their respective programs.

Further, the State's SSDI Project is administratively located in Family Health Services' MCH Epi Branch. This project is designed to increase MCH data capacity and maintain Family Health's capacity to perform needs assessment and meet annual reporting requirements pertaining to the MCH Block Grant. The Director of the MCH Epi Branch serves as Coordinator/Contributing Editor for the *MCH Annual Reports/Applications*, as well as Family Health's Needs Assessment Coordinator. Placement of the SSDI Project in the MCH Epi Branch, therefore, promotes efficient utilization of SSDI resources and integration of findings from SSDI databases into ongoing needs assessment.

Children's Health Division staff collaborate with several entities, such as with: Local Child Death Review Teams to implement child death review, delivery hospitals to assure that newborns receive appropriate biochemical and hearing screening, the Alabama Children's Health Insurance Program (which is located in ADPH) and the Medicaid Agency to promote enrollment of eligible infants and children in these programs, the State Department of Human Resources to implement the Healthy Child Care Alabama Program, and, as a member of the State Suicide Prevention Task Force, with various organizations to prevent suicide. The division also works closely with the Alabama Partnership for Children, the State Department of Mental Health, the Alabama Early Intervention System, and the State Department of Children's Affairs.

The Healthy Child Care Alabama Program continued its ongoing collaboration with the Children's Hospital's Regional Poison Control Center to provide poison prevention trainings and information for child care providers, children in child care, and the children's families. The program's Nurse Consultants also continued provision of child passenger safety information and technical assistance for child care providers and parents of young children, in collaboration with the Children's Health System's Alabama Safe Kids Campaign. The Children's Health System is headquartered in Birmingham and includes the Children's Hospital, which is the primary pediatric teaching hospital of the UAB School of Medicine. Other activities of the Healthy Child Care Alabama Program include training on health, safety, and child development; identification of community resources to promote child health and safety; and promotion of routine visits for children to their healthcare providers.

Certain Health Resources and Services Administration Programs

Primary Health Care

When indicated, case managers/care coordinators located in county health departments refer low-income patients to Primary Health Care clinics through the State. The Alabama Primary Health Care Association was represented on the MCH Advisory Group. Further, Family Health Services' Oral Health Branch partnered with ADPH's Office of Primary Care and Rural Health, the Alabama Primary Health Care Association, and the University of Alabama School of Dentistry in Birmingham to address dental workforce issues through strategies designed to increase access to dental care in Dental Health Professional Shortage Areas.

Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS)

Though most persons with HIV/AIDS receive health care through community-based organizations, collaborations among Health Department staff make case management available to individuals with HIV/AIDS who choose to receive services through the Health Department. Social work staff located in Family Health Services' Professional Support Division provide quarterly training and ongoing consultation to all Health Department case managers who provide services to HIV-positive individuals. Case management services are reimbursed by the Medicaid Agency for HIV-positive individuals with Medicaid coverage; and the HIV/AIDS Division, located in the Health Department's Bureau of Communicable Disease, allocates some of the State's Ryan White funds to support case management for person with HIV/AIDS who are not enrolled in Medicaid. Low-income, uninsured HIV-positive individuals have access to Ryan White funding for prescription medications, health care, and dental services. Expansion of these efforts to include more uninsured adults is contingent on the availability of increased funding and health manpower.

Other Health Department Programs

Chronic Disease Prevention and Health Promotion

Most of the Health Department's programs pertaining to chronic disease are administered through the Department's Bureau of Health Promotion and Chronic Disease (HPCD). The Tobacco Prevention and Control Branch's Youth Tobacco Prevention and Cessation Unit administers a community and Public Health Area grant program with 13 agency grants and 11 area tobacco control coordinator grants. These grants provide LifeSkills training, prevention, and educational presentations to many Alabama students.

Collaborations are ongoing between the Oral Health Branch and the Tobacco Prevention and Control Branch. The Interim Director of the Oral Health Branch met recently with Tobacco Prevention and Control Branch staff to consider a collaborative effort to promote the latter branch's 1-800-Quitline. The Tobacco Prevention and Control Branch seeks to expand its Nicotine Replacement Therapy Program into dental offices. Several options have been discussed and are under consideration. A new tobacco cessation program is being considered for implementation in public schools: through athletic programs, county health departments, private dental offices, and other venues to discourage spit tobacco use among children and adolescents.

The Breast and Cervical Cancer Early Detection Program, which is administratively located in Family Health Services' Division of Cancer Prevention and Control, provides free breast and cervical cancer screenings to eligible women who meet age, income, and insurance requirements. Screenings are funded by the CDC and several private entities. Since its inception in the 1990s, the Breast and Cervical Cancer Early Detection Program has partnered with the American Cancer Society. The American Cancer Society assists with promotional efforts to encourage women to be screened for breast and colorectal cancer; refers eligible women to the Breast and Cervical Cancer Early Detection Program for free mammograms; and lobbies for State dollars for the program so that underserved women are provided mammograms. The Breast and Cervical Cancer Early Detection Program refers women diagnosed with cancer to the American Cancer Society for their assistance programs. As well, the program partners with Susan G. Komen for the Cure. The latter organization provides funding for free mammograms for underserved women living in certain counties; assists with promotional efforts to encourage women to be screened for breast and colorectal cancer; refers eligible women to the Breast and Cervical Cancer Early Detection Program for free mammograms; and lobbies for State dollars for the program. Two other programs partnering with the Breast and Cervical Cancer Early Detection Program are the National Breast Cancer Foundation and Joy to Life Foundation, which both provide funding for free mammograms for underserved women in non-Komen counties. Other entities that the program partners with include the Deep South Network and REACH US (UAB affiliated-programs) and the Medicaid Agency.

Injury Prevention and Control

ADPH addresses injuries, regardless of age, through HPCD's Injury Prevention Division. This division's web page includes information about national observances such as the following: Burn Awareness Week, National Poison Prevention Week, National Youth Violence Prevention Week, National Safe Kids Week, National Bike Month, Click It or Ticket Mobilization Dates (which concerns child restraints and seat belts), Home Safety Month, National ASK Day (which pertains to parents' awareness of children's access to firearms in the home), Fireworks Safety Month, STOP a Suicide Today Day, Child Passenger Safety Week, National Fire Prevention Week, Safe Toys and Gifts Month, and National Drunk and Drugged Driving Prevention Month. As well, the web page includes information about the Injury Advisory Council, which advises the Injury Prevention Division. Entities initially represented on the council included the State Department of Economic and Community Affairs, the UAB Injury Control

Research Center, the State Department of Education, the State Department of Public Safety, ADPH's Behavior Risk Factor Surveillance System Program (operated via a cooperative agreement with CDC), ADPH's Center for Health Statistics, and others. Family Health Services chiefly addresses unintentional injuries through the Child Death Review Program, discussed previously under MCH Programs.

Immunization

Within ADPH, the WIC Program and the Bureau of Communicable Disease's Immunization Division have a memorandum of agreement on information sharing between the two programs. WIC participants routinely are screened to determine if immunizations are up to date and are referred as needed.

Vital Records and Health Statistics

Staff from Family Health Services and the Health Department's Center for Health Statistics, especially that center's Statistical Analysis Division, collaborate often. These collaborations include:

- The Director of the Statistical Analysis Division's membership on the MCH Advisory Group.
- On an annual basis, the Center for Health Statistics' provision to the MCH Epi Branch of electronic vital statistics files for the previous year, for direct analysis by MCH Epi Branch staff.
- When indicated, consultation among staff in the Statistical Analysis Division and Family Health Services on findings from electronic files or in annual publications by the Center for Health Statistics.

State Children's Health Insurance Program

Alabama's Children's Health Insurance Program (CHIP), now called ALL Kids, is administered through ADPH's Bureau of Children's Health Insurance. As Alabama's CHIP was developed, (beginning in FY 1997), Family Health Services and CRS served on workgroups to develop enhancement packages and recommendations on how the program should work.

Currently, Healthy Child Care Alabama staff provide information about ALL Kids and applications for ALL Kids to workers in child care centers and to parents of children attending these centers. CRS staff meet on an as-needed basis with ALL Kids staff to assure that issues concerning CYSHCN are considered.

Other Partnerships

Family Health Services and CRS engage in a variety of other partnerships, examples of which follow. This sub-section focuses on advisory groups and selected partnerships with public and private entities.

MCH Advisory Group

The MCH Advisory Group, discussed in Section 1, is the primary way that Family Health Services has partnered with others for the purpose of needs assessment. As stated in Section 1, Family Health convened the MCH Advisory Group in November 2009. Family Health sought to assure that a variety of MCH stakeholders were included, by inviting organizations or individuals from four basic categories: organizations or consultants outside of the Health Department, including State agencies, secular nonprofit groups, faith-based groups, civic groups, and academic institutions; healthcare consumers; Health Department staff from outside of Family Health; and Family Health staff.

The 81 registered attendees represented both internal and external organizations. Family Health Services and other Health Department staff members comprised 50 percent of the registrants. Other government agencies in attendance included ADRS; the State Departments of Human Resources, Children's Affairs, Education, and Child Abuse Prevention; and Alabama Medicaid. Educational or

academic organizations represented included UAB, Tuskegee University, Auburn University at Montgomery, and the University of Alabama.

Private organizations represented at the MCH Advisory Group included community organizations that collectively addressed domestic violence, social justice, children's advocacy, family resources, children's health insurance, adolescent pregnancy, prenatal care for low-income women, children's mental health, community wellness, faith-based social services, and Latino interests. In addition, four healthcare organizations were represented: the Alabama Hospital Association, the Alabama Chapter of the American Academy of Pediatrics, the University of South Alabama's Children's and Women's Hospital, and the Alabama Primary Health Care Association. As well, four healthcare consumers attended.

CRS Advisory Committee

The CRS Advisory Committee was developed based on ongoing partnerships with key stakeholders, including youth with special health care needs and families of CYSHCN. A membership roster is available upon request.

The State Perinatal Advisory Council

Per the State statute establishing the Perinatal Program, this program operates under the State Board of Health and SPAC. SPAC represents the Regional Perinatal Advisory Councils, whose role in infant death review is described in Section 1, and advises the State Health Officer in the planning, organization, and implementation of the Perinatal Program. The Perinatal Program has partnered with the Alabama March of Dimes since 2004 to address the problem of premature births. The Perinatal Program has provided education to physicians and their office staff, in addition to maternity hospital staff, regarding preconceptional, prenatal, and infant care issues. Included in these trainings were: smoking cessation counseling, the importance of a healthy body weight prior to conception, the effects of alcohol and substance abuse on pregnancy, the importance of folic acid supplementation for all women of childbearing age; and the promotion and support of breastfeeding, safe infant sleep environment, and newborn screening.

Alabama Chapter of the March of Dimes

The mission of the Alabama March of Dimes is central to Family Health Services' concern for pregnant women, mothers, and infants. As discussed above, Family Health's Perinatal Program has partnered with the Alabama March of Dimes to reduce the prevalence of prematurity. As well, since 2004, the Perinatal Program has collaborated with the Alabama March of Dimes to improve the health of babies by reducing the occurrence of birth defects, premature births, and infant deaths. Additionally, effective FY 2010, that organization is helping to support the initiatives of the Perinatal Program's FIMR Program.

As well, the Alabama March of Dimes provided snacks for the eight focus groups conducted by Family Health and, depending on availability, various promotional items (such as T-shirts and water bottles with the March of Dimes logo, pens, and lapel pins) for attendees.

Hospitals

Staff from the Division of Women's Health collaborate with many statewide and community groups and governmental and private organizations to address various issues, such as with: hospital facilities and private physicians for the provision of sterilizations, intrauterine device insertions, etc; and delivery hospitals to assure that newborns receive appropriate biochemical and hearing screening. The Healthy Child Care Alabama Program continues its ongoing partnership with the Children's Hospital's Regional

Poison Control Center to provide poison prevention trainings and information for child care providers, children in child care, and the children's families.

The Alabama Newborn Screening Program, in collaboration with birthing hospitals and other healthcare providers, screens for 28 of 29 disorders recommended by the March of Dimes. Along with the Alabama Hospital Association, the program has encouraged hospitals to designate a newborn screening coordinator to serve as a primary contact for newborn screening issues at their facility.

Through the provision of multidisciplinary medical specialty and evaluation clinics, family support, and care coordination throughout the State, more CYSHCN have access to quality services in their home communities. Public and private partnerships, including agreements with the two tertiary-level pediatric hospitals in the State, enable CRS to bridge gaps in the system of care, thereby increasing the State's capacity to address the health, social, and educational needs of Alabama's CYSHCN. CRS works closely with the State's two tertiary-level pediatric hospitals to provide community-based care coordination, family support activities, and financial assistance to CRS-eligible children receiving care at these institutions.

Nutrition Education Partnership

Family Health Services' WIC Division maintains a supportive, collaborative relationship that enhances the referral and delivery of services to WIC participants and promotes healthy lifestyles for the citizens of Alabama. As noted previously, the WIC Program has memoranda of understanding with the Expanded Food and Nutrition Education Program and with the Nutrition Education Program, both of which are administered through the Alabama Cooperative System. These programs are designed to enhance the delivery of nutrition education classes to WIC participants in the clinic setting. Both of the programs refer potential participants to the Alabama WIC Program. In addition, many local WIC nutritionists or nurses serve on local Head Start Health Advisory Boards.

Other State Agency Partnerships

As previously mentioned, several State agencies (the Department of Human Resources, the Department of Mental Health, the Medicaid Agency, the Department of Education, and the Department of Child Abuse Prevention) were represented on the MCH Advisory Group. At the local level, Health Department case managers/care coordinators collaborate with staff from several State agencies, as indicated. A description of selected partnerships with specific State agencies follows.

Alabama Medicaid Agency

Family Health Services and the Medicaid Agency partner on a variety of issues. For instance, several Health Department units, including Family Health, and the Medicaid Agency collaborate to identify Medicaid-eligible infants and pregnant women and help with their applications for Medicaid coverage. Additionally, the Health Department, including Family Health's Women's Health Branch, and the Medicaid Agency have partnered to implement Plan First, an 1115(a) Family Planning Waiver that began in October 2000. This waiver expanded Medicaid eligibility for family planning services for women aged 19-44 years to 133 percent of the Federal poverty level (FPL). Further, Children's Health Division staff collaborate with ALL Kids and Medicaid to promote enrollment of eligible infants and children in those programs.

ADPH partners with the Medicaid Agency to provide care coordination services to Medicaid enrollees who are eligible for Patient 1st (a Medicaid managed care program) or Plan First services. Medicaid enrollees who are eligible for care coordination include children with elevated lead levels; infants identified at birth with metabolic disorders or who fail the newborn hearing test in the hospital; children

and adults with excessive emergency room utilization; patients who have been discharged by their Medicaid Primary Medical Providers and are in need of assistance in locating a new provider; teens who present at local health departments for family planning services; children who are in need of dental services; etc.

CRS staff, including the State Parent Consultant, meet quarterly with Medicaid Agency staff to address issues concerning Medicaid-enrolled CYSHN.

Alabama Department of Human Resources
The Division of Women's Health's Family Planning Program continues to contract with the State Department of Human Resources for contraceptive supply funding for clients of Family Planning clinics. (That agency began providing funds for purchase of contraceptives in FY 2004.) Currently, negotiations are underway to acquire American Recovery and Reinvestment Act (ARRA) "crisis situation" funding for additional contraceptives and family planning outreach for Temporary Assistance to Needy Families (TANF)-eligible clients.

As previously mentioned, Children's Health Division staff collaborate with the Department of Human Resources to implement the Healthy Child Care Alabama Program. The program is represented on the Department of Human Resources work group that is developing the Quality Rating Improvement System for child care programs.

Alabama Department of Education
Family Health's Adolescent and School Health (ASH) Program partners with the State Department of Education to provide statewide professional development opportunities for health educators. ASH is spearheading the statewide School-Based Diabetes Awareness Initiative, in which the Department of Education partners. Additionally, the ASH Coordinator serves on the Department of Education's Health Resource Advisory Committee and as ADPH's School Nurse Consultant.

ADPH addresses unintentional injuries, regardless of age, through HPCD's Injury Prevention Division. This division's web page includes information about the Injury Advisory Council, which advises the Injury Prevention Division. The Department of Education is one of the entities represented in the council.

CRS is partnering with schools, child care facilities, and Head Start centers in underserved areas to provide on-site screenings for hearing loss and scoliosis. Follow up is offered through the network of CRS community-based offices should a child fail the screening.

Results, Strengths, and Weaknesses of Collaborative Efforts

As previously stated, formal and informal collaboration and partnerships for the purposes of needs assessment are discussed in Section 1. As also previously stated, Section 2 describes a variety of partnerships that included some components of the needs assessment cycle, but were not developed for the specific purpose of comprehensive, statewide needs assessment. As a corollary, the partnerships described in Section 2 preceded formal identification of MCH priority needs through the 2009-10 Needs Assessment process, so do not necessarily address a specific priority need as formulated in Section 5.

Overall strengths and weaknesses of the Needs Assessment process are described in the conclusion of Section 1. To reiterate, the methods, data sources, and collaborations that comprised the Needs Assessment process collectively provided a panoramic, current picture of the needs of maternal and child populations residing in Alabama. This picture has enabled Family Health Services and CRS to select priority needs in an evidence-based manner and provides a knowledge base that both organizations look forward to building upon through ongoing needs assessment.

Addressing the identified priority needs will require ongoing partnerships, however. The collaborations described in Sections 2 and 4, along with the involvement of the CRS Advisory Committee and the MCH Advisory Group, demonstrate a wide range of ongoing partnerships. These partnerships form an invaluable network to be maintained and enhanced as Family Health and CRS build upon the FYs 2009-10 MCH Needs Assessment, assess capacity to address priority needs, and implement activities to address those priority needs. Additionally, Family Health and CRS will consult other potential partners as feasible.

Family Health Services and CRS partner with many programs on a variety of issues. These programs include other MCH programs, other HRSA programs, other Health Department programs, other governmental agencies, and private organizations. Some of these entities were represented on the MCH Advisory Group and/or the CRS Advisory Committee. The purposes of specific partnerships vary, but include assessment of capacity and/or implementation of activities to help meet important MCH needs. The partnerships collectively comprise a dynamic, effective, and crucial part of the State's infrastructure for performing the core public health functions of assessment, policy development, and assurance.

In conclusion to Section 2, the MCH Advisory Group, CRS's Advisory Committee, and other partnerships described in Section 1 and/or Section 2 collectively comprise a dynamic, effective, and crucial part of the State's infrastructure for performing the core public health functions of assessment, policy development, and assurance.

SECTION 3

Strengths and Needs of Populations Served by the Maternal and Child Health Program

Preview: Section 3

Due to the range of information presented in this section and the variety of sources for that information, specifics of key findings cannot be presented in this preview. Instead, selected general findings—all of which pertain to Alabama residents—follow. The years to which the findings pertain vary, depending on the data source, and are usually not stated in this preview.

Demographics and Characteristics of Families and Communities

Compared to the U.S., Alabamians tend to have less formal education and a higher prevalence of poverty, as defined by household income. Alabama entered the recent recession later than the nation as a whole, but the economic decline has been steeper in Alabama.

Among 0-24 year-old Alabama residents in 2008, 4.3 percent were Latino, up from 2.5 percent in 2000.

Pregnant Women, Mothers, and Infants

Comparing 2008 to 2000, the number of live births to Latinos increased 2.7 fold. The pregnancy rate among 18-19 year-old females has increased; the percentage of infants whose mother had received inadequate prenatal care has increased; risk of infant death increased in 2005-07 relative to 2002-04; and racial gaps in infant mortality have persisted.

Children and Youth

For 15-24 year-old Alabama residents, the all-cause death rate has increased. The motor vehicle injury death rate and the suicide rate have each increased in 20-24 year-olds. The drug- and alcohol-related death rate has increased in 15-24 year-old White, non-Latino males. The homicide/legal intervention death rate has increased in 15-24 year-old Black, non-Latino males.

Qualitative Data Collected by Family Health Services

Major themes included concerns about access to health care, the availability and adequacy of health insurance, the cost of health care, and the nature of care received. Views about potential contributors to obesity were expressed. As well, views about potential contributors to the recent increase in the infant mortality rate were expressed. Many of the views expressed by respondents received some, though not unqualified, support from quantitative data.

Children and Youth with Special Health Care Needs

Socioeconomic differences exist based on geographic regions and geographic location. Children and families living in rural areas and Alabama's Black Belt counties seem to experience greater challenges.

Concerning Healthy People 2010 outcomes, there are important subgroup differences—according to race/ethnicity, age, income, insurance, medical home, and type of need—that require special attention during program planning. Differences exist for barriers and service availability by geographic region and Black Belt designation.

Overall, community-based services tend to be more difficult to obtain than health services. Respite care, summer and after-school care, and transportation tend to be the most difficult services to obtain statewide.

Needs of the three federally defined State MCH population groups were assessed according to methods described in Section 1. Here in Section 3, salient findings from the FYs 2009-10 MCH Needs Assessment are presented, generally according to the State MCH population group to which findings pertain. Some findings cut across population groups, however. Rather than being placed under a particular group, such findings are said to be crosscutting, or to pertain to more than one of the State MCH population groups. The years for which findings are reported vary, depending on the data sources or references used. In many cases, findings are reported for three (or in one case, five) years combined: sometimes in order to minimize fluctuation due to especially small numbers in the statistical sense (fewer than 20 in one or more of the years studied), but sometimes in order to describe patterns more concisely.

In some cases, discussions in this section are based on numbers shown on forms in the *MCH 2009 Report/2011 Application*, as well as in earlier *MCH Annual Reports/Applications* to which current numbers are compared. Hard copies of recent *MCH Annual Reports/Applications* and the *MCH 2009 Report/2011 Application* are or soon will be available upon request.[a]

In this document, "significance," "significantly," and "significant" pertain to statistical significance unless stated otherwise. Statistical significance was assessed in only some cases, however. Therefore, any differences noted should be assumed to be statistically significant only if stated to be so. When statistical significance was assessed, the method of assessment varied, depending on the data source or reference, time constraints, and available software. Methods used to assess statistical significance are described in technical notes (located in certain text boxes) and/or in footnotes. In some cases where significance was assessed, the confidence interval (CI) or p-value is shown parenthetically. Unless stated otherwise, a finding was said to be statistically significant if the p-value (p) was less than 0.05. It should be noted that statistical significance or lack thereof does not, by itself, determine whether a finding or pattern of findings is of public health significance.

Demographics and Characteristics of Families and Communities

The following discussion cuts across populations served by the MCH Program and compares Alabama to the nation concerning geography, demographics, and economic issues. Such information contributes to understanding the environment in which people served by the MCH Program live. As well, an awareness of these issues is critical to making informed decisions about programs, policies, and allocation of resources in the State.

Note on Terminology Concerning Racial and Ethnic Groups
In the narrative, tables, and figures for this report, the term "Black" refers to persons reported as being Black or African American.

In the narrative for this report, the term "Latino" refers to persons reported as being Hispanic or Latino, and the term "Latina" refers to Hispanic or Latino females. However, tables and figures in this report that are based on sources using the term "Hispanic" also use the term "Hispanic."

Geography, Total Population, and the Economy

Geography

According to the Census 2000, population density was higher in Alabama than in the nation (87.6 persons per square mile versus 79.6 persons per square mile.)[14] Population density *per se* may be skewed by a few densely populated areas, however, so does not adequately describe the State's geography. In fact, many of Alabama's 67 counties are largely rural. Specifically, according to

[a] The final copy of the *MCH 2009 Annual Report/2011 Application* is expected to be available in hard copy by December 2010, and expected to be on line by early 2011. Hard copies of the *MCH 2009 Annual Report/2011 Application* or pertinent pages from earlier *MCH Annual Reports/Applications* can be obtained by calling 334-206-5943 or emailing anita.cowden@adph.state.al.us.

the Census 2000, 50 (75 percent) of the State's 67 counties were more than 50 percent rural, and 37 (55 percent) of its 67 counties were more than 75 percent rural.[15]

Total Population

The following information was accessed from the U.S. Census Bureau's "quickfacts" web site.[14]

The estimated population of the State in 2008 was 4.7 million (4,661,900). Comparing July 1, 2008 to April 1, 2000, the State's population had increased by 4.8 percent, whereas the nation's population had increased by 8.0 percent. In Alabama and in the nation, 7 percent of residents were under 5 years of age (6.7 percent in Alabama and 6.9 percent in the U.S.); and 24 percent were under 18 years of age (24.1 percent in Alabama and 24.3 percent in the U.S.). Compared to the nation, Alabama residents were slightly more likely to be 65 years of age or older (13.8 percent versus 12.8 percent).

Table 3.1 compares the total population of Alabama to the total population of the U.S. with respect to race and ethnicity. Per Table 3.1, in 2008, compared to the U.S., Alabama residents were less likely to be White, more likely to be Black, less likely to be Asian, and less likely to be Latino. When concurrently classifying persons by race and ethnicity, Alabama residents were slightly more likely to be White non-Latino than U.S. residents were.

Table 3.1. Selected Facts About Race and Ethnicity, Alabama and the U.S., 2008

Characteristic	Percent*	
	Alabama	U.S.
White persons[¶]	71.0	79.8
Black persons[¶]	26.4	12.8
American Indian and Alaska native persons[¶]	0.5	1.0
Asian persons[¶]	1.0	4.5
Persons reporting two or more races	1.1	1.7
Persons of Hispanic or Latino origin[T]	2.9	15.4
White persons not Hispanic	68.4	65.6

Source: Alabama QuickFacts from the US Census Bureau. Retrieved on 2/8/2010 from the following url address: http://quickfacts.census.gov/qfd/states/01000.html.

*Percent of the population who had the characteristic
[¶]Consists of persons reporting only one race
[T]Latinos may be of any race, so are also included in applicable race categories.

According to the Census 2000, Alabamians had less formal education than U.S. residents as a whole did. That is, comparing persons aged 25 years or older in Alabama to those in the nation, Alabamians were slightly less likely to be high school graduates (75.3 percent versus 80.4 percent) and notably less likely to have a bachelor's degree (19.0 percent versus 24.4 percent).

With respect to housing, according to the year 2000 Census: Compared to U.S. residents, Alabamians were somewhat more likely to own their home (72.5 percent versus 66.2 percent) and notably less likely to live in multi-unit structures (15.3 percent versus 26.4 percent). In 2000, the median value of owner-occupied housing units in Alabama was notably less than in the U.S. ($85,100 versus $119,600).

According to the Census 2000, household size in Alabama was similar to that in the nation (persons per household: 2.49 in Alabama and 2.59 in the U.S.). However, in 2007, the median annual household

income was notably lower in Alabama than in the nation ($40,596 versus $50,740). As a corollary, in that year Alabamians were notably more likely than U.S. residents to be living below 100 percent of the FPL (16.5 percent of Alabama residents versus 13.0 percent of U.S. residents).

Employment and Economic Issues

According to the Alabama Farmer's Federation, the distribution of Alabama employment according to type of industry has been as follows:[a] agriculture and forestry, 21 percent; non-agricultural services, 24 percent; government, 18 percent; non-agricultural trade, 12 percent; non-agricultural manufacturing, 9 percent; construction, 7 percent; finance, insurance, and real estate, 5 percent; and utilities, 4 percent.[16]

Compared to the U.S., Alabamians tend to have less formal education and a higher prevalence of poverty, as defined by household income. Alabama entered the recent recession later than the nation as a whole, but the economic decline has been steeper in Alabama.

According to the U.S. Bureau of Labor Statistics, based on seasonally adjusted monthly unemployment rates, the unemployment rate in Alabama was lower (better) than that in the nation from March 2001 through November 2008. However, by December 2008, Alabama's unemployment rate had increased markedly, from 3.3 percent in April 2007 to 7.4 percent in December 2008—and matched the nation's December 2008 unemployment rate of 7.4 percent. In February 2010, the unemployment rate was 11.1 percent in Alabama and 9.7 percent in the nation. The rate of 11.1 percent for Alabama was tied (with January 2010) for being the State's highest monthly unemployment rate during the surveillance period (January 2000 through February 2010).[17]

In fact, according to the University of Alabama's Center for Business and Economic Research (CBER), Alabama entered the recent recession later than the nation, but the decline has been steeper. In Alabama in 2009, manufacturing, construction, and professional and business services experienced the worst job losses. (The reference did not report on agricultural job losses *per se*.) Nevertheless, according to CBER, 2000-2010 as a whole is becoming one of Alabama's best decades. During this time, the State has made notable strides in economic and workforce development, in personal income growth, and in tourism and exports industries. As well, economic diversification has grown high-paying manufacturing and white-collar jobs during this time period. CBER expects that these strides will help Alabama rebound economically and that 2010 will be a year of recovery for the State's economy, though Alabama's rate of improvement may be slower than the nation's. Alabama jobs are expected to continue to decline in most sectors at least through mid-2010. However, CBER expects that, later in 2010, job losses will slow and job gains will occur in services and government, to keep employment about level for the year.[18]

The prevalence of poverty has been higher in Alabama than in the nation and has been higher among children and youth than among adults. According to the 2006-2008 American Community Survey (ACS), the percentage of Alabama residents who were living below the FPL, according to age, were as follows: 22.9 percent of persons aged 17 years or younger, 14.6 percent of persons aged 18-64 years, and 12.2 percent of persons aged 65 years or older. Corresponding percentages for the U.S. were: 18.2 percent of persons aged 17 years or younger, 11.8 percent of persons 18-64 years, and 9.8 percent of persons aged 65 years or older.[19]

[a] The reference used did not state the year to which the numbers applied.

Infants, Children, and Youth: Race and Ethnicity

The following discussion of race and ethnicity among infants, children, and youth in Alabama compares Census population estimates for the year 2008 to Census population estimates for the year 2000. We[a] derived these estimates from a detailed Census spreadsheet, referred to in Census Bureau documentation as "SC-EST2008-alldata6."[12] This spreadsheet reports five single-race groups and one group of persons who were of two or more races.

On Form 21 of the *2009 Report/2011 Application*, Health Status Indicators (HSIs) #6A and #6B respectively classify certain age groups of Alabama residents by race (HSI #6A) and by ethnicity (HSI #6B) for 2008. The age groups classified in this form are under 1 year, 1-4 years, 5-9 years, 10-14 years, 15-19 years, 20-24 years, and 0-24 years overall. Tables 3.2 and 3.3 and the discussion that follows focus on the total population of 0-24 year-old Alabama residents and subgroups defined by race (Table 3.2) and by ethnicity (Table 3.3). As well, Table 3.3 includes concurrent race/ethnicity classifications that are not included in HSI #6B. Further, each table compares population numbers in 2008 to corresponding numbers in 2000. Because the following discussion is related to HSIs #6A and #6B, some of the discussion here overlaps with discussion of those HSIs in the *2009 Report/2011 Application*.

Racial Distribution of 0-24 Year-Old Alabama Residents

Table 3.2 compares the number of 0-24 year-old Alabama residents in 2008 to the number in 2000, for the total group and persons in the following racial groups: White alone, Black alone, American Indian or Alaska Native alone, Asian alone, Native Hawaiian and other Pacific Islander alone, and two or more races. Highlights from Table 3.2 follow.

In 2008, 1,572,695 persons from 0-24 years of age lived in Alabama: up 0.6 percent from the corresponding number in 2000. Among this group in 2008, 65 percent were White, 31 percent Black, and 3.3 percent of other or more than one race. Further breaking down the "of other or more than one race" group, of the total population of 0-24 year-old residents in 2008, 1.73 percent were of more than one race; and 0.96 percent were Asian, 0.54 percent American Indian or Native Alaskan, and 0.05 percent Native Hawaiian or other Pacific Islander.

Comparing 2008 to 2000, the number of 0-24 year-old Alabama residents increased, though sometimes very slightly, among the total population and among Whites, Asians, Hawaiians or Pacific Islanders, and persons of two or more races. The most striking increases were in the number of Asians (up by 26 percent, or by 3,129 individuals) and the number of persons who were of two or more races (up by 51 percent, or by 9,152 individuals). Conversely, the number of Black 0-24 year-old residents and the number of American Indian or Native Alaskan 0-24 year-old residents declined slightly. The increase in the number of 0-24 year-old Asians is credible, since a large Korean automotive manufacturer established a presence in the State early in the decade. Conjecturally, self-reporting practices (by the head of household or the individual) may partly account for the increase in persons of two or more races. That is, conceivably, persons of two or more races were more likely to be reported as such in 2008 than in 2000. As a corollary, the decline in the number of individuals with a reported race of Black or of American Indian or Native Alaskan may be at least partly due to changes in reporting practices.

[a] In this document, the term “we” typically refers to the MCH Epi Branch, other Family Health analytic staff, and/or the State’s Title V Director.

Table 3.2. Estimated Population of 0-24 Year-Old Residents, According to Race, Alabama, 2000 and 2008

Racial Group	Year 2000	Year 2008	Change, 2008 Versus 2000	
	Number (Percent*)	Number (Percent *)	Percent Change ¶	Absolute Change[T]
White[Y]	1,023,852 (65.5)	1,027,732 (65.3)	+0.4	+3,880
Black[Y]	500,167 (32.0)	493,452 (31.4)	-1.3	-6,715
American Indian or Alaska Native[Y]	9,273 (0.6)	8,429 (0.5)	-9.1	-844
Asian[Y]	11,985 (0.8)	15,114 (1.0)	+26.1	+3,129
Native Hawaiian and Other Pacific Islander[Y]	681 (0.0)	752 (0.0)	+10.4	+71
Two or more races	18,064 (1.2)	27,216 (1.7)	+50.7	+9,152
Total	1,564,022	1,572,695	+0.6	+8,673

Note: Population estimates were derived from a detailed Census spreadsheet, referred to in U.S. Census Bureau documentation as "SC-EST2008-aldata6.[12]

*Percent of column total
¶ Percent change in the number of individuals, 2008 versus 2000
[T]Number of individuals in 2008 minus the number of individuals in 2000
[Y]Comprised of persons reporting only one race

Ethnic Distribution of 0-24 Year-Old Alabama Residents

Table 3.3 shows details concerning trends in the number of 0-24 year-old Alabama residents, comparing 2008 to 2000, for the total group and the following groups defined by ethnicity or by ethnicity and race concurrently: Latino, non-Latino, White Latino, White non-Latino, Black non-Latino, and non-Latinos of another race or two or more races.

Among 0-24 year-old Alabama residents in 2008, 4.3 percent were Latino, up from 2.5 percent in 2000. Comparing 2008 to 2000, the number of Latino residents increased by 76 percent.

Among 0-24 year-old Alabama residents in 2008, 4.3 percent were Latino, up from 2.5 percent in 2000.

Stratifying concurrently by race and ethnicity, among the 1.6 million 0-24 year-old Alabama residents in 2008, 61.5 percent were White non-Latino (down from 63 percent in 2000), 31 percent Black non-Latino (down from 32 percent in 2000), 3.8 percent White Latino (up from 2.1 percent in 2000), and 3.1 percent other non-Latino (up from 2.4 percent in 2000).

Comparing 0-24 year-old Alabama residents in 2008 to those in 2000, the number of White, non-Latino residents declined by 2.4 percent: from 991,137 in 2000 to 967,579 in 2008. Conversely, the number of White, Latino residents increased by 84 percent: from 32,715 in 2000 to 60,153 in 2008. Concerning the number of individual residents in this age group, compared to 2000, in 2008 there were 23,558 fewer White, non-Latino residents and 27,438 additional White, Latino residents.

Again comparing 0-24 year-old Alabama residents in 2008 to those in 2000, the number of Black, non-Latino residents declined by 1.5 percent: from 496,495 in 2000 to 489,112 in 2008. Concerning the

number of individual residents in this age group, compared to 2000, in 2008 there were 7,383 fewer Black, non-Latino residents.

Also comparing 0-24 year-old Alabama residents in 2008 to those in 2000, the number of Other, non-Latino residents increased by 27 percent: from 38,056 in 2000 to 48,373 in 2008. Concerning the number of individual residents, compared to 2000, in 2008 there were 10,317 additional Other, non-Latino residents.

In Alabama, the increase in the White, Latino population of 0-24 year-old residents, along with concurrent declines in the White, non-Latino population and the Black, non-Latino population, impacts the healthcare system as well as culture in general. For this reason, three of the focus groups that Family Health Services or CRS convened during the 2009-10 Needs Assessment consisted of Latino individuals. For several years, many of ADPH's and CRS's outreach materials have been available in Spanish as well as in English.

The recent increase in the unemployment rate (described earlier) may have slightly affected Alabama's demographic composition in 2009, however. That is, conjecturally, some Latino residents who were not U.S. citizens may have returned to their country of origin in 2009, due to the presence of fewer job opportunities in Alabama. We do not have population estimates for 2009, so cannot quantitatively assess whether such a change occurred.

Table 3.3. Estimated Population of 0-24 Year-Old Residents, According to Ethnicity and (in Some Cases) Race/Ethnicity, Alabama, 2000 and 2008

	Year 2000	**Year 2008**	**Change, 2008 Versus 2000**	
Ethnic or Racial/Ethnic Group	Number (Percent*)	Number (Percent *)	Percent Change ¶	Absolute Change[T]
Latino	38,334 (2.5)	67,631 (4.3)	+76.4	+29,297
Non-Latino	1,525,688 (97.5)	1,505,064 (95.7)	-1.4	-20,624
White,[Y] Latino	32,715 (2.1)	60,153 (3.8)	+83.9	+27,438
White,[Y] non-Latino	991,137 (63.4)	967,579 (61.5)	-2.4	-23,558
Black,[Y] non-Latino	496,495 (31.7)	489,112 (31.1)	-1.5	-7,383
Other,[σ] non-Latino	38,056 (2.4)	48,373 (3.1)	+27.1	+10,317

Note: Population estimates were derived from a detailed Census spreadsheet, referred to in U.S. Census Bureau documentation as "SC-EST2008-aldata6.[12] Populations classified as "Hispanic" or "Not Hispanic" by the Census Bureau are referred to in the above table as "Latino" or "non-Latino."

*Percent of the total number of 0-24 year-old Alabama residents (1,564,022 in 2000 and 1,572,695 in 2008)

¶ Percent change in the number of individuals, 2008 versus 2000

[T]Number of individuals in 2008 minus the number of individuals in 2000

[Y]Comprised of persons reporting only one race

[σ] Comprised of persons reporting their race as American Indian or Alaska Native alone, Asian alone, native Hawaiian or other Pacific Islander alone, or two or more races.

Some Household and Family Characteristics

Household and family characteristics discussed here are: household structure, foster care, and receipt of public assistance. These issues were selected for discussion because some aspect of each is reported for HSIs #9A and #9B, on Form 21 in the *2009 Report/2011 Application*. However, rather than precisely conforming to pertinent indicators reported for HSIs #9A and #9B, [a] this discussion focuses on salient issues and draws extensively from material that is not reported on Form 21. All of the following findings concerning the three selected indicators pertain to Alabama residents.

Technical Note #1: American Community Survey
The American Community Survey (ACS) is a relatively new survey that is conducted by the U.S. Census Bureau. The survey collects population and housing information every year instead of every 10 years. ACS uses a series of monthly samples to produce annually updated data from the same small areas (census tracts and block groups) that were formerly surveyed via the decennial census long-form sample.[20]

In 2005, ACS expanded its sample to include housing units in all counties in the 50 states and the District of Columbia. In 2006, it was expanded to include populations living in group quarters: such as nursing homes, correctional facilities, military barracks, and college/university housing.[20] The Puerto Rico Community Survey, begun in 2005, is the Puerto Rican equivalent of ACS.[20,21]

ACS is conducted under the authority of Title 13, United States Code, Sections 141 and 193, and response is mandatory. Fines of not more than $5,000 can be imposed on anyone over 18 years of age who refuses or willfully neglects to complete the questionnaire or refuses to answer questions posed by census takers.[20]

ACS findings reported in this document were obtained from on-line reports posted by the U.S. Census Bureau.

Household Structure

The following findings on household structure are from two different sources, which classify structure in different ways: the 2006-2008 ACS,[20,21] and the NSCH, 2007.[22] Technical Notes #1 and #2 respectively discuss methods employed in these two surveys.

Findings from the above two sources collectively show that:

- Alabama children and youth were more likely to live in single-parent households than U.S. children and youth were.
- The lower the household income, the more likely the child was to live in a household with no father present.
- Compared to privately insured children, publicly insured children and uninsured children were more likely to live in a household with no father present.
- Black, non-Latino children were more likely than White, non-Latino children to live in a household with no father present.

Details follow.

[a] Numbers reported for HSIs #9A and #9B come from several external organizations, and Family Health Services does not have details on how some of the numbers were estimated. As well, translating findings from other organizations into the precise indicators required for HSIs #9A and #9B sometimes requires untested assumptions that yield very rough estimates. Further, the numbers reported on Form 21 for the preceding HSIs may be statistically unstable in some racial or ethnic subgroups, due to relatively small numbers.

Household Structure According to the American Community Survey

The Census Bureau's 2006-2008 ACS provides estimates concerning households with their own children[a] aged 17 years of age or younger.[b] According to this survey, Alabama had an estimated 540,171 family households with children in this age group.[23] Of these 540,171 households, 66 percent (354,248) were married-couple families, 28 percent (150,687) were family households with a female householder present and no husband present, and 6.5 percent (35,236) were family households with a male householder and no wife present. Combining the preceding numbers for single male householders and single female householders, 34 percent of Alabama households with children aged 17 years or younger were headed by a single parent. This was slightly higher than the corresponding percentage for the U.S, which was 31.1 percent. *(Data note: Here, the unit of analysis was households, rather than children. The percents were derived from numbers reported in the source document.)*

Household Structure According to the National Survey of Children's Health

Information about household structure is readily accessible from the NSCH web site (http://nschdata.org/content/), which classifies the child's household into one of four categories: 1) two-parent (biological or adoptive), 2) two-parent with at least one step-parent, 3) mother only, with no father of any type present, and 4) all other family structures. Methods employed in this survey are summarized in Technical Note #2. Unless stated otherwise, findings reported here from NSCH pertain to children and youth aged 17 years or younger. Throughout this Needs Assessment Report, "children" and "children and youth" are used interchangeably when referring to findings for this age group. *(Data note: Here, the unit of analysis is individual children.)*

Technical Note #2: National Survey of Children's Health

The National Survey of Children's Health (NSCH), 2007 was a national survey conducted by telephone in English and Spanish in 2007-2008. (The survey was first conducted in 2003-2004.) The sampling and data collection for the NSCH, 2007 were conducted using the State and Local Area Integrated Telephone Survey (SLAITS) program. In the survey, telephone numbers were called at random to identify households with one or more children who were 17 years of age or younger. In each household, one child was randomly selected to be the subject of the interview. From 1,725-1,932 surveys were collected per state. **Survey results are weighted** to represent the population of non-institutionalized children ages 0-17 years nationally and in each state.[22]

For this report, we roughly assessed statistical significance of NSCH findings by comparing 95 percent confidence intervals shown on the NSCH web site. That is, in this report, we state that groups differed significantly if their 95 percent confidence intervals for the finding of interest did not overlap with one another.

Since NSCH was conducted via telephone interviews, all findings are based on the report of the household member who was interviewed.

As shown in Table 3.4, compared to their national counterparts, Alabama children and youth were significantly less likely to live in a two-parent (biological or adoptive) household and significantly more likely to live in a household with no father present. That is, 58 percent of Alabama children, versus 68 percent of U.S. children, lived in a household with two biological or adoptive parents present; and 26 percent of Alabama children, versus 19 percent of U.S. children, lived in a household with a mother present but no father present.

[a] The findings pertain to family households with "own children under 18 years." According to the methodological documentation for the survey, the term "own child" pertains to a never-married child under 18 years of age who is a son or daughter by birth, a stepchild, or an adopted child of the householder.

[b] Although the ACS produces population, demographic, and housing unit estimates, only the Census Bureau's Population Estimates Program produces the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.[20]

Table 3.4. Family Structure of the Child's Household, National Survey of Children's Health, 2007, Persons 17 Years of Age or Younger, Alabama and the U.S.

Region	Household Structure			
	Two Biological or Adoptive Parents	Two Parents with at Least One Step-Parent	Mother Present, No Father Present	All Other Family Structures
Alabama				
Weighted Percent*	**57.8**	**9.7**	**26.3**	**6.1**
(95% CI)¶	(54.4 – 61.3)	(7.6 – 11.9)	(23.0 – 29.6)	(4.7 – 7.6)
Actual Sample Size	*1,127*	*150*	*352*	*122*
Estimated Number[T]	644,543	108,409	292,876	68,359
U.S.				
Weighted Percent*	**67.8**	**7.6**	**18.7**	**5.9**
(95% CI)¶	(67.0 – 68.6)	(7.1 – 8.1)	(18.1 – 19.3)	(5.5 – 6.3)
Actual Sample Size	*64,095*	*6,525*	*14,726*	*5,749*
Estimated Number[T]	49,654,667	5,556,124	13,704,062	4,323,340

Adapted from the following source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved February 17, 2010 from www.nschdata.org

*Of all persons aged 17 years or younger, the estimated percent whose family structure was as shown, after applying sampling weights

¶95% confidence interval, weighted

[T]Of all persons aged 17 years or younger, the estimated number whose family structure was as shown, after applying sampling weights

The following discussion focuses on one of the household structures shown in Table 3.4: households where the mother was present but no father of any type was present.

Findings presented here from the NSCH simply describe respective associations between two characteristics (for example, household income and family structure). Such simple, two-way *associations should not be assumed to be causal*. For example, the association between insurance status and mother-only family households is mixed with the effects of income, because income is related to insurance status.

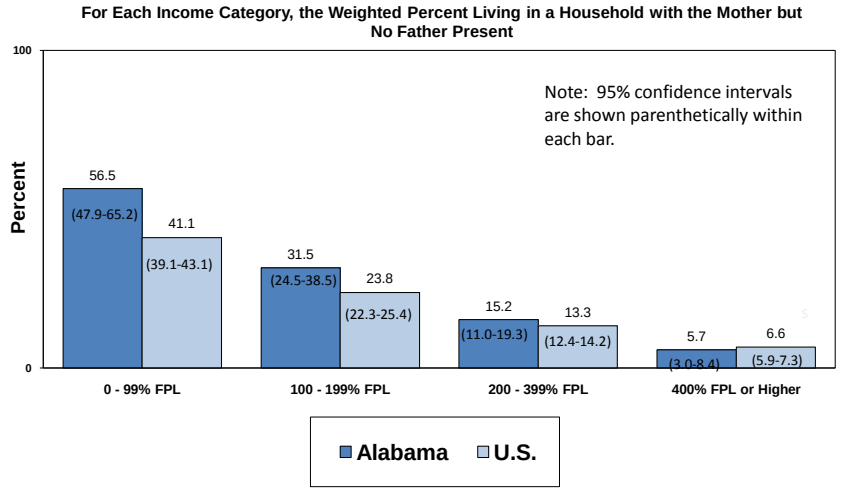
Compared to their national counterparts, Alabama children were less likely to live in a two-parent household. In both Alabama and the U.S., the lower the household income, the more likely the child was to live in a home with the mother present but no father present.

Households with the Mother but No Father, According to Income

Figure 3.1 shows the prevalence of households including the mother and child but no father, according to household income. In Alabama and the U.S., the lower the household income, the more likely the child was to live in a home with the mother present but no father present. For example, in Alabama, 56.5 percent of children whose household income was less than 100 percent of the FPL lived in a home where the mother was present but the father was not. In contrast, only 6 percent of children whose household income was 400 percent or more of the FPL had the mother but no father present in the home.

In all but the highest income category, Alabama children were more likely to live in a home with the mother but no father present than U.S. children were; and this difference was significant within the lowest income category.

Figure 3.1. Household with the Mother Present but No Father Present
According to Household Income
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Reference: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent health web site. Retrieved February 17, 2010 from www.nschdata.org

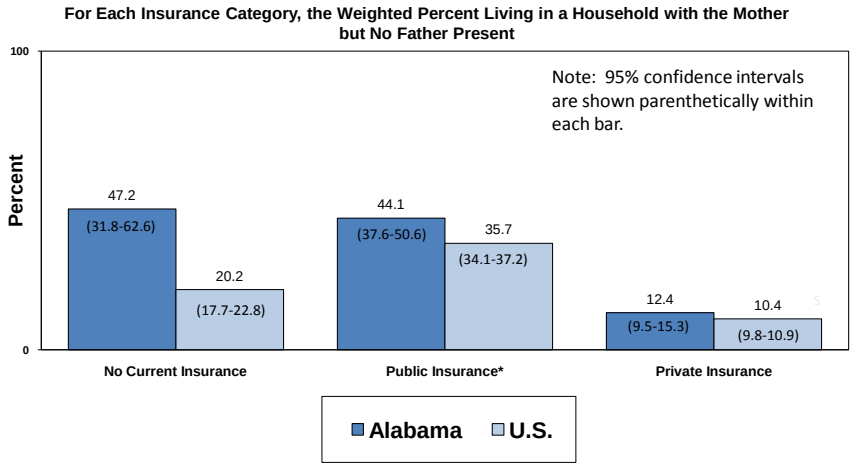
Abbreviations: FPL = federal poverty level

Households with the Mother but No Father, According to Insurance Status

Figure 3.2 shows the percentage of children living in households including the mother but no father, according to the child's health insurance status. In Alabama and the U.S., uninsured and publicly insured children and youth were significantly more likely than their privately insured counterparts to live in a home with the mother but no father present. For example, in Alabama, the percentages of children having the mother but no father present in the home were as follows: 47 percent of the uninsured group, 44 percent of the publicly insured group, and 12 percent of the privately insured group.

Compared to their counterparts in the U.S., uninsured and publicly insured children in Alabama were significantly more likely to live in a home where the mother was present but the father was not. For example, within the uninsured group, 47 percent of Alabama children, versus 20 percent of U.S. children, had the mother but no father present in the home.

Figure 3.2. Household with the Mother Present but No Father Present
According to the Child's Health Insurance Status
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Reference: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent health web site. Retrieved February 17, 2010 from www.nschdata.org

*Public insurance such as that provided by Medicaid or the State Children's Health Insurance Program

Households with the Mother but No Father, According to Race

According to NSCH 2007, in Alabama and the U.S., Black, non-Latino children and youth were more likely than White, non-Latino children and youth to live in a household with the mother present but no father present (not shown in figures). Specifically, in Alabama, 54.5 percent of Black, non-Latino children, versus 12.4 percent of White, non-Latino children, lived in a home with the mother but no father present. Corresponding percentages for the U.S. were 43.0 percent for Black, non-Latino children and 12.1 percent for White, non-Latino children. Black, non-Latino Alabama children and youth were significantly more likely than Black, non-Latino U.S. children and youth to live in a home where the mother was present but the father was not (54.5 percent versus 43.0 percent).

Foster Home Care

Care by Foster Parents or Other Non-Relatives, According to the American Community Survey

According to the 2006-2008 ACS, 1,116,004 children and youth aged 17 years or younger were living in Alabama households, and 1.7 percent of these individuals were either a foster child or unrelated to the householder. This finding was similar to the corresponding percentage for U.S. children and youth, 1.8 percent.[24]

Foster Home Care, According to a State Agency Report

The following numbers were in or derived from a report provided by the State Department of Human Resources in August 2008. [25] According to the report, 5,894 children and youth were enrolled in foster care in August 2008. Most (5,791, or 98 percent) of these enrollees were 19 years of age or younger, a few (98, or 1.7 percent) were 20 years of age, and very few (5, or 0.1 percent) were 22 years or older. Of the 5,894 children and youth who were in foster homes, 50 percent (2,939) were White, 48 percent (2,845) were Black, and 0.6 percent (33) of another race. (Information on race was missing or unknown for 77 records.) Four percent (3.6 percent, or 211) of the foster home enrollees were Latino.

According to race and ethnicity, the following percentages of 0-19 year-old Alabama residents were enrolled in foster care in 2008: 0.5 percent (5,791) of all children and youth, 0.4 percent (2,888) of White children and youth, 0.7 percent (2,795) of Black children and youth, 0.1 percent (32) of children and youth of other races, and 0.4 percent (207) of Latino children and youth.[a]

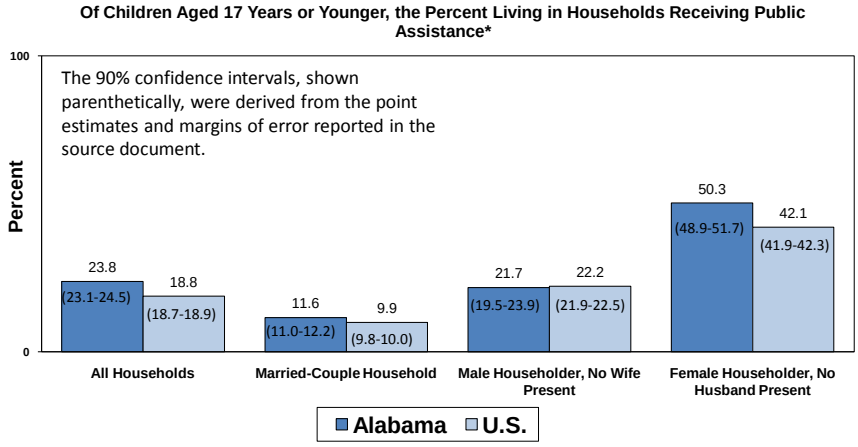
Receipt of Public Assistance

As discussed earlier in this section, the prevalence of poverty has been higher in Alabama than in the nation. As a corollary, compared to U.S. children, Alabama children and youth have been more likely to live in households that had received public assistance in the last 12 months. Specifically, the 2006-2008 ACS reports the percentage of children and youth aged 17 years or younger who were living in households with Supplemental Security Income, cash public assistance income, or Food Stamp benefits. Per this survey, 24 percent of Alabama children, versus 19 percent of U.S. children, were living in households receiving public assistance (Figure 3.3).[23]

Figure 3.3 shows this indicator for all children in family households and for children in three household structures: married-couple family households, family households with a male householder but no wife present, and family households with a female householder but no husband present. Of children living in the three types of households, those in homes with a female householder and no husband present were the most likely to be in homes that had received public assistance in the preceding 12 months. In particular, of Alabama children living in households with a female householder whose husband was not present, about half were in households that had received public assistance. Further, within all but one of the groups shown, Alabama children were more likely than their U.S. counterparts to live in households that had received public assistance. (The exception was the household headed by a male with no wife present.)

[a] To estimate the numerators for these percentages, we assumed that the age distribution of each racial or ethnic group of foster home enrollees was the same as that for the total group. That is, we multiplied the race- and ethnic-specific numbers of foster home enrollees by the factor 5,791/5,894. The denominators for each percentage were population estimates for 2008, as derived from detailed Census spreadsheets. For the "other" group, the denominator includes persons of two or more races, as well as persons of a race other than White alone or Black alone. The report used for the numerator did not have a category for two or more races.

Figure 3.3. Receipt by Household of Public Assistance
According to Family Household Structure
0-17 Year-Old Children and Youth, Alabama and the U.S., 2006-08



Source for point estimates: American FactFinder, U.S. Census Bureau. Table S0901, Children Characteristics, 2006-2008 American Community Survey 3-Year Estimates. Retrieved February 18, 2010 from http://factfinder.census.gov/

Note: Each category shown pertains to family households.

*Public assistance in the preceding 12 months: consisting of Supplemental Security Income, cash public assistance income, or Food Stamp benefits

Some Community Characteristics

Community characteristics described here pertain to the occurrence of crime, the safety of neighborhoods, and the supportiveness of neighborhoods. These issues were selected for discussion because they affect the quality of life of families, including persons served by the MCH Program. As well, one aspect of crime, the rate of juvenile crime arrests, is part of HSI #9A.

Crime

All crime, regardless of the age of the perpetrator or victim, reflects and affects the quality of life in a community. Because all crime affects the community, this discussion first addresses crime without respect to the age of the perpetrator, before addressing juveniles or young adults in particular.

Unless stated otherwise, information presented here about crime is reported in or derived from *Crime in Alabama 2008*, a report produced by the Alabama Criminal Justice Information Center.[26] The basis of the report is the Unified Crime Reporting System and arrest data. In *Crime in Alabama 2008*, an arrest is defined as "a measure of law enforcement activity by which an individual is detained in legal custody." As stated in the report, it should be noted that other factors affecting crime are not measured by the Unified Crime Reporting System: such as demographic characteristics of the population, economic conditions, education, attitudes of the victims toward crime and police, and crime reporting practices of the residents.

In general, *Crime in Alabama 2008* focuses on more serious and/or frequent crimes, termed "Part I Offenses." Here, all discussion of crime pertains to crime in Alabama.

All Crime
The following discussion is about crime regardless of the age of the perpetrator or arrestee.

Part I Crimes
The Total Crime Index
The Total Crime Index is comprised of the Part I Offenses, a category of offenses deemed to be most serious and/or most frequent: homicide, rape, robbery, aggravated assault, burglary, larceny,[a] motor vehicle theft, and arson. Both offense and arrest data are collected for Part I Crime.

From 2004 through 2008, the annual number of Part I Offenses reported in Alabama ranged from 183,802 in 2006 to 201,880 in 2008. The 201,880 crimes in 2008 were a 3.7 percent increase from the corresponding number in 2007 (when 194,610 crimes were reported). In 2008, the crime rate for the State was 4,330.4 per 100,000 inhabitants (or about four crime reports per 100 persons).

In 2008, the distribution of the 201,880 Part I Offenses according to the nature of the crime was as follows: larceny, 60.0 percent; burglary, 23.6 percent; motor vehicle theft, 6.3 percent; aggravated assault, 5.7 percent; robbery, 3.5 percent; rape,[b] 0.8 percent; and homicide, 0.2 percent. With respect to property crime versus violent crime, of the Part I Offenses in 2008, nine out of ten (89.9 percent) were property crimes and one out of ten (10.1 percent) were violent crimes (homicide, rape, robbery, and assault). From 2004 through 2008 in Alabama, the annual number of violent crimes reported ranged from 18,922 in 2006 to 20,446 in 2008. The 20,446 violent crimes in 2008 were a 3.2 percent increase from the corresponding number in 2007 (when 19,808 violent crimes were reported).

Trends in Specific Part I Crimes
Crime in Alabama 2008 reports trends in the following specific crimes for 2004-2008: property (excluding arson), violent crimes, homicide, rape, robbery, assault, burglary, larceny, and motor vehicle theft. With two exceptions (homicide and motor vehicle theft), each of these crimes increased in 2008 relative to 2007. The greatest proportionate increase was in burglary incidents, which increased by 11 percent (from 43,114 incidents in 2007 to 47,698 incidents in 2008). Of crimes that increased, the smallest proportionate increase was in robbery incidents, which increased by 1.1 percent (from 6,990 incidents in 2007 to 7,067 incidents in 2008.)

On the other hand, homicide cases declined by 12.5 percent: from 391 cases in 2007 to 342 cases in 2008. Motor vehicle theft declined by 3.1 percent: from 13,107 incidents in 2007 to 12,698 incidents in 2008.

Part I Arrests
Not all crimes result in arrests. For example, as previously stated, 201,880 Part I Offenses were reported in Alabama in 2008. On the other hand, 33,349 Part I Arrests were made in 2008. Sixty-seven percent of these arrests were of males.

[a] Larceny is the "unlawful taking or stealing of property or articles without the use of force, violence or fraud"—that is: pocket picking, purse snatching, shoplifting, theft from vending machines, etc.

[b] As defined in *Crime in Alabama 2008*, rape is the "carnal knowledge of a female through force or the threat of force, includes attempts."

Part II Arrests

Part II Offenses include crimes that are not defined as Part I Offenses. Because many Part II Offenses go undetected until an arrest is made, only arrest data are collected. In Alabama in 2008, 198,881 persons were arrested for Part II Offenses (including arson arrests): which is an 0.5 percent increase from the corresponding number of Part II Arrests in 2007 (197,836). In 2008, 75 percent of Part II Arrests were of males.

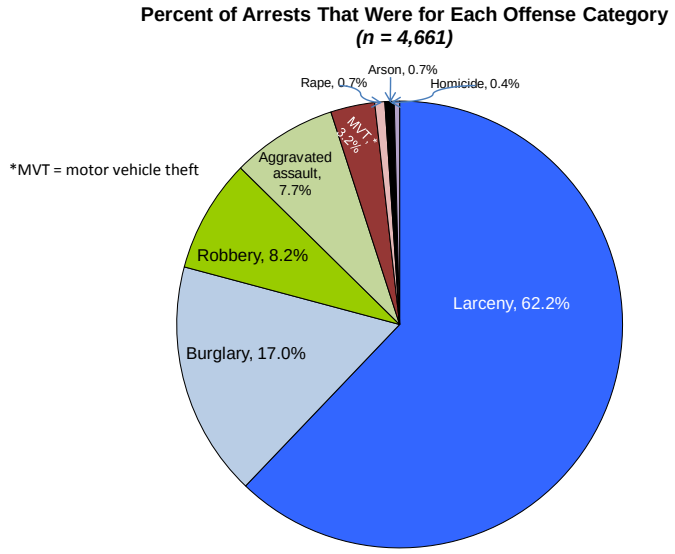
Juveniles as Perpetrators or Victims of Crime

The Uniform Crime Reporting System defines juveniles as males and females 17 years of age and younger.

Part I Arrests of Juveniles

Of the 33,349 Part I Arrests made in Alabama in 2008, 14 percent (4,661 arrests) were of juveniles. Figure 3.4 depicts these 4,661 arrests of juveniles according to the offense. As shown there, larceny accounted for more than half (2,897) of the offenses. The three least frequent types of offenses were extremely serious in nature: homicide (18 arrests), arson (31 arrests), and rape (34 arrests).

Figure 3.4. Part I Juvenile Crime Arrests
According to Type of Offense
Persons 17 Years of Age or Younger, Alabama, 2008



Reference: Alabama Criminal Justice Information Center. *Crime in Alabama 2008*. Table entitled "Total Part I Arrests by Age 2008."

Part II Arrests of Juveniles

In 2008 in Alabama, there were 9,064 Part II Arrests of juveniles, which comprised 4.6 percent of the total number of Part II Arrests (198,733). The four most frequent offenses leading to these 9,064 Part II Arrests of juveniles were: non-aggravated assault (23 percent, or 2,108 arrests); disorderly conduct (17.5 percent, or 1,585

Of arrests made in Alabama in 2008, 14 percent of Part I Arrests and 5 percent of Part II Arrests were of juveniles.

arrests), drug offenses (11.5 percent, or 1,044 arrests), and violation of liquor laws (8 percent, or 751 arrests).

Concerning some of the remaining Part II Arrests of juveniles in 2008, more than 100 arrests were made for each of the following offenses: vandalism (356), weapons (254), stolen property (245), and driving under the influence (107).

Juvenile Crime Arrest Rate
As reported here, the juvenile crime arrest rate includes Part I and Part II Arrests of persons aged 17 years or younger. Combining these arrests, in 2008 In Alabama, there were 13,725 arrests of juveniles. Dividing this number by the estimated number of 10-17 year-old Alabama residents in 2008, we estimate that the juvenile crime arrest rate in Alabama in 2008 was 2,721 arrests per 100,000 juveniles (or 2.7 arrests per 100 juveniles). (The preceding rate differs from the rate reported for HSI #9A in the *2009 Report/2011 Application*, because the latter rate is for 10-19 year-old youth.)

Juvenile Victims of Crime
Crime in Alabama 2008 provides little information about the number of juvenile victims of crime. However, the report does include the following information concerning Alabama in 2008:

- Of the 342 homicide victims, 28 were juveniles, and seven of the juvenile victims were under 5 years of age.

- About one third (32 percent) of the 1,524 rape victims were adolescent females from 13-16 years of age. In other words, about 488 rapes of Alabama females aged 13-16 years were reported in 2008.

Victims of Homicide
As previously stated, 28 victims of homicides in 2008 were juveniles. However, the 20-28 year-old group had the greatest number of homicide victims in that year: with 26 percent of the 342 homicide victims being in this age group. Eighty-seven percent of the homicide victims in 2008 were males.

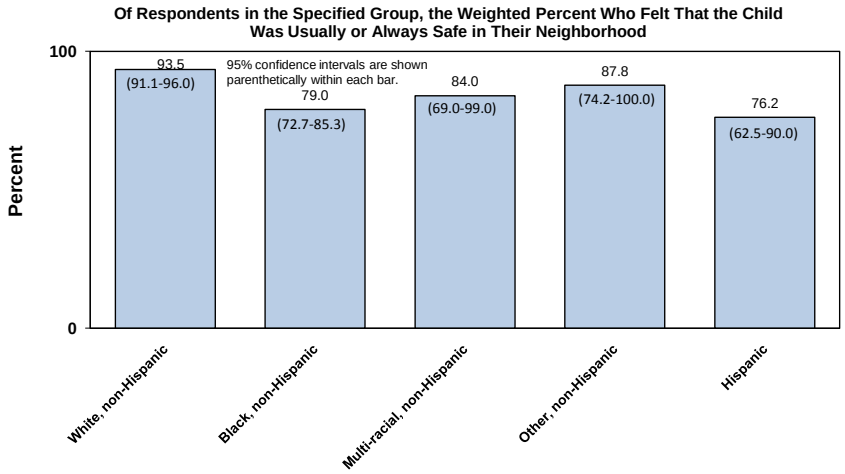
Safety of Neighborhoods
The NSCH asked how often the respondent felt that the child was safe in the household's community or neighborhood.[a] (All of the following percents are weighted to population characteristics.) For Alabama children and youth aged 17 years or younger, most respondents (88.1 percent) felt that the child was usually or always safe in the neighborhood. Nine (8.8) percent felt that the child was sometimes safe in the neighborhood, and 3.0 percent felt that the child was never safe in the neighborhood. These responses were similar to corresponding responses for the nation. However, in both Alabama and the nation, respondents for White, non-Latino children and youth were more likely than those for other racial/ethnic groups to feel that the child was usually or always safe in the neighborhood. For example, in Alabama, 93.5 percent of respondents for White, non-Latino children, versus 79 percent of respondents for Black, non-Latino children and 76 percent of respondents for Latino children, felt that the child was usually or

According to the NSCH 2007, in Alabama, respondents for White, non-Latino children and youth were more likely than those for other racial/ethnic groups to feel that the child was usually or always safe in the neighborhood. Further, compared to respondents for Black, non-Latino children and youth, respondents for White, non-Latino children and youth were more likely to feel that the child's neighborhood was supportive.

[a] Question: How often do you feel [child name] is safe in your community or neighborhood?

always safe in the neighborhood, and these differences were statistically significant. Race- and ethnicity-specific findings for Alabama concerning whether the child was usually or always safe are shown in Figure 3.5.

Figure 3.5. Perceived Safety of the Neighborhood
According to Race and Ethnicity of the Child
0-17 Year-Old Children and Youth, Alabama, 2007

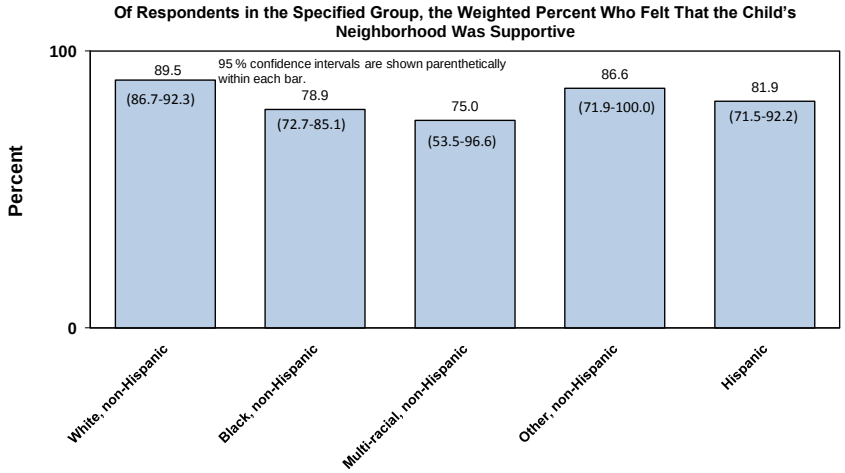


Reference: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved February 20, 2010 from www.nschdata.org

Supportiveness of Neighborhoods

The NSCH classified children concerning the respondent's perception about whether or not the child lived in a supportive neighborhood. For 0-17 year-old children and youth, 85.4 percent of Alabama residents said that the child's neighborhood was supportive: which was similar to the corresponding finding for the nation, of 83.2 percent. Figure 3.6 shows the percentage of Alabama respondents saying that the child's neighborhood was supportive, according to race and ethnicity. As shown there, the response differed significantly between Black non-Latinos and White non-Latinos. Specifically, 79 percent of respondents for Black, non-Latino children and youth, versus 89.5 percent of respondents for White, non-Latino children and youth, felt that the child's neighborhood was supportive. (The same pattern occurred in the U.S., where 71.0 percent of respondents for Black, non-Latino children and youth, versus 88.8 percent of respondents for White, non-Latino children and youth, felt that the child's neighborhood was supportive.)

Figure 3.6. Perceived Supportiveness of the Neighborhood
According to Race and Ethnicity of the Child
0-17 Year-Old Children and Youth, Alabama, 2007



Reference: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved February 22, 2010 from www.nschdata.org

Pregnant Women, Mothers, and Infants

The following issues are discussed here: 1) demographics of live births, 2) certain pregnancy-related issues, 3) adolescent pregnancies, 4) abortions, 5) maternal mortality and morbidity, 6) fetal deaths, and 7) maternal characteristics, risk markers for infant death, and healthcare issues.

Technical Note #3: Out-of-State Reporting Issues
Vital events (births, deaths, and abortions) that involve Alabama residents but occur outside of the State have apparently been underreported to ADPH in recent years. When the denominator for the indicator of interest is a population estimate provided by the U.S. Census Bureau, underreporting of the event could cause underestimation of the rate. When the numerator and denominator both come from vital events files, underreporting could affect both the numerator and the denominator—so that the estimate could err in either direction. Though the potential underestimation or overestimation of rates in any given year may be slight, even slight errors may cause appreciable distortion of trends over time.

Analyses for findings reported here addressed this out-of-state reporting issue in different ways, depending on the indicator and the context in which it is reported. Where relevant, the particular approach used is detailed in the discussion of the indicator. Analytic approaches used to address the out-of-state reporting issues included the following:

- In some cases, events that involved Alabama residents but that occurred outside of the State were excluded from analysis.
- In other cases, only records where the characteristic of interest was unknown were excluded from analysis (because one state provided a count of year 2008 births in that state to Alabama residents, but did not provide demographic information on most of the births).
- For some population-based indicators (such as adolescent pregnancy rates), certain assumptions were made about missing data from a neighboring state known to have experienced reporting problems.
- In cases where the effect of out-of-state reporting issues was deemed negligible or addressing the issues was not deemed feasible, all events involving Alabama residents were counted: regardless of where the event occurred or whether some records had missing values for the characteristic of interest.

Live Births According to Race, Ethnicity, and Maternal Age

HSIs #7A and #7B enumerate year 2008 live births according to maternal age and, respectively, race and ethnicity of the mother. Discussion here, though related to HSIs #7A and #7B, is often based on analyses that concurrently classified infants according to the mother's race and ethnicity, combined races other than White or Black into an "Other" category, and/or combined maternal ages into three (rather than five) categories.[a] In this report, unless stated otherwise, counts of births pertain to live births to Alabama residents, and the race and ethnicity of the infant are presumed to be that of the mother.

Race and Ethnicity of Live Births in 2008

In 2008, 64,345 infants were born alive to Alabama residents: up 1.9 percent from 2000. With respect to ethnicity, of the 64,345 infants, 8.2 percent were Latino: up from 3.1 percent in 2000. Racial distribution of the 64,345 infants was as follows: 66.6 percent were White, 30.8 percent were Black, and 2.6 percent were of Other race. The 892 births to Asians comprised 1.4 percent (892/64,345) of all live births and 54 percent (892/1,657) of Other-race births.

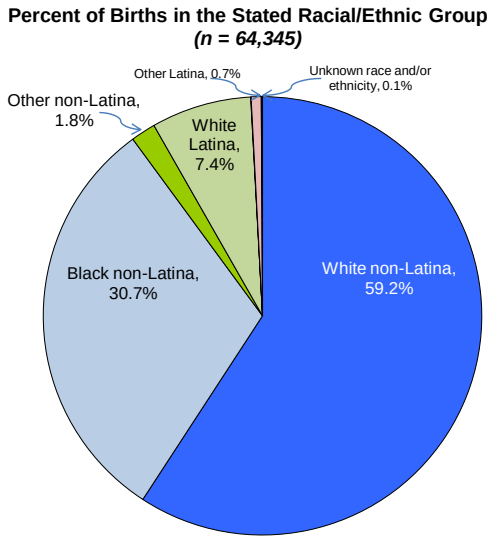
Technical Note #4: Race and Ethnicity of Live Births
Race and ethnicity are two separate items on the birth certificate. In this report, the race and ethnicity of the mother are used when classifying births or infants according to race and/or ethnicity. For some analyses, these two items were used to concurrently classify the mother or infant according to race and ethnicity.

In many analyses, three racial categories were used: White, Black, and Other—where "Other" refers to persons whose race was something other than White or Black.

Figure 3.7 shows distribution of year 2008 births according to concurrent classification by race and ethnicity. As shown there, of the 64,345 infants, 59 percent were White non-Latinos, 31 percent were Black non-Latinos, 7 percent were White Latinos, 1.8 percent were non-Latinos of another race, and 0.7 percent were Latinos of other (than White or Black) races. Only 22 (0.0 percent) of the infants were Black Latinos, and 58 (0.1 percent) of the infants were of unknown race and/or ethnicity.

[a] HSI #7A classifies race into six categories: White, Black or African American, American Indian or Native Alaskan, Asian, Native Hawaiian or Other Pacific Islander, and more than one race reported. However, neither HSI #7A nor #7B classify race and ethnicity concurrently.

Figure 3.7. Race and Ethnicity of the Mother
Residential Live Births, Alabama, 2008



Note: Only 22, or 0.0%, of the 64,345 infants were born to Black Latinas.

Live Births in Selected Years: Maternal Age, Ethnicity, and Race/Ethnicity

Tables 3.5, 3.6, and 3.7 show numbers of Alabama residential live births for 3 years—2000, 2004, and 2008. Each table shows numbers for specific maternal-age ranges and for all infants in the group of interest. Table 3.5 pertains to all live births, Table 3.6 to Latinos and non-Latinos, and Table 3.7 to several groups concurrently classified according to race and ethnicity. Although these tables show numbers for 3 years, the following narrative compares 2008 to 2000.

Maternal Age: 2008 Versus 2000

As shown in Table 3.5, the number of births for which maternal age was unknown increased dramatically (for all live births, from 8 in 2000 to 1,038 in 2008). The reason for this increase was that a neighboring state experienced reporting problems in 2008 (and perhaps 2006-2007 as well).[a] However, even when excluding records with unknown maternal age from the denominator, the percentage of live-born infants whose mother was an adolescent (less than or equal to 17 years, or 18-19 years of age) did not increase in 2008 relative to 2000 (derived from Table 3.5). However, this percentage is *not* population based and does *not* capture all pregnancies, so the adolescent pregnancy rate is discussed later in this section.

[a] Due to recent reporting problems in a neighboring state, records for many vital events (live births, fetal deaths, abortions, and deaths) involving Alabama residents that occurred in that state were not provided to ADPH. The neighboring state has begun resolving the problem, which apparently affected reporting of events occurring in 2006-2008. However, the state was unable to provide ADPH with records of all year 2008 births occurring in that state to Alabama residents. Instead, they provided a count of such births, and records corresponding to this count were added to Alabama's statistical live birth file for 2008. However, much information, including maternal age, is missing from the records for year 2008 births occurring in that state.

Table 3.5. Births According to Maternal Age, Alabama Residential Live Births, Selected Years

Maternal Age (Years)	Year 2000 Number (Percent*)	Year 2004 Number (Percent*)	Year 2008 Number (Percent *)	Change, 2008 Versus 2000 Ratio[¶] (Percent Change[T])	Absolute Change[Y]
17 or younger	3,601 (5.7)	2,835 (4.8)	2,677 (4.2)	0.74 (-25.7)	-924
18-19	6,315 (10.0)	5,424 (9.2)	5,890 (9.2)	0.93 (-6.7)	-425
20 or older	53,242 (84.3)	50,902 (86.0)	54,740 (85.1)	1.03 (+2.8)	+1,498
Unknown	8 (0.0)	9 (0.0)	1,038 (1.6)	129.8 (---[Φ])	+1,030
All ages	63,166	59,170	64,345	1.02 (+1.9)	+1,179

*Of all live births that year, the percentage who were born to mothers in the stated age group

[¶] The number of births in 2008 divided by the corresponding number in 2000

[T]The percent change in the number of births in 2008 versus 2000

[Y]The number of births in 2008 minus the number of births in 2000

[Φ]In this group, the number of records with unreported maternal age increased by more than 1,000 percent.

Race and Ethnicity of Live Births: 2008 Versus 2000

As previously stated, Table 3.6 pertains to groups classified according to ethnicity alone and Table 3.7 to several groups concurrently classified according to race and ethnicity. The groups shown in Table 3.7 are: White, Latino infants; White, non-Latino infants; Black, non-Latino infants; Other, non-Latino infants; and infants whose race or ethnicity was not reported.

Highlights from Tables 3.6 and 3.7 follow: comparing 2008 to 2000. Except where stated otherwise, the highlights are from the "All ages" row for the population under discussion. As shown in these tables:

- The number of Latino infants increased 2.7-fold, or by 3,327 infants: from 1,931 infants in 2000 to 5,258 infants in 2008 (Table 3.6).

> *Comparing 2008 to 2000, in Alabama, the number of live births to Latinos increased 2.7-fold.*

- The number of non-Latino infants declined by 3.5 percent, or by 2,130 infants: from 61,182 in 2000 to 59,052 in 2008 (Table 3.6).
- The number of White, non-Latino infants declined by 4.9 percent, or by 1,959 infants: from 40,047 in 2000 to 38,088 infants in 2008 (Table 3.7).
- The number of Black, non-Latino infants declined by 3.2 percent, or by 661 infants: from 20,430 infants in 2000 to 19,769 infants in 2008 (Table 3.7).
- Most of the decline in the number of Black, non-Latino infants occurred in those whose mother was 19 years of age or younger. The number of Black, non-Latino infants born to mothers aged 20 years or older declined by only 0.7 percent, or by 108 infants.
- The number of Other, non-Latino infants increased by 69.0 percent, or by 481 infants: from 697 infants in 2000 to 1,178 infants in 2008 (Table 3.7).

Table 3.6. Births According to Ethnicity of the Mother, Alabama Residential Live Births, Selected Years

Ethnic Group	Maternal Age (Years)	Year 2000 Number (Percent*)	Year 2004 Number (Percent*)	Year 2008 Number (Percent *)	Change, 2008 Versus 2000 Ratio[¶] (Percent Change[T])	Change, 2008 Versus 2000 Absolute Change[Y]
Latino	17 or younger	130 (6.7)	205 (6.1)	251 (4.8)	1.93 (+93.1)	+121
	18-19	183 (9.5)	347 (10.3)	450 (8.6)	2.46 (+145.9)	+267
	20 or older	1,617 (83.7)	2,820 (83.6)	4,535 (86.3)	2.80 (+180.5)	+2,918
	Unknown	1 (0.1)	3 (0.1)	22 (0.4)	22.00 (---[Φ])	+21
	All ages	1,931	3,375	5,258	2.72 (+172.3)	+3,327
Non-Latino	17 or younger	3,466 (5.7)	2,629 (4.7)	2,426 (4.1)	0.70 (-30.0)	-1,040
	18-19	6,125 (10.0)	5,076 (9.1)	5,437 (9.2)	0.89 (-11.2)	-688
	20 or older	51,589 (84.3)	48,045 (86.2)	50,185 (85.0)	0.97 (-2.7)	-1,404
	Unknown	2 (0.0)	1 (0.0)	1,004 (1.7)	502.00 (---[Φ])	+1,002
	All ages	61,182	55,751	59,052	0.97 (-3.5)	-2,130

*Of all live births that year, the percentage who were born to mothers in the stated age group

[¶] The number of births in 2008 divided by the corresponding number in 2000

[T] The percent change in the number of births in 2008 versus 2000

[Y] The number of births in 2008 minus the number of births in 2000

[Φ] In this group, the number of records with unreported maternal age increased by more than 1,000 percent.

Table 3.7. Births According to Race/Ethnicity of the Mother, Alabama Residential Live Births, Selected Years

Ethnic or Racial/Ethnic Group	Maternal Age (Years)	Year 2000 Number (Percent*)	Year 2004 Number (Percent*)	Year 2008 Number (Percent *)	Change, 2008 Versus 2000 Ratio[¶] (Percent Change[T])	Change, 2008 Versus 2000 Absolute Change[Y]
White, Latino	17 or younger	125 (6.8)	182 (5.8)	233 (4.9)	1.86 (+86.4)	+108
	18-19	178 (9.7)	324 (10.3)	402 (8.5)	2.26 (+125.8)	+224
	20 or older	1,535 (83.5)	2,646 (83.9)	4,095 (86.2)	2.67 (+166.8)	+2,560
	Unknown	1 (0.1)	2 (0.1)	22 (0.5)	22.0 (---[Φ])	+21
	All ages	1,839	3,154	4,752	2.58 (+158.4)	+2,913
White, non-Latino	17 or younger	1,648 (4.1)	1,219 (3.3)	1,125 (3.0)	0.68 (-31.7)	-523
	18-19	3,374 (8.4)	2,872 (7.8)	2,978 (7.8)	0.88 (-11.7)	-396
	20 or older	35,023 (87.5)	32,846 (88.9)	33,259 (87.3)	0.95 (-5.0)	-1,764

Ethnic or Racial/Ethnic Group	Maternal Age (Years)	Year 2000 Number (Percent*)	Year 2004 Number (Percent*)	Year 2008 Number (Percent *)	Change, 2008 Versus 2000 Ratio[¶] (Percent Change[T])	Change, 2008 Versus 2000 Absolute Change[Y]
	Unknown	2 (0.0)	0 (0.0)	726 (1.9)	363.4 (---[Φ])	+724
	All ages	40,047	36,937	38,088	0.95 (-4.9)	-1,959
Black, non-Latino	17 or younger	1,793 (8.8)	1,393 (7.8)	1,274 (6.4)	0.71 (-28.9)	-519
	18-19	2,715 (13.3)	2,171 (12.1)	2,407 (12.2)	0.89 (-11.3)	-308
	20 or older	15,922 (77.9)	14,337 (80.1)	15,814 (80.0)	0.99 (-0.7)	-108
	Unknown	0 (0.0)	1 (0.0)	274 (1.4)	--- (---[Φ])	+274
	All ages	20,430	17,902	19,769	0.97 (-3.2)	-661
Other, non-Latino	17 or younger	24 (3.4)	17 (1.9)	27 (2.3)	1.13 (+12.5)	+3
	18-19	36 (5.2)	32 (3.5)	51 (4.3)	1.42 (+41.7)	+15
	20 or older	637 (91.4)	855 (94.6)	1,098 (93.2)	1.72 (+72.4)	+461
	Unknown	0 (0.0)	0 (0.0)	2 (0.2)	--- (---[Φ])	+2
	All ages	697	904	1,178	1.69 (+69.0)	+481
Unknown race or ethnicity	17 or younger	6 (9.4)	1 (1.8)	0 (0.0)	0.00 (-100.0)	-6
	18-19	7 (10.9)	2 (3.6)	5 (8.6)	0.71 (-28.6)	-2
	20 or older	46 (71.9)	47 (85.5)	39 (67.2)	0.85 (-15.2)	-7
	Unknown	5 (7.8)	5 (9.1)	14 (24.1)	2.80 (+180.0)	+9
	All ages	64	55	58	0.91 (-9.4)	-6

*Of all live births that year, the percentage who were born to mothers in the stated age group
[¶] The number of births in 2008 divided by the corresponding number in 2000
[T]The percent change in the number of births in 2008 versus 2000
[Y]The number of births in 2008 minus the number of births in 2000
[Φ]In this group, the number of records with unreported maternal age increased by more than 1,000 percent.

Source of Payment for Delivery

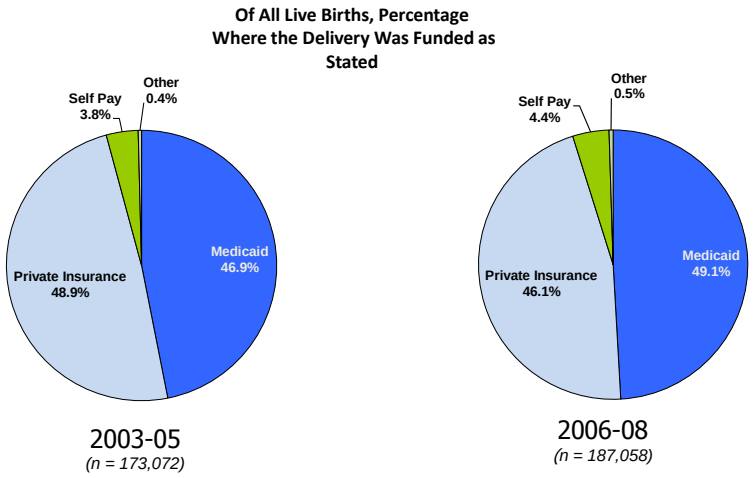
Live Births According to Source of Payment for Delivery

Figure 3.8 shows the distribution of Alabama residential live births according to source of payment for delivery: in 2003-05 and 2006-08. Comparing these two time periods, the overall distribution of funding sources for delivery changed significantly[a]. As a percentage of all deliveries, Medicaid-funded

[a] Cochran-Mantel-Haenszel Statistics, nonzero correlation, per SAS® ($p < 0.0001$)

deliveries increased from 47 percent in 2003-05 to 49 percent in 2006-08, and privately insured deliveries declined from 49 percent in 2003-05 to 46 percent in 2006-08.

Figure 3.8. Source of Payment for Delivery
Alabama Residential Live Births, 2003-05 and 2006-08



Notes:
Records with missing values for source of payment for delivery were excluded from analysis.

Comparing 2006-08 to 2003-05, the source-of-payment distribution changed significantly ($p < 0.0001$), shifting slightly away from private insurance.

Race and Ethnicity of Live Births According to Source of Payment for Delivery

Figures 3.9, 3.10, and 3.11 show the racial and ethnic distribution of Alabama residential live births in 2003-05 and 2006-08. As stated in notes to these tables, records with missing values for race or ethnicity were excluded from analysis. Comparing 2006-08 to 2003-05, highlights from these figures include the following:

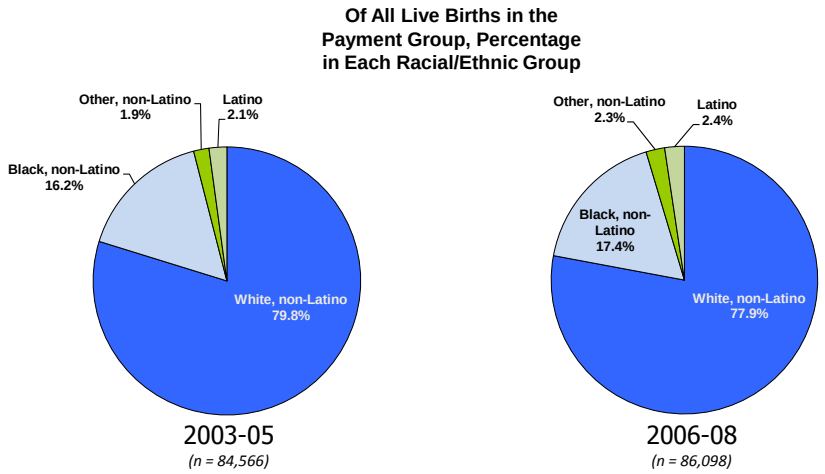
- The overall racial/ethnic distribution of live births changed significantly for each source-of-payment group (private insurance, Medicaid, and self pay).[a]
- For the privately insured group and the Medicaid group, the racial/ethnic composition shifted slightly away from White non-Latinos.
- The percentage of births to Latinas increased among privately insured deliveries and especially among Medicaid-funded deliveries. Of Medicaid-funded births, 10 percent were to Latinas in 2006-08, versus 5 percent being to Latinas in 2003-05.

Technical Note #5: Source of Payment for Delivery
The source of payment for delivery designation is based on birth certificate data. Alabama's birth certificate includes an item inquiring about the main source of payment for birth, with the following check box items: Medicaid, private insurance, self pay, and other. **Presumably, many of the "self pay" group have no health insurance and are unable to pay the cost of delivery.** In this document, when the delivery was funded by Medicaid, mothers are said to be Medicaid-enrolled, though many of the mothers were probably not enrolled in Medicaid at the beginning of the pregnancy.

[a] Cochran-Mantel-Haenszel Statistics, nonzero correlation, per SAS® ($p < 0.0001$)

- In 2006-08, births to Latinas no longer comprised the majority of self-pay deliveries, though they were still the largest subgroup of self-pay deliveries (42 percent of self-pay deliveries in 2006-08, versus 60 percent of self-pay deliveries in 2003-05).

Figure 3.9. Race and Ethnicity: Privately Insured Deliveries
Alabama Residential Live Births, 2003-05 and 2006-08



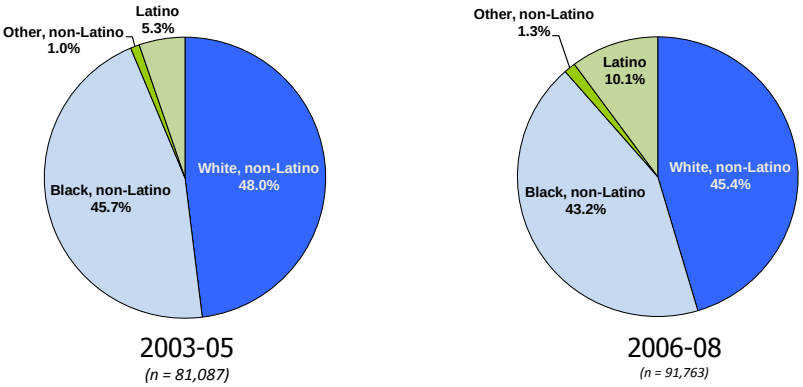
Notes:
Records with missing values for race or ethnicity were excluded from analysis.

Comparing 2006-08 to 2003-05, the overall racial/ethnic distribution of privately insured deliveries changed significantly ($p < 0.0001$), with a decline in the proportion of births to White non-Latinas and an increase in the proportion of births to females in other groups.

Figure 3.10. Race and Ethnicity: Medicaid-Funded Deliveries

Alabama Residential Live Births, 2003-05 and 2006-08

Of All Live Births in the Payment Group, Percentage in Each Racial/Ethnic Group



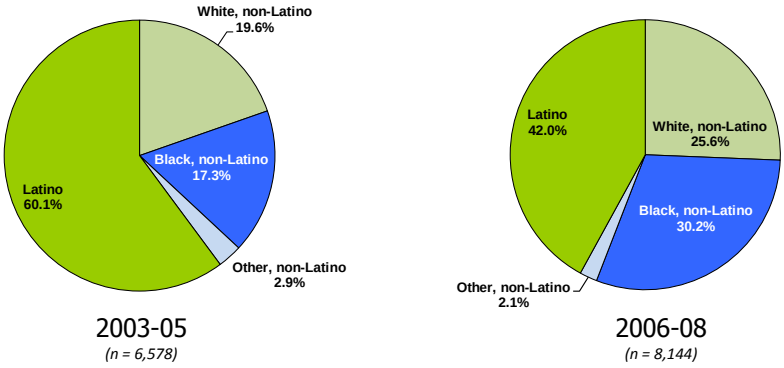
Notes:
Records with missing values for race or ethnicity were excluded from analysis.

Comparing 2006-08 to 2003-05, the overall racial/ethnic distribution of Medicaid-funded deliveries changed significantly ($p < 0.0001$): with similar declines in the proportion of births to White non-Latinas and to Black non-Latinas. Conversely, among Medicaid-funded deliveries, the proportion of births to Latinas increased by a factor of 1.9.

Figure 3.11. Race and Ethnicity: Self-Pay Deliveries

Alabama Residential Live Births, 2003-05 and 2006-08

Of All Live Births in the Payment Group, Percentage in Each Racial/Ethnic Group



Notes:
Records with missing values for race or ethnicity were excluded from analysis.

Comparing 2006-08 to 2003-05, the overall racial/ethnic distribution of self-pay deliveries changed significantly ($p < 0.0001$): with a marked decline in the proportion of Latinos whose delivery was classified as self pay.

Relationships Among Demographic Characteristics

Reducing disparities in health status is a major concern of the State, as well as the nation. Accordingly, many of the indicators described later in this report have been analyzed by race and/or ethnicity, some have been analyzed by source of payment for delivery (a surrogate for socioeconomic status), and some have been analyzed by maternal age.

When relevant, relationships among several demographic characteristics should be kept in mind when interpreting findings that are stratified by only one characteristic.

Figures 3.12, 3.13, and 3.14, which pertain to Alabama residential live births, show that source of payment for delivery, race/ethnicity, and maternal age are related to one another. When relevant, these relationships should be kept in mind when interpreting findings that are stratified by only one characteristic. Highlights from these figures, which pertain to 2006-08 combined, follow. Each of the differences mentioned was statistically significant[a]:

- Compared to White non-Latinos, Black non-Latinos and Latinos were more likely to have Medicaid-funded deliveries. For example, 69 percent of Black, non-Latino births, versus 37.5 percent of White, non-Latino births, were funded by Medicaid (Figure 3.12).

- Compared to 20-34 year-old mothers, adolescent (19 years or younger) mothers were more likely to have Medicaid-funded deliveries. That is, 81 percent of births to adolescent mothers, versus 47 percent of births to 20-34 year-old mothers, were paid for by Medicaid. On the other hand, mothers aged 35 years or older were less likely to have Medicaid-funded deliveries than 20-34 year-old mothers were (Figure 3.12).

- Compared to White non-Latinos, each of the other racial/ethnic groups (Black non-Latinos, Other non-Latinos, and Latinos) were more likely to have self-pay deliveries. For example, 22.5 percent of Latino births, versus 1.9 percent of White, non-Latino births, were self-pay deliveries (Figure 3.13).

- Compared to 20-34 year-old mothers, adolescent mothers were more likely and older mothers less likely to have self-pay deliveries. Specifically, 5.5 percent of births to adolescents, 4.3 percent of births to 20-34 year-old mothers, and 3.4 percent of births to older mothers were self-pay deliveries (Figure 3.13).

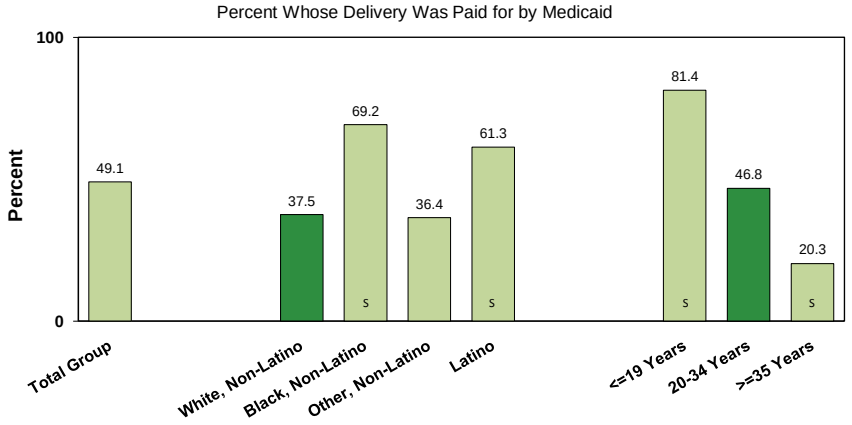
- The percentage of infants whose mother was 19 years of age or younger differed according to race/ethnicity. Other, non-Latino births were least likely to involve adolescent mothers, with just 7 percent of these births being to adolescent mothers. Black, non-Latino births were most likely to be to adolescent mothers, with 19 percent of these births being to adolescent mothers. Of Latino births, 14 percent were to adolescent mothers (Figure 3.14).

- Compared to privately insured births, Medicaid-funded births and self-pay births were more likely to be to adolescent mothers. That is, 23 percent of Medicaid-funded births, 17 percent of self-pay births, and 3.8 percent of privately insured births were to adolescent mothers (Figure 3.14).

[a] Cochran-Mantel-Haenszel statistics, nonzero correlation, per SAS® ($p < 0.0001$)

Figure 3.12. Medicaid-Funded Deliveries

Total and According to Race/Ethnicity and Maternal Age
Alabama Residential Live Births, 2006-08

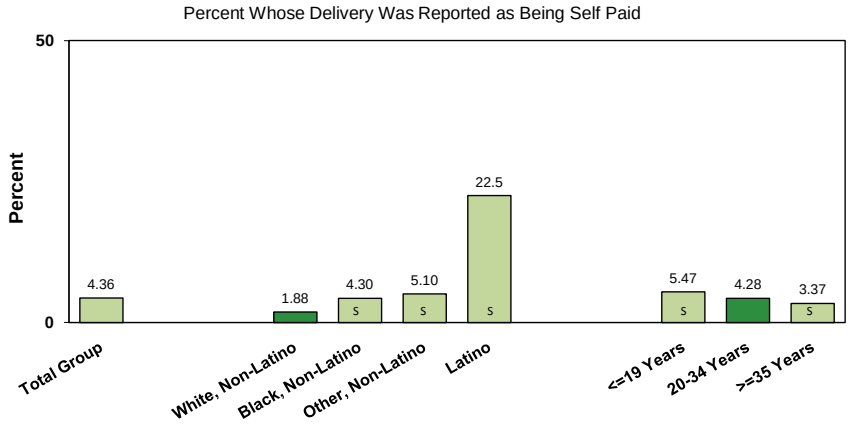


Notes:
Records with missing or unknown values for source of payment for delivery were excluded.

For each set of bars, the bar for the referent group is a darker shade than the other bars. When a group differed significantly from its referent group ($p < 0.0001$), the bar representing it is marked with an "S."

Figure 3.13. Self-Pay Deliveries

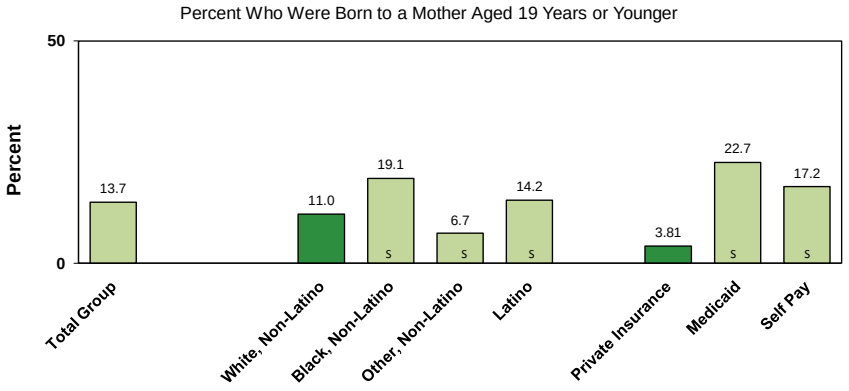
Total and According to Race/Ethnicity and Maternal Age
Alabama Residential Live Births, 2006-08



Notes:
Records with missing or unknown values for source of payment for delivery were excluded.

For each set of bars, the bar for the referent group is a darker shade than the other bars. When a group differed significantly from its referent group ($p < 0.0001$), the bar representing it is marked with an "S."

Figure 3.14. Adolescent Mothers
Total and According to Race/Ethnicity and Source of Payment for Delivery
Alabama Residential Live Births, 2006-08



Notes:
Records with missing or unknown values for maternal age were excluded.

For each set of bars, the bar for the referent group is a darker shade than the other bars. When a group differed significantly from its referent group ($p < 0.0001$), the bar representing it is marked with an "S."

Certain Pregnancy-Related Indicators

General Fertility Rate

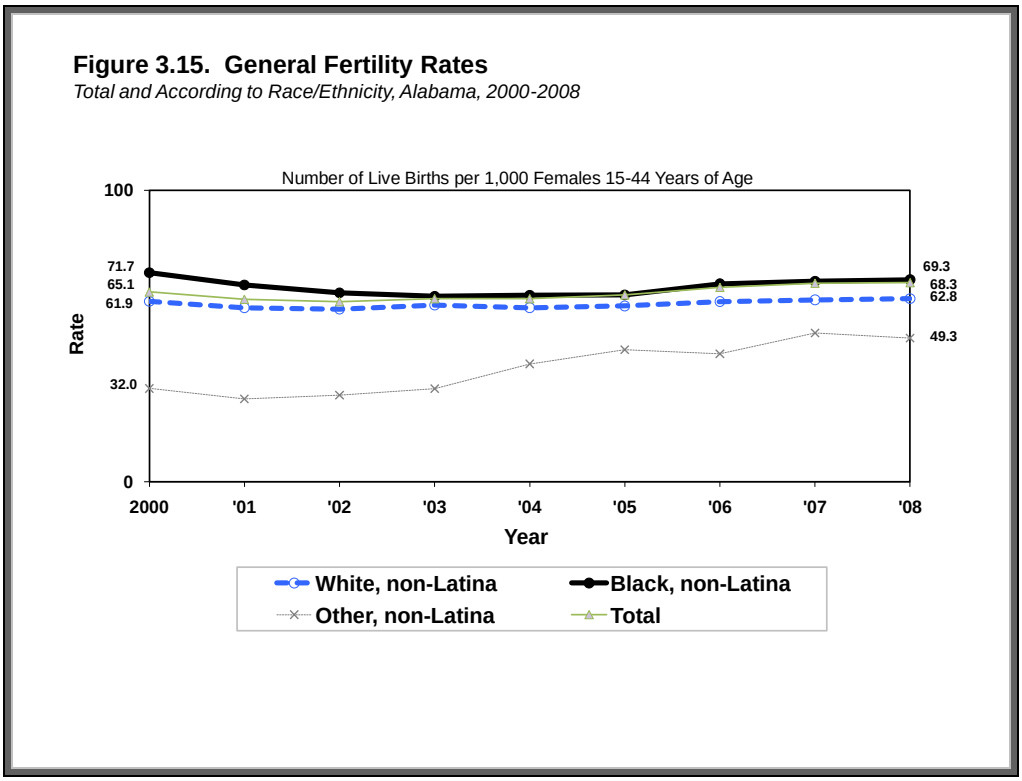
The general fertility rate is the number of live births to females of any age, per 1,000 females 15-44 years of age in the specified population. General fertility rates for 2000-2008 in Alabama are shown in Figure 3.15 for all females, White non-Latinas, Black non-Latinas, and Other non-Latinas. All fertility rates reported here are the number of Alabama residential live births in the stated group, per 1,000 15-44 year-old Alabama females in the stated group.

Among all females, the fertility rate changed little earlier in the decade, but increased in 2005 and each subsequent year. Therefore, the rate in 2008 (68.3 per 1,000) was 8.7 percent higher than the rate in 2004 (62.8 per 1,000). The rate for non-Latinas (not shown in Figure 3.15) was consistently lower than that for the total population of females. For example, in 2008, the fertility rate was 64.5 births per 1,000 among non-Latinas, versus 68.3 births per 1,000 among the total population of females. Comparing 2008 to 2004, the fertility rate rose by 6.5 percent among non-Latinas: from 60.5 per 1,000 in 2004 to 64.5 per 1,000 in 2008.

The estimated fertility rate among Latinas was 114.9 births per 1,000 females in 2000 (not shown in figures). The corresponding estimate in 2008 was 203.9 births per 1,000 females. However, conjecturally, much or all of the reported increase among Latinas may be due to progressive undercounting of 15-44 year-old Latinas over the surveillance period (2000-2008), rather than to an actual increase in the rate.

As shown in Figure 3.15, the fertility rate increased from 2005 onward for White non-Latinas and increased from 2004 onward for Black non-Latinas. For Other non-Latinas, the rate tended to increase from 2002 through 2007, then declined somewhat (by 3.2 percent) in 2008. Of the groups shown in

Figure 3.15, in 2008 the fertility rate ranged from 49.3 births per 1,000 females among Other non-Latinas to 69.3 births per 1,000 females among Black non-Latinas.



Short Inter-Pregnancy Interval

Among both White women and Black women, an inter-pregnancy interval of 18 to 23 months is associated with the lowest risk for adverse perinatal outcomes.[27] Accordingly, it has been suggested that women, especially those who are poor and young, should be advised of the potential harm to their infants of short inter-pregnancy intervals.[28] Figures 3.16 and 3.17 depict trends in the percentages of live-born infants with a second or higher live birth order who were born less than 12 months after a previous live birth: first for the total group and according to race and ethnicity (Figure 3.16), and then according to source of payment for delivery (Figure 3.17). In the discussion that follows, the term "short live birth interval" pertains to eligible infants who were born less than 12 months after a previous live birth, where " eligible infants" are infants with a second or higher live birth order.[a]

In the total population, over the surveillance period (2000-2008), the percentage of eligible infants with a short live birth interval ranged from 1.6 percent in 2001 and 2002 to 2.4 percent in 2008. As shown in Figure 3.16, this percentage tended to increase toward the end of the surveillance period in each of the groups shown, though the pattern was least consistent for Latino infants. In 2008, for the groups shown in Table 3.16, percentages of eligible infants with a short live birth interval ranged from 1.8 percent among White, non-Latino infants to 3.8 percent among Latino infants. In that year, there were a total of

[a] That is, "eligible infants" are live-born infants whose mother had given birth to one or more live-born infants before becoming pregnant with the infant being studied. First-order births and births of unknown order are excluded from this indicator.

848 infants with a short live birth interval: 373 White, non-Latino infants; 332 Black, non-Latino infants; 13 Other, non-Latino infants; [a] and 130 Latino infants.

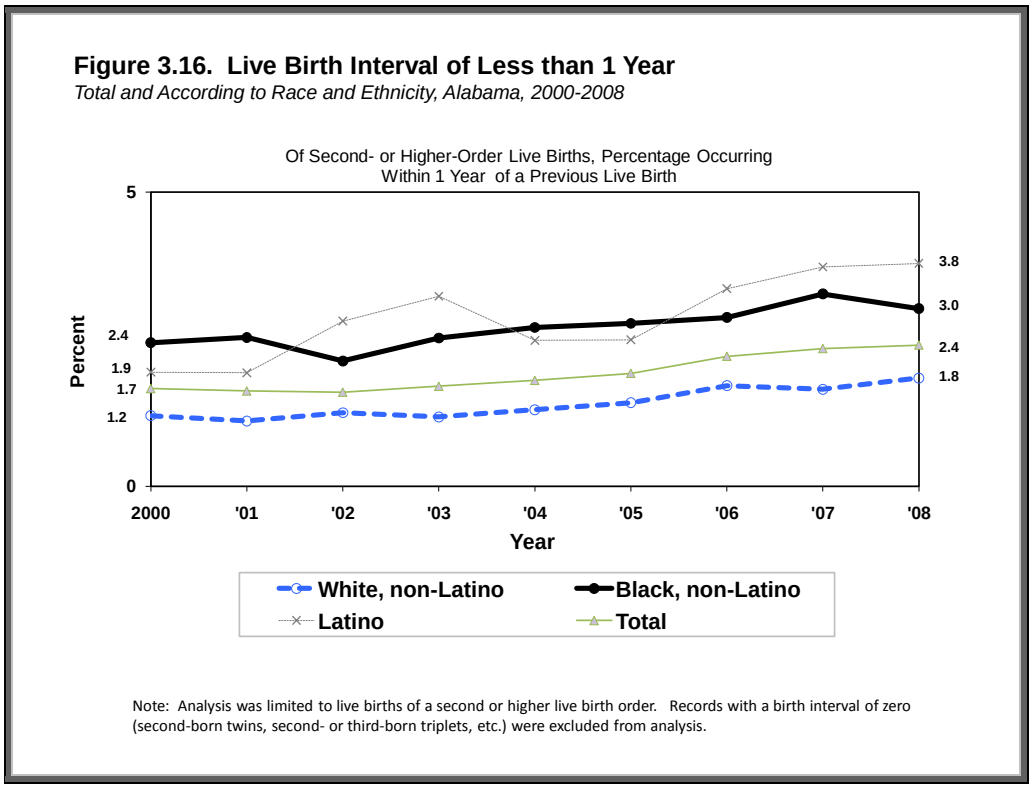
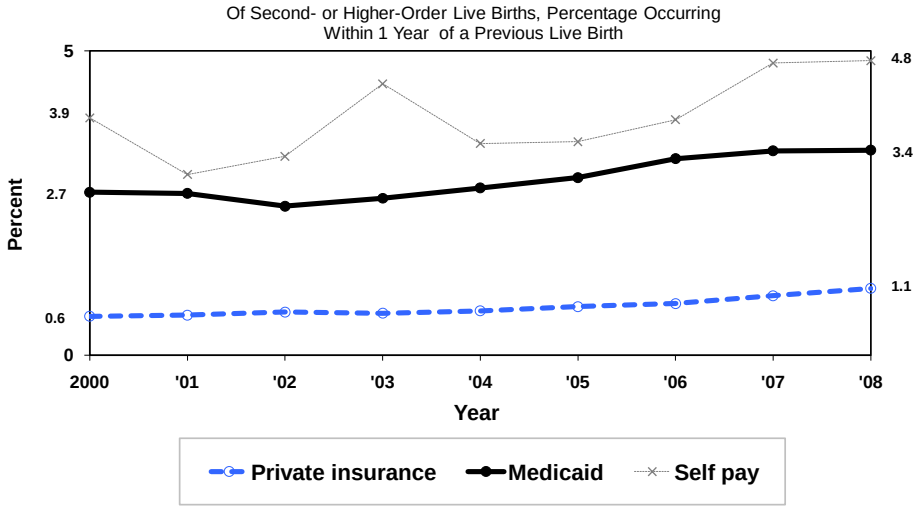


Figure 3.17 shows the prevalence of short live birth interval according to source of payment for delivery: for privately insured deliveries, Medicaid-funded deliveries, and "self-pay" deliveries. (See Technical Note #5 for explanation of self-pay deliveries.) As shown in Figure 3.17, among eligible infants from Medicaid-funded deliveries, the percentage with a short live birth interval increased in 2003 and in each subsequent year except 2008. Among eligible infants of privately insured mothers, this percentage increased in 2005 and each subsequent year. This indicator showed no clear trend among eligible infants from self-paid deliveries. In 2008, for the groups shown in Table 3.17, the percentages of eligible infants with a short live birth interval ranged from 1.1 percent among infants from privately insured deliveries to 4.8 percent among infants from self-paid deliveries. In 2008, the number of infants with a short live birth interval was 174 infants for privately insured deliveries, 577 infants for Medicaid-funded deliveries, and 85 infants for self-paid deliveries.

[a] Among eligible Other, non-Latino infants, the number of infants with a short live birth interval was small: ranging from 2 to 13 infants annually: or from 0.5 percent (2/377) of births in 2003 to 2.1 percent of births in 2005 and 2008 (11/515 in 2005 and 13/615 in 2008).

Figure 3.17. Live Birth Interval of Less than 1 Year
According to Source of Payment for Delivery, Alabama, 2000-2008



Note: Analysis was limited to live births of a second or higher live birth order. Records with a birth interval of zero (second-born twins, second- or third-born triplets, etc.) were excluded from analysis.

Adolescent Pregnancy

Various socioeconomic disadvantages and suboptimal health outcomes, including infant mortality, have been linked with adolescent pregnancy. Though these links are not necessarily causal, some factors that predispose an adolescent to become pregnant may also place her infant at higher risk of death. Prevention of adolescent pregnancy is generally desirable, therefore, to allow the adolescent additional time to mature and avail herself of social and economic opportunities before assuming the responsibilities of motherhood. Moreover, even though links between adolescent pregnancy and adverse pregnancy outcomes should not be assumed to be causal, having an adolescent mother is an important indicator of infants who may be at greater risk of morbidity and mortality.

National Performance Measure (NPM) #08 tracks the adolescent live birth rate. Because NPM #08 counts only live births, several years ago Family Health Services developed State Performance Measure (SPM) #03, which tracks the adolescent pregnancy rate for 15-17 year-old adolescents. During the 2009-10 Needs Assessment, we analyzed pregnancy rates for 18-19 year-old teens, as well as for 15-17 year-old teens. Though pregnancies in persons under 15 years of age are of tremendous concern, we did not analyze pregnancy rates in this group during the Needs Assessment, mainly because the rates are not stable due to small numbers in the statistical sense.

The pregnancy rate is the number of estimated pregnancies per 1,000 females in the specified age group: where estimated pregnancies include live births, induced abortions, and estimated total fetal losses. When estimating the adolescent pregnancy rate, we sought to account for out-of-state reporting issues that have probably led to slight undercounting of adolescent pregnancies in Alabama in recent years. These reporting issues and the methods we used to account for them, as well as details about the composition of the adolescent pregnancy rate, are described in Technical Note #6. As stated in that note, the adolescent pregnancy rates for 2006-2008 are provisional rates based on certain assumptions

about missing data. The following discussion of pregnancy rates pertains to Alabama females whose ages were, respectively, 15-17 years and 18-19 years. The surveillance period is 2000-2008.

Pregnancy Rate: 15-17 Year-Old Females

Figure 3.18 shows the pregnancy rate for 15-17 year-old Alabama females for the total group and for three groups concurrently classified according to race and ethnicity: White non-Latinas, Black non-Latinas, and Other non-Latinas. Due to uncertainty concerning the number of Latinas residing in the State, especially toward the end of the decade, pregnancy rates for Latina adolescents are not depicted.

In the total population of 15-17 year-old Alabama females, the pregnancy rate ranged from 38.7 pregnancies per 1,000 females in 2008 to 52.9 pregnancies per 1,000 females in 2000. As shown in Figure 3.18, from the 2000 baseline, this rate declined (though sometimes very slightly) every year except 2006 and 2007, when it rose each year before declining again in 2008. Combining 3 years and comparing 2006-08 to 2003-05, the rate declined by 1.6 percent: from 41.0 pregnancies per 1,000 in 2003-05 to 40.4 pregnancies per 1,000 (provisionally) in 2006-08. However, due to reporting issues detailed in Technical Note #6, whether this estimated decline actually occurred is uncertain. The annual number of pregnancies among 15-17 year-old Alabama females ranged from 3,671 in 2005 to 4,969 in 2000.

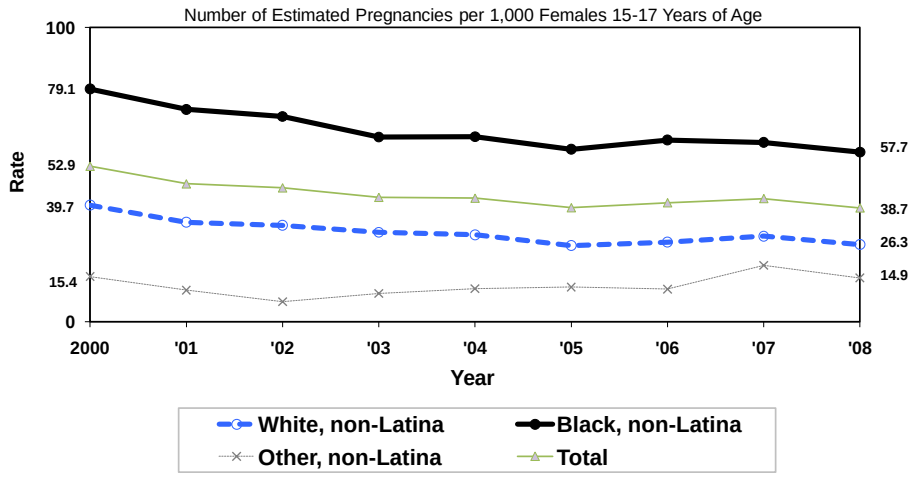
Technical Note #6: The Adolescent Pregnancy Rate
The pregnancy rate is the number of estimated pregnancies per 1,000 females in the specified age group. Estimated pregnancies include live births, induced abortions, and "estimated total fetal losses." Estimated total fetal losses are calculated as follows: 20 percent of live births plus 10 percent of induced terminations of pregnancy, which is a widely used formula developed by the Alan Guttmacher Institute.

As mentioned in Technical Note #3, vital events that involve Alabama residents but occur outside of the State have apparently been underreported to ADPH in recent years. Further, though year 2008 live births to Alabama residents that occurred in a neighboring state were reported to Alabama, demographic information (including maternal age) was missing for most of these births. In an effort to account for the missing information concerning events in the neighboring state, Family Health Services' MCH Epi Branch made certain assumptions about the missing data for 2006-2008. Details about these assumptions—which were based on distribution of pertinent characteristics in 2005 and/or 2006—are available upon request. The rates that follow were estimated in August 2009, so do not consider numbers reported after that time.

Accordingly, the **pregnancy counts and rates reported here for 2006-2008 are provisional estimates based on certain assumptions about missing data**. For this reason and because U.S. Census-based population estimates (which provide denominators for the rates) are periodically updated, pregnancy rates reported here will probably not match corresponding rates that may have been or may soon be published elsewhere.

Trends in the pregnancy rate among 15-17 year-old White, non-Latina females basically paralleled those for the total group. The annual number of pregnancies among 15-17 year-old White, non-Latina females ranged from 1,548 in 2005 to 2,362 in 2000. Among 15-17 year-old Black, non-Latina females, the pregnancy rate declined through 2003, but then showed no consistent trend. The annual number of pregnancies among 15-17 year-old Black, non-Latina females ranged from 1,799 in 2005 to 2,411 in 2000. Among 15-17 year-old Other, non-Latina females, the pregnancy rate increased in the middle of the surveillance period (2003, 2004, and 2005), but otherwise showed no consistent trend. The annual number of pregnancies in this group was small in the statistical sense: ranging from 15 in 2002 to 45 in 2007.

Figure 3.18. Adolescent Pregnancy Rate, 15-17 Years of Age
Total and According to Race/Ethnicity, Alabama, 2000-2008



Note: Rates for 2006-2008 are provisional rates that were estimated by making assumptions about missing data on events occurring in a neighboring state.

Pregnancy Rate, 18-19 Year-Old Females

Figure 3.19 shows the pregnancy rate for 18-19 year-old Alabama females for the total group and for three groups concurrently classified according to race and ethnicity. Again, due to uncertainty concerning the number of Latinas residing in the State, pregnancy rates for Latina adolescents are not depicted.

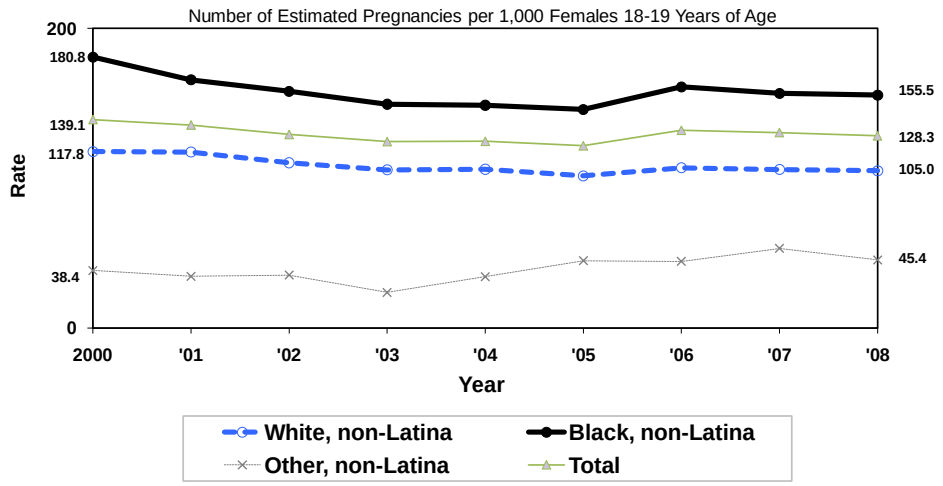
In the total population of 18-19 year-old Alabama females, the pregnancy rate ranged from 121.7 pregnancies per 1,000 females in 2005 to 139.1 pregnancies per 1,000 females in 2000. As shown in Figure 3.19, this rate declined each year from 2001 through 2003, but then showed no consistent trend. Combining 3 years and comparing 2006-08 to 2003-05, the rate increased by 5.4 percent: from 123.6 pregnancies per 1,000 in 2003-05 to 130.2 pregnancies per 1,000 (provisionally) in 2006-08. The annual number of pregnancies among 18-19 year-old Alabama females ranged from 7,563 in 2005 to 9,227 in 2000.

Technical Note #7: Estimated Fetal Losses
"Estimated fetal losses," a component used in determining the number of estimated pregnancies, is an estimate of the total number of fetal losses regardless of the gestational age of the fetus. Estimated fetal losses are computed as the sum of 20 percent of births and 10 percent of induced terminations of pregnancy, which is a widely used formula developed by the Alan Guttmacher Institute. "Estimated fetal losses" differs from the term "fetal deaths," as used in this report and in publications by ADPH's Center for Health Statistics. While Alabama law defines fetal death to include all gestations, only fetal deaths of at least 20 weeks in gestation are required to be reported by Alabama law. Therefore, in this report "fetal deaths" refers to deaths of at least 20 weeks in gestation that are reported to the ADPH (Reference: County Health Profiles, Alabama 2000. Center for Health Statistics, ADPH, June 2002). Fetal deaths, not estimated fetal losses, comprise the numerator for the fetal death rate, discussed later in this section.

Trends in the pregnancy rate among 18-19 year-old White, non-Latina females basically paralleled those for the total group. The annual number of pregnancies among 18-19 year-old White, non-Latina females ranged from 3,866 in 2005 to 4,825 in 2000. Among 18-19 year-old Black, non-Latina females, the pregnancy rate also declined through 2003, but then showed no consistent trend. However, comparing 2006-08 to 2003-05, the pregnancy rate among 18-19 year-old Black, non-Latina females increased by 6.5 percent: from 148.0 pregnancies per 1,000 in 2003-05 to 157.6 pregnancies (provisionally) per 1,000 in 2006-08. The number of pregnancies among 18-19 year-old Black, non-Latina females ranged from 3,128 in 2005 to 4,091 in 2000. Among 18-19 year-old Other, non-Latina females, the pregnancy rate showed no consistent trend. Nevertheless, comparing 2006-08 to 2003-05, the pregnancy rate among 18-19 year-old Other, non-Latina females increased by 39.0 percent: from 34.3 pregnancies per 1,000 in 2003-05 to 47.7 pregnancies per 1,000 (provisionally) in 2006-08. The annual number of pregnancies in Other, non-Latina females ranged from 36 in 2003 to 80 (provisionally) in 2007.

Comparing 2006-08 to 2003-05, the pregnancy rate among 18-19 year-old Alabama females increased by 5 percent.

Figure 3.19. Adolescent Pregnancy Rate, 18-19 Years of Age
Total and According to Race/Ethnicity, Alabama, 2000-2008



Note: Rates for 2006-2008 are provisional rates that were estimated by making assumptions about missing data on events occurring in a neighboring state.

Abortion Rates

In our view, as access to and appropriate utilization of pregnancy prevention methods increase, abortion rates should decline. A discussion of abortion rates among the total population of 15-17 year-old females, 18-19 year-old females, and 20-44 year-old females follows.[a] In this document, all discussion of

[a] Of all reported abortions performed on Alabama residents in 2000-2008, 98.9 percent were performed on 15-44 year-old residents. The total number of reported abortions performed on Alabama residents in 2008 was 9,373. However, a neighboring state did not report abortions performed in that state on Alabama residents. From 2000-2005, the annual number

abortions pertains to Alabama residents, and the abortion rate is reported as the number of abortions per 1,000 female residents in the specified age group. The rates for 2006-2008 are *estimates based on assumptions, described in Technical Note #8, about missing data* from one or more states. The fewer the number of events, the less is our confidence in estimates that are based on these assumptions. For this reason, we have not analyzed recent trends in abortions according to race or ethnicity.[a]

Abortion Rates: 15-17 Year-Old Females

Among 15-17 year-old Alabama females, from 2000-2008, the abortion rate ranged from 6.1 abortions per 1,000 females (an estimate) in 2008 to 8.6 abortions per 1,000 females in 2000. Combining 3 years and comparing 2006-08 to 2003-05, the rate may have declined by 6.2 percent: from 6.8 abortions per 1,000 in 2003-05 to 6.3 abortions per 1,000 (an estimate) in 2006-08. However, due to reporting issues detailed in Technical Note #8, whether this estimated decline actually occurred is uncertain.[b] The annual number of abortions among 15-17 year-old Alabama females ranged from 587 in 2008 (an estimate) to 808 in 2000.

Abortion Rates: 18-19 Year-Old Females

Among 18-19 year-old Alabama females, from 2000-2008, the abortion rate ranged from 16.7 abortions per 1,000 females in 2008 (an estimate) to 22.6 abortions per 1,000 females in 2000 and 2001. Combining 3 years and comparing 2006-08 to 2003-05, the rate may have declined by 5.1 percent: from 18.3 abortions per 1,000 in 2003-05 to 17.3 abortions per 1,000 (an estimate) in 2006-08. However, due to reporting issues detailed in Technical Note #8, whether this estimated decline actually occurred is uncertain.[c] The annual number of abortions among 18-19 year-old

Technical Note #8: The Abortion Rate

The abortion rate is the number of abortions per 1,000 females in the specified demographic group.

As stated in Technical Note #3, vital events, including abortions, that involve Alabama residents but occur outside of the State have been underreported to ADPH in recent years. In an effort to at least partly account for the missing records, Family Health Services' MCH Epi Branch made certain assumptions about data from a neighboring state that is known to have experienced reporting problems in recent years. Specifically, the branch assumed that the annual number of abortions performed in the neighboring state on Alabama residents of the specified demographic group was the same in 2006, in 2007, and in 2008 as it was reported to be in 2005. We consider this to be a conservative assumption. The rates based on this assumption are termed "estimated" abortion rates. As well, the MCH Epi Branch assumed a "worst-case scenario": in which the annual number of abortions performed in the neighboring state on Alabama residents of the specified demographic group in 2006, 2007, and 2008 equaled the highest annual number of abortions in this group during the surveillance period (2000-2008). Worst-case scenarios are mentioned in footnotes only.

Although estimates based on assumptions about missing data are not optimum, they are preferable to assuming that no abortions were performed in the neighboring state on Alabama residents in 2006-2008. Assuming no such abortions could lead to notably overstating a decline or failing to observe an increase in abortion rates.

Accordingly, the **abortion counts and rates reported here for 2006-2008 are provisional estimates based on assumptions about missing data**. For this reason and because U.S. Census-based population estimates (which provide denominators for the rates) are periodically updated, abortion rates reported here will probably not match corresponding rates that may have been or may soon be published elsewhere.

---

of reported abortions performed on Alabama residents in that state ranged from 380 in 2005 to 875 in 2001. (The neighboring state stopped reporting abortions performed on Alabama residents in 2006, providing records to ADPH for only 5 abortions performed in 2006 and providing no abortion records for subsequent years of the surveillance period.)

[a] In Alabama, reported abortion rates have typically been higher among Black females than among White females. For example, in 2005 in Alabama, the reported abortion rate among 20-44 year-old Black, non-Latina females was 18.8 per 1,000 (4,291/228,559) versus 5.8 per 1,000 (3,008/517,503) among 20-44 year-old White, non-Latina females.

[b] Per a worst-case scenario (defined in Technical Note #8), which we consider unlikely, the abortion rate among 15-17 year-old Alabama residents only declined by 0.6 percent over this period: from 6.8 per 1,000 in 2003-05 to 6.7 per 1,000 in 2006-08.

[c] Per a worst-case scenario (defined in Technical Note #8), which we consider unlikely, the abortion rate among 18-19 year-old Alabama residents increased by 0.7 percent over this period: from 18.3 per 1,000 in 2003-05 to 18.4 per 1,000 (an estimate) in 2006-08.

Alabama females ranged from 1,059 in 2007 (an estimate) to 1,499 in 2000.

Abortion Rates: 20-44 Year-Old Females

Among 20-44 year-old Alabama females, from 2000-2008, the abortion rate ranged from 10.0 abortions per 1,000 females in 2005 to 11.9 abortions per 1,000 females in 2001. Combining 3 years and comparing 2006-08 to 2003-05, the rate may have declined by 0.7 percent: from 10.3 abortions per 1,000 in 2003-05 to 10.2 abortions per 1,000 (an estimate) in 2006-08. However, due to reporting issues detailed in Technical Note #8, whether this slight decline actually occurred is uncertain.[a] The estimated annual number of abortions among 20-44 year-old Alabama females ranged from 7,838 in 2005 to 9,566 in 2000.

Maternal Mortality and Morbidity

Maternal Mortality

In this report, when pertaining to deaths, the term "maternal" refers to deaths attributed to pregnancy, childbirth, or the puerperium.[b] Here, all discussion of maternal mortality pertains to Alabama residents.

From 2000-2008, a total of 54 Alabama residents died of causes attributed to pregnancy, childbirth, or the puerperium. During this period, the annual number of deaths due to maternal causes ranged from 3 deaths in 2000 and 2001 to 10 deaths in 2005 and 2006. In 2008, 6 Alabama residents died from maternal causes, which was the median annual number of maternal deaths during the surveillance period.

From 2000-2008, 54 Alabama residents died of causes attributed (on the death certificate) to pregnancy, childbirth, or the puerperium. Most (65 percent) of these women were Black non-Latinas.

Among these 54 maternal deaths, the more frequent causal categories were: "other" maternal disorders predominantly related to pregnancy (13 deaths, or 24 percent of the total); edema, proteinuria, and hypertensive disorders in pregnancy, childbirth, and the puerperium (11 deaths, or 20 percent); "other" obstetric conditions, not elsewhere classified (11 deaths, or 20 percent); and complications predominantly related to the puerperium (10 deaths, or 18.5 percent). (Eight of the 10 deaths in the latter category were due to cardiomyopathy in the puerperium.) The remaining causal categories for the 54 deaths were ectopic pregnancy (4 deaths), premature separation of the placenta (3 deaths), and unspecified complications of labor and delivery (2 deaths).

With respect to race and ethnicity, most (35, or 65 percent) of the 54 women dying of maternal causes were Black non-Latinos. Seventeen, or 31.5 percent, of the 54 women were White non-Latinos. Two of the women were Latinos. Concerning age, nearly all (49, or 91 percent) of the 54 women were from 20-44 years of age.

---

[a] Per a worst-case scenario (defined in Technical Note #8), which we consider unlikely, the abortion rate among 20-44 year-old Alabama residents increased by 4.2 percent over this period: from 10.3 per 1,000 in 2003-05 to 10.7 per 1,000 (an estimate) in 2006-08.

[b] International Classification of Diseases (ICD), 10th Revision, Block 000-099

Maternal Mortality According to Race

In Alabama, the maternal mortality rate[a] among Black women has typically been higher than that among White women. Combining 5 years, in 2004-08 the maternal mortality rate for Black, non-Latino women was 5.3 times the corresponding rate for White, non-Latino women: 2.5 maternal deaths per 10,000 live births (24/94,435) versus 0.5 deaths per 10,000 live births (9/188,076). This difference was statistically significant ($p < 0.000$[b]).

Trends in Maternal Mortality

Discussion of trends is based on analysis of maternal deaths occurring from 2000 through 2008. Caution should be exercised when interpreting trends in maternal mortality over the surveillance period of 2000-2008, however: because, for Alabama, the number of maternal deaths was apparently unusually low during the first 3 years of the surveillance period. Specifically, among Alabama residents, there were 12 maternal deaths in 2000-02, the first 3 years of the surveillance period, versus 24 maternal deaths in 1997-99.[c]

Relative to 2000-2002, the maternal mortality rate increased somewhat in the middle of the surveillance period and then declined slightly. Specifically, reported as the number of maternal deaths per 10,000 live births, the maternal mortality rate in Alabama has been as follows: 0.7 deaths per 10,000 (12/182,328) in 2000-02, 1.3 deaths per 10,000 (23/178,788) in 2003-05, and 1.0 deaths per 10,000 (19/191,440) in 2006-08. The increase in 2003-05 relative to 2000-02 was of borderline statistical significance ($p = 0.055$), and the decline in 2006-08 relative to 2003-05 was not significant ($p = 0.401$).[b] Trends in single-year rates from 2000-2008 were not significant ($p = 0.309$[d]). Also, it should be noted that the number of maternal deaths in 2003-05 and in 2006-08 did not exceed the corresponding number in 1997-99.

Again reported as the number of maternal deaths per 10,000 live births, the maternal mortality rate among Black, non-Latino women in Alabama has been as follows: 1.0 deaths per 10,000 (6/57,782) in 2000-02, 2.6 deaths per 10,000 (14/53,721) in 2003-05, and 2.6 deaths per 10,000 (15/58,539) in 2006-08. Among this population, the increase in 2003-05 relative to 2000-02 was of borderline significance ($p = 0.051$).[b] Trends in single-year rates from 2000-2008 were not significant ($p = 0.126$[d]). Also, it is conceivable that the number of maternal deaths of Black, non-Latino women in 2003-05 and in 2006-08 did not notably exceed the corresponding number in 1997-99.[e]

---

[a] As reported here, the maternal mortality "rate" is actually a ratio, based on the number of maternal deaths relative to the number of live births.

[b] P-values are according to the Mantel-Haenszel Chi-square, as calculated on EpiInfo™, Version 3.5.1.

[c] Deaths from 2000-2008 were tabulated via direct analysis of Alabama's statistical death files. Counts of maternal deaths in 1997-1999 were obtained from previous publications of ADPH's Center for Health Statistics, each of which provides a total count of maternal deaths for a given year. In 1999, the system used for classifying cause of death changed from ICD-9 to ICD-10.

[d] Per the Chi-square for linear trend, as calculated on EpiInfo™, Version 3.5.1.

[e] Publications by ADPH's Center for Health Statistics do not report findings for Black, non-Latino women. Due to the change from ICD-9 to ICD-10 in 1999 and to competing priorities, the MCH Epi Branch cannot readily analyze mortality for 1998 and earlier years. For these reasons, a count of the number of maternal deaths among Black, non-Latino Alabama females in 1997-1999 (combined years) is not available. However, by assuming that 64.8 percent of the 24 maternal deaths of Alabama residents in 1997-99 were deaths of Black, non-Latino women, we estimate that about 16 Black, non-Latino Alabama residents died of maternal causes in 1997-99.

Maternal mortality rates reported here presumably underestimate true maternal mortality rates to an unknown degree, since they are based solely on death certificate data. Though few in number relative to some other causes of death, maternal deaths are part of a broader issue, which is maternal morbidity during pregnancy.

Maternal Morbidity During Pregnancy

From the PRAMS database, the Health Department's Center for Health Statistics reports on several indicators pertaining to maternal morbidity during pregnancy. Discussion of these indicators follows, and confidence intervals for estimates are shown in Table 3.8. When discussing PRAMS findings, "mothers" pertains to women having a live-born infant in the specified year(s).

Of Alabama mothers delivering live-born infants in 2007, 68 percent reported having a medical problem during pregnancy. Of those mothers with a medical problem, 32 percent reported severe nausea, vomiting, or dehydration; 24 percent reported preterm labor; 23 percent reported kidney or bladder infection, 17 percent reported high blood pressure; 13 percent reported vaginal bleeding, and 11 percent reported having diabetes.

Again of those mothers who experienced a medical problem, 44 percent visited a hospital and stayed less than a day, 26 percent stayed from one to seven days, 4.4 percent stayed longer than seven days, and 34.5 percent stayed in bed for more than two days at the advice of a doctor or nurse.

Table 3.8. Medical Problems, Hospital Visits or Stays, and Bed Rest During Pregnancy, Among Women Who Reported a Medical Problem During the Pregnancy, Alabama PRAMS, 2007

Group	***Experience During Pregnancy***	***Percent (95% Confidence Interval*)***
All mothers	Had 1 or more medical problems during pregnancy	67.6 (64.1-70.8)
Mothers who had 1 or more medical problems during pregnancy: type of medical problem¶	Had severe nausea, vomiting, or dehydration	32.3 (29.1-35.7)
	Had preterm labor	24.3 (21.4-27.5)
	Had kidney or bladder infection	23.4 (20.6-26.5)
	Had high blood pressure	17.1 (14.6-20.0)
	Had vaginal bleeding	12.8 (10.6-15.4)
	Had diabetes	11.0 (8.9-13.5)
Mothers who had 1 or more medical problems during pregnancy: hospital stay or bed rest¶	Were in hospital or emergency room less than 1 day	43.8 (39.4-48.2)
	Were in hospital 1-7 days	26.3 (22.5-30.5)
	Were in hospital longer than 7 days	4.4 (2.8-6.9)

Group	Experience During Pregnancy	Percent (95% Confidence Interval*)
	Stayed in bed for more than 2 days, on advice of doctor or nurse	34.5 (30.4-38.9)

* These confidence intervals were calculated as being plus (upper limit) and minus (lower limit) 1.96 times the standard error, using SAS® and SUDAAN® statistical packages provided by CDC.

¶For this row, the denominator for each percent is the number of women who answered "yes" to the question asking if they had experienced a medical problem during the pregnancy.

Fetal Deaths

As used in this report, "fetal deaths" pertains only to fetal deaths of at least 20 weeks in gestation that are reported to the Health Department. The fetal death ratio, reported as the number of fetal deaths per 1,000 live births in the specified group, is shown in Figure 3.20 for the total population and for three racial/ethnic groups. Figure 3.20 and discussion concerning it pertain to Alabama residents. However, for reasons detailed in Technical Note #9, in this report, Figure 3.20 and all discussion of fetal deaths and the fetal death ratio are based on *occurrent* events: That is, they are based on births and fetal deaths occurring *in* Alabama *to* or *of* Alabama residents.

As shown in Figure 3.20, from 2000-2008, the occurrent fetal mortality ratio among Alabama residents ranged from 9.0 fetal deaths per 1,000 live births (518/57,429) in 2003 to 9.7 fetal deaths per 1,000 live births (595/61,618) in 2000. In successive 3-year periods, the number of fetal deaths per 1,000 live births was as follows: 9.5 deaths per 1,000 in 2000-02, 9.1 deaths per 1,000 in 2003-05, and 9.3 deaths per 1,000 in 2006-08.

The occurrent fetal mortality ratio among White, non-Latino Alabama residents ranged from 6.0 fetal deaths per 1,000 live births (216/35,996) in 2002 to 7.1 fetal deaths per 1,000 live births (263/37,106) in 2001. In this population, in successive 3-year periods, the number of fetal deaths per 1,000 live births was as follows: 6.5 deaths per 1,000 in 2000-02, 6.2 deaths per 1,000 in 2003-05, and 6.7 deaths per 1,000 in 2006-08.

Technical Note #9: The Fetal Death Ratio

While fetal death, as defined by Alabama law, includes all gestational ages, only fetal deaths of at least 20 weeks gestation are required to be reported by Alabama law. Therefore, in this report, "fetal deaths" refers to deaths of at least 20 weeks in gestation that are reported to ADPH (reference: Division of Statistical Analysis, Center for Health Statistics, ADPH).

As previously discussed in several places in this report, out-of-state reporting issues require consideration when seeking to analyze trends. The underlying issue is this: Temporal (over-time) variations in completeness of reporting of events occurring *to* Alabama residents *in* other states can lead to ascertainment bias. In turn, to the degree that it exists, ascertainment bias can distort findings concerning trends over time.

As reported here, the fetal death ratio is the number of fetal deaths (at 20 or more weeks of gestation) per 1,000 live births. Therefore, identifying any notable ascertainment bias concerning the number of live births or fetal deaths is critical to assessing trends in the fetal death ratio.

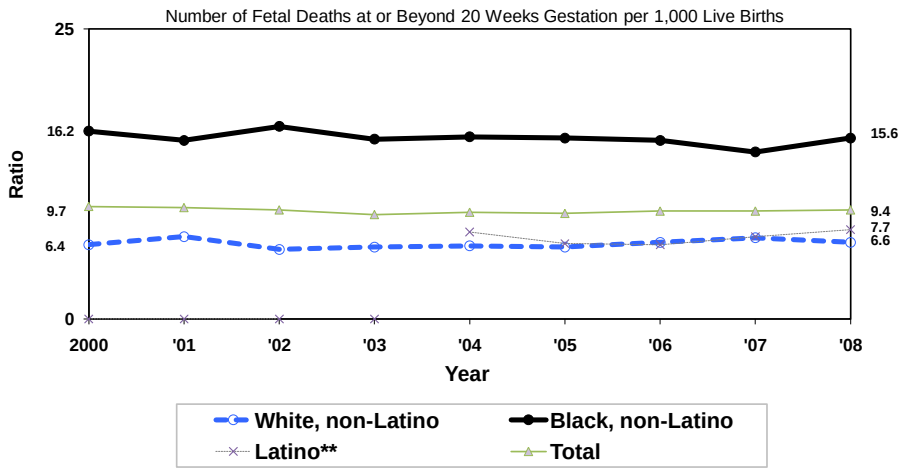
Among reported Alabama residential live births, the percent that occurred out of state dropped slightly: from 2.74 percent in 2000-02 to 2.56 percent in 2006-08. Moreover, among reported fetal deaths of Alabama residents, the percent of deaths that occurred in another state dropped strikingly: from 2.20 percent (38/1,731) in 2000-02 to 0.11 percent (2/1,743) in 2006-08. Further, this decline in reporting of fetal deaths occurring outside of Alabama was not limited to deaths occurring in a single state.

Based on the above, we conclude that births and fetal deaths, and especially fetal deaths, occurring outside of Alabama have been less completely reported to ADPH in 2006-08 relative to earlier years. Further, we conclude that this reporting issue may introduce notable bias when assessing trends. Comparison (not reported here) of trends in the fetal death ratio for three groups of Alabama residents defined according to place of occurrence supports these conclusions. (The three groups were: Alabama residents, regardless of where the birth or fetal death occurred; Alabama residents, but excluding births or deaths that occurred in one neighboring state; Alabama residents, but excluding births or deaths that occurred anywhere outside of Alabama.)

For this reason, as reported here, fetal deaths and the fetal death ratio are based on *occurrent, residential events*: meaning events occurring *in* Alabama *among* Alabama residents. That is, these indicators are based on analyses that *exclude events* (whether births or fetal deaths) occurring *outside of Alabama*. Therefore, fetal death counts and fetal death ratios reported here tend to differ from those reported elsewhere.

Figure 3.20. Fetal Death Ratio

Total and According to Race and Ethnicity, Occurrent Events Among Alabama Residents, 2000-2008*



*Based on live births and fetal deaths of Alabama residents, where the event occurred in Alabama

**For 2000-2003, the ratios are not shown for Latinos because fewer than 20 deaths occurred in most of these years.

The occurrent fetal mortality ratio among Black, non-Latino Alabama residents ranged from 14.4 fetal deaths per 1,000 live births (277/19,273) in 2007 to 16.6 fetal deaths per 1,000 live births (294/17,705) in 2002. In this population, in successive 3-year periods, the number of fetal deaths per 1,000 live births was as follows: 16.0 deaths per 1,000 in 2000-02, 15.6 deaths per 1,000 in 2003-05, and 15.1 deaths per 1,000 in 2006-08.

The number of occurrent fetal deaths among Other, non-Latino Alabama residents was very small in the statistical sense: ranging from 1-10 deaths per year during the surveillance period (2000-2008). Therefore, the fetal mortality ratio for this population is not shown in figures. In this population, in successive 3-year periods, the number of fetal deaths per 1,000 live births was as follows: 2.6 deaths per 1,000 (5/1,944) in 2000-02, 4.6 deaths per 1,000 (12/2,619) in 2003-05, and 7.2 deaths per 1,000 (24/3,340) in 2006-08.

The number of occurrent fetal deaths among Latino Alabama residents tended to be very small in the statistical sense early in the decade: ranging from 7-23 deaths per year from 2000-2003. Among Latinos, in successive 3-year periods, the number of fetal deaths per 1,000 live births was as follows: 6.3 deaths per 1,000 (42/6,657) in 2000-02, 6.9 deaths per 1,000 (70/10,207) in 2003-05, and 7.1 deaths per 1,000 (108/15,215) in 2006-08.

For all of the demographic groups mentioned above (total population, White non-Latinos, Black non-Latinos, Other non-Latinos, and Latinos), the statistical significance of trends in the fetal death ratio was assessed in three ways: by comparing 2003-05 to 2000-02[a], by comparing 2006-08 to 2003-05[a], and by assessing linear trends for single years from 2000-2008[b]. With one exception, trends in the fetal death

[a] Per the Mantel-Haenszel Chi-square, as calculated on EpiInfo™, Version 3.5.1

[b] Per the Chi-square for linear trend, as calculated on EpiInfo™, Version 3.5.1

ratio were not statistically significant at the 0.05 level. The exception was that the fetal death ratio among the Other, non-Latino population increased significantly over single years from 2000-2008 ($p = 0.04$[a]).

As well, for 2006-08, the statistical significance of racial/ethnic differences was assessed by comparing three racial/ethnic groups (Black non-Latinos, Other non-Latinos, and Latinos) to White non-Latinos. Only one comparison was statistically significant at the 0.05 level: that of Black non-Latinos to White non-Latinos. In 2006-08 in Alabama, the fetal death ratio was 2.3 times higher among Black, non-Latino residents than among White, non-Latino residents (15.1 fetal deaths per 1,000 live births versus 6.7 fetal deaths per 1,000 live births, $p = 0.000$[b]).

The potential for reporting artifacts complicates interpretation of trends in reported fetal deaths. Classifying moribund (about to die) newborns as fetal deaths versus live-born infants who soon expire is not straightforward, even with use of the World Health Organization's definition of a live birth. Further, classifying gestational age as being 20 weeks versus around 19 weeks may not be straightforward. Considered in the context of the potential for reporting artifacts, recent trends in the State's fetal death ratio *per se* have no clear implications for prenatal or perinatal health. The fetal mortality gap between Black, non-Latino Alabama residents and White, non-Latino Alabama residents is consistent with the corresponding infant mortality gap.

Certain Risk Markers and Healthcare Issues

What follows is a discussion of certain risk markers for infant death among Alabama occurrent, residential live births in 2000-2008. The relationship between a risk marker and an outcome of interest is not necessarily causal, however. Instead, the marker simply identifies some populations that are at higher risk of some adverse outcomes, such as infant death.

The relationship between a risk marker and an outcome of interest is not necessarily causal.

In this document, "occurrent, residential live births" pertains to live births that occur in Alabama to Alabama residents. That is, when this term is used, births to Alabama residents that occurred outside of the State were excluded from analysis.

Technical Note #10: Occurrent, Residential Live Births
Throughout this document, "occurrent, residential live births" pertains to live births that occurred in Alabama to Alabama residents. That is, births to Alabama residents that occurred outside of the State were excluded from analysis.

For this discussion of "Certain Risk Markers and Healthcare Issues," trends over time were assessed via Cochran-Mantel-Haenszel Statistics, using SAS® software. Statistical significance is determined by the number of events, as well as by the magnitude of the difference under consideration. When a relatively large number of events occur, such as the birth of infants whose mother had used tobacco during the pregnancy, very small differences in 3-year periods were sometimes highly significant ($p < 0.0001$) in the

Unless stated otherwise, discussion of births pertains to live births that occurred in Alabama to Alabama residents.

---

[a] Per the Chi-square for linear trend, as calculated on EpiInfo™, Version 3.5.1
[b] Per the Mantel-Haenszel Chi-square, as calculated on EpiInfo™, Version 3.5.1

statistical sense. In such cases, differences were stated to be statistically significant only if the p-value (p) was less than 0.0001 and the percentages being compared differed by at least 1.0 percent (additive model). On the other hand, for the study of trends in less frequent events, such as multiple births, differences over time were said to be statistically significant if the p-value was less than 0.05—regardless of the magnitude of the difference.

Tobacco Use During Pregnancy

This indicator pertains to the percentage of infants whose mother had used tobacco during the pregnancy. For this topic, when differences are said to be statistically significant, the p-value was less than 0.0001.

Prenatal Tobacco Use According to Race and Ethnicity

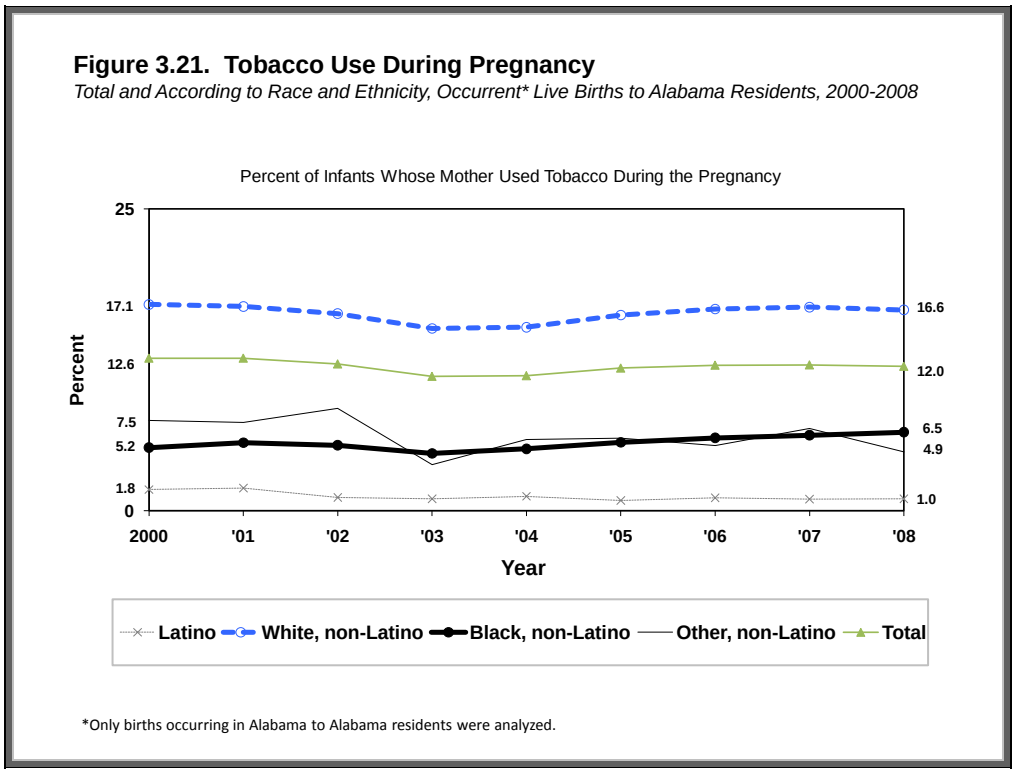
Figure 3.21 shows the prevalence of tobacco use during pregnancy for the total group and for four groups defined by race and/or ethnicity, for the years 2000-2008. For the total group, the percentage of infants whose mother had used tobacco during the pregnancy ranged from 11.1 percent in 2003 to 12.6 percent in 2000 and 2001. In this group, the indicator increased slightly from 2004 through 2007, then declined slightly in 2008. In the total group, for successive 3-year periods, this indicator was at 12.5 percent in 2000-02, 11.4 percent in 2003-05, and 12.0 percent in 2006-08. In 2006-08, the status of this indicator was significantly lower (better) than in 2000-02 but significantly higher (worse) than in 2003-05.

For White, non-Latino babies and for Black, non-Latino babies, the mothers were significantly more likely to have used tobacco during the pregnancy in 2006-08 than in 2003-05:

- For White, non-Latino babies, the percentage whose mother had used tobacco during the pregnancy was at 16.8 percent in 2000-02, 15.5 percent in 2003-05, and 16.7 percent in 2006-08.

- For Black, non-Latino babies, this indicator was at 5.4 percent in 2000-02, 5.2 percent in 2003-05, and 6.3 percent in 2006-08. The increase in 2006-08 was significant relative to each of the earlier 3-year periods.

Of the subgroups shown in Figure 3.21, White, non-Latino mothers were most likely to have used tobacco during the pregnancy. In 2008, the percentages of infants whose mother had used tobacco during the pregnancy were as follows: 16.6 percent of White, non-Latino babies; 6.5 percent of Black, non-Latino babies; 4.9 percent of Other, non-Latino babies; and 1.0 percent of Latino babies.



Prenatal Tobacco Use According to Source of Payment

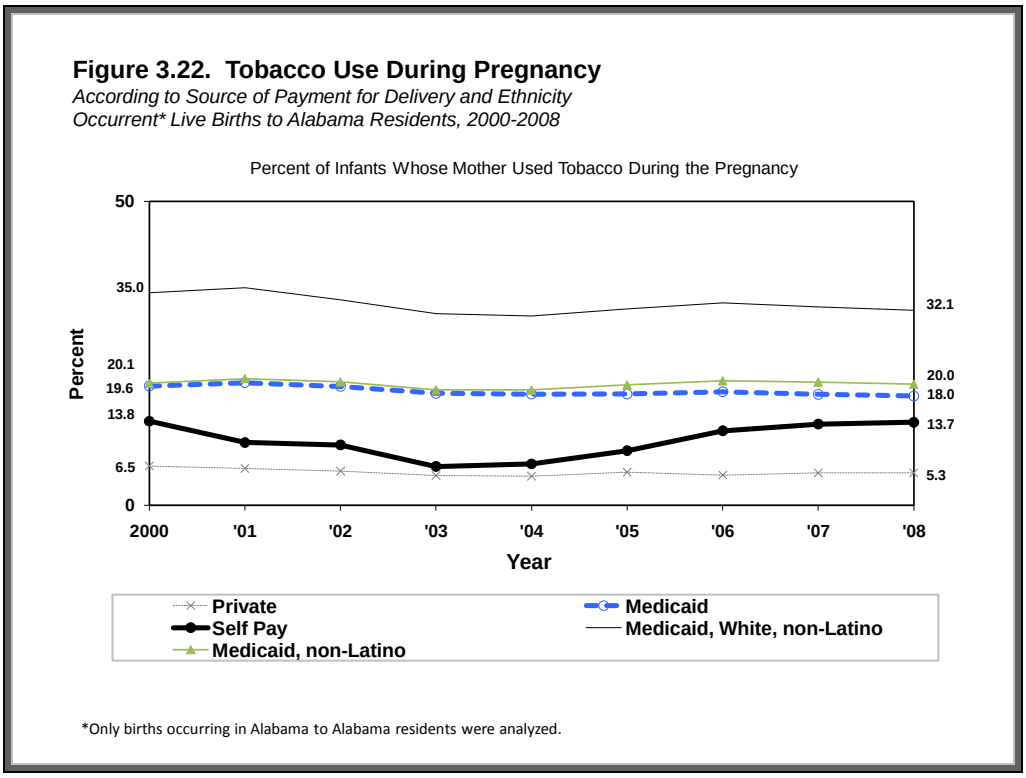
Figure 3.22 shows the prevalence of tobacco use during pregnancy for three source-of-payment groups: infants of, respectively, privately insured mothers, Medicaid-enrolled mothers, and self-paying mothers. As well, the figure depicts this indicator for non-Latino babies of Medicaid-enrolled mothers and White, non-Latino babies of Medicaid-enrolled mothers. Comparing 2006-08 to 2003-05, the prevalence of tobacco use during pregnancy did not notably decline for any of the groups shown.

About one in three White, non-Latino, Medicaid-enrolled mothers had used tobacco during the pregnancy. Specifically, in this population, from 2000-2008, the prevalence of tobacco use during pregnancy ranged from 31.1 percent in 2004 to 35.8 percent in 2001, with a median of 32.6 percent in 2007. In three successive 3-year periods, the prevalence of tobacco use during pregnancy in this population was as follows: 34.9 percent in 2000-02, 31.7 percent in 2003-05, and 32.7 percent in 2006-08. Thus, in 2006-08 in this population, the prevalence of tobacco use during pregnancy was significantly lower than in 2000-02 and slightly higher than in 2003-05.

Compared to other race/ethnicity subgroups, White, non-Latino mothers were most likely to have used tobacco during the pregnancy. In particular, about one in three White, non-Latino, Medicaid-enrolled mothers had used tobacco during the pregnancy. However, use of tobacco during pregnancy increased slightly among Black non-Latinos: from 5 percent in 2000-02 to 6 percent in 2006-08.

In 2008, for the subgroups shown in Figure 3.22, the prevalence of tobacco use during pregnancy was as follows: 32 percent of White, non-Latino, Medicaid-enrolled mothers;

20 percent of all non-Latino, Medicaid-enrolled mothers; 18 percent of the total group of Medicaid-enrolled mothers; 14 percent of mothers whose delivery was self paid; and 5 percent of the total group of privately insured mothers.



Inadequate Prenatal Care

Discussion here pertains to the prevalence of inadequate prenatal care, as measured by the Kotelchuck Index, among occurrent, residential live births in Alabama. For this topic, when differences are said to be statistically significant, the p-value was less than 0.0001.

Inadequate Prenatal Care According to Race and Ethnicity

Figure 3.23 shows the prevalence of inadequate prenatal care for the total group and for four groups defined by race and/or ethnicity, for the years 2000-2008. For the total group, the percentage of infants whose mother had received inadequate prenatal care ranged from 10.1 percent in 2003 to 13.9 percent in 2008. In this group, the indicator did not decline (improve) for 3 successive years at any point during the surveillance period. In the total group, for successive 3-year periods, this indicator was at 11.3 percent in 2000-02, 10.5 percent in 2003-05, and 13.1 percent in 2006-08. Thus, this indicator was higher (worse) in 2006-08 than in either of the other 3-year periods and, statistically speaking, the difference was significant in each case.

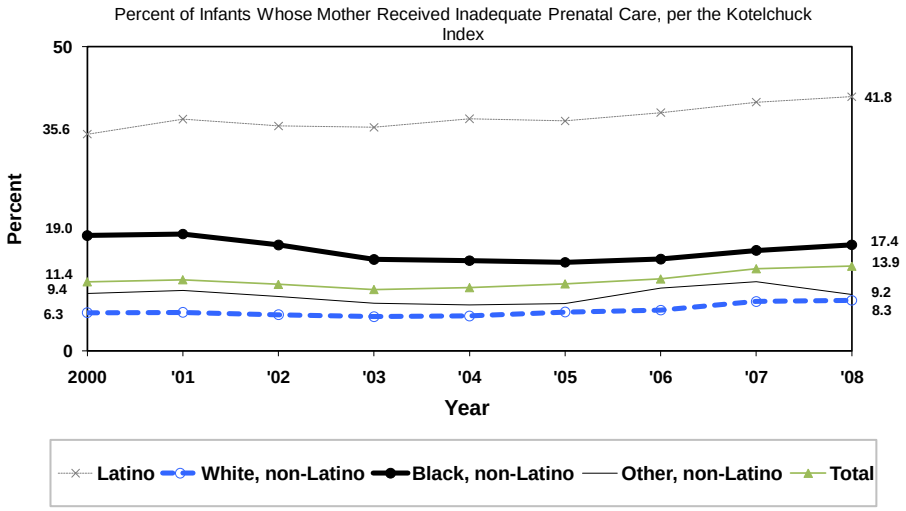
For each of the four subgroups shown in Figure 3.23, proportionately more women received inadequate prenatal care in 2006-08 than in 2003-05. Except for the Other, non-Latino group, the worsening of this prenatal care indicator in 2006-08 versus 2003-05 was significant in the statistical sense.

Of the groups shown in Figure 3.23, Latina mothers, followed by Black, non-Latina mothers, were most likely to have received inadequate prenatal care. In 2008, the percentages of infants whose mother had

received inadequate prenatal care were as follows: 42 percent of Latino babies; 17 percent of Black, non-Latino babies; 9 percent of Other, non-Latino babies; and 8 percent of White, non-Latino babies.

Figure 3.23. Inadequate Prenatal Care

Total and According to Race and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008*



*Only births occurring in Alabama to Alabama residents were analyzed.

Inadequate Prenatal Care According to Source of Payment

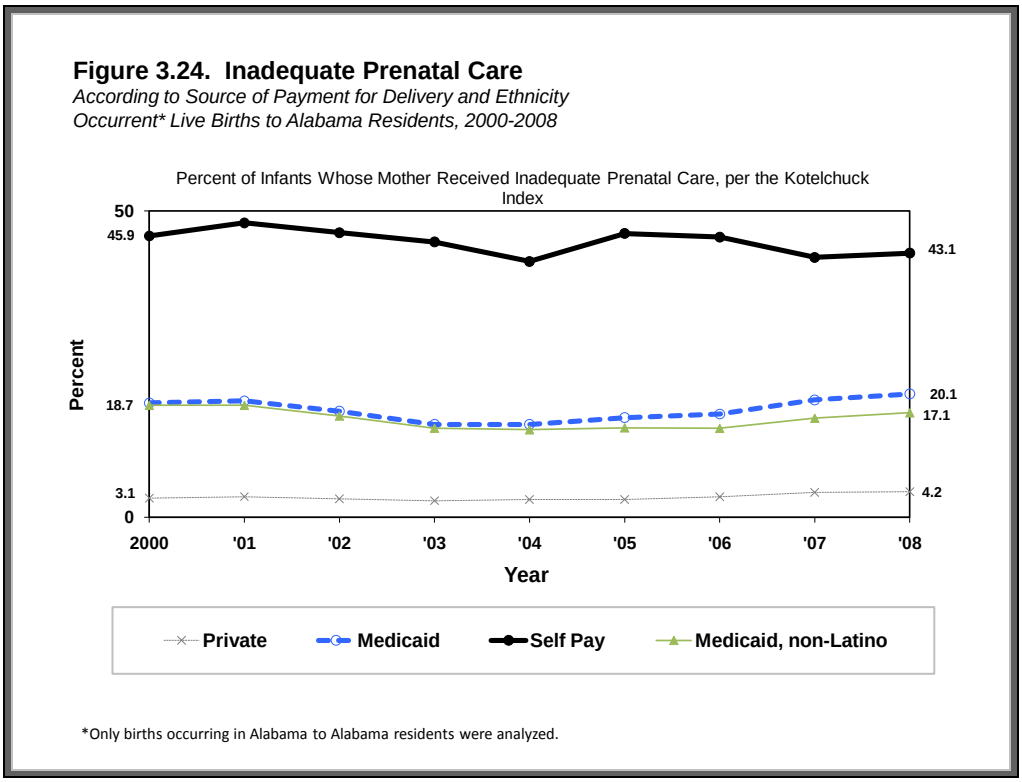
Figure 3.24 shows the prevalence of inadequate prenatal care for three source-of-payment groups: infants of, respectively, privately insured mothers, Medicaid-enrolled mothers, and self-paying mothers. As well, Figure 3.24 depicts this indicator for non-Latino babies of Medicaid-enrolled mothers. Toward the end of the surveillance period, the trend line for Medicaid-funded deliveries of non-Latino babies notably diverged from that for the total group of Medicaid-funded deliveries.

Concerning race and ethnicity, Latinas, followed by Black, non-Latino women, were most likely to receive inadequate prenatal care. Concerning source of payment for delivery, mothers whose delivery was self-paid, followed by mothers whose delivery was covered by Medicaid, were most likely to receive inadequate prenatal care.

Earlier in the decade, the prevalence of inadequate prenatal care declined for 3 or 4 successive years for the self-pay group and the non-Latino, Medicaid group. However, for all groups except the self-pay group, this indicator was significantly worse in 2006-08 combined than in 2003-05 combined. Comparing 2006-08 to 2003-05, the prevalence of inadequate prenatal care increased less for non-Latino, Medicaid-funded deliveries (where it increased by 10.0 percent) than for the total group of Medicaid-funded deliveries (where it increased by 20.5 percent).

Of the groups shown in Figure 3.24, mothers whose delivery was self paid were most likely to have received inadequate prenatal care. Specifically, in 2008, mothers of 43 percent of babies from self-paid

deliveries had received inadequate prenatal care. Also in 2008, 17 percent of non-Latino babies from Medicaid-funded deliveries, versus 20 percent of all babies from Medicaid-funded deliveries, were born to women who had received inadequate prenatal care.



Birth of Very Low Birth Weight Infants at Perinatal Centers

A major goal of the Perinatal Program is to assure that very low birth weight (VLBW, or less than 1,500 grams, which is less than about 3 pounds 5 ounces) babies are born at facilities with the resources to provide appropriate care. These facilities are often termed "perinatal centers." In this document, perinatal centers are defined as any teaching or non-teaching hospital with one or more full-time neonatologists, a neonatal intensive care unit, and two or more obstetricians. The following discussion pertains to occurrent, Alabama residential VLBW live births. For this topic, when differences are said to be statistically significant, the p-value was less than 0.05.

Births at Perinatal Centers According to Race and Ethnicity

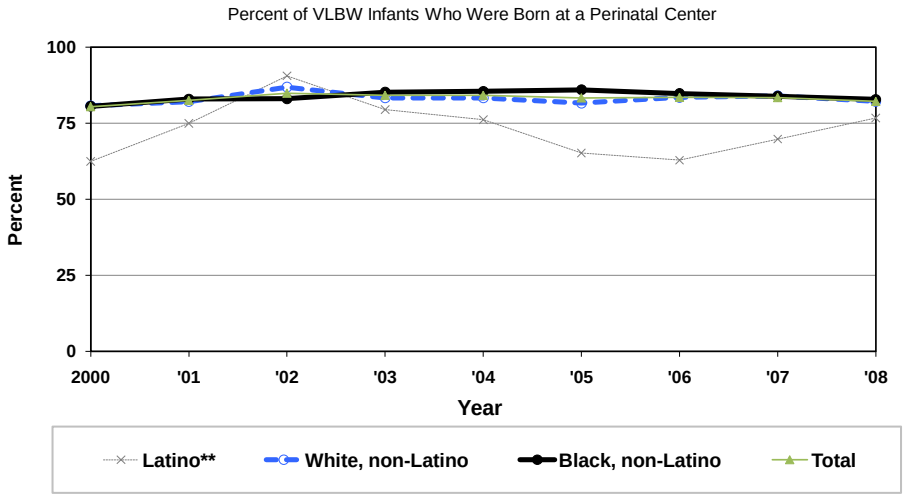
Figure 3.25 shows the percentage of VLBW infants who were born at a perinatal center. For the total group, this percentage did not show a consistent trend over the surveillance period, 2000-2008. For the total group of VLBW infants, the percentage born at a perinatal center ranged from 80.5 percent in 2000 to 84.9 percent in 2002, with a median of 83.5 percent in 2007. Again for the total group, for successive 3-year periods, this indicator was at 82.6 percent in 2000-02, 83.9 percent in 2003-05, and 83.1 percent in 2006-08. The status of this indicator in 2006-08 did not significantly differ from its status in either of the earlier 3-year periods.

Due to small numbers in the statistical sense, the Other, non-Latino group is not shown in Figure 3.25.[a] Of the groups depicted there, two showed several successive changes in the same direction, but trends were not statistically significant:

- For Latino VLBW babies, the percentage born at a perinatal center declined each year from 2003 through 2006, before increasing in 2007 and 2008. In this population, this indicator was at 78.9 percent in 2000-02, 73.2 percent in 2003-05, and 71.4 percent in 2006-08. As shown in Figure 3.25, except for 2002, Latino VLBW babies were less likely to be born at a perinatal center than either of the non-Latino groups shown.

- For Black, non-Latino VLBW babies, beginning in 2001, the percentage born at a perinatal center increased through 2005, but then declined through 2008. In this population, this indicator was at 82.2 percent in 2000-02, 85.6 percent in 2003-05, and 83.8 percent in 2006-08.

Figure 3.25. Very Low Birth Weight (VLBW) Births at Perinatal Centers
Total and According to Race and Ethnicity, Occurrent VLBW Live Births to Alabama Residents, 2000-2008*



*Only births occurring in Alabama to Alabama residents were analyzed.

**For Latino births, numbers were small in the statistical sense: for the numerator, ranging from 10 in 2000 to 56 in 2008, for the denominator, ranging from 16 in 2000 to 73 in 2008.

Births at Perinatal Centers According to Source of Payment

Figure 3.26 shows the percentage of VLBW babies born at a perinatal center for three source-of-payment groups: infants of, respectively, privately insured mothers, Medicaid-enrolled mothers, and self-paying mothers. As well, Figure 3.26 depicts this indicator for Black, non-Latino babies of Medicaid-enrolled mothers. Throughout the surveillance period, VLBW babies of privately insured mothers were somewhat more likely to be born at perinatal centers than VLBW babies of Medicaid-enrolled mothers (in 2008, 86.4 percent versus 77.4 percent).

[a] For the Other, non-Latino population, the annual number of VLBW births over the surveillance period ranged from 6 in 2002 and 2003 to 19 in 2007.

Concerning the percentage of VLBW babies born at a perinatal center, trends in three of the groups shown in Figure 3.26 are notable:

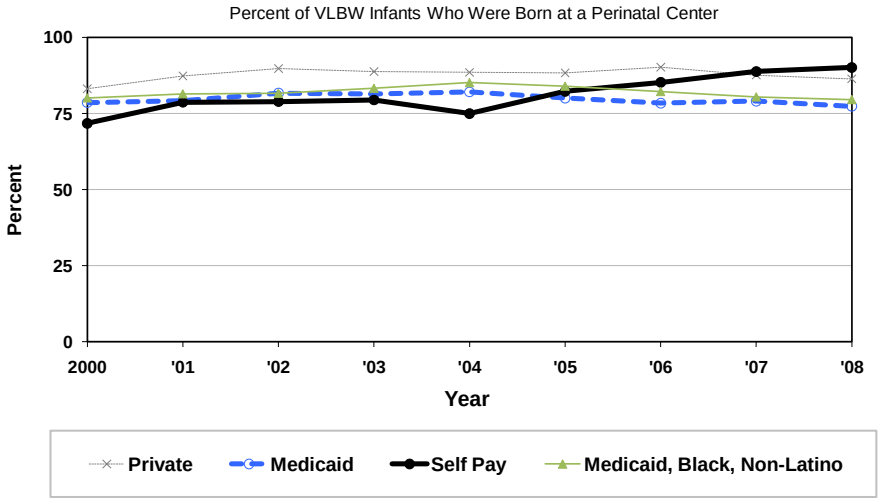
> *Among VLBW infants whose delivery was covered by Medicaid, the percentage born at a perinatal center declined: from 81 percent in 2003-05 to 78 percent in 2006-08.*

- For VLBW babies of Medicaid-enrolled mothers, this indicator was at 79.9 percent in 2000-02, 81.2 percent in 2003-05, and 78.3 percent in 2006-08. The decline in 2006-08 relative to 2003-05 was significant.

- In Black, non-Latino VLBW babies of Medicaid-enrolled mothers, the percentage born at a perinatal center increased each year from 2001 through 2004, then declined each year from 2005 through 2008. In this population, this indicator was at 81.1 percent in 2000-02, 84.2 percent in 2003-05, and 80.7 percent in 2006-08. Again, the decline in 2006-08 relative to 2003-05 was significant.

- For VLBW babies of mothers whose delivery was self paid, the percentage born at a perinatal center increased each year from 2005 through 2008. In this population, this indicator was at 76.9 percent in 2000-02, 79.2 percent in 2003-05, and 88.4 percent in 2006-08. The increase in 2006-08 relative to 2003-05 was significant. Further, by 2008, for this indicator, this population had reached and slightly surpassed the corresponding percentage for the privately insured population. Specifically, in 2008, the percentage of VLBW babies born at a perinatal center was 90 percent (110/122) for the self-pay group and 86 percent (452/523) for the privately insured group.

Figure 3.26. Very Low Birth Weight (VLBW) Births at Perinatal Centers
According to Source of Payment for Delivery and Ethnicity
Occurrent VLBW Live Births to Alabama Residents, 2000-2008*



*Only births occurring in Alabama to Alabama residents were analyzed.

Multiple Births and Very Low Birth Weight

Among Alabama occurrent, residential live births in 2005-07, VLBW infants were 76.7 times more likely to die than normal birth weight infants.[a] Among Alabama occurrent, residential live births in 2006-08, infants from multiple births (twins, triplets, etc.) were 8.5 times more likely to be VLBW than singleton infants (13.9 percent versus 1.6 percent). Trends in VLBW should, therefore, be viewed in the context of multiple births.

All discussion of "Multiple Births and Very Low Birth Weight" pertains to Alabama occurrent, residential live births, and differences over time are said to be significant if the p-value was less than 0.05, per Cochran-Mantel-Haenszel statistics, as reported via SAS® software.

Multiple Births

Multiple Births According to Race and Ethnicity

Figure 3.27 shows the percentage of Alabama newborns who were from multiple births: for the total group and for four groups defined by race and ethnicity. For the total group, this percentage ranged from 3.31 percent in 2003 to 3.64 percent in 2006, with a median of 3.41 percent in 2007. Again for the total group, for successive 3-year periods, this indicator was at 3.36 percent in 2000-02, 3.43 percent in 2003-05, and 3.49 percent in 2006-08. This percentage was significantly higher in 2006-08 than in 2000-02.

Concerning the percentage of infants who were from multiple births, trends in two of the subgroups shown in Figure 3.27 are notable:

- The percentage of White, non-Latino babies who were from multiple births increased each year from 2003 through 2006. In this subgroup, this percentage was 3.31 percent in 2000-02, 3.54 percent in 2003-05, and 3.58 percent in 2006-08. The level in 2006-08 was significantly higher than it had been in 2000-02.

- For Black, non-Latino babies, this indicator was at 3.69 percent in 2000-02, 3.55 percent in 2003-05, and 3.82 percent in 2006-08. The level in 2006-08 was significantly higher than it had been in 2003-05.

Multiple Births According to Source of Payment

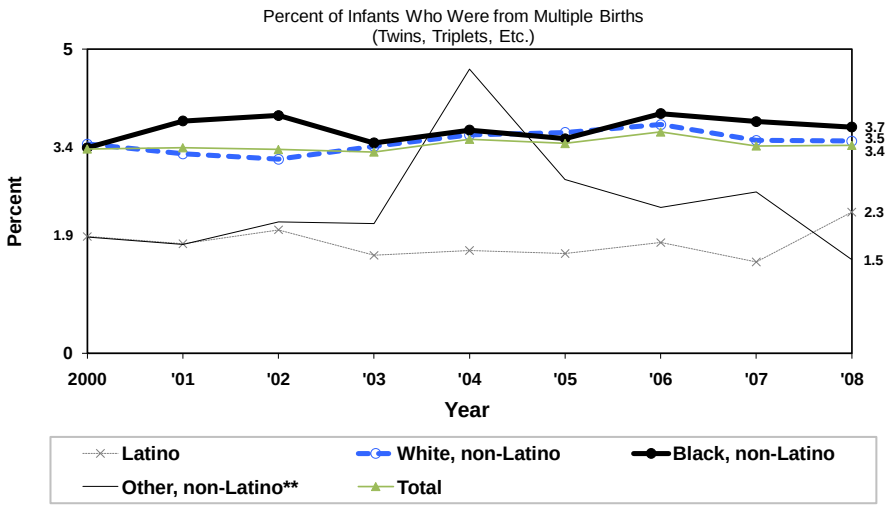
Figure 3.28 shows the percentage of Alabama newborns who were from multiple births, for three source-of-payment groups and for babies of non-Latino mothers whose delivery was funded by Medicaid. As shown, for the privately insured group, this percentage increased each year from 2004 through 2006. For privately insured deliveries, the percentage of infants who were from multiple births was 3.85 percent in 2000-02, 4.12 percent 2003-05, and 4.20 percent in 2006-08; and the level in 2006-08 was significantly higher than in 2000-02. The percentage for non-Latino privately insured deliveries, which is not shown, tracked closely to that for the total population of privately insured deliveries.

> *Among infants from privately insured deliveries, the percentage who were from multiple births increased: from 3.85 percent in 2000-02, to 4.1 percent in 2003-05, to 4.2 percent in 2006-08.*

[a] As will be detailed later, unless stated otherwise, in this report all risks of infant death among Alabama residents are based on analysis of birth cohort files linked to infant deaths, which have methodological advantages over death cohort files. The most recent available birth cohort-infant death file for the State is for the year 2007.

Figure 3.27. Multiple Births

Total and According to Race and Ethnicity, Occurrent Live Births to Alabama Residents, 2000-2008*

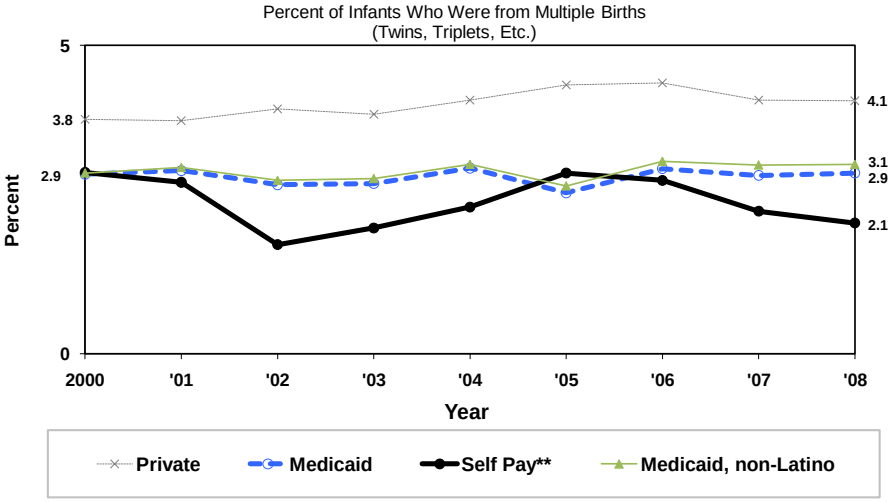


*Only births occurring in Alabama to Alabama residents were analyzed.

**Numbers of multiple births in the Other, non-Latino group were small in the statistical sense, ranging from 11 in 2001 to 42 in 2004.

Figure 3.28. Multiple Births

According to Source of Payment for Delivery and Ethnicity
Occurrent Live Births to Alabama Residents, 2000-2008*



*Only births occurring in Alabama to Alabama residents were analyzed.

**In the self-pay group, annual numbers of infants from multiple births were relatively small, ranging from 29 in 2002 to 70 in 2006.

VLBW Among Singleton Births

The following discussion concerns trends in VLBW among occurrent live singleton births to Alabama residents in 2000-2008. For this topic, when differences are said to be statistically significant, the p-value was less than 0.05.

VLBW According to Race and Ethnicity

Figure 3.29 shows the prevalence of VLBW among live singleton births: for the total group and three groups defined by race and/or ethnicity. For the total group, the percentage of singletons who were VLBW ranged from 1.47 percent in 2001 to 1.67 percent in 2005, with a median of 1.60 percent in 2000 and 2006. For successive 3-year periods, the percentage of singletons who were VLBW was 1.55 percent in 2000-02, 1.60 percent in 2003-05, and 1.63 percent in 2006-08.

Trends in VLBW varied according to race and ethnicity. To reiterate, the following findings pertain to occurrent live singleton births to Alabama residents:

- For White, non-Latino singletons, the percentage who were VLBW ranged from 0.87 percent in 2001 to 1.09 percent in 2006 and 2007, with a median of 1.02 percent in 2005. In this population, the prevalence of VLBW increased slightly in three successive years early in the decade: 2002, 2003, and 2004. For successive 3-year periods, the prevalence of VLBW in this group was 0.93 percent in 2000-02, 1.01 percent in 2003-05, and 1.08 percent in 2006-08. The prevalence was significantly higher in 2006-08 than it had been in 2000-02.

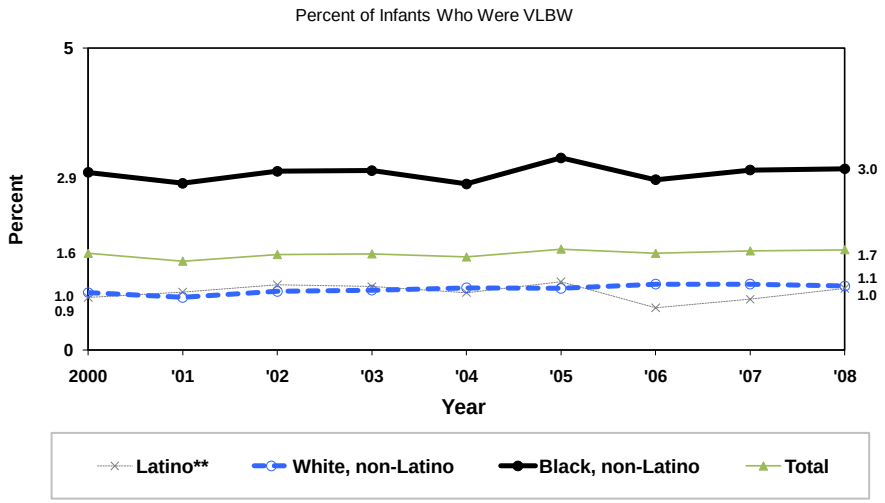
> *In White, non-Latino singletons, the percentage who were VLBW increased: from 0.9 percent in 2000-02, to 1.0 percent in 2003-05, to 1.1 percent in 2006-08.*

- Over the surveillance period, the prevalence of VLBW did not show a consistent trend in Black, non-Latino singletons or in Latino singletons.

- In Other, non-Latino singletons, the prevalence of VLBW was 0.68 percent (13/1,906) in 2000-02, 0.83 percent (21/2,533) in 2003-05, and 1.10 percent (36/3,267) in 2006-08. This group is not depicted in Figure 3.29 due to small numbers in the statistical sense.

Of the groups depicted in Figure 3.29, Black, non-Latino singletons were most likely to be VLBW. For example, in 2008, 3.00 percent of Black, non-Latino singletons, versus 1.06 percent of White, non-Latino singletons, were VLBW.

Figure 3.29. Very Low Birth Weight (VLBW)
Total and According to Race and Ethnicity, Occurrent Live **Singleton** Births to Alabama Residents, 2000-2008*



*Only singleton births occurring in Alabama to Alabama residents were analyzed.

**Numbers of VLBW births in the Latino group were small in the statistical sense, ranging from 16 in 2000 to 52 in 2008.

VLBW According to Source of Payment

Figure 3.30 shows the prevalence of VLBW for three source of payment groups and, as well, for the non-Latino, Medicaid-covered group.

Trends in VLBW varied according to source of payment. Again, the following findings pertain to occurrent live singleton births to Alabama residents:

- For successive 3-year periods, among singletons from privately insured deliveries, the percentage who were VLBW was 1.17 percent in 2000-02, 1.20 percent in 2003-05, and 1.32 percent in 2006-08. The level in 2006-08 was significantly higher than it had been in either 2000-02 or 2003-05. In fact, in this population, the prevalence of VLBW increased in each of the last 3 years of the surveillance period.

- On the other hand, among all singletons from Medicaid-covered deliveries, the prevalence of VLBW tended to decline. In this population, the prevalence of VLBW was 1.90 percent in 2000-02, 1.89 percent in 2003-05, and 1.74 percent in 2006-08. The prevalence in 2006-08 was significantly lower than it had been in either 2000-02 or in 2003-05.

- However, among non-Latino singletons from Medicaid-covered deliveries, the prevalence of VLBW declined less than it had among the total population of Medicaid-covered singleton births. Among non-Latino singletons from Medicaid-

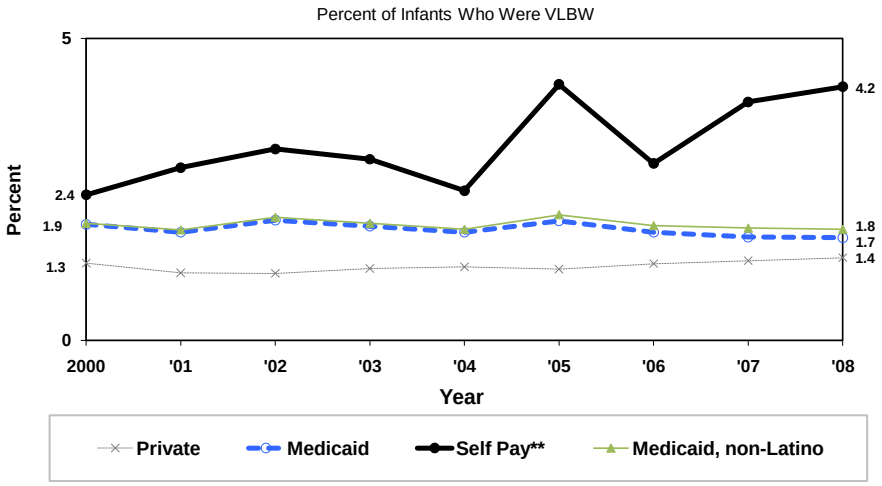
The following pertains to singleton live births. Concerning race/ethnicity, Black, non-Latino infants were most likely to be VLBW. In 2008, 3.0 percent of Black, non-Latino singletons were VLBW. Concerning source of payment for delivery and ethnicity, infants from self-pay deliveries, followed by non-Latino infants from Medicaid-funded deliveries, were most likely to be VLBW. Among singleton births in 2006-08, 3.7 percent of infants from self-pay deliveries and 1.9 percent of non-Latino infants from Medicaid-covered deliveries were VLBW.

covered deliveries, the prevalence of VLBW was 1.93 percent in 2000-02, 1.95 percent in 2003-05, and 1.87 percent in 2006-08. Here, the prevalence in 2006-08 did not significantly differ from the prevalence in the earlier 3-year periods. Therefore, much, but not all, of the decline in the prevalence of VLBW among Medicaid-covered singleton live births was due to the influx of Latinos into the Medicaid-covered population (depicted earlier, in Figure 3.10).

- Among singletons from self-pay deliveries, the prevalence of VLBW was 2.82 percent in 2000-02, 3.20 percent in 2003-05, and 3.73 percent in 2006-08. Though not statistically significant, conjecturally, the observed increase in the prevalence of VLBW in singletons from self-pay deliveries could be due Latinos moving out of the self-pay group (as depicted in Figure 3.11).

Toward the end of the surveillance period, of the groups depicted in Figure 3.30, singletons from self-pay deliveries, followed by non-Latino singletons from Medicaid-covered deliveries, were most likely to be VLBW. In 2008, the prevalence of VLBW among singletons, according to source of payment, was as follows: 4.20 percent for babies from self-pay deliveries, 1.84 percent for non-Latino babies from Medicaid-covered deliveries, and 1.37 percent for babies from privately insured deliveries.

Figure 3.30. Very Low Birth Weight (VLBW)
According to Source of Payment for Delivery and Ethnicity
Occurrent Live **Singleton** Births to Alabama Residents, 2000-2008*



*Only singleton births occurring in Alabama to Alabama residents were analyzed.

**In the self-pay group, annual numbers of infants from multiple births were relatively small, ranging from 35 in 2000 to 117 in 2007.

Maternal Age and VLBW: An Example of Effect Modification

In effect modification, the relationship between two characteristics (such as maternal age and VLBW) differs between different populations. In order to address racial or socioeconomic disparities, an understanding of risk markers within the populations that are at higher risk of adverse outcomes is necessary. Extensive assessment of effect modification is beyond the scope of this report. However, to some degree, we have assessed effect modification of the relationship between maternal age and VLBW. This assessment is reported here in order to illustrate the importance of considering effect modification when seeking to reduce disparities in health outcomes (in this case, VLBW).

As previously stated, VLBW is a very strong risk marker for infant death. It is well known that young maternal age (under 20 years, and especially under 17 years) is a risk marker for VLBW in the general population. However, this generalization does not account for potential effect modification. Among White, non-Latino singletons, maternal age was related to VLBW: with babies of adolescent mothers and older (35 years or older) mothers being more likely to be VLBW. Specifically, among occurrent live singleton births to White, non-Latino Alabama residents in 2006-08, the following percentages of babies were VLBW, according to maternal age: mothers aged 16 years or younger, 1.64 percent; 17-19 year-old mothers, 1.42 percent, 20-34 year-old mothers, 1.01 percent; and mothers aged 35 years or older, 1.27 percent. Within the Black, non-Latino population of singletons, however, babies of adolescent mothers were not more likely to be VLBW than babies of older mothers were. Specifically, among occurrent live singleton births to Black, non-Latino Alabama residents in 2006-08, the following percentages of babies were VLBW, according to maternal age: mothers aged 16 years or younger, 2.70 percent; 17-19 year-old mothers, 2.75 percent, 20-34 year-old mothers, 2.84 percent; and mothers aged 35 years or older, 4.52 percent. In other words, *within* the Black, non-Latino population of live singleton births, young maternal age was *not* associated with a higher prevalence of VLBW.

Young maternal age was related to the prevalence of VLBW within both the privately insured population and the Medicaid-covered population of singleton births. It was a stronger risk marker in the privately insured group than in the Medicaid-covered group, however. Specifically, among occurrent live singleton births to Alabama residents in 2006-08, the following percentages of babies from privately insured deliveries were VLBW, according to maternal age: mothers aged 16 years or younger, 2.47 percent (11/446); 17-19 year-old mothers, 1.84 percent, 20-34 year-old mothers, 1.23 percent; and mothers aged 35 years or older, 1.66 percent. Also among occurrent live singleton births to Alabama residents in 2006-08, the following percentages of babies from Medicaid-covered deliveries were VLBW, according to maternal age: mothers aged 16 years or younger, 2.00 percent; 17-19 year-old mothers, 1.75 percent, 20-34 year-old mothers, 1.67 percent; and mothers aged 35 years or older, 2.68 percent.

Although prevention of adolescent pregnancy is generally desirable, it should not be viewed as a way to reduce racial disparities in VLBW in the short term. As a corollary, it should not be viewed as a way to reduce disparities in infant mortality in the short term.

The above findings suggest that reducing the adolescent pregnancy rate would not reduce the prevalence of VLBW among Black, non-Latino babies in the short term. Although prevention of adolescent pregnancy is generally desirable, it should not be viewed as a way to reduce racial disparities in VLBW in the short term. Conjecturally, as a corollary, reducing the adolescent pregnancy rate should not be viewed as a way to notably reduce racial disparities in infant mortality in the short term. Though concurrently stratifying infant mortality according to maternal age and race is beyond the scope of this report, prior work supports the preceding caveat. Specifically, adolescent pregnancy, infant mortality, and source of payment for birth were studied among Alabama residential live births in 1991-1994. According to this study, programs to prevent first and subsequent adolescent pregnancies probably have little effect on infant mortality, and efforts to prevent adolescent pregnancies should not have a short-term goal of notably reducing infant mortality.[29]

Infant Mortality

The previously discussed out-of-state reporting issues could potentially distort trends in Alabama's infant mortality rate. Though this distortion may be slight, the direction of the bias cannot be determined and may vary from year to year. In an effort to minimize such distortion, we limited analysis of infant mortality to deaths of infants who were born alive in Alabama to Alabama residents. In other words, in this document, unless stated otherwise, discussion of infant mortality pertains to occurrent, residential live births. The rationale underlying the choice to limit analysis to occurrent, residential live births is discussed in Technical Note #11.

Here, findings on infant mortality pertain to deaths of infants who were born alive in Alabama to Alabama residents.

Because they are preferable for analysis of subgroups, birth cohort linked files, rather than period linked files, were analyzed. The distinguishing characteristics of birth cohort linked files, versus period linked files, are detailed in Technical Note #12. Because birth cohort linked files take longer to prepare than period linked files do, the latest year for which we have a birth cohort linked file is 2007.

Technical Note #11: Rationale for Analyzing Infant Mortality Among Only Occurrent, Residential Live Births
Although the bias caused by out-of-state reporting issues may be slight, its direction cannot be known with certainty and could vary from year to year. Such variation over time in the direction, as well the degree, of bias could distort trends. On the one hand, if out-of-state births were better reported than out-of-state infant deaths, the reported infant mortality rate could be slightly lower than the true rate. On the other hand, if out-of-state infant deaths were better reported than out-of-state births, the reported infant mortality rate could be slightly higher than the true rate. We conjecture that, compared to infants born outside of the State, infants born in the State would be less likely to die outside of the State. As a corollary, we believe that reporting infant mortality only for occurrent, residential live births should minimize the effect of out-of-state reporting issues on trends. Further, limiting analysis to occurrent, residential live births enables us to *know the direction of the bias* that may be introduced by out-of-state reporting issues. That is, if out-of-state deaths of infants who were born in Alabama to Alabama residents were notably underreported, the estimated infant mortality rate could be slightly lower than the true rate in this population. For these reasons, unless stated otherwise, **any infant (including neonatal and postneonatal) mortality rates reported here pertain to occurrent Alabama residential live births**.

The surveillance period for assessment of trends in infant mortality was 1999-2007. Trends were assessed for single years over the entire surveillance period, for 2005-07 versus 1999-2001, and for 2005-07 versus 2002-04. When analyzing trends in infant mortality (including neonatal and postneonatal mortality), statistical significance was assessed via Cochran-Mantel-Haenszel statistics, as reported in SAS®. Changes over time are said to be significant if the p-value was less than 0.05. In some cases, rather than describing trends in an indicator, the status of the indicator is reported for a 3-year period, 2005-07. Though findings are shown for various demographic groups, differences among groups were not assessed for statistical significance.

Of the 182,376 infants born alive in Alabama to Alabama residents in 2005-07, 1,723 (or about 574 per year) died before reaching their first birthday. Nearly two-thirds (63.0 percent) of these 1,723 deaths occurred before 28 days of age. Further, about one-third (34.6 percent) of these 1,723 deaths occurred at less than 24 hours of age.

In this report, terms pertaining to infant mortality are used as follows:

- "Infants" or "infancy" pertains to the first year of life, before the first birthday. "Risk of infant death" is the number of live-born infants who die before reaching their first birthday, reported per 1,000 live births.

- "Risk of neonatal death" is the number of live-born infants who die before reaching 28 days of age, reported per 1,000 live births.

- "Risk of postneonatal death" is the number of live-born infants who die after 27 days but before 1 year of age, reported per 1,000 live births.

Technical Note #12: Birth and Death Files
The Department analyzes two basic types of files that link live births and infant deaths: period linked files and birth cohort linked files. In a period linked file, the numerator file consists of all infant (under 1 year of age) deaths of babies who died during the specified year or period, for example, 2007, that have been linked to their corresponding birth certificates: whether the birth occurred in that year (per this example, 2007) or the previous year (per this example, 2006). In contrast, in the birth cohort linked file for 2007, for example, the numerator file consists of all infant deaths to babies *born* in 2007, whether the death occurred in 2007 or 2008. (Thus, some infants in the 2007 birth cohort linked file may have died on December 30, 2008.) For both types of files, the denominator file is the natality file for the specified year (per this example, 2007), which contains all the reported live births for that year.

Birth cohort linked files for a given year are prepared later than period linked files for a given year: due to the time required to allow for deaths to occur (through December 30 of the following year), to manage the data, and to link the files. However, birth cohort linked files have methodological advantages and are generally somewhat more complete and more fully edited than the Department's period linked files. Certain assumptions are required for interpretation of infant mortality estimates from period linked files, and these assumptions become increasingly less valid as the size of the subgroups being analyzed diminishes.

For the above reasons, unless stated otherwise, all infant (including neonatal and postneonatal) mortality risks reported here are based on analysis of birth cohort linked files. Also, as stated in Technical Note #11, infant mortality findings reported here are based on analysis of occurrent, residential live births, rather than all residential live births. For these reasons, findings reported here are likely to differ from related findings reported in other documents, including the *MCH 2009 Report/2011 Application*. (Because period linked files are prepared earlier than birth cohort linked files are, birth and infant mortality data reported on forms in *MCH Annual Reports/Applications* are from period linked files.)

Infant, Neonatal, and Postneonatal Mortality According to Race and Ethnicity

Figures 3.31 through 3.33 respectively show the risk of infant, neonatal, and postneonatal death: for the total group and according to race and ethnicity. All findings in the following discussion pertain to Alabama occurrent, residential live births, for the surveillance period 1999-2007.

Infant Mortality According to Race and Ethnicity

As shown in Figure 3.31, for the total group, the risk of infant death ranged from 8.5 deaths per 1,000 in 2004 to 10.0 deaths per 1,000 in 2007, with a median of 8.9 deaths per 1,000 in 2002 and 2006. The increase in 2007 was striking: About 10 of every 1,000 Alabama babies born in that year died before reaching their first birthday. The risk in 2005-07 was significantly higher than in 2002-04 (9.4 deaths per 1,000 versus 8.7 deaths per 1,000).

Risk of infant death increased: from 8.7 deaths per 1,000 in 2002-04 to 9.4 deaths per 1,000 in 2005-07. This increase occurred in White non-Latinos, as well as in Black non-Latinos. Risk of death increased notably in the neonatal period and slightly in the postneonatal period.

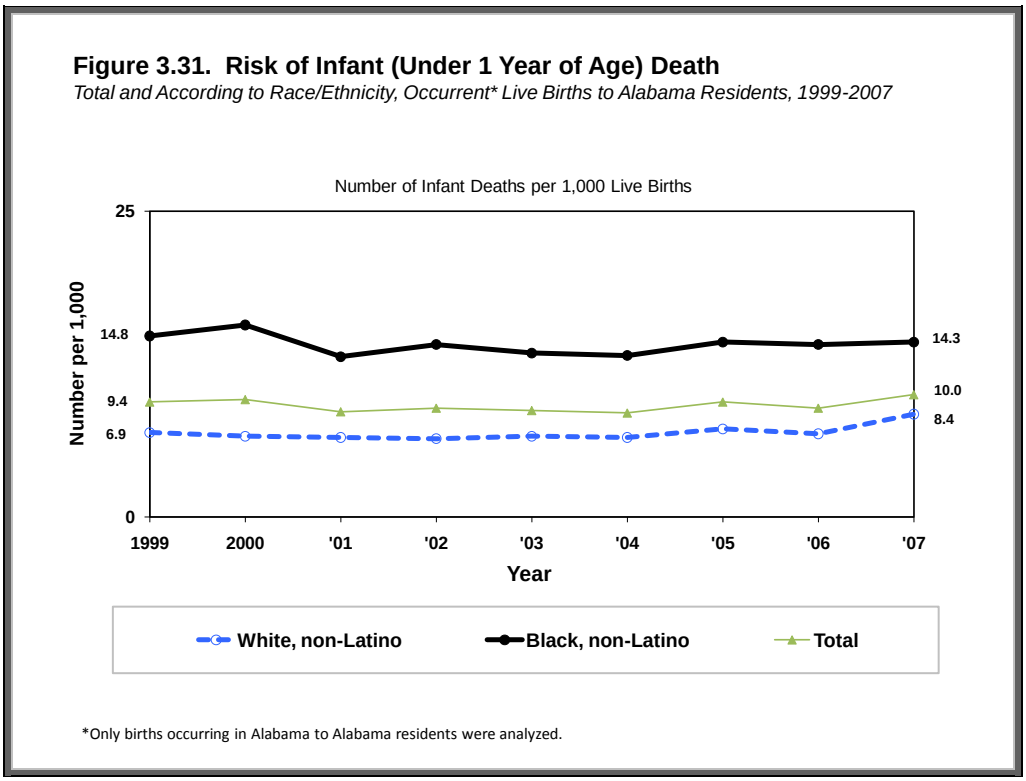


Figure 3.31. Risk of Infant (Under 1 Year of Age) Death
Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007*

*Only births occurring in Alabama to Alabama residents were analyzed.

Concerning subgroups defined by race and ethnicity:

- Among White non-Latinos, the risk of infant death ranged from 6.4 deaths per 1,000 in 2002 to 8.4 deaths per 1,000 in 2007, with a median of 6.6 deaths per 1,000 in 2000 and 2003. Again, the increase in 2007 was striking: About 8 out of every 1,000 White, non-Latino Alabama babies born in that year died before their first birthday. The risk in 2005-07 was significantly higher than in either of the preceding 3-year periods (7.5 deaths per 1,000 in 2005-07, versus 6.5 deaths per 1,000 in 2002-04 and 6.7 deaths per 1,000 in 1999-2001).

- Among Black non-Latinos, the risk of infant death ranged from 13.1 deaths per 1,000 in 2001 to 15.7 deaths per 1,000 in 2000, with a median of 14.1 deaths per 1,000 in 2002 and 2006. Of Black, non-Latino Alabama babies born in 2007, about 14 of every 1,000 died before their first birthday. Though trends in infant deaths were not statistically significant in this population, the risk of infant death was somewhat higher in 2005-07 than in 2002-04 (14.2 deaths per 1,000 in 2005-07, versus 13.5 deaths per 1,000 in 2002-04).

- Single-year risks of infant death for Other non-Latinos are not shown in Figure 3.31, due to small numbers of deaths (3-7 per year) in the statistical sense. Among Other, non-Latino infants born in Alabama, risks of infant death in successive 3-year periods were as follows: 7.5 deaths per 1,000 (14/1,876) in 1999-2001, 5.8 deaths per 1,000 (13/2,254) in 2002-04, and 5.0 deaths per 1,000 (16/3,186) in 2005-07. In this population, trends in infant deaths were not statistically significant.

- Neither are single-year risks of infant death for Latinos shown in Figure 3.31, due to small numbers of deaths in the statistical sense earlier in the surveillance period. Among Latino infants born in Alabama, risks of infant death in successive 3-year periods were as follows: 6.3 deaths per 1,000

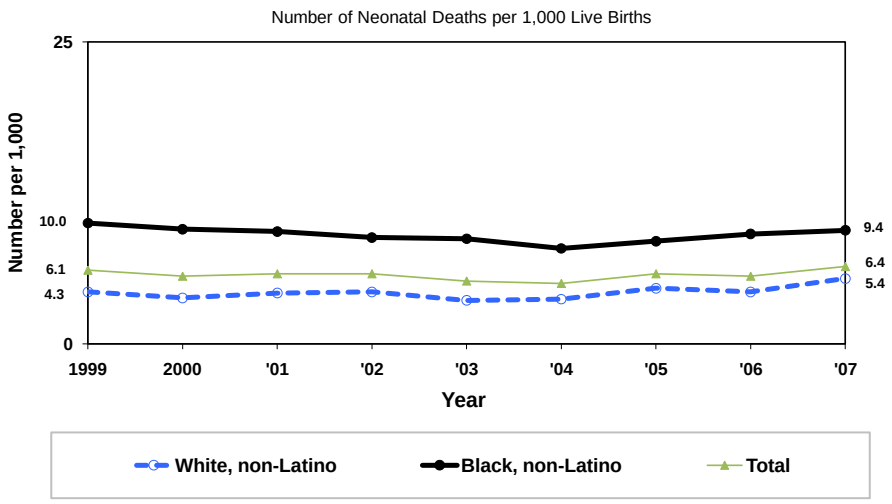
(36/5,670) in 1999-2001, 8.3 deaths per 1,000 (73/8,791) in 2002-04, and 6.7 deaths per 1,000 (93/13,970) in 2005-07. In this population, trends in infant deaths were not statistically significant.

Neonatal Mortality According to Race and Ethnicity

As shown in Figure 3.32, for the total group, the risk of neonatal death ranged from 5.0 deaths per 1,000 in 2004 to 6.4 deaths per 1,000 in 2007, with a median of 5.8 deaths per 1,000 in 2001-2002 and 2005. As was true for infant mortality, the increase in neonatal mortality in 2007 was striking: About 6 of every 1,000 Alabama babies born in that year died before reaching 4 weeks of age. The risk in 2005-07 was significantly higher than in 2002-04 (6.0 deaths per 1,000 versus 5.3 deaths per 1,000).

Figure 3.32. Risk of Neonatal (Under 28 Days of Age) Death

Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007*



*Only births occurring in Alabama to Alabama residents were analyzed.

Concerning subgroups defined by race and ethnicity:

- Among White non-Latinos, the risk of neonatal death ranged from 3.6 deaths per 1,000 in 2003 to 5.4 deaths per 1,000 in 2007, with a median of 4.3 deaths per 1,000 in 1999, 2002, and 2006. Again, the increase in 2007 was striking: About 5 of every 1,000 White, non-Latino Alabama babies born in that year died before reaching 4 weeks of age. This increased risk of neonatal death was statistically significant: whether comparing single years throughout the surveillance period or comparing 2005-07 to either of the earlier 3-year periods. Successive 3-year risks of neonatal death in this population were as follows: 4.1 deaths per 1,000 in 1999-2001, 3.9 deaths per 1,000 in 2002-04, and 4.7 deaths per 1,000 in 2005-07.

- Among Black non-Latinos, the risk of neonatal death ranged from 7.9 deaths per 1,000 in 2004 to 10.0 deaths per 1,000 in 1999, with a median of 9.1 deaths per 1,000 in 2006. Of Black, non-Latino Alabama babies born in 2007, about 9 of every 1,000 died before reaching 4 weeks of age. Though trends in neonatal mortality were not statistically significant in this population, the risk of neonatal death was somewhat higher in 2005-07 than in 2002-04 (9.0 deaths versus 8.5 deaths per 1,000).

- Single-year risks of neonatal death for Latinos are not shown in Figure 3.32, due to small numbers of deaths in the statistical sense (7-21 deaths per year). Among Latino infants born in Alabama, risks of neonatal death in successive 3-year periods were as follows: 3.7 deaths per 1,000 (21/5,670) in 1999-2001, 5.0 deaths per 1,000 (44/8,791) in 2002-04, and 3.8 deaths per 1,000 (53/13,970) in 2005-07. In this population, trends in neonatal deaths were not statistically significant.

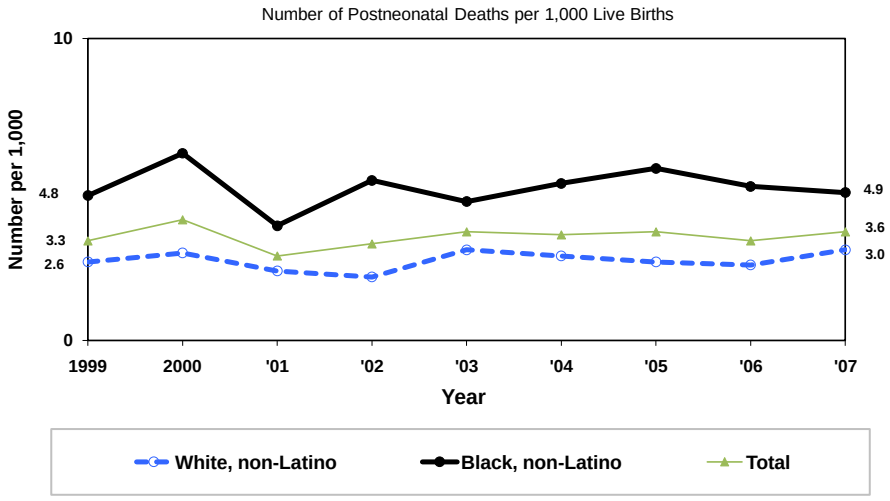
Trends in neonatal deaths of Other, non-Latino babies were not studied, due to small numbers in the statistical sense (1-4 deaths per year).

Postneonatal Mortality According to Race and Ethnicity

As shown in Figure 3.33, for the total group, the risk of postneonatal death ranged from 2.8 deaths per 1,000 in 2001 to 4.0 deaths per 1,000 in 2000, with a median of 3.5 deaths per 1,000 in 2004. The risk of postneonatal death increased slightly in 2007 (when it was 3.6 deaths per 1,000) versus 2006. In successive 3-year periods, risks of postneonatal death were as follows: 3.4 deaths per 1,000 in 1999-2001 and 2002-04 and 3.5 deaths per 1,000 in 2005-07. Trends in postneonatal deaths were not statistically significant.

Figure 3.33. Risk of Postneonatal (28-364 Days of Age) Death

Total and According to Race/Ethnicity, Occurrent Live Births to Alabama Residents, 1999-2007*



*Only births occurring in Alabama to Alabama residents were analyzed.

Concerning subgroups defined by race and ethnicity:

- Among White non-Latinos, the risk of postneonatal death ranged from 2.1 deaths per 1,000 in 2002 to 3.0 deaths per 1,000 in 2003 and 2007, with a median of 2.6 deaths per 1,000 in 1999 and 2005. Successive 3-year risks of postneonatal death in this population were as follows: 2.6 deaths per 1,000 in 1999-2001 and 2002-04 and 2.7 deaths per 1,000 in 2005-07. The slight increase in postneonatal mortality in this population was not statistically significant.

- Among Black non-Latinos, the risk of postneonatal death ranged from 3.8 deaths per 1,000 in 2001 to 6.2 deaths per 1,000 in 2000, with a median of 5.1 deaths per 1,000 in 2006. Successive 3-year

risks of postneonatal death in this population were as follows: 5.0 deaths per 1,000 in 1999-2001, 5.1 deaths per 1,000 in 2002-04, and 5.2 deaths per 1,000 in 2005-07. The slight increase in postneonatal mortality was not statistically significant.

- Single-year risks of postneonatal death for Latinos are not shown in Figure 3.33, due to small numbers of deaths in the statistical sense (4-15 deaths per year). Among Latino infants born in Alabama, the risk of postneonatal death for successive 3-year periods was as follows: 2.6 deaths per 1,000 (15/5,670) in 1999-2001, 3.3 deaths per 1,000 (29/8,791) in 2002-04, and 2.9 deaths per 1,000 (40/13,970) in 2005-07. In this population, trends in postneonatal deaths were not statistically significant.

Trends in postneonatal deaths of Other, non-Latino babies were not studied, due to small numbers in the statistical sense (1-4 deaths per year).

Racial Disparities in Infant Mortality

Clearly, as shown in Figures 3.31-3.33, the racial gaps in infant mortality, neonatal mortality, and postneonatal mortality have persisted in Alabama. (Other studies show that these gaps have persisted in the nation as well.) In Alabama in 2005-07, Black, non-Latino babies were 1.9 times more likely to die before their first birthday than White, non-Latino babies were (14.2 versus 7.5 deaths per 1,000). This relative risk was the same in the neonatal and postneonatal periods as a whole. That is, in 2005-07, compared to White, non-Latino babies, Black, non-Latino babies were 1.9 times more likely to die during the neonatal period and 1.9 times more likely to die during the postneonatal period. However, the gap was widest during the very early neonatal period (at less than 24 hours of age, not depicted in figures). In Alabama in 2005-07, Black, non-Latino babies were 2.5 times more likely than White, non-Latino babies to die at less than 24 hours of age (5.6 versus 2.3 deaths per 1,000).

Racial gaps in infant, neonatal, and postneonatal mortality have persisted. In 2006-08, Black, non-Latino infants were 1.9 times more likely than White, non-Latino infants to die before their first birthday. The gap was widest for very early neonatal deaths: Black, non-Latino infants were 2.5 times more likely than White, non-Latino infants to die at less than 24 hours of age.

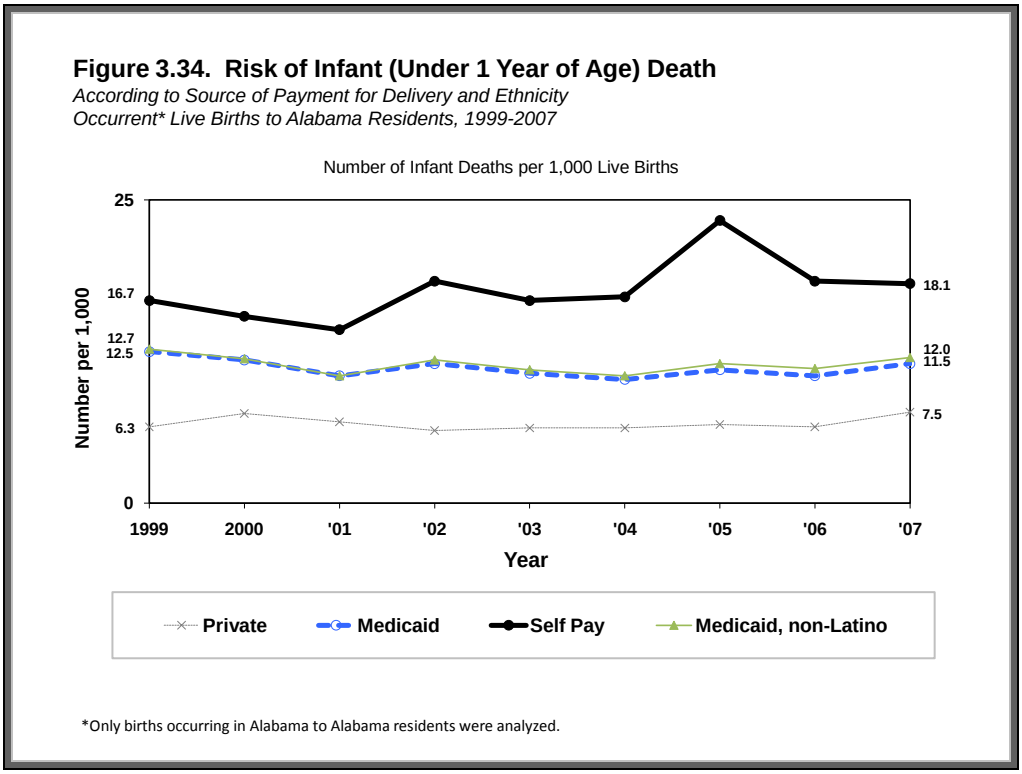
In 2005-07, Other, non-Latino babies and Latino babies were less likely to die during infancy than White, non-Latino babies were. In that 3-year period, risks of infant death in these populations were as follows: 7.5 deaths per 1,000 for White, non-Latino babies; 5.0 deaths per 1,000 (16/3,186) for Other, non-Latino babies; and 6.7 deaths per 1,000 for Latino babies.

Infant, Neonatal, and Postneonatal Mortality According to Source of Payment for Delivery

Figures 3.34 through 3.36 respectively show the risk of infant, neonatal, and postneonatal death according to source of payment for delivery. Again, all findings pertain to Alabama occurrent, residential live births, for the surveillance period 1999-2007.

Infant Mortality According to Source of Payment for Delivery

Figure 3.34 depicts risk of infant death according to source of payment for delivery.



Concerning subgroups defined by source of payment:

- Among babies from privately insured deliveries, the risk of infant death ranged from 6.0 deaths per 1,000 in 2002 to 7.5 deaths per 1,000 in 2007, with a median of 6.3 deaths per 1,000 in 1999 and 2006. In this population, risks of infant death in successive 3-year periods were as follows: 6.8 deaths per 1,000 in 1999-2001, 6.1 deaths per 1,000 in 2002-04, and 6.8 deaths per 1,000 in 2005-07. Trends in infant deaths were not statistically significant in this population.

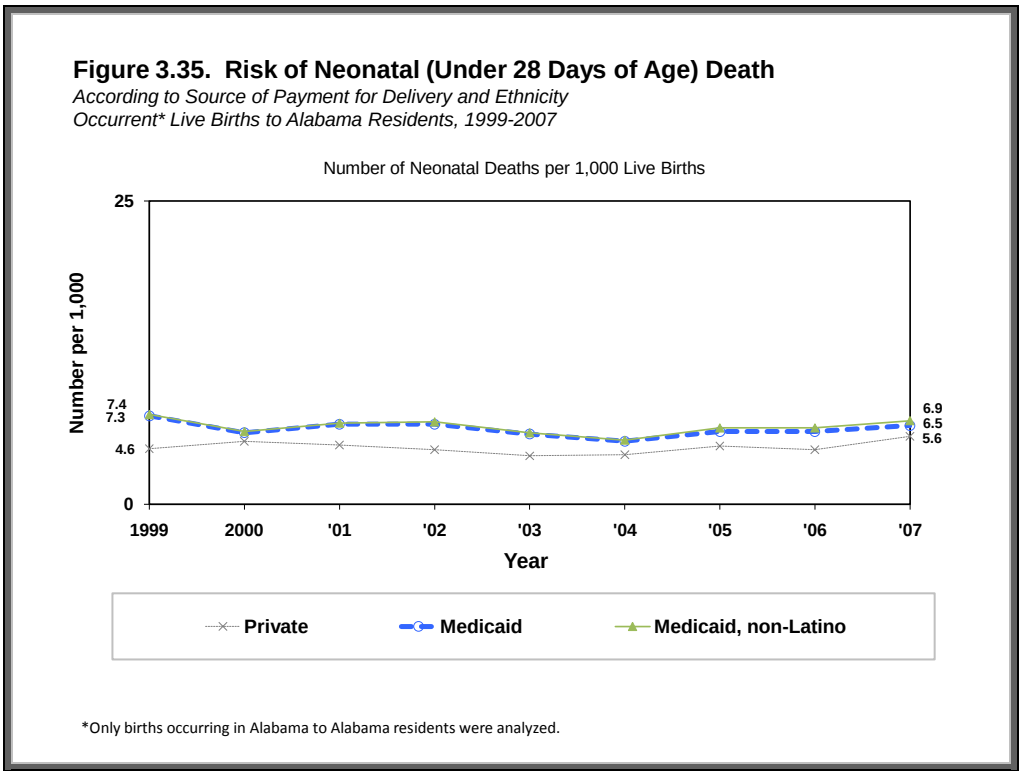
- Among babies from Medicaid-covered deliveries, the risk of infant death ranged from 10.2 deaths per 1,000 in 2004 to 12.5 deaths per 1,000 in 1999, with a median of 11.0 deaths per 1,000 in 2005. In this population, risks of infant death in successive 3-year periods were as follows: 11.6 deaths per 1,000 in 1999-2001, 10.8 deaths per 1,000 in 2002-04, and 11.0 deaths per 1,000 in 2005-07. Toward the end of the surveillance period, risk of infant death was slightly higher for non-Latino babies from Medicaid-covered deliveries than for the total population of babies from Medicaid-covered deliveries. Specifically, in 2005-07, among non-Latino babies from Medicaid-covered deliveries, risk of infant death was 11.5 deaths per 1,000. Trends in infant deaths were not statistically significant for the total population of babies from Medicaid-covered deliveries or for non-Latino babies from Medicaid-covered deliveries.

- Among babies from self-pay deliveries, the risk of infant death ranged from 14.3 deaths per 1,000 in 2001 to 23.3 deaths per 1,000 in 2005, with a median of 17.0 deaths per 1,000 in 2004. In this population, risks of infant death in successive 3-year periods were as follows: 15.4 deaths per 1,000 in 1999-2001, 17.3 deaths per 1,000 in 2002-04, and 19.6 deaths per 1,000 in 2005-07. Trends in infant deaths were not statistically significant in this population. However, in the self-pay group, the

increase in risk of infant death in 2005-07 versus 2002-04 was conceivably related to movement of some Latinas out of the self-pay group. Specifically, as previously depicted in Figure 3.11, deliveries of Latino babies comprised a smaller proportion of all self-pay deliveries in 2006-08 than in 2003-05 (42 percent versus 60 percent). Further, as recently discussed (under "Infant Mortality According to Race and Ethnicity"), in 2005-07, risk of infant death was relatively low among Latinos versus non-Latinos (6.7 deaths per 1,000 in Latinos, 7.5 deaths per 1,000 in White non-Latinos, and 14.2 deaths per 1,000 in Black non-Latinos). Putting these facts together, with the movement of some Latinas out of the self-pay delivery group, babies of women remaining in the group would probably be at especially high risk of infant death.

Neonatal Mortality According to Source of Payment for Delivery

Figure 3.35 depicts risk of neonatal death according to source of payment for delivery.



Concerning subgroups defined by source of payment:

- Among babies from privately insured deliveries, the risk of neonatal death ranged from 4.0 deaths per 1,000 in 2003 to 5.6 deaths per 1,000 in 2007, with a median of 4.6 deaths per 1,000 in 1999. In this population, risks of neonatal death during successive 3-year periods were as follows: 4.9 deaths per 1,000 in 1999-2001, 4.2 deaths per 1,000 in 2002-04, and 5.0 deaths per 1,000 in 2005-07. The increase in 2005-07 relative to 2002-04 was striking and statistically significant.

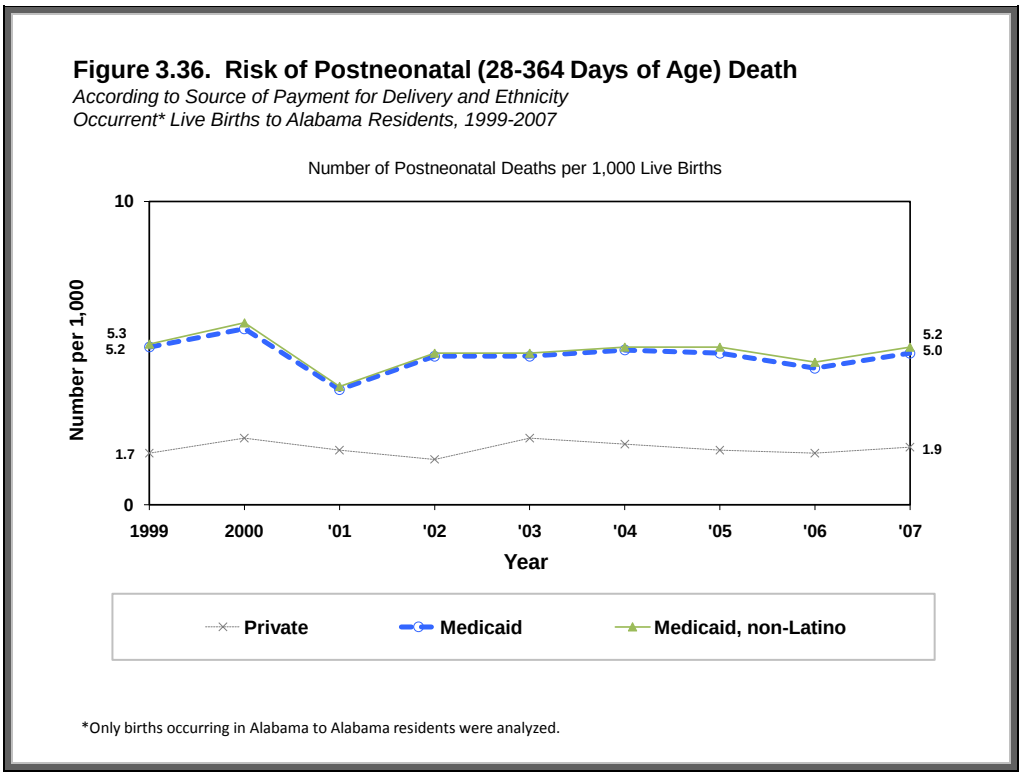
- Among babies from Medicaid-covered deliveries, the risk of neonatal death ranged from 5.2 deaths per 1,000 in 2004 to 7.3 deaths per 1,000 in 1999, with a median of 6.0 deaths per 1,000 in 2005 and 2006. In this population, risks of neonatal death in successive 3-year periods were as follows: 6.6 deaths per 1,000 in 1999-2001, 5.8 deaths per 1,000 in 2002-04, and 6.2 deaths per 1,000 in 2005-07. As was true for infant deaths, toward the end of the surveillance period, risk of neonatal death was slightly higher for non-Latino babies from Medicaid-covered deliveries than for the total

population of babies from Medicaid-covered deliveries. Specifically, in 2005-07, among non-Latino babies from Medicaid-covered deliveries, risk of neonatal death was 6.5 deaths per 1,000. Trends in neonatal deaths were not statistically significant for the total population of babies from Medicaid-covered deliveries or for Latino babies from Medicaid-covered deliveries.

- Single-year risks of neonatal death for babies from self-pay deliveries are not shown in Figure 3.35, due to small numbers of deaths in the statistical sense (11-38 deaths per year). For babies from self-pay deliveries, risks of neonatal death in successive 3-year periods were as follows: 9.4 deaths per 1,000 (41/4,339) in 1999-2001, 12.9 deaths per 1,000 (80/6,201) in 2002-04, and 12.5 deaths per 1,000 (94/7,503) in 2005-07. In this population, trends in neonatal deaths were not statistically significant.

Postneonatal Mortality According to Source of Payment for Delivery

Figure 3.36 depicts risk of postneonatal death according to source of payment for delivery.



Concerning subgroups defined by source of payment:

- Among babies from privately insured deliveries, the risk of postneonatal death ranged from 1.5 deaths per 1,000 in 2002 to 2.2 deaths per 1,000 in 2000 and 2003, with a median of 1.8 deaths per 1,000 in 2001 and 2005. In this population, risks of postneonatal death in successive 3-year periods were as follows: 1.9 deaths per 1,000 in 1999-2001 and 2002-04 and 1.8 deaths per 1,000 in 2005-07. Trends in postneonatal deaths were not statistically significant in this population.

- Among babies from Medicaid-covered deliveries, the risk of postneonatal death ranged from 3.8 deaths per 1,000 in 2001 to 5.8 deaths per 1,000 in 2000, with a median of 5.0 deaths per 1,000 in 2005 and 2007. In this population, risks of postneonatal death in successive 3-year periods were as follows: 5.0 deaths per 1,000 in 1999-2001, 4.9 deaths per 1,000 in 2002-04, and 4.8 deaths per

1,000 in 2005-07. As was true for infant and neonatal deaths, toward the end of the surveillance period, risk of postneonatal death was slightly higher for non-Latino babies from Medicaid-covered deliveries than for the total population of babies from Medicaid-covered deliveries. Specifically, in 2005-07, among non-Latino babies from Medicaid-covered deliveries, risk of postneonatal death was 5.0 deaths per 1,000. Trends in postneonatal deaths were not statistically significant for the total population of babies from Medicaid-covered deliveries or for non-Latino babies from Medicaid-covered deliveries.

- Single-year risks of postneonatal death for babies from self-pay deliveries are not shown in Figure 3.36, due to small numbers of deaths in the statistical sense (5-20 deaths per year). For babies from self-pay deliveries, risks of postneonatal death in successive 3-year periods were as follows: 6.0 deaths per 1,000 (26/4,339) in 1999-2001, 4.4 deaths per 1,000 (27/6,201) in 2002-04, and 7.1 deaths per 1,000 (53/7,503) in 2005-07. In this population, the risk of postneonatal death was notably and significantly higher in 2005-07 than in 2002-04.

The increase in risk of infant death was not limited to high-risk groups, as defined by source of payment for delivery. That is, risk of infant death increased in babies from privately insured deliveries: from 6.1 deaths per 1,000 in 2002-04 to 6.8 deaths per 1,000 in 2005-07. Most notably, in babies from privately insured deliveries, risk of neonatal death increased from 4.2 deaths per 1,000 in 2002-04 to 5.0 deaths per 1,000 in 2005-07. Risk of postneonatal death did not increase in babies whose delivery was privately insured.

Socioeconomic Disparities in Infant Mortality

We consider source of payment for delivery to be a surrogate for socioeconomic status. As well, we believe that many "self pay" deliveries were deliveries in which the mother had no insurance coverage and the provider was not reimbursed. Under these assumptions, as shown in Figures 3.34-3.36, socioeconomic gaps in infant, neonatal, and postneonatal mortality have persisted in Alabama.

In Alabama in 2005-07, babies from Medicaid-covered deliveries were 1.6 times more likely to die before their first birthday than babies from privately insured deliveries were (11.0 versus 6.8 deaths per 1,000). The Medicaid versus private insurance mortality gap was especially wide during the postneonatal period. That is, in 2005-07, compared to babies from privately insured deliveries, babies from Medicaid-covered deliveries were 1.25 times more likely to die in the neonatal period and 2.6 times more likely to die in the postneonatal period. In 2005-07, 56.2 percent of infant deaths of babies from Medicaid-covered deliveries occurred in the neonatal

Socioeconomic disparities in infant mortality have persisted. In 2005-07, compared to infants from privately insured deliveries, infants from self-pay deliveries were 2.9 times more likely to die before their first birthday. Also compared to infants from privately insured deliveries, infants from Medicaid-covered deliveries were 1.6 times more likely to die before their first birthday.

Socioeconomic gaps in infant mortality were especially wide in the postneonatal period. For instance, in 2005-07, compared to babies from privately insured deliveries, babies from Medicaid-covered deliveries were 1.25 times more likely to die in the neonatal period and 2.6 times more likely to die in the postneonatal period. For Medicaid-covered deliveries, 56 percent of infant deaths occurred in the neonatal period, and 44 percent occurred in the postneonatal period.

period. As a corollary, 43.8 percent of these deaths occurred in the post-neonatal period. In contrast, just 26.8 percent of infant deaths of babies from privately insured deliveries occurred in the postneonatal period.

In 2005-07, babies from self-pay deliveries were 2.9 times more likely to die before their first birthday than babies from privately insured deliveries were (19.6 versus 6.8 deaths per 1000). This gap was also especially wide during the postneonatal period. That is, in 2005-07, compared to babies from privately insured deliveries, babies from self-pay deliveries were 2.5 times more likely to die during the neonatal period and 3.9 times more likely to die during the postneonatal period. However, in 2005-07, 63.9 percent of infant deaths of babies from self-pay deliveries occurred in the neonatal period.

Infant Mortality Trends in Certain Subgroups

Though not shown in figures, trends in infant mortality were analyzed according to several characteristics. One message from these analyses is that the increase in infant mortality in 2005-07 was not limited to groups typically deemed to be at high risk. Examples follow. (Unless stated otherwise, none of the following changes over time were statistically significant.) Concerning risk of infant death among Alabama occurrent, residential live births *in 2005-07 versus those in 2002-04*:

> *The increase in infant mortality in 2005-07 was not limited to groups typically deemed to be at high risk. Risk of infant death increased for: singleton births as well as multiple births; normal birth weight babies as well as those in most other birth weight categories; babies whose mother had received adequate prenatal care (but not those whose mother had received inadequate care); and babies of 20-34 year-old mothers as well as those of adolescent mothers.*

- With respect to plurality, for singleton babies, the risk was 6.0 percent higher in 2005-07 (8.2 versus 7.7 deaths per 1,000). Notably, however, for babies from multiple births, the risk was 18.0 percent higher (45.1 versus 38.2 deaths per 1,000).

- With respect to birth weight, for normal birth weight births, the risk was 8.5 percent higher in 2005-07 (3.2 versus 2.9 deaths per 1,000). Of the eight birth weight categories studied, the only groups in which risk of infant death did not increase were the 1,000-1,499 gram group, the 1,500-1,999 gram group, and the 4,250 and higher gram group. (Very few deaths occurred in the 4,250 and higher gram group: 13 in 2002-04 and 10 in 2005-07.) The largest increase in risk occurred in the 750-999 gram group, where the risk of infant death increased by 28.8 percent (148.3 deaths per 1,000 in 2005-07, versus 115.2 deaths per 1,000 in 2002-04).

- With respect to adequacy of prenatal care per the Kessner Index, for babies whose mother had received adequate prenatal care, the risk was 9.2 percent higher in 2005-07, and this increase was statistically significant (8.2 versus 7.6 deaths per 1,000). For babies whose mother had received inadequate care, the risk changed little (20.0 deaths per 1,000 in 2005-07, 20.2 deaths per 1,000 in 2002-04).

- With respect to maternal age, for babies of 20-34 year-old mothers, the risk was 8.8 percent higher in 2005-07, and this increase was statistically significant (9.0 versus 8.2 deaths per 1,000). Risk of infant death also increased for babies of 15-17 year-old mothers (by 16.4 percent: from 11.4 deaths per 1,000 in 2002-04 to 13.2 deaths per 1,000 in 2005-07) and for babies of 18-19 year-old mothers (by 12.7 percent: from 11.0 deaths per 1,000 in 2002-04 to 12.4 deaths per 1,000 in 2005-07).

Certain Risk Markers for Infant Death

It has long been known that risk of infant death varies according to plurality, birth weight, adequacy of prenatal care, and maternal age. Findings stratified according to plurality, prenatal care, and maternal age are summarized below. (Findings stratified by birth weight are discussed later in this report.) The following findings (some of which have been described earlier) pertain to risk of infant death (per 1,000 live births) among Alabama occurrent, residential live births in 2005-07:

- According to plurality, the risk was as follows: for singletons, 8.2 deaths per 1,000; for babies from multiple births, 45.1 deaths per 1,000.

- According to adequacy of prenatal care per the Kessner Index, the risk was as follows: for adequate care, 8.2 deaths per 1,000; for intermediate care, 10.3 deaths per 1,000; for inadequate care, 20.0 deaths per 1,000.

- According to maternal age, the risk was as follows: for babies of mothers under 15 years of age, 22.7 deaths per 1,000 (10/441); for babies of 15-17 year-old mothers, 13.2 deaths per 1,000; for babies of 18-19 year-old mothers, 12.4 deaths per 1,000; for babies of 20-34 year-old mothers, 9.0 deaths per 1,000; and for babies of mothers aged 35 years or older, 8.2 deaths per 1,000.

As stated earlier (under "Maternal Age and VLBW: An Example of Effect Modification"), an understanding of risk markers within high-risk populations is necessary. For example, in 2005-07, *within* the population of Black, non-Latino babies born in Alabama to Alabama residents, risk of infant death (per 1,000 live births) according to maternal age was as follows: for babies of mothers under 15 years of age, 23.3 deaths per 1,000 (7/300); for babies of 15-17 year-old mothers, 12.2 deaths per 1,000 (45/3,681); for babies of 18-19 year-old mothers, 14.4 deaths per 1,000 (95/6,599); for babies of 20-34 year-old mothers, 14.1 deaths per 1,000 (582/41,183); and for babies of mothers aged 35 years or older, 15.2 deaths per 1,000 (55/3,622). In other words, within the Black, non-Latino population, except for the very youngest (under 15 years of age) mothers, young maternal age was not strongly related to risk of infant death. In fact, compared to babies of 20-34 year-old Black, non-Latino mothers, babies of 15-17 year-old Black, non-Latino mothers were slightly less likely to die, and babies of 18-19 year-old Black, non-Latino mothers were only slightly more likely to die. This was so because babies of 20-34 year-old Black, non-Latino mothers were at high risk of infant death, even though their mother was not an adolescent.

> *Within the Black, non-Latino population, except for the very youngest (under 15 years of age) mothers, young maternal age was not strongly related to risk of infant death. This was so because infants of 20-34 year-old Black, non-Latino mothers were themselves at high risk of death.*

On the other hand, among Alabama occurrent, residential live births in 2005-07, inadequate prenatal care was a risk marker for infant death within each of the four racial/ethnic groups and three source-of-payment groups that we studied. For example, among Alabama occurrent, residential live births in 2005-07:

- Within the Medicaid-covered group, babies of mothers who had received inadequate prenatal care were 1.7 times more likely to die during infancy than babies of mothers who had received adequate care (17.7 versus 10.4 deaths per 1,000 live births).

- Within the Black, non-Latino population, babies of mothers who had received inadequate prenatal care were 1.9 times more likely to die during infancy than babies of mothers who had received adequate care (25.4 versus 13.3 deaths per 1,000 live births).

Infant Mortality According to Perinatal Region

The State has five perinatal regions, each of which has a locally based Regional Perinatal Coordinator, who is administratively located in the Perinatal Program, which is located in Family Health Services. Figure 3.37 depicts risk of infant death for each of the State's five perinatal regions. As shown there, among babies born in 2005-07, risk of infant death ranged from 8.0 deaths per 1,000 live births in Region 1 to 12.4 deaths per 1,000 live births in Region 2.

Though not depicted in figures, trends in risk of infant death for the 1999 through 2007 birth cohorts were assessed according to perinatal region, just as they were assessed for the total population of live births. Only one region, Perinatal Region 3, experienced statistically significant changes in risk over the surveillance period. However, trends in some of the other regions were notable as well. Discussion of trends in each of the five perinatal regions follows, reporting risk of infant death as the number of infant deaths per 1,000 live births. In all but one of the perinatal regions, risk of infant death increased over the surveillance period. The exception was Perinatal Region 4, in which the reported risk declined. Again, all findings pertain to Alabama occurrent, residential live births and are for infants born in the specified years:

- In Region 1, successive 3-year risks of infant death were 7.6 deaths per 1,000 in 1999-2001, 7.7 deaths per 1,000 in 2002-04, and 8.0 deaths per 1,000 in 2005-07. Thus, the risk increased slightly in the second 3-year period and notably in the third 3-year period.

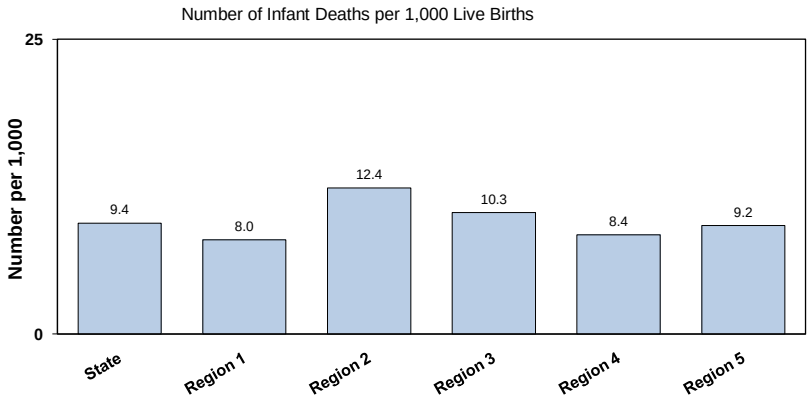
- In Region 2, 3-year risks of infant death were 11.5 deaths per 1,000 in 1999-2001, 11.0 deaths per 1,000 in 2002-04, and 12.4 deaths per 1,000 in 2005-07. The risk was higher in 2005-07 than in either of the other two 3-year periods.

- In Region 3, 3-year risks of infant death were 10.3 deaths per 1,000 in 1999-2001, 9.0 deaths per 1,000 in 2002-04, and 10.3 deaths per 1,000 in 2005-07. The risk in 2005-07 was the same as in 1999-2001 and significantly higher than in 2002-04.

- In Region 4, 3-year risks of infant death were 9.5 deaths per 1,000 in 1999-2001, 8.6 deaths per 1,000 in 2002-04, and 8.4 deaths per 1,000 in 2005-07. Though none of the 3-year comparisons were statistically significant, the trend in risk over single years was of borderline statistical significance ($p = 0.060$). In other words, in Region 4, the reported risk of infant death notably declined over the surveillance period.

- In Region 5, 3-year risks of infant death were 7.9 deaths per 1,000 in 1999-2001, 8.4 deaths per 1,000 in 2002-04, and 9.2 deaths per 1,000 in 2005-07. Thus, the risk increased notably in both the second 3-year period and the third 3-year period. The increase in the risk in 2005-07 relative to 1999-2001 was of borderline statistical significance ($p = 0.057$).

Figure 3.37. Risk of Infant (Under 1 Year of Age) Death
Total and According to Perinatal Region
Occurrent Live Births to Alabama Residents, 2005-07*



*Only births occurring in Alabama to Alabama residents were analyzed.

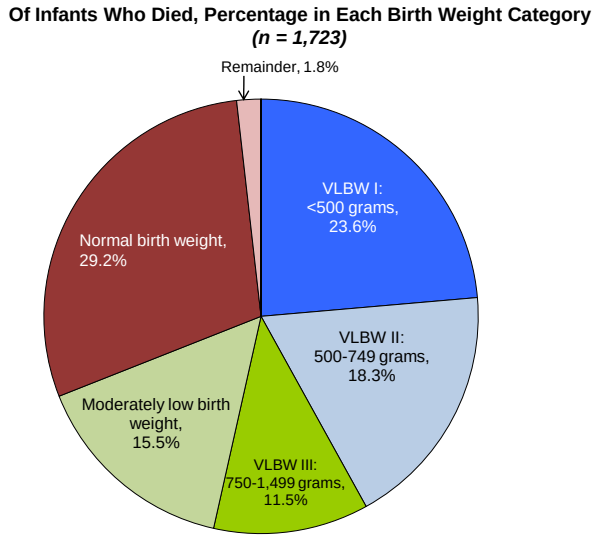
Birth Weight and Infant Death

The discussion that follows pertains to Alabama occurrent, residential live births in 2005-07. In this population, as shown in Figure 3.38, over half (53.5 percent) of the babies who died before their first birthday were VLBW. Of babies from this birth cohort who died during infancy, 29.2 percent were of normal birth weight (2,500-4,249 grams), and 15.5 percent were moderately low birth weight (1,500-2,499 grams). (See adjacent text box for approximate conversion of grams to pounds and ounces.)

Approximate Conversion of Grams to Pounds/Ounces

Grams	Approximate Pounds/Ounces
500……	1 pound 2 ounces
750……	1 pound 11 ounces
1,500….	3 pounds 5 ounces
2,500….	5 pounds 9 ounces
4,250….	9 pounds 7 ounces

Figure 3.38. Infant Deaths According to Birth Weight
Occurrent Live births to Alabama Residents, 2005-07*



*Only births occurring in Alabama to Alabama residents were studied.

Infant deaths among the 2005-07 birth cohort were analyzed for several birth weight categories: three VLBW sub-categories (less than 500 grams, 500-749 grams, and 750-1,499 grams), moderately low birth weight (1,500-2,499 grams), and normal birth weight (2,500-4,249 grams). Except for the under-500-gram category, each of these categories was further analyzed according to race and source of payment for delivery. Findings from the latter analysis are shown in Figures 3.39 through 3.42. Risks for Latino infants and infants from self-pay deliveries are shown in these figures only when 15 or more deaths occurred in the subgroup of interest.

Risk of infant death declined dramatically as birth weight increased.

As expected, risk of infant death declined dramatically as birth weight increased. Nearly all (89.1 percent) of the tiniest babies, those weighing less than 500 grams at birth, died during infancy. Not quite half (43 percent) of the babies with birth weights of 500-749 grams died during infancy (Figure 3.39). Due to their relative rarity, infant deaths in the higher birth weight categories are reported per 1,000 live births, rather than as percents. Among 750-1,499 gram newborns, 76 of every 1,000 died during infancy (Figure 3.40). Among moderately low birth weight infants, 17 of every 1,000 died (Figure 3.41). Among normal birth weight infants, three of every 1,000 died (Figure 3.42). Overall, VLBW (less than 1,500 gram) infants were 77 times more likely to die than normal birth weight infants (243.0 deaths per 1,000 versus 3.2 deaths per 1,000).

Comparing White non-Latinos and Black non-Latinos, risk of infant death did not notably differ within the 500-749 gram group (Figure 3.39). However, within the 750-1,499 gram group, White, non-Latino babies were 1.2 times more likely to die during infancy than Black, non-Latino babies were (Figure 3.40). As well, within the moderately low birth weight group, White, non-Latino babies were 1.15 times more likely to die during infancy than Black, non-Latino babies were (Figure 3.41). Conversely, within the normal birth weight group, Black, non-Latino babies were 1.2 times more likely to die during infancy

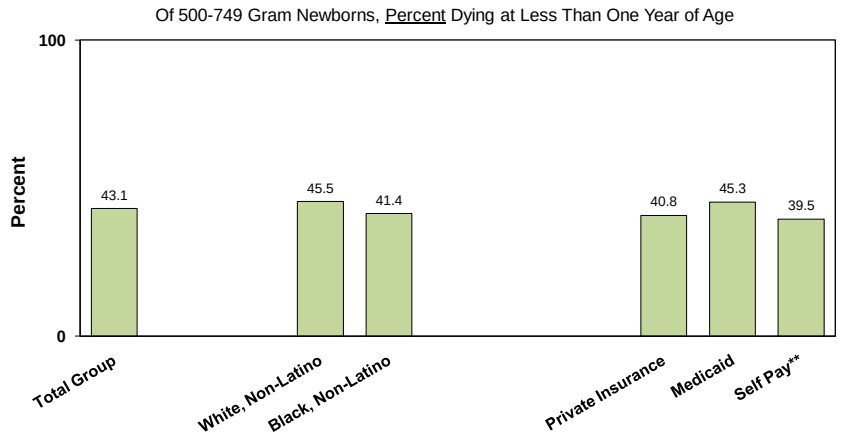
than White, non-Latino babies were (Figure 3.42). As shown in Figure 3.41, within the moderately low birth weight group, Latinos newborns were somewhat more likely to die than White, non-Latino infants were. As shown in Figure 3.42, within the normal birth weight group, Latino newborns were at the same risk of death as Black, non-Latino newborns were.

Comparing babies from privately insured deliveries and babies from Medicaid-covered deliveries, babies from Medicaid-covered deliveries were at greater risk of infant death within each of the birth weight categories shown. However, the relative risk increased as birth weight increased. Specifically, within the 500-749 gram birth weight category, babies from Medicaid-covered deliveries were just 1.1 times more likely to die during infancy than babies from privately insured deliveries were (Figure 3.39). The gap was widest within the normal birth weight category: Within this weight category, babies from Medicaid-covered deliveries were 2.7 times more likely to die during infancy than babies from privately insured deliveries were.

Of the source of payment for delivery groups, within three of the four birth weight categories respectively shown in Figures 3.39 through 3.42, infants from self-pay deliveries were at the highest risk of death, and infants from Medicaid-covered deliveries were at higher risk than infants from privately insured deliveries. The exception was the 500-749 weight category (Figure 3.39). In this group, risk of infant death was similar for babies whose delivery was privately insured and those whose delivery was self paid.

Figure 3.39. Risk of Infant Death: Very Low Birth Weight Infants Weighing 500-749 Grams

Total and According to Race/Ethnicity and Source of Payment for Delivery
Occurrent Live Births to Alabama Residents, 2005-07*

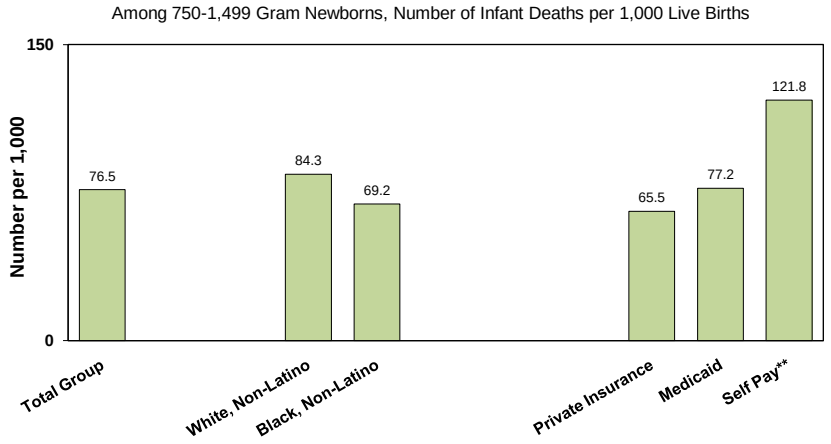


*Only births occurring in Alabama to Alabama residents were analyzed.

**In this weight category, there were few infant deaths in the self-pay group (30 deaths).

Figure 3.40. Risk of Infant Death: Very Low Birth Weight Infants Weighing 750-1,499 Grams

Total and According to Race/Ethnicity and Source of Payment for Delivery
Occurrent Live Births to Alabama Residents, 2005-07*

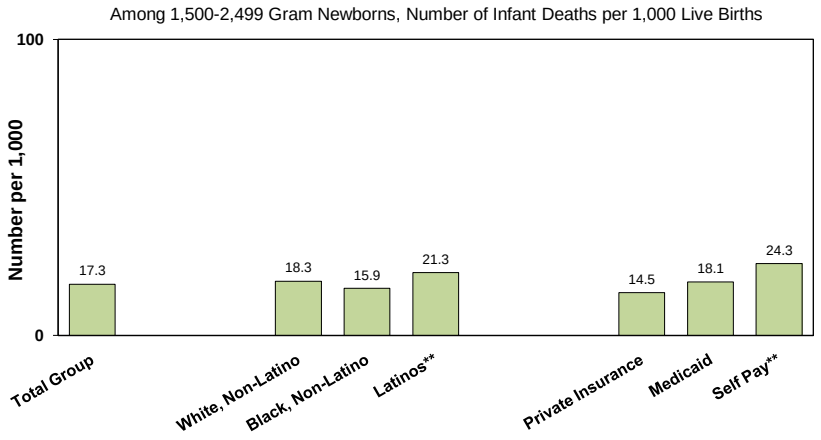


*Only births occurring in Alabama to Alabama residents were analyzed.

**In this weight category, there were few infant deaths in the self-pay group (24 deaths).

Figure 3.41. Risk of Infant Death: Moderately Low Birth Weight Infants

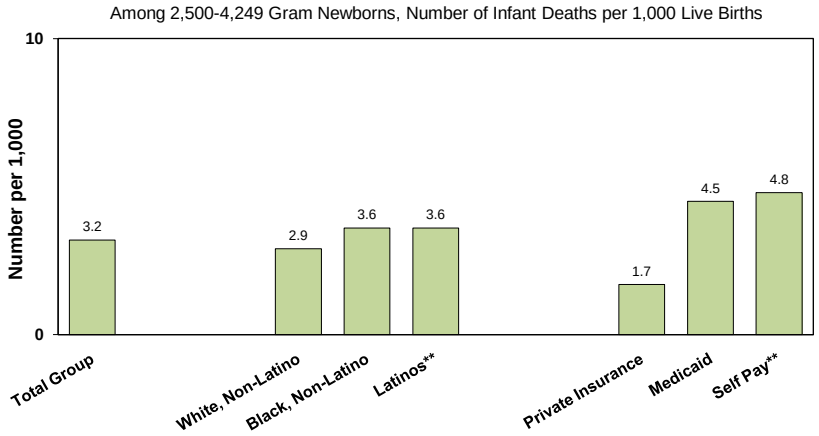
Total and According to Race/Ethnicity and Source of Payment for Delivery
Occurrent Live Births to Alabama Residents, 2005-07*



*Only births occurring in Alabama to Alabama residents were analyzed.

**In this weight category, there were few infant deaths in the Latino group (17 deaths) and the self-pay group (20 deaths).

Figure 3.42. Risk of Infant Death: Normal Birth Weight Infants
Total and According to Race/Ethnicity and Source of Payment for Delivery
Occurrent Live Births to Alabama Residents, 2005-07*



*Only births occurring in Alabama to Alabama residents were analyzed.

**In this weight category, there were few infant deaths in the Latino group (45 deaths) and the self-pay group (30 deaths).

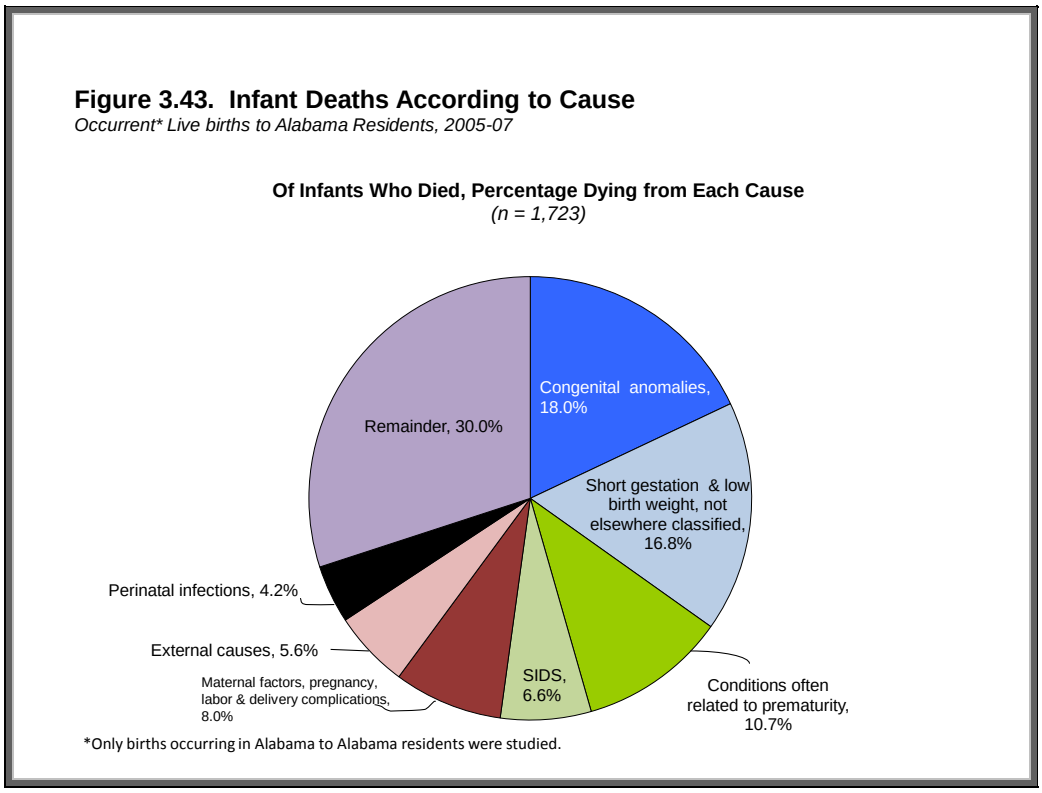
Causes of Infant Death

The International Classification of Diseases, 10th revision (ICD-10) system was used to classify infant deaths according to cause. Figure 3.43 depicts certain causal categories for infant deaths of babies born in 2005-07. Again, the findings that follow pertain to Alabama occurrent, residential live births in 2005-07.

In 2005-07, congenital anomalies were collectively the leading cause of infant death, causing 18 percent of infant deaths. However, short gestation and low birth weight that were not elsewhere classified followed closely, causing 17 percent of infant deaths. Further, 11 percent of infant deaths were attributed to conditions that are often related to prematurity.

Distribution of Causes of Infant Death

The leading cause of death was congenital anomalies, which caused 18 percent of deaths. However, "disorders related to short gestation and low birth weight, not elsewhere classified," followed very closely, causing 17 percent of infant deaths. (In this document, the preceding category is sometimes termed "prematurity.") As a corollary to the "not elsewhere classified" qualification, many deaths that may be related to VLBW are classified elsewhere. For this reason, we adopted a classification system described by Dollfus and associates[30] to develop a "conditions often related to prematurity" category. This category, subsequently termed "prematurity-related conditions," caused 11 percent of deaths. Eight percent of deaths were attributed to maternal factors and complications of pregnancy, labor, and delivery. Seven percent of deaths were attributed to SIDS, 6 percent to external causes, and 4.2 percent to perinatal infections. Remaining deaths were attributed to a variety of causes.



As expected, VLBW newborns comprised nearly all (97.2 percent) of the deaths attributed to short gestation and low birth weight, not elsewhere classified. However, VLBW babies accounted for most of the infant deaths in three other categories as well: 89.8 percent of deaths due to effects of maternal factors and complications of pregnancy, labor, and delivery; 87.6 percent of deaths due to prematurity-related conditions; and 83.6 percent of deaths due to perinatal infections.

Trends in Certain Cause-Specific Risks of Infant Death

Trends in risk of infant death due to the following three causes were assessed: short gestation and low birth weight, not elsewhere classified (termed "prematurity" below), SIDS, and external causes. Again, the surveillance period was 1999-2007. Concerning time periods, trends were assessed over single years, over three 3-year periods, and in a comparison of 2005-07 to each of the earlier 3-year periods. The most notable changes in risk due to these causes occurred in the White, non-Latino group. In the following discussion of trends in cause-specific mortality, <u>changes over time are said to be statistically significant for p-values of less than 0.05</u>.

<u>For White, non-Latino babies</u>:

- Risk of death due to prematurity increased significantly, regardless of which time periods were compared. In this population, <u>risk of death due to prematurity was 41.1 percent higher in 2005-07 than in 2002-04</u> (1.0 deaths per 1,000 versus 0.7 deaths per 1,000). For White, non-Latino infants, 110 deaths were attributed to prematurity among babies born in 2005-07, versus 77 deaths being attributed to prematurity among babies born in 2002-04.

- Risk of SIDS was 84.5 percent higher in 2005-07 than in 2002-04 (0.6 deaths per 1,000 versus 0.4 deaths per 1,000), and the increase was statistically significant. However, as discussed shortly, at least part of this increase may be a reporting artifact. For White, non-Latino infants, 71 deaths were

classified as SIDS among babies born in 2005-07, versus 38 deaths being classified as SIDS among babies born in 2002-04.

- Risk of death due to external causes was 60.4 percent higher in 2005-07 than in 2002-04 (0.5 deaths per 1,000 versus 0.3 deaths per 1,000), and the increase was statistically significant. For White, non-Latino infants, 52 deaths were attributed to external causes among babies born in 2005-07, versus 32 deaths being attributed to external causes among babies born in 2002-04.

Disparities in Cause-Specific Risks of Infant Death

Racial and socioeconomic disparities in risks of death due to prematurity, SIDS (as reported), and external causes were respectively assessed. Among infants born in 2005-07, compared to White, non-Latino infants, Black, non-Latino infants were 2.9 times more likely to die of prematurity (2.9 versus 1.0 deaths per 1,000), 1.1 times more likely to die from SIDS (0.7 versus 0.6 deaths per 1,000), and 1.2 times more likely to die of external causes (0.6 versus 0.5 deaths per 1,000). Among infants born in 2005-07, compared to infants whose delivery was privately insured, infants whose delivery was covered by Medicaid were 1.2 times more likely to die of prematurity (1.6 versus 1.3 deaths per 1,000), 3.0 times more likely to die from SIDS (0.9 versus 0.3 deaths per 1,000), and 3.7 times more likely to die of external causes (0.8 versus 0.2 deaths per 1,000).

Racial and socioeconomic disparities in infant death varied according to cause. In 2005-07, Black, non-Latino infants were 2.9 times more likely to die from short gestation and low birth weight that was not elsewhere classified than White, non-Latino infants were. Infants from Medicaid-covered deliveries were 3.7 times more likely to die from external causes than infants from privately insured deliveries were.

SIDS: A Specific Type of Sudden Unexplained Infant Death

As previously mentioned, the reported risk of SIDS increased significantly among White non-Latinos. Though not statistically significant, comparing 2005-07 to 2002-04, the reported risk of SIDS also increased in each of the other subgroups studied (Black, non-Latino babies, babies from privately insured deliveries, and babies from Medicaid-covered deliveries) and in the total population. However, according to ADPH's Child Death Review Program staff, the vast majority of deaths reported as SIDS on Alabama death certificates have not fit the accepted clinical definition of SIDS. SIDS is defined as the sudden death of an infant who is from one through eleven months of age that cannot be explained after a thorough investigation has been conducted: including a complete autopsy, examination of the death scene, and review of the clinical history. Further, a SIDS diagnosis should not be assigned if the infant was not discovered on his or her back and sleeping alone in an approved crib. Since most reported cases of SIDS among Alabama infants are misdiagnosed, the cases classified as SIDS clearly include sudden unexplained infant deaths other than SIDS. ("Sudden unexplained infant death" is the broader, more general term; SIDS is a specific type of sudden unexplained infant death.) We do not know, however, whether this misclassification has increased over time.

Infant sleep position is known to be related to sudden unexplained infant death. According to the 2007 Alabama PRAMS Survey, 60.4 percent of Alabama mothers most often placed their babies on their backs for sleeping. Although the benefits versus risks of parent-infant bedsharing have been controversial, some experts, including the American Academy of Pediatrics, have cautioned against "routine" sharing, partly because of concerns about physical dangers (overlying).[31] According to the 2007 Alabama PRAMS Survey, 24.2 percent of Alabama mothers never allowed their infant to co-sleep or share a bed with themselves or anyone else. However, 37.0 percent reported that they always or almost always allowed their infants to co-sleep.

Implications of Findings Concerning Infant Mortality

Infant mortality remains a complex, multifaceted issue, and no single intervention should be expected to markedly reduce the infant mortality rate. For example, as previously stated, in the short term, reducing the prevalence of adolescent pregnancy would not markedly reduce the overall infant mortality rate or notably reduce racial disparities in infant mortality. Nevertheless, prevention of adolescent pregnancy is generally desirable, in order to allow the adolescent time to mature and avail herself of social and economic opportunities before becoming a mother.

As stated earlier in this report, even within groups respectively defined by race/ethnicity and source of payment for delivery, inadequate prenatal care is a risk marker for infant death. Even within these groups, this relationship is presumably mixed with other factors, such as socioeconomic status and health-related behavior. However, prenatal care provides a framework for identifying and addressing not only physical risk factors, but other risk factors as well: such as mental health issues, behavioral issues, or the lack of needed social support. Additionally, prenatal care provides a framework for encouraging and enabling the mother to seek appropriate care for herself and the baby following the birth. As discussed in Section 5, one of the MCH priority needs selected by Family Health Services is to: *Promote access to a medical home and to basic health care for children, youth, and women of childbearing age*. Included in the concept of a medical home is access to prenatal care, as well as other types of care, when needed.

> *Prenatal care provides a framework for encouraging and enabling the mother to seek appropriate care for herself and the baby following birth.*

As previously shown, the increase in risk of infant death in 2005-07 relative to 2002-04 was not limited to groups typically deemed to be at high risk, so no single risk marker that we have studied fully explains the increase in risk. However, the increases in risks of infant death for babies from multiple births and for 750-999 gram babies were notable. As a corollary, further analysis of trends in infant mortality for 2002-2007 (or through 2008 when the birth cohort linked file for that year becomes available) is indicated. Specifically, a multivariate analysis that includes prenatal care, plurality, and birth weight (with control for birth weight in smaller increments) is indicated.

Nevertheless, analysis of vital statistics, though informative, will not provide all the information that is needed if the State's high infant mortality rate is to be addressed. For this reason, following the increase in the State's infant mortality rate in 2007, the State Health Officer directed Family Health Services to intensify efforts to implement FIMR statewide. In collaboration with SPAC, the Perinatal Program (located in Family Health Services), is spearheading this effort. Indeed, Family Health has selected the following new SPM, *The degree to which statewide fetal and infant mortality review (FIMR) is implemented*. The goals of the State's FIMR program are to: 1) describe significant social, economic,

> *No single risk marker that we have studied fully explains the increase in risk of infant death that occurred in 2005-07. However, a multivariate analysis of trends in infant mortality that includes prenatal care, plurality, and birth weight (with control for birth weight in smaller increments) is indicated. Nevertheless, analysis of vital statistics will not provide all the information that is needed if the State's high infant mortality rate is to be addressed. For this reason, efforts to implement FIMR statewide have been intensified. As well, unexplained or unexpected deaths among infants continue to be reviewed under ADPH's Child Death Review Program.*

cultural, safety, health, and systems factors that contribute to infant mortality; and 2) design and implement community-based action plans founded upon information obtained from reviews. As well, as discussed in Section 5, Family Health retained the following MCH priority need: *Reduce infant mortality, especially among African Americans*.

Further, unexplained or unexpected deaths among infants, as well as children and youth through 17 years of age, continue to be reviewed under ADPH's Child Death Review Program, which is administratively located in Family Health Services. This system was created by legislation enacted in 1997 and has a mandate to review all unexpected or unexplained deaths from birth through 17 years of age. Because the mandate involves review of unexpected or unexplained deaths, deaths from birth defects, prematurity, and terminal illnesses are not reviewed under the Child Death Review Program. Purposes of the program include education of the public about unexplained or unexpected deaths and engagement of the public in efforts to reduce the frequency of preventable deaths.

To recap, both FIMR and child death review are designed to help reduce the risk of death among Alabama's children and youth. Alabama's FIMR Program focuses on infants and does not exclude deaths due to particular causes. In accordance with its mandate, the Child Death Review Program focuses on unexplained or unexpected deaths and covers persons from birth through 17 years of age. Additionally, the Perinatal Program's five Regional Perinatal Coordinators work closely with Regional Perinatal Advisory Councils to promote the health and well-being of infants in their respective regions. One of the tasks of each coordinator is to work with her region's perinatal council to implement FIMR.

> *If the infant mortality gap between Black infants and White infants is to be reduced, modifiable risk factors and/or health systems issues affecting Black mothers and families need to be effectively addressed.*

Concerning racial disparities, several years ago a group of researchers concluded that eliminating racial disparities in infant mortality will require development of etiological pathways that explain why, compared to White Americans, Black Americans have higher preterm-birth rates and higher infant mortality rates.[32] What these social/environmental mechanisms and etiological pathways may be is beyond the scope of any studies or comprehensive literature review performed by Family Health Services staff. Nevertheless, if the infant mortality gap between Black, non-Latino babies and White, non-Latino babies is to be reduced, modifiable risk factors and/or health systems issues affecting Black mothers and families need to be effectively addressed.

Other Indicators or Data Sources: Pregnant Women, Mothers, and Infants

Qualitative data from the focus groups and mail surveys offer diverse perspectives concerning issues affecting the health status of pregnant women, mothers, and infants, as well as their access to care. Qualitative data are discussed later in this section. Discussion here focuses on certain indicators reported in the *MCH Annual Reports/Applications* that pertain to pregnant women, mothers, and infants.

Several of the NPMs, HSIs, national outcome measures (NOMs), or health systems capacity indicators (HSCs) specified in the *MCH 2009 Report/2011 Application* are pertinent to the pregnant woman's, the mother's, and the infant's health status or access to care. Indicators related to the following measures are discussed earlier in Section 3, though often based on a different measurement than (and sometimes on the converse of) that used in the *MCH Annual Reports/Applications*:

- NPM #08, which pertains to the live birth rate for teens. However, in this report, trends in the adolescent pregnancy rate, rather than trends in the adolescent live birth rate, are discussed.

- NPM #17, which pertains to whether VLBW infants are born at perinatal centers.

- NPM #18, which pertains to prenatal care.

- HSIs #01A, #01B, #02A, and #02 B, which pertain to low birth weight or VLBW in all live births or in singletons. For needs assessment purposes, our analyses focus mainly on VLBW. However, birth weight-specific risks of infant death have been presented.

- HSIs #06A, #06B, #07A, #07B, #09A, #09B, #10, #11, and #12—all of which pertain to demographics.

- NOMs #01, #02, #03, and #04, which pertain to infant mortality, including the racial infant mortality gap, neonatal mortality, and postneonatal mortality.

Findings discussed thus far in Section 3 do not directly address NOM #05, which pertains to the perinatal mortality rate, and HSI #05B, which pertains to chlamydia. Brief discussion of these measures follows.

Concerning the perinatal mortality rate, details regarding the data sources and methods are in the Form 11 field notes for SOM #05. From 2004 through 2008, the perinatal mortality rate in Alabama ranged from 8.4 deaths per 1,000 live births plus fetal deaths in 2006 to 9.0 deaths per 1,000 live births plus fetal deaths in 2008, with a median of 8.6 deaths per 1,000 live births plus fetal deaths in 2007. The increase in 2008 was due to an increase in the number of reported fetal deaths occurring at 28 or more weeks of gestation: from 250 deaths in 2007 to 288 deaths in 2008. The number of early neonatal (under 7 days of age) deaths declined slightly: from 306 in 2007 to 296 in 2008.

Concerning HSI #05B, from 2005 through 2009, the chlamydia case rate in 20-44 year-old Alabama females ranged from 12.9 cases per 1,000 women in 2005 to 16.9 cases per 1,000 in 2006, with a median of 13.4 cases per 1,000 in 2008. In 2009, the chlamydia case rate among Alabama 20-44 year-old women was 13.3 cases per 1,000. As discussed in the narrative of the *MCH 2009 Report/2011 Application*, in the fall of 2005, the State lab began utilizing amplified urine-based testing for chlamydia and gonorrhea, and the testing was implemented in all county health departments. Use of the amplified test increased the number of individuals tested. As well, the amplified test is more sensitive than the previously used test. Since amplified testing did not begin until the fall of 2005, the lower chlamydia case rate in 2005 relative to later years is not surprising.

Children and Youth

In the 2009-10 Needs Assessment, key (sometimes overlapping) sources of information pertaining to children and youth were the following:

- Indicators related to, but not necessarily identical to, certain NPMs, SPMs, NOMs, HSIs, and HSCs reported in the *MCH 2009 Report/2011 Application*.

- Electronic death certificate files for the State.

- The 2007 NSCH.

- U.S. Census Bureau population estimates.

- To a limited degree, the 2009 YRBSS. However, YRBSS was not used much because weighted data for Alabama for 2007 are not available and data for 2009 were not posted on the CDC web site until June 2010.

- Qualitative information from the focus groups and web-based surveys conducted by or coordinated by Family Health Services. These data are discussed later, in a sub-section focusing on qualitative data that were collected by Family Health.

Discussion of findings pertaining to children and youth is generally organized under the following subheadings:

- Race and Ethnicity: Children and Youth.

- Access to or Utilization of Health Care: Children and Youth.

- Health Status: Children and Youth.

- Mortality: Children and Youth

- Youth Risk Behavior Survey.

- Other Indicators: Children and Youth.

Adolescent pregnancy, though a very important issue, is discussed earlier in Section 3 so is not revisited here. However, as discussed later, one of the MCH priority needs selected by Family Health encompasses adolescent pregnancy, though it does not mention adolescent pregnancy in particular.

Race and Ethnicity: Children and Youth

Race and ethnicity of 0-24 year-old Alabama residents are discussed earlier in Section 3. Discussion there and here overlaps with discussion of HSIs #6A and #6B in the *MCH 2009 Annual Report/2011 Application*.

To recap highlights from the earlier discussion, among 0-24 year-old Alabama children and youth:

- In 2008, 1,572,695 persons from 0-24 years of age lived in Alabama: up 0.6 percent from the corresponding number in 2000.

- With respect to concurrent stratification by race and ethnicity, among 0-24 year-old Alabama children and youth (see Table 3.3 for details):
  - White non-Latinos constituted 61.5 percent of this population in 2008, down from 63.4 percent in 2000.
  - Black non-Latinos constituted 31.1 percent of this population in 2008, down from 31.7 percent in 2000.
  - Other non-Latinos constituted 3.1 percent of this population in 2008, up from 2.4 percent in 2000.
  - Latinos comprised 4.3 percent of this population in 2008, up from 2.5 percent in 2000.

Another notable change was that the percentage of 0-24 year-old Alabama children and youth whose race was reported as "two or more races" increased: from 1.2 percent in 2000 to 1.7 percent in 2008 (see Table 3.2 for details).

From the tables for HSIs #6A and #6B, shown in the *MCH 2009 Report/2011 Application*, we derived the percentage of the population comprised of Latinos for narrower age categories of children and youth. In general, within the 0-24 year-old population of Alabama residents, Latinos composed proportionately more of the younger age groups. Specifically, in 2008, Latinos composed the following proportions of Alabama residents in the stated age groups: 7.3 percent of 0-1 year-olds, 7.4 percent of 1-4 year-olds, 5.1 percent of 5-9 year-olds, 3.6 percent of 10-14 year-olds, 2.8 percent of 15-19 year-olds, and 2.8 percent of 20-24 year-olds.

Access to or Utilization of Health Care: Children and Youth

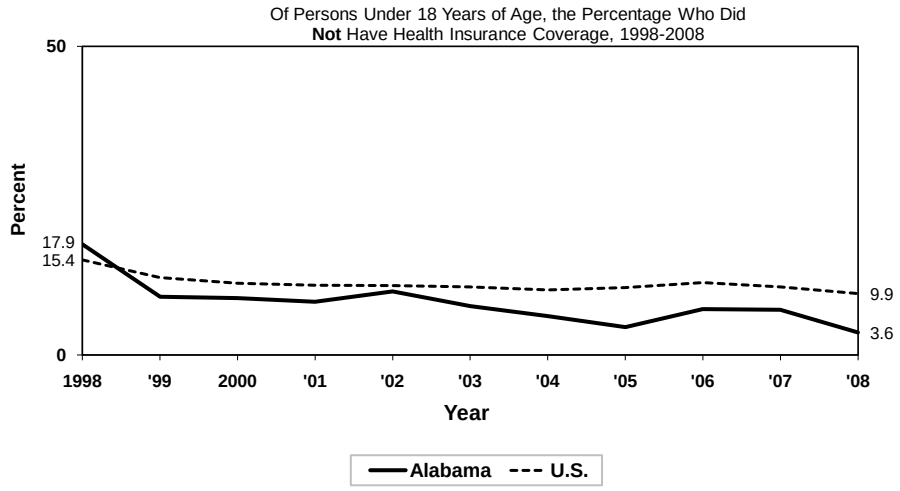
Data sources for this sub-section vary. Most of our quantitative information about access to or utilization of health care is drawn from sources used for corresponding measures in the *MCH 2009 Report/2011 Application* or from the 2007 NSCH.

Health Insurance Coverage

With the possible exception of the very wealthy, one key determinant of access to health care is whether the individual has health insurance coverage. NPM #13, "Percent of children without health insurance," addresses this issue. Alabama CHIP was first initiated, in incremental stages, in 1998, so presumably was not fully operational until 1999. In Alabama, the prevalence of *non*-insurance among children and youth under 18 years of age has declined (improved) by more than half since CHIP was implemented: from 17.9 percent in 1998[33] to 3.6 percent in 2008.[34] This decline is shown in Figure 3.44. Although each estimate is sample-based and, therefore, is subject to sampling error, the improvement in the prevalence of non-insurance among Alabama children and youth is remarkable. Further, as shown in Figure 3.44, since 1999, Alabama children and youth have been *less* likely to be uninsured than U.S. children and youth have been.

> *In Alabama, the prevalence of non-insurance among persons under 18 years of age has declined (improved) by more than half since CHIP was implemented.*

Figure 3.44. Lack of Health Insurance
Persons Under 18 Years of Age, Alabama and the U.S., 1998-2008



Source: U.S. Census Bureau, Historical Health Insurance Tables (for 1998, Table HI-5; for later years, Table HIA-5)

Note: Estimates are based on samples, so may be imprecise, especially at the state level.

Estimates shown in Figure 3.44 are from the U.S. Census Bureau's Historical Health Insurance Tables. The 2007 NSCH also provides estimates for the prevalence of non-insurance in Alabama and the nation.[35] Considering the sampling error involved, the NSCH estimate for Alabama is very similar to the corresponding estimate shown in Figure 3.44. That is, according to the 2007 NSCH, 7.7 percent (95% CI: 5.5% - 9.9%) of 0-17 year-old Alabama residents were uninsured: which is very close to the year 2007 estimate (7.3 percent) obtained from the Historical Health Insurance Tables. The NSCH and the Historical Health Insurance Tables yield different estimates for the prevalence of non-insurance among 0-17 year-old U.S. children and youth in 2007, however: which was 9.1 percent (95% CI: 8.6% - 9.6%) per the NSCH but 11.0 percent per the Historical Health Insurance Tables.

Note: In the NSCH, all findings are according to the report of the respondent.

The 2007 NSCH provides data for describing the prevalence of non-insurance according to various characteristics. In the NSCH, all findings are according to the report of the respondent. Respective comparisons of health insurance status according to age, race and ethnicity, household income, and rural versus urban residence follow. Though patterns in the U.S. are depicted in figures and sometimes mentioned to provide context, the focus of the discussion is on Alabama. All the following findings about health insurance coverage are according to the 2007 NSCH and pertain to 0-17 year-old children and youth.

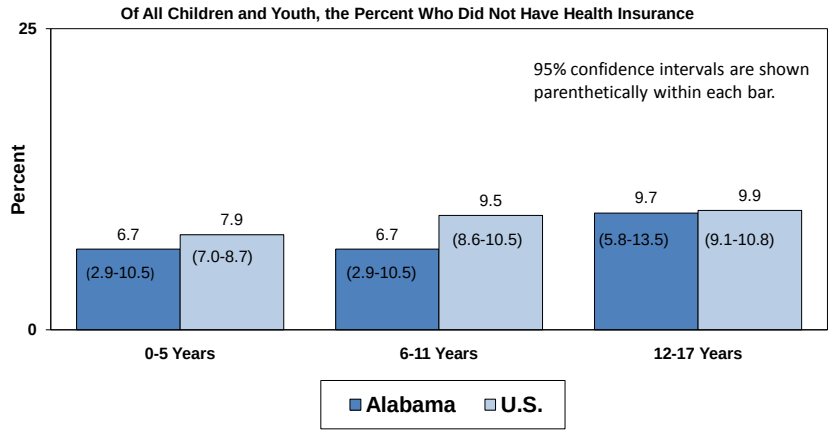
We have roughly assessed the statistical significance of NSCH findings by comparing 95 percent confidence intervals. For NSCH data, if confidence intervals for two groups do not overlap, we consider the difference to be statistically significant.

Children and youth aged 12-17 years were more likely to be uninsured than 0-5 year-old children were.

In both Alabama and the U.S., 12-17 year-old children and youth were more likely to be uninsured than 0-5 year-old children and youth were (Figure 3.45). This difference was

not statistically significant in Alabama, but was notable and consistent with the pattern for the U.S. In 2007, the proportions of Alabama children and youth who were uninsured were as follows, according to age: 7 percent of 0-5 year-olds, 7 percent of 6-11 year-olds, and 10 percent of 12-17 year-olds.

Figure 3.45. Lack of Health Insurance Coverage
According to Age of Child
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007

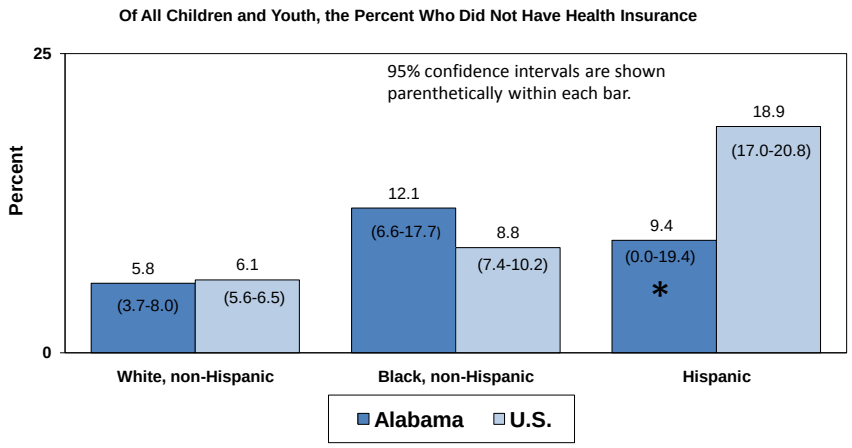


Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., Black, non-Latino children and youth were more likely to be uninsured than their White, non-Latino counterparts were (Figure 3.46). Though the difference was not statistically significant in Alabama, it was in the same direction as that in the U.S. Specifically, in 2007 in Alabama, 12 percent of Black, non-Latino children and youth, versus 6 percent of White, non-Latino children and youth, were uninsured.

Black, non-Latino children and youth were more likely to be uninsured than their White, non-Latino counterparts were.

Figure 3.46. Lack of Health Insurance Coverage
According to Race and Ethnicity
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



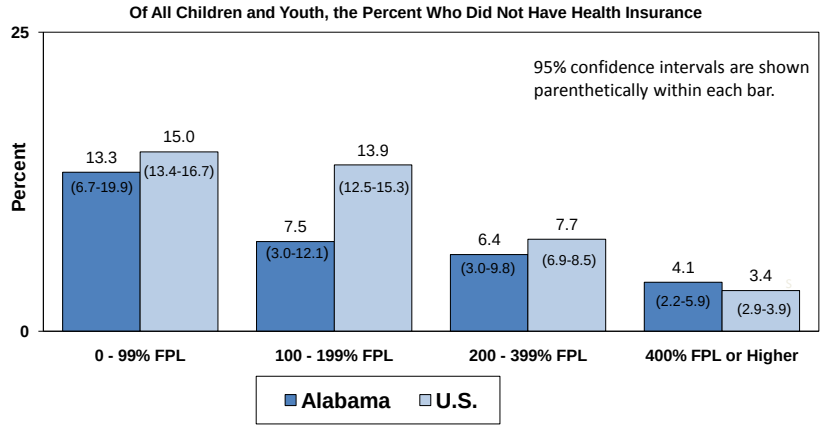
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

*Sample size was too small to meet standards for reliability or precision.

In both Alabama and the U.S., the lower the household income, the more likely the child was to lack health insurance coverage (Figure 3.47). The difference was not statistically significant in Alabama, but was notable and consistent with the pattern for the U.S. Specifically, for Alabama children and youth, the prevalence of non-insurance according to household income was as follows: 13 percent for those with household incomes from 0-99 percent of the FPL, 7.5 percent for those with household incomes from 100-199 percent of the FPL; 6 percent for those with household incomes from 200-399 percent of the FPL, and 4.1 percent for those with household incomes at or above 400 percent of the FPL.

The lower the household income, the more likely the child/youth was to be uninsured.

Figure 3.47. Lack of Health Insurance Coverage
According to Household Income
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



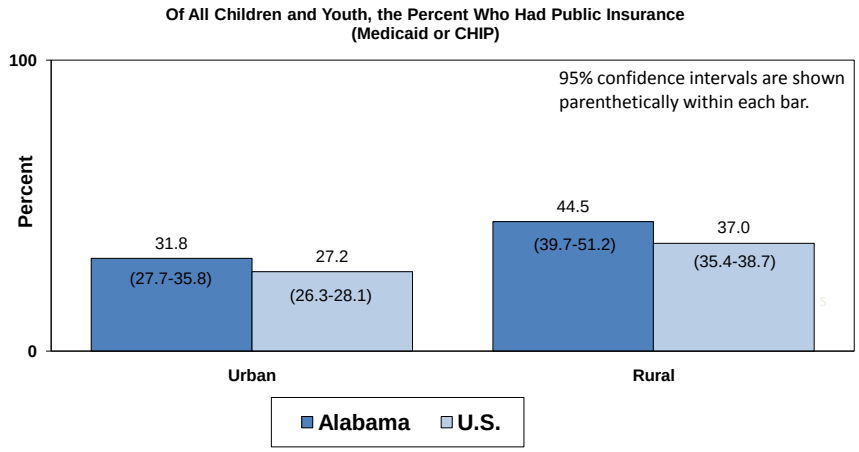
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Abbreviations: FPL = federal poverty level

The percentage of children and youth who had no insurance did not differ significantly according to rural versus urban residence, either in Alabama or the U.S. However, in both Alabama and the U.S., rural children and youth were significantly more likely to have public insurance than their urban counterparts were (Figure 3.48). As well, rural Alabama children and youth were significantly more likely to have public health insurance than rural U.S. children and youth were. In Alabama, 44.5 percent of rural children and youth, versus 32 percent of urban children and youth, had public (Medicaid or CHIP) health insurance.

Rural children and youth were more likely to have public insurance than their urban counterparts were.

Figure 3.48. Public Health Insurance Coverage
According to Urban Versus Rural Location
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 15, 2010 from www.nschdata.org

Note: The Rural Urban Commuting Area taxonomy is derived from the relationships between cities and towns as measured by work commuting flows.

Medical Home

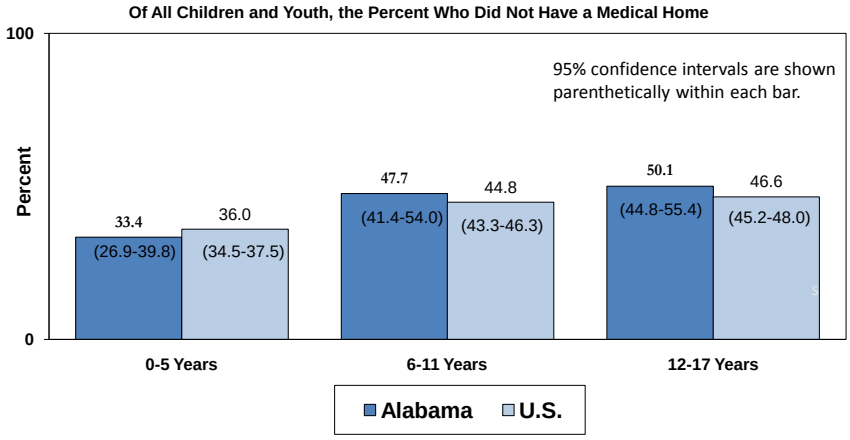
According to the 2007 NSCH, 43.9 percent (95% CI: 40.4% - 47.4%) of 0-17 year-old Alabama children and youth did not receive health care that met the American Academy of Pediatrics' definition of a medical home. This proportion was very similar to the corresponding proportion for the U.S., which was 42.5 percent (95% CI: 41.6% - 43.3%). Discussion of this indicator according to, respectively, age of the child, race and ethnicity, household income, insurance status, and rural versus urban residence follows. Again, the focus is on Alabama, and findings in the U.S. are mentioned only to provide context. All the following findings are according to the 2007 NSCH and pertain to 0-17 year-old children and youth. Generalizations and summary statements are based on point estimates because, in spite of sampling error, the point estimate for any indicator is our best estimate for that indicator. Where such statements are made concerning NSCH data, details are shown in the corresponding figure.

In Alabama, 44 percent of children and youth did not receive health care that met the American Academy of Pediatrics' definition of a medical home. Latino and Black, non-Latino children and youth were more likely to be without a medical home than White, non-Latino children and youth were. As well, the lower the household income, the more likely that the child/youth did not have a medical home. Further, publicly insured and uninsured children and youth were more likely to be without a medical home than their privately insured counterparts.

In both Alabama and the U.S., 6-17 year-old children and youth were significantly more likely to be without a medical home than their 0-5 year-old counterparts (Figure 3.49). Among Alabama residents in 2007, the proportions of children and youth who did not have a medical home were as follows,

according to age: 33 percent of 0-5 year-olds, 48 percent of 6-11 year-olds, and 50 percent of 12-17 year-olds. In other words, about half of 6-17 year-old Alabama residents did not have a medical home.

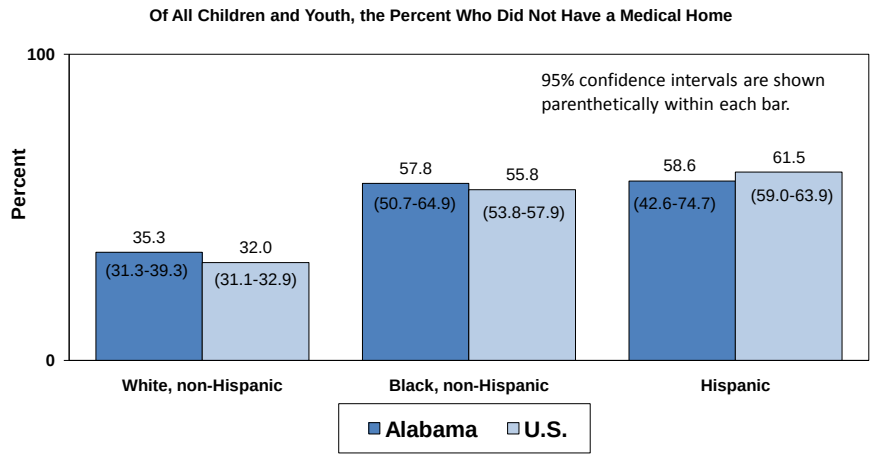
Figure 3.49. Lack of a Medical Home
According to Age of Child
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

As shown in Figure 3.50, in both Alabama and the U.S., Latinos and Black non-Latinos were significantly more likely to be *without* a medical home than White non-Latinos were. In 2007 in Alabama, 58 percent of Black, non-Latino children and youth, versus 35 percent of White, non-Latino children and youth, were without a medical home. The corresponding estimate for Latinos in Alabama was 59 percent. To recap, among Alabama children and youth, more than half of Black non-Latinos and more than half of Latinos did not have a medical home.

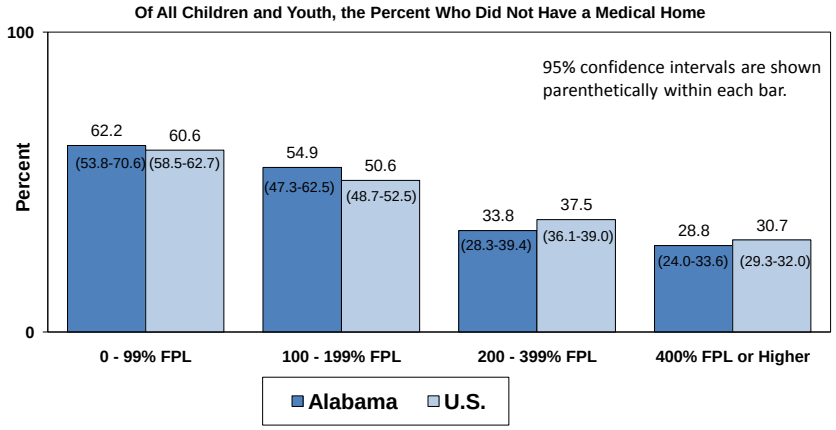
Figure 3.50. Lack of a Medical Home
According to Race and Ethnicity
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., the lower the income, the more likely the child did not have a medical home (Figure 3.51). In Alabama, some income categories did not significantly differ from other income categories, but the pattern was the same as that in the U.S. For Alabama residents in this age group, the proportions who did not have a medical home, according to household income, were as follows: 62 percent of those with household incomes from 0-99 percent of the FPL, 55 percent of those with household incomes from 100-199 percent of the FPL, 34 percent of those with household incomes from 200-399 percent of the FPL, and 29 percent of those with household incomes at or above 400 percent of the FPL. To recap, more than half of Alabama children and youth with household incomes below 200 percent of the FPL did not have a medical home.

Figure 3.51. Lack of a Medical Home
According to Household Income
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



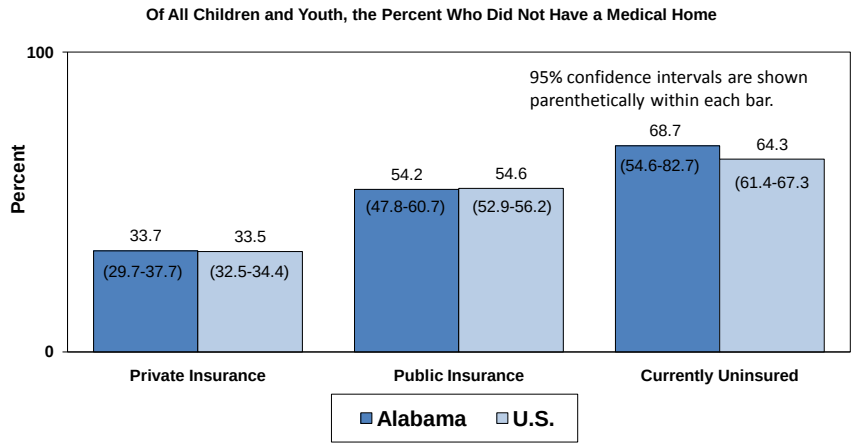
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Abbreviations: FPL = federal poverty level

In both Alabama and the U.S., publicly insured children and uninsured children were significantly more likely to be *without* a medical home than privately insured children were (Figure 3.52). In 2007, the proportions of Alabama children and youth who did not have a medical home were as follows, according to insurance coverage: 69 percent of the uninsured group, 54 percent of the publicly insured (Medicaid or CHIP) group, and 34 percent of the privately insured group. To reiterate, among Alabama children and youth, more than half of the publicly insured and nearly 70 percent of the uninsured did not have a medical home.

The likelihood that a child lacked a medical home did not vary significantly according to rural versus urban residence, either in Alabama or the U.S (not depicted in figures).

Figure 3.52. Lack of a Medical Home
According to Health Insurance Coverage
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Other Indicators of Access to Medical Care

HSCI #07A concerns access of Medicaid-enrolled children and youth (1-20 years of age) to medical care: *Percent of potentially Medicaid-eligible children who have received a service paid by the Medicaid Program*. From 2005-2009 in Alabama, this indicator ranged from 88.5 percent in 2006 to 93.0 percent in 2009, with a median of 89.6 percent in 2007. However, as reported in Alabama, the denominator for this indicator is Medicaid-enrolled children and youth, since a count of all potentially Medicaid-eligible children, some of whom may not be enrolled in Medicaid, is not available.

NPM #07 concerns provision of immunizations to toddlers: *Percent of 19-35 month-olds who have received the full schedule of age-appropriate immunizations against measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, Haemophilus influenza, and hepatitis B*. This indicator has not improved in recent years: In fact, the estimate declined in three successive years: from 85.3 percent (95% CI: 78.1% - 88.5%) in 2006, to 81.9 percent in 2007, to 78.9 percent in 2008, to 76.3 percent (95% CI: 70.2% - 82.4%) in 2009. Due to the statistical margin of error, this decline was not statistically significant; but the status of this indicator has clearly not improved.

During the 2006-2010 needs assessment cycle, Family Health Services tracked the following performance measure, numbered as SPM #01 in that cycle: *The percent of children, 0-9 years of age, enrolled in the Patient 1st Program who received case management services during the reporting year*. From 2005-2009, this indicator ranged from 3.8 percent in 2009 to 6.1 percent in 2007, with a median of 5.2 percent in 2006. The reason for the decline, to 3.8 percent, in 2009 was concern about providing matching Federal dollars in order to be reimbursed for the service. This SPM is being discontinued, effective FY 2011. One reason for its discontinuation is that the MCH Advisory Group suggested that the medical home concept be incorporated into the MCH priority needs; so we developed a new SPM concerning the medical home concept. A second reason is that, as previously discussed, medical home information is obtainable from NSCH. A third reason for discontinuing the SPM concerning care

coordination is that, due to the cost of providing matching Federal dollars in order to be reimbursed, expansion of ADPH's provision of care coordination services is unlikely.

Dental Care

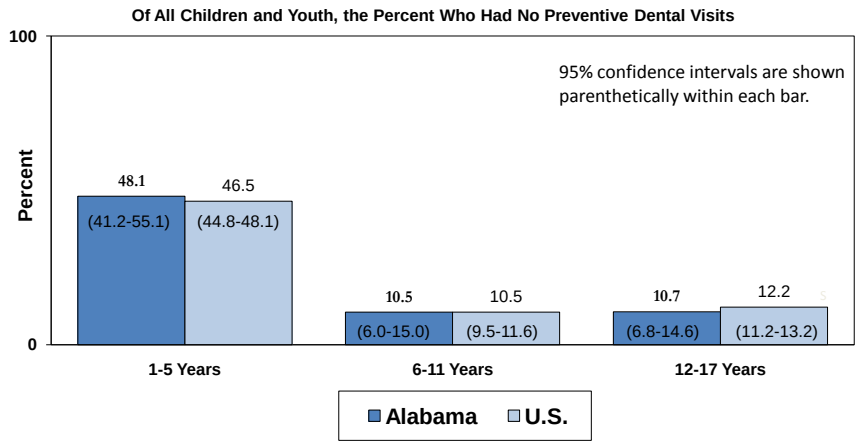
No Preventive Dental Visits

All NSCH findings about preventive dental visits pertain to 1-17 year-old children and youth.

According to the 2007 NSCH, 21.6 percent (95% CI: 18.5% - 24.8%) of 1-17 year-old Alabama children and youth had no preventive dental care visits during the 12 months preceding the survey. This proportion was identical to the corresponding proportion for the U.S. Discussion of this indicator according to, respectively, age, race and ethnicity, household income, insurance status, and rural versus urban residence follows. All the following findings are according to the 2007 NSCH and pertain to the proportion of 1-17 year-old children and youth who had gone *without* a preventive dental care visit in the preceding 12 months.

In both Alabama and the U.S., 1-5 year-old children were significantly more likely to have gone without a preventive dental care visit than their older (6-11 years and 12-17 years) counterparts (Figure 3.53). Among Alabama residents in 2007, the proportions of Alabama children and youth who had gone without a preventive dental care visit were as follows, according to age: 48 percent of 1-5 year-olds, 10.5 percent of 6-11 year-olds, and 11 percent of 12-17 year-olds. In other words, nearly half of 1-5 year-old Alabama residents had gone without a preventive dental visit in the preceding 12 months.

Figure 3.53. No Preventive Dental Care Visits
According to Age of Child
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007

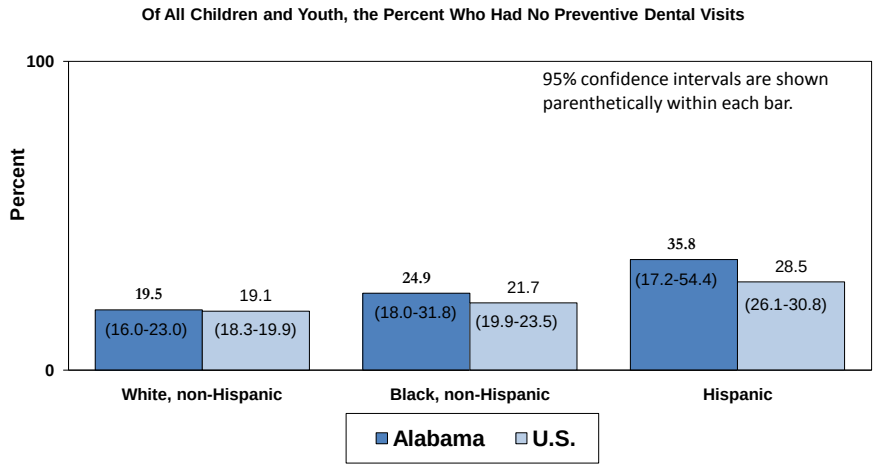


Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., Latinos and Black non-Latinos were notably more likely to have been *without* preventive dental care visits than White non-Latinos were (Figure 3.54). In 2007 in Alabama, 36 percent of Latino children and youth, versus 19.5 percent of White, non-Latino children and youth, had not made a preventive dental care visit in the preceding 12 months. The corresponding estimate for

Black non-Latinos in Alabama was 25 percent. To recap, in Alabama, about one-third of Latino children and youth had gone without a preventive dental care visit.

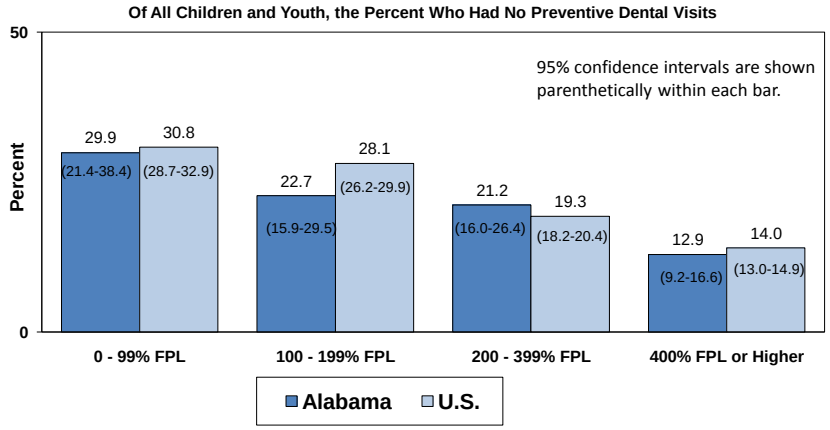
Figure 3.54. No Preventive Dental Care Visits
According to Race and Ethnicity
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., the lower the household income, the more likely the individual was to have gone *without* a preventive dental care visit (Figure 3.55), though the difference between groups was not always significant. For Alabama residents in this age group, the proportions who had gone without a preventive dental care visit, according to household income, were as follows: 30 percent of those with household incomes from 0-99 percent of the FPL, 23 percent of those with household incomes from 100-199 percent of the FPL, 21 percent of those with household incomes from 200-399 percent of the FPL, and 13 percent of those with household incomes at or above 400 percent of the FPL.

Figure 3.55. No Preventive Dental Care Visits
According to Household Income
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



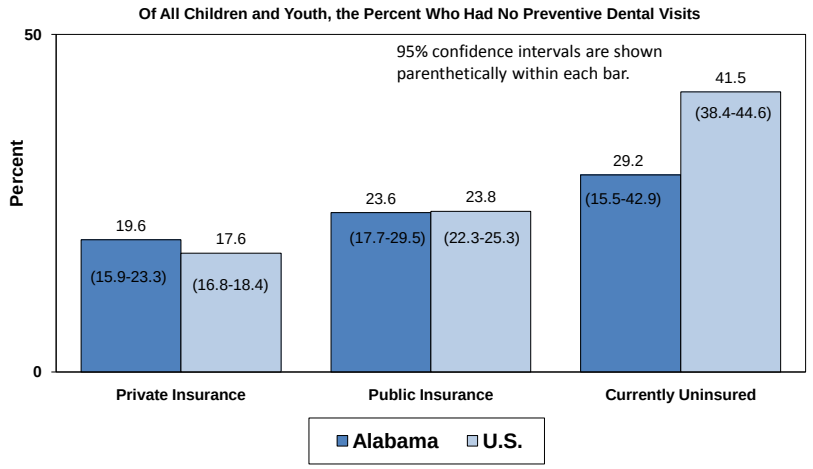
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Abbreviations: FPL = federal poverty level

In both Alabama and the U.S., publicly insured children and uninsured children were more likely to have gone without a preventive dental care visit than their privately insured counterparts were (Figure 3.56). In 2007, the proportions of Alabama children and youth who had gone without a preventive dental care visit were as follows, according to the type or absence of insurance: 29 percent of the uninsured group, 24 percent of the publicly insured (Medicaid or CHIP) group, and 20 percent of the privately insured group.

In Alabama, nearly half of the 1-5 year-old children had gone without a preventive dental care visit in the preceding 12 months. For older children and youth, about one in ten had gone without a preventive dental care visit in the preceding 12 months. Latino and Black, non-Latino children and youth were more likely to have gone without a preventive dental care visit than their White, non-Latino counterparts. The lower the household income, the more likely the child/youth was to have gone without a preventive dental care visit. Publicly insured and uninsured children and youth were more likely to have gone without a preventive dental care visit than their privately insured counterparts.

Figure 3.56. No Preventive Dental Care Visits
According to Health Insurance Coverage
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

The likelihood that a child had gone without a preventive dental care visit did not vary according to rural versus urban residence, either in Alabama or the U.S.

Other Indicators Concerning Access to Dental Care

For several years, Family Health Services has had the following SPM, which has been retained for the 2011-2015 needs assessment cycle: *Of children and youth enrolled in Alabama Medicaid's Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, the percentage who received any dental service in the reporting year*. The rationale for and trends in this measure are discussed in the *MCH 2009 Report/2011 Application* (under SPM #2, which is how this SPM was numbered in the 2006-2010 needs assessment cycle). The status of this indicator has notably improved in recent years: from 36 percent in FY 2005 to 45 percent in FY 2009.

As well, HSC #07 pertains to dental care: *The percent of EPSDT-eligible children aged 6-9 years who have received any dental services during the year*. This indicator has increased dramatically over the years: from 19 percent in FY 1998, to 50 percent in FY 2004, to 62 percent in 2009.

Further, NPM #09 pertains to dental care: *Percent of third grade children who have received protective sealants on at least one permanent molar tooth*. The most recent available estimate for this indicator is for 2007: when an estimated 28 percent of Alabama third-grade children had received protective dental sealants on at last one permanent molar tooth. Methods underlying this estimate are described in the *MCH 2009 Report/2011 Application*.

Health Status: Children and Youth

The 2007 NSCH provides a wealth of information concerning the health status of children and youth. By querying the NSCH web site, Family Health Services has reviewed three indicators of health status: 1) overall health status, 2) condition of teeth, and 3) obesity. For each indicator, findings were reviewed according to five characteristics: age, race and ethnicity, household income, insurance status, and urban versus rural residence. Unless stated otherwise, all findings concerning the health status of children and

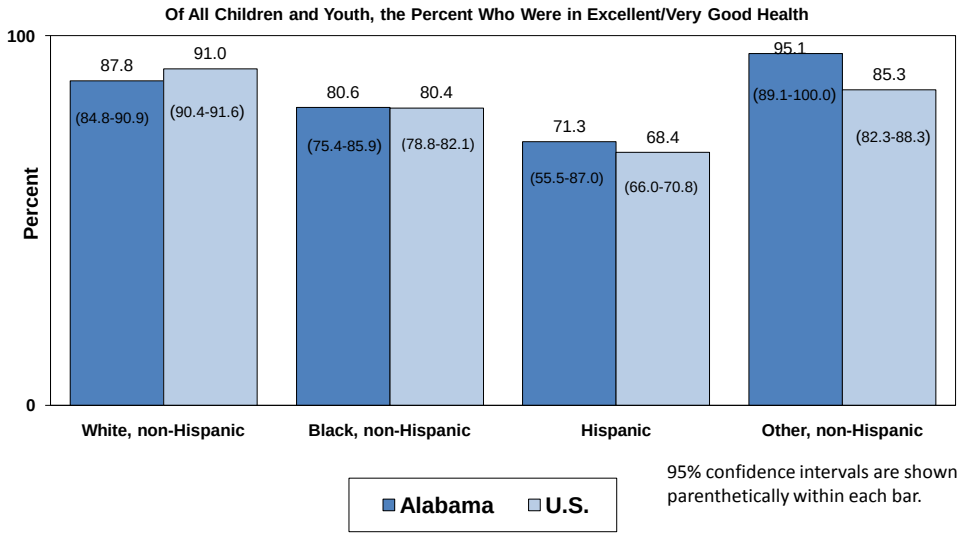
youth are based on review of the 2007 NSCH. Also, unless stated otherwise, the findings pertain to 0-17 year-old children and youth. As stated previously, findings from the NSCH are based on the respondent's report. Again, for NSCH data, we consider differences between two subgroups to be statistically significant if their 95 percent confidence intervals do not overlap. However, the following discussion focuses on patterns, rather than on whether differences were statistically significant.

Overall Health Status

Per the 2007 NSCH, among 0-17 year-old Alabama residents, 84.6 percent were in excellent or very good health, 12.5 percent in good health, and 2.9 percent in fair or poor health. None of these estimates differed significantly from corresponding estimates for the U.S. Within the State, the number of surveyed children who were in fair or poor health was too small to compare subgroups. Therefore, the following review focuses on the percentage of children who were in excellent or very good health. The prevalence of being in excellent or very good health was reviewed according to the previously stated five characteristics. In no subgroup did Alabama differ significantly from the U.S. on this indicator.

According to race and ethnicity, among 0-17 year-old Alabama residents, the following percentages of the specified populations were in excellent or very good health: 88 percent of White non-Latinos, 81 percent of Black non-Latinos, 95 percent of Other non-Latinos, and 71 percent of Latinos (Figure 3.57). The Black non-Latino versus White non-Latino gap was notable in both Alabama and the U.S. Further, in both Alabama and the U.S., Latino children and youth were least likely to be in excellent or very good health.

Figure 3.57. Excellent/Very Good Health
According to Race and Ethnicity
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007

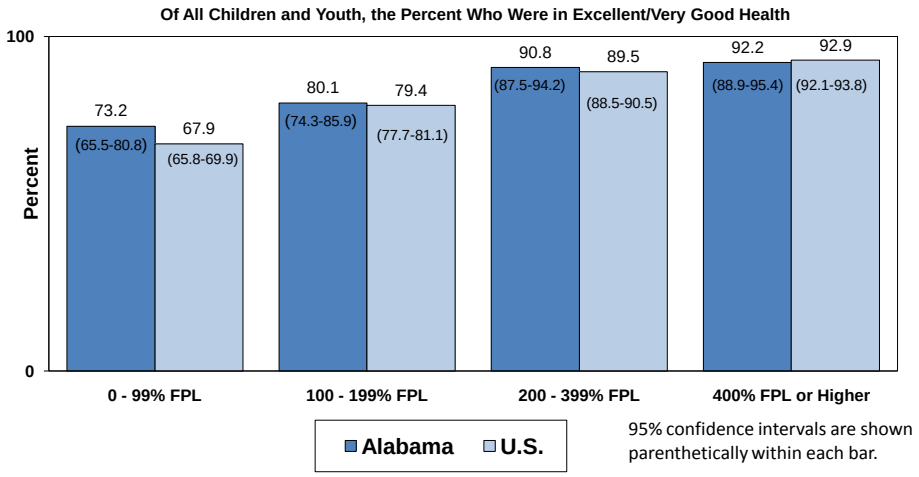


Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., the lower the household income, the less likely the child was to be in excellent or very good health (Figure 3.58). In Alabama, according to household income, the following percentages of children and youth were in excellent or very good health: 73 percent of those with household incomes less than 100 percent of the FPL, 80 percent of those with household incomes from

100-199 percent of the FPL, 91 percent of those with household incomes from 200-399 percent of the FPL, and 92 percent of those with household incomes that were 400 percent or more of the FPL. To recap, overall health varied notably according to household income, and 80 percent or fewer of children and youth with household incomes below 200 percent of the FPL were in excellent or very good overall health.

Figure 3.58. Excellent/Very Good Health
According to Household Income
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



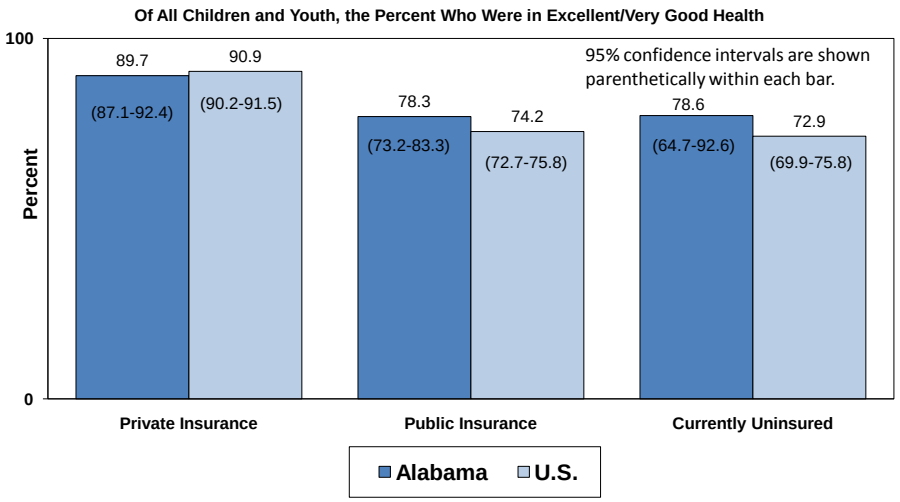
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Abbreviations: FPL = federal poverty level

In both Alabama and the U.S., privately insured children were more likely to be in excellent or very good health than publicly insured children or uninsured children were (Figure 3.59). In Alabama, according to insurance status, the following percentages of children and youth were in excellent or very good health: 90 percent of the privately insured, 78 percent of the publicly insured, and 79% of the uninsured. To recap, in Alabama, about 80 percent or less of uninsured or publicly insured children were in excellent or very good health.

Among the racial/ethnic groups studied, Latino children and youth were least likely to be in excellent or very good health. Only about seven out of ten Latino children and youth were in excellent or very good health. As well, the Black non-Latino versus White non-Latino gap was notable. About eight out of ten Black, non-Latino children and youth, versus about nine out of ten of White, non-Latino children and youth, were in excellent or very good health. Also, the lower the household income, the less likely the child/youth was to be in excellent or very good health. Health status varied according to source of insurance as well, with privately insured children and youth being in better health. For publicly insured and insured children in Alabama, about eight out of ten were in excellent or very good health.

Figure 3.59. Excellent/Very Good Health
According to Health Insurance Coverage
0-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Within Alabama, subgroups respectively defined by age and by rural versus urban residence did not notably differ from one another with respect to being in excellent or very good overall health.

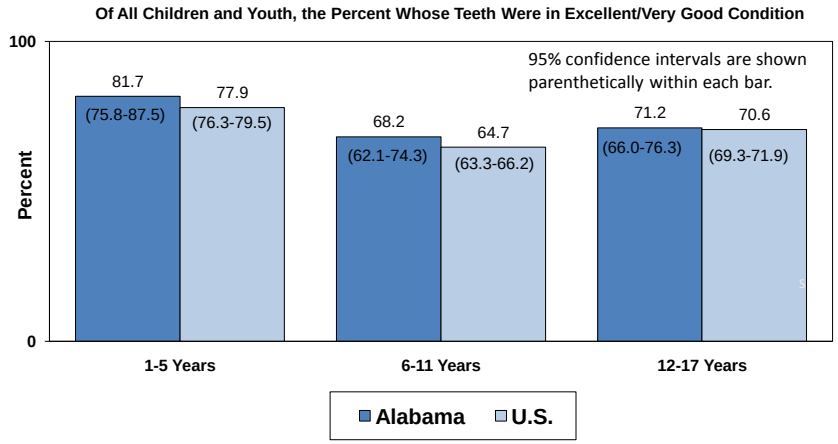
Condition of Teeth

All discussion of the condition of teeth pertains to 1-17 year-old children and youth.

Per the 2007 NSCH, among 1-17 year-old Alabama residents, the condition of the teeth was excellent or very good in 73.2 percent of children, good in 20.4 percent of children, and fair or poor in 6.4 percent of children. None of these estimates differed significantly from corresponding estimates for the U.S. The prevalence of having excellent or very good dental health was reviewed according to the previously stated five characteristics. For this indicator, in no subgroup did Alabama differ significantly from the U.S.

In both Alabama and the U.S., compared to younger and older children, 6-11 year-olds were less likely to have excellent or very good dental health (Figure 3.60). In Alabama, according to age, the following percentages had excellent or very good dental health: 82 percent of 1-5 year-olds, 68 percent of 6-11 year-olds, and 71 percent of 12-17 year-olds.

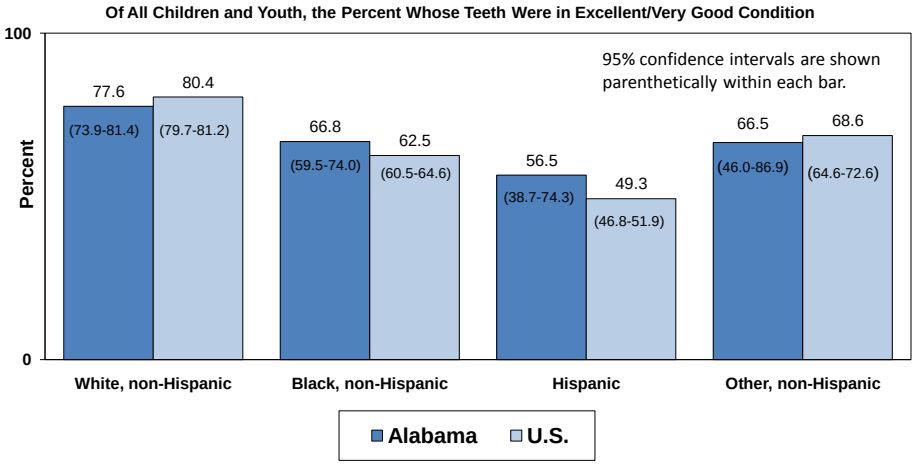
Figure 3.60. Teeth in Excellent/Very Good Condition
According to Age of Child
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Among children and youth in both Alabama and the U.S., White non-Latinos were more likely to have excellent or very good dental health than the other three race/ethnicity groups depicted were (Figure 3.61). In Alabama, 78 percent of White non-Latinos, 67 percent of Black non-Latinos, 66.5 percent of Other non-Latinos, and 56.5 percent of Latinos had excellent or very good dental health.

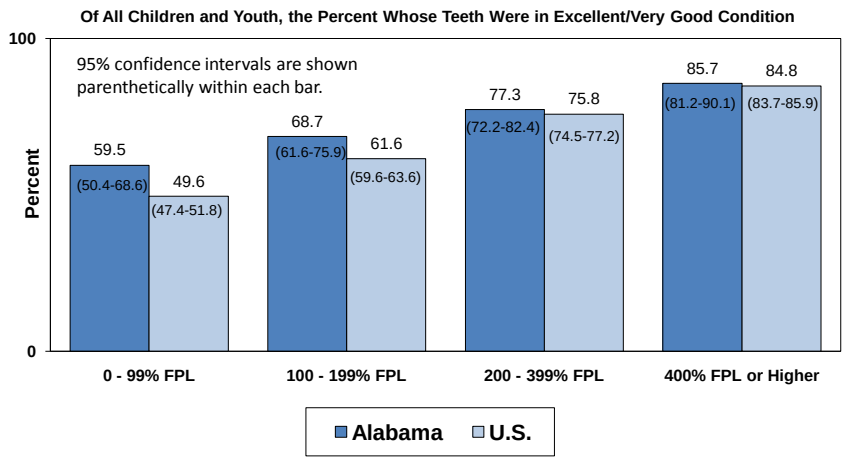
Figure 3.61. Teeth in Excellent/Very Good Condition
According to Race and Ethnicity
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

In both Alabama and the U.S., the lower the household income, the less likely the child was to have excellent or very good dental health (Figure 3.62). In Alabama, according to household income, the following percentages of children and youth had excellent or very good dental health: 59.5 percent of those with incomes less than 100 percent of the FPL, 69 percent of those with incomes from 100-199 percent of the FPL, 77 percent of those with incomes from 200-399 percent of the FPL, and 86 percent of those with incomes that were 400 percent or more of the FPL. To reiterate, dental health varied notably according to household income, and fewer than 75 percent of children and youth with household incomes below 200 percent of the FPL had excellent or very good dental health.

Figure 3.62. Teeth in Excellent/Very Good Condition
According to Household Income
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007

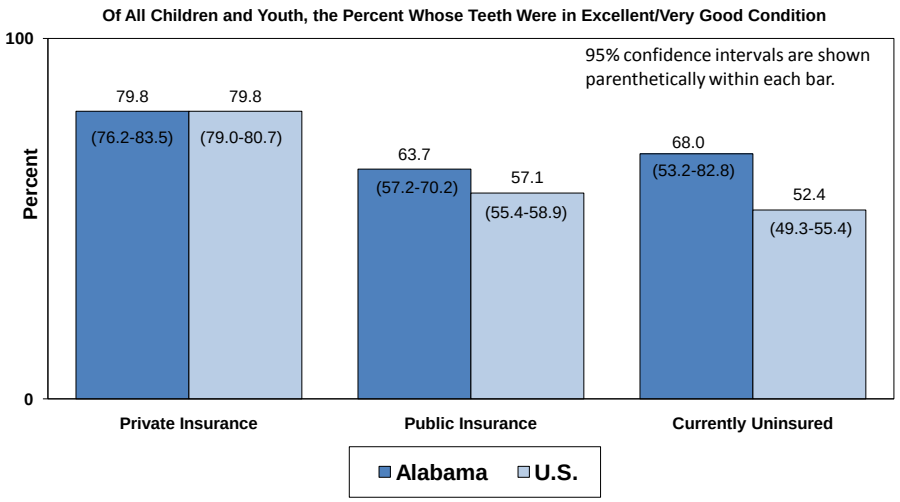


Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Abbreviations: FPL = federal poverty level

In both Alabama and the U.S., privately insured children were more likely to have excellent or very good dental health than publicly insured children or uninsured children were (Figure 3.63). In Alabama, according to insurance status, the following percentages of children and youth had excellent or very good dental health: 80 percent of privately insured children, 64 percent of publicly insured children, and 68 percent of uninsured children. To recap, in Alabama, fewer than 70 percent of uninsured or publicly insured children had excellent or very good dental health.

Figure 3.63. Teeth in Excellent/Very Good Condition
According to Health Insurance Coverage
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



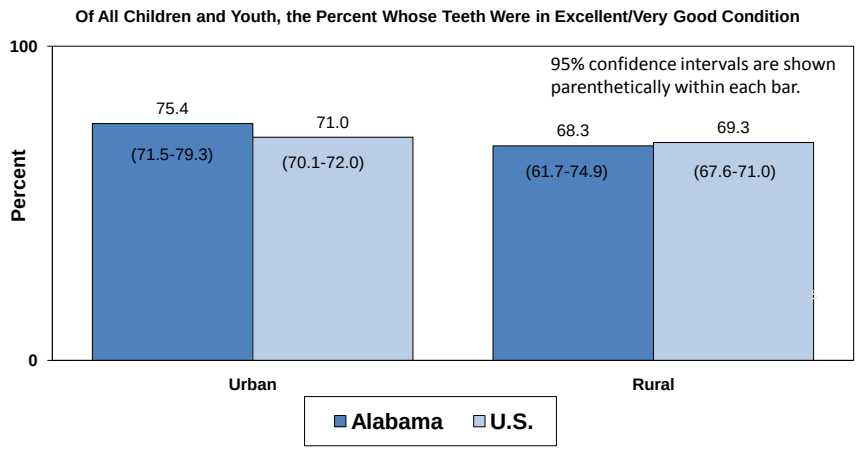
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 14, 2010 from www.nschdata.org

Statistically speaking, the prevalence of excellent or very good dental health did not differ significantly according to urban versus rural residence, in the U.S. or in Alabama. In Alabama, however, rural residents were notably (though *not* significantly) less likely to have excellent or very good dental health. Specifically, in Alabama, 68 percent of rural children and youth, versus 75 percent of urban children and youth, had excellent or very good dental health (Figure 3.64).

With respect to the other end of the dental health spectrum, 13.4 percent (95% CI: 6.5% - 20.2%) of Alabama children and youth with household incomes from 0-99% of the FPL had *fair or poor* dental health (not shown in figures).

Compared to younger and older children and youth, 6-11 year-olds were less likely to have excellent or very good dental health. White, non-Latino children and youth were more likely to have excellent or very good dental health than the other racial/ethnic groups studied. The higher the household income, the more likely the child was to have excellent or very good dental health. Privately insured children and youth were more likely to have excellent or very good dental health than their publicly insured or uninsured counterparts.

Figure 3.64. Teeth in Excellent/Very Good Condition
According to Urban Versus Rural Location
1-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved June 15, 2010 from www.nschdata.org

Note: The Rural Urban Commuting Area taxonomy is derived from the relationships between cities and towns as measured by work commuting flows.

Weight Status of 10-17 Year-Olds

Concerning weight status, our review has focused on obesity in 10-17 year-old youth, according to the 2007 NSCH, since the weight distribution for this age group is readily accessible on the NSCH web site.

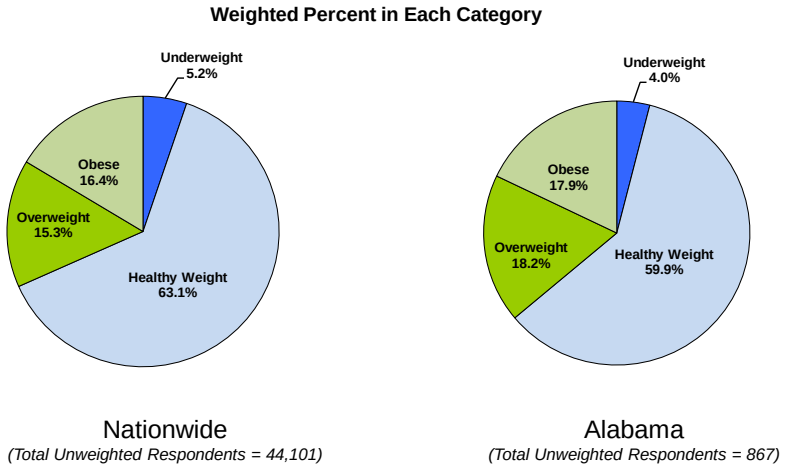
Discussion of obesity focuses on 10-17 year-old youth and is based on year 2007 NSCH findings, which are according to the report of the person being interviewed.

The weight distribution of 10-17 year-old Alabama residents and their national counterparts in 2007 is depicted in Figure 3.65. As shown there, 18 percent of Alabama residents in this age group were overweight (body mass index, or BMI, in the 85th to 94th percentile), and 18 percent of them were obese (BMI at or above the 95th percentile). As also shown, 10-17 year-old Alabama residents were slightly more likely to be overweight or obese than their national counterparts. These differences were not statistically significant, however.

Subsequent discussion here focuses on obesity in 10-17 year-old youth. As was true for previous discussion of findings from NSCH, this discussion focuses on patterns rather than on statistical significance.

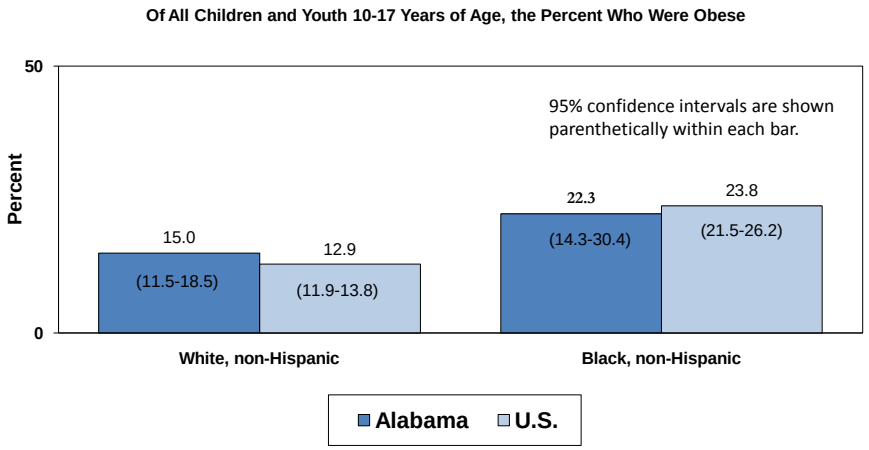
In Alabama and the U.S., Black, non-Latino youth were more likely to be obese than White, non-Latino youth were (Figure 3.66). In Alabama in 2007, 22 percent of Black, non-Latino youth, versus 15 percent of White, non-Latino youth, were obese.

Figure 3.65. Weight Status: Four Categories
10-17 Year Old Children and Youth, Alabama and the U .S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved August 21, 2009 from www.nschdata.org

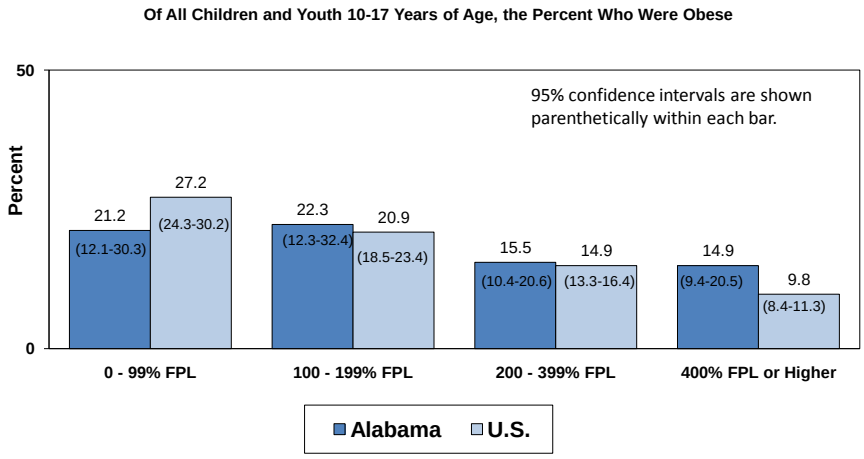
Figure 3.66. Weight Status: Obese
According to Race/Ethnicity
10-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved August 21, 2009 from www.nschdata.org

In the U.S., the lower the household income, the more likely the youth was to be obese (Figure 3.67). This U.S. pattern did not precisely hold in Alabama. However, in Alabama, youth whose household income was less than 200 percent of the FPL were more likely to be obese than youth with a higher household income. In Alabama in 2007, the following percentages of 10-17 year-old youth were obese, according to household income: 21 percent of those with incomes below 100 percent of the FPL, 22 percent of those with incomes from 100-199 percent of the FPL, 15.5 percent of those with incomes from 200-399 percent of the FPL, and 15 percent of those with incomes at 400 percent of the FPL or higher.

Figure 3.67. Weight Status: Obese
According to Household Income
10-17 Year-Old Children and Youth, Alabama and the U.S., 2007



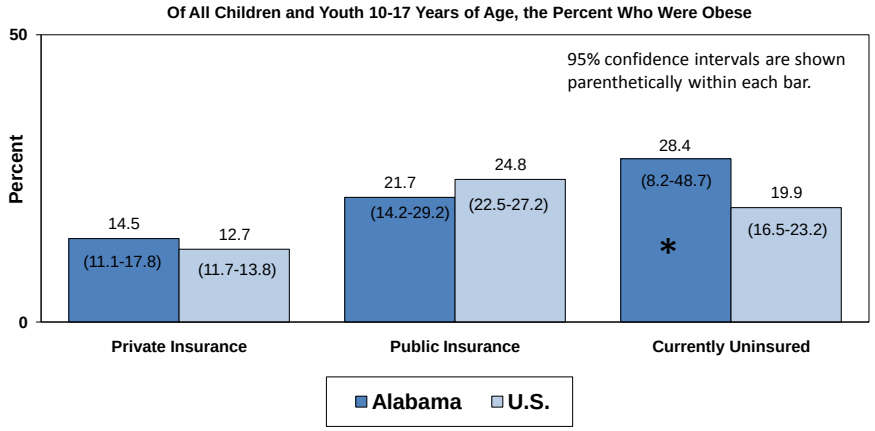
Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved August 24, 2009 from www.nschdata.org

Abbreviations: FPL = federal poverty level

In both Alabama and the U.S., publicly insured and uninsured youth were more likely to be obese than privately insured youth were (Figure 3.68). (In Alabama, the uninsured group was too small to meet standards for reliability or precision.) In Alabama in 2007, the following percentages of 10-17 year-old youth were obese, according to insurance status: 14.5 percent of privately insured youth, 22 percent of publicly insured youth, and 28 percent of uninsured youth (with the latter estimate being extremely imprecise).

Black, non-Latino youth were more likely to be obese than White, non-Latino youth. Youth whose household income was less than 200 percent of the FPL were more likely to be obese than those with higher household incomes. Publicly insured and uninsured youth were more likely to be obese than privately insured youth.

Figure 3.68. Weight Status: Obese
According to Health Insurance Coverage
10-17 Year-Old Children and Youth, Alabama and the U.S., 2007



Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health web site. Retrieved August 24, 2009 from www.nschdata.org

*Sample size was too small to meet standards for reliability or precision.

The prevalence of obesity in 10-17 year-old youth did not notably vary according to rural versus urban residence, in either Alabama or the U.S.

Other Indicators Concerning Health Status of Children and Youth

In accordance with Federal requirements, the *MCH 2009 Report/2011 Application* includes several indicators concerning health status. Discussion of some of these indicators follows.

Asthma in Preschool Children

The indicator concerning asthma is *HSC #01: The rate of children hospitalized for asthma (ICD-9 Codes 493.0-493.9) per 10,000 children less than 5 years of age.*

Making estimates for this indicator is problematic because the State does not have a representative, centralized hospital discharge database. However, for several years, Blue Cross and Blue Shield of Alabama (Alabama Blue Cross Blue Shield) and Alabama Medicaid have each provided numbers for estimating the asthma hospitalization rate in 0-4 year-old children in their respective plans. Methodological issues concerning our estimates for this indicator are detailed in the *MCH 2009 Report/2011 Application*. These issues include changes in the data systems operated by Alabama Blue Cross Blue Shield and Alabama Medicaid, which may mean that findings for 2006 and earlier years are not comparable to data for later years. Our best estimates for the asthma hospitalization rate in 0-4 year-old Alabama residents in recent years are as follows: 62.2 per 10,000 children in 2007, 53.8 per 10,000 children in 2008, and 43.8 per 10,000 children in 2009. Though this rate declined in 2008 and again in 2009, we cannot be certain that the lower rates will continue.

Chlamydia in 15-19 Year-Old Females

The indicator concerning chlamydia in young females is *HSI #05A: The rate per 1,000 women aged 15-19 years with a reported case of chlamydia.*

Reported as the number of cases of chlamydia per 1,000 females in the specified age group, from 2005-2009, the estimated chlamydia case rate among 15-19 year-old Alabama females has ranged from 38.1 cases per 1,000 in 2005 to 51.7 cases per 1,000 in 2006, with a median of 46.7 cases per 1,000 in 2007 and 2009. As detailed in the *MCH 2009 Report/2011 Application*, ascertainment bias (augmented testing) may have partly accounted for the spike in 2006.

Nonfatal Injuries in Children and Youth

Three federally required indicators in the *MCH 2009 Report/2011 Application* concern nonfatal injuries in children and youth. These indicators are:

- *HSI #04A: The rate per 100,000 of all nonfatal injuries among children aged 14 years and younger.*
- *HSI #04B: The rate per 100,000 of nonfatal injuries due to motor vehicle crashes among children aged 14 years and younger.*
- *HSI #04C: The rate per 100,000 of nonfatal injuries due to motor vehicle crashes among youth aged 15 through 24 years.*

In the absence of a statewide hospital discharge database, Family Health Services has no Alabama database from which to estimate the above indicators. Obtaining comparable numbers concerning nonfatal injuries from Alabama Blue Cross Blue Shield and Alabama Medicaid has not proven feasible. Therefore, to meet Federal reporting requirements, we use very indirect methods (using data from another state) to provide estimates for the preceding indicators. (These methods are detailed in the *MCH 2009 Report/2011 Application*.) Because the estimates made for these indicators are not based on Alabama data concerning nonfatal injuries, these indicators have not been used in our Needs Assessment process.

ADPH houses the Alabama Trauma Registry, which is located in the Department's Office of Emergency Management Services and Trauma. A major focus of this registry has been legislatively mandated data on head and spinal cord injuries. Several years ago, when Family Health Services inquired as to whether the Alabama Trauma Registry could provide data for estimating the nonfatal injury rates specified in HSIs #04A, #04B, and #04C, the database was not sufficiently developed to provide numerators for those indicators. By FY 2011, we will again contact registry staff to determine if the database could provide the necessary numerators.

Mortality: Children and Youth

Children and Youth: Trends in All-Cause Mortality According to Age

This discussion of trends overlaps with discussion of HSIs #8A and #8B, which pertain to deaths of children and youth, in the *MCH 2009 Report/2011 Application*. Our analysis of trends in the all-cause death rate in children and youth focused on three age groups: 1-4 years, 5-14 years, and 15-24 years.

Data issues involved in analyzing these trends are detailed in the aforesaid report/application and in Technical Note #13. Basically, these issues involve: 1) potential undercounting of the number of Latino residents, which would cause overestimation of death rates and 2) apparent underreporting of deaths of Alabama residents that occur outside of the State. As detailed in Technical Note #13, for 2006-2008, we report "adjusted" death rates that seek to account for apparent incomplete reporting of deaths of Alabama residents that occur outside of the State. The purpose of these adjusted rates is to avoid overestimating declines in death rates or underestimating increases in death rates. For the sake of consistency, we report the adjusted rate in all cases, even though the adjusted rate may not be preferable in a few cases. The rationale for our choice to use adjusted rates is detailed in Technical Note

#13. In the occasional instance where the adjusted rate may distort analysis of trends, we report the unadjusted rate parenthetically or in a footnote. To recap, unless stated otherwise, all 2006-2008 death rates reported here for children and youth have been adjusted, based on assumptions about missing data on out-of-state events.

The following discussion of trends in death rates pertains to Alabama residents. The surveillance period is 2000-2008, and rates are reported as the number of deaths per 100,000 population.

All-Cause Mortality: 1-4 Year-Olds

Trends in the all-cause death rate for 1-4 year-old Alabama residents are depicted in Figure 3.69: for the total group and according to race and ethnicity. Highlights follow.

The death rate in this age group ranged from 30.7 deaths per 100,000 in 2007 to 41.2 deaths per 100,000 in 2001, with a median of 41.0 deaths per 100,000 in 2006. Successive 3-year rates were as follows: 41.7 per 100,000 in 2000-02, 40.1 per 100,000 in 2003-05, and 36.0 per 100,000 in 2006-08. Comparing 3-year rates, the rate for 2006-08 was 13.8 percent lower than in 2000-02 and 10.3 percent lower than in 2003-05. The annual number of deaths ranged from 75 in 2007 to 106 in 2004.

Technical Note #13: Data Issues When Analyzing Mortality Trends in Children and Youth

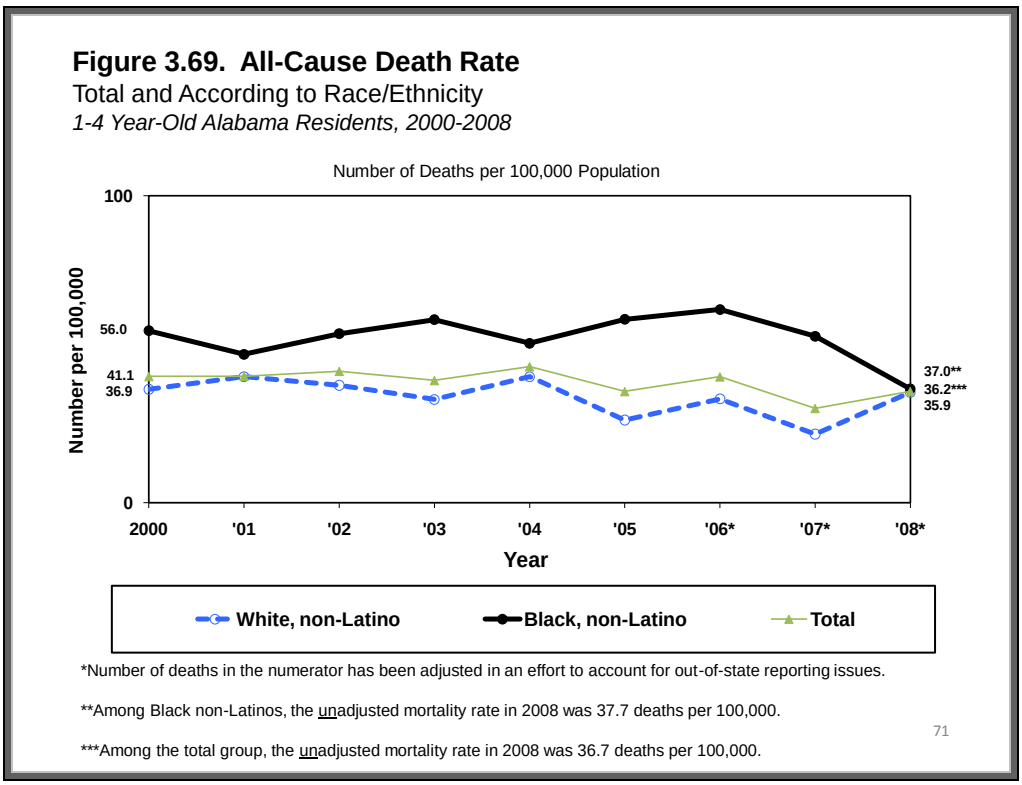
Denominators for estimating death rates were derived from a detailed U.S. Census Bureau spreadsheet of population estimates. One data problem is uncertainty about the denominator for Latinos. **Substantial undercounting of Latinos, if present, would cause overestimation of death rates for Latinos.** Further, should the number of Latinos in the population be increasingly undercounted over time, death rates for Latinos would be increasingly overestimated over time.

Another data problem is apparent underreporting of deaths of Alabama residents that occurred outside of the State in recent years, which could distort trends by causing ascertainment bias. In other words, incomplete reporting of deaths of Alabama residents that occurred outside of the State would lead to slight underestimation of recent death rates, slight underestimation of any increases over time, and slight overestimation of any declines over time.

As detailed in the narrative for HSC #8A, in the *MCH 2009 Report/2011 Application*, we used three different approaches to counting deaths. Of these three approaches, for ***all-cause deaths*** we chose the approach that adjusts the number of all-cause deaths for 2006-2008, by making assumptions about the number of unreported deaths of Alabama residents that occurred outside of the State in those years. The underlying assumption is this: that, in the group of interest, the mean annual number of out-of-state deaths of Alabama residents in 2006-08 was the same as the mean annual number of out-of-state deaths of Alabama residents in 2000-05. For example, if the mean annual number of out-of-state deaths of Alabama residents in the group of interest was ten in 2000-05 and five in 2006-08, we added the difference (five deaths) to the number of deaths reported for 2006, for 2007, and for 2008. The purpose of this assumption was to avoid underestimating the death rate in 2006-08, by failing to account for incomplete reporting of deaths of Alabama residents that occurred in another State. In most cases this approach seemed preferable, in that the adjusted rate was slightly higher than the unadjusted rate.

For Latinos, the adjusted rates for 2006-2008 were lower than the unadjusted rates: because Latinos experienced a few more deaths in 2006-08 than in 2003-05. However, since we conjecture that reported death rates for Latinos (whether adjusted or unadjusted) in 2006-08 are likely to be spuriously high, we consider the slightly lower, adjusted rates for Latinos in those years to be appropriate. In the occasional instance where the 2006-08 adjusted death rate for non-Latinos is not preferable and may distort analysis of trends, we report the adjusted rate to assure consistency in methods, but also report the unadjusted rate parenthetically or in footnotes.

To recap, unless stated otherwise, all 2006-2008 *all-cause* death rates reported here for children and youth have been adjusted, based on assumptions about missing data. Cause-specific death rates have *not* been adjusted for out-of-state reporting issues, however, because such adjustment of cause-specific deaths was not deemed feasible.



Among White, non-Latino 1-4 year-olds, the death rate ranged from 22.3 deaths per 100,000 in 2007 to 41.0 deaths per 100,000 in 2001 and 2004, with a median of 35.9 deaths per 100,000 in 2008. Successive 3-year rates were as follows: 38.7 per 100,000 in 2000-02, 33.8 per 100,000 in 2003-05, and 30.7 per 100,000 in 2006-08. The rate for 2006-08 was 20.6 percent lower than in 2000-02 and 9.2 percent lower than in 2003-05. The annual number of deaths ranged from 33 in 2007 to 61 in 2001 and 2004.

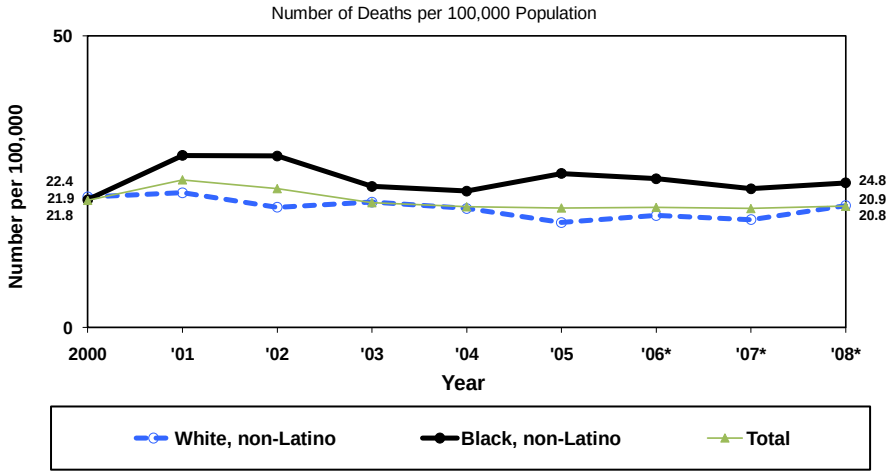
Among Black, non-Latino 1-4 year-olds, the death rate ranged from 37.0 deaths per 100,000 in 2008 to 62.9 deaths per 100,000 in 2006, with a median of 55.0 deaths per 100,000 in 2002. Successive 3-year rates were as follows: 53.1 per 100,000 in 2000-02, 57.1 per 100,000 in 2003-05, and 51.2 per 100,000 in 2006-08. The rate for 2006-08 was 3.6 percent lower than in 2000-02 and 10.4 percent lower than in 2003-05. The annual number of deaths ranged from 27 in 2008 to 44 in 2006.

Death rates for Latino 1-4 year-olds are not discussed here, due to very small numbers of deaths in the statistical sense (during 2000-2008: from 0-5 deaths per year).

All-Cause Mortality: 5-14 Year-Olds

Trends in the all-cause death rate for 5-14 year-old Alabama residents are depicted in Figure 3.70: for the total group and according to race and ethnicity. Highlights follow.

Figure 3.70. All-Cause Death Rate
Total and According to Race/Ethnicity
5-14 Year-Old Alabama Residents, 2000-2008



*Number of deaths in the numerator has been adjusted in an effort to account for out-of-state reporting issues.

The death rate in this age group ranged from 20.4 deaths per 100,000 in 2007 to 25.3 deaths per 100,000 in 2001, with a median of 20.8 deaths per 100,000 in 2008. Successive 3-year rates were as follows: 23.6 per 100,000 in 2000-02, 20.9 per 100,000 in 2003-05, and 20.6 per 100,000 in 2006-08. Comparing 3-year rates, the rate for 2006-08 was 12.8 percent lower than in 2000-02 and 1.4 percent lower than in 2003-05. The annual number of deaths ranged from 126 in 2005 and 2007 to 159 in 2001.

Among White, non-Latino 5-14 year-olds, the death rate ranged from 18.0 deaths per 100,000 in 2005 to 23.1 deaths per 100,000 in 2001, with a median of 20.6 deaths per 100,000 in 2002. Successive 3-year rates were as follows: 22.1 per 100,000 in 2000-02, 20.0 per 100,000 in 2003-05, and 19.5 per 100,000 in 2006-08. The rate for 2006-08 was 11.4 percent lower than in 2000-02 and 2.2 percent lower than in 2003-05. The annual number of deaths ranged from 69 in 2005 to 92 in 2001.

Except for one of the groups studied, comparing 2006-08 to 2003-05, the all-cause death rate declined at least slightly in 1-14 year-old Alabama residents. The exception was the 5-14 year-old, Black, non-Latino group, where the death rate remained unchanged in 2006-08 relative to 2003-05.

Among Black, non-Latino 5-14 year-olds, the death rate ranged from 21.9 deaths per 100,000 in 2000 to 29.5 deaths per 100,000 in 2001, with a median of 24.8 deaths per 100,000 in 2008. Successive 3-year rates were as follows: 26.9 per 100,000 in 2000-02, 24.7 per 100,000 in 2003-05, and 24.7 per 100,000 in 2006-08. The rate for 2006-08 was 8.3 percent lower than in 2000-02 and the same as in 2003-05. The annual number of deaths ranged from 45 in 2000 and 2007 to 60 in 2001.

Death rates for Latino 5-14 year-olds are not discussed here, due to very small numbers of deaths in the statistical sense (during 2000-2008: from 0-8 deaths per year).

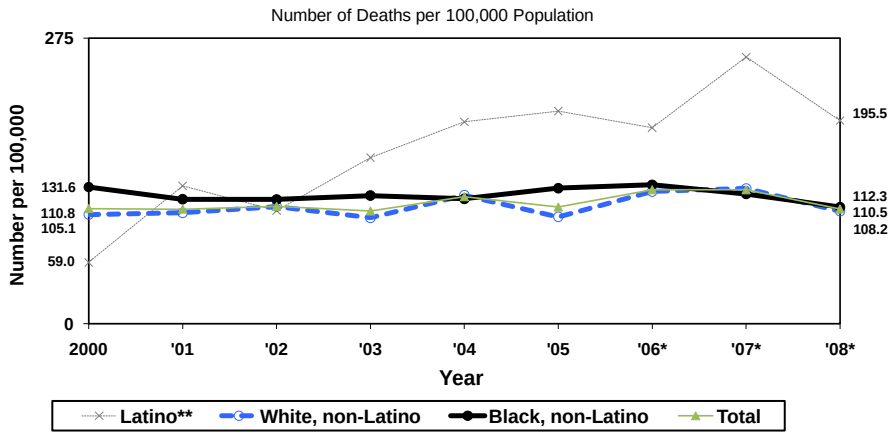
All-Cause Mortality: 15-24 Year-Olds

Trends in the all-cause death rate for 15-24 year-old Alabama residents are depicted in Figure 3.71: for the total group and according to race and ethnicity. Highlights follow.

Figure 3.71. All-Cause Death Rate

Total and According to Race and Ethnicity

15-24 Year-Old Alabama Residents, 2000-2008



*Number of deaths in the numerator has been adjusted in an effort to account for out-of-state reporting issues.

The apparent increase in the mortality rate among 15-24 year-old Latinos may be at least partly a reporting artifact. **Substantial undercounting of Latinos, if present, would cause overestimation of mortality rates in Latinos. Further, should the number of Latinos in the population be increasingly undercounted over time, mortality rates for Latinos would be increasingly overestimated over time. The annual number of deaths of 15-24 year-old Latinos ranged from 10 in 2000 to 44 in 2007 (or, if unadjusted, 45 in 2007).

The death rate in this age group ranged from 108.5 deaths per 100,000 in 2003 to 129.0 deaths per 100,000 in 2006 and 2007, with a median of 112.3 deaths per 100,000 in 2005. Successive 3-year rates were as follows: 111.4 per 100,000 in 2000-02, 114.4 per 100,000 in 2003-05, and 122.8 per 100,000 in 2006-08. Comparing 3-year rates, the rate for 2006-08 was 10.3 percent *higher* than in 2000-02 and 7.4 percent *higher* than in 2003-05. The annual number of deaths ranged from 695 in 2003 to 832 in 2007.

Among White, non-Latino 15-24 year-olds, the death rate ranged from 102.1 deaths per 100,000 in 2003 to 130.2 deaths per 100,000 in 2007, with a median of 108.2 deaths per 100,000 in 2008. Successive 3-year rates were as follows: 108.2 per 100,000 in 2000-02, 109.6 per 100,000 in 2003-05, and 121.9 per 100,000 in 2006-08. The rate for 2006-08 was 12.6 percent *higher* than in 2000-02 and 11.2 percent *higher* than in 2003-05. The annual number of deaths ranged from 413 in 2003 and 2005 to 523 in 2007.

For 15-24 year-old Alabama residents, the all-cause death rate increased in the total group and in White non-Latinos. Reported trends in the death rate for Latinos are difficult to interpret, due to uncertainty about the number of Latinos in the population.

Among Black, non-Latino 15-24 year-olds, the death rate ranged from 112.3 deaths per 100,000 in 2008 to 133.8 deaths per 100,000 in 2006, with a median of 123.4 deaths per 100,000 in 2003. Successive 3-year rates, which did not notably change, were as follows: 123.7 per 100,000 in 2000-02, 124.8 per 100,000 in 2003-05, and 123.6 per 100,000 in 2006-08. The annual number of deaths ranged from 238 in 2008 to 280 in 2006.

Among Latino 15-24 year-olds, the death rate ranged from 59.0 deaths per 100,000 in 2000 to 256.7 deaths per 100,000 in 2007, with a median of 188.7 deaths per 100,000 in 2006. Successive 3-year rates were as follows: 99.9 per 100,000 in 2000-02, 186.2 per 100,000 in 2003-05, and 213.7 per 100,000 in 2006-08. The rate for 2006-08 was 2.1 times as high as in 2000-02 and 14.8 percent higher than in 2003-05. (However, as previously stated, potential undercounting of Latinos may distort trends in death rates for this population.) The annual number of deaths ranged from 10 in 2000 to 44 in 2007. (The unadjusted number of deaths in 2007 was 45.)

Children and Youth: Age- and Race-Specific Differences in Mortality

As is evident from Figures 3.69 through 3.71 and corresponding discussion, mortality of children and youth varied by age. Of the three age groups discussed, mortality was lowest in the 5-14 year-old group and by far the highest in the 15-24 year-old group.

Of the three age groups of children and youth studied, mortality was by far the highest in the 15-24 year-old group. The racial mortality gap declined with age, virtually disappearing in the 15-24 year-old group.

Among children and youth, the racial mortality gap declined with age, virtually disappearing in the 15-24 year-old group. The following estimates are for the 3-year period, 2006-08. Among 1-4 year-old children in those years, Black non-Latinos were about 1.7 times more likely to die than White non-Latinos were (51.2 versus 30.7 deaths per 100,000). Among 5-14 year-old children and youth in those years, Black non-Latinos were about 1.3 times more likely to die than White non-Latinos were (24.7 versus 19.5 deaths per 100,000). Among 15-24 year-old youth in those years, Black non-Latinos experienced about the same death rate as White non-Latinos (123.6 versus 121.9 deaths per 100,000).

Children and Youth: Age-Specific Causes of Death

Adjusting cause-specific numbers of deaths for out-of-state reporting issues was not deemed feasible. Therefore, any ***cause-specific*** numbers and rates reported here have ***not*** been adjusted for out-of-state reporting issues. We conjecture that cause-specific numbers and death rates reported here may be slightly lower than the actual numbers and rates for certain populations and causes: for 15-24 year-olds, especially for motor vehicle crash-related deaths of 20-24 year-olds, and most especially for motor-vehicle crash-related deaths of White, non-Latino 20-24 year-olds.

Distribution of deaths according to cause is shown in Figures 3.72 through 3.75 for, respectively, four age groups: 1-4 year-olds, 5-14 year-olds, 15-19 year-olds, and 20-24 year-olds. These figures and corresponding discussion pertain to deaths of Alabama residents in the specified age group. Highlights from these figures follow:

- Injuries due to motor vehicle crashes were collectively the leading cause of death in the three older age groups and the second leading cause of death in the youngest age group.
- "Remaining external causes"[a] were collectively the leading cause of death in 1-4 year-olds, the second-leading cause in 5-14 year-olds, and the third-leading cause in 15-19 year-olds.
- Homicide and legal intervention were collectively the second-leading cause of death in 15-19 year-olds and 20-24 year-olds. In the other two age groups they were among the top five causes of death.

[a] This causal group excludes any specific external causes shown in the pie chart for the age group of interest.

- Congenital anomalies and malignancies respectively composed the third- and fifth-leading causes of death in 1-4 year-olds.

- In 5-14 year-olds, the third- and fourth-leading causes of death were, respectively, malignancies and heart disease.

- In 15-19 year-olds, suicide and drug/alcohol use each emerged as one of the five leading causes of death. In 20-24 year-olds, they were among the four leading causes of death.

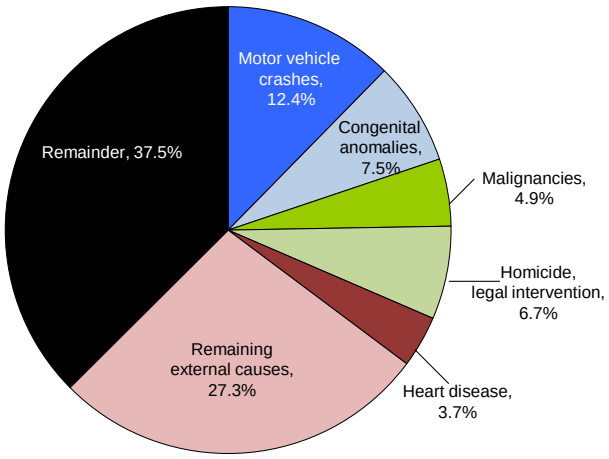
External causes were a major cause of death in each age group studied.

In 15-19 year-olds, suicide and drug/alcohol use each emerged as one of the five leading causes of death. In 20-24 year-olds, they were among the four leading causes of death.

External causes (combining motor vehicle crashes, homicide/legal intervention, suicide, drug- and alcohol-related incidents, and remaining external causes) were a major cause of death in each age group studied. That is, as stated in footnotes to Figures 3.72 through 3.75, external causes collectively caused 46 percent of the deaths of 1-4 year-olds, 51 percent of the deaths of 5-14 year-olds, 81 percent of the deaths of 15-19 year-olds, and 77 percent of the deaths of 20-24 year-olds.

Figure 3.72. Causes of Death
1-4 Year-Old Alabama Residents, 2006-08

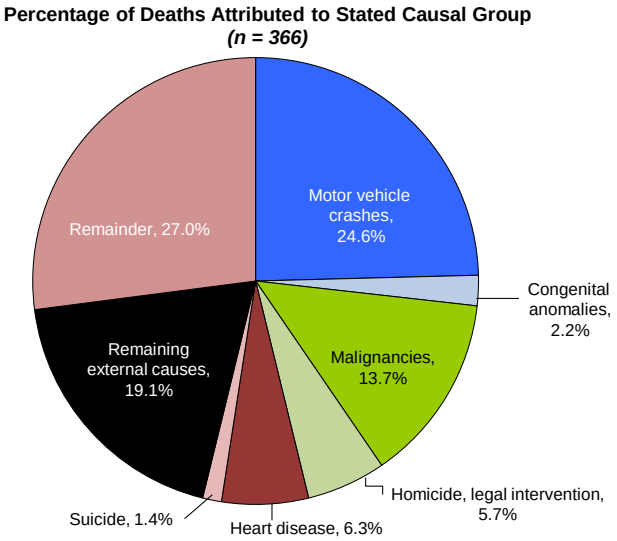
Percentage of Deaths Attributed to Stated Causal Group
(n = 267)



Note: Combining motor vehicle crashes, homicide/legal intervention, and remaining external causes, nearly half (46%) of the deaths of 1-4 year-olds were due to external injuries.

Figure 3.73. Causes of Death

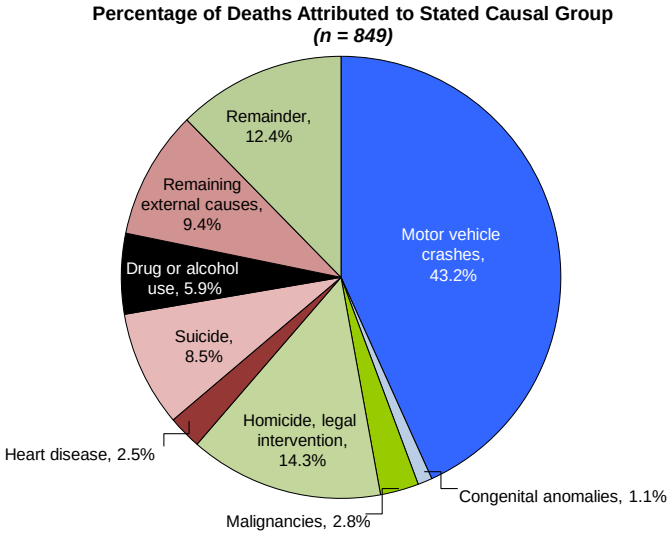
5-14 Year-Old Alabama Residents, 2006-08



Note: Combining motor vehicle crashes, homicide/legal intervention, suicide, and remaining external causes, about half (51%) of the deaths of 5-14 year-olds were due to external causes.

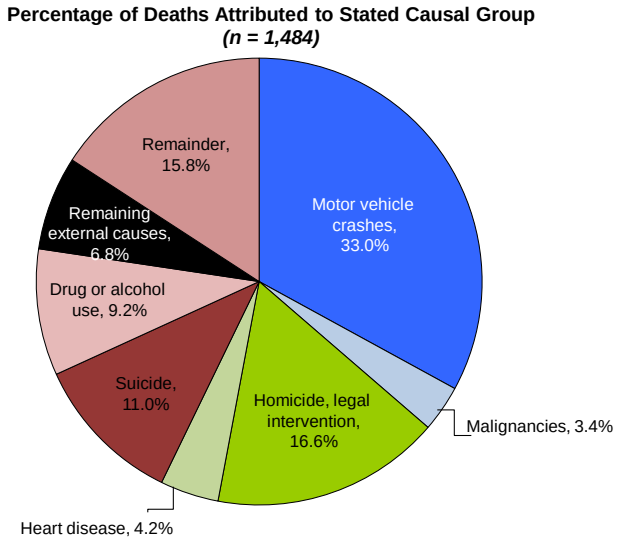
Figure 3.74. Causes of Death

15-19 Year-Old Alabama Residents, 2006-08



Note: Combining motor vehicle crashes, homicide/legal intervention, suicide, drug- and alcohol-related incidents, and remaining external causes, 81% of the deaths of 15-19 year-olds were due to external causes.

Figure 3.75. Causes of Death
20-24 Year-Old Alabama Residents, 2006-08



Note: Combining motor vehicle crashes, homicide/legal intervention, suicide, drug- and alcohol-related incidents, and remaining external causes, 77% of the deaths of 20-24 year-olds were due to external causes.

15-24 Year-Old Youth: Trends in Certain Cause-Specific Death rates

As previously discussed, all-cause death rates increased in 15-24 year-old White, non-Latino Alabama residents. Though not reported here, earlier analyses of unadjusted death rates were performed, comparing 2006-08 to 2003-05, for the total group, for White non-Latinos, and for Black non-Latinos. These earlier analyses, which analyzed 15-19 year-olds and 20-24 year-olds separately, showed that the main increase in all-cause mortality was among White, non-Latino, 20-24 year-olds. To reiterate, the earlier analyses were for a 6-year period, comparing 2006-08 to 2003-05. Per these analyses, the all-cause death rate did not increase in 15-19 year-olds: either for the total group, for White non-Latinos, or for Black non-Latinos. However, comparing 2006-08 to 2003-05, the all-cause death rate increased by 15 percent in the total group of 20-24 year-old Alabama residents: from 135.8 deaths per 100,000 to 155.5 deaths per 100,000. Virtually all of the increase in this age group was in White non-Latinos, for whom the all-cause death rate increased by 15 percent: from 127.7 deaths per 100,000 in 2003-05 to 150.5 deaths per 100,000 in 2006-08. The corresponding rate among Black non-Latinos increased very little: from 154.9 per 100,000 in 2003-05 to 158.6 per 100,000 in 2006-08.

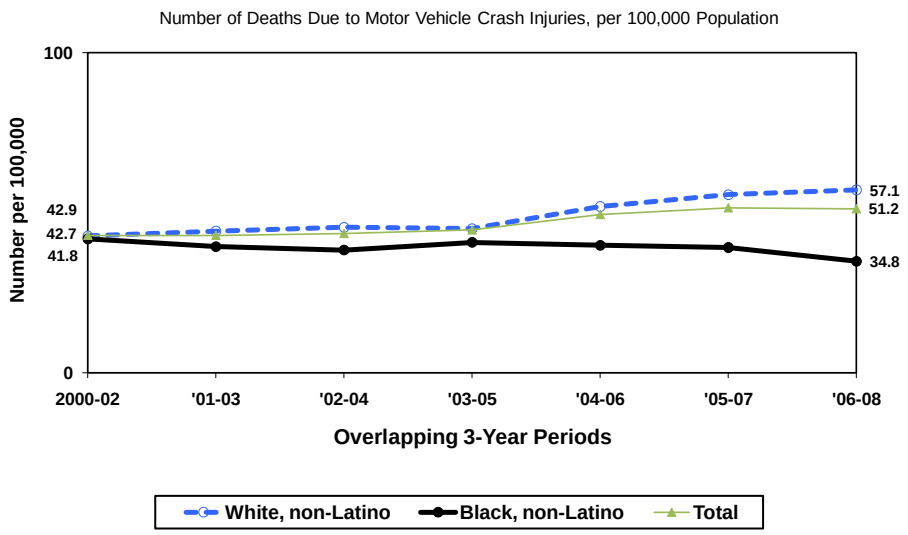
As part of the earlier analyses, four cause-specific death rates in 2006-08 were compared to corresponding rates in 2003-05, for 15-19 year-olds and 20-24 year-olds. These four causal groups were: motor vehicle crash injuries, homicide and legal intervention, suicide, and use of drugs or alcohol. Based on these earlier analyses, certain indicators in certain subgroups were selected for expanded analyses (from 2000-2008). Key findings from these expanded analyses are depicted in Figures 3.76 through 3.79, which depict overlapping 3-year rates. Discussion of these figures follows. All findings pertain to unadjusted mortality in Alabama residents in the specified subgroup from 2000-2008.

Motor Vehicle Crash Death Rate

Figure 3.76 depicts the motor vehicle crash death rate in 20-24 year-old Alabama residents for overlapping 3-year periods from 2000-02 through 2006-08: for the total population and according to race and ethnicity. As shown there, the motor vehicle crash death rate increased in the total population and, specifically, in White non-Latinos. In White non-Latinos, this death rate increased in each of the last three overlapping 3-year periods. In consecutive (non-overlapping) 3-year periods, this rate was as follows for White non-Latinos: 42.7 deaths per 100,000 in 2000-02, 45.0 deaths per 100,000 in 2003-05, and 57.1 deaths per 100,000 in 2006-08. In 2006-08, this rate was 1.3 times as high as in either 2000-02 or 2003-05. For Black non-Latinos, this rate was lower in 2006-08 than in 2000-02 or 2003-05. In 2008, the numbers of motor vehicle crash deaths were as follows: 144 for the total population, 98 for White non-Latinos, and 32 for Black non-Latinos.

In 20-24 year-old Alabama residents, the motor vehicle crash death rate increased in the total population and in White non-Latinos. In 2008 in Alabama, 144 deaths of 20-24 year-olds were due to motor vehicle crash injuries.

Figure 3.76. Motor Vehicle Crash Injury Death Rate
Total and According to Race/Ethnicity
20-24 Year-Old Alabama Residents, 2000-2008



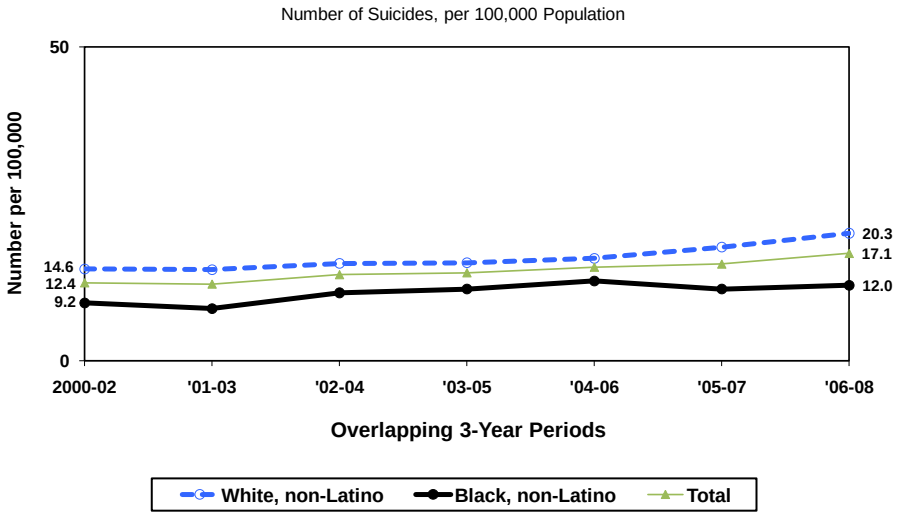
Suicide Rate

Figure 3.77 depicts the suicide rate in 20-24 year-old Alabama residents for overlapping periods from 2000-02 through 2006-08: for the total population and according to race and ethnicity. As shown there, for the total population, the suicide rate increased in each of the last five overlapping 3-year periods. For the total population of 20-24 year-olds, suicide rates in three consecutive 3-year periods were as follows: 12.4 deaths per 100,000 in 2000-02, 14.0 deaths per 100,000 in 2003-05, and 17.1 deaths

In 20-24 year-old Alabama residents, the suicide rate increased in the total population, White non-Latinos, and Black non-Latinos. For the total population, from 2000-2008, the number of suicides averaged 43 per year.

per 100,000 in 2006-08. The rate in 2006-08 was 1.4 times as high as in 2000-02 and 1.2 times as high as in 2003-05. The annual number of suicide deaths in 20-24 year-olds ranged from 37 in 2002 to 57 in 2007, with a median of 43 in 2000 and 2003.

Figure 3.77. Suicide Rate
Total and According to Race/Ethnicity
20-24 Year-Old Alabama Residents, 2000-2008



For 20-24 year-old White, non-Latino Alabama residents, the suicide rate increased in each of the last five overlapping 3-year periods. Rates in consecutive 3-year periods were as follows: 14.6 deaths per 100,000 in 2000-02, 15.6 deaths per 100,000 in 2003-05, and 20.3 deaths per 100,000 in 2006-08. The rate in 2006-08 was 1.4 times as high as in 2000-02 and 1.3 times as high as in 2003-05. The annual number of suicide deaths in 20-24 year-old White, non-Latinos ranged from 26 in 2002 and 2005 to 45 in 2007, with a median of 34 in 2003.

For 20-24 year-old Black, non-Latino Alabama residents, the suicide rate increased in four of the last five overlapping 3-year periods. Rates in three consecutive 3-year periods were as follows: 9.2 deaths per 100,000 in 2000-02, 11.4 deaths per 100,000 in 2003-05, and 12.0 deaths per 100,000 in 2006-08. The rate in 2006-08 was 1.3 times as high as in 2000-02 and 5 percent higher than in 2003-05. The annual number of suicide deaths in 20-24 year-old Black, non-Latinos ranged from 7 in 2001 to 15 in 2004, with a median of 11 in 2007.

Drug- and Alcohol-Related Death Rate: White, Non-Latino Males

Most of the drug- and alcohol-related deaths among Alabama adolescents occur among White, non-Latino males. Specifically, from 2000-2008, 84.5 percent (93/110) of all such deaths of 15-19 year-old Alabama residents occurred among White, non-Latino males; and 72 percent (213/296) of all such deaths of 20-24 year-old Alabama residents occurred among White, non-Latino males.

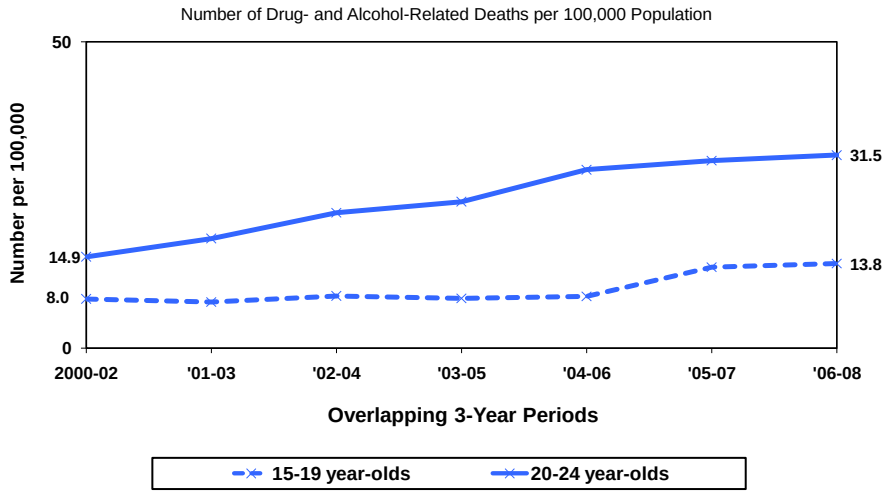
The drug-related component of this death rate includes drug-related causes that were not attributed to alcohol. This component is similar to a broad category that the National Center for Health Statistics (NCHS) designates as a "drug-induced" cause, but also includes exposure to certain chemicals that are

not included in NCHS's drug-induced causal category. The added chemicals, such as solvents, are not intended for internal use. The alcohol-related component of this death rate is identical to the NCHS category that includes alcohol-induced deaths. As used here, the drug- and alcohol-related death rate does not include deaths due to crashes that occurred because the driver had been using alcohol or drugs.

In White, non-Latino Alabama males, the drug- and alcohol-related death rate increased in 15-19 year-olds and 20-24 year-olds. In these groups, from 2000-2008, the number of such deaths averaged 10 deaths per year for 15-19 year-olds and 23 deaths per year for 20-24 year-olds.

Figure 3.78 depicts the drug- and alcohol-related death rate in two age groups of White, non-Latino males living in Alabama: 15-19 year-olds and 20-24 year-olds. As shown in Figure 3.78, this death rate increased in both age groups.

Figure 3.78. Drug- and Alcohol-Related Death Rate
White, Non-Latino Males
15-19 and 20-24 Year-Old Alabama Residents, 2000-2008



In 15-19 year-old White, non-Latino males living in Alabama, drug- and alcohol-related death rates were as follows in consecutive 3-year periods: 8.0 deaths per 100,000 in 2000-02, 8.1 deaths per 100,000 in 2003-05, and 13.8 deaths per 100,000 in 2006-08. In 2006-08, this death rate was 1.7 times as high as in either 2000-02 or 2003-05. Inspection of overlapping 3-year rates shows that this rate increased in four of the last five overlapping 3-year periods. The annual number of drug- and alcohol-related deaths among 15-19 year-old White, non-Latino males ranged from 4 deaths in 2001 to 22 deaths in 2007, with a median of 10 deaths in 2002 and 2006.

In 20-24 year-old White, non-Latino males living in Alabama, drug- and alcohol-related death rates were as follows in consecutive 3-year periods: 14.9 deaths per 100,000 in 2000-02, 23.9 deaths per 100,000 in 2003-05, and 31.5 deaths per 100,000 in 2006-08. In 2006-08, this death rate was 2.1 times as high as in 2000-02 and 1.3 times as high as in 2003-05. Inspection of overlapping 3-year rates shows that this rate increased in each of the last six overlapping 3-year periods. The annual number of drug- and

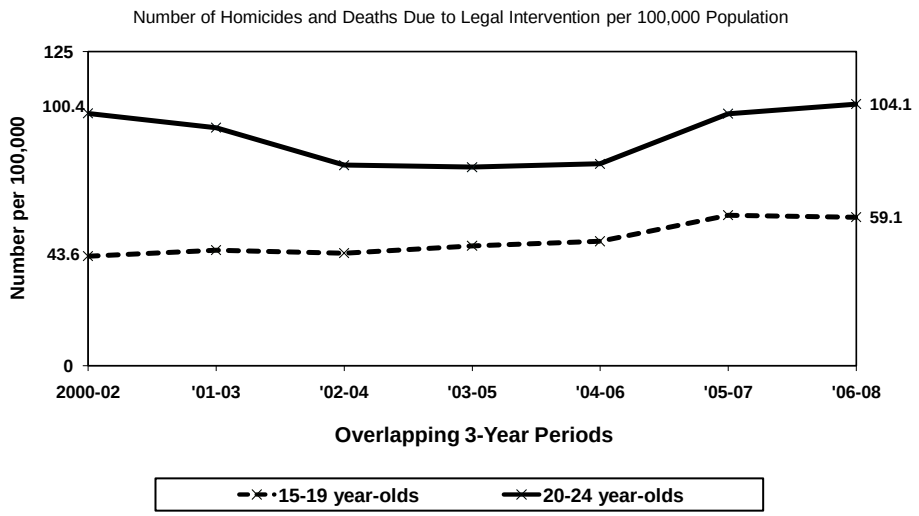
alcohol-related deaths among 20-24 year-old, White, non-Latino males ranged from 9 deaths in 2000 to 35 deaths in 2007, with a median of 23 deaths in 2005.

Homicide/Legal Intervention Death Rate: Black, Non-Latino Males

Most of the homicide/legal intervention deaths among Alabama adolescents occur among Black, non-Latino males. Specifically, from 2000-2008, 70 percent (235/338) of all such deaths of 15-19 year-old Alabama residents occurred among Black, non-Latino males; and 64 percent (411/646) of all such deaths of 20-24 year-old Alabama residents occurred among Black, non-Latino males.

Figure 3.79 depicts the homicide/legal intervention death rate in two age groups of Black, non-Latino males living in Alabama: 15-19 year-olds and 20-24 year-olds. As shown in Figure 3.79, the homicide/legal intervention death rate recently increased in both age groups.

Figure 3.79. Homicide and Legal-Intervention Death Rate
Black, Non-Latino Males
15-19 and 20-24 Year-Old Alabama Residents, 2000-2008



In 15-19 year-old Black, non-Latino males living in Alabama, homicide/legal intervention death rates were as follows in consecutive 3-year periods: 43.6 deaths per 100,000 in 2000-02, 47.7 deaths per 100,000 in 2003-05, and 59.1 deaths per 100,000 in 2006-08. In 2006-08, this death rate was 1.35 times as high as in 2000-02 and 1.2 times as high as in 2003-05. Inspection of overlapping 3-year rates shows that this rate increased in three of the last four overlapping 3-year periods, but declined slightly in 2006-08. The annual number of homicide/legal intervention deaths among 15-19 year-old, Black, non-Latino males ranged from 20 deaths in 2004 to 38 deaths in 2007, with a median of 26 deaths in 2005 and 2008.

In Black, non-Latino Alabama males, the homicide/legal intervention death rate increased in 15-19 year-olds and 20-24 year-olds. In these groups, from 2000-2008, the number of such deaths averaged 26 deaths per year for 15-19 year-olds and 46 deaths per year for 20-24 year-olds.

In 20-24 year-old Black, non-Latino males living in Alabama, homicide/legal intervention death rates were as follows in consecutive 3-year periods: 100.4 deaths per 100,000 in 2000-02, 79.0 deaths per 100,000 in 2003-05, and 104.1 deaths per 100,000 in 2006-08. In 2006-08, this death rate was just 4 percent higher than in 2000-02, but was 1.3 times as high as in 2003-05. Inspection of overlapping 3-year rates shows that, from the 2000-02 baseline, this rate declined through 2003-05, but then increased in subsequent overlapping 3-year periods, especially in 2005-07. The annual number of homicide/legal intervention deaths among 20-24 year-old Black, non-Latino males ranged from 27 deaths in 2004 to 57 deaths in 2007, with a median of 46 deaths in 2001 and 2008.

Youth Risk Behavior Survey

As previously stated, due to the absence of weighted year 2007 YRBSS data for Alabama, the YRBSS was not a major component of the 2009-10 Needs Assessment. However, certain findings from the year 2009 YRBSS data that were posted on CDC's web site in June 2010 were reviewed. Highlights of this review follow. All findings pertain to Alabama public high school students in 2009, and were obtained by querying the YRBSS web site (http://www.cdc.gov/healthyyouth/yrbs/) on June 17, 2010. In the findings that follow, Alabama was considered to differ significantly from the U.S. for an indicator if 95 percent confidence intervals did not overlap.

Use of Certain Drugs by Male Public High School Students

Per the 2009 YRBSS, the following percentages of male public high school students in Alabama had engaged in the specified behavior:

- 14.1 percent had sniffed glue, breathed the contents of aerosol spray cans, or inhaled paints or sprays to get high one or more times during their life.
- 7.5 percent had taken steroid pills or shots without a doctor's prescription one or more times during their life. This prevalence was significantly higher than the corresponding prevalence in the U.S.
- 5.4 percent had used heroin one or more times during their life.
- 4.4 percent had used a needle to inject an illegal drug into their body one or more times during their life.

Selected Other Risk-Related Behaviors in Public High School Students

Also per the 2009 YRBSS, the following percentages of Alabama public high school students had engaged in the specified behavior:

- 56.6 percent had engaged in sexual intercourse during their lifetime. This prevalence was significantly higher than the corresponding prevalence in the U.S.
- 32.0 percent had ridden one or more times during the preceding 30 days in a vehicle driven by someone who had been drinking alcohol.
- 20.8 percent had smoked cigarettes on at least one day during the preceding 30 days.

During the preceding 30 days, about one in three Alabama high school students had ridden in a vehicle driven by someone who had been drinking alcohol.

About one in five Alabama high school students had smoked cigarettes during the preceding 30 days.

- 12.9 percent rarely or never wore a seat belt when riding in a car driven by someone else.

- 16.8 percent had been hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the preceding 12 months. This prevalence was significantly higher than the corresponding prevalence in the U.S.

- 10.4 percent had been threatened or injured with a weapon on school property one or more times during the preceding 12 months.

- During their life time, 11.0 percent had been physically forced to have sexual intercourse when they did not want to. This prevalence was significantly higher than the corresponding prevalence in the U.S.

Other Indicators: Children and Youth

Several indicators pertaining to children and youth that are reported in the *MCH 2009 Report/2011 Application* are not precisely addressed in the preceding discussion. However, the preceding discussion addresses most of the issues that these indicators are intended to track. Examples follow.

NPM #10 and HSI #03B: The rate of deaths caused by motor vehicle crashes among children aged 14 years and younger.
Motor vehicle crash deaths in children and youth were reviewed during the Needs Assessment, but these deaths have been discussed here only for groups that were identified as of particular concern. Specifically, Figure 3.76 depicts the motor vehicle crash injury death rate for 20-24 year-old Alabama residents, for the total group and according to race and ethnicity.

NOM #06: The child death rate per 100,000 children aged 1 through 14.
Figures 3.69 through 3.71 respectively show the all-cause death rate, for the total population and according to race and ethnicity, for the following age groups: 1-4 years, 5-14 years, and 15-24 years.

HSI #03C: The death rate per 100,000 from unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years.
As previously stated, Figure 3.76 depicts the motor vehicle crash injury death rate for 20-24 year-old Alabama residents, for the total group and according to race and ethnicity. As well, though not discussed thus far in this document, the motor vehicle crash injury death rate declined slightly in the total population of 15-19 year-old Alabama residents: from 41.4 deaths per 100,000 in 2003-05 to 37.5 deaths per 100,000 in 2006-08.

HSIs #08a and #08B: Deaths of infants and children 0 through 24 years, enumerated by age subgroup and race, then by age subgroup and ethnicity.
As previously stated, Figures 3.69 through 3.71 respectively show the all-cause death rate, for the total population and according to race and ethnicity, for the following age groups: 1-4 years, 5-14 years, and 15-24 years.

Access to Primary Care: Crosscutting Populations

The web-based surveys conducted by Family Health Services, methods for which are detailed in Section 1, gathered much data about access to health care. The qualitative data gathered from these surveys, which are discussed later, provide a variety of interesting perspectives on access to care. The most

salient information from the quantitative data involves comparison of the healthcare providers' and healthcare consumers' views about access to primary care.

Specifically, both the Healthcare Providers Survey and the Family Survey included a section on medical homes, which was adapted from selected items in the American Academy of Pediatrics' *Medical Home Services* Survey (Periodic Survey of Fellows #44, 2000). This section was about the characteristics of the practice: of the respondent's practice in the Healthcare Providers Survey, and of the practice that was the selected family member's main source of health care in the Family Survey. A caveat is that the two surveys were independent of one another. That is, **Family Survey respondents were not selected from patients of the Healthcare Providers Survey respondents**. Nevertheless, the sometimes discrepant views on the characteristics of practices are intriguing.

For several of the services asked about in the Health Care Providers Survey and the Family Survey, more providers than consumers felt that the service was always or nearly always provided.

Notably discrepant views, for eight indicators, are shown in Table 3.9. These indicators pertain to whether the practice always or nearly always: 1) was accessible by phone 24/7, 2) involved patients or families in decisions about their care, 3) coordinated medical care, 4) saw patients for night or weekend emergencies, 5) incorporated patient's or family's beliefs or requests into the care plan, 6) provided a range of payment options, 7) discussed the need for supportive services, and 8) scheduled time to discuss results of a visit to a specialist. For seven of the eight indicators, proportionately more providers than consumers felt that the service was always or nearly always provided. For example, according to the Healthcare Providers Survey, nearly all (90 percent) of the practices always or nearly always provided phone access 24/7. In contrast, just over half (54 percent) of the Family Survey respondents said that their source of care always or nearly always provided phone access 24/7. For one of the indicators—scheduling time to discuss results of a visit to a specialist—the pattern was reversed. For this indicator, proportionately more consumers than providers said that the service was always or nearly always provided.

Table 3.9. Provision of Certain Services, According to the Healthcare Providers Survey (123 Respondents) and the Family Survey (460 Respondents), Alabama, FY 2009

Respondents' Perceptions About the Percentage of Practices Who Always or Nearly Always Provided the Specified Service		
Service	**Percentage per Healthcare Providers Survey (Providers' Perceptions)**	**Percentage per Family Survey (Consumers' Perceptions)**
Phone access 24/7	90.2%	54.4%
Involvement of patients or families in care decisions	90.2%	47.2%
Coordination of medical care	82.1%	61.7%
Seeing patients for night or weekend emergencies	69.9%	23.0%
Incorporation of patient's or family's beliefs and requests*	57.7%	24.8%
A range of payment options¶	39.0%	11.5%

Respondents' Perceptions About the Percentage of Practices Who Always or Nearly Always Provided the Specified Service		
Service	**Percentage per Healthcare Providers Survey (Providers' Perceptions)**	**Percentage per Family Survey (Consumers' Perceptions)**
Discussion of need for supportive services[T]	33.3%	12.2%
Scheduling of time to discuss results of a visit to a specialist	13.8%	31.5%

Note: The two surveys were independent of one another. That is, Family Survey respondents were not selected from patients of the Healthcare Provider Survey respondents.

*48.5% of families selected "Don't Know" as their response.
[¶]55.0% of families selected "Don't Know" as their response.
[T]34.5% of families selected "Don't Know" as their response.

Qualitative Findings: Family Health Services

Family Health Services obtained qualitative data via 10 focus groups, three web-based surveys, and key informant interviews. The following, extensive discussion of qualitative data obtained by Family Health Services is organized according to the source of the data. These findings cut across all MCH Program populations, though they do not specifically address CYSHCN. At the end of this sub-section, highlights from Family Health's qualitative data are more concisely summarized across the data sources and placed in the context of pertinent quantitative data. (The summary is entitled "Putting Quantitative and Qualitative Data Together: Family Health Services.")

Eight Focus Groups Conducted by Family Health Services

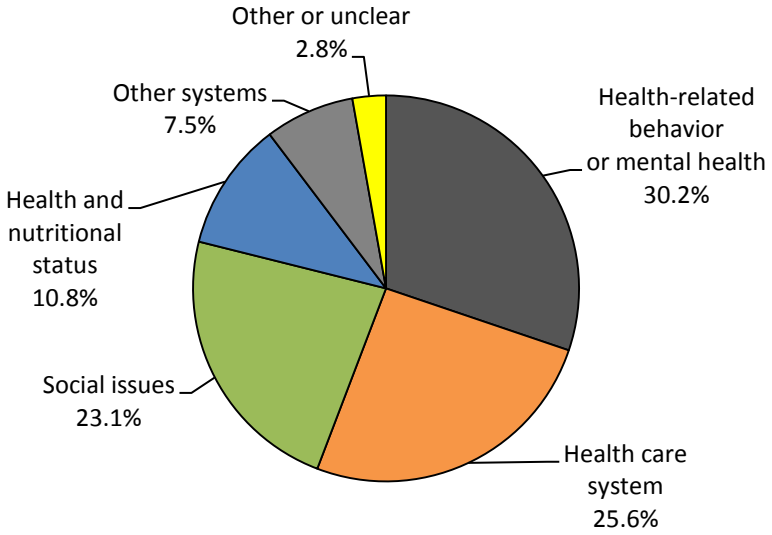
This discussion pertains to the eight focus groups that were conducted in English and coordinated by Family Health Services. Demographic characteristics of the 65 discussants in the eight analyzed community focus groups are described in Section 1. As stated there, transcribed proceedings were reviewed and classified into 2,189 key phrases (remarks or keyword combinations). Each phrase was treated as a unit of observation and classified into one of five main categories (issues) or an "other or unclear" category, one of 73 sub-issues, and numerous facets. The facets included detailed data that left the discussants' perspectives intact, thus providing a way to identify phrases that could be directly quoted or paraphrased to illustrate the concerns expressed. The following information is based on quantitative analysis of key phrases classified in the preceding manner.[a]

To some degree, the nature of the questions asked influenced the percentage of the discussants' remarks that were devoted to particular issues. For example, with the exception of the two adolescent student groups, each facilitator was to ask about obesity and about infant mortality, as well as about certain "core" issues. The question about obesity presumably prompted responses pertaining to health behavior. The manual for the eight focus groups, which includes questions asked, is available upon request.

[a] As well, each phrase was classified according to whether it represented strength or cause for concern and according to the MCH Program population(s) to which it pertained. Findings reported here, however, are not stratified according to strength versus cause for concern or to the population to which the remark pertained.

As shown in Figure 3.80, nearly one-third of the key phrases pertained to health-related behavior or mental health, about one-fourth to the healthcare system, 23 percent to social issues, 11 percent to health and nutritional status, and 7.5 percent to other systems. About three percent of the phrases were either unclear or did not pertain to a major topic of discussion.

Figure 3.80. Classification of Phrases According to Main Issue, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009



(8 groups, 2,189 phrases)

Each of the four leading main issues (health-related behavior or mental health, healthcare system, social issues, and health and nutritional status) was further quantified with respect to the distribution of sub-issues within that issue and the distribution of facets within those sub-issues. Discussion here focuses on two of the main issues: the "healthcare system" issue and the "health-related behavior or mental health" issue.

Eight Focus Groups: The Healthcare System

Figure 3.81 illustrates the distribution of sub-issues and facets within the healthcare system issue, which comprised one-fourth of all phrases. The 560 phrases classified under the healthcare system are further classified into sub-issues, and the sub-issues into facets.

As shown in Figure 3.81, the 560 phrases pertaining to the healthcare system issue were classified as follows:

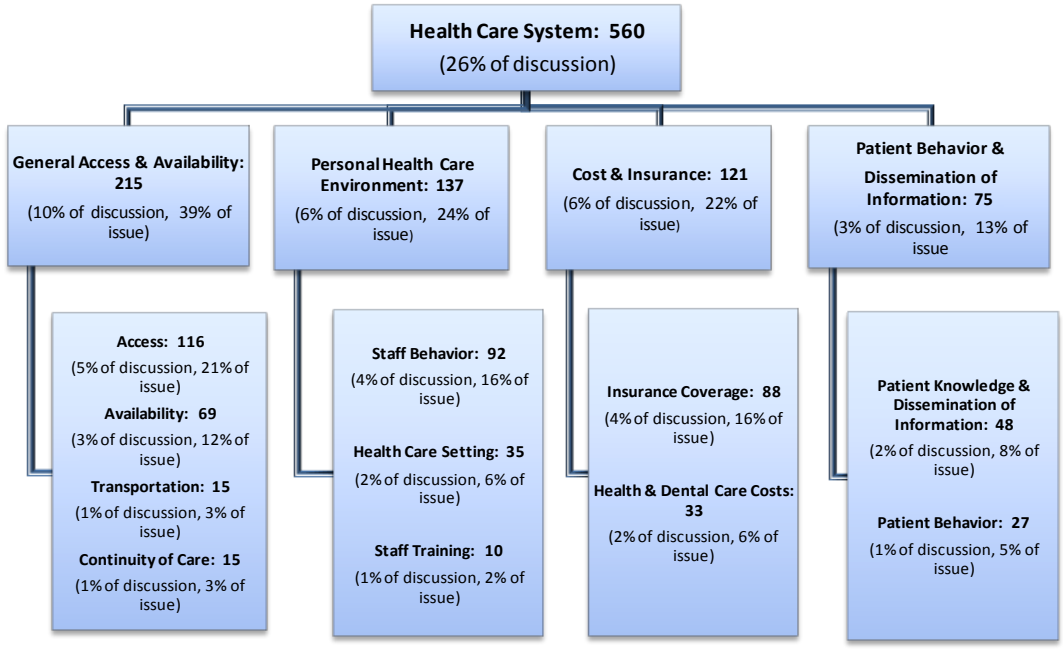
- 216 phrases, or 39 percent of the phrases about the healthcare system, pertained to general access and availability.

- 137 phrases, or 24 percent of the phrases about the healthcare system, pertained to personal healthcare environment, most often including discussion about staff behavior and other issues.

- 121 phrases, or 22 percent of the phrases about the healthcare system, pertained to healthcare costs and health insurance coverage.

- 75 phrases, or 13 percent of the phrases about the healthcare system, pertained to patient behavior and dissemination of information.

Figure 3.81. Classification of Phrases Concerning the Healthcare System, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009



Note: The 2% (n=12) of the phrases concerning the healthcare system that were classified as "Other or Unclear" are not depicted above.

General Access and Availability

As shown in Figure 3.81, for phrases about the healthcare system, the main topic was "general access and availability," which accounted for 39 percent of the discussion on this issue. The 216 phrases pertaining to the general access and availability sub-issue concerned several facets: access, availability, transportation, and continuity of care. In many cases, discussants were concerned about availability of specialty healthcare services (for example, care for childbirth, substance abuse, and mental health).

The following were some of the discussants' remarks pertaining to healthcare availability:

> *"In adult women ages 20-44….say they have had a hysterectomy or they have gotten their tubes tied, well a lot of places are just like the health department, they get no funding; so they will not even give the cancer detection Pap smear anymore if you have had a hysterectomy or your tubes tied."*
>
> *"I guess depending on the degree of care that you want, for some people it's a headache."*
>
> *"Doctors just read the brochure to you like everybody else and then say do you understand and when you say no, they say well you will get to know, let me just finish this."*

"Unfortunately, they have a high need in that area and the psychiatrist [only] comes four times a month, which actually is an increase from once or twice a month."

The incapacity to access healthcare services due to either the lack of available facilities or the location of facilities (free and school clinics, early intervention programs, clinic hours of operation, specialty services treatment) was also a prominent issue among discussants concerning the healthcare system. Other issues that arose among discussants about the healthcare system included transportation or the lack thereof and continuity of care. Remarks included the following:

"…access to care and where it is you are limited to care."

"I think there is a difference in location, kids that are in town, their parents are going to get them to the doctor more often and follow up with things. Kids in the rural area of the county don't get the follow ups you see with the kids in the city because of transportation, cost, and a hundred different reasons."

"A lot of middle age people do not want to take off work for their chronic care visits, so they make appointments, cancel them, and then come up short on medicines."

"A lot of our mental health associations and the organizations that assist with mental health are not in convenient locations, so there are access problems for those who are in that lower income bracket as far as being able to receive those free services that are there."

Personal Healthcare Environment

For phrases classified under the healthcare system category, "personal healthcare environment" was the second main sub-issue, comprising 24 percent of discussion on the issue. This sub-issue involved the patient's view of the healthcare environment when receiving health care in the community: concerning such matters as staff behavior, healthcare setting, and staff training.

Staff Behavior

Several concerns about staff behavior were expressed by discussants. The overall theme of the concerns illustrated problems with patients' inability to trust doctors with their health care, given that most doctors seem in a rush to provide adequate care. Nurses were considered more open and caring, making patients feel more confident and willing to share information with nurses versus doctors in the practice. Also, communication barriers existed where some discussants expressed the need for doctors to use comprehensible vocabulary, which they felt would eliminate doctors having to sugarcoat the facts about the patient's health status. Other issues discussed concerning staff behavior, as perceived by the discussants, were unnecessary tests and procedures and an inflation of Cesarean section rates: with the latter being due to scheduled deliveries based on doctor availability and convenience. Comments included the following:

"…They [doctors] don't have the time to talk to you about everything going on and because of that lack of attention to detail, that a lot of times, things are getting misdiagnosed..."

"I saw the doctor look at his watch and he's ready to leave so I will just say I have a cold, there is nothing else besides the cold, it makes you withdraw information because of the attitude they have."

"I think normally a nurse might be in the room actually longer than the doctor."

"…why did I have to have that test, can somebody please sit down with me for five minutes and explain to me why this is necessary, there just is not that communication between you and your physician."

"But your doctor don't talk about postpartum depression, once you have that baby, they are done with you."

"I think that's a really interesting problem but most of my friends had scheduled deliveries where there was a Cesarean section or they were going to be induced on a certain day…."

Healthcare Setting

Some of the phrases classified as pertaining to personal healthcare environment involved the healthcare setting. Within this facet, concerns included a need for more space and comfortable seating in the clinic due to the wait time to receive care, separate patient waiting areas for well visits and sick visits, more coordination of care through the healthcare system, collaboration with agencies to further promote staff working together, and better patient flow. Remarks included the following:

"Pediatric clinics should have more age-related rooms because some rooms have like Dr. Seuss and Winnie the Pooh."

"I think it's important to them that we truly care about them as people, and not just as a number and I think that makes any provider's office a much more pleasant place when you feel like that they really care about you as a person."

"In the perfect health department, there would be somebody there to assist the patients and their families if they had multiple care needs instead of why you need to go here or here for this, this, and this. They need somebody to coordinate all of that."

Staff Training

The remaining phrases concerning personal care environment pertained to inadequate staff training. Staff were considered to be competent, whether being a nurse practitioner or family physician; however, some discussants felt that universal tools, screening methods, and adequate referral systems should more often be in place, in order to identify developmental delays among infants and children before they enter elementary school:

"Before Public Health used to screen and then it went to private providers [pediatricians]…for whatever reason it is not as in depth as I think it was in Public Health, they are missing the training to really look at that developmental stage and identify where they are or if they are at the right place...instead of waiting until they get into school, when they are 5 or 6 years old and identify, 'Oh!, Johnny's got a problem'."

Cost and Insurance

As further shown in Figure 3.81, 22 percent of the phrases concerning the healthcare system were classified under the sub-issue "cost and insurance."

Discussion about cost and insurance generally pertained to coverage or to barriers to accessing insurance. The phrases classified here typically involved lack of health insurance coverage for families and children. Most of these perceived limitations concerned the ability to obtain public health insurance in a timely manner, inadequate response by staff to requests for services, and insurance ineligibility based on pre-existing conditions. Another facet arising here involved confusion about procedures or services covered by health insurance companies. Remarks included the following:

"They charge you big bills and they don't do anything."

"Well for me personally, with this pregnancy, it took me over two months to get on Medicaid."

"It's easier to get a sexually transmitted disease treated and have it covered under insurance than to get psychotherapy to deal with an issue that has you emotionally troubled, and that to me is wrong and the State's responsibility; it's not just the insurance companies."

"I can't get health insurance because of pre-existing conditions."

Health and dental care costs comprised the remaining discussion under the cost and insurance sub-issue. Many discussants felt that care was available but not affordable. These discussants perceived the healthcare system as being financially straining. They felt that care should be more affordable, in order to keep people from suffering and not receiving adequate health care:

"When you don't have a job and no health insurance, you don't have money to go to the doctor, so you suffer."

"All I know is if you don't pay them, you don't get waited on anymore; seems to be all about money now."

Patient Behavior and Dissemination of Information

As shown in Figure 3.81, 13 percent of the discussion about the healthcare system pertained to the sub-issue "patient behavior and dissemination of information."

One of the facets of this sub-issue was "patient knowledge and dissemination of information." Lack of knowledge about how to promote health and lack of information about health-related programs in the community were mentioned in remarks about health status and, in particular, Alabama's high infant mortality rate. (For most of the focus groups, one of the questions posed by facilitators concerned the State's high infant mortality rate.) Most health-related conditions were attributed to limited resources and the need for teen parenting classes. Suggestions were made to offer outreach screening days in multiple settings (daycare facilities, churches, clinics, college campuses), as a way to reduce the prevalence of diseases and suboptimum health status among populations served by the MCH Program. These suggestions included the following:

"Getting the information out to the people to let them know there is help for your children, but then some people just don't listen."

"If people did know about a free clinic, they would take advantage of it."

"Patient behavior" was another facet of the patient behavior and dissemination of information sub-issue. Topics dominating the discussion about patient behavior included parental involvement and mental health. In the phrases classified here, concerns expressed included problems in the home, lack of parenting skills, and the lack of programs aimed at early identification and intervention for health problems in children.

Eight Focus Groups: Health-Related Behavior and Mental Health

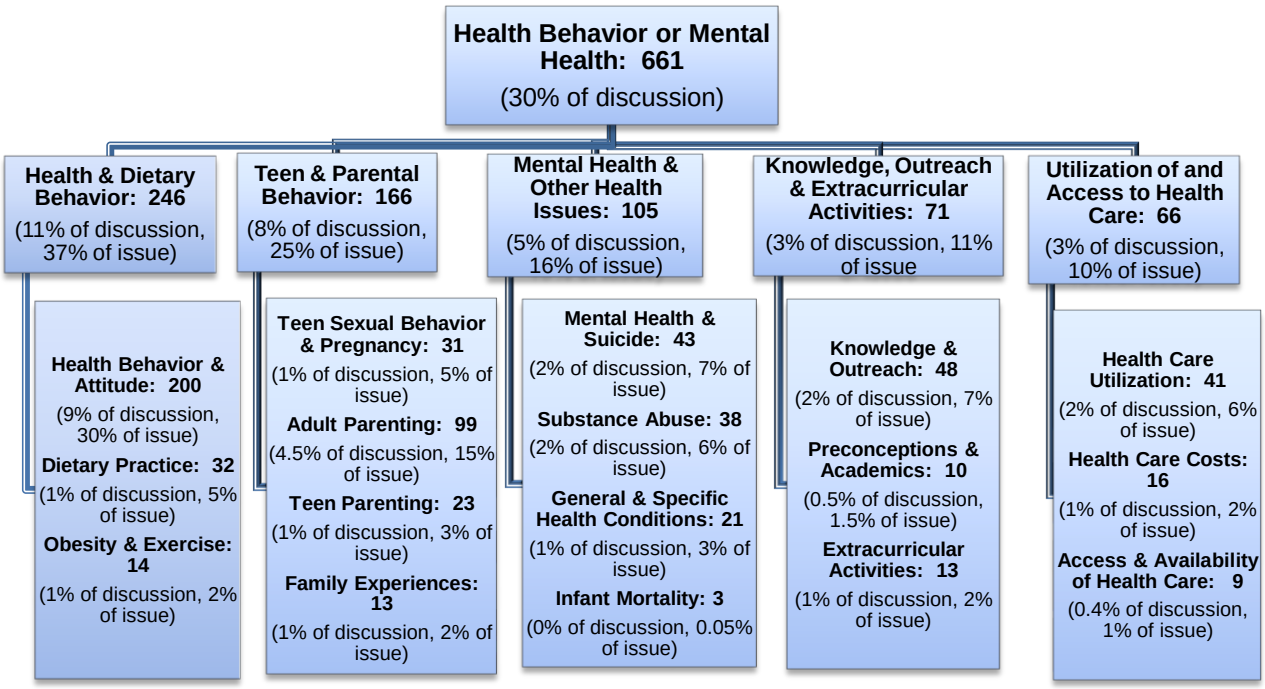
Nearly one-third of all phrases were classified into the main issue "health behavior or mental health." The 661 phrases classified into this main issue were further classified into sub-issues, and the sub-issues into facets.

As shown in Figure 3.82, the 661 phrases pertaining to the main issue of health behavior or mental health were classified as follows:

- 246 phrases, or 37 percent of the phrases on this main issue, pertained exclusively to health and dietary behavior.

- 166 phrases, or 25 percent of the phrases on this main issue, pertained to teen behavior or parental practices.
- 105 phrases, or 16 percent of the phrases on this main issue, pertained to mental health and other specific health conditions.
- 71 phrases, or 11 percent of the phrases on this main issue, pertained to knowledge, outreach, and extracurricular activities.
- 66 phrases, or 10 percent of the phrases on this main issue, pertained to utilization of and access to health care.

Figure 3.82. Classification of Phrases Concerning Health-Related Behavior or Mental Health, Eight Focus Groups Conducted by Family Health Services, Alabama, FY 2009



Note: 1% (n=7) of the phrases concerning health-related behavior or mental health are not depicted in the second and third levels above.

Health and Dietary Behavior

Within the main issue of health behavior or mental health, over one-third of the phrases were classified into the "health and dietary behavior" sub-issue.

Health Behavior and Attitude
Within the health and dietary behavior sub-issue, most of the phrases concerned the facet "health behavior and attitude." Phrases classified as pertaining to this facet covered a variety of topics: obesity, seatbelt use, condoms, nutrition, tattoos, bullying, self-image, and many others. Most comments reflected how discussants perceived health and their attitudes concerning health behavior. A few of the comments pertaining to health behavior and attitude follow:

> *"During this time, we just don't consider health at all, there may be a few out there that think about health, but the majority just does not."*
>
> *"If I am sick, I just keep on trucking until I get better in a couple of days."*
>
> *"If the bullying comes in and I start questioning who I am or am I good enough, then that sparks alternative forms to boost my self esteem, which may be using alcohol or increasing sexual tendencies."*
>
> *"With tobacco we tend to look at the long-term consequences, with alcohol we tend to look at the short-term consequences and maybe we should reverse those a little bit."*
>
> *"I usually don't wear a seatbelt, until I see a cop."*

Dietary Practice, Obesity, and Exercise
Other facets of the health and dietary behavior sub-issue concerned dietary practice, obesity, and exercise. Remarks on these topics included the following:

> *"We have a high rate of childhood obesity…the children should be active instead of sitting in front of their computers."*
>
> *"When I was growing up, my parents would say get outside and they didn't want to see you until it were late in the evening. We stayed outside, ran, and played with our friends instead of just sitting in the house watching TV."*

> *"I mean if you are accustomed to turnip greens with fatback, sprinkling a little seasoning on it is not going to cut it."*

Teen and Parental Behavior
One-fourth of the phrases about health-related behavior or mental health were classified under the "teen and parental behavior" sub-issue. This sub-issue included topics such as sexual behavior and pregnancy, parenting skills, and other family experiences. Nearly one-third of the 166 phrases classified under this sub-issue pertained to either teen sexual behavior, pregnancy, or parenting: as two of the eight focus groups consisted solely of adolescents and young adults and a third group consisted of adolescent mothers.

> *"Teen pregnancy has boomeranged back around again; back in the eighties, there was a teenage pregnancy boom and it is just coming again full force."*

Many discussants felt that sexual activity outside of marriage has become more common and is accepted by more people. As well, many felt that the age at which teens are having babies has become younger and younger. They also felt that young mothers are not equipped to provide an environment that enhances a child's cognitive development. Some of the comments put forth in this regard follow:

> *"You have girls that are so sexually active, like eighteen year olds sleeping with thirty-something year old men and having babies for them now."*

"A lot of these young kids that's starting out seem to know the procedure of having babies and getting babies. It should be some way that we could get through to them, if they are going to be out there."

"We need parenting skills for new parents. When they leave the hospital with the newborn and go out into the recesses of rural areas; we don't see the kids anymore until it is time to go to Kindergarten, and then Little Johnny does not know red from blue."

"Most of the young parents are leaving the babies with the grandparents. The grandparents are too old to have the time and patience with the babies and the parents are young and unaware."

"We, as parents, are not doing a good enough job with our children once they leave elementary school about the issue of premarital sex."

Mental Health and Other Health Issues

Of the phrases concerning health behavior or mental health, 16 percent were classified into the sub-issue "mental health and other health issues." This sub-issue consisted of 105 phrases related to topics such as suicide, substance abuse, and specific health conditions. One key message taken from the qualitative data is that the discussants felt that mental health status, low socio-economic status, and stressful environments were interrelated. Most often fear of not being able to provide basic needs for the family was cited along with emotional issues (suicide, postpartum depression, and low self-esteem). Substance abuse—of drugs, alcohol, and tobacco—was also mentioned in all focus groups. Under the sub-issue of mental health and other health issues, only three responses pertained to infant mortality. Remarks classified under this sub-issue of mental health and other health issues included the following:

> *"Statewide, it is the drug abuse that is contributing to our infant mortality rate."*

"Don't you think that the current economic situation is creating concern for parents, such as fear of can I still keep health insurance coverage for my kids and fear of can I keep them in college."

"Well, if you want to factor in mental health, it's the same with higher incomes…sometimes they hide behind a glass of wine and a pill; but, they do have access to mental health care where lower income groups do not."

"I think a young person who is pregnant and smoking doesn't realize how bad that affects the unborn child."

Knowledge, Outreach, and Extracurricular Activities

Of the discussion about the issue of health behavior or mental health, 11 percent of responses pertained to the "knowledge, outreach, and extracurricular activities" sub-issue. These responses reflected concerns about lack of knowledge, information, and resources in the community. The facets of this sub-issue were: "knowledge and outreach," "preconceptions and academics," and "extracurricular activities." Concerns condensed into each of the latter two facets were not directly related, yet merited recognition.

Some remarks classified under the knowledge, outreach, and extracurricular activities sub-issue were associated with remarks that were classified under the teen and parental behavior sub-issue: for example, lack of knowledge about how to care for a child or what healthcare services are available for women in the community. There were several areas where discussants indicated a lack of knowledge was harmful: in respect to the importance of prenatal and infant care, healthy lifestyles, and family planning. Some of the responses classified under the sub-issue of knowledge, outreach, and extracurricular activities follow:

"There are so many services out there that people don't know about because they [the services] are not easily accessible to them."

"I didn't find out until late in my pregnancy that I was actually pregnant. I just went to the doctor for the first time two days ago, that was my first prenatal visit."

"A lot of people want to do well, but they don't know how."

"There needs to be public awareness. We need to be more proactive in educating our community members, so they can disburse information to others."

"Kids from age one to twelve have less play activity than they used to. I am ashamed to say that my son spends a lot of time in front of his Nintendo Wii and Game Boy."

Utilization of and Access to Health Care

As shown in Figure 3.82, of the discussion about health behavior or mental health, 10 percent of responses pertained to the "utilization of and access to health care" sub-issue. The facets concerned with this sub-issue were "healthcare utilization," "healthcare costs," and "access and availability." In most cases, responses concerned the utilization of healthcare services in the community. According to some discussants, lower socioeconomic status and its associated ills, such as the barriers of lower educational attainment and transportation problems, play a part in some populations not receiving needed health services. Some of the remarks concerning utilization of and access to health care follow:

I know a baby who has not received any health care since she was born.

Lower income groups never get well check-ups. They don't even know what a well check-up is; it is so foreign to them.

There is only one facility that offers the entire package [mental, dental, and vision], and the community free health clinic is great, but there are no services there for kids.

"The parents are pushing the child, saying you better get a scholarship!"

Latino Focus Groups Conducted by ADPH

As previously stated, the Assistant Director of the Health Department's Office of Minority Health facilitated two focus groups that were conducted in Spanish. One group met in a central-Alabama county and the other in a north-Alabama county. Collectively, the groups included 14 Latinas, all but one of whom were 20-44 years of age. The remaining discussant was from 45-64 years of age. Concerning household income, nine of the discussants had a household income of less than $25,000 per year, three of $25,000-$35,000 per year, and one of $35,000-$75,000 per year. The following are general views expressed by groups as a whole:

- Concerning health status of adult Latinas, the longer they live in Alabama, the more their health is compromised. They ignore their own health issues to take care of others.

- Concerning the health status of Latino infants, it depends on the mother's care. Generally, the health status of Latino infants is good, though not excellent. Survival of Latino infants in Alabama is better than in the discussants' country (or countries) of origin.

- Concerning the health status of Latino children in Alabama, they are healthy overall. However weight is an issue, as are the underlying issues of poor eating habits and lack of physical activity.

Preschool children are frequently sick.

- Concerning healthcare access and utilization, the following are issues:
  - Lack of medical insurance.
  - Care denied.
  - Unfriendly payment plans.
  - Language barriers.
  - Cultural barriers.
  - Lack of knowledge about where to go for care.

- Concerning the discussants' perceptions of care given, the healthcare providers are friendly and helpful, and the providers try to communicate and give options for care.

- When asked how they would change Alabama's healthcare system if they could, discussants said that they would:
  - Provide affordable medical care.
  - Treat everyone regardless of documentation status.
  - Include the community when planning prevention messages.
  - Invite the community to share their cultural beliefs.
  - Change [expand] the hours that [non-emergency] healthcare services are available.

Web-Based Surveys of Healthcare Providers and MCH Organizations

In FY 2009, Family Health Services conducted the Healthcare Providers Survey and the MCH Organizations Survey, both of which were web-based. For each survey, the methods and the respondents are described in Section 1. These surveys included the same three open-ended questions, which generated many comments: from 154 of the Healthcare Provider Survey respondents and from 222 of the MCH Organizations Survey respondents.

A full report of input from each of the two surveys is beyond the scope of this report, but two internal reports, each of which details responses to one of the surveys, are available upon request (anita.cowden@adph.state.al.us). A sample of excerpts from responses to the open-ended questions, edited for readability but not for content, follows. To distinguish which survey is the source of a quote or paraphrase, the following acronyms are used when presenting qualitative findings from the surveys: "Providers" for the Healthcare Providers Survey and "Organizations" for the MCH Organizations Survey. Inclusion of only a few of the comments is feasible here. We have sought to select comments that display the more common themes of the responses and the divergent, sometimes conflicting views of the respondents.

Barriers to Care

Survey recipients were asked to: *List up to five barriers to health care for pregnant women, mothers, children or youth or gaps or weaknesses in the healthcare-system, with "one" being of the greatest importance. If you wish, briefly state what you think should be done to address each barrier/gap/weakness that you list*.

Barriers cited fell generally into five areas: access issues (both surveys), patient- or client-related issues (both surveys), insurance issues (Healthcare Providers Survey), systems issues (both surveys), and social support issues (MCH Organizations Survey).

Access Issues

Access issues generally pertained to health insurance, particular types of providers or services, transportation, and language.

Health Insurance

Many respondents cited a lack of insurance or a patient's inability to pay as a major barrier to accessing health services in Alabama. Some pertinent excerpts or paraphrases follow:

> *[There are] limited choices for the uninsured patient to obtain basic health care (Providers).*
>
> *[My county] has the highest unemployment rate in the state and a resultant lack of money, as well as a lack of insurance (Providers).*
>
> *Many [undocumented immigrants] have no medical coverage (Providers).*
>
> *[There is a lack of] health insurance for people who do not meet poverty guidelines, but cannot afford insurance on their own (Providers).*
>
> *It is hard for a pregnant female that is homeless to sign up for Medicaid (Organizations).*

Access to Particular Providers or Services

Over one-third of the respondents from both surveys cited a lack of specific types of providers or services, especially in rural areas, as a major access barrier. In the Healthcare Providers Survey, prompt and adequate access to mental-health services, including treatment for substance abuse, was the most commonly reported type of service lacking in the State. This issue was cited in the MCH Organizations Survey as well. Another issue cited was the need for affordable dental care for children, especially Medicaid-enrolled children and those with special healthcare needs. As well, several MCH Organization Survey respondents mentioned the lack of providers who serve indigent women and young children. Some pertinent excerpts or paraphrases follow:

> *Private-practice psychiatrists won't accept Medicaid, and private carriers reimburse poorly, if at all (Providers).*
>
> *Mental health care as an outpatient is often limited to overworked county mental-health providers that are not always pediatric oriented (Providers).*
>
> *We do not currently have an obstetrician in our county (Organizations)!*
>
> *There is a need for a local pediatric clinic within the county (Organizations).*
>
> *We need more nurses (Organizations).*
>
> *. . . . women are forced to drive long distances for prenatal care (Organizations).*
>
> *[There is a] lack of professional medical education and training for doctors, dentists, and other health practitioners on children and youth with mental disabilities (Organizations).*
>
> *The patient load for doctors has created less time for [a] doctor-patient conference. The patient is left to understand diagnoses on their own (Organizations).*

Regarding types of providers, a lack of access was specifically mentioned for orthopedics and obstetrics, as well as for pediatric subspecialists in dermatology, neurology, psychiatry, and gastroenterology. Some pertinent excerpts or paraphrases follow:

There are many specialists that are not present in the county. Many specialists won't take Medicaid (Providers).

I can't get physicians of other specialties to see my Medicaid-obstetric patients with nonpregnancy-related problems (Providers).

[The] closest delivering hospital for pregnant women on Medicaid is 70 miles away (Providers).

Other types of services mentioned as being unavailable were dental care, social services, and developmental/behavioral evaluations for children over 5 years of age.

Transportation

About one-third of the respondents to the Healthcare Providers Survey and more than one-half of the respondents to the MCH Organizations Survey reported lack of transportation to health care as a major barrier. Some pertinent excerpts or paraphrases follow:

County-wide public transportation services would be of great benefit (Organizations).

People in rural areas don't always have the transportation they need. . .I can easily see someone not receiving prenatal care because they cannot get to the hospital that Medicaid requires for doctor visits or even [get] to their county health department (Organizations).

Transportation is still an issue for many people in rural areas—no public transportation, lack of reliable transportation, or cost of gasoline (Organizations).

Many low-income families do not have transportation, and the public transit system is not reliable (Organizations, from a metropolitan-area respondent).

Language

Respondents to both surveys often indicated that language was an important barrier to care for Alabama's Latino population. For example:

Non-English-speaking patients have a very difficult time getting their needs met. It is very difficult to provide competent and complete care when one cannot communicate with the patient (Providers).

Patient Issues

Patient issues generally pertained to patients' knowledge and to patient/family motivation.

Patients' Knowledge

Over a quarter of the respondents from the Healthcare Providers Survey and over half of the respondents from the MCH Organizations Survey indicated that a general lack of knowledge on the part of patients regarding service availability and the importance of health care was a major barrier to care. Some pertinent excerpts or paraphrases follow:

We are weak in promoting the importance of having a visit with a woman's primary-care provider at least annually (Providers).

New mothers fail to see the need for childhood immunizations (Providers).

People need to know quickly and easily what services are available and where (Organizations).

Many women do not understand what they need to do to be healthy and to keep their family healthy (Organizations).

Patient/Family Motivation and Issues
Respondents from both surveys often cited a general lack of patient/family interest in obtaining health care or in complying with physician recommendations as a major barrier to care. Some pertinent excerpts or paraphrases follow:

> *[There is] noncompliance with seeking prenatal care (Providers).*
>
> *Most of our clients have poor health, poor teeth, and little interest in either (Organizations).*
>
> *[There is] a disregard of the individual need to plan and to consider consequences for the future (Organizations).*
>
> *Children are at greater risk of declining health due to their parents' increased use of drugs and alcohol (Organizations).*

Family Support, Other Cultural Issues, and Family Obligations
Respondents from both surveys often mentioned a lack of family support, cultural issues, and family obligations. One family physician observed that some families do not "step in and help." An obstetrician noted the lack of support from the baby's father. As well, the inability to take off from work and the inability to find child care were mentioned as obstacles to health care. Two excerpts or paraphrases follow:

> *Cultural beliefs that counseling is for crazy people [is an important barrier to care] (Organizations).*
>
> *[There is a need for] people to access friendly practitioners who look like them (Organizations).*

Health Insurance Issues from the Providers' Perspectives
From respondents to the Healthcare Providers Survey, insurance issues cited included inadequate coverage and inadequate reimbursement.

Inadequate Coverage
Providers expressed frustration over needed services that were not covered or were inadequately covered by public and/or private insurance. For example:

> *Most private insurances and Medicaid don't provide for dietary counseling and weight-management counseling for pediatrics and adolescents (Providers).*
>
> *[Neither Medicaid nor private insurance cover] comprehensive assessments for children with autism or autism-spectrum disorders (Providers).*
>
> *[There are] problems with insurance that does not cover routine vaccines [and] does not cover the standard number of well-child checkups (Providers).*

Inadequate Reimbursement
Another source of frustration for providers was inadequate reimbursement for services, though this issue was cited most often cited by pediatricians. For example:

> *Limited Medicaid reimbursement and [the] difficult-to-navigate Medicaid system make it difficult for providers to take on many Medicaid patients. We would love to see more Medicaid patients, but have to limit our numbers because of these issues (Providers).*
>
> *[There is] inadequate reimbursement for complexity and time consumption of patients with [the] greatest needs (Providers).*

There are not enough primary-care providers available in Alabama to provide the services needed to take excellent care of its citizens. This is in large part due to the low level of payment made to primary-care providers compared to payment for specialists (Providers).

Health Systems Issues

Respondents highlighted certain aspects of Alabama's health, education, and public-welfare systems that they viewed as problematic. The following facets of Alabama's system were mentioned often: education, family planning, Alabama Medicaid's maternity care system, immunizations, health department services, and undocumented residents. Sample comments on two of these issues—family planning and health department services—follow. Many respondents to both surveys mentioned Medicaid-related issues, but most of the comments on Medicaid will be shared with Alabama Medicaid staff, rather than reviewed here. Healthcare providers expressed a variety of concerns related to family planning in Alabama. As well, MCH Organizations Survey respondents expressed concerns about navigating the healthcare system.

Family Planning

Some excerpts or paraphrases of responses about family planning follow:

[There should be] affordable birth control for all childbearing-age women—all options (Providers).

Private insurance does not cover contraception (Providers).

[There is] poor funding for family planning services for Medicaid and Title X (Providers).

Postpartum contraception falls through because when my office does the exam and recommends [a] particular method, the patient must obtain a form from the Health Department, bring it back to my office for hand (not stamp) signature, and take it back to the Health Department. Some patients will do this; some won't and come back pregnant again (Providers).

The Health Department

Though generally complementary of ADPH, MCH Organizations Survey respondents noted limitations and areas for improvement. Some of the strengths noted were public service announcements to educate women on the importance of folic acid and the availability of ALL Kids. Other strengths noted were provision of cervical cancer screening and of services to immigrants. One respondent said that their county health department was very responsive to the families that her organization worked with and the general public. Another noted the "good relationship that the local health department has with community partners." Another noted that "funding for Public Health is vital," and that any decrease in service would be detrimental to many families.

County health department staffing limitations concerned some MCH Organizations Survey respondents. One rural respondent reported needing public health nursing services within the community more often than one day a month. Another said that the adjoining county health department needed to be staffed full time with a receptionist and a nurse. The same respondent said that the health department in her county was operated by excellent staff and was highly efficient and effective. On the other hand, one respondent said that many of the clients preferred the emergency room rather than the health department because of the waiting time at the health department.

Several respondents collectively pointed out a variety of opportunities for improvement within ADPH. One respondent suggested expanded publicity about available services and more

involvement with boards, councils, and committees that oversee programs that benefit the populations served by ADPH. Another respondent suggested childbirth classes.

Navigating the Healthcare System: General Comments
Respondents to the MCH Organization Survey expressed a variety of concerns about the healthcare system and difficulties in navigating it. They voiced many concerns related to the attitude of providers, including the "judgmental attitudes of staff." Other issues mentioned concerned long waiting times and appointments being limited to times that conflicted with parents' work hours. As well, MCH Organizations Survey respondents expressed concerns about the "lack of adequate health education." Another theme of their responses was a lack of funding for both public and private organizations serving maternal and child populations. Several respondents mentioned limitations of the State Department of Education, which are beyond the scope of this report.

Social Issues
MCH Organizations Survey respondents identified a lack of social supports and the presence of poverty as major barriers to receiving many types of services, including health care, for families in Alabama. As well, several respondents to this survey mentioned a lack of community support as a barrier to a healthy, productive lifestyle. Most of these mentioned lack of access to child care facilities and the difficulty that mothers have in getting excused from work as issues. One respondent mentioned the financial burden of co-pays for insurance. On the other hand, one respondent mentioned poor management of personal income as an issue and suggested that perhaps financial-planning education should be mandatory for receipt of assistance.

Many MCH Organizations Survey respondents expressed concerns related to adolescent pregnancy. These comments pertained to the need to reduce the occurrence of adolescent pregnancy and to have intervention strategies to help pregnant teens.

The Increase in Alabama's Infant Mortality Rate

After stating that Alabama's infant mortality rate had increased in 2007, the surveys stated: *If you have opinions on what may have contributed to the increase, please share them below.*

Ninety-two respondents from the Healthcare Providers Survey and 290 respondents from the MCH Organizations Survey shared their views concerning infant mortality. Opinions concerning factors that may be responsible for the increase fell into four areas: high-risk populations, access to and utilization of prenatal care, statistical issues (per the Healthcare Providers Survey), and social issues (per the MCH Organizations Survey).

Concerning high-risk populations, many respondents to both surveys indicated that the increase in the infant mortality rate could be due to higher risk women having children. As well, the issues of fertility treatments and multiple births were mentioned. One pediatrician mentioned the increasing rate of survival of extremely premature infants.

Concerning prenatal care, respondents to the Healthcare Providers Survey often cited Medicaid eligibility issues and the decreasing number of obstetrical providers and delivering hospitals. While metro-area providers sometimes mentioned the "failure" of others to refer at-risk women or to transport women with threatened preterm labor to a perinatal center, physicians outside of metro areas sometimes mentioned barriers to such referral, such as the cost of transport. Also mentioned was the mother's lack of understanding of the need for prenatal care.

Concerning statistical issues, two respondents to the Healthcare Providers Survey cited the need to consider such issues as gestational age (especially extremely premature, newborn babies whose gestational age of 20-23 weeks was incompatible with life), race, and socioeconomic status when tracking infant mortality. One respondent cautioned against making radical changes based on statistical quirks.

Social issues mentioned by respondents to the MCH Organizations Survey included the economic downturn and, as was true in the Healthcare Providers Survey, lack of parental knowledge on how to care for a child.

Other Comments

Respondents to each survey were encouraged to submit miscellaneous comments and to include the strengths of Alabama's healthcare system. The comments not previously mentioned generally related to healthcare manpower issues or to the healthcare system. Sample comments follow.

Healthcare Manpower

Manpower issues mentioned by respondents to the Healthcare Providers Survey included provider shortages, geographic distribution, and cultural competence.

> *We have a disconnected healthcare system with a severe lack of primary care/medical homes (Providers).*
>
> *There are not enough family physicians to cover Alabama's needs (Providers).*
>
> *Specialty care for children and infants is usually in the larger counties and access to those services [is] difficult to identify and difficult to schedule due to the travel involved (Providers).*

Healthcare System

In the Healthcare Providers Survey, healthcare systems issues focused on the providers' perceptions of the current system's strengths and weaknesses.

> *I don't see many strengths of the healthcare system at this time (Providers)!*
>
> *We need to put more emphasis on personal responsibility for healthy lifestyles (Providers).*
>
> *Why is [SOBRA Medicaid] offered to those with private insurance (Providers)?*
>
> *Medicaid and SCHIP are the cornerstones of access to care in our area (Providers).*
>
> *I think the Medicaid system should be overhauled (Providers).*
>
> *I expect with the economic downturn we will have more uncompensated care, more emergency-room visits for care that should be seen in a primary-care office, and more patients foregoing care until they find they are in real trouble (Providers).*

Respondents to the MCH Organizations Survey deemed many components of Alabama's healthcare system praiseworthy. A sampling of comments follows:

> *I think we have a good public healthcare system (Organizations).*
>
> *ALL Kids and SOBRA Medicaid are definitely strengths (Organizations).*

For adults that are employed, the low-cost policies being offered by Blue Cross are also a plus (Organizations).

The faith-based community seems to be trying hard to meet [the] government shortfall (Organizations).

I think that Alabama has done a remarkable job in seeing that our women, infants, and children receive the best health care possible (Organizations).

Suggestions for improvement made by MCH Organization Survey respondents included an emphasis on adolescent health, home visiting after the baby's birth, surveillance of birth defects, and more outreach efforts.

Web-Based Survey of Families

Family Health Service also conducted the web-based Survey of Alabama Families in FY 2009. The methods for this survey and some characteristics of the respondents are discussed in Section 1. Of the survey respondents, 380 answered at least one of the open-ended questions. Findings from this survey are only briefly and selectively reviewed here, but an internal report of the survey is available upon request (anita.cowden@adph.state.al.us). Responses to two questions are discussed here: one about infant mortality and one about obesity.

Factors Contributing to Infant Mortality

As was true for the Healthcare Providers Survey and the MCH Organizations Survey, respondents to the Family Survey were asked their views on the increase (in 2007) in Alabama's infant mortality rate. Over half of the respondents indicated multiple contributory factors, demonstrating their awareness of the complexity of this public health problem. Issues mentioned included low income, limited access to health care or good nutrition, and drug use, including inappropriate use of prescription medications. Other opinions concerning factors that may have contributed to the increased rate fell into one of six areas: 1) high-risk populations (as was true for the other two web-based surveys), 2) lack of health care, 3) what some viewed as unnecessary obstetrical interventions, 4) prematurity, 5) lack of parental knowledge, and 6) lack of support from the family and community. Concerning lack of parental knowledge, respondents cited a lack of understanding of how behavior impacts health, a lack of knowledge concerning abstinence and family planning, a lack of knowledge concerning appropriate infant care, and a need for more education about the importance of health care.

Addressing Factors Contributing to Obesity

Respondents were asked what they thought could be done to help solve the problem of obesity, especially in women of childbearing age, children, and youth; 337 respondents answered this question. Several of these respondents said they had no suggestions. Several others expressed the view that dealing with obesity was an issue of personal responsibility and that little would be accomplished unless Alabamians accepted the responsibility to make healthier choices. One respondent said that there was nothing the State could do except to educate. Since these responses concern whether the State MCH Program could garner the political will of the public to address obesity, some quotes or paraphrases follow:

There is nothing the State can do except educate. People have to make their own decisions in life regarding their personal health.

It is not the State's role to solve this problem. Educational material is available, and people know it is unhealthy to be overweight. It all comes down to willpower and wanting to be healthy and maintain a proper weight.

Others felt that families were experiencing barriers to good health. Opinions from these respondents on strategies to help tackle obesity fell into five areas: increasing access to resources for weight control, increasing public education and outreach, improving daily environments, addressing government-related issues, and addressing healthcare system issues. For each of the five areas, a brief discussion and one or two quotes or paraphrases (selected from many) follow.

Access to Resources

About one-third of the respondents to this question expressed the need to increase Alabamians' access to the critical resources for maintaining a healthy weight. Among the critical resources mentioned were: nutritious food, physical activity, and, if needed, weight-control programs. These respondents indicated that even when families know what they should do regarding nutrition and fitness, finances and community design can be barriers.

Nutritious Food

Issues that the respondents viewed as problematic included the relatively high cost of foods that are better for health, the sales tax on groceries, ingredients and food additives that are not good for health, and restaurants and fast-food franchise menus.

> *The price of groceries is expensive, and it seems to me that foods that are better for you cost a lot more. People like myself that are overweight and live from paycheck to paycheck have a difficult time affording healthy food.*

Physical Activity

Physical activity was also deemed essential to a healthy lifestyle. Concerns expressed about physical activity fell mainly into four areas: the need for safe venues, affordable exercise options, available childcare, and variety in exercise options.

> *[There is a need for communities to have] sidewalks, biking lanes, and venues for exercise that are safe and easy to access.*

Public Education and Outreach

About one-third of the respondents to the question on obesity commented on the need for broader public education and outreach concerning obesity.

> *Many do not know where to seek help [and/or] are afraid of the cost. Programs at the local community centers, churches, schools, and even at recreation facilities could be used for community awareness*.

Daily Environments: School, Work, and Home

About one-fifth of the respondents to the question on obesity noted the need to make adjustments in the daily environments of Alabama residents to help reduce obesity. Comments generally concerned school, work, and home environments.

> *I feel that women are under a considerable amount of stress and pressure related to their jobs and family life. As a result, they are forced to make food choices that [are] less time consuming and generally not as healthy.*

Government Issues

Many respondents felt that government did have an important role in combating obesity. These comments generally pertained to the government's overall role in regulation and coordination as well as its ability to expand or improve two existing food-related programs: Food Stamps and WIC.

I have heard the WIC Program is changing the food coupons to better suit the needs of families, giving more fresh fruits and veggies. Good job!

The Healthcare System

Some respondents felt that primary care providers have a responsibility to address obesity. Comments along this line generally concerned several issues: provider counseling, alternative providers, and medication that promotes weight loss. As well, some respondents mentioned the role of health insurance in promoting weight loss. Some respondents felt that health insurance coverage for treatment of obesity was inadequate. Another issue was the appropriateness of incentives for insurance enrollees to lose weight: Some respondents felt that incentives were appropriate and some did not.

If doctors would speak more openly to their patients about their weight, then there would be less of a problem.

Key Informant Interviews Conducted by Family Health Services

In addition to the focus groups and the three web-based surveys, key informant interviews were a source of qualitative data analyzed by Family Health Services. The methods for and participants in these interviews are described in Section 1. Key informants were asked a series of questions that related to health status, healthcare access and utilization, the healthcare delivery system, infant mortality, and other concerns they may want to express. Again, full discussion of the interviews is beyond the scope of this report, and an internal report of the findings is obtainable upon request. The description that follows is organized according to the issues raised, rather than the question asked of the respondent.

Respondents generally expressed concern about the health status of the populations served by Alabama's MCH Program.

Dental health or dental care was often mentioned, and dental care was viewed as one of the most important unmet health needs. Respondents mentioned the need for pediatric oral-health care providers. Periodontal disease was mentioned as a potential contributor to the State's high infant mortality rate. As well, the threat that abscessed teeth pose to a child's health and, in severe cases, even a child's life was mentioned.

The need for access to mental health services and services for behavioral disorders was also seen as one of the most important unmet health needs. Further, the need for increased availability of substance-abuse treatment services for women of childbearing age was expressed. One respondent felt that substance abuse was increasing, for both drugs and alcoholic beverages. A need for residential programs to treat substance abuse where the mothers' children could stay with them was expressed. One respondent stated that more parity is needed in funding services for physical health and mental or behavioral disorders. Concerns were expressed about needed services for autism spectrum disorders.

The lack of comprehensive medical homes was mentioned. One respondent advocated for expanding the services for which a primary care physician can be reimbursed to strengthen the establishment of a medical home. Another concern was insurance reimbursement for some well child visits and screenings.

Another concern was healthcare shortages in rural areas. One respondent suggested that medical and dental students' awareness of the needs in rural areas should be increased and that incentives (scholarships, loan repayment programs, and mentoring) should be developed to encourage them to practice in rural areas. The need for more rural providers of care who served Medicaid enrollees was also expressed.

With respect to obesity, respondents mentioned some of the issues that were brought up in the web-based surveys (though not necessarily described in the preceding discussions of those surveys). These issues included the need for schools to have more recess time, more physical education, and healthier school menus. (Respondents to the Family Survey also stated these concerns.)

In the view of the respondents, other important unmet health needs were for family planning services and prevention services. As well, the view that nurse-midwives and other advance-practice nurses were underutilized was expressed. (Many respondents to the Family Survey also advocated for utilization of nurse midwives.)

Concerning strengths of the healthcare system, respondents cited the good relationships between public and private service providers, the improving status of insurance coverage for children, the quality of care received at a major children's hospital in the State, the habilitation services provided by CRS, the Medicaid Maternity Care Program, and ADPH's services and outreach efforts.

Putting Quantitative and Qualitative Data Together: Family Health Services

The following consists of generalizations about qualitative data collected by Family Health Services, cutting cross the six initiatives to collect such data (eight focus groups, two focus groups conducted in Spanish, three web-based surveys, and key informant interviews.) These generalizations focus on five issues: 1) access to health care, 2) health insurance, 3) the nature of the care provided, 4) obesity, and 5) Alabama's infant mortality rate. Where pertinent findings from quantitative data are readily available, the findings on qualitative and quantitative data are roughly compared.

Access to Health Care

Access to care was a focus of much of the qualitative input. Specific concerns about access varied, but limited transportation and a conflict between consumers' work schedules and the hours that non-emergency care was available often arose. Access to particular types of care arose fairly often, such as limited or delayed access to dental care; mental health care, including treatment of substance abuse; specialty care; and subspecialty care. As well, the importance of a medical home was mentioned by some. A respondent to the Healthcare Providers Survey said that we have a disconnected healthcare system with a severe lack of primary care/medical homes. Additionally, a respondent to the same survey advocated for expanding the services for which a primary care physician can be reimbursed, in order to strengthen the establishment of a medical home. Though, as stated above, access to specialty and subspecialty care was felt to be insufficient, some respondents expressed a need for more family physicians or primary care physicians.

Compared to the other initiatives to collect qualitative data, the MCH Organizations Survey respondents tended to more frequently mention strengths of the healthcare system. For instance, a respondent to the Healthcare Providers Survey said that he/she did not see many strengths of the healthcare system. On the other hand, a respondent to the MCH Organizations Survey said that we have a good public healthcare system, and another respondent to this survey said that Alabama has done a remarkable job in seeing that women, infants, and children receive the best health care possible.

With respect to the above issues, pertinent quantitative Needs Assessment findings include data on medical homes, access to dental care, dental health, and, to some degree, substance abuse. These findings, discussed earlier in this section, are consistent with the concerns arising in the qualitative data. A recap of a few pertinent quantitative findings, all pertaining to Alabama residents, follows. Concerning a medical home, in 2007, about 44 percent of children and youth did not receive health care

that met the American Academy of Pediatrics' definition of a medical home. Concerning dental care, in 2007, the lower the household income, the more likely the child/youth was to have gone without a preventive dental care visit (Figure 3.55). Concerning substance abuse, from 2000-2008, the drug- and alcohol-related death rate increased in 15-19 year-old and 20-24 year-old White, non-Latino males (Figure 3.78).

Health Insurance and Cost of Care

Health insurance and the cost of health care were frequent topics of the qualitative input.

Reimbursement and Coverage Issues

Concerns about reimbursement and coverage cut across both private and public insurance. Issues for which some healthcare providers felt that reimbursement was inadequate included: 1) psychiatric care, 2) dietary counseling and weight management, 3) comprehensive assessment of children with autism or autism-spectrum disorders, 4) routine immunizations and well-child checkups, 5) family planning services, and 6) the time required to care for patients with the greatest needs.

Private Insurance

Additional concerns expressed about private health insurance generally pertained to the cost of the insurance or the amount of co-pays. On the other hand, a respondent to the MCH Organizations Survey said that the low-cost policies offered to employed people by Alabama Blue Cross Blue Shield were a plus.

Public Insurance

With respect to Medicaid, concern was expressed about a number of issues. Perceptions of the respondents about Medicaid included the following: 1) delay in getting enrolled for prenatal care, 2) barriers to enrollment of homeless pregnant women, 3) the distance to a delivery hospital for pregnant Medicaid enrollees, and 4) circumstances that, from a provider's perspective, complicate provision of care to Medicaid enrollees.

On the other hand, some respondents viewed Medicaid, as well as CHIP, as a major strength of the healthcare system. A respondent to the Healthcare Providers Survey said that Medicaid and ALL Kids were the "cornerstones of access to care in our area." Further, a respondent to the MCH Organizations Survey said that ALL Kids and SOBRA Medicaid were "definitely strengths." ("SOBRA" refers to the Federal Sixth Omnibus Budget Reconciliation Act.) The Needs Assessment has not produced quantitative findings concerning the Medicaid-related qualitative input. However, the Medicaid Agency has taken concrete steps to seek public and provider input concerning the Alabama Medicaid program and to address certain issues that have arisen. Specifically, *Together for Quality* is the Alabama Medicaid Agency-led initiative to transform the State's fragmented claims and process-oriented system into one that is patient-centered and cost-efficient. One goal of *Together for Quality* is to simplify provider access and use of information at the point of care.[36]

Quantitative Data on Health Insurance

Though the lack of health insurance for some and limits in the coverage provided by health insurance are concerns, it is notable that the prevalence of non-insurance has declined for children and youth in Alabama. That is, in Alabama, the prevalence of non-insurance among children and youth has declined by more than half since CHIP was implemented (Figure 3.44).

Nature of Care Received and the Physical Setting

Nature of Care

Some respondents indicated concern about the nature of the care received. Particulars of these concerns varied and included such issues as 1) the provision of information without consideration of the patient's comprehension and 2) the attitude of staff providing the care. A respondent to the MCH Organizations Survey said that patients need friendly care providers who look like them. A related issue is cultural competence. Discussants in the two focus groups that were conducted in Spanish mentioned cultural and language barriers and suggested that the community be invited to share their cultural beliefs. Respondents to the Healthcare Providers Survey and the MCH Organizations Survey also mentioned cultural issues.

Quantitative data concerning cultural issues comes from the Healthcare Providers Survey and the Family Survey. As shown in Table 3.9, 25 percent of respondents to the Family Survey, versus 58 percent of respondents to the Healthcare Providers Survey, said that the practitioner incorporated the patient's or family's beliefs and requests into the care plan. These findings support the concerns about cultural competence that arose in the qualitative input.

Physical Setting for Care

Discussants in the eight focus groups suggested that care be provided in a less crowded, more comfortable setting, that there be separate waiting areas for preventive care visits and sick care visits, and that patient flow be improved. The Needs Assessment did not produce quantitative data on these issues.

Obesity

Since Family Health Services specifically requested input concerning obesity, much of the qualitative input pertained to this issue. Factors that respondents felt contributed to obesity included: 1) lack of physical exercise, 2) inadequate education and outreach; 3) stress (in women); 4) limited access to resources for weight control, and 5) community and school environments that were not conducive to weight loss.

Some of the above concerns are supported by quantitative data compiled during the Needs Assessment. For example, according to the 2007 NSCH, about 45 percent of 6-17 year-old Alabama residents had engaged in vigorous physical activity on <u>fewer</u> than four of the preceding seven days (not previously mentioned in this report). With respect to community environment, again according to 2007 NSCH findings for Alabama, the perceived safety of neighborhoods varied according to race and ethnicity. That is, respondents for Black, non-Latino children and youth and for Latino children and youth were less likely than their White, non-Latino counterparts to feel that the child was usually or always safe in the neighborhood (Figure 3.5).

Infant Mortality

Concerning the increase in Alabama's infant mortality rate, one respondent cautioned that radical changes should not be made based on "statistical quirks." Other respondents conjectured that a variety of factors may have contributed to the rise in Alabama's infant mortality rate in 2007. These factors included: 1) a relative increase in the number of high-risk women giving birth; 2) an increase in fertility treatments and multiple births; 3) [an increase in] extremely premature live births whose gestational age was incompatible with life; and 4) barriers to transporting high-risk pregnant women to places equipped to care for them.

Viewing the above comments in the context of quantitative findings on trends in infant mortality is informative. Certainly, the caution against making radical changes based on statistical quirks is appropriate. However, as previously shown (Figure 3.31), the increase in the risk of infant death in Alabama was not confined to a single year. Perceptions that changes in the risk status of women giving birth are a factor have some support from quantitative data, in that the prevalence of inadequate prenatal care has increased slightly (Figure 3.23). As well, perceptions that changes in the prevalence of multiple births and prematurity are a factor have some support: in that the prevalence of multiple births (Figure 3.27) and the prevalence of VLBW in singleton births (Figure 3.29) have increased slightly. However, as stated earlier in Section 3, the increase in risk of infant death in 2005-07 relative to 2002-04 was not limited to groups typically deemed to be at high risk. Therefore, the slight changes in risk markers do not fully explain the increase in infant mortality. As previously stated, multivariate analysis of trends in infant mortality—that considers prenatal care, plurality, and birth weight—is indicated.

Children and Youth with Special Health Care Needs

Secondary Data: Children's Rehabilitation Service

The following secondary data relating to Alabama CYSHCN were gathered from national, State, and local sources as a part of the Needs Assessment process:

- In FY 2009, CRS served 12,499 CYSHCN under the age of 21 years. This included 2,472 CSHCN who were new to the program. Of those enrolled in CRS, 3,648 were Supplemental Security Income (SSI) recipients under the age of 16 years (about 37 percent of CRS enrollees who were under 16 years of age).

- In FY 2009, Alabama's Early Intervention System served 6,044 infants and toddlers who had a 25 percent delay in development in at least one domain. This figure represents almost a 40 percent increase over the 4,351 served in FY 2005.

- In Alabama as of December 2008, there were 29,270 children under 18 years of age receiving SSI at any time during the year (about 2.6 percent of the total population under age 18 years). This figure represents a steady increase over the 27,556 recipients in 2005 and the 23,722 recipients in 2000 (about 2.1 percent of the total population in this age range in 2000). The percentage varied across the State from the highest four counties of Perry, Wilcox, Dallas, and Bullock (7.1 percent, 6.5 percent, 5.8 percent, and 5.4 percent respectively) to the lowest two counties of Shelby and St. Clair (1.0 percent and 0.3 percent respectively). All four counties with the highest percentages are rural, southern counties located in the Black Belt region of the State. Both of the two counties with the lowest percentages are in the north-central portion of the State, but one is considered an urban county and the other is considered rural. The above counties differed significantly in certain areas, notably in the percentage of the total child population that was Alabama Medicaid-eligible, the median income, and the percentage of children living in poverty. The rural, southern counties with a higher percentage of SSI recipients under the age of 18 years tended to show higher rates of the described indicators when compared with the north-central counties with the lowest rates. Table 3.10 highlights these differences.

Table 3.10. Comparison of Counties with Highest and Lowest Percentages of SSI Recipients Under 18 years, *Selected Alabama Counties, Selected Years*

County	% SSI Under Age 18 years*	Median Income (dollars)**	% Children Under 18 Years Living in Poverty§	% Total Child Population Eligible for Medicaid¶
Perry	7.1	24,132	46.4	57.0
Wilcox	6.5	21,325	46.7	59.0
Dallas	5.8	27,647	42.0	64.2
Bullock	5.4	24,969	38.7	71.3
St. Clair	1.0	67,031	9.0	15.5
Shelby	0.3	50,046	17.1	35.4

* Numerator from Social Security Administration, "SSI Recipients by State and County, 2008"; denominator from US. Department of Commerce, Bureau of Census, 2000, prepared by Alabama State Data Center at the University of Alabama

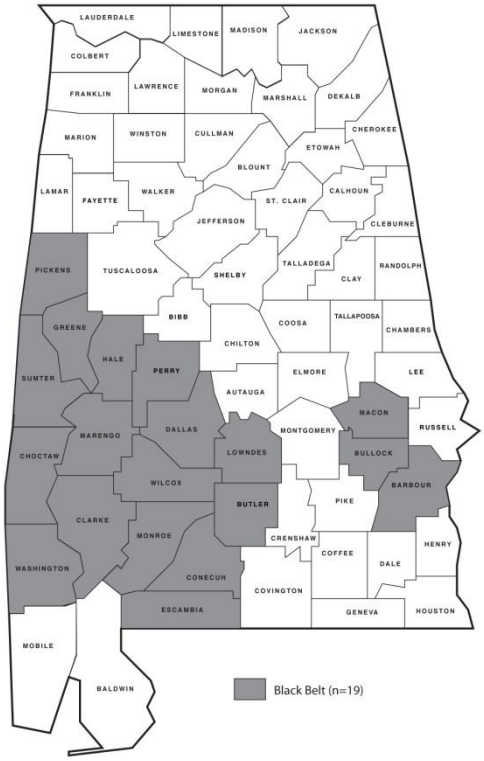
** "County-level Unemployment and Median Household Income for Alabama," 2008, Bureau of Labor Statistics, Local Area Unemployment Statistics data, Bureau of Census, Small Area Income & Poverty Estimates Program, presented by U.S. Department of Agriculture, Economic Research Service

§ Percentage of children under age 18 years living below the Federal poverty threshold, 2007, Small Area Income and Poverty Estimates, Bureau of Census

¶ Percentage of total county population under age 21 years eligible for Alabama Medicaid, Alabama Medicaid Agency Statistics, 2007

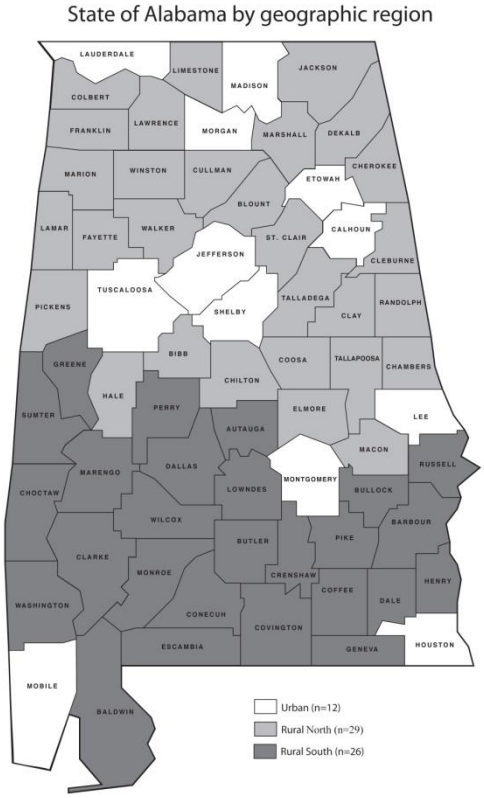
Both primary data gathered by CRS and secondary data elements were examined by geographic region according to Black Belt designation. The "Black Belt" is a crescent-shaped region reaching from Texas to Virginia and is named for its rich, dark-colored soil. Nineteen of Alabama's counties, mainly located in the southwestern part of the State, are located in the Black Belt. Figure 3.83 displays the Alabama counties designated as Black Belt.

Figure 3.83. Alabama's Black Belt Counties



Geographic regions included county groupings by "Rural North," "Rural South," and "Urban." These delineations were obtained from the report *What is Rural?*, published by the Alabama Rural Health Association, which based its designation on a formula of four variables: percentage of total county employment by primary and secondary schools; dollar value of agricultural production per square mile; population per square mile; and index of populations of the largest city in the county, other cities in the county, and cities that are in more than one county. Figure 3.84 displays Alabama's counties by geographic region.

Figure 3.84. Alabama's Geographic Regions by County



In general, the three geographic regions differed significantly in median income, educational attainment, percentage of total child population that was Alabama Medicaid-eligible, percentage of children receiving SSI, and percentage of children living in poverty. The Rural South had a higher percentage of SSI recipients, mean percentage of children under age 18 years living in poverty, and mean percentage of children under age 21 years eligible for Medicaid. Also, they had a lower median income when compared with the Urban and Rural North. Both the Rural North and Rural South were less likely to obtain a high school or higher educational level when compared with persons in the Urban areas. Considering the Black Belt designation, there were also higher levels of poverty, Medicaid eligibility, and SSI, as well as lower levels of educational attainment and median income. Table 3.11 highlights these differences.

Table 3.11. Selected Indicators by County Designation (Geographic Region and Black Belt), Alabama, Selected Years

County Designation	Mean % Receiving SSI Under Age 18[†]	Mean % Under Age 18 living in Poverty[i]	Median Income (Dollars)[π]	Mean % Under Age 21 Eligible for Medicaid[β]	Mean % Over Age 25 with High School or Greater Education[∂]	Mean % Over Age 25 with BS Degree or Higher[Δ]
Urban	2.5	22.1	40,830	35.8	79.0	23.2
Rural North	2.3	24.9	36,009	41.1	67.2	10.5
Rural South	3.4	32.6	32,429	49.2	68.1	12.3
Black Belt[#]	3.9	36.4	30,370	51.8	66.7	10.9
Non-Black Belt	2.3	23.9	37,504	39.9	70.8	14.5
Statewide	2.6	27.4	35,558	43.3	69.6	13.5

[†] Numerator from Social Security Administration, "SSI Recipients by State and County, 2008"; denominator from US. Dept. of Commerce, Bureau of Census, 2000, prepared by Alabama State Data Center at the University of Alabama

[i] Percentage of children under age 18 years living below the Federal poverty threshold, 2007, Small Area Income and Poverty Estimates, Bureau of Census

[π] "County-level Unemployment and Median Household Income for Alabama," 2008, Bureau of Labor Statistics, Local Area Unemployment Statistics data, Bureau of Census, Small Area Income & Poverty Estimates Program, presented by U.S. Department of Agriculture, Economic Research Service

[β] Percentage of total county population under age 21 years eligible for Alabama Medicaid, Alabama Medicaid Agency Statistics, FY 2007

[∂] "County-level Education Data for Alabama," 2000, Bureau of Census, presented by U.S. Department of Agriculture, Economic Research Service

[Δ] "County-level Education Data for Alabama," 2000, Bureau of Census, presented by U.S. Department of Agriculture, Economic Research Service

[#] The Black Belt encompasses 19 of Alabama's 67 counties, including Barbour, Bullock, Butler, Choctaw, Clarke, Conecuh, Dallas, Escambia, Greene, Hale, Lowndes, Macon, Marengo, Monroe, Perry, Pickens, Sumter, Washington, and Wilcox. All but three are designated Rural South.

Socioeconomic differences exist based on geographic regions and Black Belt designation. Children and families living in rural areas and Alabama's Black Belt counties seem to experience greater challenges. These are important considerations for program planning and policy-making.

Alabama-specific data were gathered from two national surveys relevant for CSHCN. The National Survey of CSHCN is a rich information source for state and national estimates related to critical issues and system development for CSHCN and their families. This includes information related to the six Healthy People 2010 outcomes for this population and the five NPMs that are based upon them. There have been two iterations of this survey, first in 2001 and next in 2005-2006. The NSCH provides a comprehensive look at children's health in general. There have also been two iterations of this survey, 2003 and 2007. Selected information and indicators from both surveys are presented below.

National Survey of Children with Special Health Care Needs, 2005-2006

According to the National Survey of CSHCN (NSCSHCN), 17 percent of children ages 0 to 17 years in Alabama are CSHCN, compared with 14 percent nationally. This represents a statistically significant difference based on a comparison of the confidence intervals for the two estimates. Based on

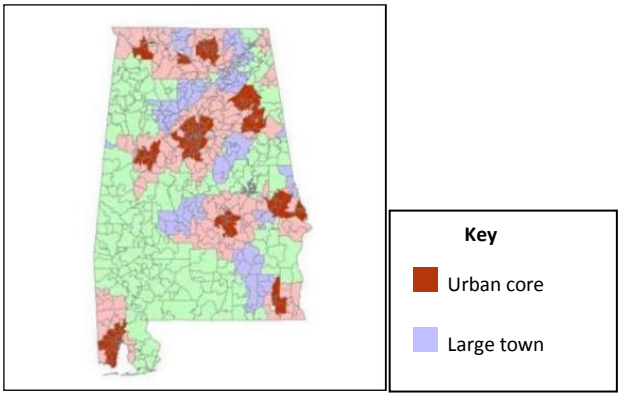
population estimates for Alabama, this translates to 187,263 CSHCN in the State. This survey allows for analysis by urban/rural profile. Per survey methodology, the geographic categories utilized are based on the Rural Urban Commuting Area rural/urban taxonomy. This is derived from the size and functional relationships of cities and towns as measured by work commuting flows. For more information, go to: http://depts.washington.edu/uwruca/rural.html. Although these are more detailed than the county designations utilized for comparisons of secondary data as presented above and also within CRS's primary data, they do allow for a general comparison with these other data sources. (See discussion under "Primary Data: Children's Rehabilitation Service" for more information.) The highest prevalence of CSHCN in Alabama appears to be in suburban areas. Table 3.12 illustrates this trend.

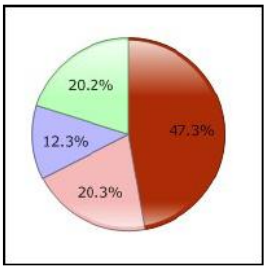
Table 3.12. Prevalence of CSHCN Overall and by Geographic Region, Alabama and the U.S., 2005-2006

	Alabama %	Nation %
Overall	17.1	13.9
Urban core	17.3	13.6
Suburban	18.4	14.5
Large town	17.4	15.0
Small town/Rural	15.1	14.0

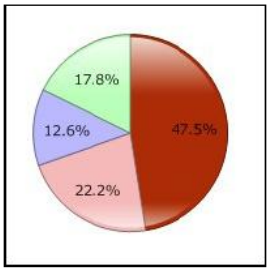
Looking at the Alabama map provided with the survey report, as expected, the urban core areas coincide with the largest cities in the State. These include the Muscle Shoals area, Huntsville, Anniston, Gadsden, Birmingham, Tuscaloosa, Montgomery, Opelika, Dothan, and Mobile. CRS has offices in all of these locations. According to the survey designations, most of the State geographic regions are designated small town/rural areas. This does coincide with the county designations utilized in analysis of primary data collected for the Needs Assessment. The population estimates for children ages birth to 17 years and for CSHCN of the same ages are also provided. Almost half of all Alabama children and Alabama CSHCN live in urban core areas. Figure 3.85 illustrates these findings.

Figure 3.85. Alabama CSHCN by Geographic Region, 2005-2006





Child population, ages 0 -17 years



CSHCN population, ages 0 -17 years

Source: Child and Adolescent Health Measurement Initiative. *2005/2006 National Survey of Children with Special Health Care Needs*, Data Resource Center for Child and Adolescent Health website. Retrieved [1/13/2010] from www.cshcndata.org

Method Note: The geographic categories in this report are based on the Rural Urban Commuting Area rural/urban taxonomy, which is derived from the size and functional relationships of cities and towns as measured by work commuting flows. For more information, go to: http://depts.washington.edu/uwruca/rural.html

As mentioned previously, there are six Healthy People 2010 outcomes for CSHCN, and five NPMs are based upon them. The Healthy People 2010 outcomes cover the broad areas of Family/Professional Partnerships, Medical Home, Adequate Insurance, Early and Continuous Screening, Organized Community-Based Systems, and Transition. There are NPMs for all but the Early and Continuous Screening outcome. The NSCSHCN provides estimates related to these and allows further stratification of data to allow comparisons across significant sub-populations. Table 3.13 provides summary information for success on each outcome measure for the Alabama sample compared with national estimates.

Table 3.13. Summary of Findings by Broad Area, Percent Successfully Achieved, Alabama and the U.S., 2005-2006

Broad Area	Alabama % (CI)	Nation % (CI)
Family/Professional Partnerships	59.9 (55.7 – 64.1)	57.4 (56.5 – 58.2)
Medical Home	50.0 (45.6 – 54.4)	47.1 (46.3 – 48.0)
Adequate Insurance	65.0 (60.8 – 69.1)	62.0 (61.2 – 62.8)
Early and Continuous Screening	62.3 (58.1 – 66.5)	63.8 (63.0 – 64.6)

Broad Area	Alabama % (CI)	Nation % (CI)
Organized Community-Based Systems	91.7 (89.6 – 93.8)	89.1 (88.6 – 89.6)
Transition	38.3 (31.7 – 44.9)	41.2 (39.9 – 42.5)

Information related to these broad categories is presented below.

Family/Professional Partnerships

This area is based on Healthy People 2010/MCHB *Core Outcome #1: CSHCN whose families are partners in decision-making at all levels and are satisfied with the services they receive*. It also relates to *NPM #2: The percent of CSHCN age 0 to 18 years whose families partner in decision making at all levels and are satisfied with the services they receive*. The data for this indicator come from the NSCSHCN.

In Alabama, about 60 percent of families reported success for this measure. The actual estimate, 59.9 percent, is slightly above the national estimate, 57.4 percent, but this is not a significant difference based on a comparison of confidence intervals. These estimates are based on updated data from the 2005-06 iteration of the NSCSHCN. Per survey notes, this outcome can be compared to 2001 results. In the 2005-06 survey versus the 2001 survey, 6.2 percent fewer Alabama families reported success for this measure while numbers for U.S. families were virtually the same.

Comparing across geographic regions, families that lived in small town/rural areas tended to report greater success for this measure, though the differences between the regions were not significant when comparing confidence intervals. Table 3.14 displays these results.

Table 3.14. Family/Professional Partnerships: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
58.9 (52.8 – 65.1)	58.9 (50.2 – 67.6)	57.0 (45.5 – 68.4)	65.7 (56.1 – 75.3)

Looking at success for this measure according to important subgroups reveals several significant differences based on a comparison of confidence intervals. Some additional trends can also be observed; however, they are not significant when comparing confidence intervals. These trends are often mirrored in the national data and result in statistically significant differences by comparison of confidence intervals. Of note, national confidence intervals are narrower, indicating more precise measurements due to the larger sample size. For several Alabama subgroups, the confidence intervals are quite large or the sample size is less than 50. This limits the capacity to interpret the data in a reliable manner and may result in the inability to determine whether trends that appear quite different are actually significant. Alabama families were significantly more likely to report success for this measure if they were consistently insured, had a medical home, and had incomes at 400 percent of the FPL or greater as opposed to 0-199 percent of the FPL. Also, families of younger CSHCN (0-5 years) were more successful on this measure than were those with older CSHCN (12-17 years) as were those whose child had private insurance only as opposed to those with both private and public coverage. Finally, those families with children who qualified as CSHCN based solely on needing prescription medications were significantly more likely to report success for this measure than were those with CSHCN who

qualified because of functional limitations or prescription medication usage and above average service usage together. Table 3.15 summarizes these results.

Table 3.15. Family/Professional Partnerships: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance status	
Currently insured	60.3 (56.1 – 64.6)
Currently not insured*	39.2 (13.6 – 64.8)
Insurance stability	
Insured entire year	62.3 (58.0 – 66.6)
1 or more periods uninsured, past year	32.9 (19.5 – 46.2)
Insurance type	
Private only	65.6 (60.7 – 70.4)
Public only	57.3 (49.2 – 65.3)
Both private and public	45.3 (30.9 – 59.7)
Income level	
0-199% FPL	53.7 (47.1 – 60.2)
200-299% FPL	62.3 (52.8 – 71.7)
300-399% FPL	64.0 (53.9 – 74.2)
400% FPL or greater	71.8 (65.1 – 78.5)
Race/ethnicity	
White, non-Hispanic	63.1 (58.5 – 67.6)
Black, non-Hispanic	54.8 (45.7 – 64.0)
Hispanic*	24.9 (6.7 – 43.2)
Multi-racial, non-Hispanic	54.1 (26.1 – 82.2)
Other, non-Hispanic	78.0 (54.6 – 100)
Age	
0-5 years	70.8 (62.7 – 78.9)
6-11 years	58.6 (51.8 – 65.4)
12-17 years	54.6 (47.9 – 61.2)
Qualification reason	
Functional limitations	48.5 (39.4 – 57.6)
Managed by prescription medications	69.8 (64.4 – 75.3)
Above routine need/use of services	60.6 (46.5 – 74.6)
Prescription medications and service use	49.8 (40.2 – 59.4)
Medical home	
Yes	81.5 (76.9 – 86.1)
No	38.8 (32.6 – 45.0)

*Estimates based on sample sizes too small to meet standards for reliability or precision

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Medical Home

This area is based on Healthy People 2010/MCHB *Core Outcome # 2: CSHCN receive coordinated, ongoing, comprehensive care within a medical home*. It also relates to *NPM #03: The percent of CSHCN*

age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home. The data for this indicator come from the NSCSHCN.

In Alabama, 50 percent of families reported success for this measure. This is slightly above the national estimate, 47.1 percent, but this is not a significant difference based on a comparison of confidence intervals. These estimates are based on updated data from the 2005-06 iteration of the NSCSHCN. Per survey notes, this outcome cannot be compared to 2001 results due to changes in methodology. Most families did report having a source for sick care other than an emergency room (93.6 percent). CSHCN with medical homes were statistically significantly less likely to have unmet health service or equipment needs than were those without medical homes. Of those with medical homes, 94.4 percent had no unmet needs compared with 80.8 percent of those without medical homes.

Comparing across geographic regions, families that lived in suburban areas tended to report greater success for this measure, though the differences between the regions were not significant per comparison of confidence intervals. Table 3.16 displays these results.

Table 3.16. Medical Home: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
49.3 (42.9 – 55.8)	53.1 (44.2 – 62.1)	46.6 (34.4 – 58.9)	50.2 (39.5 – 60.9)

Looking at success for this measure according to important subgroups reveals several significant differences based on comparison of confidence intervals. Some additional trends can also be observed; however, they are not significant per comparison of confidence intervals. These trends are often mirrored in the national data and result in statistically significant differences according to comparison of confidence intervals. There are similar limitations based on confidence interval range and sample size. Alabama families were significantly more likely to report success for this measure if they were consistently insured and if they had incomes at 300-399 percent of the FPL or 400 percent or greater of the FPL, as opposed to 0-199 percent of the FPL. Also, families of CSHCN with private insurance only were more likely to have a medical home as opposed to those with both private and public coverage. Finally, those families with children who qualified as CSHCN based solely on needing prescription medications were significantly more likely to report success for this measure than were those with CSHCN who qualified for other reasons. Table 3.17 below summarizes these results.

Table 3.17. Medical Home: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance status	
Currently insured	50.2 (45.8 – 54.7)
Currently not insured*	31.4 (6.3 – 56.5)
Insurance stability	
Insured entire year	51.8 (47.2 – 56.3)
1 or more periods uninsured, past year	29.4 (15.4 – 43.4)
Insurance type	
Private only	59.6 (54.4 – 64.8)
Public only	42.4 (33.9 – 50.8)
Both private and public	31.9 (17.7 – 46.0)

Selected Indicator	Percent Achieved (CI)
Income level	
0-199% FPL	40.5 (33.8 – 47.3)
200-299% FPL	52.0 (42.1 – 61.9)
300-399% FPL	64.6 (54.3 – 74.9)
400% FPL or greater	64.7 (57.1 – 72.3)
Race/ethnicity	
White, non-Hispanic	54.5 (49.7 – 59.4)
Black, non-Hispanic	40.5 (31.2 – 49.9)
Hispanic*	39.9 (16.4 – 63.4)
Multi-racial, non-Hispanic	53.7 (26.7 – 80.8)
Other, non-Hispanic*	48.5 (17.8 – 79.1)
Age	
0-5 years	51.3 (41.7 – 60.9)
6-11 years	49.9 (42.7 – 57.0)
12-17 years	49.3 (42.5 – 56.1)
Qualification reason	
Functional limitations	34.4 (25.5 – 43.3)
Managed by prescription medications	62.5 (56.6 – 68.4)
Above routine need/use of services	38.6 (23.8 – 53.4)
Prescription medications and service use	42.8 (33.0 – 52.5)

*Estimates based on sample sizes too small to meet standards for reliability or precision

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Adequate Insurance

This area is based on Healthy People 2010/MCHB *Core Outcome #3: CSHCN have adequate public and/or private insurance to pay for the services they need*. It also relates to *NPM #04: The percent of CSHCN age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need*. The data for this indicator come from the NSCSHCN.

In Alabama, 65 percent of families reported success for this measure. This is slightly above the national estimate, 62 percent, but this is not a significant difference based on a comparison of confidence intervals. These estimates are based on updated data from the 2005-06 iteration of the NSCSHCN. Per survey notes, this outcome can be compared to 2001 results. Per the 2005-06 survey versus the 2001 survey, 5.4 percent more Alabama families and 2.4 percent more U.S. families reported adequate insurance.

Comparing across geographic regions, families that lived in large towns tended to report greater success for this measure, though the differences between the regions were not significant when comparing confidence intervals. Table 3.18 below displays these results.

Table 3.18. Adequate Insurance: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
68.4 (62.4 – 74.4)	64.1 (55.4 – 72.8)	69.1 (58.4 – 79.7)	54.0 (43.6 – 64.4)

Looking at success for this measure according to important subgroups reveals several significant differences based on comparison of confidence intervals. Some additional trends can also be observed; however, they are not significant when comparing confidence intervals. These trends are often mirrored in the national data and result in statistically significant differences per comparison of confidence intervals. There are similar limitations based on confidence interval range and sample size. Alabama families were significantly more likely to report success for this measure if they were consistently insured, had a medical home, and had incomes at 400 percent or greater of the FPL, as opposed to 0-199 percent of the FPL. Also, families of CSHCN with private insurance only were more likely to have adequate insurance as opposed to those with both private and public coverage. Finally, those families with children who qualified as CSHCN based solely on needing prescription medications were significantly more likely to report success for this measure than were those with CSHCN who qualified based on functional limitations. Table 3.19 summarizes these results.

Table 3.19. Adequate Insurance: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance type	
Private only	69.5 (64.6 – 74.4)
Public only	67.6 (59.8 – 75.5)
Both private and public	46.1 (32.0 – 60.3)
Income level	
0-199% FPL	59.5 (53.0 – 66.0)
200-299% FPL	64.7 (55.5 – 73.9)
300-399% FPL	70.1 (59.9 – 80.3)
400% FPL or greater	76.3 (69.7 – 82.9)
Race/ethnicity	
White, non-Hispanic	66.4 (61.7 – 71.0)
Black, non-Hispanic	63.2 (54.2 – 72.1)
Hispanic	44.5 (20.6 – 68.4)
Multi-racial, non-Hispanic	62.3 (37.0 – 87.5)
Other, non-Hispanic	61.1 (30.7 – 91.6)
Age	
0-5 years	67.0 (58.3 – 75.8)
6-11 years	63.9 (57.1 – 70.8)
12-17 years	64.8 (58.3 – 71.3)
Qualification reason	
Functional limitations	54.2 (45.1 – 63.3)
Managed by prescription medications	71.2 (65.6 – 76.9)
Above routine need/use of services	63.0 (47.4 – 78.5)
Prescription medications and service use	63.3 (53.9 – 72.7)
Medical home	
Yes	76.4 (70.9 – 81.9)
No	53.9 (47.6 – 60.1)

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Early and Continuous Screening

This area is based on Healthy People 2010/MCHB *Core Outcome #4: CSHCN who are screened early and continuously for special health care needs*. There is no corresponding NPM. The 2005-06 NSCSHCN included baseline results for early and continuous screening for special healthcare needs. Overall, 62.3 percent of Alabama families with CSHCN reported success for this measure versus 63.8 percent of U.S. families, though this is not a significant difference based on comparison of confidence intervals.

Comparing across geographic regions, families that lived in urban core and suburban areas tended to report greater success for this measure. Based on comparison of confidence intervals, the differences are significant when compared with the experience of CSHCN living in small town/rural areas. Table 3.20 displays these results.

Table 3.20. Early and Continuous Screening: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
68.5 (62.6 – 74.3)	69.3 (60.7 – 77.9)	50.4 (38.7 – 62.1 0)	45.5 (35.3 – 55.7)

Looking at success for this measure according to important subgroups reveals several significant differences based on comparison of confidence intervals. Some additional trends can also be observed; however, they are not significant when comparing confidence intervals. These trends are often mirrored in the national data and result in statistically significant differences per comparison of confidence intervals. As described earlier, Alabama data have limitations based on confidence interval range and sample size. Alabama families were significantly more likely to report success for this measure if they were consistently insured, had private insurance only as opposed to public only, and had incomes at 300-399 percent of the FPL or 400 percent or greater of the FPL, as opposed to 0-199 percent of the FPL. Table 3.21 summarizes these results.

Table 3.21. Early and Continuous Screening: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance status	
Currently insured	62.6 (58.3 – 66.9)
Currently not insured	49.1 (22.4 – 75.7)
Insurance stability	
Insured entire year	63.3 (58.9 – 67.7)
1 or more periods uninsured, past year	50.8 (36.1 – 65.4)
Insurance type	
Private only	70.8 (66.1 – 75.4)
Public only	53.5 (45.3 – 61.8)
Both private and public	54.5 (40.1 – 68.9)
Income level	
0-199% FPL	55.6 (49.0 – 62.2)
200-299% FPL	67.5 (58.5 – 76.5)
300-399% FPL	73.4 (64.4 – 82.4)
400% FPL or greater	69.7 (62.6 – 76.8)

Selected Indicator	Percent Achieved (CI)
Race/ethnicity	
White, non-Hispanic	65.8 (61.3 – 70.3)
Black, non-Hispanic	54.9 (45.6 – 64.2)
Hispanic	59.6 (34.3 – 84.8)
Multi-racial, non-Hispanic	57.0 (30.5 – 83.4)
Other, non-Hispanic	83.0 (59.7 – 100)
Age	
0-5 years	54.9 (45.6 – 64.3)
6-11 years	68.1 (61.5 – 74.6)
12-17 years	60.6 (53.9 – 67.3)
Qualification reason	
Functional limitations	63.2 (54.4 – 71.9)
Managed by prescription medications	62.0 (56.0 – 67.9)
Above routine need/use of services	61.4 (46.2 – 76.6)
Prescription medications and service use	62.5 (52.7 – 72.2)
Medical home	
Yes	65.3 (59.2 – 71.4)
No	58.8 (52.6 – 65.0)

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Organized Community-Based Systems

This area is based on Healthy People 2010/MCHB *Core Outcome #5: CSHCN whose community-based service systems are organized for ease of use*. It also relates to *NPM #05: The percent of CSHCN age 0 to 18 whose families report the community-based service systems are organized so they can use them easily*. The data for this indicator come from the NSCSHCN.

In Alabama, 91.7 percent of families with CSHCN reported success for this measure, versus 89.1 percent of U.S. families, but this is not a significant difference based on a comparison of confidence intervals. These estimates are based on updated data from the 2005-06 iteration of the NSCSHCN. Per survey notes, this outcome cannot be compared to 2001 results due to changes in methodology.

Comparing across geographic regions, there is little variation, though families that lived in large towns tended to report slightly less success for this measure. The differences between the regions are not significant when comparing confidence intervals. Table 3.22 displays these results.

Table 3.22. Organized Community-Based Systems: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
92.5 (89.3 – 95.6)	92.0 (87.8 – 96.1)	85.7 (78.5 – 93.0)	93.5 (89.0 – 98.0)

Looking at success for this measure according to important subgroups reveals several significant differences based on comparison of confidence intervals. Some additional trends can also be observed; however, they are not significant when comparing confidence intervals. These trends are often mirrored in the national data and result in statistically significant differences by confidence intervals.

There are similar limitations based on confidence interval range and sample size. Alabama families were significantly more likely to report success for this measure if they had a medical home and if their children qualified as CSHCN based solely on needing prescription medications as opposed to functional limitations or prescription medications and service use together. Also, those classified as other, non-Latino appeared to report greater success for this measure, though the sample size was very small and there is no reported range for the confidence interval. Table 3.23 summarizes these results.

Table 3.23. Organized Community-Based Systems: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance status	
Currently insured	91.9 (89.7 – 94.0)
Currently not insured	82.3 (62.9 – 100)
Insurance stability	
Insured entire year	92.5 (90.3 – 94.6)
1 or more periods uninsured, past year	82.5 (72.2 – 92.9)
Insurance type	
Private only	93.5 (91.1 – 96.0)
Public only	90.7 (86.7 – 94.8)
Both private and public	87.2 (78.6 – 95.7)
Income level	
0-199% FPL	90.5 (87.2 – 93.8)
200-299% FPL	89.0 (82.4 – 95.6)
300-399% FPL	91.9 (87.0 – 96.7)
400% FPL or greater	96.3 (93.7 – 99.0)
Race/ethnicity	
White, non-Hispanic	91.5 (88.9 – 94.0)
Black, non-Hispanic	92.6 (88.4 – 96.8)
Hispanic	80.2 (61.2 – 99.1)
Multi-racial, non-Hispanic	85.4 (70.3 – 100)
Other, non-Hispanic	100 (100 – 100)
Age	
0-5 years	92.6 (88.3 – 96.8)
6-11 years	91.7 (88.2 – 95.1)
12-17 years	91.2 (87.7 – 94.7)
Qualification reason	
Functional limitations	80.7 (74.3 – 87.1)
Managed by prescription medications	97.9 (96.1 – 99.7)
Above routine need/use of services	92.7 (86.5 – 98.9)
Prescription medications and service use	89.3 (83.9 – 94.6)
Medical home	
Yes	97.7 (96.1 – 99.2)
No	85.6 (81.6 – 89.7)

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Transition

This area is based on Healthy People 2010/MCHB *Core Outcome #6: CSHCN ages 12-17 who receive services needed for transition to adulthood (health care, work, and independence)*. It also relates to *NPM #06: The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence*. The data for this indicator come from the NSCSHCN.

In Alabama, 38.3 percent of families with CSHCN reported success for this measure versus 41.2 percent of U.S. families, but this is not a significant difference based on a comparison of confidence intervals. These estimates are based on updated data from the 2005-06 iteration of the NSCSHCN. Previous Alabama estimates for this measure were not reliable and, per survey notes, this outcome cannot be compared to 2001 results due to changes in methodology.

Comparing across geographic regions, families that lived in suburban areas tended to report greater success for this measure, though the differences between the regions are not significant when comparing confidence intervals and the estimate for those in large towns do not meet reliability and precision standards. Table 3.24 displays these results.

Table 3.24. Transition: Percent Successfully Achieved by Geographic Region, Alabama, 2005-2006

Urban Core % (CI)	Suburban % (CI)	Large Town % (CI)	Small Town/Rural % (CI)
36.2 (27.2 – 45.2)	49.2 (35.1 – 63.3)	26.5* (7.1 – 45.9)	37.7 (20.8 – 54.6)

*Estimates based on sample sizes too small to meet standards for reliability or precision

In many cases, when attempting to look at the Alabama data related to success for this measure by subgroups, the sample sizes were too small to meet reliability and precision standards. When those were met, often the confidence interval ranges were quite large, so even trends that are significant in the national data could not be supported. There are two significant differences based on a comparison of confidence intervals. Alabama families were significantly more likely to report success for this measure if they had a medical home and if they had incomes at 400 percent or greater of the FPL, as opposed to 0-199 percent of the FPL. Table 3.25 summarizes these results.

Table 3.25. Transition: Percent Successfully Achieved by Selected Indicator, Alabama, 2005-2006

Selected Indicator	Percent Achieved (CI)
Insurance status	
Currently insured	39.1 (32.4 – 45.8)
Currently not insured	0
Insurance stability	
Insured entire year	42.1 (35.0 – 49.2)
1 or more periods uninsured, past year*	9.5 (0 – 20.4)
Insurance type	
Private only	52.2 (44.3 – 60.2)
Public only	20.0 (8.6 – 31.4)
Both private and public*	27.5 (5.2 – 49.9)

Selected Indicator	Percent Achieved (CI)
Income level	
0-199% FPL	23.1 (13.7 – 32.4)
200-299% FPL	48.0 (32.8 – 63.2)
300-399% FPL	49.5 (30.6 – 68.4)
400% FPL or greater	60.0 (48.8 – 71.2)
Race/ethnicity	
White, non-Hispanic	44.2 (36.7 – 51.6)
Black, non-Hispanic	26.7 (13.3 – 40.2)
Hispanic*	40.8 (7.8 – 73.9)
Multi-racial, non-Hispanic*	19.5 (0 – 55.2)
Other, non-Hispanic*	34.2 (0 – 85.9)
Qualification reason	
Functional limitations	29.9 (16.3 – 43.6)
Managed by prescription medications	45.0 (35.5 – 54.4)
Above routine need/use of services	46.3 (22.5 – 70.1)
Prescription medications and service use	31.2 (18.1 – 44.2)
Medical home	
Yes	56.9 (47.2 – 66.6)
No	22.5 (14.8 – 30.1)

*Estimates based on sample sizes too small to meet standards for reliability or precision

Shaded areas indicate significant differences exist within the subgroup based on comparison of confidence intervals.

Care Coordination

Although there is no Healthy People 2010 outcome measure or NPM associated with care coordination, this is a service that is critical for CYSHCN and their families so that they may best benefit from the services they need and receive. It is also a key service provided by CRS. The NSCSHCN provides information on this area of interest via a derived indicator. In Alabama, 62.2 percent of CSHCN who needed care coordination received all the needed components of the service. This was slightly above the estimate for the nation, 59.2 percent, but the difference was not significant based upon a comparison of confidence intervals. Taken in reverse, this means that almost 40 percent of Alabama CSHCN did not receive one or more elements of care coordination.

Overall, CSHCN in Alabama meet Healthy People 2010 outcomes at similar rates to their national peers. However, there are important subgroup differences—race/ethnicity, age, income, insurance, medical home, and type of need—that require special attention during program planning.

National Survey of Children's Health, 2007

The NSCH offers a wide range of information, but only selected indicators were analyzed, chosen because they add to the findings gathered from NSCSHCN and act as an adjunct to the primary data collected by CRS. The selected indicators are related to family supports, neighborhood, and CSHCN involvement in community and school activities.

Based on a comparison of confidence intervals, parents of Alabama CSHCN were more likely to experience child care issues and job-related changes due to child care issues than were Alabama parents of non-CHSCN. This trend is also seen nationally. The Alabama data are not significantly different from the national estimates. Alabama non-CSHCN were more likely to live in supportive neighborhoods than were their national peers; however, there are no differences seen for CSHCN. Supportive neighborhoods are defined based on questions related to neighbors helping each other and watching out for each others' children. Alabama CSHCN and Alabama non-CSHCN were more likely than their national peers to live in neighborhoods with no amenities (parks, recreation centers, sidewalks, or libraries). No specific CSHCN differences are noted. Nationally, non-CSHCN were more likely to participate in sports teams or lessons, clubs, or organizations outside of schools than were their CSHCN peers. Although this trend is observed in the Alabama data, it is not significant by confidence interval. Table 3.26 summarizes these results.

Table 3.26. Selected Indicators, CSHCN Versus Non-CSHCN, Alabama Versus U.S., 2007

Indicator	Alabama % (CI)		Nation % (CI)	
	CSHCN	Non-CSHCN	CSHCN	Non-CSHCN
Parents had problems with child care or job-related changes due to child care reasons	52.4 (33.9-70.9)	30.1 (23.8-36.3)	37.1 (33.1-41.0)	29.8 (28.4-31.3)
Children living in supportive neighborhoods	78.5 (71.3-85.7)	87.6 (84.9-90.2)	80.4 (78.9-81.9)	83.9 (83.2-84.6)
Children living in neighborhoods with no amenities	15.2 (9.4-21.0)	11.1 (8.7-13.5)	4.7 (4.0-5.3)	4.6 (4.2-4.9)
Children usually or always feel safe at school	85.5 (79.3-91.8)	86.2 (82.4-90.0)	88.8 (87.5-90.1)	89.8 (89.0-90.6)
Children participate in one or more organized activities outside school	77.4 (69.8-84.9)	79.7 (75.6-83.9)	77.2 (75.4-79.0)	81.7 (80.7-82.7)

Primary Data: Children's Rehabilitation Service

Primary data were collected from families, youth, and providers to more adequately assess the current status of Alabama's CYSHCN. Findings from three main methodologies—focus groups, surveys, and key informant interviews—are described next.

County-Level Provider Surveys

CRS staff facilitated the completion of surveys on a county-by-county basis, utilizing various methods to obtain input from providers and agencies serving CYSHCN in the county. (In this report, these surveys are collectively referred to as the Service Providers for CYSHCN Survey.) There were 501 total respondents counted across all counties, with a wide range of community providers and partners represented. Given the increased number of participants and multi-agency involvement, the data are considered to be a valid representation of actual barriers and conditions at the county level. (The Service Providers for CYSHCN Survey tool is in *Selected Tools for MCH Needs Assessment*, which is available upon request.[6])

As in previous years, data were analyzed not only in aggregate, but also according to geographic categories and Black Belt designation. Statewide data from the 2009-10 Needs Assessment were compared with data gathered during the 1994, 1999, and 2004-05 needs assessments whenever possible. Some differences in analyzed responses were noted by geographic region.

Barriers

A list was provided of 14 potential barriers to receiving services that might be experienced by CYSHCN and their families. Respondents were to answer "yes" or "no" to indicate whether that particular item posed a barrier to CYSHCN and their families receiving needed services. Respondents were then asked to assign a rank for the importance level of that barrier as either "high," "medium," or "low." The ratings basically asked the respondents to consider how much of a problem the identified barrier was for CYSHCN and their families. Only those barriers actually identified as present in the county were ranked. A numeric value was assigned to these designations to assist with ranking. Responses were tabulated to obtain the number of counties that indicated the item was a barrier as well as the total priority score from the rankings. First, barriers were ranked in order of the number of counties that indicated the item as a barrier. Ties were then broken based on the priority ranking score. In the event of a tie for both scores, the barriers were presented in the order in which they appeared in the survey. Barriers were ranked statewide and by geographic region and Black Belt designation.

Statewide Barriers

Of the top five barriers for the 2009-2010 Needs Assessment, three were also in the top five in 2004 and all five were in the top five in 1999. "Transportation" continued to be the number one barrier identified by providers, and this follows a trend that has been observed since 1994. "Families unsure how to use the system" has been the number two or three barrier since 1999. "Lack of child care" continued to be in the top five, as has also been the case since 1994. "Lack of information on resources and health needs" and "insurance does not adequately cover needed health and related services" have both moved in to the top five from number 8 and number 11, respectively, in 2004. "Providers not available" was the number four barrier in 2004, but dropped to number 10 for 2009. Another significant change was seen for "costs of services are too high." This barrier was ranked as number six by providers in 2004, but dropped to number 12 in 2009. Other barriers were ranked at similar levels to previous needs assessment years. Table 3.27 summarizes these results.

Table 3.27. Barriers to Receiving Services for CYSHCN and Families, Statewide, Alabama, Selected Years

2009 (in rank order)	2004 rank	1999 rank	1994 rank
1. Transportation	1	1	1
2. Families unsure how to use the system	3	2	7
3. Lack of child care	5	5	4
4. Lack of information on resources and health needs	8	5	10
5. Insurance does not adequately cover needed health and related services	11	5	6
6. Lack of health insurance	7	3	10
7. Inadequate transition	9	n/a	n/a
8. Cultural or language barriers	10	7	14
9. Lack of facilities with convenient locations	12	8	9
10. Providers not available	4	4	5
11. Lack of facilities with convenient hours	13	9	13
12. Costs of services are too high	6	6	2
13. Other	15	11	8
14. State policy or administrative barriers	14	10	11

Source: Service Providers for CYSHCN Survey

Barriers According to Geographic Area

Responses were stratified according to geographic region, and data were compared to statewide findings as well as between groups. Statewide, and for the Rural North and Rural South geographic regions, "transportation" was ranked as the number one barrier to care for CYSHCN. In 2004, this barrier was also ranked as the number one barrier for the Urban region; however, for the 2009-10 Needs Assessment, it dropped to number three in that area. In addition to "transportation," the only other barrier that appeared in the top five list across all three geographic regions was "families unsure how to use the system." Differences were noted geographically in further rankings. For example, "lack of child care" was mentioned in the top five list for Rural North or Rural South, but not for Urban areas. The barrier "insurance does not adequately cover needed health and related services" illustrates another example of this geographic variation. This barrier was ranked as one of the top five barriers for the Urban regions, but not for the Rural North and Rural South regions. Table 3.28 summarizes the results across all three geographic regions.

Table 3.28. Top Five Barriers to Obtaining Services for CYSHCN and Families, by Geographic Region, Alabama, 2009

Rank	Rural North	Rural South	Urban
1	Transportation	Transportation	Families unsure how to use the system
2	Families unsure how to use the system	Inadequate transition	Cultural/language barriers
3	Lack of child care	Families unsure how to use the system	Transportation
4	Lack of information on resources and health needs	Lack of facilities with convenient hours	Insurance does not adequately cover needed health and related services
5	Lack of health insurance *and* Lack of facilities with convenient locations	Lack of child care	Other

Source: Service Providers for CYSHCN Survey

Barriers According to Black Belt Designation

Responses were also stratified according to Black Belt designation, and data were compared between groups. "Transportation" was the number one barrier for both groups. "Families unsure how to use the system" was in the top five list for both groups. Specifically for the Black Belt region, "lack of information on resources and health needs" and "providers not available" were among the top five barriers. Given the known lack of resources in the area, this is not surprising. Perhaps "inadequate transition" being listed also is partially explained by the lack of resources in the area. In the non-Black Belt region, consistency and adequacy of health insurance were in the top five issues, as were cultural and language barriers. Table 3.29 summarizes the results between the two groups.

Table 3.29. Top Five Barriers to Obtaining Services for CYSHCN and Families, by Black Belt Designation, Alabama, 2009

Rank	Black Belt	Non-Black Belt
1	Transportation	Transportation
2	Inadequate transition	Families unsure how to use

Rank	Black Belt	Non-Black Belt
		the system
3	Lack of information on resources and health needs	Insurance does not adequately cover needed health and related services
4	Families unsure how to use the system *and* Lack of child care	Cultural/language barriers
5	Providers not available	Lack of health insurance

Source: Service Providers for CYSHCN Survey

Services

The Service Providers for CYSHCN Survey tool included questions related to the availability of 23 specific services that may be utilized by CYSHCN and their families. These services were divided into health services and community-based services. Respondents were first asked to consider whether these services were available within the county. If a service was not available within the county, the respondents were then asked to consider whether it was available in an adjoining or neighboring county. Comparisons could then be made statewide, by geographic region and by Black Belt designation. Service availability questions were included in the 1999 and 2004 needs assessments, but results are not truly comparable. Previously, the focus was on availability of services in the county. CRS's leadership team for the 2009-10 Needs Assessment felt that service availability should not focus simply on the county, but the surrounding area given that certain services would not be expected within each county. For purposes of categorization, difficulty in obtaining services or less than optimal service availability was considered if a service was not available (within county or in adjoining county) in at least 90 percent of counties. Table 3.30 displays statewide availability of services either within counties or in neighboring counties. Most services were available either within the county or in a neighboring county. Three community-based services—respite, summer and/or after-school care, and transportation—were available (in county or in adjoining county) in less than 90 percent of counties.

Table 3.30. Statewide Service Availability, Alabama, 2009

Service	Statewide (n=67)	
	Available within county or adjoining county	%
Health Services		
Primary care	67	100
Specialty care	65	97
Emergency care	66	99
Mental health/behavioral	65	97
Developmental screening	66	99
Dental	66	99
Physical therapy	67	100
Occupational therapy	64	96
Speech language pathologist services	66	97
Nutrition	67	100
Vision	66	99
Hearing	63	94
Equipment/braces	61	91

Service	Statewide (n=67)	
	Available within county or adjoining county	%
Community-based Services		
Care coordination	66	99
Daycare	64	96
Early intervention	67	100
Education	67	100
Family support	63	94
Transition	63	94
Recreation	63	94
Respite	57	85
Summer/after-school care	58	87
Transportation	58	87

Source: Service Providers for CYSHCN Survey
Shaded services available in less than 90% of counties

Comparing service availability across geographic areas and Black Belt designation revealed differences. Rural North counties had similar availability to the statewide numbers, with only respite, summer and after-school care, and transportation available in less than 90 percent of counties. Urban counties showed less than 90 percent service availability for only respite and summer and after-school care. Rural South counties had considerably more services that were not available in at least 90 percent of the counties. In addition to respite, summer and after-school care, and transportation, other services included hearing, equipment/braces, family support, transition, and recreation. All three geographic areas had community-based services that were not available either within the county or in an adjoining county for less than 90 percent of the counties. However, Rural South counties not only had more community-based services that were less available, but also were the only counties to report health service availability difficulties as well. Findings for counties within the Black Belt designation were the same as those for the Rural South. Tables 3.31 and 3.32 display services that were difficult to obtain by geographic region and Black Belt designation.

Table 3.31. Service Availability at Less than 90 Percent by County Designation (Within County or in Adjoining County), Alabama, 2009

Service	Rural North (n=29)		Rural South (n=26)		Urban (n=12)	
	Total	%	Total	%	Total	%
Health Services						
Hearing	28	97	23	88	12	100
Equipment/braces	27	93	22	85	12	100
Community-based Services						
Family support	28	97	23	88	12	100
Transition	28	97	23	88	12	100
Recreation	28	97	23	88	12	100
Respite	25	86	22	85	10	83
Summer/after-school care	25	86	23	88	10	83
Transportation	25	86	22	85	11	92

Source: Service Providers for CYSHCN Survey
Shaded areas are service availabilities at less than 90%

Table 3.32. Service Availability at Less than 90 Percent by Black Belt Designation (Within County or in Adjoining County), Alabama, 2009

Service	Non-Black Belt (n=48)		Black Belt (n=19)	
	Total	%	Total	%
Health Services				
Hearing	47	98	16	84
Equipment/braces	46	96	15	79
Community-based Services				
Family support	47	98	16	84
Transition	47	98	16	84
Recreation	47	98	16	84
Respite	42	88	15	79
Summer/after-school care	42	88	16	84
Transportation	41	85	17	89

Source: Service Providers for CYSHCN Survey

Differences existed for barriers and service availability by geographic region and Black Belt designation. Overall, community-based services tended to be more difficult to obtain than health services. Respite care, summer and after-school care, and transportation tended to be the most difficult services to obtain statewide.

CRS Key Informant Interviews

After the Service Providers for CYSHCN Survey data were analyzed, the CRS Needs Assessment leadership team determined that clarification was needed relative to service availability in the State. Specifically, the team felt that not enough was known about experiences with service availability at the county level in terms of burden or difficulty in obtaining services. The Service Providers for CYSHCN Survey gave an idea of the availability of services (either within the county or in a neighboring county), but did not provide an idea of what that really meant to people living in communities. For example, a service could indeed be available in a county, but could still be a burden to obtain based on a variety of issues (waiting lists, number of providers, expertise, travel, etc.). Also, a service with availability in a neighboring county might be relatively easy or significantly difficult to obtain depending upon geographic location. To that end, the team decided to conduct key informant interviews with a goal of clarifying what had been learned from providers and filling in gaps related to difficulty or burden. CRS District Supervisors and Office Coordinators were selected as key informants as they are seen as having expert knowledge in advocating for and providing services to CYSHCN and their families (either directly or through administration/oversight) at the community level. All 14 interviews were conducted by the CRS Needs Assessment Coordinator. A three-question tool was developed in collaboration with UAB School of Public Health. The interview included assessments of the level of burden or difficulty faced by families living in the county in obtaining health and community-based services, the effectiveness of the overall system of care for CYSHCN and families in the county, and the three greatest service needs in the county. (The key informant interview tool is in *Selected Tools for MCH Needs Assessment.*[6])

Level of Difficulty

The same list of 23 health and community-based services that was presented in the Service Providers for CYSHCN Survey and CYSHCN Family Survey (see next section) was presented to key informants. Respondents were asked to assess the level of difficulty or burden faced by families in the county in

obtaining the selected services. They were instructed to consider how hard it was for families to get the services, regardless of where they get them (within county, in neighboring county, or further away). This assessment was based on a 1 – 3 Likert scale for "harder than you would expect," "about what you would expect," and "easier than you would expect." Statewide, no services averaged "easier than you would expect." A slight majority of health services averaged to "about what you would expect" (7 of 13), with the others averaging to "harder than you would expect." Most community-based services averaged to "harder than you would expect" (6 of 10), with the remainder averaging to "about what you would expect." When comparing the average scores for all 23 services, the most difficult services to obtain statewide were 1) respite care, 2) transportation assistance, 3) recreation opportunities, 4) planning for transition to adulthood and, with a tie, 5) mental health/behavioral services and summer and after-school care. Five of these are community-based services. These findings are similar to those for the Service Providers for CYSHCN Survey in that respite, summer and after-school care, and transportation were difficult to obtain (available in less than 90 percent of counties—within or in adjoining). Table 3.33 displays these findings.

Table 3.33. Level of Difficulty/Burden in Obtaining Selected Services for CSHCN, Statewide, Alabama, 2009

Service	Harder Than You Would Expect (1), Frequency (%)	About What You Would Expect (2), Frequency (%)	Easier Than You Would Expect (3), Frequency (%)	Mean Level of Difficulty
Health Services				
Dental	22 (32.8)	37 (55.2)	8 (11.9)	1.79
Developmental screening	15 (22.4)	50 (74.6)	2 (3)	1.81
Emergency care	24 (35.8)	35 (52.2)	8 (11.9)	1.76
Hearing/hearing aids	27 (40.3)	35 (52.2)	5 (7.5)	1.67
Mental health/behavioral[α]	43 (64.2)	24 (35.8)	0	1.36
Nutrition	28 (41.8)	31 (46.3)	8 (11.9)	1.70
Occupational therapy	36 (53.7)	26 (38.8)	5 (7.5)	1.54
Physical therapy	31 (46.3)	29 (43.3)	7 (10.4)	1.64
Primary care	1 (1.5)	49 (73.1)	17 (25.4)	2.24
Special equipment or braces	34 (50.7)	29 (43.3)	4 (6)	1.55
Specialty care	40 (59.7)	23 (34.3)	4 (6)	1.46
Speech therapy	38 (56.7)	24 (35.8)	5 (7.5)	1.51
Vision/eyeglasses	17 (25.4)	46 (68.7)	4 (6)	1.81
Community-based Services				
Care coordination	13 (19.4)	48 (71.6)	6 (9)	1.90
Child care facilities/day care	30 (44.8)	32 (47.8)	5 (7.5)	1.63
Early intervention	2 (3)	52 (77.6)	13 (19.4)	2.16
Education services	3 (4.5)	52 (77.6)	12 (17.9)	2.13
Family support	39 (58.2)	26 (38.8)	2 (3)	1.45
Planning for transition to adulthood[α]	49 (73.1)	17 (25.4)	1 (1.5)	1.28
Recreation opportunities[α]	51 (76.1)	14 (20.9)	2 (3)	1.27
Respite care[α]	61 (91)	6 (9)	0	1.09
Summer/After- school care[α]	43 (64.2)	24 (35.8)	0	1.36
Transportation assistance[α]	54 (80.6)	13 (19.4)	0	1.19

Source: Key Informant Interviews conducted for all 67 Alabama counties

[α] Italicized services designate top 5 most difficult services to obtain.

Stratifying these results by geographic region and Black Belt designation revealed differences in assessment of how difficult services were to obtain. For Rural North counties, six of 13 health services and four of ten community-based services were ranked as "about what you would expect." The rest were ranked as "harder than you would expect." For Rural South counties, five of thirteen health services and three of ten community-based services were ranked "about what you would expect," while the rest were "harder than you would expect." Urban counties fared better in that no health services and only four of ten community services rated "harder than you would expect." All other services ranked "about what you would expect" in the Urban counties. In counties designated as Black Belt, three of 13 health services and three of ten community-based services were rated "about what you would expect," while all other services were rated as "harder than you would expect." Of interest, for both Rural North and Rural South counties, four of the six most difficult services to obtain were community-based services. Due to the small numbers of Urban counties, there were ties when stratifying down to the urban level; however, six of the seven most difficult services to obtain were community-based services. Black Belt counties also had several ties related to the most difficult services to obtain, but six of 12 were community-based services. This means that Black Belt counties had equal difficulties obtaining both health and community-based services, but other designations tended to have the most difficulty obtaining community-based services. In those areas that reported specific health services as "harder than you would expect," the services were mental health/behavioral, occupational therapy, physical therapy, special equipment/braces, specialty care, and speech therapy. Table 3.34 displays results for services that were rated "harder than you would expect" by geographic region and Black Belt designation.

Table 3.34. Health and Community-Based Services Rated by Key Informants as "Harder Than You Would Expect" to Obtain for CYSHCN and Their Families, Alabama, 2009

Designation	"Harder than you would expect"		
	Health Services	Community-based Services	Total (of 23 services)
Statewide	• Mental health/behavioral • Occupational therapy • Physical therapy • Special equipment or braces • Specialty care • Speech therapy	• Family support • Respite care • Planning for transition to adulthood • Recreation opportunities • Summer/after-school care • Transportation assistance	12
Rural North	• Emergency care • Hearing/hearing aids • Mental health/behavioral • Occupational therapy • Physical therapy • Special equipment or braces • Specialty care • Speech therapy	• Child care facilities/day care • Family support • Planning for transition to adulthood • Recreation opportunities • Respite care • Summer/after-school care • Transportation assistance	15
Rural South	• Hearing/hearing aids • Mental health/behavioral • Nutrition • Occupational therapy • Physical therapy • Special equipment or braces	• Child care facilities/day care • Family support • Planning for transition to adulthood • Recreation opportunities • Respite care	15

Designation	"Harder than you would expect"		
	Health Services	Community-based Services	Total (of 23 services)
	• Specialty care • Speech therapy	• Summer/after-school care • Transportation assistance	
Urban		• Planning for transition to adulthood • Respite care • Summer/after-school care • Transportation assistance	4
Black Belt	• Dental • Emergency care • Hearing/hearing aids • Mental health/behavioral • Nutrition • Occupational therapy • Physical therapy • Special equipment or braces • Specialty care • Speech therapy	• Child care facilities/day care • Family support • Planning for transition to adulthood • Recreation opportunities • Respite care • Summer/after-school care • Transportation assistance	17

Greatest Needs

Key informants were asked to consider all of the needs in the county in light of how they had rated the difficulty or burden in obtaining services. They were then asked to identify the three greatest needs in the county. Transportation ranked in the top three greatest needs statewide and for all stratifications. Therapies (physical, occupational, speech, and nutritional) ranked in the top three statewide and for all stratifications except for Urban counties. Specialty care was a greatest need for Rural South counties and counties designated as Black Belt. Although more of the community-based services were ranked as "harder than you would expect" to obtain, selected health services were predominantly in the top three greatest needs statewide and for all designations except Urban. Though ties within the smaller number of Urban counties made it somewhat difficult to identify three needs, six of the seven greatest needs were community-based services. Perhaps once general health service needs are met, key informants begin to consider the community-based supports that are adjunctive to them. Although transportation assistance is considered a community-based service support, its importance across all stratifications is not unexpected given the criticality of getting to services statewide. Table 3.35 summarizes these findings.

Table 3.35. Greatest Needs by Geographic Area and Black Belt Designation, in Rank Order, Alabama, 2009

Statewide	Rural North	Rural South	Urban	Black Belt
Transportation	Transportation	Transportation	Respite *and* Transportation	Transportation
Respite	Respite	Therapies (physical, occupational, speech pathology, nutritional)	Child care *and* Mental health/behavioral	Therapies (physical, occupational, speech pathology, nutritional)

Statewide	Rural North	Rural South	Urban	Black Belt
Therapies (physical, occupational, speech pathology, nutritional)	Child care *and* Therapies (physical, occupational, speech pathology, nutritional)	Specialty care	Family support and Summer/after-school care *and* Transition	Specialty care

Source: Key informant interviews conducted by CRS

Effectiveness of the Overall System of Care for CYSHCN and Their Families

Key informants were asked to rate the overall effectiveness of the system of care in the county in meeting the needs of CYSHCN and their families. Choices were again along a Likert scale including "excellent," "above average," "average," "below average," and "very poor." Combining results statewide, the overall system of care in Alabama was rated "average." Examining these ratings by geographic region and Black Belt designation revealed differences in effectiveness. Rural North, Rural South, and Black Belt counties rated "below average" overall, while Urban counties rated "average."

Although most services were available either within counties or in adjoining counties statewide, a significant number of services (especially community-based services) were considered "harder than you would expect" for CYSHCN and families to obtain. Regional and Black Belt designation differences existed. Identified greatest needs tended to be health service needs, except for the Urban counties. Alabama's overall system of care for CYSHCN and families was rated "average."

Youth Surveys

The Youth Survey was adapted from a tool created by the North Carolina Title V Program, Specialized Services Unit of the Division of Public Health. Original publication was possible through a grant from the CDC, Division of Birth Defects, Child Development, Disability, and Health Branch. It was utilized as a portion of the North Carolina 1999 needs assessment process. Permission was obtained to modify the survey for use in Alabama as a part of the State's 2004-05 Needs Assessment. This tool was again modified for use in the 2009-10 Needs Assessment. Modifications also included mirroring questions from the NSCSHCN. The instrument consists of 25 questions, with both open-ended and check box answers possible. The survey targets youth with special health care needs (ages 12-25 years) and includes questions related to basic demographics, condition or disability, insurance, health status, impact of condition or disability, school status, transition, social activity, future plans, informational needs, and whether help was obtained in completing the survey. (The Youth Survey tool is in *Selected Tools for MCH Needs Assessment.*[6])

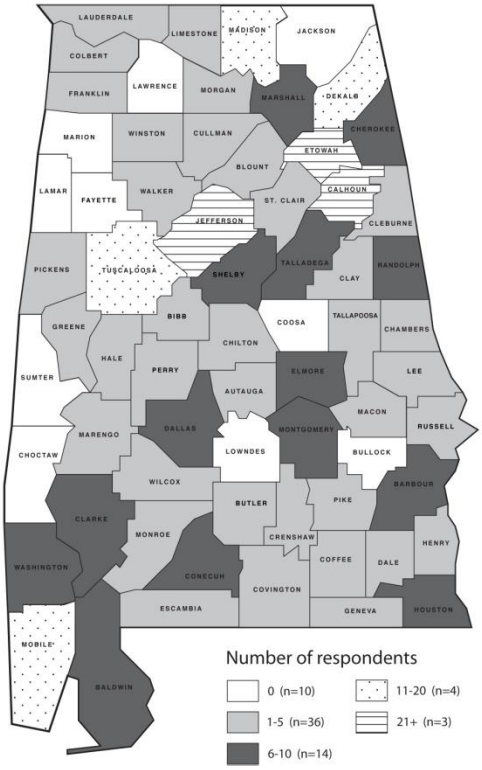
There were 336 surveys submitted, combining electronic and hard copy versions and English and Spanish responses (response rate 37.2 percent). This is an increase over the 229 responses from 2004 (35 percent response rate). Methodology for dissemination was primarily passive in that surveys were placed in strategic locations likely to be frequented by youth with special health care needs, but also included postcards and newsletter awareness tools and electronic outreach methods including email, listservs, links on web sites, and Facebook. Most surveys were completed in English and in hard copy.

Results follow, presented in broad categories. In general, findings indicate that responses from these youth were quite similar to those that might be expected from typically developing peers in terms of social activity choices, future plans, and perceived health status. This group appears to be insured, to have a source of routine primary care, to be currently in high school, to live in parents' homes, and to be more likely to receive Medicaid benefits. Youth who completed the survey without help from any outside source were more likely to have future plans that included completing college, working for pay, getting married, having children, and living independently than were those who needed help completing the items. Although only five youth took the survey in Spanish, those who did were more likely to report future plans that included living with family. It was suggested that this may be a cultural preference to live with family until marriage.

Demographics

Respondents were ages 14-20 years and tended to be female (54.4 percent). Just over 62 percent were White, while about 30 percent were Black; 4 percent were Latino; and about 3 percent were other races (multi-race, American Indian, etc.). The vast majority were currently in school and continued to live in their parents' homes. Of the 289 youth who answered the question related to whether they received help in completing the survey, 142 (49.1 percent) indicated that they had received help of some kind. This help may have included assistance reading the questions, writing down the answers given by the youth, translating the questions into the youth's language, or answering the questions on behalf of the youth. If help was received at all, the most common form was for someone to complete the survey on behalf of the youth or to read the questions to the youth. Responses were received from youth living in 57 of Alabama's 67 counties. Figure 3.86 displays responses by county.

Figure 3.86. Youth Survey Respondents by County, Alabama, 2009



Insurance
Within the group of respondents, 9.4 percent reported that they had no insurance. For those who reported no insurance, all but five were over 18 years of age. For those who indicated they had insurance, 51.6 percent reported that they had Medicaid, 36.7 percent reported private, 6.5 percent reported ALL Kids, and the remainder reported other insurance. These findings are similar to the 2004 findings.

Health Status, Impact of Condition, and Health-Related Issues
A list of 20 conditions or disabilities was included. Respondents were to indicate which, if any, of the conditions applied to them. Commonly reported conditions were epilepsy, cerebral palsy, orthopedic conditions, deafness/hearing impairment, blindness/vision impairment, learning disabilities, attention deficit disorder, mental health problems, respiratory conditions, and speech/language disorders.

Most youth indicated that they had a source of primary care, typically a physician's office, with only 6.1 percent indicating that they had no source of routine primary care. In responding to an item related to perceived health status, 75.2 percent of youth reported that their health was "good" or "excellent." These findings were similar to those reported in the 2004-05 Needs Assessment. Youth were also asked to comment on how often their health condition affected their ability "to do things." Of those who responded, 62.9 percent of youth reported at least "sometimes" (includes "sometimes," "frequently," and "always"). Youth were asked to rate the severity of the difficulties caused by their special healthcare needs. Almost 40 percent reported "moderate," with 26.3 percent reporting "minor" and 20.1 percent reporting "severe." Just over 16 percent indicated that they did not know.

Transition and Healthcare Independence
Several questions addressed healthcare independence. Just over 44 percent of youth indicated that their healthcare provider had talked with them about their healthcare needs as they become adults. Given the age range of survey respondents (14-20 years), this is a somewhat low percentage. About 51 percent of youth felt that their healthcare provider "frequently" or "always" encouraged them to take responsibility for their healthcare needs. Of those youth who had a visit during the year prior to the survey and indicated an answer, 60 percent said that they had ***not*** been given a chance to speak to the healthcare provider privately. This could potentially impede questions related to sensitive issues that may become important during adolescence. Finally, almost 45 percent reported that their healthcare provider "frequently" or "always" helped them feel involved or included in their healthcare decisions. Again, this is a somewhat low percentage give the age range of survey participants.

Social Activity
Several survey questions related to social activity. Of those youth who responded, almost 80 percent stated that they spend time doing things with people outside their homes "sometimes" or "a lot." A list of 17 social activities was included and youth were to indicate which, if any, they participated in. In general, the three most commonly reported social activities were "watching television," "listening to music," and "computer." Across all severity ratings, the top six activities were similar. There were some differences noted based on whether youth received help completing the survey, especially those where someone else had completed the survey on their behalf. Though the percentages differed, the most commonly reported activities were similar across all groups. These most common activities may be described as somewhat sedentary, and results are similar to those seen in the 2004 responses.

Future Plans

Youth were asked to consider a list of 10 potential future plans (choices for "don't know," "none of these apply to me," and "other" were also possible). In general, the most commonly reported plans included "working for pay," "living independently," "completing high school," "completing graduate school or professional school," and "marrying." Responses were stratified based on whether the youth received help completing the survey and based on severity. In the State's 2004-05 Needs Assessment, CRS also stratified responses to this question based on whether the youth received help completing the survey. Severity questions were not included in the 2004 iteration of the survey.

In both the 2004 and 2009 surveys, clear differences were noted for future plan activities based on whether the youth received help completing the survey. Youth who received help completing the survey were less likely to report these future plans, especially if the help was in the form of someone else completing the survey on the youth's behalf. In the 2009 survey, a similar trend was demonstrated for those who rated the impact of their condition as "severe." The trend for severity may be as expected, and help in the form of someone else completing the survey on the youth's behalf may be a proxy for severity. For this question, 24 percent of respondents had a severity rating of "severe" and 22 percent indicated they had received help in the form of "someone else completing the survey on the youth's behalf." It may be that youth with severity ratings of "severe" and those who received help in the form of "someone else completing the survey on the youth's behalf" were the same respondents. However, the lower numbers for youth who received any other help at all—excluding the category who received help in the form of someone else completing on the youth's behalf—are somewhat puzzling given that the help may have been simply to write down the answers the youth provided or to assist the youth by reading the questions. Reasons for these significant variations may include: Those who received help may be youth with more severe conditions; youth may think more independently if they are able to answer the survey without help; or youth may have different plans for themselves than those expressed by those who helped them complete the survey. This may indicate a need to educate and empower youth and their families about the future. Table 3.36 and 3.37 illustrate these differences.

3.36. Future Plans Reported by Youth with Special Health Care Needs, by "Received Help," Alabama, 2009

Future Plan	"Yes", Did Not Receive Help (%)	"Yes", Received Any Other Help* (%)	"Yes", Someone Else Completed on Youth's Behalf (%)
Living independently	59.4	47.8	40.7
Marrying	58.7	53.2	29.6
Working for pay	67.1	47.8	48.1
Completing high school	49.7	41.4	50.0
Completing graduate or professional school	58.0	48.7	25.9

* Does not include "someone else completed on youth's behalf"

Table 3.37. Future Plans Reported by Youth with Special Health Care Needs, by Severity, Alabama, 2009

Future Plan	"Yes", Minor or Moderate (%)	"Yes", Severe (%)
Living independently	61.3	26.3
Marrying	57.9	24.6
Working for pay	66.0	35.1

Future Plan	"Yes", Minor or Moderate (%)	"Yes", Severe (%)
Completing high school	59.1	31.6
Completing graduate or professional school	56.4	24.6

Information Needs
Youth were asked to consider a list of topics and to indicate any for which they would like to receive more information. The top six requests were job/careers, condition or disability, further education and training, healthy behaviors, successful persons living with disability, and insurance/"how to pay for my health care."

Alabama youth with special health care needs are typically insured and have a source for primary care. There is room for improvement related to transition and health care independence. Youth who received help completing the Youth Survey were less likely to report selected future plans than were those who did not receive help. Severity of condition only partially explains these differences.

CYSHCN Family Survey

The CYSHCN Family Survey was created based on research of tools utilized in other settings and mirrored questions from the Service Providers for CYSHCN Survey and the NSCSHCN, 2005-06. The tool was piloted by CRS Local Parent Consultants and two or three Local Parent Advisory Committee members in each district. The instrument consists of 26 questions, with both open-ended and check box answers possible. The survey targets families who have CYSHCN and includes questions related to basic demographics and information on need for, receipt of, and satisfaction with health and community-based services; on perceived barriers to care; on medical home; on transition services; and on informational needs. (The CYSHCN Family Survey tool is in *Selected Tools for MCH Needs Assessment.*[6])

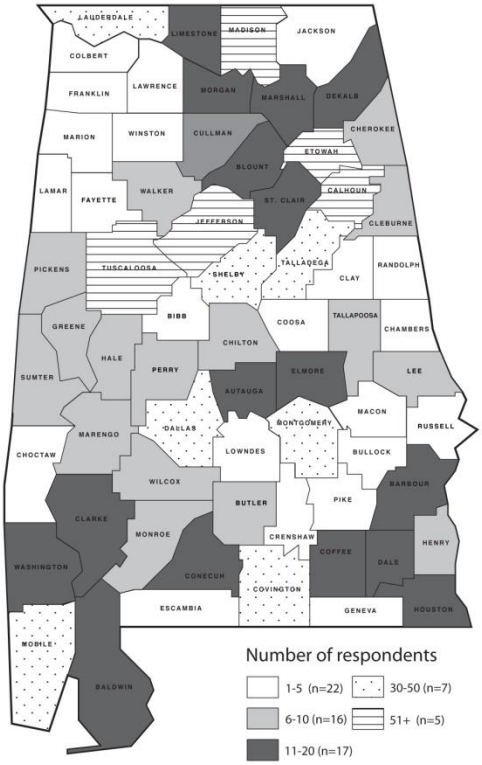
There were 1,103 surveys submitted, combining English and Spanish responses and both electronic and paper copy submissions (response rate 39.3 percent). Methodology for dissemination was primarily passive in that surveys were placed in strategic locations likely to be frequented by families of CYSHCN, but also included postcards and newsletter awareness tools and electronic outreach methods including email, listservs, links on web sites, and Facebook. Most surveys were completed in English and in hard copy.

Results follow, presented in broad categories. There were some differences noted between groups who took the survey in Spanish and those who took it in English, but these are discussed simply as trends since only 32 respondents took the survey in Spanish.

Demographics
Respondents typically indicated that they had one child or youth with special health care needs in the family, tended to be the parent, and were most often female (87 percent). The average age of the CYSHCN for those who took the CYSHCN Family Survey in English was 11 years, while it was lower (9 years) for those who took the survey in Spanish. Just over 61 percent were White, while about 34 percent were Black, 3 percent were Latino, and about 2 percent were other races (Asian, American Indian, etc.). This racial/ethnic distribution is similar to that observed in the Youth Survey. Of

respondents who took the survey in English, 86.5 percent had at least a high school education. Of those, 56.5 percent had some college or a college degree. For those who took the survey in Spanish, a lower percentage, 46.2 percent, had at least a high school education. Of those, 30.8 percent had some college or a college degree. In both groups, most respondents were married. There were responses from at least one family in each of Alabama's 67 counties. Figure 3.87 displays response by county.

Figure 3.87. CYSHCN Family Survey Respondents by County, Alabama, 2009



Insurance

Within the group of respondents, 9.4 percent (three) of those who took the survey in Spanish and 3.5 percent (35) of those who took it in English reported that their CYSHCN had no insurance. Again, only 32 respondents took the survey in Spanish, but this difference bears consideration. Overall, 3.7 percent of respondents reported that their CYSHCN was uninsured. Combining the groups, of those who indicated that their CYSHCN had insurance, 63.4 percent reported Medicaid, 35.2 percent reported private, 6.2 percent reported ALL Kids, and the remainder reported other insurance. These findings are similar to the Youth Survey findings except Youth Survey respondents reported slightly higher uninsured percentages and slightly lower Medicaid.

Impact of Condition

In both respondent groups, the majority of families rated the severity of difficulties caused by the special healthcare need as "moderate." This is similar to the findings from the Youth Survey.

Health and Community-Based Services

The same list of health and community-based services utilized in the Service Providers for CYSHCN Survey and CRS key informant interviews was presented to families. Respondents were asked to indicate which services their CYSHCN had needed during the previous 12 months. For those services

that were needed, families were asked to indicate whether they actually received the service. Respondents were also asked about satisfaction with services received, but those results are not presented in this document. There was a large amount of missing data in this section of the survey. Even though the survey tool was piloted and modifications were made as indicated, the CRS Needs Assessment leadership team believes retrospectively that this section was awkward, especially in hard copy. The electronic version of the survey facilitated better flow for these questions; however, the section still seems daunting. Many respondents either skipped the section entirely or provided inconsistent responses (i.e., responding that their CYSHCN received a service when they had not indicated a need for it, or failing to indicate whether their CYSHCN received a needed service.) Resource limitations, as well as respondents not indicating they would be receptive to a call for further information, prevented follow up to clarify responses. In the future, CRS will modify the way these questions are presented.

The large amount of missing data prevented any further stratification by geographic area or Black Belt designation. There is little difference in the percentages of identified need for services by region; however, there are regional differences in non-response rates. It appears that respondents from Urban areas tended to have less missing data than did those in the Rural North and Rural South areas. Therefore, the Urban data may be overrepresented or over-counted in the sample. It would not be a sound research practice to either exclude the missing data or to count it equally in the "yes" and "no" columns for receipt of service. To exclude these data in their entirety would skew the results and percentages, and there is no way to accurately determine how to divide the non-response between "yes, received" and "no, did not receive." There is definitely bias in the sample based on where the respondents lived geographically; however, the cause cannot be determined. The CRS Needs Assessment leadership team has posited that perhaps differences in educational and literacy levels between urban and rural areas may explain some portion of the observed differences. Regardless, only statewide information can be presented in a reliable and valid format.

The most commonly reported service needs were for primary care, dental services, educational services, vision care/eyeglasses, and primary care. This is not surprising for children and youth in general. For those services, most respondents indicated that their CYSHCN received the needed service. Non-receipt ranged from 2.4 percent for primary care to 9.3 percent for educational services. Other services may have been indicated as a need by a lower percentage of respondents, but were striking in terms of non-receipt. For example, only a little more than 20 percent of respondents indicated that they had needed summer or after-school care for their CYSHCN, but more than 42 percent did not receive it. This means that although only 20 percent of respondents reported this need, more than 42 percent of them were unable to get the service. For seven services, 20 percent or more of those who indicated a need were unable to obtain the service. All seven of these services were community-based services (of the ten total community-based services). There were no health services that yielded this high of a percentage of non-receipt of service, i.e., unmet need. The highest percentages for health services were reported for the following services in percent of unmet need order: mental health/behavioral, occupational therapy, speech therapy, and nutritional. The percentage of unmet need ranged from 12.4 percent for nutritional services to 16.3 percent for mental health/behavioral services. Table 3.38 summarizes these results.

Table 3.38. Percentage of Families Reporting Non-Receipt of Needed Services, Statewide, Alabama, 2009

Service	Indicated Need for Service (%)	Indicated Need for Service but Did Not Receive [a] (%)
Health Services		
Dental	57.0	9.2
Developmental screening	35.0	9.6
Emergency care	27.9	2.0
Hearing/hearing aids	23.9	7.8
Mental health/behavioral	27.0	16.3
Nutrition	26.4	12.4
Occupational therapy	38.3	14.6
Physical therapy	37.7	8.2
Primary care	61.9	2.4
Special equipment or braces	35.4	8.4
Specialty care	43.2	3.9
Speech therapy	39.3	12.8
Vision/eyeglasses	43.2	6.9
Community-based Services		
Care coordination	16.8	18.9
Child care facilities/day care	19.0	32.0
Early intervention	17.2	6.5
Education services	46.2	9.3
Family support	22.7	32.5
Planning for transition to adulthood	13.6	34.5
Recreation opportunities	22.9	35.1
Respite care	17.9	25.0
Summer/after-school care	20.2	42.1
Transportation assistance	20.9	23.2

Source: CYSHCN Family Survey

[a] Missing data for this question ranged from 7.1% – 15.9%.
Shaded services were needed but not received by 20% or more of family respondents.

Barriers to Receiving Care

A list was provided of 15 potential barriers to receiving services that might be experienced by CYSHCN and their families. Respondents were asked to check any item that had posed a barrier for them over the previous 12 months. Responses were tabulated to obtain the number of respondents who identified the item as a barrier. Barriers were then ranked based on the percentage of respondents who identified the issue as a barrier for them and for their CYSHCN. In the event of a tie for both scores, the barriers were presented in the order in which they appeared in the survey. Barriers were ranked statewide and by geographic region and Black Belt designation.

Statewide Barriers

Overall, the most commonly reported barrier was that "insurance didn't cover services." More than a quarter of all families reported that they had experienced this barrier over the previous year. Almost this same amount had experienced the barrier "did not know where to go or who to see." The top six barriers were reported by at least 20 percent of respondents. Although only a small percentage of

families reported needs for care coordination in the service needs section (see Table 3.38), the second most common barrier indicated was "did not know where to go/who to see." CRS believes that these are comparable and perhaps families do not recognize what "care coordination" means or how it can assist them in navigating the system of care. A comparison of family and provider responses about barriers to care is presented in the last section of this chapter. Table 3.39 presents the statewide results for barriers to care from the perspective of parents.

Table 3.39. Barriers to Receiving Services for CYSHN, Statewide, Alabama, 2009

Barrier	Percent Indicated
1. Insurance didn't cover services	26.3
2. Did not know where to go/who to see	24.8
3. Missed school days	21.6
4. Transportation	21.0
5. Can't afford co-pays and deductibles	20.3
6. Services too expensive	20.1
7. Waiting list for services too long	18.8
8. Providers not available	16.8
9. Work conflict – unable to take time off work	16.1
10. Work conflict – can't afford to lose pay	15.6
11. Hours/location of providers not convenient	15.1
12. Lack of child care	14.5
13. State policy or administrative barriers	9.0
14. No insurance	8.0
15. Language/ cultural barriers	3.0

Source: CYSHCN Family Survey

Because some barriers were closely related, individual barriers were combined into themes. About 75 percent of respondents indicated that financial issues had been a barrier to their CYSHCN receiving services over the previous year. More than 50 percent reported that they had experienced work/school issues and provider/service issues. The final categories for theme are comprised of only one barrier, so they are represented by a somewhat smaller percentage of respondents. Table 3.40 summarizes these results.

Table 3.40. Barriers to Receiving Services for CYSHCN and Families by Theme, Statewide, Alabama, 2009

Barriers by Theme	Percent of Respondents Indicating Barrier
Financial issues	75
Work/school issues	53
Provider/service issues	51
Care coordination issues	25
Transportation issues	21
Child care issues	15
Administration issues	9
Language/cultural issues	3

Source: CYSHCN Family Survey

Barriers According to Geographic Area and Black Belt Designation
Responses were stratified according to geographic region and Black Belt designation. Data were compared between groups. Differences can be observed in the percent of families that indicated they had experienced a particular barrier based on these groupings.

The percentage differences between both the geographic regions and Black Belt designation are statistically significant for three barriers—insurance didn't cover services," "services too expensive," and "transportation." Respondents from the Rural South and Black Belt were less likely to indicate "insurance didn't cover services" than were respondents from other geographic regions or non-Black Belt counties. Respondents living in Urban and non-Black Belt counties were more likely to report "services too expensive" as a barrier than were those in the rural geographic regions or the Black Belt counties. As noted earlier, both rural geographic areas, especially Rural South, and Black Belt counties have higher percentages of children under age 21 years eligible for Medicaid. This may explain these differences to some degree, given that medically necessary services are required to be provided under the EPSDT benefit and Alabama Medicaid does not impose cost-sharing requirements on its recipients. Also, families living in the Rural South and Black Belt counties were more likely to report "transportation" as a barrier than were those in other geographic regions or non-Black Belt counties.

In addition to the ones above, the percentage differences between the geographic regions are also statistically significant for "state policy or administrative barriers." Respondents living in Urban areas were more likely to report this barrier than were those living in either the Rural North or Rural South.

The percentage difference between Black Belt and non-Black Belt counties is also statistically significant for six barriers in addition to the ones mentioned above. They are "did not know where to go or who to see," "can't afford co-pays and deductibles," "waiting list for services too long," "providers not available," "work conflict—unable to take time off work," and "work conflict—can't afford to lose pay." For example, respondents from Black Belt counties were less likely to report "can't afford co-pays and deductibles" as a barrier than were those living in non-Black Belt counties. This finding may again be explained by the comment about the lack of cost-sharing requirements in Alabama Medicaid, as mentioned above. As previously noted, about 52 percent of all children under age 21 years in Black Belt counties are eligible for Medicaid compared with about 40 percent in non-Black Belt counties. Table 3.41 displays these results by geographic region and Black Belt designation.

Table 3.41. Barriers to Receiving Services for CYSHN, by Geographic Region and Black Belt Designation, Alabama, 2009

Barrier	Percent indicated				
	Rural North	Rural South	Urban	Black Belt	Non-Black Belt
Insurance didn't cover services* [B]	15.9	9.4	17.2	7.4	16.5
Did not know where to go/who to see [B]	13.6	13.6	14.2	7.4	15.2
Missed school days	10.7	12.8	12.9	11.1	12.6
Transportation* [B]	8.9	18.3	9.6	18.5	10.2
Can't afford co-pays and deductibles [B]	9.3	8.9	13.2	5.6	12.5
Services too expensive* [B]	8.9	7.7	14.0	3.1	13.0
Waiting list for services too long [B]	7.5	9.8	12.1	6.2	11.4
Providers not available [B]	10.3	6.8	11.0	4.9	10.8
Work conflict – unable to take time off work [B]	10.3	7.2	10.0	3.7	10.5
Work conflict – can't afford to lose pay [B]	8.4	6.4	9.5	4.3	9.3

Barrier	Percent indicated				
Hours/location of providers not convenient	11.7	8.5	7.8	6.2	9.3
Lack of child care	6.5	6.4	8.7	5.6	8.1
State policy or administrative barriers*	2.8	4.3	7.0	3.1	5.9
No insurance	3.3	4.3	4.3	4.9	3.9
Language/ cultural barriers	.5	2.1	1.7	1.2	1.6

Source: CYSHCN Family Survey

*Geographic differences significant at $p < .05$ by Pearson's Chi-Square
[B]Black Belt differences significant at $p < .05$ by Pearson's Chi-Square

Using the percentages of respondents who identified each issue as a barrier, the top five barriers were ranked for each geographic region and for Black Belt designation. "Insurance didn't cover services," "missed school days," and "did not know where to go or who to see" ranked in the top five for all geographic regions. Beyond that, differences in barriers were noted. For example, "services too expensive" and "can't afford co-pays and deductibles" were top five barriers in the Urban region, but were ranked slightly lower in the Rural North and Rural South regions. Table 3.42 summarizes rankings based on geographic region.

Table 3.42. Top Five Barriers to Receiving Services for CYSHN, by Geographic Region, Alabama, 2009

Rank	Rural North	Rural South	Urban
1	Insurance didn't cover services	Transportation	Insurance didn't cover services
2	Did not know where to go/who to see	Did not know where to go/who to see	Did not know where to go/who to see
3	Hours/location of providers not convenient	Missed school days	Services too expensive
4	Missed school days	Waiting list for services too long	Can't afford co-pays and deductibles
5	Providers not available *and* Work conflict – unable to take time off work	Insurance didn't cover services	Missed school days

Source: CYSHCN Family Survey

Comparing differences in rankings by Black Belt designation also reveals differences. "Insurance didn't cover services," "can't afford co-pays and deductibles," "missed school days," and "did not know where to go or who to see" ranked in the top five for both designations. Though ties were evident due to the small number of counties in the Black Belt region, "transportation," "waiting lists," "hours/locations of providers not convenient," and "lack of childcare" were all in the top five for the Black Belt. "Services too expensive" was ranked in the top five for non-Black Belt counties. Table 3.43 summarizes the rankings by Black Belt designation.

Table 3.43. Top Five Barriers to Receiving Services for CYSHN, by Black Belt Designation, Alabama, 2009

Rank	Black Belt	Non-Black Belt
1	Transportation	Insurance didn't cover services
2	Missed school days	Did not know where to go/who to see

Rank	Black Belt	Non-Black Belt
3	Insurance didn't cover services *and* Did not know where to go/who to see	Services too expensive
4	Waiting list for services too long *and* Hours/location of providers not convenient	Missed school days
5	Can't afford co-pays and deductibles *and* Lack of child care	Can't afford co-pays and deductibles

Source: CYSHCN Family Survey

Medical Home and Continuous Screening

The majority of respondents in both groups indicated that their CYSHCN had a person or persons that they considered a personal doctor or nurse, though the percentages were higher in the group that took the survey in English (87.6 percent versus 66.6 percent). Respondents were asked whether the child's main healthcare provider had helped them feel like a partner in health care over the previous 12 months. For the group that took the survey in English, almost 78 percent said that this was "usually" or "always" the case. For those who took the survey in Spanish, only 23 percent reported these same findings. Of the respondents who took the survey in Spanish, 96 percent indicated they had needed an interpreter. Of those, almost 55 percent said they were able to get an interpreter other than a family member to help them speak with the healthcare provider. Of those who took the survey in English, almost 70 percent indicated that their child had been screened regularly for special health needs and developmental delays. For those who took the survey in Spanish, this was indicated by only about 17 percent. Again, only 32 respondents took the survey in Spanish, and this trend toward lower partnership with health providers and less consistent screening for health needs and developmental delays may be somewhat indicative of a language barrier. However, it is still important to consider in program planning.

Transition Services and Planning for the Future

Two questions dealt specifically with healthcare transition. About 59 percent of respondents (similar for both groups) indicated that their child's doctor or health provider had not talked with them about the child's healthcare needs as he or she was becoming an adult. Only about 41 percent reported that the child's health providers had encouraged him or her to take responsibility for his or her health care. The young average age of the respondents' CYSHCN (11 years and 9 years for English and Spanish groups, respectively) may have impacted these results.

As in the Youth Survey, the CYSHCN Family Survey included a list of potential future plans. Families were asked to consider their oldest CYSHCN in responding whether they had begun to make plans for any of the items. There was a large amount of missing data for this question, so the results must be interpreted with caution. In general, the most commonly reported items that families had begun planning for included "completing high school/GED," "completing college (includes advance degrees and technical school)," "social relationships (friends, romantic)," "living with family," and "working for pay." Again, the young average age of CYSHCN may have impacted these results somewhat.

Survey responses for this question were stratified based on severity. Those respondents who classified the difficulties caused by their child's special healthcare need as "severe" had different responses when compared with those who classified the difficulties as "minor" or "moderate." This is not entirely unexpected. However, this does not mean that families do not include these activities as possibilities in the child's future. It simply means that they have not yet begun to plan for them. In addition to severity, the young average age may also explain some of the observed differences. Table 3.44 displays these findings.

Table 3.44. Future Planning Reported by Families of CYSHCN, by Severity, Alabama, 2009

Planning for the Future	"Yes", Minor or Moderate (%)	"Yes", Severe (%)
Living with family	28.8	45.5
Social relationships (friends, romantic)	39.8	28.0
Working for pay	38.8	23.1
Completing high school	48.6	37.1
Completing college	15.1	6.8

Although a direct comparison between the questions related to future plans and planning cannot be made between the CYSHCN Family Survey and the Youth Survey, an approximation yields interesting results that warrant consideration. Caution must be taken in interpreting trends due to three issues. First, there is a large amount of missing data for this question on the CYSHCN Family Survey. Second, the Youth Survey respondents were older (ranged 14-20 years) than were those CYSHCN about whom CYSHCN Family Survey respondents were considering the question—average age 9 years for Spanish and 11 years for English. Third, the Youth Survey asks the youth specifically if his or her future plans include any of the activities while the CYSHCN Family Survey asks families whether they have begun to make plans for any of the activities. With those important caveats clear, interesting trends can be seen based on severity rating. In general, though youth plans may include some of the typical future plans, in many cases their families have not yet begun to plan for those activities. This difference is exacerbated for those with difficulty levels rated "severe" by their families, but is still present even for those rated as "minor" or "moderate." As would be expected, for those future plans that are most immediate (living with family and completing high school), the differences are not as pronounced. Table 3.45 illustrates these findings for some of the more common responses.

Table 3.45. Future Plans and Planning Reported by Youth with Special Health Care Needs and Their Families, by Severity, Alabama, 2009

Future Plan/Planning for the Future	Youth Survey "Yes", Minor or Moderate (%)	CYSHCN Family Survey, "Yes", Minor or Moderate (%)
Living independently	61.3	29.8
Living with family	26.5	28.8
Marrying /social relationships	57.9	39.8
Working for pay	66.0	38.8
Completing high school	59.1	48.6
Completing college	56.4	15.1

Information Needs
Families were asked to consider a list of topics and to indicate any about which they would like to receive more information. The top requests for both groups included child's condition or disability, recreational activities, successful persons living with condition/disability, healthy behaviors, and jobs/careers.

Alabama families of CYSHCN typically reported insurance for their children and most indicated that their child had a personal healthcare provider. Most reported that they had felt a partner in their child's health care and that he or she had been screened regularly for special healthcare needs and developmental delays, though some potential trends were noted based on ethnicity. There is room for improvement related to healthcare transitions and independence, though the average age of respondents' children was quite young. Future planning activities were similar to the future plans indicated by youth in the Youth Survey, though there were differences noted based on severity. Although overall indication of need for community-based services is less, families reported greater percentages of unmet need for those services. There were differences in barriers to receiving services based on geographic area and Black Belt designation.

Focus Groups (Family, Youth, and Key State Stakeholders)
A discussion guide for the English, Latino, youth, and key State-level stakeholders focus groups was adapted from the format suggested in the *FOCUS on Children Community Planning Manual: Needs Assessment and Health Planning for Children, Including CSHCN* (October 1996; published jointly by the University of Illinois at Chicago Division of Specialized Care for Children and the Illinois Department of Public Health through an MCHB-funded grant). A script was drafted for use in all forums, with a translation in Spanish and modifications for appropriateness for youth. The script was modified from that used in both the State's 1999-2000 and 2004-05 MCH needs assessments, with minor updates to capture current issues and trends. An optional demographic sheet was available at the family and youth focus groups, to be utilized to better describe participants and the CYSHCN for whom they provided care. (Focus group scripts and demographic sheets are in *Selected Tools for MCH Needs Assessment*.[6])

Family and youth focus group participants were recruited to provide a broad representation across socioeconomic, geographic, and disability-type variables as well as to reach out to families and youth not enrolled in CRS. Key State stakeholders were selected by CRS's Needs Assessment leadership team.

Youth
The youth focus group was conducted in a Montgomery suburb and included seven males and five females ranging in age from 14 to 20 years. Based on self identification, there were four Caucasian and eight African American youth. Most were still in high school, but several were attending college. The primary health conditions identified were seizures, cerebral palsy, cleft lip, asthma, Asperger's syndrome, and attention-deficit/hyperactivity disorder. The severity of disability was rated as "moderate" by five youth and "severe" by the remaining four.

Family
A total of four family focus groups were held in Huntsville, Tuscaloosa, Jackson, and Birmingham. The Birmingham focus group had entirely Latino participants and differed somewhat from the other focus groups in terms of lower participant educational levels. The participants identified themselves as

mothers (26), fathers (four), and grandparents (two) of CYSHCN. Based on self identification, there were 16 Caucasian, eight Latino, and seven African American participants. Participant educational levels were less than high-school (seven), high-school diploma/GED (seven), some college/associate degree/ vocational training (11) and other (three). The ages of the CYSHN for which they provided care ranged from 5 to 20 years, with a mean age of 10 years and the most commonly listed age at 17 years of age. The primary health conditions/disabilities of their children included cerebral palsy, autism, Down Syndrome, attention-deficit/hyperactivity disorder, spina bifida, juvenile rheumatoid arthritis, hearing impairment, epilepsy, cleft lip and palate, learning disability, cystic fibrosis, brain damage, shaken baby syndrome, Crohn's disease, eating disabilities, and hydrocephalus. Participants rated the severity of their child or youth with special health care need's condition/disability as "minor" (five), "moderate" (17), and "severe" (11).

Key State Stakeholders

Representatives were invited from the following entities: ALL Kids, FVA, Children's Health System (CHS), CSHCN Director, LEND program, Alabama Disabilities Advocacy Program, Alabama Medicaid, Title V Director, Vocational Rehabilitation Service-Deaf/Blind Services, Alabama's Early Intervention System, United Cerebral Palsy, Alabama Lifespan Respite Resource Network, Alabama Chapter of the American Academy of Pediatrics, the Children's Hospital of Alabama's Pediatric Pulmonary Center, the State Department of Mental Health's Office of Children's Services, ADPH's Office of Minority Health, the State Department of Education's Special Education unit, and Voices for Alabama's Children.

Families and youth commented on several areas of concern related to the service system for CYSHCN in Alabama. Responses from the English and Spanish family forums were quite similar except for increased reporting of needs related to language barriers, acculturation, and difficulty locating resources for their children due to limitations in language, education, and computer skills. Youth responses tended to be more focused on independent living skills, social issues, and successful transition to adulthood. Key State stakeholders identified needs and barriers that were comparable to those from the family focus groups. Subsequent discussion summarizes responses by broad topic area.

Family Focus Groups

Family Needs

Families were asked to consider whether they thought that families of CYSHCN had different needs from families that did not have a child or youth with special health care needs. In general, families said that their needs were different. They mentioned that they needed more support and often lacked this. They noted that they have to be more careful about the environment their child is exposed to and that people often did not understand their need to be extra attentive to their child's health. They also commented on how much extra time is needed to care for their CYSHCN, how much more time they spent on medical needs, and about the extra needs for equipment, specialists, and child care centers. Families of CYSHCN felt that overall they had more stress in their lives. Some excerpts from comments follow:

> *"I have to be extra diligent with germs."*
>
> *"You need more support."*
>
> *"You need extra hands."*
>
> *"People don't understand."*

"They need so much, doctors and all."

"You have something weekly or monthly."

"Couples suffer; they can't get out as much."

Primary Resources
Families were asked about the primary resource person that they can turn to for assistance. Participants said that they turn to their families, but mainly have to rely upon themselves. They also mentioned the Internet and several local agencies and providers including United Cerebral Palsy, CRS Care Coordinators, CRS Parent Consultants, early intervention therapists, and primary care doctors. Some excerpts from comments follow:

"My mother is my hugest support."

"Even though your family is great, they are not you."

"Me and my laptop"

"You have to be the constant advocate."

"Helps to talk with another parent (who has a child with special needs)."

Community Supports and Barriers
Families mentioned their own families and their churches as main sources of support in the community. They mentioned that many barriers created challenges and prevented families of CYSHCN from connecting to supports, especially transportation, financial issues, and lack of services. They also mentioned simply knowing about and finding services was a barrier, as was getting funding for services. Some excerpts from comments follow:

"Transportation."

"Lack of child care (for other children in the family)."

"Lack of knowledge regarding what services are available."

"No group meeting because we can't have our kids in the same room."

"Church."

"No time to do the research."

"Finding the services."

"There is nothing in the rural areas."

Medical/Health Services
Families stated that they used primary care physicians in their local communities and CRS services, but for "everything else" they went to larger cities or out of state in some cases. (Many medical specialty

services in Alabama are centered around cities with larger population density and surround the specialty children's hospitals in Mobile and Birmingham.) Some excerpts from comments follow:

"I go to Birmingham for everything except for my primary care provider."

"None in _____. You go to Birmingham or Nashville."

"We go to Mobile for a specialist."

Medical/Health Services Barriers and Strengths

When asked about barriers or issues they had encountered in obtaining needed medical services, results were somewhat different across the CRS focus group sites and based on where the participant lived. Those from more rural areas said overwhelmingly that the lack of services within the community was the biggest issue. In terms of strengths, families mentioned several local agencies and that "knowing what you are legally entitled to" was the greatest strength. Some excerpts from comments follow:

"No specialist in the area."

"Keeping your income low enough to get financial support."

"I just need more information."

"Taking off work."

"The financial burden."

"Coordinating the services."

"Lack of knowledge about what services are available."

Dental Services

Families were specifically asked about access to dental services in the community. Families statewide said that only basic, if any, dental services were available locally and that they had to go to larger cities for most services. Some excerpts from comments follow:

"They have to put him asleep, and no anesthesiologist would take him here."

"Dental care is a big issue."

"Nearest place for dental surgery is Birmingham."

Education Services

Some reported success with inclusion of their CYSHCN in classrooms. Others discussed that they had tried to integrate their CYSHCN in the local schools, but there had been many challenges. They also commented that the educational system did not meet their particular needs.

Education Services Barriers and Strengths

Families mentioned the Alabama Disabilities Advocacy Program as a strength for its help in obtaining needed educational services. They mentioned the lack of specialty training in working with specific

disabilities, especially autism, as a barrier. Some mentioned a general lack of support from the education system as a main barrier. Excerpts from comments follow:

> *"ADAP is a strength."*
>
> *"Teachers need special training for children with special needs."*
>
> *"More aids are needed."*
>
> *"We have some good teachers, but few."*

Recreation Services

Families were asked about the availability of recreational opportunities in their communities. Depending upon the focus group site and where the participant lived, some opportunities were mentioned. Where opportunities were available, these tended to be parks, special camps, Upward Basketball, baseball, and Special Olympics. Families in the more rural areas felt that their CYSHCN did not have equal opportunities to meet and play with other children of similar ages. They cited a lack of basic amenities as a barrier.

Transportation

Transportation was discussed in terms of travel to appointments and to school. Some families said that transportation to school was provided, but that it was not fully accessible. Others mentioned that they had to travel the farthest for dental services and specialty care. Kid One Transport was mentioned as a strength and resource for transportation, but some participants noted there are limitations and difficulties with schedules.

Other Services

Families were asked to consider broadly any additional community services that would benefit CYSHCN and their families. Families mentioned respite care, support for siblings of CYSHCN, and support for caregivers. They also mentioned services to help with transition to adulthood, especially related to jobs after graduation from high school. Excerpts from comments follow:

> *"Somewhere they (the sibling) can complain."*
>
> *"Just a break."*
>
> *"The stress is everyday, seven days a week and there are not enough support groups for moms."*
>
> *"Not enough respite care, guidelines pretty strict."*

Financial Issues

General discussion of financial issues included health insurance and financial burden. Families said that health insurance was a major financial concern, especially after age 21 years. They discussed insurance as not always affordable and not always covering the services needed by CYSHCN, especially equipment. They also mentioned restrictions placed on income in order to qualify for governmental supports. Additional costs for these families were related to missed work due to the child's condition or hospitalizations. Some comments included:

> "*You have to be dirt poor; the system keeps you there."*

"If I'm out there working and make money, then I lose the money."

Perhaps the most striking comment of all and the one that best captures the sentiments of the family focus groups was:

"We want a plan. We want to be part of the plan."

Latino Focus Group Conducted by CRS

The issues that came from discussions during this focus group were similar to those presented above; however, some unique situations and challenges were apparent. Language, cultural, educational, and literacy issues clearly presented barriers for these families. These included not only the lack of bilingual staff at provider offices and agencies for CYSHCN, but also general difficulty in learning the language. There was an overarching expression of the need for bilingual staff in the medical, educational, and support community. The group felt that language issues combined with lower educational and literacy levels limit the ability of the Latino population to use information technology, navigate health systems, and learn about resources for their CYSHCN. Also, acculturation could be even more difficult for Latino families with CYSHCN, leaving them somewhat isolated from society. This was partially due to fear and mistrust within the community, but also from a lack of linkages with services in general or from services that have a monocultural focus. Financial issues—especially time away from work and low wages in the community—and the lack of health insurance or adequate health insurance were of concern for these families. These Latino families relied heavily on faith-based organizations for support. In addition to the above, barriers were similar to those discussed in the English-speaking focus groups.

Youth Focus Group Conducted by CRS

Youth Needs

When asked if they thought that their needs were different from the needs of youth without special health care needs, participants in the youth focus group said that they felt they did have different needs, but overall had more similarities. Some comments included:

"I don't really think so; only my ability to walk is affected."

"Yes and no; I have problems walking, but my mind and my spirit is just the same."

Primary Resources

Most youth said that they usually go to a friend or family member when they have a need or a question, but they also said that sometimes they don't go to anyone. Excerpts from comments follow:

"My mom."

"My brother."

"I go to my sister."

"Friends. I would not go to family first."

"I just go into my room and hide if I don't have someone else to talk to."

"I usually just hold my emotions in. I don't really talk about it."

"I don't really have anyone to talk to."

Medical Services/Community Supports
Youth commented very little on direct medical services, but referred more to supportive services. They mentioned school and family resources as community supports.

Community Access
The youth said that finances and physical limitations present the biggest challenges to them accessing places in the community that other kids can.

Educational Services
Youth discussed the services they receive in school: mainly therapies, personal aides, and access to the school counselor. They were not as aware of being involved in the planning processes of their school services.

Recreational Activities
When asked what they do in their free time, the youth said they do a wide variety of activities. These included engaging in sports, engaging in computer activities, reading, drawing, playing piano, singing, participating in church activities, going to the park, and talking with friends.

Health Behaviors
When asked if anyone talks with them about smoking, diet, sexuality, and alcohol, youth participants said they knew what those were but no one had talked to them specifically about those subjects.

Transition and Independence
Youth participants said that having a car was important to gaining independence in general. Other aspects of transition were discussed.

<u>Medical Independence</u>
When asked if they got to talk with their doctor without a parent present, the youth said that usually a parent or grandparent was in the room during their doctor's visits. Some comments included:

"Usually my dad is there, and that is really important for him."

"My mother is a 'mother hen.' She feels that it is her job."

Insurance Independence
When asked if they were aware of insurance and how much their family pays for their care, youth said that they knew about insurance but did not comment upon the costs. Most were aware of the basic idea of a health insurance plan but little beyond that.

Future Jobs/Work
Youth were asked if they were concerned about finding a job or a worthwhile activity during the day in the future. Participants said that they had some concerns about finding a job, but overall felt that they would be able to accomplish that goal. Some comments included:

"Yes. My ability to not be able to walk makes me think that I am not going to be able to do a whole lot of

stuff."

"I think that I will be able to work."

"I worry that I won't be able to find a job that I like and that I'm good at."

"I think that I am determined; that it is going to be when I get a job, not if."

Transition Planning

When asked about transitioning into adulthood, the youth did not know of a transition plan but knew they wanted to be independent from their parents when they become adults. For example, one youth participant said,

"I don't want to live in my mom's basement until I am 47."

The final part of the discussion centered on youth self-perception. When asked if they consider themselves to have a disability, the youth said they feel "normal" and that defining "normal" is subjective. Perhaps the most striking comments and those that best capture the sentiments of the youth focus groups came from this discussion. For example:

"I don't think that I am incapable of doing anything!"

"We are what we think we are."

"… people might say that we are not normal, and we are normal! This is our normal."

Key State Stakeholders Focus Group Conducted by CRS

In general, this group expressed similar views to those discussed by families in the family focus groups conducted by CRS. They perceived families with CYSHCN as having needs that are generally more intensified than for families without CYSHCN, particularly in regard to financial concerns, family relationships, and strains on time and human resources. In addition to echoing the barriers as discussed in the family groups, most talked about lack of knowledge and trust issues as huge barriers in accessing services. They mentioned that occasionally relationships between parents and providers can become strained during the process of identifying needs and determining what services will be provided. They felt that parents are oftentimes reluctant to share what is going on in the home and may experience feelings of denial or fear of being seen as "doing a bad job of parenting." All agreed that there should be more education for the general public about disability, especially those conditions that are not as obvious physically. There was general agreement that it is difficult for services to meet needs statewide due to geographic location, travel requirements, and the need for families to take time off work. Participants felt that transition services were greatly lacking in the State, mainly because they are unavailable in rural areas and tended to drop off into adulthood. Though they did note that some recreational opportunities exist for CYSHCN, these participants said that community parks and playgrounds need to be more accessible. Most agreed that there is no good transportation infrastructure for anyone, perhaps due to unrealistic Federal regulations, liability insurance, funding, ignorance, and long waiting periods. Finally, the group

Per data collected by CRS, families, youth, and key State stakeholders identified needs and barriers that were similar to those noted in the CYSHCN Family Survey, the Youth Survey, and the Service Providers for CYSHCN Survey.

discussed system strengths as Kid One Transport, Alabama Medicaid's Patient First Program, the CHS, Medicaid travel vouchers, media attention, and the combined insurance application for ALL Kids, Medicaid, and the Child Care Foundation.

Overall View of Secondary and Primary Data Concerning CYSHCN and Their Families

Secondary data and primary data from providers, families of CYSHCN, and youth with special health care needs were remarkably similar regarding the priority health problems, service gaps, and status of the present service system. Although the rank order is different, providers and families identified similar top barriers to CYSHCN receiving services. Also, focus group themes supported these findings. Tables 3.46 and 3.47 display these results.

Table 3.46. Statewide Barriers to Obtaining Services for CYSHCN and Families—Provider and Family Responses, Alabama, 2009

Rank	Service Providers for CYSHCN Survey	CYSHCN Family Survey
1	Transportation	Insurance didn't cover services
2	Families unsure how to use the system	Didn't know where to go/who to see
3	Lack of child care	Missed school days
4	Lack of information on resources and health needs	Transportation
5	Insurance does not adequately cover needed health and related services	Can't afford co-pays/deductibles

Table 3.47. Common Focus Group Themes and Concerns, Families, Alabama, 2009

Lack of services
Not knowing where to go or who to see
Affordability/adequacy of insurance (co-pays, deductibles)
Transportation
Work conflicts
Needing to stay below a certain income level for government services

As displayed above, transportation was mentioned in all three primary data sources. Also, "families unsure how to use the system" and "lack of information on resources and health needs" from the Service Providers for CYSHCN Survey is equivalent to "didn't know where to go/who to see" on the CYSHCN Family Survey and "not knowing where to go or who to see" from the focus groups. In addition, "insurance does not adequately cover needed health and related services" from the Service Providers for CYSHCN Survey is comparable to "insurance didn't cover services" and "can't afford co-pays/deductibles" from the CYSHCN Family Survey as well as the theme of "affordability/adequacy of insurance" in the focus groups.

In terms of service needs, again there were similarities between the primary data sources. Although key informants mentioned more health services when asked about the greatest needs in their counties, they did identify "most difficult" services to obtain that were similar to services that families reported they needed but had been unable to obtain. Most of these were community-based services (all were for families and all but one was for key informants). Transition services were mentioned by key informants, families, and youth. Table 3.48 summarizes these results.

Table 3.48. Service Needs and Concerns Compared—Providers, Families, and Key Informants, Alabama, 2009

Top 5 Needs Not Obtained – CYSHCN Family Survey	Top 5 Most Difficult Services to Obtain - Key Informant Interviews	Top 5 Greatest Needs – Key Informant Interviews
Summer/after-school care	Respite	Transportation
Recreation opportunities	Transportation	Respite
Planning for transition	Recreation opportunities	Therapies (physical, occupational, speech pathology, nutritional)
Family supports	Planning for transition	Specialty care
Child care facilities/day care	Mental health/behavioral services *and* Summer/after-school care	Child care *and* mental health/behavioral

In summary, for CYSHCN, the most significant priority health needs and service gaps were in the following areas:

- Inadequate access to culturally competent care coordination services for CYSHCN, including transition planning as appropriate.
- Inadequate family and youth support services to promote increased participation in CYSHCN policy-making.
- Inadequate access to community-based services for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services).

SECTION 4

MCH Program Capacity by Pyramid Levels

Preview: Section 4

Section 4 begins with discussion of a variety of issues that the MCH Block Grant Guidance[1] suggests for discussion in this section. It ends with discussion of capacity to address the ten MCH priority needs that were jointly selected by Family Health Services and CRS. By necessity, some of this discussion overlaps with Section 5, in which the process used by the State to select priorities is discussed. For example, the ten MCH priority needs (seven selected by Family Health Services and three selected by CRS) are listed in both Section 4 and Section 5.

General Capacity

A variety of information pertaining to MCH capacity is discussed: including information about certain programs located in Family Health Services or CRS and pertinent public input (obtained through surveys or other means) that is not discussed elsewhere.

Capacity to Address the Ten MCH Priority Needs

Assessment of capacity to address the ten priorities was organized around two grids developed by Family Health's MCH Epi Branch, utilizing the following three sources:

- A presentation by Donna J. Petersen, ScD, MHS, entitled "MCH Needs Assessment: Capacity to Competency," made at the Federal/State Maternal and Child Health Partnership Technical Assistance Meeting on Title V 2010 Needs Assessment.[10]

- Materials produced by the Capacity Assessment for State Title V (CAST-5) Project, a joint initiative of the John Hopkins Women's and Children's Health Policy Center and the Association of Maternal and Child Health Programs.[11]

- Guidance provided by the MCHB, HRSA, U.S. Department of Health and Human Services (MCH Block Grant Guidance).[1]

The first of the two grids is "Worksheet 1: Identified Needs by Maternal and Child Health Population and Pyramid Level Grid." On this tool, each of the ten priority needs is listed and classified according to the particular population served by the MCH Program and to the level of service as depicted in the MCH Pyramid developed by MCHB.

The second of these two grids is "Worksheet 2: MCH Capacity Assessment Grid." On this grid, each of the ten priority needs is scored across five domains: 1) skill sets, 2) resources/partners, 3) local networks for service delivery, 4) political will/interest, and 5) feasibility. Information from the aforesaid presentation[10] and from CAST-5 Project materials[11] was used in developing the worksheet.

The rationale for scores reported on Worksheet 2 is extensively discussed. As well, the rationale for selecting some priority needs that the Alabama MCH Program has very limited capacity to address is discussed.

As stated in the preview, Section 4 begins with a discussion of overall MCH program capacity, according to pyramid levels, and ends with a discussion of particular capacity to address the 10 MCH priority needs that were jointly selected by Family Health Services and CRS.

Overall MCH Program Capacity

This discussion of overall MCH Program capacity covers material specified in the Federal guidance for the *MCH Annual Reports/Applications*, so is organized according to the levels of service in the MCH Pyramid developed by MCHB. As well, many of the findings from qualitative data collected during the 2009-10 Needs Assessment, which are described in Section 3, pertain to MCH Program capacity.

Within level-of-service designations, discussion provided by ADPH generally pertains to the first two MCH Program populations, and discussion provided by CRS generally pertains to CYSHCN.

Direct and Enabling Services

Direct Services: ADPH

ADPH's Provision or Assurance of Direct Services

Initiatives Concerning Health Professional Shortage Areas

Shortages in healthcare professionals affect all three of the federally designated MCH Program population groups. Though the goal of addressing shortages in healthcare professionals is to increase the availability of direct healthcare services, ADPH's role in achieving that goal is mainly infrastructure-building in nature.

HRSA's Shortage Designation Branch develops shortage designation criteria and uses them to decide whether or not a geographic area, population group, or facility is a Health Professional Shortage Area (HPSA) or a Medically Underserved Area or Population. HPSAs may be designated as having a shortage of primary medical care, dental providers, or mental health providers. They may be urban or rural areas, population groups, or medical or other public facilities.[37]

All but five of Alabama's 67 counties include a Primary Medical Care HPSA. Further, all but one of the State's counties include a Dental Health HPSA, and all of the State's counties include a Mental Health HPSA.[38] In sum, all Alabama counties have a shortage of at least one type of healthcare provider; and all but five of the State's counties have a shortage of primary medical, dental health, and mental health providers.

About 44 percent of Alabama residents live in rural areas, and most of these rural areas are considered to be HPSAs. ADPH's Office of Primary Care and Rural Health has responded to the critical shortage of healthcare providers in rural Alabama by creating a free medical placement service within the office. As part of this service, which began in the fall of 2007, the office's medical placement staff help rural and underserved communities recruit primary care physicians, dentists, physician assistants, and nurse practitioners. As well, these staff help healthcare professionals and their families locate a practice site in Alabama that best fits their needs. The Office of Primary Care and Rural Health has developed and maintains Alabama's Rural Health Recruitment and Retention web site. On this web site, rural communities and facilities that are seeking to place a healthcare provider can apply for such placement, and healthcare professionals can apply for positions.

Further, the Office of Primary Care and Rural Health has received funding to create the Alabama State Loan Repayment Program and to provide sub-grants to over 20 qualified healthcare professionals in exchange for 2 years of service in an HPSA. The goals of the program are to:

- Increase the number of healthcare professionals in HPSA-designated areas each year.
- Increase the healthcare workforce diversity in HPSA-designated areas to better reflect the racial and ethnic populations in those areas.
- Expand the distribution of the healthcare workforce in HPSA-designated areas by prioritizing applications from those areas with the greatest need and monitoring the locations of awards.

In the above program, qualified candidates compete for awards totaling up to $35,000 per year for 2 years of service, with half of the award being paid by ADPH and half of it being matched with payment from the employing public or nonprofit agency. Two-year contracts are required between the applicant and the employing agency, and the employment site must be designated as an HPSA by HRSA at the time of the award.

Services Through Health Departments and the Newborn Screening Program
To some degree, through county health departments, ADPH provides direct services to all three of the MCH Program populations, though these services are not targeted to CYSHCN in particular and do not include subspecialty care. However, as discussed in the *MCH 2009 Report/2011 Application*, ADPH's role in providing direct services has declined over the years. That is, changes in the healthcare environment, especially changes in Medicaid's managed care plans, have caused a shift in the provision of direct medical services from county health departments to private providers. When this shift began, it prompted a paradigm shift concerning the roles of county health departments—toward a greater emphasis on the core public health functions of assessment, policy development, and assurance. This shift has been especially evident with respect to provision of services to children, youth, and pregnant women. Because the assurance role includes provision of some direct care to populations that cannot readily access it elsewhere, some county health departments continue to provide some direct services, however. A discussion of certain aspects of ADPH's role in providing or assuring access to direct health care for particular populations follows.

As detailed in the *MCH 2009 Report/2011 Application*, the number of pregnant women served by ADPH has declined dramatically: by 93.9 percent over a 12-year period and by 69.9 percent over a 5-year period. Further, since ADPH has withdrawn from providing direct prenatal care, services provided to pregnant women in FY 2009 were presumably enabling services, rather than direct health care.

Through its Newborn Screening Program, which includes screening for hearing impairment as well as screening of blood samples, ADPH serves virtually all of the State's newborns. Here, however, ADPH's role is mainly infrastructure-building in nature, rather than in the provision of direct care.

The numbers of children and youth receiving care in county health departments has declined dramatically: by 55.7 percent over a 12-year period and by 5.1 percent over a 1-year period.

The number of individuals receiving family planning services at county health departments has increased, however: by 22.0 percent over a 12-year period and by 15.3 percent over a 5-year period.

Family Health's Priorities Concerning Direct Health Care
Through the Needs Assessment, Family Health Services selected three MCH priorities that pertain to assurance of access to direct care. These priorities, selection of which is fully discussed in Section 5, are:

MCH Priority Need 2: Promote access to a medical home and to basic health care for children, youth, and women of childbearing age.

MCH Priority Need 9: Promote access to a dental home and to preventive and restorative dental care for children, youth, and women of childbearing age.

MCH Priority Need 10: Promote access to mental health services for children, youth, and women of childbearing age.

The State MCH Program's capacity to address these priorities is fully discussed later in this section. As stated in Section 5, the number associated with each priority need is simply a numerical identifier, not a rank indicating priority.

Enabling Services: ADPH

Care Coordination: ADPH

The evolution of ADPH's provision of care coordination, which is an enabling service, is detailed in the *MCH 2009 Report/2011 Application*, and the following discussion of care coordination is drawn from several places in that document. In recent years, much of ADPH's provision of care coordination has been funded through Medicaid's Patient 1st Program. By the end of FY 2008, ADPH's provision of care coordination under Patient 1st had expanded greatly, with 133 full-time equivalents (76 of them serving children) devoted to provision of these services. By that time, however, growth in the program had created financial concerns for ADPH in regard to the match required of the Department, which was 33 percent.

Due to this concern, in September 2008 Medicaid agreed to pay half of the Federal match on any match in Medicaid-related expansion of ADPH's Care Coordination Program. Further, ADPH worked to run a more efficient program. Despite the cost sharing and cost containment, in FY 2009 ADPH determined that it could not maintain the program as then funded and began negotiating with Medicaid for further assistance with the Federal match. Since further cost sharing could not be achieved in FY 2009, ADPH's provision of care coordination under Medicaid's Patient 1st Program decreased. Specifically, by the end of FY 2009, 101 full-time equivalents (70 of them serving children) were devoted to care coordination under the Patient 1st Program. In FY 2010, the Federal match required of ADPH for provision of care coordination under Patient 1st dropped to 23.46 percent. However, the State's Governor has required that ADPH turn over savings from this drop to the State for distribution to other agencies.

Due to ADPH's financial concerns regarding the cost of providing care coordination under Patient 1st, the Department provided fewer care coordination services under Patient 1st in FY 2009 relative to FY 2008: with workers providing services only for referrals received from ADPH staff, Medicaid, Medicaid-participating physicians, or, in certain cases, dentists. Referrals from dentists are limited to cases where the family needs help to obtain specialty dental care for the child or the child has missed appointments and been lost to follow up during extensive treatment.

As well as providing care coordination under Patient 1st, ADPH provides care coordination to its family planning patients, under Plan First (the Family Planning Medicaid Waiver). Since the provision of care coordination under Patient 1st is expected to decline gradually, some Patient 1st care coordinators will begin working in the Plan First care coordination program or providing outreach under the WIC Program.

In the past, via sub-contracts with Medicaid Maternity Care Providers, in several counties ADPH has provided care coordination to pregnant women. However, the number of counties in which the

Department provides maternity care coordination has declined, and ADPH now provides this service in only two counties.

Financial Access: ADPH

A key component of ADPH's strategy to promote financial access to care is Alabama's CHIP, or ALL Kids, which is administratively located in the Department's Bureau of Children's Health Insurance. Over the years, both Family Health Services staff and CRS staff have been a part of the ALL Kids Program's collaborative network. ALL Kids is a private-like insurance package for children whose household income exceeds the upper limit for Medicaid eligibility and, effective October 2009, does not exceed 300 percent of the FPL. (Prior to October 2009, the maximum allowable household income for ALL Kids enrollment was 200 percent of the FPL.) Another way that ADPH promotes financial access is through participation in Plan First, which, as previously stated, is the Family Planning Medicaid Waiver. Yet another way that ADPH promotes financial access is through its Cancer Prevention and Control Program, which is administratively located in Family Health Services. This program includes three branches: the Cancer Prevention Branch, which receives specific funding for the prevention of prostate cancer and colorectal cancer; the Cancer Registry Branch, which maintains a statewide cancer registry; and the Breast and Cervical Cancer Branch, which focuses on early detection of breast and cervical cancer.

Cultural Acceptability: ADPH

This summer ADPH is offering a three-part series of satellite programs on cultural sensitivity and diversity awareness for healthcare providers and social workers who treat patients in community clinics, public health departments, and medical and dental facilities. The presentations are offered to private- and public-sector healthcare providers. The training offered will enable community medical providers to better understand the stereotypes, prejudices, stigmatizations, and personal conclusions that can often present barriers to minority, vulnerable, and underserved populations—as individuals in these populations seek to access health care and fully benefit from the care provided. The three presentations were offered in, respectively, June, July, and August 2010. Further, as of September 2010, they are available for "on demand" viewing on ADPH's web site, following registration.

Other ADPH activities to promote cultural acceptability of services are described in the *MCH 2009 Report/2011 Application*. These include provision of training about cultural factors to nurses who perform EPSDT assessments and preparation of various informational materials that have been translated into Spanish.

ADPH's Priorities Concerning Enabling Services

As previously stated, Family Health has selected an MCH priority need concerning a medical home, a priority concerning a dental home, and a priority concerning mental health services. Addressing these priorities includes provision of care coordination services, which are enabling in nature. As previously stated, the State MCH Program's capacity to address these priorities is fully discussed later in this section. Discussion of these priorities includes pertinent information about barriers, emerging issues, and available resources.

Specific linkages between primary care, specialized secondary care, and highly specialized tertiary care are discussed shortly, under "CRS's Provision and Assurance of Direct and Enabling Services."

Barriers to Care: per Qualitative Data Collected by ADPH

Barriers to care, as identified via ADPH's components of the Needs Assessment, are specifically mentioned or strongly implied in Section 3 of this document, mainly under "Qualitative Findings: Family Health Services."

Barriers per Qualitative Data from Eight Focus Groups

Barriers Related to the Healthcare System

As depicted in Figure 3.81, which is based on proceedings from eight focus groups, these groups' discussion of the healthcare system fell mainly into four areas: 1) general access and availability, 2) personal healthcare environment, 3) health insurance and the cost of care, and 4) patient behavior and dissemination of information. The following discussion of barriers is a recap of the previous discussion of Figure 3.81 and is based on the perceptions of the discussants in eight focus groups held by Family Health Services.

Barriers pertaining to general access and availability include the following: 1) the inaccessibility of some services, such as Pap smears, for low-income populations; 2) provision of information in a way that is not tailored to the patient; 3) very limited availability of some services, such as psychiatric care, in some areas; 4) location of no-cost or low-cost mental health services in places that low-income populations cannot conveniently access; 5) as a corollary, a nonnegotiable distance to care and/or lack of transportation to the care; and 6) non-provision of care (except in emergency rooms) outside of normal work hours.

Barriers arising in the personal healthcare environment mainly fall into three areas: 1) interaction between the provider and the patient, 2) the physical setting, and 3) staff training. Concerning interaction, one barrier is the patients' inability to trust doctors with their health care because most doctors seem to have little time to give the patient and often do not explain facts in a way that is understandable to the patient. However, the nurses have more time to give patients, and patients are generally more comfortable sharing information with nurses than with physicians. Another barrier to care is the patients' perceptions that some of the tests ordered are unnecessary. Barriers that concern the physical setting include the lack of rooms that are tailored to adolescents and the lack of a coordinator to help patients readily locate the various places at which care is provided. With respect to staff training, staff are felt to be competent, but universal tools for developmental screening, universal methods for developmental screening, and adequate referral systems should more often be in place.

Cost- and insurance-related barriers to care generally pertain to insurance coverage and to the cost of medical and dental care. Most of the health insurance-related barriers concern inability to obtain public insurance in a timely manner (during pregnancy), inadequate response by staff to requests for services, insurance ineligibility based on pre-existing conditions, and confusion about what the health insurance covers. Concerning the cost of care, health care is often available but not affordable.

Barriers involving individual behavior and dissemination of information by healthcare professionals mainly fall into two categories. The first category concerns consumers' knowledge and a related factor, dissemination of information by health professionals. In a nutshell, people sometimes do not know what care is available and may not understand how to improve their health, and health professionals should disseminate the information that people need. The second category concerns individual behavior and knowledge. As discussed in the eight focus groups, this category pertains to parental knowledge and behavior. However, the issues of knowledge and behavior apply to all populations served by the MCH Program.

Barriers Concerning Health-Related Behavior and Mental Health

Nearly one-third of the discussion in the eight focus groups concerned health behavior or mental health in a broad sense (Figure 3.80). Individual behavior has already been mentioned as a potential barrier to accessing health care or fully benefiting from care. Additional dimensions that arose in this discussion include self image, which can positively or negatively influence health-related behavior, affects the risk

of suicide, and affects mental health; a short-term focus, rather than consideration of the long term; parenting at a very young age; and the relationships among mental health status, socioeconomic status, and environmental stressors.

Barriers per Other Qualitative Data Collected by Family Health Services
The barriers gleaned from the preceding eight focus groups covered many of the barriers gleaned from Family Health Services' three web-based surveys and key informant interviews. However, input provided through these venues and through the two focus groups that were conducted in Spanish brought forth some barriers that were not prominent in the eight focus groups' discussions. These additional barriers include: 1) language issues and cultural issues, which affect provision of care to Latinos; 2) undocumented residents' lack of access to care; 3) social support issues and economic issues, which overlap with the eight focus groups' input about relationships among mental health, socioeconomic status, and stressors; 4) in some cases, suboptimum support from and involvement of the individual's family; 5) in some cases, the individual's insufficient exercise of personal responsibility, which overlaps with the eight focus groups' input on individual behavior; 6) substance abuse, including inappropriate use of prescription medications; 7) lack of access to resources for maintaining a healthy weight, including safe venues for exercise and affordable exercise options; and 8) factors in the school setting that are not conducive to school children having a healthy weight.

Linkages: ADPH
As discussed in the *MCH 2009 Report/2011 Application*, Alabama's Title V Program is administered by ADPH, through Family Health Services. Family Health contracts with CRS, which administers services to CYSHCN. In addition to the Title V Program, Family Health administers the Title X Family Planning Grant, WIC, the Perinatal Program, the Child Death Review Program, the Cancer Prevention and Control Program, and the State Dental Program. The Title V Program, as well as these other programs, serves all of the State's 67 counties. Through a wide variety of ways, many of which are discussed throughout the *MCH 2009 Report/2011 Application*, as well as in Section 2 of this document, Family Health promotes provision of services to Title V populations.

Direct and Enabling Services: CRS

Financial Access: CRS
Financial issues continue to impact access to care for CYSHCN and their families. On the Service Providers for CYSHCN Survey, lack of health insurance was ranked statewide as the sixth most important and common barrier to CYSHCN and their families receiving needed services, up slightly from its seventh-place ranking in 2004. This issue was also in the top five barriers for Rural North and non-Black Belt designations. In the CYSHCN Family Survey, lack of health insurance was indicated by only 8 percent of respondents and ranked 14 of 15 in terms of percentage. This was indicated to a greater degree in the focus group conducted in Spanish and the Spanish-language CYSHCN Family Survey. Data from the Youth Survey indicate that lack of health insurance may be a more significant problem for older adolescents and youth. Of the 336 respondents, 9.4 percent indicated that they had no source of insurance, and most of those were over age 18 years. In FY 2008, 12.5 percent of CRS enrollees were uninsured and relied solely on the State CSHCN program for medical coverage, prescriptions, and durable medical equipment. While ALL Kids, Medicaid, and other third-party insurers have combined to provide coverage to most of Alabama's children aged 0-18 years, CRS's Needs Assessment survey results indicate that this is an area that must be monitored, especially by geographic region and within the youth and Latino populations.

The related problem of underinsurance for CYSHCN (having insurance, but policy does not adequately cover needed services, or co-pays/deductibles create excessive burden) is also an important

consideration. On the Service Providers for CYSHCN Survey, "insurance does not adequately cover needed health and related services" was ranked as the number five barrier statewide, up from its number 11 ranking in 2004. "Costs of services are too high" was ranked at number 12 by providers. In the CYSHCN Family Survey, the most commonly reported barrier was "insurance didn't cover services," while the fifth most-reported barrier was "can't afford co-pays and deductibles." These findings were echoed in both the family and key State stakeholders' focus groups. Looking at themes from the CYSHCN Family Survey, 75 percent of respondents reported financial issues. The affordability and adequacy of insurance was also a common theme during family focus groups conducted by CRS. As previously noted, families also reported during the focus groups that costs of travel to medical care and out-of-pocket expenses for non-covered or additional services, equipment, and supplies related to medical or dental care were significant concerns. Underinsurance for habilitation and rehabilitation services is a problem for CYSHCN, especially those with private insurance coverage. CRS often provides additional financing for necessary services, such as augmentative communication devices, specialized therapies, and other durable medical equipment items.

Patient 1st, Alabama Medicaid's primary case management program, was the first statewide attempt at managing primary care and was based on the medical home concept. The Patient 1st Program assigned all Medicaid recipients, including CYSHCN, within a county to a medical home for management of healthcare needs, appropriate referrals for specialty care, and pre-authorization of specified Medicaid services. Primary care case management was instrumental in increasing access to primary care for Medicaid recipients, including CYSHCN, throughout the State. This program was briefly terminated in 2004, but was reinstituted in 2005. The new Patient 1st Program has a similar structure to the previous Patient 1st Program and provides financial incentives to provide a true medical home and perform EPSDT screenings. Graduated case management fees are determined by what components of care the primary medical provider agrees to provide, including medical home provision, EPSDT, immunizations, etc. The program includes increased quality assurance efforts, performance-based goals, and a sharper focus on affecting behavior through a more active provider role in patient education. CRS continues to work closely with Alabama Medicaid on all issues related to services for CYSHCN. CRS has been particularly active in the areas of hearing aids, augmentative communication devices, power wheelchairs and other durable medical equipment, and dental services, including medically necessary orthodontia.

ALL Kids provides health insurance to children under 19 years of age in families with incomes up to 300 percent of the FPL who are not eligible for Medicaid. In addition to the basic benefits package, ALL Kids offers an expanded benefit package for CYSHCN—ALL Kids Plus. CRS has worked closely with ALL Kids staff to develop and implement this program. All CYSHCN who receive ALL Kids benefits and are enrolled in the CRS program are eligible for the enhanced coverage provided by ALL Kids Plus.

Alabama Blue Cross Blue Shield remains the dominant private sector insurer in the State, providing more than 80 percent of private insurance coverage. Managed-care organizations have not penetrated deeply into the insurance market in Alabama. Based on July 2008 data obtained from the Kaiser Foundation, the health maintenance organization penetration rate in Alabama is 4.1 percent, up from 3.4 percent in 2003. The Alabama 2008 rate compares with 21.4 percent for the United States. Both of the State's tertiary-level pediatric hospitals are providers in nearly all the health maintenance organization networks, as well as for Alabama Medicaid, Alabama Blue Cross Blue Shield, and ALL Kids.

Cultural Acceptability: CRS

Cultural and language barriers were indicated by 3 percent of the total respondents to the CYSHCN Family Survey, though they were much more commonly reported among the respondents who took the survey in Spanish. Cultural and language barriers ranked as the number eight barrier to care for CYSHCN

statewide on the Service Providers for CYSHCN Survey. This is an increase over its number 10 ranking in 2004 and number 14 in 1994. This steady increase is indicative of the growing diversity within the State. The State is making progress in addressing the problems with cultural competence and language issues related to access to care; however, results from the Spanish-speaking family focus group indicate that cultural and language issues continue to present barriers in the service system for CYSHCN in the State. These impact not only service delivery, but also the ability of the Latino population to identify resources for their CYSHCN, to use the Internet to access materials, and to be fully acculturated. Specific to CRS, CRS provides all of its brochures and informational materials in alternate formats, including Spanish, and provides reimbursement for translation services. In addition, CRS contracts with AT&T for utilization of language translation lines to ensure timely access to interpretation services across the State.

Availability of Care: CRS

Across all focus groups conducted by CRS, families and State stakeholders discussed availability of care as a significant issue in obtaining necessary services for their CYSHCN. Families discussed the limitations of care in local communities, especially for specialty care and dental services. For the CYSHCN Family Survey, 16.8 percent of respondents indicated "providers not available" as a key barrier they had experienced. Many services were rated by key informants as "harder than you would expect" in terms of burden on families to obtain them. The lack of providers and the lack of facilities with convenient hours and locations were among the top five barriers in the Service Providers for CYSHCN Survey for both rural regions and Black Belt counties. In addition, families, State stakeholders, key informants, and respondents to the Service Providers for CYSHCN Survey discussed transportation issues related to the increased travel required to access specialty services, typically located in more urban settings.

Availability of care either within a county or in an adjoining or neighboring county was addressed through the Service Providers for CYSHCN Survey. For most health and community-based services, care was available in either of these methods. Statewide, only respite care, summer and after-school care, and transportation assistance were available (in the county or in a neighboring county) in less than 90 percent of counties. Geographic and Black Belt differences were noted, with additional difficulties noted for hearing services, equipment/braces, family supports, planning for transition, and recreational opportunities. As discussed previously, however, availability tells only half the story. Key informants rated 12 of 23 services as "harder than you would expect" for families to obtain statewide. The most difficult services to obtain were identified as respite care, transportation assistance, recreational opportunities, planning for transition, mental health/behavioral care, and summer and after-school care. Of services identified by families as needed during the previous year, 20 percent or more were unable to obtain the following services: child care, family support, planning for transition, recreational opportunities, respite care, summer and after-school care, and transportation assistance. All of these are community-based services. Community-based services were the services most commonly reported as difficult to obtain across all groups. The most difficult to obtain health services reported by families were for mental health/behavioral care, occupational therapy, speech therapy, and nutritional management. Key informants rated pediatric therapies (as above) and respite care as two of the three greatest needs statewide.

There was a slight trend for key informants to identify more gaps in health services; however, all groups recognized the limitations of availability for community-based services and supports to families. There were also differences in terms of barrier identification between families and providers. Even with these delineations, there was remarkable similarity of responses across the groups in terms of service availability, unmet need, and difficulty to obtain service data. These findings are all based on perceptions and individual experiences. Any discrepancies may indicate true differences, but may also, to some degree, indicate a need to provide ongoing provider education related not only to the unique

needs of CYSHCN but also to specific standards for comprehensive care provision for CYSHCN. This also illustrates the importance of family and youth partnerships in their care and participation in policy-making efforts.

Both the scarcity of resources in general and the disparity of these services between urban and rural settings increases difficulties for families through costs for transportation and time away from home and work for extensive travel. It also creates complex service systems in the State. Although many of the services critical to the health and well-being of CYSHCN are centrally located in urban areas, CRS operates 15 community-based offices throughout the State to increase access to care for CYSHCN and their families. Through CRS staff, arrangements with local vendors, and service agreements with community providers and hospitals, CRS provides health care and related services to CYSHCN in every county within the State.

System Linkages: CRS

Tertiary-Level Hospitals

Alabama's two tertiary-level hospitals for children are CHS and the University of South Alabama (USA) Children's and Women's Hospital. Both institutions provide an extensive array of pediatric subspecialty services and have provider relationships with CRS, ALL Kids, Alabama Medicaid, Alabama Blue Cross Blue Shield, and most managed care organizations operating in the State. CHS consists of both inpatient and outpatient services as well as satellite sites for pediatric subspecialty care in several locations outside the Birmingham area.

CRS has an office within the CHS facility in Birmingham to facilitate referral to community-based care coordination and follow up. These service systems have greatly increased access to pediatric subspecialty care for Alabama's CYSHCN.

Memorandums of Understanding: CRS

As part of its role to fill system gaps, CRS has in place memorandums of understanding with the Shriners Hospitals for Children, CHS, and the USA Children's and Women's Hospital to address the health, social, and educational needs of Alabama's CYSHCN. These public/private partnerships were created to 1) identify clients eligible for the services of both partners but presently served by only one, and 2) identify unmet needs of clients served by either partner that could be met through utilization of the other's services and resources.

Through these agreements, CRS provides community-based care coordination, family support activities, wrap-around services, and financial assistance as needed to CRS-eligible children receiving pediatric subspecialty care at these institutions, and to the children's families as well. CYSHCN served by all of the partners are encouraged to have a medical home and are assisted with placement as needed. Through the efforts of care coordinators and reports of clinic visits, the medical homes are kept current on the status of the child's specialty care. This system supports the provision of the coordinated, comprehensive services that are critical for this population of children.

Support for Several Programs: CRS

CRS provides Title V funding support to the Civitan International Research Center/Sparks Clinics in Birmingham, which provides multidisciplinary developmental evaluations for CYSHCN. In addition, CRS supports the Medical Genetics Program at USA through the provision of staff and facility space for a community genetics clinics held on-site in Montgomery and a clinic for CRS-eligible children in Mobile.

Population-Based Services

Newborn Screening: A Joint Effort

The Alabama Newborn Screening Program, administratively located in Family Health Services, has two components: the Newborn Screening Program and the Newborn Hearing Screening Program. Much of the following information is drawn from the *MCH 2009 Report/2011 Application*.

Newborn Screening Program

The Alabama Newborn Screening Program focuses on identification of and follow up for hematological disorders and metabolic disorders. As stated in Section 2, in collaboration with birthing hospitals and other healthcare providers, this program screens for 28 of 29 disorders recommended by the March of Dimes. This program convenes the State Newborn Screening Advisory Committee. CRS serves as the voice of CYSHCN and families on this committee: concerning such issues as expanding newborn screening, developing surveillance methods, and establishing follow-up procedures. After the newborn screening panel was expanded to include cystic fibrosis, CRS entered into a partnership with the CHS and the Newborn Screening Program to provide follow up for infants who test positive for cystic fibrosis. The Newborn Cystic Fibrosis Clinic began in April 2008. This clinic provides second-level screening, with appropriate follow up after a definitive diagnosis is made.

Newborn Hearing Screening Program

Following its inception in 2004, *Alabama's Listening*, Alabama's Universal Newborn Hearing Screening Program, accomplished hearing screening in all Alabama birthing hospitals on a voluntary basis. In January 2008, the Alabama State Board of Health Administrative Code was amended to make hearing loss a mandatory part of the Alabama Newborn Screening panel of tests. The State has built considerable capacity to ensure screening for all newborns, tracking, follow up, monitoring, and linkage to appropriate services for all infants with a confirmed hearing loss.

Family Health's role in the Newborn Hearing Screening Program is mainly enabling or infrastructure-building in nature, including such activities as:

- Administering the non-laboratory aspects of the program, including contracts. One of the contracts is with Auburn University for a doctoral-level audiology student assistant, one is with a part-time audiologist who consults with birthing hospitals, and one is with the Children's Hospital of Alabama's HEAR Center. The contract with the HEAR Center has two purposes: to provide free follow-up clinics for infants who fail initial hearing screens and to help in the initial phase of creating a parent peer support group for parents of hearing-impaired children.
- Providing follow up for infants who fail or miss the initial hearing screening and infants identified with risk factors associated with late-onset hearing loss.
- When needed, providing case management for Medicaid-enrolled infants who have potential or confirmed hearing impairment.
- Loaning hearing screening equipment to hospitals when their equipment needs repaired.
- Providing monthly hearing screening reports to birthing hospitals.

The Newborn Hearing Screening Committee, on which CRS serves, is a subcommittee of the State Newborn Screening Advisory Committee convened by Family Health Services. Partners throughout the State, including CRS, provide follow-up services at the community level. Alabama has an

effective intervention system through private providers, the Alabama Institute for Deaf and Blind regional centers and school, the 15 CRS community-based district offices, and Alabama's Early Intervention System. In addition, CRS is a direct provider with the Medicaid Agency for audiological services, hearing aids, and related supplies, thereby providing better coordination of these services for Medicaid-eligible CRS clients. CRS has staff audiologists available in all CRS district offices and provides screenings, assessments, and follow up. CRS established a data-sharing agreement with ADPH's Universal Newborn Hearing Screening Program to provide data on second-level hearing assessments for infants who fail initial screening. CRS began transmitting these data electronically to ADPH in May 2008.

Population-Based Services: ADPH

Selected Population-Based Services Managed by ADPH

Population-based programs serving the Title V Program that are administered by ADPH include the following:

- The Newborn Screening Program, which has been previously described.
- The Alabama Childhood Lead Poisoning Prevention Program.
- The Healthy Child Care Alabama Project.
- The Alabama Child Death Review Program.
- The FIMR Program.
- The Breast and Cervical Cancer Early Detection Program.
- The Immunization Program.
- The Injury Prevention Program.

The Alabama Childhood Lead Poisoning Prevention Program

As discussed in the *MCH 2009 Report/2011 Application*, this program continues as a collaborative effort of Family Health Services, ADPH's Bureau of Environmental Services, and Alabama Medicaid. The program's mission is to help every child in Alabama develop to his or her maximum potential by promoting a lead-free environment and a healthy lifestyle. To accomplish this mission, case management is provided for all children with a confirmed blood lead level of 10 ug/dL or higher. Environmental inspections are included in the management of blood lead levels of 15 ug/dL or higher. Universal screening of children aged 6-72 months is conducted in seven high-risk counties, while the remaining counties follow a targeted screening protocol under which only children meeting certain social and medical criteria are screened. Primary prevention activities to increase awareness of lead-safe practices among parents, property owners, renovators, and child health providers are conducted statewide.

The Healthy Child Care Alabama Project

Family Health Services collaborates with the State Department of Human Resources to implement this program, which is administratively located in Family Health. The program was developed to support people who take care of other people's children: whether the care is provided in a child day care center or day care home or provided by family, friends, or neighbors. Services offered by the program include provision of information on child development, provision of classes on the health and safety of children,

identification of community resources to promote child health and safety, and encouragement of routine visits for children to their healthcare providers.

The Alabama Child Death Review Program
As discussed in the *MCH 2009 Report/2011 Application*, legislation creating the Alabama Child Death Review Program was enacted in 1997 and has a mandate to review all unexpected or unexplained deaths of children in Alabama from birth through 17 years of age. Reviews include children who die from a vehicle accident or from drowning, fire, SIDS, child abuse, suicide, suffocation, etc. Deaths from prematurity or birth defects, as well as deaths from terminal illnesses, are not reviewed by these teams. The purpose of these reviews is to identify trends in unexpected or unexplained childhood deaths, educate the public about the incidence and causes of these deaths, and engage the public in efforts to reduce the risk of such injuries and deaths. This program is administratively located in Family Health Services. Additional discussion of this program is located in Section 2.

The FIMR Program
As discussed in Section 3, following the increase in the State's infant mortality rate in 2007, the State Health Officer directed Family Health Services to intensify efforts to implement FIMR. The goals of this program, which is administratively located in Family Health, are described in Section 3. Further, FIMR is extensively discussed later in Section 4, in the context of *MCH Priority Need #6: Reduce infant mortality, especially among African Americans*.

The Breast and Cervical Cancer Early Detection Program
This program, which is located in Family Health Services, is fully discussed in Section 2. To recap, the program provides free breast and cervical cancer screenings to eligible women who meet income and insurance requirements.

The Immunization Program
The Immunization Program is administratively located in ADPH's Bureau of Communicable Disease, which provides vaccine statewide by using State and Federal funds. The division participates in the Vaccines for Children Program, a Federal entitlement program. Further, it operates an immunization registry for the State, known as the Immunization Provider Registry with Internet Technology (ImmPRINT). Activities of the Immunization Division are fully discussed under NPM #07, in the *MCH 2009 Report/2011 Application*.

The Injury Prevention Program
ADPH addresses injuries, regardless of age, through HPCD's Injury Prevention Division, which is discussed in Section 2. The division seeks to reduce death and disability from intentional and unintentional injury through coordination and implementation of health promotion and education programs and special events. As discussed in Section 2, the division is advised by the Injury Advisory Council, which includes representatives from multiple entities within and external to ADPH.

Coordination with Other Services: ADPH
One way that Family Health Services and CRS coordinate with other agencies and organizations in the provision of services is by holding regular (three times a year) meetings attended by staff from Family Health, CRS, Alabama Medicaid, UAB School of Public Health's MCH Department, UAB's Civitan Center, and the Children's Hospital of Alabama's Pediatric Pulmonary Center. Through these meetings, which ADPH and CRS alternately host, attendees keep abreast on activities of common concern and plan for coordinated initiatives affecting children. As well, two Family Health Staff members (one from the

Children's Health Division and one from the MCH Epi Branch) serve on the Pediatric Pulmonary Center's Advisory Committee.

Multiple other partnerships, in which Family Health participates, with a variety of organizations are discussed in Sections 1 and 2 of this report, as well as throughout the *MCH 2009 Report/2011 Application*.

ADPH: Geographic Availability of Services

HPSAs are discussed earlier in Section 4. As stated in that discussion, HPSAs may be urban or rural areas, population groups, or medical or other public facilities. As also stated in that discussion, all of Alabama's counties have a shortage of at least one type of healthcare provider; and all but five of the State's counties have a shortage of primary medical, dental health, and mental health providers.

As discussed later in this section, public health services in Alabama are primarily delivered through county health departments, which are located in each of Alabama's 67 counties.

ADPH: Funding Mechanisms

Funding mechanisms for programs through which the Health Department serves the Title V populations, listed on Form 2 of the *MCH 2009 Report/2011 Application*, include the MCH Block Grant Federal allocations, State MCH funds, and program income. As well, funding sources include a variety of Federal grants, such as WIC, AIDS, Community Integrated Service Systems (CISS), and SSDI.

Population-Based Services: CYSHCN

Healthy People 2010 Objectives for CYSHCN

In addition to the leadership role as the Title V CSHCN program in Alabama, CRS has also been identified as the lead agency for planning and implementing activities to meet the Healthy People 2010 objectives for CYSHCN. In the spring of 2001, CRS established six workgroups, each addressing a different 2010 objective related to CYSHCN, and invited colleagues from outside CRS to facilitate each of the workgroups in an effort to assure multi-agency partnerships and participation in Alabama's Healthy People 2010 plan. These facilitators represented key agencies from the system of care for CYSHCN in the State, including the Alabama March of Dimes, FVA, the Alabama Chapter of the American Academy of Pediatrics, ALL Kids, State Department of Mental Health, and a private consultant/advocate for youth with special health care needs.

CRS State Office staff members have served as liaisons to support the various technical aspects of each workgroup. The workgroups themselves are composed of families, youth, and partners from other agencies related to CYSHCN in the State. Participants include UAB School of Public Health's Department of MCH, the Medicaid Agency, the Individual and Family Support Council, families and youth, private pediatricians, and the UAB MCH Health Collaborative. The participation of youth with special health care needs and families of CYSHCN in the workgroups is supported through advisory fees, transportation reimbursement, and child care supplements. All support to youth and families of CYSHCN is provided by CRS through Title V dollars and in-kind contributions.

The goal for Alabama's 2010 plan is to create community-based service systems for CYSHCN and to assure family-centered care for all children in Alabama. This vision is based on the U.S. Department of Health and Human Services' Healthy People 2010's national objective to increase the proportion of states and territories that have community-based service systems for CYSHCN. Through the established structure of the workgroups targeting individual objectives and collaboration with its partners, CRS has facilitated the creation of Alabama's Healthy People 2010 Action Plan.

Over the 10-year period, workgroups have met as often as quarterly, charged with creating and implementing a strategic plan with action steps to assure achievement of their specific objective. General meetings have been held roughly once per year for all workgroups to highlight success and focus on the completion of the overall plan for Alabama to meet the six Healthy People 2010 objectives for CYSHCN. Individual group goals have been consolidated into the overall Alabama 2010 Action Plan for CYSHCN, which is updated and enhanced as each group makes progress in implementing activities. The planning document is dynamic, evolving as the workgroups continue to meet, complete action steps, and envision new activities and strategies over the next several years. The UAB School of Public Health's MCH Division has assisted with planning and evaluation strategies to document individual workgroup progress and overall progress toward implementation of Alabama's 2010 Action Plan. Over the last 18 months, the groups have been less active, with much of their time and resources devoted to the Needs Assessment process. In anticipation of new Healthy People 2020 objectives, the group leaders and membership would like to develop more of a grassroots effort and target—pushing activities to the community level through the local connections of the statewide groups represented and with local family and youth participation.

Infrastructure-Building Services

ADPH: Infrastructure Building

Local Delivery Systems for Public Health Services

Public health services in Alabama are primarily delivered through county health departments. Larger counties and some counties with specific needs have more than one health department location. A wide variety of services, as well as valuable information, is provided at county health departments. Typical services include, but are not limited to, the following: dental services and community fluoridation programs; child health, family planning, immunization, nutrition, nursing, and social work services; and treatment of sexually transmitted diseases. As discussed earlier in Section 4, the numbers of children and youth and pregnant women receiving services in county health departments have declined during the last several years.

Existing Systems and Collaborative Mechanisms: ADPH

As previously stated in this section, Family Health Services and CRS alternately host meetings, held three times a year, that are attended by staff from several organizations. As also previously stated, Family Health partners with a variety of organizations, and these partnerships are discussed in Sections 1 and 2 of this document.

For both Family Health and CRS, the collaborations described in Sections 1 and 2 demonstrate a wide range of ongoing partnerships. As stated at the end of Section 2, the methods, data sources, and collaborations that comprised the Needs Assessment process collectively provide a panoramic, current picture of the needs of maternal and child populations living in Alabama. This picture has enabled Family Health Services and CRS to select priority needs in an evidence-based manner. As well, the picture provides a knowledge base that both organizations look forward to building upon through ongoing needs assessment.

Planning, Evaluation, Research, and Workforce Development: ADPH

The Needs Assessment process, detailed in Section 1, was a major effort in planning and research. The findings from ADPH's data-collection initiatives, detailed in Section 3, cut across MCH Program populations, with a particular focus on pregnant women, mothers, and infants and on children and youth.

A description of certain quality assurance initiatives, which is drawn from the *MCH 2009 Report/2011 Application*, follows.

The Director of Family Health Services and the Director of its Medical Branch serve as Collaborative Physicians for nurse practitioners employed by 65 of the 67 county health departments. Currently, these 65 counties employ a total of 46 nurse practitioners. The role of the Collaborative Physician includes ongoing review and revision of protocols used by the nurse practitioners, training of nurse practitioners, assurance that protocols are followed, provision of consultation for situations not covered by the protocols, and other activities assuring the provision of appropriate, high quality services by the nurse practitioners. Further, Family Health's Medical Branch provides consultation to the nurse practitioners employed by the aforesaid 65 county health departments, via a consult template accessed on ADPH's intranet system. Another quality assurance activity, implemented in May 2002, is the 2-day Model Clinic Rotation, which each nurse practitioner from the 65 participating county health departments is required to complete annually. In the rotation, the nurse practitioner works directly with the Collaborative Physician when seeing patients.

As well, quality assurance positions are being created in some of the State's 11 Public Health Areas to monitor production and documentation of Care Coordination Program staff.

A key way that ADPH addresses workforce development is the Public Health Team Academy, which is periodically (at least annually) offered by ADPH's Bureau of Professional and Support Services, through a contract with Auburn University Montgomery. This 5-day training event uses a problem-centered approach to develop competencies and skills that have practical applications in the accomplishment of ADPH's various work settings. The training is very interactive and uses experiential exercises. The focus is on competencies that are necessary for effective performance on a day-to-day basis.

Coordination Efforts Concerning Certain Programs: ADPH

Medicaid

Family Health Services coordinates with Medicaid in a variety of ways, which are discussed in Section 2 of this document and/or in the *MCH 2009 Report/2011 Application*. These collaborations include, but are not limited to: inclusion of Medicaid staff on the MCH Advisory Group, performance of care coordination under Medicaid's Patient 1st Program and Medicaid's Plan First Program, and a memorandum of agreement with Medicaid to link live birth records and Medicaid paid claims for deliveries.

AIDS Programs

The HIV/AIDS Prevention and Control Division is located in ADPH's Bureau of Communicable Disease. The mission of this division, achieved in collaboration with community partners, is to reduce the incidence of HIV infections, increase life expectancy for those infected, and improve the quality of life for persons living with or affected by HIV. The division oversees Alabama's Ryan White Part B Program activities that include Ryan White Part B funded case management and the Alabama AIDS Drug Assistance Program. Alabama's HIV care and service providers may apply for Ryan White funding to provide HRSA-defined core medical and support services. As stated in Section 2, though most persons with HIV/AIDS receive health care through community-based organizations, collaborations among ADPH staff make case management available to persons with HIV/AIDS who choose to receive services through the Health Department. Family Health's social work staff provide quarterly training and ongoing consultation to all Health Department case managers who provide services to HIV-positive individuals.

Mental Health Programs
As stated in Section 2, most Local Child Death Review Teams include representation from local units of the State Department of Mental Health. Other collaborations involving Family Health Services and the State Department of Mental Health, discussed in various places in the *MCH 2009 Report/2011 Application*, concern the following: 1) implementation of Alabama's Blueprint for Zero to Five, the State's strategic plan for early childhood systems development; 2) prevention of suicide; 3) and family planning. In the latter collaboration, Family Planning Program care coordinators outreach to State Department of Mental Health facilities, and that agency refers clients to ADPH's Family Planning Program. As well, the Department of Mental Health was represented on the MCH Advisory Group.

SSDI
SSDI is administratively located in Family Health's MCH Epi Branch. The SSDI Project Epidemiologist has served as coordinator of ADPH's components of the 2009-10 Needs Assessment, as well as the two previous 5-year Title V MCH needs assessments.

WIC
Since the WIC Program is administratively located in Family Health Services, the Director and the Assistant Director of the WIC Division are on Family Health's Management Team, and collaboration between WIC and MCH Program staff is built into the organizational structure of the bureau.

School Health Programs
As more fully discussed in Section 2, Family Health's Adolescent and School Health (ASH) Program partners with the State Department of Education to provide statewide professional development opportunities for Alabama health educators. As well, the Director of ASH will spearhead efforts to address *MCH Priority Need #3: Promote positive youth development to reduce high risk behaviors in adolescents*. Capacity to address this priority is discussed later in Section 4.

Primary Health Care
Collaborations with the Alabama Primary Care Association and Primary Health Care clinics are discussed in Section 2. These include: when indicated, referral of ADPH patients to Primary Health Care clinics, representation of the Alabama Primary Care Association on the MCH Advisory Group, and collaboration to increase access to dental care.

Infrastructure-Building Services: CYSHCN

Constructs of a Service System for CYSHCN
The interagency group that comprised the CRS Advisory Committee, key State-level stakeholders, youth with special health care needs, and families of CYSHCN (through the advisory committee, surveys, and focus groups) participated in the assessment process.

State Program Collaboration: CRS
Many collaborative mechanisms exist at the State level to coordinate State services available to CYSHCN. CRS represents the Title V CSHCN Program in numerous efforts, discussion of which follows.

Governor's Interagency Coordinating Council for Early Intervention Services
ADRS is the lead agency in Alabama for the Part C initiative for infants and toddlers with developmental delays. The ADRS Commissioner represents the agency on the Governor's Interagency Council for Early Intervention Services. Other member agencies of this council participated in the CYSHCN portion of the FYs 2009-10 Needs Assessment. The council has developed coordinated policies and procedures, interagency training, monitoring standards for service delivery, and joint legislative budgetary requests.

As well, the council has shared data on infants and toddlers with disabilities. CRS actively participates in this process, sitting on all Interagency Council for Early Intervention Services subcommittees for funding, personnel preparation and training conferences, public awareness, and program evaluation.

Alabama Children's Policy Council
This network of the State Children's Policy Council and local county children's policy councils was established originally in 1975 and revamped in 1999. Under the coordination of the State Department of Children's Affairs, each local children's policy council is chaired by the county's juvenile judge and has members from a diverse cross-section of public and private individuals interested in the general needs of all children and families in the State.

The ADRS Commissioner is a member of the State Children's Policy Council, and ADRS staff members participate in local children's policy councils in all 67 counties within the State to provide expertise related to the unique needs of CYSHCN. This partnership raises awareness of the importance of identification of CYSHCN, the specialized needs of this population, and the implications of these needs for resources in a local community. It also has an impact at the community level in supporting the inclusion of CYSHCN. Finally, the effort makes great strides in enhancing current infrastructure through a mutually beneficial opportunity for information-gathering and collaboration.

State Perinatal Advisory Council
ADRS staff are appointed to this council, which is typically convened by Family Health's Perinatal Program staff. The council has a significant role in the implementation of regionalization for neonatal intensive care in the State to ensure access to appropriate services.

State Head Start Advisory Committee for Children with Disabilities
Representatives from State agencies serving children, including CRS, meet quarterly with Head Start personnel to advise Head Start programs in accessing health, education, and welfare service systems. An interagency agreement between Head Start, including Early Head Start and Migrant Programs, and ADRS exists "to work collaboratively in identifying and serving children with disabilities from birth through age five and their families." Joint public awareness efforts, procedures for identification, referral, assessment and evaluation, and transition of young children with disabilities, procedural safeguards, interagency training, and resource and data sharing are specifically addressed in the agreement.

Alabama Head Injury Task Force
ADRS is the lead State agency for serving individuals with traumatic brain injury. This group plans for the development and implementation of a statewide community-based system of services for children and adults with traumatic brain injury. Data sharing, financing issues, interagency training, and coordinated policies are pursued by this coalition of public and private agencies.

Alabama SCHIP
CRS has participated both as a provider of ALL Kids Plus services and as an advocate for the unique needs of CYSHCN in policy development for general benefits packages. Currently, CRS is collaborating with ALL Kids to develop a process for CRS informational materials to be sent to families based on responses to selected questions on the Pediatric Health History form, included on the joint program application (ALL Kids, Alabama Medicaid, and Alabama Caring Foundation). CRS also meets on an as-needed basis with ALL Kids staff to discuss program and policy issues likely to affect CYSHCN.

Medicaid
CRS has an interagency agreement with Medicaid to provide Children's Specialty Clinic Services, including specialty medical and/or evaluation clinics, care coordination, outreach, related therapy services, patient education, orthodontic services, and replacement factor for clients enrolled in the Alabama Hemophilia Program. This has greatly increased access for CYSHCN with Medicaid to multidisciplinary team care throughout the State.

In April 2005, CRS became a preferred vendor for hearing aids and related supplies, providing comprehensive coordination for Medicaid-eligible CRS clients. In addition, the CRS program specialist for speech-language pathology serves as reviewer for all requests throughout the State for Medicaid funding for augmentative communication devices. In the past, CRS served in this role for requests for power wheelchairs; however, this is now contracted to a third party. CRS physical therapists participated in training for the new reviewers. Members of the CRS State Office staff, including the State Parent Consultant, meet quarterly with Medicaid staff members to discuss program and policy decisions likely to affect CYSHCN.

Camellia Project: "My Alabama"
CRS is one of six State agency divisions participating in the Camellia Project (newly renamed "My Alabama"), a program out of the Governor's Taskforce to Strengthen Alabama's Families funded through an Annie E. Casey Foundation grant. In Phase I, a web page was developed that includes an electronic tool to identify health and human service resources in the State with criteria for eligibility. In Phase II, now in process, the group is creating an application system that will capture basic demographics and populate them to participating agencies' pre-applications to avoid applicants having to enter information in multiple places. This only occurs if the applicant releases the information for sharing. The system will also facilitate data sharing across programs if released by applicants. As a part of My Alabama, CRS will make a pre-application available electronically on the project web site.

Medicaid Transformation Grant: Together for Quality
CRS staff participated on the advisory committee and several subcommittees for Alabama Medicaid's transformation grant, Together for Quality. This project targets State reforms to increase quality and efficiency in the Medicaid program while building an integrated healthcare system focused on better health outcomes and improved quality of life for recipients. Some of the goals of the project are to reduce duplication of service, prevent fragmented information, increase access to medical data, and improve care coordination. Medicaid is piloting a statewide electronic health information system to link Alabama Medicaid, State health agencies, providers, and private payers and to establish access to individual health information, claims, immunization records, prescription data, and lab results.

Alabama's Assuring Better Child Health and Development
Both ADPH and CRS partnered with Medicaid on their grant to further screening initiatives in the State. Under this grant, the State's Assuring Better Child Health and Development (ABCD) Project worked with pediatricians to link EPSDT, Patient 1st, and other public health initiatives: through well-child visits to enhance child health and development through the inclusion of standardized developmental screenings. Pilot sites were established in three cities to choose tools and determine the most appropriate methodology for adoption of the initiative in pediatric practices statewide. CRS staff participated with private medical providers and other State agencies on project workgroups. These included 1) policy improvement; 2) screening tools; 3) measurement and evaluation; 4) information, resources, and referral; and 5) statewide spread and implementation. Although the project is complete, it was successful in raising awareness related to the importance of early and continuous developmental screening.

Family Voices of Alabama
CRS has a long history of collaboration and partnership with FVA. Members are active participants in both CRS's State and Local Advisory Committees. The FVA co-director is the CRS State Parent Consultant. She represented FVA on the CRS Advisory Committee, CRS's Needs Assessment leadership team, and in the key State-level stakeholder's focus group. CRS has partnered with FVA on programmatic and grant activities, specifically to provide supports for youth and families of CYSHCN to participate in CRS-sponsored activities including Healthy People 2010 workgroups, a Champions for Progress grant-funded Healthy People 2010 conference, and needs assessment activities. FVA was recently awarded a Family to Family Health Information Center grant, and ongoing collaboration is planned on these grant activities.

Alabama Parent Education Center
The Alabama Parent Education Center (APEC) is Alabama's parent training institute. This group provides families with training, information and support through programs such as Parent Information and Resource Center, Academy for Parent Leadership and Engagement, Alabama Network for Children with Disabilities, Programs of Adult and Community Education, and Fathers Forward. APEC staff members have provided training for CRS Local Parent Advisory Committees. APEC was represented on the CRS Advisory Committee and funded printing of additional CYSHCN Family Survey forms that they distributed at all of their conferences and trainings during the summer of 2009.

State Support for Communities: CRS
Community support is provided through several local planning processes, discussion of which follows.

District Coordinating Councils for Early Intervention Services
The role of the district councils is to conduct local needs assessments, coordinate services, and identify barriers to service for the State council. The State supports these councils through financial support for approved council activities and employment of full-time council coordinators. CRS provides office space for district service coordinators for children receiving early intervention services who are not yet part of a program and for administrative support personnel. CRS staff members participate on all the councils and support at the local level all initiatives of the Governor's Interagency Coordinating Council for Early Intervention Services, such as public awareness campaigns and training activities for service providers and families.

Local Children's Policy Councils
As previously noted, ADRS staff participate in each county's Local Children's Policy Council to provide a voice for CYSHCN in needs assessments, community planning, and resource mapping for all children and families.

CRS Local Parent Advisory Committees
Each CRS district has an advisory committee to address family issues in the CRS community-based service system and to advise the offices on service needs and family-centered care. Representatives from each committee make up the State Parent Advisory Committee, which advises CRS administrators on program and policy issues concerning family-centered care. These committees annually review the CRS State plan and progress toward meeting targets for the CRS performance measures.

CRS Local Offices
Each district office has the responsibility for supporting local, district, and regional health planning initiatives. Staff members serve on local councils that address health and/or youth and children's issues. CRS supports their involvement financially and through performance standards, which expect each

worker to be active in the assigned county. Additionally, each district office functions as a powerful resource network within its local community, responding to numerous requests for information regarding CYSHCN and available services.

Coordination of Health Components of Community-Based Systems: CRS
Coordination within community-based systems is achieved through several means, listing and discussion of which follows.

Maternal and Child Health
As previously discussed, CRS administrative staff members and program specialists meet three times per year with staff from Family Health Services and several other MCH stakeholders, to assure coordination of initiatives. These entities are specified in Section 2.

Memorandums of Understanding with Tertiary Children's Hospitals
Memorandums of understanding between CRS and the two tertiary care pediatric hospitals in the State are essential to the coordination of health components of community-based systems. Copies of these agreements are available upon request.

The Alabama Hemophilia Program
This program is administered by CRS. Persons of any age with bleeding disorders are eligible to participate. Treatment centers in Birmingham and Mobile provide evaluation, treatment, patient education, care coordination, and allied health services. CRS receives MCHB funds through a contract with Hemophilia of Georgia to promote comprehensive care for this population. Programs collaborating with CRS in this effort include the Health Department's AIDS Program, Alabama Medicaid, local AIDS outreach and treatment clinics, and the State genetics programs.

Medical Genetics Programs
The UAB and USA Medical Genetics Programs provide counseling and testing services for CYSHCN and their families through a network of community-based clinics throughout the State, often in conjunction with CRS.

Coordination of Health Services with Other Services at the Community Level
The State has made great advances toward coordinating community-based services for CYSHCN over the last 5 years through the agreements with tertiary-level providers, credentialing of local vendors for allied health services, and service agreements with community providers and hospitals. The development of further public and private agreements would continue the progress in this area.

The placement of CRS within ADRS facilitates the coordination of health services with other services at the community level for CYSHCN. CRS, as a division of ADRS, is co-located with Alabama's Early Intervention System, Vocational Rehabilitation Service, and the State of Alabama Independent Living (SAIL) Program in most locations throughout the State. This promotes the coordination of program planning and service delivery at the local level, as well as at the State level.

In order to provide a coordinated team approach to early intervention, CRS sponsors 13 Early Intervention System programs statewide. CRS State Office staff members participate in the annual Provider Appraisal Review for these programs to ensure consistent quality and fiscal responsibility, and provide technical assistance and information to program coordinators on the benefits of referral to CRS for eligible infants and toddlers with special health care needs. Special education, social services, and family support services are brought together by the Early Intervention District Community Councils at

the community level as well. This mechanism has also increased collaboration regarding service coordination for other age groups.

CRS staff work individually with youth with special health care needs to ensure linkage with adult healthcare providers and community service systems. As transition for CYSHCN can be complex, especially for those with more extensive needs, CRS developed social work staff positions focused specifically on transition. At age 14 to 16 years, CRS youth are transferred to their district's Social Work Transition Specialist. These staff have received specialized training and have expertise in all aspects of transition. These specialists provide targeted, comprehensive transition services to help CRS-enrolled youth and their families plan for adulthood.

In February 2005, a joint effort between CRS and ADRS's Vocational Rehabilitation Service was established to identify challenges in the referral and transition process. The ADRS Continuum in Transition Task Force focuses on strengthening the continuum of services provided by each division. As a part of the overall strategic plan, a liaison council was formed to develop a framework for divisions to provide comprehensive, quality services to youth with disabilities. Transition liaisons were identified from both divisions for each district office, and ongoing training was provided. An electronic referral system between CRS and Vocational Rehabilitation Service was launched in January 2006. The CRS/Vocational Rehabilitation Liaison Council continues to be active, with meetings and conference calls, assuring that youth with special health care needs receive timely and appropriate services to assist them locally with education and employment-related goals.

CRS has a long history of collaboration with Easter Seals Alabama to enhance services for CYSHCN through community rehabilitation centers and Camp ASCCA, a year-round camp facility for children and adults with disabilities. CRS staff members volunteer their time to provide their specialized skills for various camps, and CRS supports camps for children with hemophilia through public awareness and the provision of educational materials and self-infusion teaching kits. CRS also has an extensive partnership with United Cerebral Palsy, including the employment of local parent consultants and public awareness for Camp Adventure, a camp for children and youth with disabilities.

CRS actively promotes the development of community-based systems of care through its network of 15 district offices, which work with every county in the State to enhance local services for CYSHCN.

Quality Assurance and Systems Development: CRS

Quality assurance and systems development activities by CRS follow.

Formal monitoring procedures for clinical sites and Quality Care Guidelines for 12 specific diagnostic conditions have been developed and implemented.

Quality Improvement Teams in CRS districts meet to identify service delivery areas that need improvement and to formulate an improvement plan to address that need.

Standards of care have been implemented for each specialty medical and evaluation clinic.

The CRS Policy and Procedure Manual and the CRS Infection Control Manual were significantly updated during 2004-2005. These are available in hard copy in each local office as well as on the ADRS internal web site, where they are updated as needed. An infection control DVD training was developed by the CRS Nursing Program Specialist. All staff were required to watch the training, and it was also shared with other divisions of ADRS.

Patient satisfaction surveys are mailed monthly to families. Any expressed concerns are forwarded to the appropriate district supervisor for resolution. CRS is revamping program evaluation in general and plans to modify its methods, including the satisfaction survey tool, during 2010. Also, CRS is embarking on a Business Intelligence initiative which will allow leadership to analyze data in real time and to monitor key performance indicators for proactive program planning and decision-making.

A credentialing process is used for enrolling specialty physicians, dentists, allied healthcare providers, and durable medical equipment providers. Clinic and care coordination dictation is regularly reviewed by the appropriate staff therapist, program specialist, and/or medical consultants to ensure quality and appropriateness of coding for reimbursement.

CRS staff members participate in annual Provider Appraisal Review for all CRS-sponsored Early Intervention System programs to ensure consistent quality and fiscal responsibility. Technical assistance is provided as needed throughout the year.

Staff performance appraisals, based on pre-identified responsibilities and expected results, are conducted bi-annually.

Capacity to Address the Ten Selected MCH Priority Needs

As stated in Section 1, Family Health Services and CRS jointly selected ten MCH priority needs: seven selected by Family Health and three selected by CRS. The processes utilized by Family Health Services and CRS to select these priorities are detailed in Section 5. The purpose of this part of Section 4 is to specifically discuss the State MCH Program's capacity to address the 10 selected priority needs.

Priority Needs by MCH Population Level and Pyramid Level

The 10 priorities, also listed in Section 5, are listed in the "Identified Needs" column of Worksheet 1, which is located on the next page.

As stated in footnotes to Worksheets 1 and 2, the numbers used to list the MCH priority needs are simply identification numbers for matching a priority in Worksheet 1 with the corresponding priority in Worksheet 2, and do not rank priorities according to public health significance. In both worksheets, the priorities are ordered according to the MCH Service Pyramid level to which they mainly pertain. However, as shown in Worksheet 1, many priorities pertain to more than one level of the pyramid. Selection of the pyramid level that such priorities mainly pertain to is, therefore, subjective in nature. In Worksheet 1, in the row for each priority, the cell for the service level to which the priority mainly pertains is shaded in blue. *Within* ordering by MCH Service Pyramid level, the priorities are ordered according to the MCH Program population to which they pertain, with priorities that pertain to more than one population being listed last.

Worksheet 1. Identified Needs by Maternal and Child Health Population and Pyramid Level Grid

MCH Priority Needs*	MCH Population Groups			MCH Pyramid Levels			
	Pregnant Women, Mothers, and Infants	Children	Children with Special Health Care Needs	Direct Healthcare Services	Enabling Services	Population-Based Services	Infrastructure-Building Services
1. **Increase access to culturally competent care coordination services** for CYSHCN, including transition planning as appropriate			X		X		
2. **Promote access to a medical home and to basic health care** for children, youth, and women of childbearing age	X	X	X	X	X		X
3. **Promote positive youth development** to reduce high risk behaviors in adolescents		X				X	X
4. **Reduce the prevalence of obesity** among children, youth, and women of childbearing age	X	X				X	X
5. **Reduce the prevalence of violent behavior**, including homicide and suicide, committed by or against children, youth, and women	X	X				X	X
6. **Reduce infant mortality**, especially among African Americans	X						X
7. **Increase family and youth participation in CYSHCN policy-making** through support services and education/training			X		X	X	X

MCH Priority Needs*	MCH Population Groups			MCH Pyramid Levels			
	Pregnant Women, Mothers, and Infants	Children	Children with Special Health Care Needs	Direct Healthcare Services	Enabling Services	Population-Based Services	Infrastructure-Building Services
8. **Promote access to community-based services** for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services) through education, awareness, advocacy, and linking families with local resources			X		X	X	X
9. **Promote access to a dental home** and to preventive and restorative dental care for children, youth, and women of childbearing age	X	X			X		X
10. **Promote access to mental health services** for children, youth, and women of childbearing age	X	X			X		X

Note: In the row for each MCH priority need, the cell for the service level that the priority mainly pertains to is shaded in blue.

*The numbers used to list the MCH priority needs are simply identification numbers for matching a priority need in Worksheet 2 with the corresponding priority in Worksheet 1. The numbers do not rank priorities according to public health significance.

Capacity Assessment: Ten MCH Priority Needs

As stated in Section 1, Family Health Services and CRS each selected its organization's potential MCH priority needs before a systematic, joint assessment of capacity was performed, but considered its general capacity to address individual priorities as potential priorities were selected. As also discussed in Section 1, the linkage between selection of priorities and examination of strengths and capacity is bidirectional. Accordingly, each of the 10 selected priorities became part of the structured framework for examining capacity in a quantitative manner, a description of which follows.

On the next page, Worksheet 2, the "MCH Capacity Assessment Grid," scores each of the State's ten MCH priority needs across five domains, with each domain having two or three sub-domains (for a total of twelve sub-domains). The five domains are skill sets, resources/partners, local networks for service delivery, political will/interest, and feasibility. Information from two sources was utilized in developing Worksheet 2: 1) a presentation by Dr. Donna Petersen[10] and 2) materials developed by the CAST-5 Project.[11]

To arrive at these scores, each priority need was assigned to a person or group of persons who scored that priority for each item under each of the five domains. (Each assignee was a member of Family Health's staff or CRS's staff.) For each priority, the assigned person(s) then wrote narrative concerning the scores given. A score of 5 indicates high capacity, a score of 3 moderate capacity, and a score of 1 low capacity. For each of the ten priorities, the scores across the five domains were totaled, and the total was placed in the "Total Points" column. In the "Total Points" column, the higher the total points, the higher the State MCH Program's capacity to address that priority. The maximum number of total points is 60.

The "Capacity Ranking" column ranks each of the ten priorities according to the State MCH Program's capacity to address it, relative to the program's capacity to address the remaining nine priorities. In the Capacity Ranking column, the priority that the State MCH Program has the *greatest* capacity to address is given a rank of 1, and the priority that the program has the *least* capacity to address is given a rank of 10. In two cases (respectively ranked as 5.5 and 8.5), two priorities had the same total points.

Family Health Services considered capacity to address needs as its initial potential priority needs were selected and as it revised and narrowed the priorities to seven MCH priority needs. However, the total score for capacity to address a particular priority need did *not determine* whether a potential priority was included in the seven MCH priority needs selected by Family Health. Instead, Family Health considered the *public health significance* of the need: based on findings from the Needs Assessment and input from the MCH Advisory Group. For this reason, the State MCH Program's capacity to address some of the priorities selected by Family Health is not very high. In particular, the capacity to address the priority need concerning prevention of violence, ranked tenth in the Capacity Ranking column, is very low. By FY 2011, Family Health's members of the Leadership Team, as well as other key Family Health staff, will determine whether capacity to address the priority need to prevent violence can be enhanced. In particular, this will occur as allocation of resources, which is part of the needs assessment cycle depicted in Figure 1.1 in Section 1, is considered.

For a ranking of the 10 MCH priority needs according to the State MCH Program's capacity to address them, see Worksheet 2, which follows.

Worksheet 2. MCH Capacity Assessment Grid

The scale used to rate capacity was as follows: 5 for high capacity, 3 for moderate capacity, and 1 for low capacity.

Abbreviations used in the worksheet:
MCH = maternal and child health
SO = State Office staff
CHD = county health departments
CRS DO = District offices of Children's Rehabilitation Service

MCH Priority Needs*	I. Skill Sets		II. Resources/Partners			III. Local Networks for Service Delivery		IV. Political Will/Interest			V. Feasibility		Total Points and Capacity Ranking	
	Central/ SO Staff	Other Partners	Time	Cost	Funding Partners	CHD/ CRS DO	Grantees/ Partners	Staff	Elected Officials	Public	System Capacity	State Context	Total Points[¶]	Capacity Ranking[T]
1. Increase access to culturally competent care coordination services for CYSHCN	5	5	5	5	5	5	5	5	3	5	3	3	54	1
2. Promote access to a medical home and to basic health care	3	3	3	1	1	1	1	5	3	1	3	1	26	8.5
3. Promote positive youth development	5	3	3	3	1	3	1	3	1	1	1	1	26	8.5
4. Reduce the prevalence of obesity	5	5	3	3	1	1	3	5	3	1	1	1	32	5.5
5. Reduce the prevalence of violent behavior	1	3	1	1	1	1	3	1	1	1	1	1	16	10
6. Reduce infant mortality	5	5	5	3	1	5	5	5	1	3	3	3	44	3
7. Increase family and youth participation in CYSHCN policy-making	5	3	5	3	5	5	5	5	3	3	3	5	50	2
8. Promote access to community-based services for CYSHCN and families	5	3	3	3	3	1	1	5	1	3	3	5	36	4

MCH Priority Needs*	I. Skill Sets		II. Resources/Partners			III. Local Networks for Service Delivery		IV. Political Will/Interest			V. Feasibility		Total Points and Capacity Ranking	
	Central/ SO Staff	Other Partners	Time	Cost	Funding Partners	CHD/ CRS DO	Grantees/ Partners	Staff	Elected Officials	Public	System Capacity	State Context	Total Points[¶]	Capacity Ranking[T]
9. Promote access to a dental home	5	5	1	1	3	1	1	5	3	1	1	1	28	7
10. Promote access to mental health services	3	5	3	3	1	3	3	5	1	1	1	3	32	5.5

Note: Information from the following two sources was utilized in developing Worksheet 2: 1) material presented by Dr. Donna Petersen at a February 2009 technical assistance meeting on Title V needs assessment[10] and 2) materials developed by the Capacity Assessment for State Title V (CAST-5) Project, a joint initiative of the John Hopkins Women's and Children's Health Policy Center and the Association of Maternal and Child Health Programs.[11]

*The 10 MCH priority needs that were jointly selected by Family Health Services and CRS. These correspond to those listed in Worksheet 1, but shortened terminology is used in Worksheet 2. The numbers used to list the MCH priority needs are simply identification numbers for referencing the priority needs in discussion or for matching a priority need in Worksheet 2 with the corresponding priority in Worksheet 1. The numbers do not rank priorities according to public health significance.

[¶] The total of the scores for the MCH priority need. The higher the total points, the higher the State MCH Program's capacity to address that priority. The maximum number of total points is 60.

[T] Ranks for each of the ten priorities: according to the State MCH Program's capacity to address the need, relative to the program's capacity to address the remaining nine priorities. The priority that the State MCH Program has the *greatest* capacity to address is given a rank of 1, and the priority that the program has the *least* capacity to address is given a rank of 10. Two of the ten priorities had a score of 26, so received an identical rank (of 8.5). As well, two priorities had a score of 32, so received an identical rank (of 5.5).

Throughout this discussion of capacity to address the priority needs, "MCH Program" refers to Alabama's MCH Program. Discussion concerning the MCH Program capacity scores shown on Worksheet 2 follows, for each of the 10 priority needs. In accordance with the Federal guidance,[1] the discussion is organized according to MCH Service Pyramid levels. However, as discussed earlier and shown in Worksheet 1, many of the priorities pertain to two or more pyramid levels. Such priorities are discussed under the pyramid level to which they mainly pertain. The priorities are discussed sequentially with respect to the capacity to address each. For priorities selected by Family Health Services, the discussion of capacity to address the particular capacity is extensive. For a brief review of the MCH Program's capacity to address the 10 priority needs, refer to: 1) the last column in Worksheet 1, which ranks each priority according to capacity to address it, 2) discussion under "Recap of MCH Program Capacity Across Domains," and 3) the "Highlights: Sub-Domains with the Highest and Lowest MCH Program Capacity" box.

Enabling Services

Priority: Increase Access to Culturally Competent Care Coordination

The full statement of this priority is to: *Increase access to culturally competent care coordination services for CYSHCN, including transition planning as appropriate.*

Planning for this need will require special consideration of cultural and language barriers, cultural competence, and geographic differences. Based on ratings of areas covered in Worksheet 2, this priority earned 54 total points, the highest number of points earned, so ranks first with respect to the MCH Program's capacity to address it.

Priority: Promote Access to a Medical Home

The full statement of this priority is to: *Promote access to a medical home and to basic health care for children, youth, and women of childbearing age*.

Background

Although ADPH's activities to address this priority are mainly enabling and infrastructure-building in nature, a major goal of these activities is to promote access to direct care, as well as enabling services. Further, to the degree feasible, county health departments fill certain gaps in the healthcare system by providing direct care to some clients who choose the health department as a source of care or cannot access the care elsewhere.

"Basic health care" is defined as primary care for all, care coordination for those who need it, and prenatal care for pregnant women.

Medical Home, Domain I: Skill Sets

The requisite skill sets for promoting a medical home and basic health care include having ADPH staff members who are knowledgeable about the medical home concept and healthcare resources available in the community and are able to make referrals for primary health care for both insured and uninsured patients. ADPH care coordinators receive programmatic training at the Central Office prior to working in any of the State's 11 Public Health Areas or 67 counties. Information and education about the medical home concept and healthcare resources are included in that training. Supervisors in the counties provide local information and guidance regarding primary care resources. Nurses in local health departments are kept updated regarding access to primary care services by their supervisors.

Skill sets in ADPH's Central Office are ranked at moderate capacity. Staff members located in the Central Office are generally aware of the medical home concept and healthcare resources available in the community. The MCH Program also has moderate capacity to access these skill sets from other partners. Many partners—Medicaid, ALL Kids, federally funded community health centers, rural health clinics, CDC, MCHB, and professional associations—are knowledgeable about the medical home concept and are promoting it within their areas of influence. However, as information does not always arrive in a timely manner, opportunities to work collaboratively are sometimes missed.

Medical Home, Domain 2: Resources and Partners
The MCH Program and its many partners currently devote both human and financial resources to promoting medical homes and access to basic health care for children and youth, including those with special health care needs, and women of childbearing age. The medical home movement has continued to gain traction as evidenced by the American Academy of Pediatrics' promotion regarding "every child needs a medical home" and Medicaid's Patient 1st primary care provider model.

The MCH Program has high capacity to devote time to promotion of the medical home through its staff and partners. All programs within Family Health promote access to basic primary care through the medical home model. Central Office staff work closely with partners to stay abreast of healthcare resources, advocate for patients and programs, and provide updated information to Public Health Area and county staff members in a timely manner.

Due to funding constraints at the State and Federal levels, the MCH Program has low capacity to obtain or allocate funding to address the promotion of the medical home and access to primary care services, including care coordination. The care coordination program for Medicaid patients has been impacted by lack of funding and, while the Medicaid-enrolled population has grown, the care coordination program has been unable to increase services. ADPH has unsuccessfully pursued additional funding support from Medicaid for care coordination. Funding through Medicaid or other State agencies is not currently available. Funding for family planning clinical services is available, but does not assist with access to primary care for other services. A small number of county health departments have memoranda of understanding with Patient 1st providers to provide EPSDT screenings for their patients; however, in most counties, children's health services, other than immunizations, are not available.

Medical Home, Domain 3: Local Networks for Service Delivery
ADPH has a strong network of county health departments throughout the State, which are administered by Public Health Area personnel. Area administrators are responsible for managing the human and financial resources in the county health departments, and the MCH Program has limited ability to redirect area or county staff activities without providing additional funding. Local networks of many of the MCH Program's partners are facing staff reductions and budgetary constraints.

The MCH Program has low capacity in regard to local external networks through which new initiatives could be deployed. While ADPH advocates for health care for all residents, any new initiatives for expanding the healthcare network depend upon procurement of additional State or Federal funding. The MCH Program also has low capacity to utilize local networks through grantees

or partners at the present time. Although ADPH advocates for health care for all residents, the Department has limited ability to direct the activities of its partners.

Medical Home, Domain 4: Political Will or Interest
As the medical home movement has gained acceptance within the broader community, the ability of the MCH Program to champion it has increased. MCH Program staff members have a high level of commitment to promoting the medical home and access to basic healthcare services for MCH populations. Within the political arena, both State and national elected officials are concerned about healthcare access and financing. While the public values access to health care, concerns about financing access for all citizens are being voiced.

The MCH Program has high capacity to garner political will and interest regarding this need among its staff. Family Health Services perceives access to a medical home and basic health care for children, youth, and women of childbearing age to be very important. ADPH works diligently to assure that all residents receive needed health care and to remove barriers that would prevent them from receiving care.

The MCH Program has moderate capacity to garner political will and interest regarding this need among elected officials. While the legislature supports Medicaid and ADPH programs that provide health care, there is limited funding in the State and much competition among agencies for these scarce resources. The MCH Program has low capacity to garner political will and interest among the public regarding access to a medical home and basic health care for all residents. Educating the public about the need and cost effectiveness of providing everyone with needed health care is paramount to creating public support for ensuring that healthcare services are available for all residents.

Medical Home, Domain 5: Feasibility
Access to a medical home and basic health care is considered a priority by ADPH, Medicaid, and some other State agencies. ADPH and Medicaid collaborate to increase access to medical homes and basic health care for low-income residents in a number of programs. Alabama's children in low-income families have access to care both through Medicaid and ALL Kids. Medicaid assigns children to a medical home through their Patient 1st Program. Patient 1st-enrolled children have access to ADPH-provided care coordination to assist in removing barriers to healthcare access. Low-income, uninsured women of childbearing age have access to family planning and care coordination through Plan First, Medicaid's family planning waiver program. Low-income, uninsured pregnant women have access to prenatal care through the State Maternity Waiver Program. The Alabama Breast and Cervical Cancer Early Detection Program provides free screenings for age-eligible, low-income, uninsured women, and those who are diagnosed with cancer are then eligible for Medicaid coverage. Low-income, uninsured HIV-positive individuals have access to Ryan White funding for prescription medications, health care, and dental services. Expansion of these efforts to include more uninsured adults is contingent on the availability of increased funding and health manpower.

The MCH Program currently has moderate capacity within the State's system of care for the MCH population to address this need. Multiple examples of collaboration exist, but expansion is contingent on increasing available resources.

The MCH Program currently has low capacity to address this need in the current State context. In the current climate, access to a medical home and basic health care for the uninsured is not

supported by the general public, physicians, and elected officials if its provision causes an increase in taxes. While MCH staff perceive this access as vitally important, there is little support for increasing healthcare funding with State dollars.

Medical Home, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to promote access to a medical home and to basic health care is 26. Of the 10 priorities, this priority ties for a rank of 8.5 with respect to the program's capacity to address it.

Population-Based Services

Priority: Promote Positive Youth Development
The full statement of this priority is to: *Promote positive youth development to reduce high risk behaviors in adolescents***.**

Positive Youth Development, Domain I: Skill Sets
The skill sets required for positive youth development include possessing a developmental perspective on adolescence and its importance during the lifespan. Specific skills include being able to identify normal stages, transitions, and tasks; gather current information regarding research in adolescent health issues and challenges; discuss these challenges; and offer suggestions for helping adolescents build healthy skills to navigate throughout domains in the home, school, and community settings.

Family Health's ASH Program has the skill set to train throughout the State as well as to train others to train on the stages, tasks, and myths. This has been an ongoing project with staff of the Alabama Campaign to Prevent Teen Pregnancy and former sub-grantees of the abstinence until marriage program. Future grant proposals and requests for funding will be designed and written with a youth development foundation. The ASH Program reviews current research and seeks to be up to date on evidence-based practice as related to all adolescent health issues. Skill sets in ADPH's Central Office are ranked at the highest capacity. The ASH Program has moderate capacity to access skill sets from its partners, as access has not completely been realized.

Positive Youth Development, Domain 2: Resources and Partners
The ASH Program has both staff and funding available to pursue reducing adolescent risk behaviors through positive youth development. While its partners have funding, their funding streams are frequently dedicated to addressing subsets of youth risk behaviors.

The MCH Program currently has moderate capacity regarding staff and funding. The MCH Block Grant is the source for 100 percent of the funding supporting the program. Over the past 4 years, the increasing number of opportunities identified across the State for education and collaboration has exceeded the capacity of the ASH Program's one full-time staff member.

Family Health Services allocates limited funding to the ASH Program. In order to expand the ASH Program's capacity, currently ranked as moderate, additional funding is needed to provide training and resources throughout the State. The MCH Program currently has low capacity to locate funding partners to address this need. Most partners have funding streams that are dedicated to addressing subsets of youth risk behaviors.

Positive Youth Development, Domain 3: Local Networks for Service Delivery
The program has some capacity to utilize the county health departments to address some youth risk behaviors (such as teen pregnancy prevention), but not within the broader framework of positive youth development. Local networks available through grantees or partners have been reduced due to financial constraints related to the economic downturn within the State.

The MCH Program presently has moderate capacity to utilize local networks to deploy new initiatives. County health departments have some limited capacity to address selected youth risk behaviors, particularly those related to reproductive health. One example of a successful utilization effort is ongoing collaboration with Plan First. The ASH Program will plan trainings to county health departments to increase their capacity to serve adolescents aged 18-24 years. Visits to three Public Health Areas resulted in plans to partner in two high-risk areas, including training for clinic staff in selected county health departments.

Growth in local networks through grantees or partners has been extremely limited, often due to funding constraints. The MCH Program currently has low capacity to utilize local networks through grantees or partners. Other agencies with local offices that serve youth—such as mentoring programs, local school systems, postsecondary institutions, healthcare providers, and hospitals—have been identified as potential partners.

While ASH staffing limitations have restricted the capacity to fully utilize available local networks, the program is currently working on two initiatives. The first initiative is to provide training to community partners related to the potential funding for evidence-based teen pregnancy prevention. The ASH Program, in collaboration with one statewide non-profit partner, has provided and facilitated trainings across the State through a three-session webcast series on evidence-based programming and the Behavior Determinant Intervention logic model. Secondly, a school-based diabetes initiative is being coordinated within the ASH Program to bring awareness statewide to the intensifying impact of diabetes on school-age children and youth in Alabama.

Positive Youth Development, Domain 4: Political Will or Interest
While the MCH Program has remained very supportive of the ASH Program, there appears to be limited interest in adolescents and positive youth development among elected officials and the public. While verbal support is often given, the words are not followed by financial support to develop and implement programs to foster positive youth development.

The MCH Program has moderate capacity to garner political will or interest regarding this need among its staff. This ranking is a reflection of the ongoing work within programs, as well as a reflection of the tremendous shift in philosophy from disorder-, risk behavior-, or disease-based programs and services to a population-based, youth development approach. The MCH Program has low capacity to garner political will or interest regarding this need among elected officials. Legislation and policies that are related to youth issues continue to be punitive and do not address youth protective factors, including quality out-of-school time programs such as mentoring and service learning opportunities. Building political will and interest among the public for adolescents is an ongoing effort and remains a program priority. However, the MCH Program has low capacity to gain political will or interest regarding adolescent health among the public.

Positive Youth Development, Domain 5: Feasibility
The current economic downturn within the State has affected the overall system of care for all of its vulnerable populations.

The MCH Program has low capacity within the State's system of care to address the needs of the adolescent population. Systems are designed for the younger populations and often ignore the diverse needs of adolescents and young adults. The MCH Program has low capacity to address this need in the current State context. This capacity will be increased by building political will and interest among the public for young people.

Positive Youth Development, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to promote positive youth development is 26. Of the 10 priorities, this priority ties for a rank of 8.5 with respect to the program's capacity to address it.

Priority: Reduce the Prevalence of Obesity
The full statement of this priority is to: *Reduce the prevalence of obesity among children, youth, and women of childbearing age*.

Obesity, Domain I: Skill Sets
The WIC Division's Nutrition Services Branch employs seven registered dietitians in the State Office. The Nutrition Service Branch plans, coordinates, and monitors the nutrition education and counseling efforts in the WIC clinics statewide. Obesity is just one of the nutrition education topics provided to WIC participants. In addition, three registered dietitians work in the Bureau of Professional Support Services Nutrition and Physical Activity Division. They plan and coordinate State and community-level education, policy, system, and environmental initiatives that address obesity with partners outside of the ADPH Central office. Accordingly, skill sets of MCH Program staff and partners to address this priority are rated as high.

Obesity, Domain 2: Resources and Partners
WIC providers, nutritionists, and nurses can provide nutrition education for WIC participants only. The WIC Program is 100 percent federally funded; therefore, only WIC participants are served by nutritionists and nurses who code their time to WIC. The Nutrition and Physical Activity Division generates funding via various grant submissions and State funds, which provides ability to reach varied audiences like State employees, school programs, and other community groups. They are able to collaborate with multiple partners through statewide coalitions, task forces, and community organizations. In this domain, the MCH Program's capacity to address this priority is ranked as moderate for both time and cost, but the capacity to secure funding partners is ranked as low.

Obesity, Domain 3: Local Networks for Service Delivery
Obesity counseling in the county health departments is provided only for WIC participants due to the funding noted above. Currently, there are no funds provided to the county health departments for obesity counseling outside of those participants in the WIC Program. The Nutrition and Physical Activity Division can provide one-on-one counseling to ADPH employees to teach healthy lifestyle changes. Local classes and/or education sessions are taught with local groups and schools. In this domain, capacity to address this priority is ranked as low for the Health Department's local networks and moderate for partners' networks.

Obesity, Domain 4: Political Will or Interest
ADPH Staff are aware of the need for weight management counseling and public initiatives to address the problem of obesity. Elected officials, as well, express interest in and concern regarding the high incidence of obesity in the State. Information is available for the general public to be aware

of the problem; however, little effort is being generated by the average individual to correct his or her situation. In this domain, capacity to address obesity is ranked as high for garnering the will of staff, moderate for garnering the will of elected officials, and low for garnering the will of the public.

Obesity, Domain 5: Feasibility
At this time, the system capacity to address and correct the high prevalence of obesity in the State is hindered by lack of funds and the workforce to reach all population groups. Therefore, capacity is ranked as low in both sub-domains.

Obesity, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to reduce the prevalence of obesity among children, youth, and women of childbearing age is 32. Of the 10 priorities, this priority ties for a rank of 5.5 with respect to the MCH Program's capacity to address it.

Priority: Reduce the Prevalence of Violent Behavior
The full statement of this priority is to: *Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women*.

Violent behavior committed by or against children, youth, and women includes assault and abuse (including child abuse and domestic violence), homicide, and suicide.

Violent Behavior, Domain I: Skill Sets
The requisite skill sets for reducing these behaviors lie primarily in the criminal justice and judicial arenas, with notable exceptions of prevention and social marketing skills present in both public and mental health disciplines. While ADPH staff are competent in general prevention methodology, more training would be necessary to address violence prevention issues in most cases. The skill sets already in place within ADPH related to this priority are primarily in the areas of injury and fatality prevention and focus mainly on child abuse, youth suicide, and homicides with young victims. The Child Death Review Program, located in Family Health Services, and the Injury Prevention Division, located in HPCD, are the ADPH programs most involved in these issues.

Skill sets in the MCH Program are ranked at lowest capacity. Staff members located in certain programs within the Central Office are involved in some aspects of violence reduction efforts, but these skills are neither generalized nor widespread. The MCH Program does have moderate capacity to access these skill sets from other partners. Many partners—law enforcement at all levels, prosecutors, medical examiners, coroners, judges, social workers, domestic violence organizations, and child advocates—are knowledgeable about the issues surrounding violence involving children, youth, and women. These partners are implementing various efforts to reduce the prevalence of violence. However, most of their efforts do not focus on primary prevention or the health-related aspects of these issues, and many opportunities to expand the MCH Program's network of partners and work collaboratively toward a more comprehensive approach exist.

Violent Behavior, Domain 2: Resources and Partners
The MCH Program and its many partners currently devote both human and financial resources to reducing violent behavior committed by or against children, youth, and women. Despite being recognized as a serious problem, violent behavior is rarely a resource priority in terms of time, personnel, or funding.

The MCH program has low capacity to devote time to reducing violent behavior through its staff and partners. Presently, very few ADPH programs have violent behavior as a priority, and the issue is not the primary focus of any of them. These few programs in the ADPH Central Office work closely with their partners to share information and support mutual prevention or reduction efforts, but these efforts rarely involve Public Health Area, county, or local ADPH staff directly.

Due to funding constraints at both the State and Federal levels, the MCH Program currently has low capacity to locate funding partners and to obtain or allocate funding for initiatives to reduce the prevalence of violent behavior committed by or against children, youth, and women. The programs that participate in such efforts are limited in funding and address a myriad of other issues as well.

V*iolent Behavior, Domain 3: Local Networks for Service Delivery*
ADPH has a strong network of county health departments throughout the State, which are administered by Public Health Area personnel. Area administrators are responsible for managing the human and financial resources in the county health departments, and the MCH Program has limited ability to redirect Public Health Area or county ADPH staff activities without providing additional funding. Local networks of many of the MCH Program's partners are also facing staff reductions and budgetary constraints.

The MCH Program has low capacity in regard to local networks through which new initiatives could be deployed. ADPH is directly involved in very few violence prevention initiatives and, in light of current resource limitations, such new initiatives outside of core missions or functions are lacking the availability of additional, targeted State or Federal funding. The MCH Program has moderate capacity to utilize local networks through grantees or partners that are more directly involved in these issues. The Child Death Review Program and the Injury Prevention Division both work closely with partner organizations in varied disciplines with a more direct focus including violence prevention, surveillance, and intervention.

Violent Behavior, Domain 4: Political Will or Interest
The issue of reducing the prevalence of violent behavior committed by or against children, youth, and women is one that is highly sensationalized in the media and supported vocally with rhetoric, but rarely finds the political will or interest to make any sweeping changes or redirect resources. While MCH Program staff members certainly support such reduction efforts, these efforts do not directly fit the mission of more than a handful of programs or personnel. Within the political arena, both State and national elected officials voice concerns about violent behavior committed by or against children, youth, and women. The public expresses similar concerns, especially child and family advocates.

The MCH Program has low capacity to garner political will or interest regarding this need among its staff. While MCH staff perceive violent behavior committed by or against children, youth, and women to be an important issue, very few are directly involved with addressing such in their routine responsibilities. The MCH Program also has low capacity to garner political will or interest regarding this need among elected officials. While lip service is paid to the issue, it is rarely considered a high priority in terms of funding and resources.

The MCH Program also has low capacity to garner political will or interest among the public regarding this need. While child and family advocates and people whose lives have been directly affected by violence can be quite vocal on the issue, the public at large seems to accept that the

issue is serious without becoming invested in it as a priority problem to address through time, funding, and community involvement.

Violent Behavior, Domain 5: Feasibility
Several agencies engage in some efforts to reduce the prevalence of violence, and some ADPH programs collaborate with those partners to inform and improve prevention efforts. The Child Death Review Program and the Injury Prevention Division both partner with law enforcement, investigative agencies, and advocacy groups whose primary focus is one aspect or the other of this issue. These partners include the State Department of Human Resources, the State Department of Child Abuse and Neglect Prevention, the State Department of Children's Affairs, the State Department of Mental Health, the State Department of Public Safety, the Alabama Head Injury Task Force, the Alabama Suicide Prevention and Resource Coalition (formerly the Alabama Suicide Prevention Task Force), VOICES for Alabama's Children, and others. Any expansion of these strategic partnerships and collaborative efforts will be contingent upon the availability of increased funding and manpower.

The MCH Program currently has low capacity within the State's system of care to address this need. Multiple examples of collaboration exist, but expansion is contingent on increasing available resources. The program currently has low capacity to address this need in the current State context. More violence reduction programs and efforts certainly exist outside of ADPH than within; but even in those organizations where such efforts are considered a primary mission, they are subject to the same challenges of limited resources and competing priorities that all State efforts suffer from in the current climate. While MCH staff perceive reducing the prevalence of violence as an important issue, there is little support for increasing healthcare funding with State dollars or redirecting staff for something that most do not perceive as being primarily a public health issue.

Violent Behavior, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to reduce the prevalence of violent behavior is 16. Of the 10 priorities, this priority ranks lowest (rank of 10) with respect to the program's capacity to address it.

Infrastructure-Building Services

Priority: Reduce Infant Mortality
The full statement of this priority is to: *Reduce infant mortality, especially among African Americans*.

Infant mortality is an indicator used to characterize the health status of communities and states. It indicates the current health status of a community as well as future health status.

Infant Mortality, Domain I: Skill Sets
The skill sets required to reduce infant mortality, especially among African Americans, include identifying the factors that contribute to infant mortality, identifying factors associated with infant mortality for the African American populations, collecting and analyzing data, and implementing programs and strategies to address the multi-faceted causes of infant mortality.

Training is available and has been provided to Family Health Services staff. The staff have been trained and have acquired the needed skills to address this priority. The staff continue to acquire needed skills by attending relevant trainings, seminars, and conferences.

Skills sets in ADPH's Central Office staff members are ranked at the highest capacity. Skills sets for other partners are ranked at high capacity. Family Health Services collaborates with agencies, organizations, and academic institutions statewide regarding infant mortality and perinatal issues.

Infant Mortality, Domain 2: Resources and Partners
The need to reduce infant mortality continues to be one focus of the MCH Program. The State implemented the FIMR Program in January 2009 as a strategy to address infant mortality. Alabama Medicaid is co-funding the program; however, additional funding is needed to sustain the program. Other agencies that might assist in funding the program include the State Legislature, Federal and State agencies, and national foundations.

The MCH Program currently has a high capacity to address the need through staff and partners. The Perinatal Program holds quarterly meetings statewide and meets monthly in the perinatal regions to address the need. The capacity for the MCH Program to obtain and/or allocate funding to address the need is moderate. Additional funding is needed to hire additional staff for expansion of the FIMR Program. The MCH Program's ability to locate funding to address this need is low, due to the current economic situation.

Infant Mortality, Domain 3: Local Networks for Service Delivery
The MCH Program has identified several local networks where a new initiative can be implemented in communities throughout the State. These agencies were identified through the FIMR Program. The Community Action Teams being developed through the FIMR Program include representatives from schools, local government agencies, academic institutions, healthcare providers and workers, political leaders, community leaders, the media, and community organizations. New initiatives are implemented in a perinatal region based on the recommendations received from a case review team in that region. (As previously stated, the State has five perinatal regions.) The FIMR Program identifies local service capacity and existing gaps in services due to lack of availability, access, continuity, and appropriateness. Additionally, the FIMR program identifies the potential to add, link, or modify services. The MCH Program cannot at this time provide funding.

The capacity of the MCH Program to utilize its local networks to address infant mortality is high. SPAC advises Family Health Services in the planning, organization, and evaluation of programs and policies to address the need. The council consists of representatives from each perinatal region, the Alabama Chapter of the American Academy of Pediatrics, the Alabama Section of the American College of Obstetricians and Gynecologists, the Alabama Academy of Family Practice, the Alabama Early Intervention System, the Alabama March of Dimes, and the Schools of Medicine at UAB and USA. Through the FIMR Community Action Teams, the MCH Program's capacity to utilize its local networks through grantees or partners addressing infant mortality is high.

Infant Mortality, Domain 4: Political Will or Interest
In previous years, the MCH Program had a desire to implement FIMR, but neither had the resources nor staff available to do so. However, the 2007 infant mortality rate increase to 10.0 deaths per 1,000 live births sparked opportunity, and was the impetus that required the MCH Program to address the issue. With the implementation of FIMR to decrease infant mortality, staff roles and responsibilities were modified to address infant mortality. Healthcare providers, healthcare workers, community organizations, and interested citizens understand the need to address infant

mortality. However, legislators and elected officials require further education and better understanding of this need and the impact that infant mortality has on the State.

The capacity of the MCH Program to garner political will or interest regarding this priority among staff is high. Perinatal Program staff can share data and information gained through FIMR to frame the issue and increase the staff's knowledge about the issue and the impact it has on the community. The capacity of the MCH Program to garner political will or interest regarding this priority among elected officials is low. Most current political leaders are not focused on infant mortality. The MCH Program has moderate capacity to garner political will or interest regarding this priority among the public. The staff can use information and data gained through FIMR to inform the public about the impact infant mortality has on the community now and in the future. Staff can raise awareness about reducing infant mortality in communities statewide.

Infant Mortality, Domain 5: Feasibility
The entire system of care for the MCH population in the community has the capacity and obligation to address infant mortality. The only way the issue can be addressed is through collaboration. Collaboration among agencies and organizations continues to strengthen the efforts throughout the State regarding perinatal issues. Several factors should be taken into consideration to address perinatal issues in the State, of which one is providing health insurance to women of childbearing age across the lifespan. Many women do not have access to health care 60 days after the birth of their newborn. Providing health insurance across the lifespan would lessen the gap of access to health care for many women in the State.

The State's current system of care for the MCH population to address infant mortality is at moderate capacity. Many counties do not have healthcare providers, hospitals, or clinics to provide the services that are needed. In order to strengthen the capacity, programs and strategies are needed for targeted populations. Disparities have to be addressed and evidence-based approaches implemented to reduce infant mortality, particularly in the African American population. The capacity of the MCH Program to address the need in the current State context is moderate. Infant mortality has to be an issue of concern for everyone in the State if the infant mortality rate is to be reduced.

Infant Mortality, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to reduce infant mortality is 44. Of the 10 priorities, this priority has a rank of 3 with respect to the program's capacity to address it.

Priority: Increase Family and Youth Participation in Policy Making
The full statement of this priority is to: *Increase family and youth participation in CYSHCN policy-making through support services and education/training*.

Planning for this need will require special consideration of cultural and language barriers and geographic differences. Based on ratings of areas covered in the MCH Capacity Assessment Grid, this priority earned 50 total points and ranks number 2 for the MCH Program's capacity to address it.

Priority: Promote Access to Community-Based Services
The full statement of this priority is to: *Promote access to community-based services for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services) through education, awareness, advocacy, and linking families with local resources*.

Activities toward meeting this need will rely heavily on education and awareness of youth, families, and providers related to what services are available and what are needed at the local levels. It will require dissemination of data from the Needs Assessment, support for and stimulation of grassroots efforts to develop local delivery systems, and advocacy and leadership training for families and youth—empowering them as agents of change in their local communities. Planning for this need will require special consideration of cultural and language barriers and geographic differences. Based on ratings of areas covered in the MCH Capacity Assessment Grid, this priority earned a total of 36 points and ranks number 4 with respect to the MCH Program's capacity to address it.

Priority: Promote Access to a Dental Home
The full statement of this priority is to: *Promote access to a dental home and to preventive and restorative dental care for children, youth, and women of childbearing age*.

Dental Home, Domain I: Skill Sets
While Family Health's Oral Health Branch has not had a fulltime Dental Director for the past 18 months, a strong partnership with ADPH's Central Office programs and other agencies provides high capacity to address this priority. The Assistant Director of the Oral Health Branch serves as Acting Director, and the branch continues to be supported one day a week by pediatric staff from the UAB School of Dentistry.

Health Department Central Office partners, some of which are located outside of Family Health Services, include: ALL Kids, the Tobacco Prevention and Control Branch, the Office of Primary Care and Rural Health, WIC, Healthy Child Care Alabama, the ASH Program, and the Social Work Branch. Strong partnerships with other State and private agencies include: the UAB School of Dentistry, Alabama Medicaid, Alabama Head Start, the Alabama Primary Health Care Association, the Alabama Dental Association, the Alabama Academy of Pediatric Dentistry, the Sarrell Regional Dental Center, the Alabama Dental Society, and several school-based dental programs.

Based on the above partnerships, the MCH Program's skill sets and their partners' skill sets for addressing this priority are ranked as high.

Dental Home, Domain 2: Resources and Partners
The MCH Program has low capacity to address this need based on limited staff, funding resources, and ongoing program commitments. Hiring freezes, budget cuts, and restrictions continue for most State agencies.

The Alabama Head Start program has a new grant designed to promote dental homes for Early Head Start and Head Start children statewide. The Oral Health Branch will partner with several agencies to promote this initiative statewide and will continue dental activity with Alabama Medicaid through Patient 1st, screening and referral activity with the UAB School of Dentistry, education and outreach through the Healthy Child Care Alabama grant, policy development with the Alabama Dental Association, and recruitment and retention initiatives with the Alabama Primary Health Care

Association and ADPH's Office of Primary Care and Rural Health. The MCH Program has moderate capacity to locate funding partners to address this need.

Dental Home, Domain 3: Local Networks for Service Delivery
The MCH Program has low capacity to deliver oral health services through county health departments or through partners' local networks, due to economic concerns and funding restrictions at the national and State levels.

Dental Home, Domain 4: Political Will or Interest
The ADPH Central Office staff and State partners have a strong interest and high capacity to promote the dental home priority need through collaboration with the Alabama Dental Association, the Alabama Dental Society, the Alabama Academy of Pediatric Dentistry, UAB's School of Dentistry, and other key stakeholders.

Elected officials understand the importance of children, youth, and women of childbearing age having dental homes and access to preventive and periodic dental care. New Mobile Dental Van legislation was passed in 2008, allowing dental care to be provided in underserved areas of the State through mobile dental programs. Several nonprofit dental programs, Federally Qualified Health Center programs, and schools have added mobile dental vans to their existing programs that target low-income families due to this new legislation. The Oral Health Branch is asked to assist the Governor's Office and numerous State legislators in accessing dental care for Alabama citizens residing in their respective districts. The Oral Health Coalition of Alabama continues to address lack of access to dental care and seek support from elected officials in meeting these needs. Accordingly, capacity to garner political will to address this priority is deemed to be moderate.

The public continues to have misconceptions regarding preventive and regular dental care. The MCH Program's capacity to garner political will from the public to address this priority is deemed to be low.

Dental Home, Domain 5: Feasibility
With funding cuts, hiring freezes and economic concerns, the State system of care continues to have low capacity to address this dental priority need. Based on HPSA dental designations for Alabama, all counties except one (Shelby) are rated as an HPSA for dental care. HPSA dental data also show that Alabama has a shortage of 288 dentists. Gaps in service are evident in several counties; even though all counties have dental practices or clinics, four counties have no Medicaid dental providers.

The Oral Health Branch collaborates with UAB's School of Dentistry, the Office of Primary Care and Rural Health, the Alabama Primary Health Care Association, and several nonprofit dental programs to promote location of dentists in underserved areas. However, the capacity to promote this priority remains low.

Dental Home, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to promote access to a dental home is 28. Of the 10 priorities, this priority has a rank of 7 with respect to the program's capacity to address it.

Priority: Promote Access to Mental Health Services
The full statement of this priority is to: *Promote access to mental health services for children, youth, and women of childbearing age*.

Mental Health, Domain I: Skill Sets
The skill sets required by MCH staff related to mental health services are the ability to identify needs through screening and surveillance, the ability to identify appropriate referral sources, and the ability to effect change through an advocacy role. Training is available for the first two skill sets. Advocacy and policy change require the opportunity, as well as the skills, to engage in these functions.

Skill sets in ADPH's Central Office are ranked at moderate capacity. Staff serve or have served on the following committees: the Suicide Prevention Task Force, the Fetal Alcohol Syndrome Disorder Grant, the Mental Health Multiple Needs Committee, and the ACT Regional Summit on Autism. The aforesaid summit enhanced the identification, assessment, service coordination, and provision of services for children with autism spectrum disorders and related developmental disabilities. The Child Death Review Program distributes a brochure on suicide prevention. In 2008, nine mental health workers were placed into underserved Alabama communities through the National Health Services Corps by the Office of Primary Care and Rural Health Development.

Alabama's Blueprint for Zero to Five was developed through the Early Childhood Comprehensive Systems Initiative of ADPH, building on the report of the Early Learning Commission and the Systems Mapping Initiative. The Blueprint is offered as the starting point for directing resources and efforts toward what has proven to make a difference. The Blueprint is viewed as a structure for planning, funding, advocacy, accountability, and policy decisions for the purpose of promoting healthy development of children.

Pertinent skills sets of other partners are ranked at high capacity. In particular, the Alabama Chapter of the American Academy of Pediatrics has spearheaded initiatives to increase pertinent skills in the medical community. Discussion of these initiatives follows.

<u>Initiatives of the Alabama Chapter of the American Academy of Pediatrics</u>
The Alabama Chapter of the American Academy of Pediatrics (Chapter) implemented a Healthy People 2010 grant project in 2005-2006: by establishing an interdisciplinary mental health task force and carrying out a series of four regional dinner meetings. The dinner meetings gave pediatricians the tools they need to more effectively identify and refer children with mental health needs. In 2008, building upon the success of the 2005-2006 project, the Chapter secured a grant from the American Academy of Pediatrics (as one of five state chapters) to expand these efforts into four other locations. The 2008 project, Strategies for System Change in Children's Mental Health: A Chapter Action Kit, focused on conducting regional roundtable dinner sessions and community service provider forums for local pediatricians. The new roundtable locations—Florence, Opelika, Selma, and Dothan—were planned by the already established Chapter Mental Health Advisory Committee in cooperation with local arms of each agency and local primary care and mental health providers. (The aforesaid advisory committee was comprised of member pediatricians and key representatives from the State Department of Mental Health, the ADPH, and family members representing Alabama Family Ties and the Alabama unit of the National Alliance on Mental Illness.)

The overarching goal of the Chapter's 2008 project was to increase pediatricians' comfort level in accessing mental health services for their patients and families by establishing local children's mental health networks and identifying where children could be referred locally for mental health services. Coordinated by a local pediatrician, the roundtable meetings brought together pediatricians, community mental health center professionals, psychiatrists, early intervention professionals, and others serving the needs of children and families. The strategy at each of the

roundtable sessions required the participation of the local community mental health center and their child and family service providers to complete a Community Resource Information form that cataloged the services provided by their specific program, contact information, linkage requirements for pediatricians, and preferred insurance accepted by their agency. Likewise, the local pediatricians completed a Community Resource Inventory form and a Pre-Meeting Survey that identified and inventoried areas of specific need. Each of the roundtables highlighted information and resources on Bright Futures' new mental health materials. Both the templates for the regional sessions and the progress of each region are catalogued on the Chapter web site's mental health pages, along with a Local Comprehensive Children's Mental Health Resource Directory.

Outgrowths and "grant-expanding" successes from these initiatives of the Alabama Chapter of the American Academy of Pediatrics have included:

- The Alabama ABCD Screening Academy project, developed through technical assistance as a National Academy for State Health Policy grantee.
- Creation of a white paper, *Needs Assessment and Recommendations on Children's Mental Health in Alabama*.
- Creation of a legislative agenda for children's mental health.
- Creation of the Chapter's Mental Health Coalition.
- Creation of a mental health resources directory and other resources for pediatricians.
- Partnership with the State Department of Mental Health, the ADPH, and Alabama Family Ties on the annual Child and Adolescent Psychiatric Institute.
- Continuing medical education sessions at the Chapter's two yearly meetings on mental health screening, triage, and treatment.
- An open forum on children's mental health in 2007.
- A grant from the American Academy of Pediatrics to conduct two open forums on developmental services in 2009-2010.
- Chapter representation on the State Department of Mental Health's Child and Adolescent Task Force.
- Chapter representation on the Blueprint from Zero to Five Project.
- Continued statewide expansion of standardized developmental screening.

The ABCD Screening Project in Alabama and screening projects from 17 other states are provided technical assistance by the National Academy on State Health Policy to improve policy and protocols for the use of standardized developmental screening tools. The State's ABCD Screening Project convened pediatricians and representatives from the Medicaid Agency, the ADPH, the State Department of Mental Health, and Alabama's Early Intervention System in 2007 to begin this process under the umbrella of the Alabama Partnership for Children's *Blueprint for Zero to Five* Initiative.

Other Initiatives

The Alabama Partnership for Children's *Zero to Five Matters* is a statewide comprehensive early care and education campaign targeting business leaders and policymakers across the State, emphasizing the importance of the first 5 years of life. The campaign was developed, accepted, and embraced by all stakeholders across the State, and advocates for increased investment in the State's most vulnerable citizens. One component of the campaign is ensuring children have health insurance and a medical home to provide consistent care, including attention to good emotional development and mental health needs.

ADPH designated the UAB School of Public Health and the Department of Health Care Organization and Policy as the *bona fide* agent to manage the grant "Enhancing Current Capacity for Surveillance of Autism Spectrum Disorders and Other Developmental Disabilities from a Public Health Perspective."

Mental Health, Domain 2: Resources and Partners

The MCH Program has moderate capacity to devote time and funding to address this need. Currently, the MCH Program addresses this need by allowing staff time to serve on committees and provide care coordination services. Care coordinators routinely assess Medicaid-enrolled patients for mental health issues and make referrals as required. The MCH Program provided funds to purchase the ASQ-3™ developmental screening tool[a] to be used by county health departments during well child visits. Training will be provided in 2010. For many years, ADPH has provided funds to the Center for Child and Adolescent Development to provide comprehensive diagnostic and therapy services for children aged 18 months through 18 years in the central Alabama region. Disorders treated include behavioral disorders and emotional difficulties.

The MCH Program has low capacity to locate funding partners to address this priority. Most partners have dedicated funding streams or are seeking funding to address this issue. The Alabama Business Leaders' Summit on Early Childhood Investment was held in October 2009. Partners included the Business Council of Alabama, the Chamber of Commerce Association of Alabama, the Alabama School Readiness Alliance, and the Alabama Partnership for Children. The purpose of the summit was to educate the business community on the importance of making young children the top economic priority in Alabama. Mental health problems were one of the topics discussed during one of the sessions.

Mental Health, Domain 3: Local Networks for Service Delivery

The MCH Program rates local networks through which new initiatives can be deployed currently at moderate capacity. As stated above, the ASQ-3™ screening tool will be implemented in county health departments in 2010. Staff will continue to be involved with many of the initiatives discussed previously.

The MCH Program ranks capacity of local networks to take on new initiatives through grantees or partners as moderate. Many partners are working diligently to increase provider capacity through training and workshops. Alabama Blue Cross Blue Shield is in the process of expanding their Mental Health Network. There are now over 700 providers in the network. The lack of appropriate provider screening to identify need and the lack of mental health providers to diagnose and treat are issues that will need to be addressed.

[a] Ages and Stages Questionnaires®, Third Edition

With support from The Children's Trust Fund of Alabama, Alabama March of Dimes, Central Alabama Community Foundation, Joint Public Charity, and Montgomery Public Schools, the Gift of Life Foundation implemented the Nurse Family Partnership in the Montgomery area in 2009.

Mental Health, Domain 4: Political Will or Interest
The MCH Program capacity to garner political will or interest regarding this need among its staff is ranked at high capacity. The majority of the staff perceives this need as very important. Many staff members are currently on committees that are working to better the system for families and participate with initiatives related to this issue. ADPH care coordinators receive training on depression, suicide, and other mental health issues during mandatory trainings. Satellite trainings on mental health issues such as prevention of suicide were provided in 2007.

The MCH Program staff's capacity to garner political will or interest regarding this need among elected officials is rated at low capacity. Without additional funding, it is very difficult to garner support from elected officials. The Alabama Chapter of the American Academy of Pediatrics has mental health on their legislative agenda. Additionally, the MCH Program staff's capacity to garner political will or interest among the public is rated at low capacity. Many citizens remain unaware of the shortage of mental health services in the State until they have a family member who requires diagnostic evaluation or treatment.

Mental Health, Domain 5: Feasibility
The current capacity of the State's system of care for the mental health priority is low. The MCH Program must work with the other partners to continue the work that has been done over the last 4 years to improve the mental health system for families in the State. The MCH Program's capacity to address the need for mental health services in the current State context is moderate. It is still realistic to focus on this need even though the State is facing funding cuts and hiring freezes. The need for mental health services increases during difficult times. Stakeholders must continue to work together to improve mental health services for families by continuing the previously outlined activities.

Mental Health, Total Points:
As shown on Worksheet 2, the total score for the MCH Program's capacity to promote access to mental health services is 32. Of the 10 priorities, this priority has a rank of 5.5 with respect to the program's capacity to address it.

Recap of MCH Program Capacity Across Domains

To recap MCH Program capacity to address the priority needs, within each of the five domains:

- With respect to Domain 1, Skill Sets, the skills of Central or State Office staff to address the priority need are high in seven cases, moderate in two cases, and low in one case. For other partners, skills were high in five cases and moderate in five cases.

- With respect to Domain 2, Resources/Partners, time available to address the priority need was high in three cases, moderate in five cases, and low in two cases. Capacity to meet the cost to address the priority need was high in one case, moderate in six cases, and low in three cases. In regards to available resources of funding partners to address the priority need, capacity was high in two cases, moderate in two cases, and low in six cases.

- With respect to Domain 3, Local Networks for Service Delivery, capacity to address the priority through the county health departments and CRS's district offices was high in three cases, moderate in two cases, and low in five cases. Capacity to address the priority through the local networks of grantees/partners was high in three cases, moderate in three cases, and low in four cases.

- With respect to Domain 4, Political Will/Interest, the capacity to garner political will or interest from staff to address the priority need was high in eight cases, moderate in one case, and low in one case. For elected officials, the capacity to garner political will or interest was moderate in five cases and low in five cases. Capacity to garner political will or interest from the public was high in one case, moderate in three cases, and low in six cases.

- With respect to Domain 5, Feasibility, system capacity to address the priority need was moderate in five cases and low in five cases. The feasibility to address the priority need in the current State context was high in two cases, moderate in three cases, and low in five cases.

Highlights:

Sub-Domains with the Highest and Lowest MCH Program Capacity

The five domains in Worksheet 2 include twelve sub-domains.

The three sub-domains in which the MCH Program had the highest capacity were: 1) the political will and interest of MCH Program staff, which ranked first; 2) the skill sets of Central and State Office staff, which ranked a close second; and the skill sets of other partners, which ranked a close third.

Of the twelve sub-domains, three tied for being lowest with respect to MCH Program capacity: 1) capacity to garner political will or interest of elected officials, 2) capacity to garner the political will or interest of the public, and 3) system capacity.

SECTION 5

Selection of State Priority Needs

Preview: Section 5

Section 5 addresses the six major topics specified in the MCH Block Grant Guidance:[1] 1) list of potential priorities; 2) methodologies for ranking/selecting priorities; 3) priorities compared with prior needs assessment; 4) priority needs and capacity; 5) MCH population groups; and 6) priority needs and State Performance Measures.

Rather than elaborating on the above issues, this preview lists the 10 priorities that Family Health Services and CRS ultimately selected.

Ten MCH Priorities Jointly Selected by Family Health Services and Children's Rehabilitation Service

- *Increase access to culturally competent care coordination services for CYSHCN, including transition planning as appropriate.*
- *Promote access to a medical home and to basic health care for children, youth, and women of childbearing age.*
- *Promote positive youth development to reduce high risk behaviors in adolescents.*
- *Reduce the prevalence of obesity among children, youth, and women of childbearing age.*
- *Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women.*
- *Reduce infant mortality, especially among African Americans.*
- *Increase family and youth participation in CYSHCN policy-making through support services and education/training.*
- *Promote access to community-based services for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services) through education, awareness, advocacy, and linking families with local resources.*
- *Promote access to a dental home and to preventive and restorative dental care for children, youth, and women of childbearing age.*
- *Promote access to mental health services for children, youth, and women of childbearing age.*

Potential Priorities and Methods Employed to Select Priorities

Family Health Services and CRS each developed a list of potential MCH priority needs, and each presented those potential needs to its advisory group/committee. The two organizations interfaced in the selection of MCH priority needs via: 1) inclusion of the CRS's Needs Assessment Coordinator on the Leadership Team, which was otherwise comprised of Family Health staff members, 2) inclusion of two CRS staff members on Family Health's MCH Advisory Group, and 3) inclusion of a Family Health staff member on the CRS Advisory Committee. These interfaces assured a comprehensive, complementary selection of priority needs. Ultimately, Family Health Services selected seven priority needs focusing on the first two MCH Program populations: pregnant women, mothers, and infants; and the general population of children and youth. CRS selected three priority needs, focusing on CYSHCN, a sub-population of the general population of children and youth. The respective processes used by these organizations to select MCH priority needs follow.

For a list of the 10 priorities that Family Health Services and CRS ultimately selected, see the preview of this section.

Family Health Services' Selection Process

Family Health's process for selecting MCH priority needs basically occurred in three stages.

Stage One: Family Health Services

In October 2009, the Leadership Team met and reviewed the list of 14 MCH priority needs that had been presented to Family Health Services' 2004-05 MCH Advisory Group. Using this list as a springboard, the Team considered longstanding and emerging needs, as evidenced by then available findings from the 2009-10 Needs Assessment and by general knowledge concerning the first two MCH Program populations. In this way, the Leadership Team developed the 14 potential MCH priority needs that were presented to the MCH Advisory Group in November 2009. These 14 potential needs comprise the first 14 statements of need shown in Table 5.1.

Stage Two: Family Health Services

Members of the MCH Advisory Group then ranked the aforesaid 14 priority needs on forms provided, first individually and then consensually in six breakout groups. The six breakout groups respectively consisted of: 1) healthcare consumers, 2) Family Health Services staff, 3) Health Department staff located outside of Family Health, 4) State agencies, 5) community organizations, and 6) healthcare providers and university faculty. Both individuals and groups were given the options of adding new priority needs and/or revising the preselected potential priority needs. These options resulted in the addition of two potential priority needs, comprising the last two statements listed in Table 5.1.

Sixteen Potential MCH Priority Needs

The MCH Epi Branch then quantitatively analyzed the individual rankings and the breakout groups' rankings for the potential priority needs shown in Table 5.1, using methods described in notes to Table 5.1. As well, Table 5.1 shows four different ranks for each priority need. The first three ranks are based on three different methods (described in notes to the table), and the fourth rank is a mean of the first three ranks. In the table, rows showing the seven potential priorities with a mean rank of 7 or higher are highlighted.

Discussion of the underlying rationale for the 16 potential priority needs follows Table 5.1. Note that the "ID" column in Table 5.1 simply lists identification numbers (ID #s) for referencing certain potential priority needs in the discussion that follows. The ID # does not rank the potential priority that it identifies.

Table 5.1. Sixteen Potential MCH Priority Needs Initially Considered by Family Health Services, Along with Ranks (Beginning of Stage 2)

ID*	Potential Priority Need	Three Methods of Ranking[¶]			Mean of Three Ranks
		6-Group Rank[T]	5-Group Rank[Y]	Individual Rank[Φ]	
1	Reduce infant mortality, especially among African Americans.	6.0	6.0	2.0	4.7
2	Reduce the prevalence of prematurity.	5.0	8.5	6.0	6.5
3	Maintain the State's system of regionalized perinatal care.	14.0	14.0	11.0	13.0
4	Assure appropriate primary care, including prenatal care, for Title V populations—including low-income, minority, and immigrant groups.[λ]	1.0	1.0	1.0	1.0
5	Promote access to, and utilization of, dental care for all Title V populations, particularly low-income individuals.	8.0	7.0	10.0	8.3
6	Promote access to mental health services for all Title V populations.	4.0	3.5	4.0	3.8
7	Collaborate with the Children's Health Insurance Program in outreach efforts.	14.0	14.0	12.0	13.3
8	Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women.	7.0	5.0	7.0	6.3
9	Further develop the Title V Program's capacity to collect and analyze health-related data, and translate findings into action for key stakeholders.	14.0	14.0	13.0	13.7
10	Promote a systematic method of obtaining feedback from local health department patients.	14.0	14.0	14.0	14.0
11	Promote positive youth development to reduce high-risk behaviors in adolescents.	2.0	2.0	5.0	3.0
12	Promote evidence-based health education and outreach regarding high priority topics.	12.0	12.0	8.0	10.7
13	Reduce the prevalence of obesity among children and youth.[ξ]	3.0	3.5	3.0	3.2
14	Maintain and expand the provision of case management or care coordination services, increasing their availability to all three Title V populations.	9.0	8.5	9.0	8.8
New	Promote preconception health.[ρ]	10.5	10.5	14.0	11.7
New	Reduce the prevalence of adolescent pregnancy.[σ]	10.5	10.5	14.0	11.7

*"ID" pertains to the numerical listing only, not to rank.

[¶] When a potential priority need was ranked first by a group or individual, it was given a score of 5; when ranked second, a score of 4; when ranked third, a score of 3; when ranked fourth, a score of 2; and when ranked fifth, a score of 1. For each method, the scores were added across groups or individuals. **The priority need with the highest total score was assigned a rank of one, that with the second-highest score a rank of two, that with the third-highest score a rank of three, etc.—until the potential priority need with the lowest score or zero was assigned a rank of 14.** Except for scores of zero, ties were ranked midway between two ranks. For example, each of two ties for tenth place was assigned a rank of 9.5.

[T]Ranks based on sum of scores across all six breakout groups.

[Y]Ranks based on sum of scores across five breakout groups, excluding the group consisting only of Family Health staff members.

[Φ]Ranks based on sum of scores for the 67 individual respondents.

[λ]One breakout group, consisting of healthcare providers and university faculty, suggested that this priority need be revised as follows: "Promote medical home including care coordination, primary care, prenatal care, screening and follow-up." Their score for this alternative was attributed to the potential priority need concerning primary care, as originally worded.

[ξ]One breakout group, consisting of healthcare providers and university faculty, suggested that this priority need be revised as follows: "Reduce the prevalence of obesity among children, youth and women of childbearing age." Their score for this alternative was attributed to the potential priority need concerning obesity, as originally worded.

[ρ]This item was suggested for consideration by the breakout group consisting of Alabama Department of Public Health staff who were not located in Family Health Services. This group ranked the item as #4 in importance.

[σ]This item was suggested by two groups: the State Agencies Breakout Group and the Community Organizations Breakout Group. The Community Organizations group ranked it as #4 in importance, but the State Agency group did not rank it among the top five.

Considerations During Stage Two of the Selection Process

Discussion of the rationale for considering each of the 16 priority needs listed in Table 5.1, as well as why six of them were excluded during stage two of the selection process, follows.

Potential Priorities Concerning Infant Mortality

Items 1 through 3 in Table 5.1 pertain to infant mortality. Reducing the risk of infant death has long been a concern in Alabama, as well as the nation.

Reducing Infant Mortality

ID #1, "Reduce infant mortality, especially among African Americans," was initially developed for reasons listed below:

- Reducing disparities in health status is a major concern in Alabama and the nation as a whole.
- Risk of infant death has recently increased in Alabama.
- This increase in risk was not limited to groups typically deemed to be at high risk.
- Alabama's infant mortality rate remains above that of the nation.
- Compared to their national counterparts, White, non-Latino Alabama newborns were notably more likely to die before their first birthday; and Black, non-Latino Alabama newborns were slightly more likely to die before their first birthday (based on work not presented in this report).

For the aforesaid reasons and because it was highly ranked by the MCH Advisory Group, the potential priority need concerning infant mortality progressed to stage three of the selection process. Because White, non-Latino Alabama newborns are more likely to die during infancy than their national counterparts, concerns about infant mortality are not limited to African Americans or to racial disparities in infant mortality.

Reducing the Prevalence of Prematurity

ID #2 was developed because, as discussed in Section 3, VLBW babies were at far greater risk of infant death than normal birth weight babies were. Further, taken together, short gestation and low birth weight (not elsewhere classified) and conditions often related to prematurity caused more than one-quarter of the infant deaths studied (shown in Section 3). For these reasons and because this item was ranked rather highly by the MCH Advisory Group, the potential priority need concerning prematurity progressed to stage three of the selection process.

Maintaining the System of Regionalized Perinatal Care

VLBW infants are more likely to survive and thrive if they are born and cared for in a facility that is appropriately staffed and equipped and has a high volume of high-risk admissions.[1]
Assuring that VLBW infants are born in such facilities requires a strong system of regionalized perinatal care. Consequently, Family Health's initial list of potential priority needs included ID #3, which pertains to maintaining the State's system of regionalized perinatal care. ID #3 was excluded during stage two of the selection process, however, because it was not highly ranked by the MCH Advisory Group. Nevertheless, Family Health will continue to track NPM #17, the percent of VLBW infants delivered at facilities for high-risk deliveries and neonates. Further, Family Health will continue spearheading the Perinatal Program (discussed in Section 2), which is based on the concept of regionalization of health care, a systems approach designed to ensure that pregnant women and their newborns have access to the appropriate level of care.

Potential Priorities Concerning Basic Health Care

Items 4, 5, 6, and 14 in Table 5.1 concern basic health care: whether at the direct service level or the enabling service level.

Assuring Appropriate Primary Care

As shown in Table 5.1, ID #4 involves assurance of appropriate primary care, including prenatal care, for Title V populations. This item was included in the initial list because much of the qualitative input, described in Section 3, concerned the need for such assurance. This item progressed to stage three of the selection process because it was assigned the highest priority by the MCH Advisory Group, regardless of how input from the group was analyzed.

Access to Dental Care

Potential priority need #5 concerns access to and utilization of dental care. This item was included because oral health care is an important, but often neglected, component of total health care. Regular dental visits provide an opportunity for early diagnosis, prevention, and treatment of oral disease and conditions; and experts recommend that children as young as 1 year of age be examined for evidence of early childhood caries. Further, some of the responses to Family Health's qualitative data-collection initiatives pertained to concerns about dental care. For these reasons, ID #5 progressed to stage three of the selection process, even though it was not ranked very highly by the MCH Advisory Group.

Access to Mental Health Services

ID #6 concerns access to mental health services and was developed for reasons that follow. Mental health is critical to personal well-being and is one of the Healthy People 2010 Leading Health Indicators.[39] Further, concerns about mental health were expressed by some of the discussants in Family Health's focus groups. For these reasons and because it was highly ranked by the MCH Advisory Group, ID #6 progressed to stage three of the selection process.

Care Coordination

ID #14 pertains to provision of case management or care coordination services. This item was included because care coordination, often called case management by funding sources, helps clients access needed medical, social, and educational services. For this reason and because one of the MCH Advisory Breakout Groups considered it to be an important element of primary care, this indicator progressed to stage three of the selection process, even though care coordination *per se* was not highly ranked by the MCH Advisory Group.

Potential Priorities Concerning Health Education or Outreach

Items 7 and 12 in Table 5.1 pertain to health education and/or outreach.

Collaboration with the Children's Health Insurance Program

ID #7 pertains to collaboration with the Children's Health Insurance Program in outreach efforts. This item was initially considered because having health insurance is one of several strong predictors of access to health care. However, ID# 7 was excluded during stage two of the selection process because the MCH Advisory Group assigned low priority to it. As described in Alabama's *MCH FY 2009 Annual Report/FY 2011 Application*,[40] the State has a strong Children's Health Insurance Program (ALL Kids), which is administratively located in the Health Department's Bureau of Children's Health Insurance. Though ID #7 was not selected as a priority need, Family Health Services staff will continue collaborating with ALL Kids staff whenever such collaboration is indicated.

Evidence-Based Health Education and Outreach

ID #12 concerns promotion of evidenced-based health education and outreach about high-priority topics. This issue was identified as a potential priority because many high risk behaviors can be addressed in part by health education and outreach. Examples of such behavior, described in Section 3, include tobacco use during pregnancy and relatively frequent use of certain drugs by male public high school students in Alabama. Although the MCH Advisory Group as a whole did not rank this potential priority need very highly, it progressed to stage three of the selection process because the Healthcare Consumers breakout group ranked it as #5 in importance.

Potential Priorities Concerning Data

Items 9 and 10 in Table 5.1 pertain to data capacity.

ID #9 pertains to developing the State MCH Program's capacity to collect and analyze health-related data and translate findings into action, and ID #10 concerns promotion of a systematic method of obtaining feedback from local health department patients. These items were included for consideration because collection, analysis, and interpretation of data are critical components of needs assessment. The MCH Advisory Group assigned very low priority to these issues, however. Therefore, IDs #9 and #10 were excluded during stage two of the selection process. Nevertheless, Family Health will maintain its capacity to meet MCH Block Grant reporting requirements and to perform some ongoing needs assessment—though some tasks may need to be contracted out during the next 5-year MCH needs assessment.

Other Priorities

Items 8, 11, and 13 in Table 5.1 collectively pertain to youth development, to behavior, and to obesity, which itself is related to dietary and exercise habits.

Violent Behavior

ID #8 pertains to reducing the risk of violent behavior, committed by or against children, youth, and women. Findings shown in Section 3 that support selection of this issue as a priority need include the following. In 2006-08, among 15-19 year-old Alabama residents, 14 percent of deaths were due to homicide or legal intervention, and 8.5 percent were due to suicide. Corresponding numbers among 20-24 year-old Alabama residents were 17 percent for homicide/legal intervention and 11 percent for suicide. Further, as detailed in Section 3, the homicide/legal intervention death rate rose among young (15-19 year-old and 20-24 year-old) Black, non-Latino males, in 2006-08 relative to 2003-05. For these reasons and because it received a moderately high ranking from the MCH Advisory Group, ID #8 progressed to stage three of the selection process.

Positive Youth Development

ID #11 involves promotion of positive youth development to reduce high risk behaviors in adolescents. Adolescents face many issues concerning development, behavior, and consequences of behavior. Such issues include relationships with parents and peers, choices concerning whether to use drugs and alcohol, choices concerning whether to be sexually active, potential consequences of some behavioral choices, risk of violence, and risk of unintentional injuries.

Examples of high risk behaviors or their consequences have been discussed in Section 3. For example, in 2006-08, more than three-fourths of deaths among 15-24 year-old Alabama residents were attributed to external causes: including deaths due to motor vehicle crashes, homicide or legal intervention, suicide, and use of drugs or alcohol. Further, according to the year 2009 YRBSS, of Alabama public high school students: 32 percent had recently ridden in a vehicle driven by someone who had been drinking alcohol, 21 percent had recently smoked cigarettes, and 57 percent had engaged in sexual intercourse during their lifetime.

Some of the preceding issues are addressed by public health agencies to some degree. Focusing on particular behaviors, however, may not address underlying developmental issues. In contrast, a "youth development" approach emphasizes the positive attributes of young people and aims to develop inherent strengths and assets in youth to promote healthy behavior.[41] Emphasis on youth development can promote resiliency, which is "the ability of youth to overcome obstacles and risk factors in their environment to meet the social demands of adolescence and to build the competencies necessary for success as adults."[42] Consequently, promotion of youth development can create conditions by which young people from all populations have opportunities to develop skills and habits that lead to long-term good health. For all the preceding reasons and because it was highly ranked by the MCH Advisory Group, potential priority need #11 progressed to stage three of the selection process.

Obesity

ID #13 focuses on reducing the prevalence of obesity among children and youth, which has emerged as a serious health concern in Alabama and in the nation as a whole. As discussed in Section 3, in 2007, 18 percent of 10-17 year-old Alabama residents were obese. Obese children and adolescents may experience immediate health consequences and may be at risk for weight-related health problems in adulthood.[43] Childhood obesity is linked with various adverse outcomes, including psychosocial problems and risk factors for cardiovascular disease (high cholesterol levels, high blood pressure, and abnormal glucose tolerance).[44] For the preceding reasons and because it was highly ranked by the MCH Advisory Group, ID #13 progressed to stage three of the selection process.

Additional Potential Priority Needs Suggested by the MCH Advisory Group
Two of the MCH Advisory Breakout Groups suggested an additional potential priority need, each of which is listed in Table 5.1 and is discussed below.

Preconception Health
The potential priority need to promote preconception health, a woman's health before she becomes pregnant, was suggested by the MCH Advisory Breakout Group consisting of Health Department staff who were not located in Family Health Services. According to the CDC, preconception care is critical to improving the health of the nation. The fetus is most susceptible to developing certain problems in the first 4 to 10 weeks after conception, before prenatal care is typically begun. Many women are not aware that they are pregnant until after this period of time, so may not reduce risks to their own and to their baby's health unless intervention begins before conception.[45] Although preconception health is critical to the health of women and infants, preconception health *per se* was excluded from the list during stage two of the selection process for the following reasons. The Breakout Group suggesting it ranked it as #4 in importance, which is not an exceedingly high rank. The Community Organizations Breakout Group considered a related issue, the need to reduce the frequency of unplanned pregnancy, but ranked that issue as #7, which is not very high. None of the four remaining Breakout Groups suggested the issue. Further, in the judgment of the Leadership Team, promoting preconception care is part of assuring primary care, the most highly ranked priority need.

Adolescent Pregnancy
The potential priority need to reduce the prevalence of adolescent pregnancy was suggested by the Community Organizations Breakout Group. As discussed in Section 3, comparing 2006-08 to 2003-05, in Alabama the pregnancy rate may have declined slightly for 15-17 year-old females, but it increased for 18-19 year-old females. Various socioeconomic disadvantages and suboptimal health outcomes, including infant mortality, have been linked with adolescent pregnancy. Though these links are not necessarily causal, some factors that may predispose an adolescent to become pregnant may also place her infant at higher risk of death. Prevention of adolescent pregnancy is generally desirable, therefore, to allow the adolescent additional time to mature and to utilize social and economic opportunities before assuming the responsibilities of motherhood. For these reasons, reducing the prevalence of adolescent pregnancy continues to be a priority of Family Health Services. However, the potential priority need concerning adolescent pregnancy *per se* was removed from the list during stage two of the selection process for the following reasons. The Leadership Team, which had considered adolescent pregnancy when it preselected 14 potential MCH priority needs for presentation to the MCH Advisory Group, felt that promoting positive youth development (ID #11) would better equip adolescents to make constructive choices, which would contribute to a reduction in the frequency of adolescent pregnancy. Further, the Community Organizations Group was the only Breakout Group to add a potential priority need concerning adolescent pregnancy.

Based on considerations detailed in the preceding discussion, Family Health's Needs Assessment Coordinator tentatively narrowed the list of 16 potential MCH priority needs (shown in Table 5.1) to the 10 statements shown in Table 5.2. Eight of the ten potential needs had earned a mean MCH Advisory Group rank of 8.3 or higher. The remaining two were retained for further consideration because the Healthcare Consumers Breakout Group had ranked them among the top five.

Table 5.2. Ten Potential MCH Priority Needs Subsequently Considered by Family Health Services, Along with Mean Ranks (End of Stage Two)

ID*	Potential Priority Need	Mean of Three Ranks¶	Comments
1	Reduce infant mortality, especially among African Americans.	4.7	
2	Reduce the prevalence of prematurity.	6.5	
4	Assure appropriate primary care, including prenatal care, for Title V populations—including low-income, minority, and immigrant groups.	1.0	One MCH Advisory Breakout Group suggested that this item be revised as follows: "Promote Medical Home including care coordination, primary care, prenatal care, screening and follow-up."
5	Promote access to, and utilization of, dental care for all Title V populations, particularly low-income individuals.	8.3	
6	Promote access to mental health services for all Title V populations.	3.8	
8	Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women.	6.3	
11	Promote positive youth development to reduce high risk behaviors in adolescents.	3.0	
12	Promote evidence-based health education and outreach regarding high priority topics.	10.7	This item was included for further consideration because the Healthcare Consumers Breakout Group ranked it as #5 in importance.
13	Reduce the prevalence of obesity among children, youth, and women of childbearing age. *[Note: Following the MCH Advisory Group meeting, Family Health's Needs Assessment Coordinator revised this statement to include women of childbearing age.]*	3.2	One MCH Advisory Breakout Group suggested that this item be revised as follows: "Reduce the prevalence of obesity among children, youth, and women of childbearing age."
14	Maintain and expand the provision of case management or care coordination services, increasing their availability to all three Title V populations.	8.8	This item was included for further consideration because the Healthcare Consumers Breakout Group ranked it as #4 in importance.

*"ID" pertains to the original numerical listing of the 14 preselected potential priority needs, not to rank.

¶Ranks were assigned based on methods described in notes to Table 5.1.

Stage Three: Family Health Services

After tentatively narrowing the potential priority needs to the 10 shown in Table 5.2, Family Health's Needs Assessment Coordinator then convened a meeting of key Family Health staff to assess MCH program capacity to address the 10 potential needs listed in Table 5.2, as detailed in Section 4. Handouts respectively consisting of information shown in Table 5.1, Table 5.2, and the *MCH Capacity Grid* (Worksheet 2, included in Section 4) were distributed to attendees at this meeting,

which was held in February 2010. (At that time, Worksheet 2 included only the priority needs under consideration, not MCH capacity points or ranks.)

Based on input from Family Health Service staff members on the Leadership Team and the Interim Director of the Oral Health Branch, Family Health selected seven MCH priority needs. In some cases, the wording of a potential priority was revised, relative to Table 5.2, based on further consideration of terminology. In addition to being bulleted below, these seven selected priorities are listed in the preview of this section, which also includes the three MCH priority needs selected by CRS. The seven priorities selected by Family Health are to:

- *Promote access to a medical home and to basic health care for children, youth, and women of childbearing age.* (This statement is a revision of ID #4 in Table 5.2.)
- *Promote positive youth development to reduce high risk behaviors in adolescents* (ID #11 in Table 5.2).
- *Reduce the prevalence of obesity among children, youth, and women of childbearing age* (ID #13 in Table 5.2).
- *Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women* (ID #8 in Table 5.2).
- *Reduce infant mortality, especially among African Americans* (ID #1 in Table 5.2).
- *Promote access to a dental home and to preventive and restorative dental care for children, youth, and women of childbearing age* (corresponds to ID #5 in Table 5.2).
- *Promote access to mental health services for children, youth, and women of childbearing age* (corresponds to ID # 6 in Table 5.2).

As stated, the first bullet in the aforesaid list is a revision of ID #4 in Table 5.2. As mentioned in Table 5.2, one of the MCH Advisory Breakout Groups suggested that ID #4, which pertains to assurance of primary care, be revised to focus on promotion of medical homes. In considering whether to make this revision, Family Health staff considered whether the following were available for adults, as well as for children and youth: 1) a commonly accepted definition of "medical home"; and 2) data concerning availability of a medical home. Discussion of these issues follows.

Definition of "Medical Home" and "Primary Care"

According to MCHB, the American Academy of Pediatrics has stated that a medical home should provide the services that constitute comprehensive care: continuous access to medical care; referral to pediatric medical subspecialties and surgical specialists; and interaction with child care, early childhood education programs, and schools to assure that the needs of the child and the family are addressed.[46] We are not aware of a corresponding definition of what comprises a medical home for adults. Applying the American Academy of Pediatrics' statement to adults would require broadening of what a medical home should provide: perhaps to include such elements as preconception care for females and assurance of prenatal care for pregnant females. Broadening the medical home concept in this manner should be feasible, however.

Databases Concerning the Medical Home Concept

The NSCH and the NSCSHCN each provides data on medical homes. Although Family Health staff are not aware of statewide data on medical homes *per se* for adults, CDC's Behavioral Risk Factor Surveillance System asks the following question, which should be an excellent surrogate for whether the respondent has a medical home: "Do you have one person that you think of as your personal doctor or health care provider?" Therefore, progress on promoting access to medical homes should be measurable for all populations served by the MCH Program. We are aware that the term "medical home" may be interpreted differently by different readerships. On the other hand, views about what constitutes primary care may vary as well. In the context of MCH priority needs, we are using the definition of "primary care" provided in the MCH Block Grant Guidance.[a] After considering the aforesaid issues, Family Health staff revised the priority need concerning primary care (ID #4 in Table 5.2) to read as follows: *Promote access to a medical home and to basic health care for children, youth, and women of childbearing age*.

Stage Three Exclusions from Family Health's Seven Priority Needs

The final seven priority needs selected by Family Health Services do **not** include the following potential priorities listed in Table 5.2: ID #2, which pertains to prematurity; ID #12, which pertains to evidence-based health education and outreach; and ID #14, which pertains to care coordination. For reasons discussed earlier in this section, each of these issues is important. However, for reasons that follow, they were not included as stand-alone statements in the final seven priorities selected by Family Health.

Prematurity is a major cause of infant death, so the priority need to "Reduce infant mortality, especially among African Americans" encompasses the need to reduce the prevalence of prematurity. For this reason, the statement of need concerning prematurity was excluded from the final seven priority needs, even though it received a mean MCH Advisory Group ranking of 6.5.

ID #12, which pertains to health education and outreach, was excluded from the final list of priorities because of its low mean ranking by the MCH Advisory Group. Addressing the seven priorities that were selected by Family Health Services will involve health education and outreach, however.

The statement concerning care coordination (ID #14) was also excluded from Family Health's final list of priority needs because of its low mean ranking. However, Family Health considers care coordination to be a critical component of basic health care.

Children's Rehabilitation Service's Selection Process

List of Potential Priorities: CRS

The following list (in Table 5.3) of potential priority needs for CYSHCN in Alabama was developed by CRS's Needs Assessment leadership team based upon the findings from primary and secondary data sources. A discussion of each potential priority follows the table.

[a] The glossary included in the guidance for the Title V MCH Services Block Grant defines "primary care" as: "the provision of comprehensive personal health services that include health maintenance and preventive services, initial assessment of health problems, treatment of uncomplicated and diagnosed chronic health problems, and the overall management of an individual's or family's health care services."[1]

Table 5.3. Potential Priority Needs for CYSHCN

1. Increase family and youth awareness of specific disabilities/conditions.
2. Improve the cultural competence of services available to CYSHCN and families.
3. Increase access to care coordination services for CYSHCN.
4. Increase awareness of medical home concept for providers and families.
5. Increase family knowledge of resources available to CYSHCN and families.
6. Improve the health status of CYSHCN through increased access to primary, specialty, and subspecialty care.
7. Increase family and youth participation in CYSHCN policy-making through support services and education/training.
8. Increase access to planning for transition to all aspects of adulthood (work, school, independence) for youth with special health care needs.
9. Increase availability of comprehensive health insurance coverage to CYSHCN through advocacy and educational efforts targeted at public and private insurance programs and outreach to families.
10. Promote increased access to community-based support services for CYSHCN and families, including respite care and recreational opportunities through education, awareness, advocacy, and linking families with resources.

1. Increase family and youth awareness of specific disabilities/conditions.
This potential need was included for consideration based on results from the CYSHCN Family Survey and the Youth Survey, specifically the informational needs section. This was one of the top requests for both groups. It also ranked in the top five in importance among several of the small groups at the final CRS Advisory Committee meeting and was subsequently ranked high in terms of feasibility. Several groups suggested it could be combined with other potential needs. CRS ultimately chose to include this need as a part of two broader needs to allow more flexibility and further reach of activities rather than to include it as a stand-alone need.

2. Improve the cultural competence of services available to CYSHCN and families.
This potential need was included for consideration based on results from the CYSHCN Family Survey, specifically the differences noted between the groups who answered the survey in English compared with those who answered in Spanish. Also, the focus group held in Spanish supported its inclusion. It did not rank in the top five for importance among any of the small groups from the final CRS Advisory Committee meeting. CRS ultimately chose to include this need as a part of a broader need to allow a comprehensive approach to service delivery and to build upon current activities.

3. Increase access to care coordination services for CYSHCN.
This potential need was included for consideration based on results from the Service Providers for CYSHCN Survey, CYSHCN Family Survey, and Youth Survey as well as all focus groups and data from the NSCSHCN. Results indicate a theme from both families and providers that CYSHCN and their families often don't know where to go or who to see for services or have difficulty navigating the system of care. Also, CRS has increased its capacity in this area over the past 2 years by adding a Care Coordination Specialist in the State Office, solely focused on strengthening care coordination services within the program. This need ranked in the top five for importance among several of the small groups at the final CRS Advisory Committee meeting and was subsequently ranked high in terms of feasibility. Several groups suggested that this need become a foundation and vehicle for activities related to several other potential needs. Advisory Committee members recommended

broadening this need to encompass activities related to other potential priority needs. CRS ultimately chose to select this as a priority need with the recommended expansion. This need encompasses cultural competence, transition planning (via specially trained care coordinators focused on transition), and increasing family knowledge of resources available and awareness of specific disabilities and conditions.

4. Increase awareness of medical home concept for providers and families.
This potential need was included for consideration based on results from the CYSHCN Family Survey and the Youth Survey and data from the NSCSHCN. It ranked in the top five for importance for one of the small groups at the final CRS Advisory Committee meeting and was subsequently ranked high in terms of feasibility. CRS ultimately did not select this as one of its priority needs for further planning since these efforts are addressed in activities toward NPM #03, through Healthy People 2010 initiatives, and through other partner projects, including training through Alabama Medicaid.

5. Increase family knowledge of resources available to CYSHCN and families.
This potential need was included for consideration based on results from the Service Providers for CYSHCN Survey and the CYSHCN Family Survey, as well as CRS's family focus groups. It also ranked in the top five for importance among several of the small groups at the final CRS Advisory Committee meeting and was subsequently ranked high in terms of feasibility. Several groups suggested it could be combined with other potential needs. CRS ultimately chose to include this need as a part of two broader needs to allow more flexibility and further reach of activities rather than to include it as a stand-alone need.

6. Improve the health status of CYSHCN through increased access to primary, specialty, and subspecialty care.
This potential need was included for consideration based on results from the Service Providers for CYSHCN Survey and CRS's key informant interviews. Also, there was support for its inclusion in the CYSHCN Family Survey and family focus groups. This is a current priority need for Alabama's CYSHCN. It ranked in the top five for importance among several of the small groups at the final CRS Advisory Committee meeting, but was subsequently ranked low in terms of feasibility. CRS ultimately did not select this as one of its priority needs for further planning since the CYSHCN Family Survey results pointed to greater issues with community-based services and to other issues that seemed to warrant focus. Also, the CRS program will continue its ongoing efforts towards increasing access to health and related services through its system of 15 community-based offices statewide and through partnerships with other members of the system of care for CYSHCN in the State.

7. Increase family and youth participation in CYSHCN policy-making through support services and education/training.
This potential need was included for consideration based on results from the CYSHCN Family Survey, the Youth Survey, and CRS focus groups. The education and training component was also supported through the Service Providers for CYSHCN Survey and key informant interviews. It is similar to a current priority need for Alabama's CYSHCN. It did not rank in the top five for importance among any of the small groups from the final CRS Advisory Committee meeting. However, CRS ultimately chose to select this as a priority need. This choice is based not only on the data, but also on the internal capacity to impact change through State and Local Parent Consultants and Advisory Committees and on opportunities to partner with support and educational organizations. These include APEC and FVA, which is also a newly funded Family to Family Health Information Center.

This need encompasses not only direct supports for participation, but also increasing family knowledge of resources available, awareness of specific disabilities and conditions, and other educational and training opportunities.

8. Increase access to planning for transition to all aspects of adulthood (work, school, independence) for youth with special health care needs.
This potential need was included for consideration based on results from the CYSHCN Family Survey, the Youth Survey, CRS focus groups (including the State stakeholders focus group), Service Providers for CYSHCN Survey, CRS's key informant interviews, and data from the NSCSHCN. It ranked in the top five for importance for several of the small groups at the final CRS Advisory Committee meeting, but was subsequently ranked lower in terms of feasibility for most groups. CRS ultimately did not select this as one of its priority needs for further planning since these efforts are addressed in activities toward NPM #06 and through Healthy People 2010 initiatives. Also, this need will be addressed through a broader effort and new priority need related to care coordination. This included specially trained care coordinators who work solely with youth of transition age.

9. Increase availability of comprehensive health insurance coverage to CYSHCN through advocacy and educational efforts targeted at public and private insurance programs and outreach to families.
This potential need was included for consideration based on results from the CYSHCN Family Survey, the Youth Survey, the Service Providers for CYSHCN Survey, and CRS's family and key State stakeholders focus groups. It ranked in the top five for importance for several of the small groups at the final CRS Advisory Committee meeting, but subsequently ranked low in terms of feasibility. CRS ultimately did not select this as one of its priority needs for further planning since these efforts are addressed in activities toward NPM #04 and Healthy People 2010 initiatives. CRS has ongoing partnerships with ALL Kids and Alabama Medicaid to address system issues that impact CYSHCN and their families. Also, local CRS office staff work with families to assist them in applying for all third-party resources for which they may be eligible and to assure that they understand and make the best use of their benefit packages.

10. Promote increased access to community-based support services for CYSHCN and families, including respite care and recreational opportunities through education, awareness, advocacy, and linking families with resources.
This potential need was included for consideration based on results from the CYSHCN Family Survey, the Service Providers for CYSHCN Survey, and CRS's family and key State stakeholder focus groups. It also ranked in the top five for importance among several of the small groups at the final CRS Advisory Committee meeting and was subsequently ranked in the mid to high ranges in terms of feasibility. Several groups suggested that this need could be expanded to include additional services that stood out as difficult to obtain from the surveys. They also noted that this would be another avenue for family support and training in advocacy and awareness. It is also related to care coordination. CRS ultimately chose to select this as a priority need with recommended expansions to include transportation assistance, child care, and school-based services.

Methodologies for Ranking and Selecting Priorities: CRS

The final CRS Advisory Committee meeting occurred in December 2009, focusing on a presentation of the analyzed data and a discussion of priority needs for CYSHCN. Attendants were randomly divided into one of five small groups to consider the list of suggested priority needs. They were allowed to add or alter based on their interpretation of the information presented. No new needs were added, but attendants did suggest some combinations of needs, as mentioned previously.

Small group facilitators led discussions about the information and instructed members to identify which potential needs they believed were the top five priority needs for CYSHCN in Alabama. A second process was then facilitated such that members then ranked those top five priority needs according to their assessment of the feasibility of addressing that need (i.e., how likely it was that the State CSHCN program and the State system of care for CYSHCN could implement activities to address the proposed need). Results were tallied for each group and then a report was generated for use in the final consideration of priority needs.

CRS State Office administrative staff, including the State Parent Consultant, and all eight district supervisors (CRS Administrative Team) participated in a follow-up meeting to review the input of the committee and their thoughts on the Needs Assessment data. The group discussed the importance and feasibility rankings of the potential priority needs from the CRS Advisory Committee, current CSHCN program activities, and the NPMs and SPMs for CYSHCN. The group also gave careful consideration to the financial and human resources available, what was already being done around these needs (within and outside the CSHCN program), and focused on existing gaps where CRS has the mission and the capacity to address the need. Based on these considerations, the group identified three priority needs for further development and planning. Two of these three identified priority needs were reworded from those presented to the advisory committee to be more inclusive and allow activities that more broadly address several separate potential needs. The third need was selected as it was originally written. These three priority needs were then entered into the MCH Capacity Assessment Grid and rated by the CRS State Office administrative staff at a separate meeting.

Three State-negotiated performance measures were drafted, including appropriate measurement strategies. The priority needs and draft measures were then electronically sent back to the CRS Administrative Team for final comment and approval.

Priorities Compared with Prior Needs Assessment

Discussion of priorities selected by Family Health Services is followed by discussion of those selected by CRS.

Comparison: Family Health Services

Changes in priorities selected by Family Health Services are based on input from the MCH Advisory Group and the Leadership Team.

Dropped Priorities: Family Health

Two of the priorities selected by Family Health Services for the 2006-2010 needs assessment cycle have been dropped because the MCH Advisory Group did not assign high priority to these issues. These former priorities were to: 1) *promote evidence-based education and outreach regarding high priority topics*, and 2) *further develop the Title V Program's capacity to collect and analyze health-related data and translate findings into information for key stakeholders*.

Encompassed Priorities: Family Health

Three of Family Health's 2006-2010 needs assessment cycle priorities, though not *per se* retained as individual priorities, fall under the umbrella of newly selected priorities. Specifically,

- The former priority, *assure appropriate primary care, including prenatal care, for all Title V populations—including low-income, immigrant, and minority groups*, is encompassed by the new priority to *promote access to a medical home and to basic health care for children, youth, and women of childbearing age*.

- The former priority, *further reduce the adolescent pregnancy rate*, is encompassed by the new priority, *promote positive youth development to reduce high risk behaviors in adolescents*.

- The former priority, *reduce the prevalence of high risk behaviors, including those predisposing to obesity*, is also encompassed by the new priority, *promote positive youth development to reduce high risk behaviors in adolescents*. As well, this former priority is partly encompassed by the new priority to *reduce the prevalence of obesity among children, youth, and women of childbearing age*.

Retained Priorities: Family Health

Two of Family Health's 2006-2010 needs assessment cycle priorities have been retained precisely as they were. These priorities are to:

- *Reduce the prevalence of violent behavior, including homicide and suicide, committed by or against children, youth, and women.*

- *Reduce infant mortality, especially among African Americans.*

New Priorities: Family Health

Family Health has selected the following new priorities, which do not have a precedent in the previous needs assessment cycle:

- *Promote access to a dental home and to preventive and restorative dental care for children, youth, and women of childbearing age.*

- *Promote access to mental health services for children, youth, and women of childbearing age.*

Pertinent Changes in Capacity: Family Health

Capacity to Promote the Medical Home Concept

As stated in Section 4, the medical home movement has continued to gain traction as evidenced by the American Academy of Pediatrics' promotion of the concept and Medicaid's Patient 1st primary care provider model. As this concept has gained broader acceptance, the ability of the State MCH Program to champion it has increased.

The current economic climate has affected the financial resources available to many programs. For example, with respect to the medical home concept, as discussed in Section 4, due to ADPH's concerns regarding the cost of providing care coordination under Patient 1st, the Department is not expanding its provision of care coordination services under Patient 1st.

Capacity to Address Infant Mortality

As previously mentioned, following the increase in the State's infant mortality rate in 2007, the Perinatal Program intensified its efforts to implement FIMR statewide. Although additional nursing staff have not been added to the Perinatal Program, Perinatal Program staff have received training on FIMR, and their roles and responsibilities were modified to address infant mortality. As well, a

research analyst was added to the program's staff in FY 2010, which has enhanced the program's capacity to develop and analyze a FIMR database.

Comparison: Children's Rehabilitation Service

Although no priority needs for CYSHCN are worded precisely as they were in the last cycle, one is similarly worded. Specifically, comparing priority needs for 2011-2015 to similar priority needs from the previous cycle:

The new priority to *increase family and youth participation in CYSHCN policy-making* is similar to the previous priority to *strengthen systems of family and youth support to enable children and youth with special health care needs and their families to participate more fully in program and policy development, to identify resources, and to benefit from the services they receive*. The purpose of the modification was to provide more of a focus on supports, education, and training.

Two priority needs for CYSHCN from the FY 2006-2010 needs assessment cycle have not been retained or specifically mentioned in the new priority needs. These are to *improve health status of CYSHCN* and to *improve the capacity of CYSHCN to be fully integrated into their communities*. Improving health status involved increasing access to comprehensive, quality primary and specialty care and to allied health and other related services. These activities will continue to be addressed via the CRS statewide program and through partnerships with other components of the system of care for CYSHCN and their families. Improving the capacity of CYSHCN to be fully integrated into their communities is also an ongoing initiative in the CRS program, and components of this need will also be addressed through the new priority needs.

The discontinuation of two priority needs for CYSHCN allowed the addition of two new priority needs that were not recognized by the priorities established for the FY 2006-2010 cycle. These are the former priorities concerning *increasing access to culturally competent care coordination services* and *promoting access to community-based services for CYSHCN and families*.

The following is a list of the priorities selected by CRS, along with discussion of capacity.

Enabling Services

Priority: Increase access to culturally competent care coordination services for CYSHCN.

The full statement of this priority is to: *Increase access to culturally competent care coordination services for CYSHCN, including transition planning as appropriate.*

This priority need is new for the 2011-2015 needs assessment cycle. Current Needs Assessment findings from the Service Providers for CYSHCN Survey, the CYSHCN Family Survey, and CRS's focus groups indicate that families of CYSHCN often don't know where to go or whom to see for services or have difficulty navigating the system of care and may need assistance in connecting with resources at the local level. Youth and CYSHCN Family Surveys also highlight the importance of culturally competent care coordination and its impact on transition planning. Support for the selection of this need also includes data from the NSCSHN, which indicated that almost 40 percent of Alabama CYSHCN did not receive all elements of needed care coordination. Planning for this need will require special consideration of cultural and language barriers, cultural competence, and geographic differences. As previously stated, based on ratings of areas covered in Worksheet 2, this priority earned 54 of 60 possible total points. Of the 10 priorities selected by CRS or Family Health Services, it ranks first with respect to the MCH Program's capacity to address it.

Infrastructure-Building Services

Priority: Increase family and youth participation in CYSHCN policy-making.

The full statement of this priority is to: *Increase family and youth participation in CYSHCN policy-making through support services and education/training.*

This priority need is similar to one identified in the previous needs assessment cycle, with more focus on supports, education, and training. This need encompasses direct family and youth supports as well as enabling supports for participation in program decisions and policy development. It calls for planning and implementation of activities across all aspects of the service system for CYSHCN in the State and relies heavily on both direct supports and on education and training via existing family and youth networks and through new partnerships. Through the surveys and focus groups, families of CYSHCN reported a variety of needs for support services, informational materials, and training. According to the Service Providers for CYSHCN Survey, family supports are less available, especially in the Rural South. Key informant interviews show that they are harder than would be expected to obtain statewide and especially in rural areas and Black Belt counties. Planning for this need will require special consideration for cultural and language barriers and geographic differences. As previously stated, based on ratings of areas covered in Worksheet 2, this priority earned 50 of 60 possible total points. Of the 10 priorities selected by CRS or Family Health Services, it ranks second with respect to the MCH Program's capacity to address it.

Priority: Promote access to community-based services for CYSHCN and families.

The full statement of this priority is to: *Promote access to community-based services for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services) through education, awareness, advocacy, and linking families with local resources.*

This priority need is new for the 2011-2015 needs assessment cycle. Current needs assessment findings from the Service Providers for CYSHCN Survey, the CYSHCN Family Survey, CRS's focus groups, and the State stakeholder focus groups indicate that families of CYSHCN have great difficulty accessing community-based services—often more difficulty than experienced for health and related services. All of those listed above were ranked by key informants as "harder than you would expect" for families to obtain, statewide and by geographic or Black Belt designations, and were ranked as some of the greatest needs for local areas. They were also less available according to the Service Providers for CYSHCN Survey. The CYSHCN Family Survey data also support the selection of this need. Of all 23 services listed, only seven were reported as needed but not obtained by greater than 20 percent of respondents. All seven of these services were community-based services, including those targeted by this priority need. Activities toward meeting this need will rely heavily on education and awareness for youth, families, and providers related to what services are available and what are needed at the local levels. It will require data dissemination from the Needs Assessment, support for and stimulation of grassroots efforts to develop local delivery systems, and advocacy and leadership training for families and youth—empowering them as agents of change in their local communities. Planning for this need will require special consideration for cultural and language barriers and geographic differences. As previously stated, based on ratings of areas covered in Worksheet 2, this priority earned 36 of 60 possible total points. Of the 10 priorities selected by CRS or Family Health Services, it ranks fourth with respect to the MCH Program's capacity to address it. (Of the three priorities selected by CRS, it ranks third with respect to capacity.)

Changes in State Capacity: CRS

A major change in the State CYSHCN program's capacity is the enhancement of transition planning services in the State. All CRS districts have access to a transition specialist—a social worker with specialized training in transition to adulthood who serves as the primary care coordinator for youth of transition age. Also, CRS has added a Care Coordination Specialist in the State Office to focus on quality improvements within the care coordination program. CRS has enhanced its participation with the Universal Newborn Hearing Screening Program through electronic data sharing related to follow-up testing for children who fail the initial newborn screening. CRS has expanded its data collection and analysis capacity via an electronic medical record system. In addition to creating electronic client records, the system facilitates quality assurance reviews and provides reporting options to gather and present data according to important stratifications that inform policy and programmatic decisions. Finally, CRS has new capacity for partnership with critical organizations that provide family education, training, informational resources, and leadership development. These organizations—APEC and the newly awarded Family to Family Health Information Center (long-time partner FVA)—will augment CRS program activities, including those related to the family and youth involvement.

Priority Needs and State Performance Measures

The following discussion concerns selection of SPMs that correspond to one or more of the newly selected MCH priority needs.

Measures Developed by Family Health Services

Family Health has developed four SPMs.

One of these is retained from the previous needs assessment cycle: *of children and youth enrolled in Alabama Medicaid's EPSDT Program, the percentage who received any dental service in the reporting year*. This measure relates to the new priority concerning promoting access to a dental home.

One of Family Health's newly selected SPMs is *the percentage of 0-17 year-old children and youth who do not have a medical home*. This measure relates to the new priority concerning promotion of access to a medical home and basic health care.

Another of Family Health's newly selected SPMs is *the degree to which statewide FIMR is implemented*. This measure relates to the retained priority concerning reduction of the infant mortality rate.

The final SPM selected by Family Health is *the degree to which the Bureau of Family Health Services promotes a positive youth development model*. This measure relates to three of the retained or new priorities, the ones pertaining to: promotion of positive youth development, reduction in the prevalence of obesity, and reduction in the prevalence of violent behavior.

Measures Developed by Children's Rehabilitation Service

SPMs have been developed for all three priority needs identified for CYSHCN and their families. A checklist measurement tool has been created for each new performance measure. The new SPMs selected by CRS follow.

Provide increased access to care coordination services for CYSHCN.
This performance measure is linked to the following priority need: *to increase access to culturally competent care coordination services for CYSHCN, including transition planning as appropriate*. A checklist measurement tool of five characteristics that promote increased access to care coordination services will be used to measure progress toward this new objective. Each characteristic will be measured on a 0 – 3 scale (not met, partially met, mostly met, and completely met), bringing the total possible scores for progress toward the entire measure to 15. Objective criteria have been set for each score. The characteristics are:

- The State CSHCN Program develops materials, modifies existing materials, and/or disseminates public awareness materials regarding the Care Coordination Program and other related issues (condition/disability-specific, cultural competence, family-centered care, medical home, transition, care coordination) to increase awareness and knowledge of resources available to CYSHCN and their families.

- The State CSHCN Program establishes and maintains a Care Coordination Taskforce (including representatives from local staff and parent consultants) to provide leadership and maintains an updated Care Coordination Manual to guide implementation of the program statewide.

- The State CSHCN Program hosts or provides ongoing care coordination training for staff at State and local levels.

- The CSHCN Program staff, including parent consultants, maintain a working knowledge of local resources to assist in linking and referring CYSHCN and their families to services as needed. This task will include hosting or directly providing trainings and/or resource fairs for CYSHCN and their families in local communities to increase awareness and knowledge of care coordination services and other available resources.

- Each child or youth enrolled in the State CSHCN program is assigned to a local care coordinator (traumatic brain injury or transition care coordinator as appropriate and available) and has an active comprehensive plan of care in place that addresses identified needs, integration into local communities, independence, and transition planning.

Promote increased family and youth participation in CYSHCN policy-making.
This performance measure is linked to the following priority need: to *increase family and youth participation in CYSHCN policy-making through support services and education/training*. A checklist measurement tool of five characteristics that promote increased family and youth participation in CYSHCN policy-making will be used to measure progress toward this new objective. Each characteristic will be measured on a 0 – 3 scale (not met, partially met, mostly met, and completely met), bringing the total possible scores for progress toward the entire measure to 15. Objective criteria have been set for each score. The characteristics are:

- The State CSHCN program, in collaboration with Alabama's Family to Family Health Information Center, supports families of CYSHCN and youth with special health care needs to participate in State and local taskforces/committees, inter-agency meetings, and partner agency initiatives to represent the unique needs of CYSHCN and to promote a comprehensive, collaborative effort to increase their participation in policy-making.

- The State CSHCN program collaborates with Alabama's Family to Family Health Information Center to promote leadership development initiatives for families of CYSHCN and youth with special health care needs.

- The State CSHCN program staff, including Parent Consultants, in partnership with appropriate advocacy agencies and service providers, host or directly provide training for families of CYSHCN and youth with special health care needs including condition/disability-specific issues, special education rights, local resources, etc. to support increased knowledge and effective participation in policy-making.

- The State CSHCN program, in collaboration with partner agencies, develops new materials, modifies existing materials, and/or disseminates resources related to the unique needs of CYSHCN, including condition/disability-specific information and the core components of cultural competence, family-centered care, and care coordination to support increased knowledge and effective participation in policy-making.

- The State CSHCN program maintains active parent and youth advisory committees (State and local), employs parent and youth consultants, and strengthens parent to parent networks to support increased knowledge and to promote effective participation in policy-making by families of CYSHCN and youth with special health care needs.

Promote access to community-based services for CYSHCN and families.
This performance measure is linked to the following priority need: to *promote access to community-based services for CYSHCN and families (including respite care, recreational opportunities, transportation, child care, and school-based services) through education, awareness, advocacy, and linking families with local resources*. A checklist measurement tool of five characteristics that promote access to community-based services will be used to measure progress toward this new objective. Each characteristic will be measured on a 0 – 3 scale (not met, partially met, mostly met, and completely met), bringing the total possible scores for progress toward the entire measure to 15. Objective criteria have been set for each score. The characteristics are:

- The State CSHCN program staff, including Parent Consultants, participate in State and local taskforces/committees, inter-agency meetings, partner agency initiatives, and local community efforts to represent the unique needs of CYSHCN and to advocate for increased access to community-based services (transportation, recreational opportunities, respite care, child care, school-based services, etc.).

- The State CSHCN program staff, including Parent Consultants, host or directly provide training and technical assistance for community-based organizations to increase awareness of the unique needs of CYSHCN and their families and to promote access to necessary services in local communities.

- The State CSHCN program staff, including Parent Consultants, host or directly provide training for families of CYSHCN and youth with special health care needs to increase knowledge of services that may benefit them, to increase awareness of local community resources, and to support and promote effective advocacy for needed community-based services.

- The State CSHCN program staff, including Parent Consultants, maintain a working knowledge of local community-based resources and assist in linking or referring CYSHCN and their families to

services as needed. They also monitor service needs that are unable to be met in local communities and share these with appropriate policy-makers.

- The State CSHCN program analyzes the 2009-10 Needs Assessment findings to develop community-level reports and disseminates these to local policy-makers to help identify strengths and gaps/needs for community-based services in the local area.

SECTION 6

Federal and State Outcome Measures

Preview: Section 6

Section 6 discusses how State MCH Program activities relate to performance measures and outcome measures. As well, factors that may have adversely influenced progress on measures are discussed.

Performance Measures, Outcome Measures, and Program Activities: Family Health Services

Here, discussion focuses on activities to address certain performance measures for which notable progress has not occurred. These measures are: NPM #07, which concerns completion of recommended immunizations in 19-35 month-old children; NPM #15, which concerns tobacco use during pregnancy; NPM #17, which concerns delivery of VLBW infants at perinatal centers; NPM #18, which concerns receipt of prenatal care in the first trimester; and SPM #01, which concerns provision of care coordination to 0-9 year-old EPSDT enrollees. Brief discussion of factors that may have affected progress on these indicators, which is often drawn from Family Health's qualitative data-collection initiatives, follows.

Lack of recent progress on fully immunizing 19-35 month-old children may be partly due to the lack of a medical home for many children. Lack of progress on assuring that VLBW infants are born at a perinatal center may be partly related to limited transportation and access. Lack of progress on assuring that pregnant women receive prenatal care may be related to a variety of issues: such as lack of health insurance or delays in obtaining insurance; issues that, from a provider's perspective, may complicate provision of care to Medicaid enrollees; and patient-related factors, such as whether the patient recognizes that she is pregnant early in the pregnancy and seeks care. Lack of recent progress on provision of care coordination to EPSDT enrollees is related to concern about the cost of matching Federal dollars in order to be reimbursed for the service. Needs Assessment findings yielded little insight into why the proportion of women who used tobacco during the pregnancy has increased.

Several outcome measures, especially infant mortality, are discussed in Section 6. Respondents to Family Health's qualitative data-collection initiatives conjectured that a variety of factors may have contributed to the rise in Alabama's infant mortality rate in 2007. Following this rise, the Perinatal Program has intensified efforts to implement fetal and infant mortality review statewide.

Performance Measures and Program Activities: Children's Rehabilitation Service

CRS promotes ongoing efforts toward the integration of CYSHCN to live, learn, work, and play within their communities. CRS is actively involved in providing education and outreach to local educational agencies and providers of care including medical home, specialty care, and ancillary health-related services.

CRS will continue to promote access to health and related services for CYSHCN. This part of CRS's mission is accomplished through its system of 15 community-based offices, located strategically throughout the State. CRS partners closely with ADRS's Alabama Early Intervention System, ADRS's Vocational Rehabilitation Service, other health systems, and school systems to assure a comprehensive system of care for CYSHCN and their families.

In this section, the relationship among State MCH Program activities, NPMs, SPMs, and outcome measures is discussed: first from Family Health's perspective and then from CRS's perspective. Program activities designed to address the performance measures are detailed, under each performance measure, in the *MCH 2009 Report/2011 Application*. In most cases, the relationship between a set of activities and a single performance measure is straightforward.

Performance and Outcome Measures and Activities: Family Health

The following discussion addresses: 1) performance measures, 2) outcome measures, and 3) activities relating to performance and outcome measures.

The MCH Block Grant Guidance[1] suggests that, when a performance measure's target has not been met, factors that may have affected progress on the measure be discussed. However, according to the web-based guidance for the *MCH Annual Reports/Applications*, whenever the status of an indicator notably misses or surpasses the objective (or target) for that year, targets for the submission year and successive years may be revised. Though we do not typically revise targets on an annual basis, we do tend to revise targets for an indicator if its status notably misses or surpasses the target 3 years in a row. Whether a target was met or not depends on the aggressiveness of the target and the frequency with which targets are revised, as well as on trends in the indicator. For these reasons, discussion here focuses on measures that have worsened or clearly not improved: without respect to whether targets were achieved. In some cases, rather than focusing on the exact, federally defined performance measure that is included in the *MCH 2009 Report/2011 Application*, discussion focuses instead on a related measure that was tracked during the Needs Assessment.

The following discussion interweaves identification of the measures on which progress has not been made with discussion of the factors affecting progress on the measure and the activities undertaken to promote progress on the measure.

Performance Measures: Family Health Services

Indicators pertaining to, though not necessarily identical to, most of the NPMs focusing on the first two MCH Program populations are depicted and/or discussed in Section 3.

Performance Measures Concerning Access to or Utilization of Care

In our view, the following NPMs pertain to access to or utilization of care: #01, which involves biochemical/hematologic newborn screening; #07, which involves immunization of 19-35 month-olds; #09, which involves dental sealants; #12, which involves newborn hearing screening; #13, which involves non-insurance of children and youth; and #17, which involves birth of VLBW infants at perinatal centers. Additionally, SPM #01, which involves care coordination for EPSDT-enrolled children, and SPM #02, which involves provision of dental services to Medicaid-enrolled children, concern access to or utilization of care.

This Needs Assessment Report has not thus far discussed progress on two of the above measures: NPM #01 and NPM #12. Brief discussion of these indicators follows. Concerning NPM #01, the percentage of Alabama newborns who have received timely follow up to definitive diagnosis and clinical management for conditions mandated for screening has remained at 100 percent for several years. As discussed in Section 2, the Alabama Newborn Screening program now screens for 28 of 29

disorders recommended for screening by the March of Dimes. Concerning SPM # 12, the percentage of newborns who have been screened for hearing before hospital discharge, the status of this indicator has remained at 95 percent or above in recent years, and the target for 2009 was surpassed. Alabama's Universal Newborn Hearing Screening Program, discussed in Section 4, is surely a major factor in this achievement.

As mentioned in Section 3 and detailed in Form 11 form notes of the *MCH 2009 Report/2011 Application*, of the remaining performance measures related to healthcare access or utilization, notable progress has ***not*** recently occurred for the following: NPM #07 (immunizations), NPM #17 (VLBW births occurring at a perinatal center), NPM #18 (prenatal care), and SPM #01 (care coordination). Discussion of factors affecting each of these four indicators follows. The *MCH 2009 Report/2011 Application* includes detailed discussion of trends, influencing factors when known, and pertinent activities. Much of the qualitative input that follows is drawn from Section 3 of this Needs Assessment Report.

Concerning NPM #07, the 19-35 month-olds who have received the full schedule of age appropriate immunizations, lack of progress is perhaps affected to some degree by the lack of a medical home for many children (Figures 3.49 through 3.52). Further, according to responses to Family Health's qualitative data-collection initiatives: Some mothers do not see the need for childhood immunizations; some women do not understand what they need to do to keep their family healthy; and reimbursement for routine immunizations and well-child checkups is not seen as adequate by some physicians. ADPH's Immunization Division, located in the Bureau of Disease Control, promotes full immunization in a number of ways, including reminders to parents and maintenance of an immunization registry. Also, as mentioned in Section 2, Family Health's WIC Division and the Immunization Division have a memorandum of agreement on information sharing between the two programs. WIC participants are routinely screened to determine if immunizations are up to date and are referred as needed.

Concerning NPM #17, delivery of VLBW infants at perinatal centers, transportation and access issues may adversely affect progress. Per qualitative data, views on why prenatal transport does not occur differ. Specifically, while metropolitan-area providers sometimes mentioned the "failure" of others to refer at-risk women or to transport women with threatened preterm labor to a perinatal center, physicians outside of metro areas sometimes mentioned barriers to such referral, such as the cost of transport. Family Health Services primarily addresses NPM #17 through its Perinatal Program, which collaborates with SPAC and Regional Perinatal Advisory Councils in efforts to strengthen the system of regionalized perinatal care.

Concerning NPM #18, receipt of prenatal care in the first trimester, qualitative data provided a variety of perspectives. With respect to access, several pertinent issues concerning Medicaid were mentioned: 1) delay in obtaining insurance coverage for prenatal care, 2) barriers to enrollment of homeless pregnant women, 3) the distance to a delivery hospital, and 4) circumstances that, from a provider's perspective, complicate provision of care to Medicaid enrollees. On the other hand, one respondent called SOBRA Medicaid a definite strength. With respect to utilization, responses to qualitative data-collection initiatives indicated the woman may not know that she is pregnant until later in the pregnancy, many women do not understand what they need to be healthy, and there is sometimes noncompliance with seeking prenatal care. The pregnant woman's perceptions about the nature of the care she will receive may also be a factor. Since ADPH no longer provides direct prenatal care, a key component of ADPH's efforts to address the issue of late or no prenatal care is

to encourage family planning patients, should they become pregnant, to obtain early and continuous prenatal care. As well, Family Health operates a toll-free hotline that helps pregnant women access providers and information.

Concerning SPM #01, provision of care coordination to 0-9 year-old EPSDT enrollees, the decline in this indicator (described in Section 3) is related to concern about the cost of matching Federal dollars in order to be reimbursed for the services. Because of this concern, expansion of care coordination to EPSDT enrollees has not only halted, but criteria for provision of care coordination by ADPH staff have become more restrictive. For these reasons, this SPM is being discontinued, effective FY 2010. Family Health's negotiations to address financial concerns, which have not been fully successful, are detailed in the *MCH 2009 Report/2011 Application*.

Performance Measures Concerning Morbidity or Mortality

Three NPMs concern morbidity or mortality: NPM #10, which pertains to the motor vehicle crash death rate in children aged 14 years and younger; NPM #14, which pertains to the BMI of 2-5 year-old children; and NPM #16, which pertains to the suicide rate in 15-19 year-old youth. None of these indicators has worsened in recent years. Though NPM #16 has not shown a consistent trend, it was lower (better) than its target in 2008. On the other hand, as detailed in Section 3, the motor vehicle crash death rate and suicide rate have worsened in 20-24 year-olds.

Other Performance Measures

Of the remaining performance measures tracked by Family Health Services, the one that has clearly not improved is NPM #15, which pertains to smoking during pregnancy. As depicted in Figure 3.21, this indicator worsened in 2006-08 relative to 2003-05. Specifically, the percentage of Alabama newborns whose mother had used tobacco during the pregnancy was 12.0 percent in 2006-08, versus 11.4 percent in 2003-05. White non-Latinos were more likely than Black non-Latinos to use tobacco during the pregnancy. When stratifying according to race and source of payment for delivery, the prevalence of tobacco use during pregnancy was highest among White, non-Latino, Medicaid-enrolled pregnant women: About one in three of them had used tobacco during the pregnancy. Though tobacco use was mentioned as a problem in some of Family Health's qualitative data-collection initiatives, the qualitative data did not provide clear insight into contributing factors. The Perinatal Program's activities to reduce the prevalence of tobacco use during pregnancy are discussed in the *MCH 2009 Report/2011 Application*. Basically, these consist of: 1) partnering with HPCD's Tobacco Prevention and Control Branch to implement and evaluate tobacco prevention and cessation activities for pregnant teens, 2) collaborating with the Medicaid Maternity Care Program on smoking cessation for SOBRA recipients, 3) providing educational materials and other resources to organizations statewide, and 4) partnering with the Alabama March of Dimes and other agencies to provide smoking cessation-education training statewide.

Outcome Measures: Family Health Services

Measures pertaining to, though not necessarily identical to, the NOMs are depicted in and/or discussed in Section 3 of this Needs Assessment Report. Again, discussion of qualitative data is drawn from Section 3.

Infant Mortality

Concerning NOMs #01-#04: The risks of infant, neonatal, and postneonatal death are respectively depicted in Figures 3.31, 3.32, and 3.33—for the total group and according to race and ethnicity. As

stated in discussion of those figures, the racial mortality gap has persisted and is especially wide during the very early (under 1 day of age) neonatal period. As extensively discussed in Section 3, the risk of infant death increased in 2005-07 relative to 2002-04.

The reason that the aforesaid findings end with the year 2007 is that birth cohort files that have been linked with infant deaths occurring among the cohort were used for tracking infant mortality. For describing risks of infant death, birth cohort files were used because of their methodological superiority to period (death cohort) linked files (see Technical Note #12). Because birth cohort linked files do not become available until a year or more after period files become available, the risks of infant, neonatal, and postneonatal death were tracked only though 2007.

To reiterate discussion from Section 3, per responses to Family Health's qualitative data-collection initiatives, respondents conjectured that a variety of factors may have contributed to the rise in Alabama's infant mortality rate in 2007. These factors included: 1) a relative increase in the number of high-risk women giving birth; 2) an increase in fertility treatments and multiple births; 3) [an increase in] extremely premature live births whose gestational age was incompatible with life; and 4) barriers to transporting high-risk pregnant women to places equipped to care for them.

The aforesaid perceptions concerning potential changes in the risk status of women giving birth have *some* support from quantitative data, since the prevalence of inadequate prenatal care has increased slightly (Figure 3.23). As well, the aforesaid perceptions concerning potential changes in the prevalence of multiple births and prematurity have *some* support from quantitative data. Specifically, the prevalence of multiple births (Figure 3.27) and the prevalence of VLBW in singleton births (Figure 3.29) have increased slightly. However, as stated earlier in Section 3, the increase in risk of infant death in 2005-07 relative to 2002-04 was not limited to groups typically deemed to be at high risk. Therefore, the slight changes in risk markers do ***not*** fully explain the increase in infant mortality. As previously stated, multivariate analysis of trends in infant mortality—that considers prenatal care, plurality, and birth weight—is indicated.

As stated in Section 3, following the increase in the State's infant mortality rate in 2007, the State Health Officer directed Family Health Services to intensify efforts to implement FIMR statewide. In collaboration with SPAC, the Perinatal Program is spearheading this effort. Indeed, Family Health Services has selected a new SPM that focuses on the degree to which statewide FIMR is implemented. As well, as discussed in Section 5, Family Health retained the following MCH priority need: *Reduce infant mortality, especially among African Americans*.

Perinatal Mortality

Concerning SOM #05, which pertains to the perinatal mortality rate, details regarding the data sources and methods are in the Form 11 field notes for SOM #05. To recap discussion in Section 3, from 2004 through 2008, the perinatal mortality rate in Alabama ranged from 8.4 deaths per 1,000 live births plus fetal deaths in 2006 to 9.0 deaths per 1,000 live births plus fetal deaths in 2008, with a median of 8.6 deaths per 1,000 live births plus fetal deaths in 2007. The increase in 2008 was due to an increase in the number of reported fetal deaths occurring at 28 or more weeks of gestation: from 250 deaths in 2007 to 288 deaths in 2008. The number of early neonatal (under 7 days of age) deaths declined slightly: from 306 in 2007 to 296 in 2008. This indicator would presumably be affected by the same factors that affect the infant mortality rate. In Alabama, FIMR currently focuses on infant deaths, but plans are to eventually review fetal deaths as well. Further, the

previously described activities to promote early and continuous prenatal care may, along with other measures, help to promote fetal health.

The Child Death Rate

SOM #06 pertains to the death rate in children aged 1 through 14 years. Rather than using that broad age category, the all-cause death rate was tracked for 1-4 year-olds (Figure 3.69) and 5-14 year-olds (Figure 3.70). Both of these indicators were tracked for the total population, White non-Latinos, and Black non-Latinos. As detailed in Section 3, the all-cause death rate did not increase in either of these age groups and, in most cases, declined.

State Outcome Measures

For the 2006-2010 needs assessment cycle, the State had two outcome measures: one pertaining to the homicide/legal intervention death rate in 15-19 year-old Black males and the other to the infant mortality gap between Alabama and the U.S. Neither of these measures is being retained for the 2011-2015 needs assessment cycle. Measures seeking to reduce infant mortality in Alabama have already been discussed.

Trends in the homicide/legal intervention death rate in 15-19 year-old and 20-24 year-old Black, non-Latino males are depicted in Figure 3.79. As detailed in Section 3, the death rate due to this cause has been increasing in both the aforesaid age groups of Black, non-Latino males: though, in 2006-08, it declined slightly in 15-19 year-old Black, non-Latino males. Family Health has retained its MCH priority need concerning prevention of violent behavior. One way of seeking to reduce the homicide rate is via child death review, which is discussed in Sections 1 and 2. However, as discussed in Section 4, the State MCH Program's capacity to reduce the prevalence of violent behavior is considered to be quite low.

Performance Measures and Activities: CRS

Community Integration: Children's Rehabilitation Service

Children's Rehabilitation Service promotes ongoing efforts toward the integration of CYSHCN to live, learn, work, and play within their communities. CRS is actively involved in providing education and outreach to local educational agencies and providers of care including medical home, specialty care, and ancillary health-related services. These efforts seek to increase access to high-quality care and to build comprehensive service systems within the State that address the global needs of CYSHCN and their families. Throughout all planning efforts, CRS seeks to create opportunities to strengthen systems of family and youth support that may enable CYSHCN and their families to participate more fully in program and policy development, to identify resources, and to benefit from the services they receive.

Promoting Access to Health and Related Services: Children's Rehabilitation Service

CRS will continue to promote access to health and related services for CYSHCN. This is part of the mission of the State CSHCN program and is accomplished through its system of 15 community-based offices, located strategically throughout the State. Many of these offices are co-located with offices for Alabama's Early Intervention System and Vocational Rehabilitation Service, enhancing participation in these programs and promoting smooth transitions. CRS also partners closely with school systems and other health systems to assure a comprehensive system of care for CYSHCN and their families.

Partners in Promoting Health

In closing, Family Health Services and CRS will continue seeking ways to promote the health of all populations served by the MCH Program. We will do this in partnership with one another, with other organizations, with communities, and with the individuals we seek to serve.

Appendix 1

Acronyms and Abbreviated Names

Acronym/Name	***Explanation***
ABCD	Assuring Better Child Health and Development
ACS	American Community Survey
ADPH	Alabama Department of Public Health
ADRS	Alabama Department of Rehabilitation Services
AIDS	Acquired immunodeficiency syndrome
Alabama Blue Cross Blue Shield	Blue Cross and Blue Shield of Alabama
Alabama March of Dimes	Alabama Chapter of the March of Dimes
Alabama Medicaid	Alabama Medicaid Agency
ALL Kids/Alabama SCHIP	State Children's Health Insurance Program
APEC	Alabama Parent Education Center
ARRA	American Recovery Reinvestment Act
ASCCA	Alabama's Special Camp for Children and Adults
ASH	ADPH's Adolescent and School Health Program
BMI	Body Mass Index
CBER	Alabama's Center for Business and Economic Research
CDC	Centers for Disease Control and Prevention
Census	U.S. Census Bureau
Chapter	Alabama Chapter of the American Academy of Pediatrics
Child Death Review Program	Alabama Child Death Review System
CHIP	State Children's Health Insurance Program
CHS	Children's Health System
CI	Confidence Intervals
CRS	Children's Rehabilitation Service
CRS Advisory Committee	Children's Rehabilitation Service's Needs Assessment Advisory Committee
CSHCN	Children with special health care needs
CY	Calendar Year
CYSHCN	Children and youth with special health care needs
CYSHCN Family Survey	Family Survey conducted by CRS
Department	Alabama Department of Public Health
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment
Family Health	Family Health Services
Family Health Services	Bureau of Family Health Services
Family Survey	Survey of Alabama's Families pertaining to services for women of childbearing age, children and youth (conducted in 2009)
FIMR	Fetal and Infant Mortality Review
FPL	Federal poverty level
FVA	Family Voices of Alabama
FY	Fiscal year
Healthcare Providers Survey	Survey of Healthcare Providers for women of childbearing age, children, and youth (conducted in 2009)
Health Department	Alabama Department of Public Health
HIV	Human immunodeficiency virus

Acronym/Name	***Explanation***
HPCD	Bureau of Health Promotion and Chronic Disease
HPSA	Health Professional Shortage Area
HRSA	U.S. Health Resources and Services Administration
HSC	Health Systems Capacity Indicator
HSI	Health Status Indicator
ICD	International Classification of Diseases
ID #	Identification number
i.e.	That is
ImmPrint	Immunization Provider Registry with Internet Technology
Leadership Team	Leadership Team, convened by Family Health Services, for the 2009-10 Title V Needs Assessment
MCH	Maternal and child health
MCH Advisory Group	Family Health Services' MCH Needs Assessment Advisory Group
MCH Annual Reports/Applications	MCH Services Title V Block Grant annual reports/applications
MCH Block Grant	Federal MCH Services Block Grant
MCH Program	MCH Service Block Grant Program
MCHB	Maternal and Child Health Bureau
MCH Epi Branch	Maternal and Child Health Epidemiology Branch
MCH Organizations Survey	Mail Survey of Alabama non-medical organizations serving women of childbearing age, children and youth, and/or families (conducted in 2009)
MCH Pyramid	Pyramid developed by MCHB, depicting 4 levels of service
Medicaid Agency	Alabama Medicaid Agency
NCHS	National Center for Health Statistics
NSCH	National Survey of Children's Health
NSCSHCN	National Survey of Children with Special Health Care Needs
Needs Assessment	State of Alabama FYs 2009-10, 5-Year Maternal and Child Health Needs Assessment
Needs Assessment Report	The full report of the State of Alabama FYs 2009-10, 5-Year Maternal and Child Health Needs Assessment
NOM	National Outcome Measures
NPM	National Performance Measure
Occurrent	Refers to an event that occurs in Alabama to an Alabama resident
P, or p	P-value
Perinatal Program	State Perinatal Program, Alabama
PRAMS	Pregnancy Risk Assessment Monitoring System
Service Providers for CYSHCN Survey	County-level survey of providers of care, conducted by CRS
SIDS	Sudden infant death syndrome
SLAITS	State & Local Area Integrated Telephone Survey
SOBRA	Sixth Omnibus Budget Reconciliation Act
SPAC	State Perinatal Advisory Committee
SPM	State Performance Measure
SSDI	State Systems Development Initiative
SSI	Supplemental Security Income
State	State of Alabama
SUIDI	Sudden Unexplained Infant Death Initiative
TANF	Temporary Assistance to Needy Families

Acronym/Name	***Explanation***
Team	Leadership Team, convened by Family Health Services, for the 2009-10 Title V Needs Assessment
UAB	The University of Alabama at Birmingham
U.S.	United States
USA	University of South Alabama
VLBW	Very low birth weight
WIC	Special Supplemental Nutrition Program for Women, Infants and Children
Youth Survey	Survey of youth with special health care needs conducted by CRS
YRBSS	Youth Risk Behavior Survey System
2009 Report/2011 Application	Alabama MCH Services Title V Block Grant FY 2009 Annual Report/FY 2011 Application
2009-10 Needs Assessment	FYs 2009-10 MCH Needs Assessment conducted by Alabama

References:

[1] U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Maternal and Child Health Services Title V Block Grant Program Guidance and Forms for the Title V Application/Annual Report. OMB NO 0915-0172. Expires March 31, 2012.

[2] Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children's Health, Data Resource Center for Child and Adolescent Health web site. Retrieved in 2009 from www.nschdata.org.

[3] Youth Risk Behavior Surveillance System. Centers for Disease Control and Prevention web site. Retrieved 10/27/2009 and 10/28/2009 from http://www.cdc.gov/HealthyYouth/yrbs/.

[4] Personal correspondence from a U.S. Centers for Disease Control and Prevention staff member.

[5] The U.S. Census Bureau's detailed spreadsheet, "SC-EST2008-alldata6: Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and One Group with Two or More Race Groups) by Age, Sex, and Hispanic Origin: April 1, 2000 to July 1, 2008. As of March 5, 2010, the spreadsheet for states from Alabama through Idaho (alphabetically arranged) could be accessed from the following url address: http://www.census.gov/popest/states/asrh/.

[6]Selected Tools for Alabama's 2009-10 Maternal and Child Health Needs Assessment. A compilation of materials used by the Bureau of Family Health Services, Alabama Department of Public Health, and Children's Rehabilitation Service, Alabama Department of Rehabilitation Services. Obtainable by contacting Anita Cowden, DrPH, at anita.cowden@adph.state.al.us, or telephoning 334.206.5943.

[7] Maternal and Child Health Epidemiology Branch, Bureau of Family Health Services, Alabama Department of Public Health. *A Manual for Convening and Facilitating Maternal and Child Health Focus Groups*. December 19, 2008.

[8] Microsoft Office 2007, Microsoft Online.

[9] SAS® for Windows. 2002-2003 SAS Institute, Cary, NC. SAS Proprietary Software Release 9.1 (TS1M3).

[10] Donna J. Petersen, ScD, MHS, MCH Needs Assessment: Capacity to Competency Presentation at the Federal/State Maternal and Child Health Partnership Technical Assistance Meeting on Title V 2010 Needs Assessment, held in Washington, DC, on February 26, 2009.

[11] John Hopkins Women's and Children's Health Policy Center and the Association of Maternal and Child Health Programs. (2004). Capacity Assessment for State Title V: Second Edition. (Obtained from the following web address on March 19, 2009: http://www.amchp.org/MCH-Topics/A-G/CAST5/Pages/default.aspx.)

[12] Derived from the U.S. Census Bureau's detailed spreadsheet, "SC-EST2008-alldata6: Annual State Resident Population Estimates for 6 Race Groups (5 Race Alone Groups and One Group with Two or More Race Groups) by Age, Sex, and Hispanic Origin: April 1, 2000 to July 1, 2008. As of March 5, 2010, the spreadsheet for states from Alabama through Idaho (alphabetically arranged) could be accessed from the following url address: http://www.census.gov/popest/states/asrh/.

[13] Per estimates provided by the University of Alabama's Center for Business and Economic Research and based on Census Bureau data for 2000.

[14] Alabama QuickFacts from the US Census Bureau. Retrieved from the following url address on 2/16/2010: http://quickfacts.census.gov/qfd/states/01000.html.

[15] Source: U.S. Department of Commerce, Bureau of the Census, 2000 Census of Population, Summary File 1, Table P2. Special tabulation by the Alabama State Data Center. Retrieved on February 8, 2010 from the following web site: http://cber.cba.ua.edu/.

[16] Alabama Farmers Federation web page. Retrieved on February 8, 2010 at the following url address: http://www.alfafarmers.org/ag_facts/

[17] Bureau of Labor Statistics. Two tables (one for the U.S. and one for Alabama) concerning seasonally adjusted, monthly unemployment rates. Retrieved on May 6, 2010 from the following url address: http://data.bls.gov/cgi-bin/surveymost.

[18] Alabama 2010 Forecast Released at Annual Conference. Retrieved on February 8, 2010 from the web site of the University of Alabama's Center for Business and Economic Research: at the following url address: http://cber.cba.ua.edu/2010EconomicForecast.html.

[19] The U.S. Census Bureau's American Community Survey. Table S1701: Poverty Status in the Past 12 Months. Retrieved on February 19, 2010 from the following web address: http://factfinder.census.gov/.

[20] Information about the American Community Survey, retrieved on 2/17/2010 from the following web address, by clicking "What is the survey?" and "Introduction": http://www.census.gov/acs/www/SBasics/desgn_meth.htm.

[21] Quick Guide to the American Community Survey (ACS) Products in American FactFinder. 2008 ACS-1-Year Estimates—September 22, 2009. 2006-2008 ACS 3-Year Estimates—October 27, 2009. Retrieved on 2/17/2010 from the following web address: http://factfinder.census.gov/home/saff/aff_acs2008_quickguide.pdf.

[22] National Survey of Children's Health (NSCH), 2007. FAST FACTS about the SURVEY. Data Resource Center for Child and Adolescent Health. Your Data… Your story. Retrieved on 2/17/2010 from the following web address, by clicking "Learn about the surveys": http://nschdata.org/content.

[23] U.S. Census Bureau, 2006-2008 American Community Survey. Information is from the following tables for, respectively Alabama and the U.S.: Selected Social Characteristics in the United States: 2006-2008. Accessed on 2/16/2010 from the following web address: http://factfinder.census.gov/. Percentages reported were derived from absolute numbers reported in the table.

[24] American FactFinder, U.S. Census Bureau. Table S0901, Children Characteristics, 2006-2008 American Community Survey 3-Year Estimates. Retrieved 2/18/2008 from http://factfinder.census.gov/.

[25] Alabama Department of Human Resources. Characteristics of Children in Foster Care. August 2008.

[26] Crime in Alabama 2008. Statistical Analysis Center, Alabama Criminal Justice Information Center. Retrieved on 2/19/2010 from the following web address: http://acjic.alabama.gov.

[27] Zhu BP, Haines KM, Le T, McGrath-Miller K, Boulton ML. Effect of the interval between pregnancies on perinatal outcomes among white and black women [abstract]. Am J Obstet Gynecol. 2001 Dec;185(6): 1403-10.

[28] Klerman LV, Cliver SP, and Goldenberg RL. The impact of short interpregnancy intervals on pregnancy outcomes in a low-income population. American Journal of Public Health, Vol 88, Issue I, 1182-5, © 1998 by

American Public Health Association.

[29] Cowden AJ, Funkhouser E. Adolescent pregnancy, infant mortality, and source of payment for birth: Alabama residential live births, 1991-1994. Journal of Adolescent Health 2011; 29:37-45.

[30] Dollfus C, Patetta M, Siegel E, Cross AW. Infant mortality: a practical approach to the analysis of leading causes of death and risk factors. Pediatrics, Vol 86, August 1990, 176-83.

[31] AAP Grand Rounds. Bedsharing/Cosleeping: The Data Neither Condemns Nor Endorses. AAP Grand Rounds 8:45-47 (2002). Retrieved on 6/13/2010 from the following web address: http://aapgrandrounds.aappublicatins.org/cgi/content/extract/8/4/46. [from first 20% of the full text of the article, cites a primary source]

[32] Alexander GR, Kogan MD, Himes JH, Mor JM, Goldenberg R. Racial differences in birthweight for gestational age and infant mortality in extremely-low-risk US populations [abstract]. Pediatric & Perinatal Epidemiology, April 1999, Vol. 13, No. 2, P. 205-217.

[33] U.S. Census Bureau. Historical Health Insurance Tables. Table HI-5. Health Insurance Coverage Status and Type of Coverage by State—Children Under 18: 1987 to 2005. Retrieved on 4/17/2008 from the following web address: http://www.census.gov/hhes/www/hlthins/historic/hlthin05/hihistt5.html.

[34] U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. Table HIA-5. Health Insurance Coverage Status and Type of Coverage by State.

[35] Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children's Health, Data Resource Center for Child and Adolescent Health web site. Retrieved 6/14/2010 from www.nschdata.org.

[36] Alabama Medicaid Agency. Together for Quality. Retrieved from the following web site on June 26, 2010: www.medicaid.alabama.gov.

[37] U.S. Department of Health and Human Services Health Resources and Services Administration. Shortage Designation: HPSAs, MUAs & MUPs. Retrieved on 6/21/2010 from the following web address: http://bhpr.hrsa.gov/shortage/.

[38] U.S. Department of Health and Human Services Health Resources and Services Administration. Find Shortage Areas: HPSA by State & County. Retrieved on 6/21/2010 from the following web address: http://hpsafind.hrsa.gov/HPSASearch.aspx.

[39] Healthy People 2010 Leading Health Indicators. Accessed on January 28, 2010 from the following web address: http://www.healthypeople.gov/.

[40]State of Alabama Maternal and Child Health Services Block Grant, Fiscal Year 2009 Annual Report/Fiscal Year 2011 Application, Volume I: Narrative and Attachments. Prepared by the Bureau of Family Health Services, Alabama Department of Public Health, for submission in July 2010 to: the Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services.

[41] Birkhead GS, Riser MH, Mesler K, Tallon TC, and Klein SJ. Introduction: Youth development is a public health approach. *J Public Health Management Practice*, 2006. November (Suppl), S1-S3. Copyright 2006 Lippincott Williams & Wilkins, Inc.

[42] National Adolescent Health Information Center. Investing in Adolescent Health, A Social Imperative for California's Future. San Francisco: University of California; 2000.

[43] Centers for Disease Control and Prevention. Childhood Overweight and Obesity. Retrieved from the following web address on January 29, 2010: http://www.cdc.gov/obesity/childhood/consequences.html.

[44] Dietz W. Health consequences of obesity in youth: Childhood predictors of adult disease. Pediatrics 1998:101:581-525. (As cited in the preceding secondary reference: Centers for Disease Control and Prevention. Childhood Overweight and Obesity.)

[45] Preconception Care: Why is Preconception Care a public health concern? Retrieved on 1/29/2010 from the following web address: http://www.cdc.gov/ncbddd/preconception/whypreconception.htm.

[46] Retrieved from the web page of the Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services, on 1/29/2010, at the following web address: http://mchb.hrsa.gov/research/strategic_definitions.asp.

Additional Reference:

Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children with Special Health Care Needs, 2005/2006.