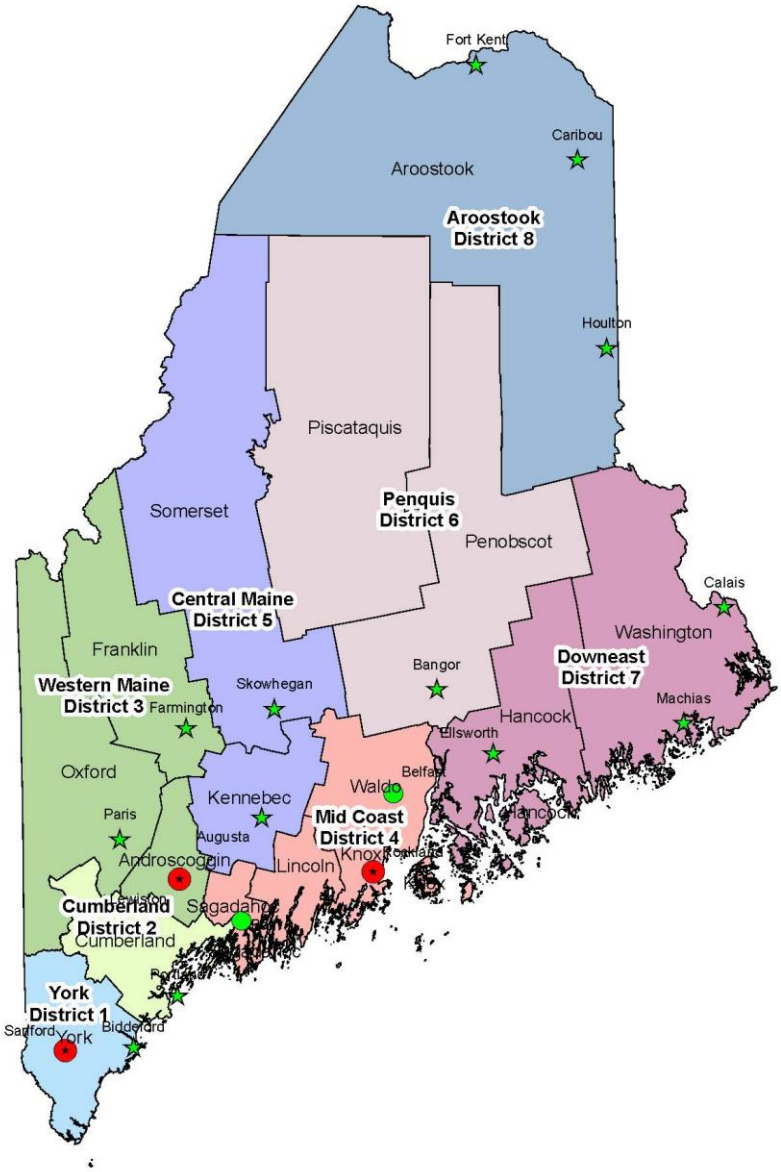
State of Maine



MATERNAL AND CHILD HEALTH SERVICES

TITLE V BLOCK GRANT PROGRAM
COMPREHENSIVE STRENGTHS AND NEEDS ASSESSMENT
JULY 15, 2010

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September 13, 2010

As a requirement of continued funding of the Maternal and Child Health (Title V) Block Grant, Maine is required to conduct a comprehensive strengths and needs assessment of its' maternal and child population every five years.

This document outlines the process used to conduct the assessment for Maine and the resulting priorities and state performance measures for the next five years. As you read the document please keep the following in mind;

- You will see a greater focus on strengths and what Maine is doing well, throughout the report. We feel strongly that by re-directing resources prematurely may lead to poorer outcomes. We acknowledge that there will never be sufficient resources to address all the MCH needs. When we see an increase in domestic violence, child abuse and neglect, or autism during times of continued reductions in resources we have to continually ask ourselves "are we currently addressing the most critical MCH issues, and how will we know we have made a difference?" Addressing these issues early on, we hope, will lead to improved health outcomes for the entire population long-term;
- As we address these areas we are confronted with many new challenges as our environment continually changes. They include such issues as a changing economy reflected in a shift from a more traditional manufacturing base to lower paying service sector (ie; telemarketing centers), high unemployment (8.3%), an aging population combined with a declining birth rate; and a recent curtailment request by the Governor that could result in a $450,000 reduction for the Division of Family Health. Please see State Overview Section, page 11 of Maine's Application and Annual Report for more detail on these challenges; and
- You will see several areas of overlap and repetition in the report, this was intentional, to avoid having to continually re-direct the reader to prior sections of the assessment.

We hope you find this assessment to be a useful resource. If you have any questions or need additional information please contact, the Maine CDC, Division of Family Health, Office Manager at 207-287-9917.

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Section I – PROCESS FOR CONDUCTING NEEDS ASSESSMENT

Introduction

The powerful idea that government has a moral and legal responsibility to promote the health and well being of the nation's children and families became a reality with the enactment of Title V of the Social Security Act in 1935. Seventy-five (75) years later, we continue to draw inspiration, direction, and resources from the visionary leadership that led to the original Title V legislation.

The U.S. Congress amended Title V in 1981 and in 1989. These amendments clarified and expanded the leadership role of State Government in carrying out the Title V mission. These amendments were instrumental in giving State Title V Agencies the fiscal authority and programmatic responsibility to focus its resources on developing family-centered and culturally competent systems of care for all children and families.

In Maine, the State Title V Agency is housed in the Division of Family Health (DFH) of the Maine Center for Disease Control and Prevention (Maine CDC), Department of Health and Human Services (DHHS). In the winter of 2008 Maine's Title V Program expanded the monitoring of the priorities identified for 2005-2010 to include development of the Comprehensive Strengths and Needs Assessment (CSNA) and priorities for 2010-2015. The Assessment represents a unique opportunity to plant creative and fertile seeds for maternal and child health (MCH) leadership in Maine. As the Title V Agency for Maine, we articulated a vision for the assessment.

We agreed on the concept that this would be a CSNA, not just a needs assessment: underlying this is our vision that our work as leaders to improve the health of the state's children and families should be rooted in tapping into strengths as well as in meeting needs. We believe that children, families, communities, and systems are more likely to change for the better when the context for such actions includes their strengths, assets, resources, protective factors, and resiliency. It is also important to know the strengths and key elements of the MCH system that are needed to achieving and maintaining positive outcomes. This allows us to ensure that these elements are not dismantled by the state when faced with necessary changes in allocation of resources to address emerging issues. To maintain such a context, we decided to keep the framework used in 2005, repeatedly asking the following questions: Why do some families do better than others in the face of similar circumstances and adversity? Why does Maine do well in certain MCH indicators such as infant mortality and teen fertility? What are the aspects and qualities of certain MCH programs, such as Women, Infants, and Children Supplemental Nutrition (WIC) and home visitation, which make a positive impact on the MCH population? How can we collect information over the next five years so that we will be able to track the answers to these and other such questions? We added questions such as: What are the areas with overall good outcomes, but when looking by subpopulations there are disparities? What are the root causes of those disparities? Thus, we decided to conduct a CSNA that seeks, from start to finish, to create a five year process that will enable us to identify and measure positive factors, so that we have a balance in our systems and programs between risk reduction and strength enhancement.

We have found tremendous value in the Institute of Medicine's (IOM) 1988 definition of public health. This definition is rooted in the idea that public health refers to a process of fostering conditions that will enable the whole population – all people - to achieve optimal health. When children thrive; when they grow up with a sense of dignity, curiosity, and hope; when they experience enduring unconditional love from at least one adult; and when they feel a collective spirit of respect from the community and society as a whole, we all benefit, every one of us, and these children grow up to become engaged and productive adults within our communities.

On the other hand, when children experience the trauma of abuse and neglect; when their health is impaired due to systemic gaps and a lack of synergy and collaboration across sectors; when they experience depression in adolescence, only to come up against a culture of stigma about mental illness; when their oral health is such that it not only causes a series of medical complications but also an enduring low self-esteem; when those with special health needs remain in segregated settings, we all lose out every one of us.

Indeed, as President Theodore Roosevelt said a century ago, every child represents a potential addition to the productive and humane capacity or a potential addition to the destructive forces of a community. We as a society have a strongly vested interest in seeing that children do well in all aspects of life, and our challenge as MCH leaders is to foster the conditions that will help them do well. Such is the mission of Title V.

So in the spirit of the values that lie at the heart of public health, we decided early on in planning for the Assessment to measure the health of the MCH population not only quantitatively but also in ways that illuminate the quality of their lives and of the policies and systems that affect them. The quantitative measures with which we are most familiar and comfortable such as: infant mortality, low birth weight, and youth suicide rates continue to be important and essential to our leadership. However, we decided that qualitative indicators at all levels were equally important. The questions that form the foundation for our assessment should stretch and flow well beyond the boundaries of numbers. To what extent are Maine's children thriving? To what extent are our MCH services, organizations, and systems culturally and linguistically competent? To what extent are they family-centered? The MCH focus groups that took place throughout the state in summer and fall of 2009 grew out of our desire to feature quality as well as quantity in our assessment.

We aimed to include a wide array of stakeholders in focus groups, especially those most directly affected by MCH policies and systems. One reason that Title V is such a precious resource is that it requires us to not only assure reasonable services for the whole MCH population but also to establish the foundation needed to sustain such services from one generation to the next. The MCH CSNA is a central component of this foundation for our leadership, and its value as a powerful planning tool over the next five years will rest, in large part, on our capacity to get buy-in and involvement from all stakeholders. Thus, family and community involvement from start to finish is central to every last detail of the assessment and the priorities that emerged from it. Our initial task as MCH leaders should always be to ask again and again: Who should be at the table? Whom have we forgotten? And how do we ensure that everyone feels welcomed and that his or her voice matters in this process?

During the 2005 CSNA process we initiated discussions with several of the Region I States regarding the processes they used, as well as, how they incorporated strengths in their

assessment. This led Region I to discuss the importance of evaluating strengths and exploring the literature for existing measures of strength. The discussion included both the measurement of strengths of the MCH population and of the system of care that serves this population. It was less challenging to gather data around the assessment of strengths of populations than around systems. For the 2010 CSNA Maine continued to look at both the MCH population and system of care and services with data on systems of care continuing to be a challenge.

There was a focus on collaboration, inclusiveness, and stakeholder input throughout the development of Maine's 2010 CSNA. Focus groups were designed to collect information on providers and consumers of MCH services in each of Maine's eight new public health districts. Stakeholders throughout the state with expertise in potential MCH priority areas were asked to consult on the development of fact sheets designed to inform ratings of these priorities. Students in a course at a local college were engaged in creating fact sheets on potential priorities. Surveys were sent to over 100 MCH stakeholders asking them to rate priorities. The quantitative needs assessment was released to Maine CDC staff and stakeholders for input and feedback; stakeholders included consumers of MCH and CSHN services, families of CSHN and providers of MCH/CSHN related services. Groups of experts were consulted on wording of priorities and development of performance measures. Program staff from within and outside of the Maine CDC were encouraged to participate in all aspects of the CSNA, including review of focus group questions, review of quantitative data, development of priority selection criteria, survey development, priority selection, and performance measure development.

The design of information gathering for Maine's annual Title V report helped increase engagement in the needs assessment process. For the past three years, we changed the way we collect information on the accomplishments, current activities and plans for our annual Title V report. Rather than asking individuals to contribute written information, we convene meetings on each measure, which include individuals from different areas working on the same measure. These meetings allow programs to learn from each other and make connections for future collaborations. During the development of this year's needs assessment, we used these groups to complete the annual report, but to also educate group participants on the needs assessment and engage their assistance in the development and selection of priorities and measures. These groups have encouraged more engagement in the Title V annual report and the CSNA.

The methodology of Maine's priority selection process for the 2010 CSNA was enhanced through the pre-conference training, "State Title V Needs Assessment Practice Workshop" offered at the 2008 Maternal and Child Health Epidemiology Conference in Atlanta, Georgia. The workshop provided insight into methods for selecting criteria and engaging stakeholders, and encouraged us to develop a planning process to advance our priority areas throughout the next five years. We took this information, researched experiences of other states, and refined our priority selection processes to be more inclusive and data-driven.

Cultural and Linguistic Competence

We continue to use the 1989 monograph, *Toward a Culturally Competent System of Care*, for our starting point definition of cultural competence. According to this definition, cultural competence is a set of behaviors, attitudes, and policies that enable a system, organization, or health care practice to work effectively in cross-cultural and cross-language situations. The difference between cultural sensitivity and competence is important to acknowledge. Culturally sensitive provision of care involves the individual provider's awareness of and respect for the

beliefs of people of diverse backgrounds. Cultural competence, on the other hand, encompasses such awareness and respect at the institutional, organizational, and systems and policy level.

In the time since the 2005 CSNA several programs within the DFH have undertaken a self-assessment of cultural competency. The programs include CSHN, WIC, and the Maine Injury Prevention Program (MIPP). Revitalizing Quality Nutrition Services in WIC through a focus on implementation of Value Enhanced Nutrition Assessment (VENA) is a national goal for continuous program improvement that will assure that WIC remains and further evolves as an outstanding public health nutrition program. Adding to the current VENA training, WIC received a Special Project Grant through the US Department of Agriculture to test an approach and model for continuous skill building in cultural and linguistic competence to improve staff and organizational performance in providing VENA. Enhancing the value of nutrition assessment can be logically linked to equity in health outcomes for all WIC participants, a key strategy of which is to build cultural and linguistic competence. This project is being evaluated using a quasi-experimental pre-test/post-test control group design. Thus far, baseline data on staff cultural competency and participant satisfaction have been collected. Follow-up surveys are planned for March 2011.

The CSHN Program continues to move toward a culturally competent system of care through our own awareness and growth. The CSHN Birth Defects Coordinator, Diane Haberman, has taken on the role of coordinating the programs efforts. Ms. Haberman provides the CSHN staff with opportunities to engage in discussions on culturally sensitive issues. For example during FY09 she held formal meetings to view and discuss an eight part series on Native American history that allowed CSHN staff to gain a better understanding of how history has affected the Native American people.

MIPP staff also participated in a training titled Achieving the Promise: Cultural and Linguistic Competence in Maine. These trainings have helped deepen the awareness and understanding of the cultural differences of the populations served and has resulted in the program ensuring all resource materials are culturally appropriate.

Dick Aronson, our former MCH Medical Director, articulated assumptions that are at the heart of our public health work with the MCH population. They are such a core component of our practice that we tend to forget to articulate them to those with whom we work. As you read through the CSNA and annual report and plan, please keep these assumptions in mind.

1. Honor and respect the dignity of all people involved, and of their cultures.

2. Consider that everyone is an "expert" and honor all voices, especially those who have historically not been included in the design of the policies that affect them.

3. Involve families and communities from start to finish.

4. Use simple and clear, non-jargon, non-bureaucratic, non-violent language and communication. This means not using acronyms unless we are willing to explain what the letters mean, and not using terms such as "targeted" and "surveillance" unless we define them first.

5. Draw on the strengths, resiliency, and resources of all people involved, including the families and communities that we serve.

6. Collect, track, analyze, and use data in an honest, clear, and accurate way that is true to the basic principles of public health and that serves as the foundation for action.

7. Advocate for ways to humanize and dignify systems, policies, programs, and services in the long term.

8. Be faithful to the purpose of public health, which is to foster the conditions that will enable the whole population to achieve optimal health. To serve the health of the public, we have to take care of our own health first.

9. Be non-judgmental, and realize that behind every statistic, every risk factor, every death is a real human being, with all the complexity, magnificence, and potential for good that is in each of us.

10. Be relationship-centered i.e. carry out the work of public health within a context that appreciates the vital role of loving and thoughtful human relationships in promoting health, safety, and justice.

Methodology

Maine Title V uses the five year assessment and planning cycle for the MCH Block Grant as a basis for its MCH program planning and evaluation cycle. Two frameworks for planning and evaluation of Maine's Title V Program include a logic model for MCH in Maine (represented in Figure 1.1) and results-based management cycle (represented in Figure 1.2). Several tools and frameworks have been added to the federal requirements.

1. Maine state law continues to require performance based contracting, first implemented in 1997. In addition the Department of Human Services became the DHHS in 2005. The DHHS leadership has determined and enforced the use of evidence-based or best practice based interventions and services in all offices within the Department. This has been reinforced by the Commissioner and Legislature as they have to increasingly make difficult decisions in an effort to balance the state budget,

2. During the 2005 five-year CSNA, we developed a logic model for the Title V Program in Maine. Most of the MCH related programs have developed individual logic models that serve as a framework for planning and resource allocation. The Maine MCH Logic Model is also a tool for communicating the long-term outcomes we are focused on achieving, as well as the strategies and methods to achieve these outcomes. Also, the logic model provided a useful touch point as the Title V Program reviewed data from the comprehensive assessment, and identified priorities for the upcoming 5-year period.

3. In February 2010 the state Medicaid (MaineCare) agency and the DFH were notified of our successful application for a Centers for Medicare and Medicaid Services (CMS) Child Health Insurance Program Reauthorization Act (CHIPRA) grant. The focus of this grant is to improve health outcomes for children insured through MaineCare. The 5 year

project has 3 primary goals: 1) Implement the Bright Futures program at every EPSDT well child visit to ensure a basic standard of care for children throughout the state and measure the quality of care delivered; 2) Develop an electronic database and health passport to improve care for all children in foster care, as this group of children experiences the highest level of health disparities; and 3) Create an electronic health dashboard that enables meaningful use of Health Information Technology (HIT) permitting electronic transfer of child health data from providers to state health systems that allows the state to monitor health outcomes and to reimburse for preventive and coordinated care

4. The emergence of public health districts in Maine are bringing together familiar and new partners to improve the health of all children and families in Maine. One example of these partnerships was Maine's approach to addressing the H1N1 outbreak in the Fall and Winter of 2009/2010. The Maine CDC worked very closely with Public Health District Liaisons who, in turn, worked with schools across the state to immunize children. The success of this effort resulted in Maine leading the nation in the immunization of children. A new framework introduced to Maine CDC is the Essential Public Health Services Assessment, which was conducted at the district level between March and December 2009. The Maine CDC Office of Local Public Health (OLPH) coordinated the assessments in Maine's newly formed public health districts. This assessment provides a new component for inclusion in the Title V CSNA because it is based upon the ten (10) Essential Public Health Services (EPHS).

5. The Maine CDC conducted a state level public health services assessment on May 13, 2010. Information from this assessment will inform Maine CDC's preparation for voluntary public health accreditation. Quality improvement (QI) is a major component of accreditation which requires public health entities to enhance their evaluation and QI processes.

6. Another new tool for planning and evaluating the use of our human and financial resources within Title V is the adoption of zero based budgeting (ZBB), a model adopted from the corporate business community. Generally it is a trade off model that requires programs to identify their core business functions, why they do the functions (mandated statute, etc.), prioritize the functions and activities, and identify what portion of their human and financial resources are focused or dedicated to which functions or activities. ZBB is a tool managers utilize on a regular basis, especially when presented with an increase or decrease in their annual funding. In the coming year we will add a variable to our ZBB matrix that looks at the use of human and financial resources by the 10 EPHS. This tool has been critical in successfully changing the allocation of resources during challenging budget periods.

Figure 1.1 Maine Maternal and Child Health Logic Model

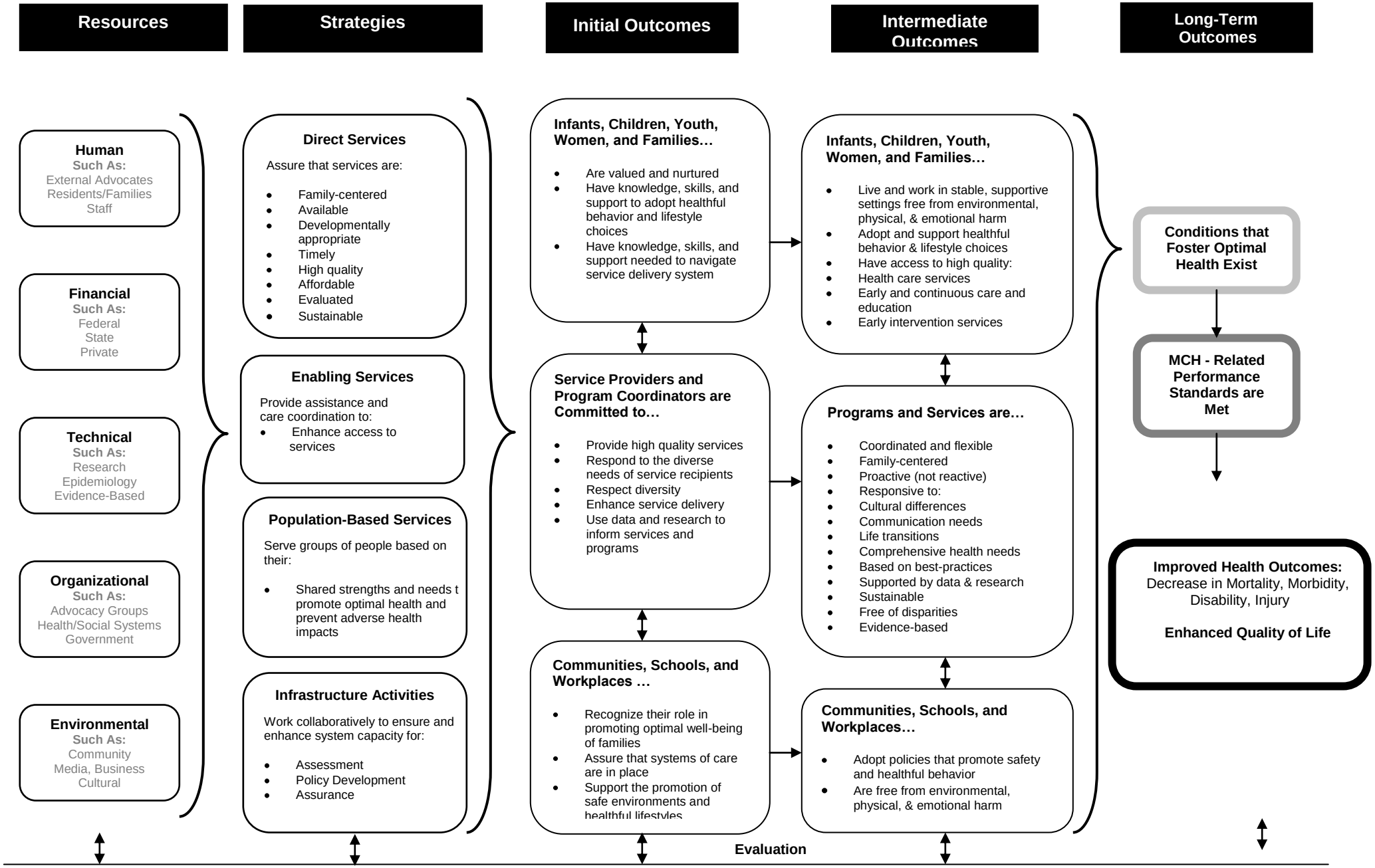
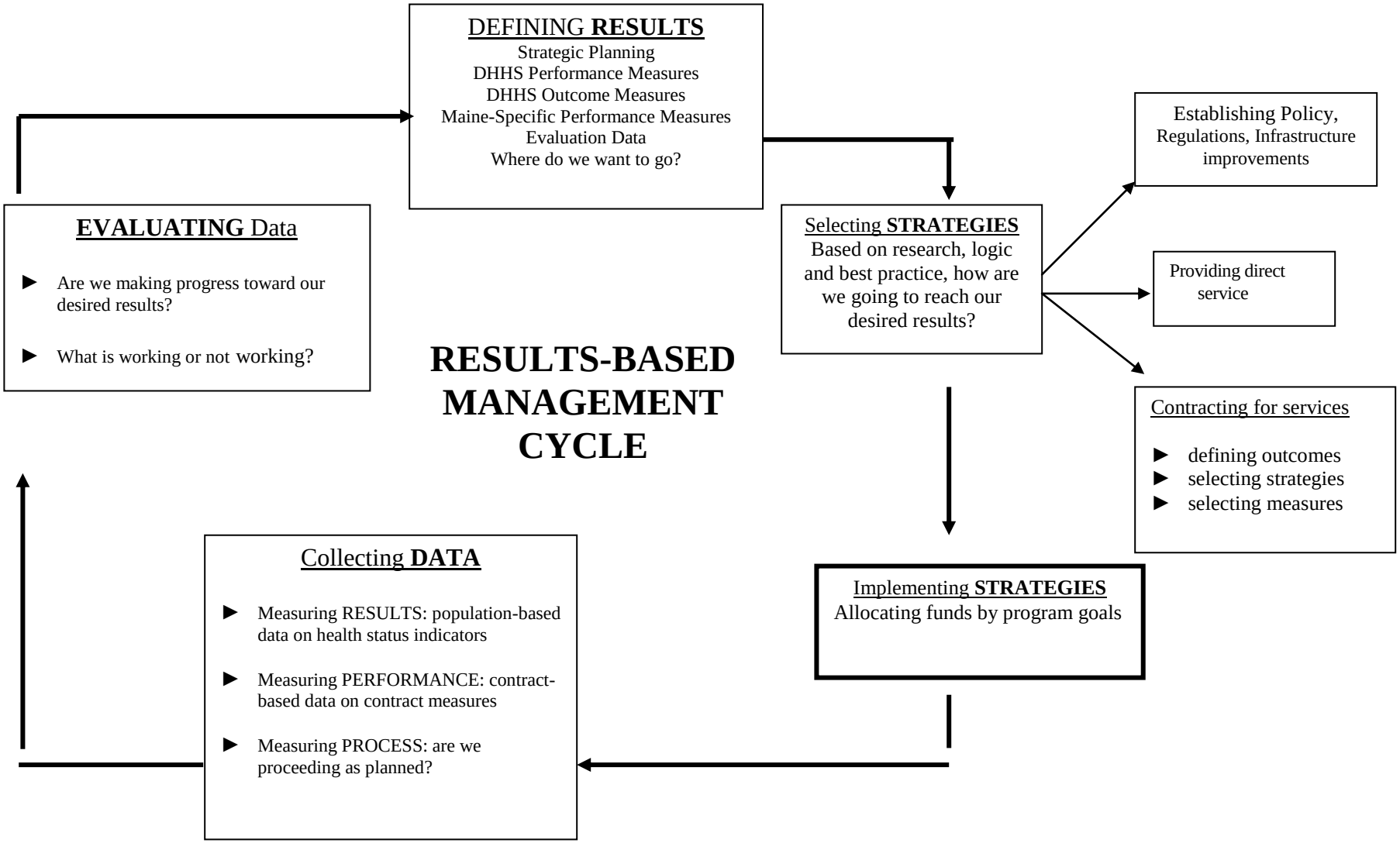


Figure 1.2 Planning and Evaluation Cycle



Maine's MCH Epidemiology Team (Epi Team) led the analysis of the quantitative data for the needs assessment and the qualitative data were collected by a team of experienced researchers at the University of Southern Maine's (USM) Muskie School of Public Service. Potential priorities were identified from these sources of data and specific criteria, including capacity, and stakeholder input were used to identify Maine's ten priority needs. Lead individuals were established for each priority and these leads worked with stakeholders and our lead MCH epidemiologist to develop state performance measures.

Since the 2005 assessment, the MCH Epi Team has been strengthened with the addition of a doctoral prepared and a second masters prepared epidemiologist. This team of three has become a critical component of Maine's Title V Program, providing leadership in incorporating data into the selection and prioritization of public health intervention activities. Within the next year, the MCH Epi Team plans to include a Research Analyst, who will specialize in data analysis and forecasting and a Research Assistant. The Research Analyst will assist with setting annual targets.

As the Title V Programs understanding and experience with performance measures has grown along with epidemiology capacity, the state performance measures are maturing. The development and analysis of state negotiated performance measures as well as the setting of longer term goals and annual objectives involves the program manager and relevant staff, the MCH Epi Team staff, the Title V Director and the MCH Medical Director.

To identify objectives and activities to address the new MCH priorities, we have developed a workplan based on the framework of "problem mapping," which was presented as part of the pre-conference MCH-Epi workshop in 2008. Problem mapping involves identifying and visually displaying potential precursors and consequences of a problem. These "maps" are used to identify areas where the Title V Program and its partners will focus resources for the next five years. During summer 2009, a graduate student intern from MCHB was asked to research the process of "problem mapping" in greater detail and she gave a presentation to senior staff and program managers in the DFH. The established lead individuals for each of the ten priorities are responsible for identifying key stakeholders to assist in the development of the "maps," the objectives, and the activities for a specific priority. This process will be professionally facilitated. Evaluation strategies and objectives will be developed for the proposed activities to monitor progress. Progress will also be monitored through the state performance measures, which were designed to reflect the priorities.

Public Input

The CSNA derived public input from many sources. These included the various committees and collaborative projects of our MCH related programs such as the CSHN Family Advisory Council, CSHN Youth Advisory Council and the Tribal Health Leaders Council. The bi-monthly DFH program manager meeting was expanded to include all state government related MCH managers as well as increased frequency as needed. MCH managers were also invited to provide input on potential missing issues that should be included in the full list prior to the narrowing process. In addition, the Title V Program contracted with the USM, Muskie School to conduct a series of focus groups with a diverse range of constituents, (including young adults with special health care needs and families) advocates, and partners in public health specific to

the strengths and weaknesses of Maine's Title V Program. The focus groups began in the summer of 2009 and were completed by late fall 2009. They form the qualitative component of the CSNA. (See Qualitative Methods Description Section)

Data from the focus groups are evident in the assessment that follows. The group responsible for completing the CSNA included the Title V Director, MCH Medical Director, CSHN Director, MCH Epi Team, the leader of the focus group sessions who is also the lead writer for the CSNA, and the Family Health Senior Leadership Team. In addition many members of the public were included in the groups that narrowed down the MCH priorities as described under Selection of State Priority Needs, Section V.

A steering committee for planning and conducting the CSNA was formed in early fall 2008. Initially this included the Title V Director, CSHN Director, Teen and Young Adult Health (TYAH) Program Manager, MCH Epi Team and the lead writer at USM, Muskie. In January 2009 this group was expanded to include the full Family Health Senior Leadership Team. All MCH related program managers were involved in developing the criteria used to narrow the 2010 MCH priorities to ten.

Methods for Assessing Three MCH Populations

Quantitative Methods Description

We obtained data from multiple sources, including vital statistics files, hospital discharge data sets, Maine-based surveys, and national surveys that include state-level estimates. We conducted our own analyses for some measures; for others, we used findings published by other groups or available via web-based query sites.

We used quantitative data on births, mortality, morbidity, health behaviors, population-based services, enabling services, and access to care to assess the needs and strengths of the MCH population in Maine. For births, we looked at pregnancies, live births, low birthweight, prematurity, prenatal care, and related topics. For mortality, we examined age-specific mortality rates and leading causes of death. For morbidity, we looked at common causes of hospitalization, selected measures from each of the Healthy People 2010 (HP2010) leading health indicator categories (i.e., physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental quality, immunization and access to health care), and other conditions (e.g., asthma, oral health, infectious disease). We also selected health behaviors from the leading health indicator categories.

Data are presented as numbers, proportions, and/or rates, as appropriate for a given measure. When small numbers are an issue, we reported data for multi-year intervals, including using 5-year moving averages to look at trends for certain measures.

For many measures, the most recent data available at the time of analysis were used. In some cases, we needed to use pre-existing analyses, reports, and query systems that did not always include the most recently available data, precise age groups, years, or variables that we would

have preferred to use. Some data (e.g., 2000 Census) are now several years old and might not accurately reflect current status. However, it is unlikely that large changes have taken place since these data were collected to change the overall picture presented in this assessment.

For selected measures, we presented subgroup analyses in order to identify possible disparities. For example, many of the birth-related measures are presented by maternal age and many of the access to care issues are examined by health insurance status. The discussion on enabling services and access to care includes information specific to individuals with special needs. Due to very small numbers (even combining across years), we are not able to present many results by subgroups such as race and ethnicity.

For many measures, we compared Maine rates with the US white or non-Hispanic white rates. We chose to use these comparison groups because 96.4% of the Maine population is white and only 1.3% is Hispanic. We also compared Maine's status on various measures with Healthy Maine 2010 (HM2010) and/or HP2010 goals.

Quantitative data analysis began prior to the start of the focus groups and continued while the groups were being held. Once the draft of the focus group findings was completed, we identified themes (e.g., housing) from the group discussions that were not yet represented in the quantitative sections of the assessment. We then gathered additional quantitative data to complement the qualitative data obtained from the focus groups on these topics.

Qualitative Methods Description

The USM, Muskie School applied researchers met with the Maine CDC, DFH Director, MCH Medical Director, MCH Epidemiologist and DFH Senior Leadership Team to design the qualitative data collection process. Based on these discussions, we sought to engage children, youth, and families from all sectors of MCH in a series of focus groups. One goal of the focus groups was to reach out to a variety of non-traditional stakeholders in order to obtain input from diverse populations to learn from their perspectives the strengths and needs of Maine women, infants, and children and especially children with special health needs. As a result, the focus groups included youth groups, youth with special needs, parents of children with special needs, parents of children in early childhood care and representatives of Native American and Somali families. Key informant interviews were conducted with providers and policy experts with knowledge of the MCH population.

The study design called for two focus groups in each of Maine's eight public health districts. Six categories of stakeholders were identified: key informants, general (variety of key stakeholders with knowledge or interest of MCH issues), consumers, teens, minorities, and CSHN. This approach provided qualitative data that enable the Title V Program to better understand the perspectives of those affected by its work. In addition to the DFH staff, we consulted with the Maine Office of Minority Health Director to ensure that the focus groups and key informant interviews would honor and respect the cultures of all people involved in the conversations. Questions were tailored to specific groups. A list of questions by participant group is included in Appendix A.

The planning process led to the identification of 19 groups comprised of six to ten participants in each. A team of three Muskie applied research staff conducted focus groups and audio taped the hour-long sessions.

Focus Group Recruitment

General Groups - Muskie researchers worked directly with the Maine CDC, DFH Programs to identify focus group participants (except pregnant women, Native American, Somali and other immigrant populations, and youth) from their partner listservs.

Youth Groups - Youth (age 14-17) were recruited with the assistance of such organizations as the Maine Youth Action Network, New Beginnings, School Health Coordinators and School-Based Health Centers, and the Youth Coordinator for Children and Youth with Special Health Needs (CYSHN) Program. Focus groups were held with four youth groups.

Pregnant Women Groups - We worked with Maine's Perinatal Nurse Managers, and local WIC agencies to identify and recruit pregnant women in their respective public health district to participate in a focus group.

Native American, Somali, and Other Immigrant Populations - Researchers worked with the Tribal Liaisons and the Office of Minority Health Director to arrange a focus group with the Tribal Health Directors. The United Somali Women of Maine and a lead Nutrition Educator for Somali families helped identify and recruit Somali women.

Key Informant Interviews - All key informant interviews were conducted with health care professionals (e.g. physicians, dentists), local health departments, and community leaders, identified by MCH program managers and partners, to be knowledgeable of the MCH population needs in their community.

Data Collection

Of the 19 identified groups, we were able to successfully conduct 17 focus groups between June and November 2009. All 14 key informants agreed to be interviewed. We were not able to hold two focus groups seeking pregnant women as participants. Because these pregnant women were considered vulnerable populations, staff working directly with this population was asked to recruit participants. Two different dates and times were scheduled to hold each of these focus groups but follow-up calls, to confirm prior to each session, led to cancellation by the recruiters citing lack of time to recruit participants.

Of the 125 individuals invited by researchers, sixty (48%) participated in the focus groups. An additional 50 participants were successfully recruited by individuals working with the populations. Overall, 110 people participated in 17 focus groups. We do not know the total number of potential participants invited to attend a focus group. With permission of the participants, all focus groups were audio recorded. During a 45-60 minute session, a Muskie moderator asked all consenting participants to answer 6-7 questions tailored to their population group.

Upon completion of the focus groups, the transcripts were transcribed verbatim. Two researchers read the transcripts and responses from all participant groups. We sorted and collapsed response themes within and across groups.

Data collection protocols were approved by the USM Office of Research Compliance.

Limitations

While the focus groups provided some very rich and informative data, the open-ended nature of participant responses made interpretation, analysis, and summarization of the results challenging to discuss. Participant responses were not necessarily independent in that they often flowed from or represented a reaction to the statements of others in the room. In addition, focus groups provide subjective insight into the perspectives within a particular population of interest; i.e. MCH, therefore findings may not necessarily represent the views of larger segments of the population. The primary purpose was to understand attitudes and perceptions rather than measure them.

Methods for Assessing State Capacity

The methodology used for assessing the capacity for MCH services involved a review of key factors influencing the availability and utilization of services. This included a review of existing payment mechanisms (public and private insurance), availability of specialty care, the practice of cultural and linguistic competence, and the impact of other policy issues, such as welfare reform, on the MCH population. Quantitative information was obtained from a variety of sources. We examined population-based services such as newborn hearing screening and newborn bloodspot screening. For enabling services we looked at topics such as health insurance, and WIC. For access to care, we examined capacity, use, and barriers to care. Additional information was obtained by reviewing national and state policies for the last few years.

Data Sources

Following is a comprehensive listing of data sources that includes limitations of data where applicable.

Table 1.1

Source	Indicator	Data Limitations
2-1-1 Maine	· Hotline calls for health and social service information · Hotline calls related to access to dental care · Hotline calls related to access to substance abuse services	Limitations associated with data collected for administrative purposes.
American Academy of Pediatrics (AAP)	· Pediatric patient caseload · Provider acceptance of Medicaid · Provider barriers to Medicaid acceptance	
Behavioral Risk Factor Surveillance	· Contraceptive use and methods · Pregnancy intention · Health status	Survey data are based on self-report and may be subject to recall errors or to

Source	Indicator	Data Limitations
System (BRFSS)	· Asthma · Diabetes · Clinical breast exams · Mammograms · Cervical cancer screening · Tooth condition · Preventive dental care visit · Dental cleaning in past year · Oral health care barriers · Dental insurance · Influenza vaccination · Seat belt use · Driving after drinking · Depression · Anxiety · Domestic violence · Sexual assault · Tobacco use among women · Heavy drinking among women · Binge drinking among women · BMI among women · Physical activity among women · Fruit and vegetable consumption · Cholesterol screening · HIV screening · Mental health status	people giving expected or socially acceptable responses. The BRFSS telephone survey excludes people without a residential phone, people who are institutionalized, and people with limited English proficiency. Survey response rates may affect the potential for bias in the data. The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.
Children Served by MaineCare Survey, USM	· Unmet health needs among MaineCare children · Usual source of care among MaineCare children · Preventive medical visit among MaineCare children · Preventive dental care visit among MaineCare children	Survey data are based on self-report and may be subject to recall errors or to people giving expected or socially acceptable responses. The survey excludes people with limited English proficiency. Response rates may affect the potential for bias in the data.
Data Accountability Center - Individuals with Disabilities Education Act (IDEA)	· Children served by IDEA · Disability type · Early intervention services	
Eastern Maine	· Barriers in access to mental health services	Study was conducted in 4

Source	Indicator	Data Limitations
Rural Child Mental Health Epidemiology Study		rural counties in eastern Maine; results might not be generalizable to the entire state. Prevalence estimates are based on parental reports.
Guttmacher Institute	· Pregnancy outcomes · Contraceptive service and supply need · Contraceptive service utilization	
Kaiser Family Foundation	· Food stamp participation · Supplemental Nutrition Assistance Program (SNAP) enrollment · Cost barriers to medical care · Oral health workforce · MaineCare enrollment	
Maine School-Based Health Care	· School based health center visits · Screening for adolescent risks	
Maine CDC, HIV/STD Program	· Chlamydia · Gonorrhea · Syphilis · HIV · AIDS	
Maine CDC, Infectious Disease	· Hepatitis C · Pediatric influenza · Pertussis · Lyme disease	
Maine CDC, Maine Birth Defects Surveillance System	· Congenital Anomalies/Birth Defects · Newborn medical conditions detected by newborn bloodspot screening	
Maine CDC, Maine Cancer Registry	· Cancer incidence · Breast cancer · Cervical cancer · Lung cancer	
Maine CDC, Office of Data, Research and Vital Statistics (ODRVS), Cooperative Health Manpower Resource System	· Number and types of health professionals · Population per primary care provider · Children per clinically active pediatrician · Primary specialty of physicians · Mental health care providers · Population per active psychiatrist · Population per active dentist · Dentist specialty and training · Population per active dental hygienist · Dental providers accepting MaineCare	Response rates from recent ODRVS surveys range from 77.4% among allopathic physicians to 24.6% among pharmacy technicians. Estimates based on responses to the manpower surveys will underestimate the health professional workforce capacity.

Source	Indicator	Data Limitations
	· Dental care capacity · Substance abuse providers	
Maine CDC, ODRVS	· Number of pregnancies · Pregnancy rate · Pregnancy outcomes · Live births · Fetal deaths · Abortion · Fetal mortality rate · Fertility rate · Teen birth rate · Obstetric delivery method and delivery location · Birth facility for high-risk pregnancies · Transfer status of very low birthweight infants · Birth attendant · Maternal age at birth · Maternal education · Maternal race/ethnicity · Maternal marital status · Maternal parity · Prenatal care utilization – early and adequate · Tobacco use during pregnancy · Maternal medical risks during pregnancy including hypertension and diabetes · Obstetric procedures including labor induction · Labor complications · Maternal mortality · Mortality among women · Leading causes of death · Gender of Births · Preterm Births · Birthweight/Low birthweight · Congenital Anomalies · Infant Mortality · Causes of infant death · Perinatal/Neonatal/Postneonatal mortality · Child mortality · Leading causes of child deaths · Injury deaths · Leading cause of injury deaths · Intent of injury deaths · Suicide	

Source	Indicator	Data Limitations
Maine CDC, Office of Rural Health and Primary Care (ORHPC)	· Federally designated medically underserved areas and population · Federally designated primary care health professional shortage areas · Federally designated dental health professional shortage areas · Federally designated mental health professional shortage areas · Current health care safety net providers and sites	
Maine Child Health Survey (MCHS)	· Food security · Tooth decay · Dental problems · Environmental tobacco smoke exposure	Survey conducted in 2002. Included only kindergartners in public schools, overall response rate was 40.0%, so results might not be generalizable to all kindergartners in Maine. The demographic characteristics of survey respondents were similar to those of the state and several findings were consistent with other sources of data.
Maine Department of Education (DOE)	· Race/ethnicity of enrolled students · Limited English proficient students · High school completion · Student dropout rate · High school graduates' intention of post-secondary education · Reading, math and science achievement · Students receiving free or reduced lunch	
Maine DHHS, Office of Integrated Access and Support (OIAS)	· Temporary Assistance for Needy Families (TANF) enrollment	
Maine DHHS, Office of Child and Family Services (OCFS)	· Referrals for Child Protective Services · Children in protective custody · Foster care · Subsidized childcare · Head Start enrollment · Dental problems among Head Start children	
Maine DHHS, Office of MaineCare Services (OMS)	· MaineCare dental services and claims · Calls related to access to dental care	

Source	Indicator	Data Limitations
Maine Department of Labor (DOL)	· Livable wage · Labor force size · Job loss	
Maine Department of Public Safety	· Domestic assault arrests · Homicides related to domestic conflict · Rape · Youth arrests	
Maine Environmental Health Tracking Program	· Lead screening · Elevated blood lead levels	
Maine Hospital Discharge Datasets (inpatient and outpatient/emergency department)	· Asthma hospital discharges and emergency department (ED) visits · Mental health related hospital discharges · Self-inflicted hospital discharges and ED visits · Drug-affected newborns · Prenatal exposure to drugs · Abusive head trauma · Injury hospital discharges and ED visits · Leading causes and intent of injury	The rate of E-coding injury hospitalizations in Maine hospitals is not 100 percent, which may produce underestimates of the true number of hospitalizations for injuries.
Maine Office of Licensing and Registration	· Service providers available to children with special health care needs	
Maine State Housing Authority (MSHA)	· Affordable housing · Emergency shelter use · Homeless individuals · Use of homeless shelters · Reasons for homelessness	
Maine Youth Drug and Alcohol Use Survey (MYDAUS)	· Youth commitment to school · Positive school-related behaviors · Alcohol use · Binge drinking · Marijuana use · Tobacco use · Drunk or high at school · Sold illegal drugs · Parental attitudes towards alcohol, tobacco or marijuana use · Perception of community drug use laws and norms	Last administered to Maine students in 2008. Survey data are based on self-report and may be subject to recall errors or to students giving expected or socially acceptable responses. The MYDAUS protocol has included running an "honesty profile". Statewide, about 4% of the surveys are excluded each year because they are considered untruthful. Survey response rates may affect the potential for bias in the data. Survey excludes students

Source	Indicator	Data Limitations
		with limited English proficiency. The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.
Margaret Chase Smith Policy Center	· Home energy assistance	
National Cancer Institute	· Cancer incidence · Cancer mortality · Breast cancer · Cervical cancer · Lung cancer · Pediatric cancer deaths	
National Center for Health Statistics (NCHS) (Primarily used for national vital statistics; used for Maine data when ODRVS data not available)	· Fetal mortality rate · Fertility rate · Teen birth rate · Obstetric delivery method and delivery location · Birth attendant · Maternal age at birth · Maternal education · Maternal race/ethnicity · Maternal marital status · Maternal parity · Plurality · Prenatal care utilization · Obstetric procedures including labor induction · Labor complications · Maternal mortality · Mortality among women · Births · Gestational age/preterm births · Birthweight/low birthweight · Congenital Anomalies · Infant Mortality · Causes of infant death · Perinatal mortality/Neonatal/Postneonatal · Child mortality	
National Survey of Children with Special Health Care Needs (NS-CSHCN) (2001, 2005-2006)	· Prevalence of children with special health care needs · Types of special health care needs · Functional impact · Income level · Age	Survey cannot be used to examine geographical units smaller than the state. Survey data are based on parental reports and may be subject to recall errors or to

Source	Indicator	Data Limitations
	· Gender · Limitation type · Health status · Medical conditions · Service needs · Service utilization · Support services · Medical home · Experiences with health care provider · Adequacy of health insurance · Children living in urban/suburban/rural communities · Family partnership in care · Satisfaction with services · Screening for special health care needs · Organization of community based services · Transitions to adult health care · Financial problems due to child's health needs · Burden of out-of-pocket expenses for child's health care · Unmet mental health care need · Unmet dental care need	people giving expected or socially acceptable responses. Survey response rates may affect the potential for bias in the data. Survey excludes people without a residential phone, people who are institutionalized (homeless shelters), and people with limited English proficiency. The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.
National Immunization Survey (NIS)	Vaccination coverage	
National Survey of Children's Health (NSCH)	· Insurance coverage · Adequacy of health insurance · Medical home/usual source of care · Problems accessing specialist care · Problems accessing referrals · Unmet medical health care need · Unmet dental care need · Unmet mental health care need · Preventive medical visit · General health status · Tooth condition · Dental problems · Preventive dental visits · Parental awareness of need for preventive dental care · Children with special health care needs · Screened for special health care needs · Emotional, developmental or behavioral problems · Asthma	Survey cannot be used to examine geographical units smaller than the state. Survey data are based on parental reports and may be subject to recall errors or to people giving expected or socially acceptable responses. Survey response rates may affect the potential for bias in the data. The survey excludes people without a residential phone, people who are institutionalized, and people with limited English proficiency.

Source	Indicator	Data Limitations
	· Diabetes · Environmental tobacco smoke exposure · BMI/weight status · Supportive communities · Childcare use · School engagement · Regularly complete homework · Care about school performance · Parental engagement - outings, reading, family dinners · Characteristics of children's neighborhoods	The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.
Pregnancy Risk Assessment Monitoring System (PRAMS)	· Paternal age at conception · Inter-pregnancy interval · Pre-pregnancy healthcare consultation · Pre-pregnancy vitamin use · Contraceptive use after pregnancy · Pregnancy intention · Prenatal care utilization - early · Prenatal care utilization - barriers · Prenatal care provider · Prenatal care content · Prenatal care payor · Pre-pregnancy BMI · Pregnancy weight gain · Tobacco use during pregnancy · Tobacco use pre-pregnancy · Tobacco use post-pregnancy · Tobacco discussion with prenatal provider · Tobacco cessation activities during pregnancy · Multivitamin use pre-pregnancy · Alcohol use pre-pregnancy · Alcohol use during pregnancy · Alcohol discussion with prenatal provider · Oral health-teeth cleaning during pregnancy · Oral health-teeth cleaning post- pregnancy · Oral health discussion with prenatal provider · Hypertension during pregnancy · Diabetes during pregnancy · Previous low birthweight and/or preterm infant · Postpartum depression · Intimate partner violence · Mothers' awareness of consequences of shaking an infant · Infant sleep position · Infant sleep location	Survey cannot be used to examine geographical units smaller than the state. PRAMS data are not generalizable to other states, the entire US, or all pregnant women, only those who delivered live-born infants. Survey data are based on self-report and may be subject to recall errors or to people giving expected or socially acceptable responses. PRAMS uses a mixed-mode data collection methodology (mail and telephone surveys). Survey response rates may affect the potential for bias in the data. The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.

Source	Indicator	Data Limitations
	· Car seat use · Infant exposure to second-hand smoke · Breastfed ever · Breastfed 6 months · Breastfed 12 months · Reasons for not breastfeeding · Breastfeeding supports · Cost barriers to prenatal care · Post-partum depression · Post-partum contraceptive use · WIC participation during pregnancy	
Survey of Children Served by MaineCare	· Delayed or unmet medical need of child · Medical home/usual source of care · Children with a mental, behavioral health diagnosis · Unmet mental health care need · Unmet dental care need · Preventive dental care visit	Survey data are based on self-report and may be subject to recall errors or to people giving expected or socially acceptable responses. Survey response rates may affect the potential for bias in the data. The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.
US Administration for Children and Families	· Subsidized childcare · Child maltreatment	
US Census Bureau (Census 1990, 2000, Population Projections)	· Population size · Population growth · Median age · MCH population · Age projections · Area size · Urban and rural population · Largest cities · Population density · Child population · Youth unemployment · Racial distribution	
US Census Bureau, American Community Survey (ACS)	· Age distribution · Household size · Households with children · Household types	

Source	Indicator	Data Limitations
	· Marital status · Race · Ethnicity · Foreign-born · Language spoken at home · English-language proficiency · Educational attainment · Median household income · Poverty status · Labor force participation · Jobs sectors · Families with income assistance · Housing units · Vehicles available to households · Housing characteristics · Households with children · Grandparents as primary caregivers of children · Children in linguistically isolated households · Youth engagement · Pre-elementary school enrollment · Children in poverty · Families in poverty · Lead hazards-age of housing · Disability · Mental disability	
US Census Current Population Survey (CPS)	· Health insurance status · Source of health insurance · Medicaid enrollment	
US, CMS	· Per capita health care spending · Per capita dental care spending	
US Department of Agriculture, Food and Nutrition Service	· WIC enrollment and eligibility	
US, DHHS, Center for Mental Health Services, CMHS Uniform Reporting System Measures	· Community mental health service utilization · Satisfaction with community mental health services	
US Health Resources and Services Administration	· Mental health providers is HRSA primary health care centers · Mental health related encounters and patients · Dental health related encounters and patients in	

Source	Indicator	Data Limitations
(HRSA), Health Center Data, Uniform Data System	HRSA primary health care centers · Dental health providers is HRSA primary health care centers · Substance abuse providers is HRSA primary health care centers · Substance abuse related encounters and patients in HRSA primary health care centers · Contraception management related encounters and patients in HRSA primary health care centers · HRSA primary care health center visits · Primary care service utilization	
WISQARS, Centers for Disease Control and Prevention	· Injury deaths · Youth suicide · Youth suicide method	
Youth Risk Behavior Survey (YRBS)	· AIDS education in schools · Seat belt use · Rode in car of someone using alcohol or drugs · Bicycle helmet use · Skateboard/rollerblade helmet use · Suicide ideation and behavior · Peer victimization · School safety · Community safety · Weapons · Physical fighting · Sexual assault · Dating violence · Asthma · Preventive dental visits · Sexual intercourse · Condom use · Birth control pill use · Talking with parents/guardians about sex · BMI/weight status · Weight control methods · Physical activity · Physical education class · Hours of television viewing · Hours of computer/video game use · Alcohol use · Tobacco use · Tobacco cessation	Survey data are based on self-report and may be subject to recall errors or to people giving the response they feel is expected or acceptable, rather than the response that most accurately reflects their behavior. School-based survey data apply only to youth who attend school and have parental permission to participate, the survey results may not be representative of all respondents in that age group such as homeless youth or those students who may be schooled at home. YRBS survey cannot be used to examine geographical units smaller than the state. Survey response rates may affect the potential for bias in the data.

Source	Indicator	Data Limitations
	· Prescription drug use · Smokeless tobacco use · Cocaine use · Hallucinogen use · Stimulant use · Inhalant use · Ecstasy use · Heroin use · Other illegal drug use · Offered, sold, or given drugs on school property · Injected drugs · Purchased alcohol in store · Supportive teachers · Extra-curricular activity participation · Parental support · Community service · Supportive communities · Oral health visit	The ability to study sub-groups is limited as the reliability of estimates depends on the actual, un-weighted number of respondents in a category.

Note: In most cases, the data sources listed above are the primary source from which much of the data used in this assessment were obtained. Maine CDC staff or contractors conducted some of the analyses; other results were extracted from reports published by outside groups. The "Assessment of Needs of the MCH Population" and "MCH Program Capacity by Pyramid Levels" sections include complete reference citations for all reported data.

Linkages Between Assessment, Capacity, and Priorities

For this CSNA, the selection of priorities was an iterative process linking both qualitative and quantitative data. The initial list of potential issues to be considered for priority-setting was taken from both the qualitative and quantitative data collections of the strengths and needs assessment. Some of these issues were related to outcomes, while others were related to capacity. Neither was given a preference at any point in the process. State and local capacity was a criterion at Levels II and III in the process for narrowing the priorities to the final ten.

In reviewing the top ten priorities to determine the precise language for and measurement of progress on the priority, the workgroups had to examine the capacity within Maine CDC and/or its partners in public health to address the priority. Many of the priorities require staff within Maine's Title V Program to partner with other programs and organizations such as; the Physical Activity Nutrition and Healthy Weight (PAN-HW) Program in the Maine CDC, Division of Chronic Disease as well as, the Divisions of Children's Behavioral Health, Early Childhood and Child Welfare in the OCFS or external to the Executive Branch such as; the Maine Coalition Against Sexual Assault, Maine Coalition to End Domestic Violence and the Family Planning Association of Maine. It is worth noting that this is the first time that capacity to address many priorities is external to the Maine CDC. As such this provides an opportunity to truly integrate our resources with our partners in public health to achieve progress. In a time of ever increasing

state and federal financial deficits it has become more critical for the Title V Program to reach out to our partners to work collaboratively in a coordinated manner.

Dissemination

We recognize that the need for MCH information varies for MCH staff, policy makers, service providers, consumers and other stakeholders and results should be shared in a manner that meets the unique needs of potential users. To date, we have employed an array of dissemination strategies related to the CSNA and its by-products. Examples of dissemination that have occurred in the past year include:

- Dissemination via e-mail to external and internal stakeholders of the list of issues gathered in the quantitative and qualitative needs assessment
- Dissemination via e-mail of the quantitative needs assessment to a group of students assigned to produce factsheets of issues selected as possible Maine MCH priorities
- Dissemination via the DFH website of fact sheets related to the top 30 potential priorities for the purpose of providing background material for priority setting participants
- Internal dissemination via the DFH website to program staff of the qualitative and quantitative assessments for comment
- External and internal dissemination via the DFH website of the draft CSNA to program staff and stakeholders

The CSNA provides background and information on prevalence, incidence, and risk factors on issues affecting MCH health and service delivery. The primary use of the CSNA will be to provide direction to Maine's MCH staff and stakeholders in addressing the identified priorities. The CSNA and its by-products can also be used to support the following:

- Improve the knowledge base of MCH issues and priorities in Maine
- Promote a MCH-based perspective
- Guide MCH problem mapping and program development
- Provide a resource for state, regional, and local assessments and grant writing
- Improve linkages and collaborations among stakeholders

The CSNA will be made available via the web through an existing Maine CDC website: http://www.maine.gov/dhhs/bohdcfh/FamilyHealth/family.html. It will also be placed on the Maine CDC's Public Health Data Reports website: http://www.maine.gov/dhhs/boh/phdata/. Key stakeholders will be notified of its release through email. The primary users will be internal and external MCH staff and organizations. However, secondary users may include staff of other health or social service organizations and agencies, parents and the general public. We will encourage established networks to spread awareness of Maine MCH products.

The Maine Family Health website will be updated to include access to new products and reports from the DFH. Examples of products include but are not limited to:

- External and internal dissemination of the CSNA via the web to program staff and stakeholders

- Annual updates to data for the 18 national performance measures, 9 state performance measures and other health status indicators reported in the annual Title V application and report
- Revisions/updates of factsheets related to the 10 selected priorities
- Power point presentations to Maine-based groups (i.e.; district public health planning meetings, Maternal and Infant Mortality Review [MIMR]) to increase awareness of MCH populations and issues

We will continue to identify opportunities for audiences and ways to present data in formats that are useful and accessible to increase the likelihood that the CSNA will be used. Additional strategies for dissemination, organization of information, and the focus of information will be discussed on an ongoing basis as user expectations and technology change over time.

Strengths and Weaknesses of Process

Strengths

Maine's Public-Private Partnerships

Maine's total population of only 1.3 million residents, many of whom descend from families who have resided here for generations, creates a statewide small town climate where everyone knows almost everyone else. As a result, there is a long-standing history of direct, albeit often informal, relationships between state agencies, legislators, and a populace not afraid to speak their minds. This creates an environment of continuous informal feedback that truly helps us keep our "finger on the pulse" of our communities.

Title V purchases many direct services from vendors in the communities across Maine, which helps keep us abreast of community strengths, needs, and concerns. A formal strengths and needs assessment is of great importance, but our on-going relationships and ease of communication are also highly valued sources of information.

With the development of eight public health districts and through the work of the district and tribal liaisons, our partnerships at the community (profit and non-profit entities) and district level are growing and becoming stronger. Through the district level work partners that only focused on one area, for example chronic disease, are gradually becoming aware of issues in other areas that impact their work. In addition, they are meeting new partners that can assist them in achieving their goals. The development of the public health districts has encouraged us to conduct more analyses in the needs assessment at a district level to provide information to local partners. In addition, the new district infrastructure and having Maine CDC district liaisons helped us identify key stakeholders in each district to interview or participate in focus groups.

Our legislators are not career politicians and Maine does not have a complex political infrastructure. This makes access to leaders and legislators relatively simple and easily accomplished. The proliferation of the Internet and email has also significantly increased access to key leadership within government and the Legislature. In addition, our legislative sessions are scheduled to alternate one long year with one short year. Therefore, while there are great demands on staff to quickly respond to legislators' requests during the legislative session, once

the Legislature adjourns our staff are able to turn their undivided attention to the business of the Division and Maine CDC. Our legislators are also willing to partner with agencies. For example, three legislators are serving on the Children's Growth Council, Maine's vehicle for the work of *Humane Systems for Early Childhood,* which is our State Early Childhood Comprehensive Systems Initiative (ECCS).

Collaboration

In 2005, the now DHHS was re-organized. As a part of the reorganization the Home Visiting (HV) Program and the Early Childhood Comprehensive Systems (ECCS) Initiative moved to the Division of Early Childhood within the OCFS (state child welfare agency). Since those programs moved, the DFH has remained actively engaged with both programs, meeting regularly with program leaders. The Title V agency is the fiscal agent for the ECCS grant as well as the First Time Family's grant, and as such, provides an opportunity for maintaining a close connection between the agencies. Staff from ECCS participated in the CSNA process, as did DOE staff. Maine has a strong partnership between Maine CDC and the Maine DOE, including the promotion of comprehensive sexual health education, comprehensive school health education, changes in school health policies and environments, and the Maine Integrated Youth Health Survey (IYHS). This survey also includes a partnership with the Maine Office of Substance Abuse (OSA), and provides key data on children and adolescents in Maine.

Of particular political importance is the participation of the Governor's Children's Cabinet (CC). The CC was established in 1995 by former Governor, Angus King and has been expanded and strengthened by the current Governor, John E. Baldacci. It is composed of those Commissioners from the State departments directly related to children and families: Health and Human Services, Education, Public Safety, Labor, and Corrections, as well as the Attorney General's Office and the judicial branch. The CC meets monthly and is chaired by First Lady, Karen Baldacci, a Registered Dietician and kindergarten teacher. Issues, both positive and negative, which arise in the CC meetings are brought to department staff by both the Commissioners and the First Lady.

The DFH Medical Director serves as chair of the Child Death and Serious Injury Review Panel (CDSIRP). This multidisciplinary team of professionals, established by State law in 1992 to review child deaths and serious injuries, meets monthly to review cases evaluating sentinel events, patterns of injury and/or death, and the effectiveness of our state programs that provide for child protection, safety, and care. The panel is not meant to be a part of the system of case investigation and criminal prosecution. Through the panel's findings and recommendations, the panel hopes to help reduce the number of preventable child fatalities and serious injuries in Maine. Additionally, the panel meets annually with Child Fatality Review Teams from all of New England to share experience, information, and review cases that involve services from more than one State or which represent a challenge that all States are attempting to address. Topics of case reviews in 2009 included: a review of care of former foster children that went on to commit violent crimes; an assessment of the safety of home births; areas to strengthen to lower maternal/infant morbidity and mortality. Some of the areas identified by the CDSIRP informed the quantitative analysis of the needs assessment and the fact sheets developed for the priorities.

Epidemiology Capacity

Another change since the 2005 Assessment is further expansion of an Epi Team within the Divisions of Chronic Disease and Family Health. What developed into the Epi Team began when a PhD Epidemiologist, Nancy Sonnenfeld was hired for chronic disease. An initial capacity assessment conducted by Dr. Sonnenfeld in 1998 revealed a significant lack of and need for epidemiology support for the MCH related programs. Since then, the MCH epidemiology capacity has increased to three Epidemiologists, one doctoral prepared epidemiologist, Erika Lichter, and two masters prepared epidemiologists, Cindy Mervis and Denise Yob. This team has become a critical component of Maine's Title V Program. In the coming year, the Epi Team will expand again to include a Research Analyst and a part-time Research Assistant.

Reading the 2010 MCHBG Annual Report and CSNA, one sees the positive influence of the Epi Team on data collection and analysis. An epidemiologist is assigned as a liaison to each program within MCH and chronic disease. This permits the epidemiologists to develop specific knowledge and expertise about the program and its relevant data sources. The long-term goal continues to be the development of program specific surveillance plans as well as development of sufficient knowledge of basic epidemiology within programs to conduct small routine analyses. This will allow programs to manage their basic surveillance system and generate basic reports allowing the Epi Team to be utilized for more complex data analyses. The Epi Team provides leadership in incorporating data and what it is telling us into the selection and prioritization of public health interventions and activities. This, along with the anticipated development of an overarching surveillance plan for MCH which includes program specific plans, supports a continuous planning and evaluation cycle. (Figure 1.2)

New Resources

It is fortuitous for Title V to be conducting the 5-year CSNA at this time, as in early 2008 Maine began to formally implement newly developing public health districts across the state. The 16 counties in Maine have been divided into a total of eight districts so they cover a similar amount of geography and population (see details in Section IVA of Block Grant Report). An initial activity to help determine the public health capacity within the districts was an EPHS Assessment at the district level. These assessments were conducted between March and October 2009. The DFH provided some resources for conducting the assessments and some of the data from the assessments were used in developing the CSNA.

The advent of the public health districts provides a new pool of partners and requires the DFH to look at its roles and responsibilities in relation to this new mid-level public health structure. The role of many state level traditional MCH programs is changing from one of delivering public health services to being more of a link between resources and district needs. Through this change the state level program will focus more on the population based and infrastructure levels of the MCH Pyramid. An example of the changing role is demonstrated by the MIPP, which for decades directly provided education and training on childhood injury prevention and now has taken on the role of being the link to data, resources and training for the agencies providing public health services within the public health districts.

Technology

Maine CDC's information systems have made great strides since the 2005 CSNA. The Integrated Public Health Information System (IPHIS) platform was built and rolled out in late 2007. This platform is the foundation of Maine CDC's central repository for the various information systems within Maine CDC. The Office of Public Health Informatics (OPHI) was created in 2006 and charged with providing leadership in assuring that new information systems within the Maine CDC are linked to IPHIS. The IPHIS platform is primarily utilized by the National Electronic Disease Surveillance System (NEDSS), the Environmental Public Health Tracking Information System, and the Immunization Registry. A new sequel server will allow the Public Health Nursing electronic documentation and management information system (CareFacts) to be integrated with IPHIS. The WIC Program is in the early stages of adopting a new state agency model WIC management information system called SPIRIT. Implementation of the WIC system is planned for late 2011 and it will be integrated into the IPHIS platform.

The Maine CDC, ODRVS is approaching rollout of an electronic death certificate system and is in the beginning stages of developing a modern electronic birth certificate (EBC) system, the existing system is approximately 17 years old. The ODRVS is working with offices and programs across the Maine DHHS, as well as other Executive Branch agencies to develop and fund the new EBC and anticipates a 2011 rollout.

Maine's ChildLink System includes data on infant births, deaths, newborn bloodspot screening, newborn hearing screening and birth defects. This linked data system provided key information for the quantitative portion of the needs assessment. In the future, we hope to expand this system and link it to immunization data and Medicaid data.

Maine's CHIPRA grant will link proprietary HIT systems of primary care providers in medical homes throughout the state with our CSHN ChildLINK and PHN CareFacts databases, as well as with our Childhood Lead Poisoning Prevention Program for appropriate data exchange. MaineCare will also be linked to community providers through this system enabling meaningful use of health data systems and improved tracking of outcomes from primary quality improvement initiatives. The OCFS MACWIS database for behavioral and physical health outcomes for foster children will be available to medical and behavioral health providers and to MaineCare to improve bidirectional sharing of data.

The CHIPRA grant will also encourage collaboration with Vermont as our states share lessons learned though this quality improvement program.

Maine has experienced an increased technology capacity since the 2005 CSNA which has provided greater access to data systems to retrieve quantitative data electronically. While this is a strength it did become clear that several data systems, that could have significantly informed the identification of priorities within Maine's MCH population, are antiquated thus extraction of data was limited by the design of the platform. In addition, with a growing number of individual program information systems that are not linked we were, in some cases not able to conduct in depth analysis into health outcome variances within populations to identify health disparities. There are efforts underway to begin linking multiple datasets within the Maine CDC and other DHHS offices as discussed elsewhere in this CSNA.

In this CSNA, Maine's Title V Program utilized the internet and web-based survey tools such as Survey Monkey to obtain stakeholder input into the narrowing of the potential 10 priorities. This proved to be a very useful mechanism to engage a diverse group of stakeholders from across the state. Video-conferencing was considered for obtaining focus group and key informant interview input, however the CSNA Steering Committee determined that the in person interaction would be lost and hinder participant engagement.

Data Collection and Reporting

Several strengths and weaknesses were identified related to the quantitative component of the assessment. The strengths of this assessment include:

- Guidance in the selection of relevant measures from the assessment steering committee and local program managers;
- Oversight in the development of the assessment from the steering committee;
- Epidemiologic expertise provided by the DFH MCH Epi Team, as well as support from other internal and external sources (i.e., Chronic Disease Epi Team);
- Inclusion of a comprehensive set of measures that addressed births, mortality, morbidity, health behaviors, population-based services, enabling services, and access to care for all MCH populations;
- Inclusion of selected measures from each of the HP2010 leading health indicator categories;
- Use of multiple data sources;
- Inclusion of subgroup analyses to identify possible disparities on select measures;
- Comparison of current status to HM2010 and/or HP2010 goals;
- Involvement of stakeholders including other agencies and systems serving Maine's MCH population in the review and interpretation of key findings;
- The overlap of components of the MCH assessment with other assessments and planning process including District Health Profiles and topic-specific surveillance and strategic planning reports;
- Staff from the MCH Epidemiology Program and the DFH continue to be involved in efforts to improve and/or integrate public health information systems which helps to insure the collection, quality, and use of MCH-related data;
- Collaborative relationships with other state agencies (e.g., DOE, Department of Public Safety, Office of Substance Abuse) to provide data and input into priority and performance measure selection;

Several strengths and weaknesses were identified following the qualitative component of the assessment. During the 2005 process Maine recognized the value of consumer input in the strengths and needs assessment and we continued to include this input in our 2010 process. This community voice brought a new perspective not acquired in the past. Consumers of services; families, youth, CYSHN and minorities were able to articulate their concerns and recommendations through focus groups. Participants expressed their appreciation for having the ability to contribute to the CSNA process and provided a valuable perspective not always gained from clinicians and other professionals working with the MCH population. In addition we found that by holding focus groups around the state participants were able to describe in rich detail personal experiences specific to their community.

Weaknesses

Multiple Demands, Time Limits and Competing Priorities

The delicate art of balancing the demands of planning and conducting the CSNA, providing support for the State response to H1N1, working with and supporting the emerging public health districts and responding to legislative related requests, all at the same time, has burdened an already over extended and understaffed Title V Program. To overcome the limited resources and competing priorities, the State Title V Program began the CSNA planning process early in winter 2008 and implemented quantitative and qualitative data collection early in 2009. While obtaining data from other sections within the DHHS as well as other Departments continues to be challenging, the relationships developed by the DFH and the Epi Team over the last five years has helped to minimize the challenge. A difficult barrier to overcome is the ongoing decrease in staff across the Executive Branch and the inability of caring and committed partners to remain engaged in partnerships. The continued decrease in staff is related to ongoing shortfalls in projected state revenue. Because the population most negatively impacted by H1N1 is the MCH population, the Family Health staff were detailed to assist with the H1N1 response, from public health nurses administering vaccines at school and public clinics, to staff at all levels assisting with the telephone bank and the leader of the Population Health and Prevention section reassigned to provide support on communications developed for the public and media. This has resulted in pushing back the completion dates for several Title V projects, such as identifying the ten MCH priorities for 2010-2015 and conducting problem mapping for each of those priorities.

Staffing Limits

In the time since the 2005 CSNA, both the Administration and the Legislature have rejected developing any new state funded positions and in the last two years have also rejected any new federally funded positions within Executive Branch agencies. This has been a challenge as the Maine CDC develops the new public health districts. For the State Title V Program, the Division restructure was prevented from developing an operational support unit. Three positions previously within the DFH that would have been used to create the operational support unit were reassigned to the OLPH and one position was moved to the Office of Minority Health. Inadequate staffing levels resulted in the inability of the Maine CDC to apply for grants that would benefit the State and assist in achieving Center and State priorities. Lastly, with no improvement in state salary compensation rates, attracting experienced and highly qualified candidates has created challenges.

Between January 2008 and September 2009 seven key leadership positions were frozen. This negatively impacted the Title V Program's ability to maintain existing partnerships and prohibited development of new partnerships despite emerging public health issues. Limited staffing and hiring freezes caused the Title V Program to review existing and desired activities related to the MCH population that resulted in having to relinquish some and not commence others. Title V programs have also looked at how their traditional roles and responsibilities fit with the emerging public health district structure. Several programs are refocusing on the infrastructure-based and population-based levels of the MCH pyramid and support developing district capacity to focus on direct and enabling service levels of the pyramid, a shift that has been difficult for some staff.

Budgets

Since the 2005 CSNA was submitted the trend of the State budget forecast has been on a continual decline. Biennial FY10/11 is the 10th year of budget decreases for Title V and the Maine CDC in general. Several areas within the Maine CDC have been prohibited from increasing their fees therefore revenue has not kept pace with operating expenses. For the Maine CDC to remain within budget there have been cuts to other Maine CDC areas general fund budgets. This has hit the Title V budget particularly hard. In the past, the State has exceeded the required MCH Block Grant match and maintenance of effort; currently the Title V Program's general fund budget just meets the required match. With a projected $300,000,000 to $400,000,000 revenue shortfall for the FY10/11 biennium, the Legislature cut $450,000 from MCH general fund appropriations in FY10 and $100,000 in FY11. In FY11 the Maine CDC, as a whole, will experience an additional $500,000 reduction. It is possible that Title V will see a $300,000 decrease in general fund to meet this mandated one time cut. Ongoing flat funding from the MCH Block Grant adds to the challenge of developing systems of services and care that meet the needs of Maine's MCH population.

While we pride ourselves on the strengths of our quantitative assessment we also recognize its limitations. They include:

- Some data (e.g., 2000 Census) are now several years old and might not accurately reflect current status. However, it is unlikely that large changes have taken place since these data were collected to change the overall picture presented in this assessment;
- Small numbers necessitated the use of 5-year moving averages for some measures, which could mask very recent changes; lack of statistical precision due to small numbers also means that apparent trends might not be statistically significant;
- Comparison data sources for the United States did not always use the same case definition (e.g., different definitions of "very premature") and were not always available for the same years as Maine data;
- The use of some pre-existing analyses and reports were included that did not always include the precise age groups, years, or variables that we would have preferred to use;
- Maine's system of Local Public Health Districts is still in its infancy and although a process was initiated to include local perspectives in the statewide assessment; competing health priorities (e.g. H1N1) diminished the impact of this effort.

Weaknesses of the qualitative component included an inability to engage pregnant women in the process. Since this population is considered vulnerable we were not able to directly recruit and had to rely upon organizations working with this population. While we offered as much assistance as possible recruiters were unable to find sufficient time in their busy schedules to reach out and encourage participation.

Section II – PARTNERSHIP BUILDING AND COLLABORATION EFFORTS

In the time since the last Title V CSNA, the DFH (Maine's Title V agency) has invested much time and energy into expanding existing partnerships and building new ones. Being attentive for opportunities to nurture existing and develop new partnerships is a responsibility of all Title V related leaders within the Maine CDC and requires seeking opportunities that promote accomplishing individual partner goals as well as goals shared by the partner and Title V. Focusing upon partnerships and activities that only meet Title V goals lead to a weakening of the partnership. The Maine Title V Program is grounded in the philosophy that there are multiple contributing factors to a given situation thus there is a role for multiple entities in resolving the situation. This perspective can be seen in the approach outlined in several of the Maine CDC Title V related plans such as the State Early Childhood Plan, the State Oral Health Plan, and the Physical Activity and Nutrition Statewide Plan. For example, to reach the goal of improving the oral health status among Maine children there is a role for schools, pediatric primary care providers, community based dentists and dental hygienists, local water districts, and the Maine CDC Oral Health Program in achieving a reduction in dental caries in school aged children. The MCH CSNA focus groups conducted in the summer and fall of 2009 confirmed what we had hypothesized going into the Assessment: that we have continued to make strides in partnership building and collaboration during the past five years. Some examples of this include:

- Enhanced partnership between the Title V Agency and the Maine Chapter of the AAP, as reflected in an AAP sponsored conference on immunization in September 2009, involvement of the Maine AAP leadership and several pediatric specialists in developing a protocol and prior authorization of specialty formulas paid by Medicaid for WIC participants insured through MaineCare (state Medicaid agency).
- The Title V Director appointed as a voting member of the CGC, which replaced the Task Force on Early Childhood, and agreement that the DFH would remain the fiscal agent for two grants that are managed by the Early Childhood Initiative within the OCFS (the state child welfare agency).
- A Governor's Proclamation on youth suicide in Maine that highlighted the state's commitment to preventing this second-leading cause of death among 15-24 year olds in the state, and how a public health approach to it is so essential. In addition, recognition of the successful work of the Maine Youth Suicide Prevention Program (MYSPP) is evidenced through repeated requests for the MYSPP staff to work with partners in the Office of Elder and Adult Services, the Department of Public Safety and Department of Corrections to expand suicide prevention across the lifespan.
- A project that involves Title V, the CDC-funded Coordinated School Health Program, the DOE, the AAP, Academy of Family Physicians, and schools in strengthening and enhancing collaboration between physicians and schools.
- A statewide Maternal and Infant Mortality Review Panel, bringing together organizations and people across the health care system including substance abuse, hospital, community advocacy, education, insurance, families, and other sectors.
- The ongoing work of the ECCS Initiative in uniting people from the public and private sectors and from the state and local level in implementing a humane and dignified system of policies and services for young children and their families.

- Continued work with the Maine Children's Trust and the OCFS in framing child abuse prevention as a public health issue, and with the Maine Children's Trust in support of a universal home visitation program (*Maine's blend of Healthy Families, Parents as Teachers and Parents are Teachers Too).*
- Ongoing collaboration between the CSHN Section and the OMS, with the movement of the informing and referral components of Early and Periodic Screening, Diagnosis and Treatment (EPSDT) to the CSHN section in the DFH.
- The work of the Abusive Head Trauma (AHT) Prevention Workgroup and the statewide implementation of the Period of Purple Crying Program whose focus is on educating parents and caregivers about infant crying and development, and communicating the importance of never shaking a baby or child.
- A Safe Families Partnership (SFP) initiated through an AMCHP Action Learning Lab (ALL), which brought together partners from the public, non-profit and private sector to coordinate and enhance activities to educate the public and health care and social service providers about domestic and intimate partner violence.
- Access to MaineCare (Medicaid) data by the MCH Epi Team which resulted in an increase in funding for the Maine Immunization Program.
- A successful application for Project (LAUNCH) Linking Actions for Unmet Needs in Children's Health, in partnership with the OCFS (Children's Behavioral Health Division), the Office of Minority Health and the Washington County Community Caring Collaborative to promote the wellness of young children (birth to eight years old) by addressing physical, emotional, social and behavioral aspects of their development.
- Maine CDC and OCFS analysis of anti-psychotic medication use among children in State custody. Collaborative development of a systematic, step wise approach to consent, prescription and monitoring outcomes for use of these powerful and potentially toxic medications.
- Initial planning with the OIAS, (Welfare/Medicaid eligibility agency) for OIAS to determine financial eligibility for WIC participants using their Automated Client Eligibility System once the WIC Program's new management information system is in place.
- Implementation of the Maine IYHS that combines the needs for data collection from students on health conditions and behaviors, and risk and protective factors into one survey. This integrated survey reduces state requests of schools for classroom time for surveying, provides for a comprehensive K-12 assessment of children and youth health, and provides local data for schools on YRBS and other indicators. Careful attention to the needs of US CDC Division of Adolescent and School Health has allowed us to remain part of the YRBS and provide state data to the US CDC.
- A strengthening of cross Center and Department work between the Title V Program and partners in public health in the public, non-profit and private sector in responding to the H1N1 pandemic. Because the population experiencing the most complications from H1N1 infection is the MCH population it was extremely appropriate for Title V related staff to be actively engaged in Maine's response. Examples of opportunities to break the ground in forming partnerships and collaboration include; Public Health Nurses (Maine CDC employees) stepping in to assist school nurses and local hospital systems in organizing and administering school-based mass vaccination clinics of school aged children, and providing staff to assist with communications and phone bank tasks. In this

latter role, Title V staff were able to interact with staff in other Maine CDC programs, learn more about each others' work and realize similarities in their priorities and the possibility of assisting each other to reach shared priorities and goals.

- A partnership between the WIC Program, the Office of Minority Health and the Muskie School for Public Service to increase cultural and linguistic competence among staff in the local and state agencies in the delivery of WIC services to Maine residents.
- Implementation of a Pervasive Developmental Disorders (PDD) Systems Change Initiative, a broad public and private collaboration. Focus areas of the Initiative are: early identification of PDDs in young children and the transition process from school to adult life, early intervention services, health care, and services for youth and adults including employment and community supports.
- The Act Early Regional Summit Project brought together key State leaders from the early intervention and early childhood community for the purpose of enhancing relationships and collaborations among these key stakeholders and provided a forum to share information and insights on the opportunities, challenges, and barriers for families and children with Autism Spectrum Disorders (ASD) and related disabilities in the identification, assessment, diagnosis and intervention areas. The success of the Act Early Region I Summit allowed us to apply for the HRSA/MCHB/DSCSHN State Implementation Grant for Improving Services for Children and Youth with ASD/DD (developmental disabilities).

The extent of our partnerships is further evidenced by a significant increase in the number of memoranda of agreement (MOA) and memoranda of understanding (MOU) between the DFH or the Maine CDC related to the MCH population and/or issues. Included in Appendix B are 2 sample copies of eight MOU's developed in the last five years related to MCH initiatives or projects.

Stakeholder engagement was a critical component of our strengths and needs assessment process. We sought broad-based input at various points to ensure a diverse perspective from those who might benefit from the MCH services and systems in the state. In part, stakeholder input in the 5-year CSNA was structured through the use of focus groups. Nine focus groups were held with advocates, policy makers, public health leaders or health professionals, three with youth, one with parents of young children, one tribal, one with immigrants, and two with CSHN and parents of CSHN; a total of 175 participants. The focus groups were conducted in the eight public health districts across the state. Questions were tailored to the population group with each group answering six to seven questions focused on identifying needs, gaps, and barriers in the service systems that would help in identifying priorities for the next five years. Fourteen key informant interviews were conducted with health care providers, school superintendents, DHHS personnel, OIAS (TANF Program), and a tribal representative to seek their input on perceived needs in the communities they serve.

Key participants in the priority setting process included the following groups: CSNA Steering Committee, program managers of the DFH, a Criteria-Setting Subcommittee comprised of MCH program staff, epidemiologists, and DOE; and an expanded group of MCH stakeholders comprised of physicians, nurse practitioners, parents, non-governmental agencies, local WIC and community action programs, non-profit organizations working with children and families across

the state, and DFH staff. The CSHN Family Consultant, Anna Cyr, and CSHN Youth Coordinator, Mallory Cyr participated in all levels of the priority setting process.

Stakeholders were also involved in the selection of the MCH priorities. Web-based surveys were sent to stakeholders across the state two different times asking them to rate the potential MCH priorities. In addition, over 30 stakeholders who are "experts" in specific MCH issues were asked to consult with college students in the development of fact sheets on specific MCH priorities. This involved an in-person or telephone meeting with a student to provide background on the importance of the issue in Maine, interpretation of the prevalence and trends, and to discuss current interventions related to that activity. Stakeholder groups were also convened to develop the final wording for each of the ten priorities and to help develop state performance measures.

Several collaborations were used in developing the strengths and needs assessment. Our University partnerships continue to be a key collaboration. Through our cooperative agreements with the USM, we are able to collect quality quantitative and qualitative data, using the expertise of our partners. Focus groups conducted by applied researchers from the USM Muskie School of Public Service brought together groups from all public health districts in the state to engage in conversations about MCH needs and strengths at the community level, as well as among specialists in different areas within MCH.

Our MCH Epi Team, located within the Applied Sciences Department at USM, also brings key expertise that is otherwise difficult to attract and retain within state government. A faculty member leads the team and, in addition to providing guidance and technical knowledge, was able to engage students in the assessment process providing them with hands on experience and exposure to MCH principles and practice.

During the past ten years, the DFH has significantly expanded its capacity specific to epidemiology. An area for growth, and one which integrates at points with epidemiology, is evaluation. Staff within the DFH have the capacity to conduct simple process evaluation. We contract with evaluators from the University of Maine System, Maine Center for Public Health, and consulting firms such as Hornby Zeller Associates for more complex evaluation plans and specific time limited projects. A DFH priority is to develop capacity within the Title V programs related to evaluation, which will strengthen Title V resources available to the emerging public health districts.

The DFH, under the leadership of a senior leader team member, developed a multi-level process for determining the 2010-2015 MCH priorities that included internal and external partners in the narrowing and selection of the final 10 priorities. This process also included engaging all MCH program managers and key internal partners, input from external partners throughout the state, as well as a class of undergraduate public health students.

A partnership between the OLPH (which provides technical assistance and support to the emerging public health districts) and the DFH allowed us to combine financial resources to conduct the essential public health services assessment at the district level during calendar year

2009. The assessment will provide information that will be useful for divisions within the Maine CDC, as well as the individual districts.

These partnerships resulted in a strengths and needs assessment that was more data-driven than past efforts, a priority-setting process that was more inclusive and transparent, and continues to be more integrated into the strengths and needs assessment, and a planning process designed to build on the priority setting in better, more integrated ways.

The strengths of these collaborations include broad perspectives on the status of MCH, through the use of multiple data collection methodologies and a broad array of stakeholders, both within the MCH field and in related fields, in both social services and public health; solid data analysis and the application of the data to our priorities; and the advancement of our techniques and strategies to be more evidence-based and data-driven.

Limitations of these collaborations are centered around resources. Time constraints of our local partners can often limit our ability to engage them. When individuals are accountable to specific grant-supported projects taking the time to think broadly and strategically can be challenging. In addition, although our local public health structure has grown tremendously over the last few years, it remains under development and has not always matured to the point of having strong MCH allies in all parts of the state.

Section III – STRENGTHS AND NEEDS OF THE MATERNAL AND CHILD HEALTH POPULATION GROUPS AND DESIRED OUTCOMES

Section 3.1: State Overview

Maine is the northernmost and largest state in New England and the easternmost state in the United States. Maine's population is growing at a slower rate than most of the U.S., but aging at a faster rate. The majority of residents reside in rural towns and small cities. The current economy with higher unemployment, as well as high heat, gas, and food prices are major issues facing Maine's most vulnerable. The demographic and geographic factors that contribute to Maine's uniqueness among the New England states are the very same factors that create complex challenges for Maine's Title V agency as we strive to improve the health outcomes of the MCH population.

Maternal and Child Health Populations in Maine

There are 1.32 million people residing in the state of Maine.[1] Between 2000 and 2008, Maine's overall population increased 3.3% compared to 8.0% in the U.S. Most of Maine's population growth was due to migration from other states (61.9%) and natural causes (excess births over deaths; 28.6%). However, 11.4% of the growth was due to international migration, which has resulted in increased racial and ethnic diversity within the state. In contrast, 63.5% of the U.S. population change in this period was due to net natural increases.[2]

The median age of Maine's population is 41.1 years and is the highest in the country. Nationally, the median age is 36.4 years.[3] The U.S. Census Bureau projects that by 2020, 19.1% of Maine's population will be under 18 years and there will be more people age 65 years and older than children under age 18. Between 2005 and 2020, Maine's population of 65 year old and older residents will increase by 52.7%, while the population under the age of 18 will decrease by 4.8%. Based on census projections, Maine's median age will be 46.9 years in 2020, compared to 39.0 years nationally.[4]

Maine's MCH populations (i.e., children, including those with special health needs and women of reproductive age) represent a significant proportion of the population. In 2008, children under 18 years of age plus women ages 18-44, represented 37.9% of Maine's population of 1.32 million.[1] Children under 18 years of age comprised 20.8% of the state's population. (Nationally, children under age 18 composed 24.3% of the population.)[1] Across the state's 16 counties the proportion of children ranged from 18.9% to 22.6% (Table 3.1.1).[5]

The median age of women in Maine is 42.2 years.[3] In 2008, women aged 15-44 years comprised 19% of Maine's population, similar to the proportion nationally (20.4%).[1] Across the state, the proportion of women of reproductive age within each county ranged from 16.8% to 21.5% (Table 3.1.1).[5]

Prevalence estimates of current disability or special health needs among Maine children range from 10% to 20%, depending on the definition used. According to the 2005-2006 NS-CSHCN, there were nearly 49,000 CSHCN in Maine, representing 17.7% of children under age 18.[6]

For more information on each of these populations, please see the corresponding sections of this document.

Table 3.1.1: MCH Population and Median Age, Maine 2008

County	Total # Under 18 yrs	% of Population < 18 yrs	Total # Ages 18-24 yrs	% of Population Ages 18-24 yrs	Total # Females Ages 15-44 yrs	% of Population Females Ages 15-44 yrs	Median Age (2005-2007)
Androscoggin	24,177	22.6%	8,990	8.4%	21,281	19.9%	39.4
Aroostook	14,029	19.6%	6,030	8.4%	12,824	17.9%	43.4
Cumberland	59,301	21.5%	23,869	8.6%	52,545	19.0%	40.5
Franklin	5,700	19.1%	3,629	12.2%	6,411	21.5%	40.0
Hancock	10,240	19.3%	4,508	8.5%	9,376	17.6%	43.4
Kennebec	24,895	20.6%	10,623	8.8%	23,403	19.3%	41.1
Knox	7,931	19.5%	2,796	6.9%	6,842	16.8%	43.5
Lincoln	6,554	18.9%	2,301	6.6%	5,925	17.1%	45.0
Oxford	11,492	20.3%	4,125	7.3%	10,580	18.6%	42.4
Penobscot	30,208	20.3%	17,134	11.5%	30,545	20.5%	39.3
Piscataquis	3,230	19.0%	1,261	7.4%	2,879	17.0%	--*
Sagadahoc	8,218	22.6%	2,603	7.2%	6,671	18.4%	40.5
Somerset	10,827	21.1%	3,731	7.3%	9,739	19.0%	41.8
Waldo	7,957	20.8%	3,161	8.2%	7,182	18.7%	42.0
Washington	6,565	20.2%	2,523	7.8%	5,699	17.5%	43.0
York	43,543	21.6%	15,398	7.6%	37,836	18.8%	40.9
Maine	274,867	20.9%	112,682	8.6%	249,738	19.0%	41.1
*data not available due to small sample size							

Data Source: U.S. Census Bureau, 2008 Population Estimates and 2005-2007 ACS

Geography

New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, the other 5 New England states, can fit into the 35,385 square miles occupied by the state of Maine.[7]

Although 80% of American residents reside in metropolitan areas, the majority of Maine's population resides in rural towns and small cities. Statewide, 59.8% of the population lives in rural areas, as compared with 21.0% of the US population.[8] More than one third (36.3%) of Maine's population lives in the two southernmost counties (Cumberland and York). However, these counties account for only 6% of the state's land area.[7] In five Maine counties, 90% or more of the population lives in rural areas; 2 of these counties are 100% rural (Table 3.1.2).[9] Maine has three major cities: Portland (pop. 62,561), Lewiston (pop. 35,131) and Bangor (pop. 31, 756).[10] Collectively, only 10% of Maine's population resides in these three cities and each city experienced a population decline between 1990 and 2008 (2.8%, 11.6%, and 8.2% decreases respectively). [11] Augusta is the state capital of Maine and has a population of 18,282; Augusta's population has declined by 14% over the past two decades. [11, 12]

The average population density of Maine is 42.7 people per square mile, compared to 86.0 people per square mile in the United States. However, the population density of Maine varies dramatically across the state, from 330.4 people per square mile in Cumberland County, where Maine's largest city (Portland) is located, to 4.3 people per square mile in Piscataquis County (Table 3.1.2).[7]

Table 3.1.2 Selected Measures Related to Geography, Maine and United States

	Population, 2008	% of state population, 2008	Area (land + water) in square miles, 2000	Area (land) in square miles, 2000	% of state's land area, 2008	# of people per square mile of land area, 2008	% living in rural area, 2000
United States	--	--	---	--	--	86.0	21.0%
State of Maine	1,316,456	--	35,385	30,862	--	42.7	59.8%
Androscoggin	106,877	8.1%	497	470	1.5%	227.3	42.7%
Aroostook	71,676	5.4%	6,829	6,672	21.6%	10.7	77.3%
Cumberland	276,047	21.0%	1,217	836	2.7%	330.4	34.3%
Franklin	29,857	2.3%	1,744	1,698	5.5%	17.6	82.7%
Hancock	53,137	4.0%	2,351	1,588	5.1%	33.5	95.2%
Kennebec	120,959	9.2%	951	868	2.8%	139.4	61.2%
Knox	40,686	3.1%	1,142	366	1.2%	111.3	61.6%
Lincoln	34,628	2.6%	700	456	1.5%	75.9	100.0%
Oxford	56,741	4.3%	2,175	2,078	6.7%	27.3	82.8%
Penobscot	148,651	11.3%	3,556	3,396	11.0%	43.8	55.9%
Piscataquis	16,961	1.3%	4,377	3,966	12.9%	4.3	100.0%
Sagadahoc	36,332	2.8%	370	254	0.8%	143.1	59.0%
Somerset	51,377	3.9%	4,095	3,927	12.7%	13.1	74.5%
Waldo	38,342	2.9%	853	730	2.4%	52.5	91.1%
Washington	32,499	2.5%	3,255	2,568	8.3%	12.7	92.0%
York	201,686	15.3%	1,271	991	3.2%	203.5	53.5%

Data Source: U.S. Census Bureau, 2008 Population Estimates, 2000 Census

Demographics

Family

According to estimates from the 2005-2007 ACS, the average household size in Maine was 2.4 people and the average family size was 2.8. Less than one-third (30.4%) of households in Maine included one or more children under age 18-- slightly fewer than in the U.S. (34.6%). Of the households with a child under age 18, 23.3% were female-headed households; 10.8% were male-headed households. Of the households with a child under age 18 nationally, 25.1% were female-headed and 8.4% were male-headed.[3]

Of Maine women aged 15 years and over, 51.% were currently married, 13.4% were divorced, 1.4% were separated, 10.4% were widowed, and 23.7% were never married.[3]

Racial and Ethnic Diversity

According to 2008 Census estimates, Maine's population is 96.4.% white (95.3% of Maine's population described themselves as white alone, non-Hispanic), 0.6% American Indian or Alaska Native, 1.0% black or African-American, 0.9% Asian, and 1.5% two or more races. The Hispanic population is about 1.3%. Of Maine's children under age 18, 91.0% are non-Hispanic white and 1.8% are Hispanic (Table 3.1.3).[13]

Table 3.1.3. Racial and Cultural Diversity, Maine and United States, 2005-2007 and 2008

	% White (2008)	% Hispanic (2008)	% Foreign born (2005-2007)	% Language other than English spoken at home "sometimes" or "always" (2005-2007)	% Speak English less than "very well" (2005-2007)
United States	79.8	15.4	12.5	19.5	8.6
State of Maine	96.4	1.3	3.2	7.6	1.8
Androscoggin	95.7	1.6	4.0	17.1	4.5
Aroostook	96.3	1.1	5.2	-	-
Cumberland	94.5	1.8	5.1	7.2	2.6
Franklin	97.8	0.8	2.0	-	-
Hancock	97.3	1.0	2.7	-	-
Kennebec	97.2	1.2	2.3	6.0	1.1
Knox	98.0	1.0	1.9	-	-
Lincoln	98.2	0.8	1.4	-	-
Oxford	97.9	0.8	1.7	-	-
Penobscot	96.3	1.0	2.4	4.8	1.2
Piscataquis	97.9	0.8	1.9*	-	-
Sagadahoc	96.2	1.8	2.0	-	-
Somerset	97.6	0.7	2.3	5.1	1.3
Waldo	97.7	0.8	1.2	-	-
Washington	93.5	1.5	4.8	5.3	1.3
York	97.3	1.2	2.8	8.6	1.8

Data Source: U.S. Census Bureau, 2008; 2005-2007 ACS, *2000 Census

Although Maine's population is predominantly white, the state is gradually becoming more racially diverse. The proportion of the population that is white decreased from 98.4% on the 1990 census to 96.9% on the 2000 census,[14] to 96.4% according to the most recent census estimates.[13] Similarly, the proportion of Maine students in public and approved private schools who are white decreased from 97.5% in the 1993-1994 school year to 94.6% in the 2006-2007

academic year. During that school year, 2.3% of students were Black or African American; 1.4% were Asian/Pacific Islander; 0.7% were American Indian; and 1.0% were Hispanic.[15]

Based on 2005-2007 data from the ACS, nearly 6,880 Mainers identify as American Indian alone and nearly 22,000 identify as American Indian alone or in combination with one or more other race.[3] There are five federally recognized Indian tribes in Maine today: Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, and Penobscot Indian Nation. [16] The majority of Maine's native American population resides in or near the five small, rural communities of Indian Island (Penobscot Nation), Pleasant Point (Pasamaquoddy tribe), Indian Township (Pasamaquoddy tribe), Houlton (Houlton Band of Maliseet) and Presque Isle (Aroostook Band of Micmac).[17]

A total of 3,369 Pasamaquoddy tribal members are listed on the tribal census rolls with 1,364 on the Indian Township census and 2,005 listed on Pleasant Point census.[18] The Aroostook Band of Micmacs is estimated at 1,000 members.[19] The Houlton Band of Maliseet Indians is comprised of approximately 800 members.[20] The Penobscot Nation population is estimated at 2,365 members.[21]

In 2005-2007, 3.2% of Maine residents were foreign-born; the proportion within Maine's counties ranged from 1.2% to 5.2%. Approximately 30% of Maine's foreign born population was born in North America, 10.3% in Latin America, 27.5% in Europe, 21.3% in Asia, and 10.0% in Africa. Among Maine's foreign born, 77.4% entered the U.S. before 2000. Slightly more than half of Maine's foreign born population are naturalized U.S. citizens (51.1%). Across Maine, 7.6% of the population aged 5 and older spoke a language other than English at home; approximately 1.9% spoke English less than "very well" (Table 3.1.3). [3]

Emerging populations in Maine include people of Somali, Sudanese, and Iraqi ancestry arriving in Maine as primary refugees or secondary migrants. Refugees are individuals granted refugee status overseas by the U.S. Department of Homeland Security and are brought to the U.S. for resettlement by the U.S. Department of State and are assisted with resettlement in U.S. communities through the Office of Refugee Resettlement and voluntary agencies.[22] In FY 2008, 60 refugee arrivals were initially resettled in Maine (31 originating from Somalia, 19 from Sudan, and 3 from Iraq). In FY 2007, there were 118 primary refugees who were resettled in Maine, 142 in FY2006, and 151 in FY2005. [23] "Secondary Migration" is a legal term which refers specifically to refugees who are placed for resettlement initially in one location in the United States, and who decide to relocate to another part of the United States. Although immigration data does not track secondary migration, it is the largest force affecting immigration into Maine. It has been estimated that far more foreign-born arrive in Maine every year through secondary migration than are placed here through federal refugee resettlement placements. For example, beginning around 2001, the number of people with Somali ancestry living in Maine began to steadily increase, both as primary and secondary immigrants, primarily resettling in Lewiston and Portland. The City of Portland's Refugee Service Program estimates that approximately 80% of Maine's immigrant population is due to secondary migration. [16] According to a recent news article, as of March 2009, 111 Iraqis have relocated to Maine from other states, and an additional 200 to 300 families are expected to arrive. [24]

Educational Attainment

In 2005-2007, 88.8% of Maine residents ages 25 and over were high school graduates compared to 84.9% nationally. The county-specific proportion of residents ages 25 and over who graduated high school ranges from 87.9% to 92.3% (Table 3.1.4). Although a slightly higher percentage of Maine residents over age 25 years have completed high school compared to the U.S., a slightly lower percent have a higher education degree. About one-quarter of Maine residents over age 25 have a bachelor's degree, and less than one in 10 (8.9%) completed an advanced degree (Table 3.1.4). [3] Among Maine women, 93.2% of those aged 25-34 years and 93.7% of Maine women aged 35-44 years were high school graduates according to data from 2000, the most recent year available; both proportions were higher than that found among women of these age groups in the United States (85.9% and 86.6%, respectively).[25]

Table 3.1.4: Adult Education Attainment, Maine and US, 2005-2007

County	% Ages 25 Years and Over Who Have Completed High School (Includes Equivalency)	% of Ages 25 and Over Who Have Completed a Bachelor's Degree	% of Ages 25 and Over Who Have Completed an Advanced Degree
U.S.	84.0	27.0	9.9
Maine	88.8	25.9	8.9
Androscoggin	83.2	17.2	5.0
Aroostook	82.6	16.1	4.3
Cumberland	92.3	38.9	13.8
Franklin	87.1	26.7	9.3
Hancock	91.3	28.7	11.2
Kennebec	89.9	25.3	9.4
Knox	88.9	25.4	9.0
Lincoln	90.9	30.1	11.3
Oxford	87.9	16.2	5.3
Penobscot	88.9	22.9	8.4
Piscataquis*	--	--	--
Sagadahoc	91.2	26.2	9.8
Somerset	84.5	15.1	5.6
Waldo	89.6	20.2	5.7
Washington	84.2	18.6	5.9
York	89.3	26.2	8.0

*Because of small population size the ACS does not include data from Piscataquis County

Data Source: U.S. Census Bureau, 2005-2007 ACS

Socioeconomic Indicators

Income and Poverty

The Maine Center for Economic Policy has created a method of estimating of what Maine families need to earn to make ends meet in today's marketplace; this *livable wage* is based on a basic needs budget that takes into account actual living expenses, including housing, health care, child care, transportation, and taxes. Current calculations are performed by the Maine Department of Labor's Center for Workforce Research; they estimate that the annual income required for a 2-parent (2-earner) 2-child Maine family to meet a basic needs budget was $54,384. The county-specific livable wage for this family type ranged from $47,746 (Aroostook County) to $58,515 (Cumberland County). Among 1-parent Maine families with 1 child in pre-school and 1 in public school, the annual income required was $41,615, with county-specific estimates ranging from $28,504 (Aroostook County) to $45,844 (Cumberland County).[26] The livable wage is considerably higher than both the federal poverty level (FPL) and the income of a minimum wage earner. Maine's $7.50 per hour minimum wage is 25 cents higher than the federal standard. [27], [28] In Maine, a full time year-round minimum wage worker will earn $300 per week, or $15,600 per year. The FPL for a family unit consisting of two people is $14,570 per year. The FPL for a family of four in 2009 was $22,050 and for a family of three was $18,310.[29] As such, while significant portions of the MCH population are under the FPL, even higher proportions live in families that do not earn livable wages (Table 3.1.5).

Based on ACS data, the median household income in Maine between 2005-2007 was nearly $5,000 less than in the U.S. overall ($45,211 vs. $50,007). Although states in the Northeast tend to have median incomes above the U.S. median, Maine's falls below the U.S. median. There is considerable variation in income across Maine counties. The median household income ranged from $33,171 in Washington County to $53,768 in Cumberland County (Table 3.1.5).[3]

According to the 2005-2007 ACS, 16.4% of the Maine's population had incomes below 125% of the poverty threshold based on household size; 4.5% had incomes below 50% of the poverty threshold; 7.5% had incomes between 50% and 100% of the threshold; and 4.4% were between 100% to 125% of the threshold. Poverty is inversely related to educational attainment; among females over age 25, 28.8% of those with less than a high school diploma were below the FPL, compared to 14.3% of high school graduates, 10.5% of those with some college, and 4.8% of those with a bachelor's degree or higher.[3]

Across Maine, 12.8% of residents and 16.3% of children under 18 years lived below the FPL between 2005 and 2007 (Table 3.1.5). The county-specific proportions of children under age 18 below the FPL ranged from 11.2% in Hancock County to 28.0% in Washington County. Among female-headed households with children under 18 years of age, 38.9% lived in poverty (U.S.= 36.9%). Approximately one in five (20.4%) families with children under age 5 were living below poverty and more than half (59.4%) of female-headed households with children under 5 lived in poverty between 2005-2007; this is slightly higher than similar households in the U.S.(45.5%).[3]

Labor Force and Employment

Maine's civilian labor force was estimated at 705,000 at the end of 2008.[30] The proportion of adults aged 16 to 64 years old in the labor force ranges from 70.1% in Aroostook County to 80.5% in Cumberland County. The proportion of children with all parents in the labor force is 62.9%, and ranges from 50.9% in Sagadahoc County to 71.0% in Somerset County (Table 3.1.5). Among women ages 16 to 64 years, 71% are in the civilian labor force. Median earnings for females in 2005-2007 were 67% of male earnings ($23,344 vs. $34,392).[3]

Maine, like the rest of the country has experienced a downturn in the economy. As of February 2010, there were an estimated 58,600 unemployed Mainers or 8.3% of the workforce.[31] In comparison, in 2001, 3.1% were unemployed. According to the Maine DOL, since January 2008 Maine has lost 32,000 jobs (nonfarm payroll). Job losses have resulted in longer periods of unemployment, and the average duration for collecting unemployment compensation has risen from 14.0 to 17.4 weeks.[32] Unemployment figures do not reflect the number of underemployed and those who have become discouraged and stopped looking for work. Based on US Census data, Maine has a larger proportion of its jobs in education, health care, and retail trade sectors than in the US overall, while a smaller proportion of its jobs are in manufacturing, wholesale trade, and administrative services sectors.[3]

Table 3.1.5. Select Measures of Income and Poverty, Maine and United States.

	% of People Below Poverty Level 2005-2007	% Related Children <18 Below Poverty Level, 2005-2007	Median household income, 2005-2007 $	Required annual income wage to meet basic needs budget for single parent with 2 children, 2008 $	Required annual income to meet basic needs budget for 2 parents 2 earners) with 2 children, 2008 $	% Population 16 to 64 Years Old in Labor Force, 2005-2007	% of Children <6 with All Parents in Labor Force, 2005-2007
United States	13.3	17.9	50,007	---	---	74.2	61.1
State of Maine	12.8	16.3	45,211	41,615	54,384	76.7	62.9
Androscoggin	16.2	24.4	42,725	33,136	51,974	76.6	64.6
Aroostook	18.0	20.3	34,225	28,504	47,746	70.1	62.6
Cumberland	10.4	12.9	53,768	45,844	58,515	80.5	61.8
Franklin	15.0	18.4	38,975	30,799	50,010	75.8	68.1
Hancock	9.8	11.2	45,822	41,388	54,168	78.8	67.4
Kennebec	13.2	19.3	45,248	31,738	50,873	76.4	58.6
Knox	12.1	13.4	42,495	42,712	55,492	78.4	69.7
Lincoln	10.6	12.6	45,620	41,192	53,972	78.4	62.0
Oxford	15.6	20.2	37,175	31,937	51,050	73.5	60.8
Penobscot	14.2	16.9	41,336	39,539	52,426	72.3	62.6
Piscataquis[a]	--	--	--	32,453	51,657	--	--
Sagadahoc	9.2	14.8	52,569	43,930	56,603	79.6	50.9
Somerset	16.7	22.6	36,154	30,548	49,708	70.9	71.0
Waldo	16.3	22.0	40,470	42,588	55,368	76.6	65.5
Washington	19.7	28.0	33,171	39,445	52,332	71.4	59.3
York	8.7	9.1	52,726	45,671	58,345	79.5	64.4

[a] Because of small population size the ACS does not include data from Piscataquis County.

Data Source: U.S. Census Bureau, 2005-2007 ACS and Maine Department of Labor, Center for Workforce Research and Information

Income Assistance

Between 2005 and 2007, approximately 23.3% of children under the age of 18 were living in households that in the previous 12 months had received Supplemental Security Income (SSI), cash public assistance income, or SNAP. This proportion varied by family type. Among children living in married couple family households, 13.6% had household income from one or more of these sources; among children living in households with a female householder (no husband present) 48.3% had received assistance, and among children living in households with a male householder (no wife present), 34.9% had received assistance from one or more of these sources.[3]

SNAP assistance is one of the most wide-spread low-income benefit programs in Maine. According to recent data, approximately 16% of Maine's overall population was receiving food stamps. Preliminary data suggest that monthly food stamp participation increased by 18% between June 2008 and June 2009 (Table 3.1.6).[33] The monthly benefit per person averages $94.52 in Maine.

According to the Margaret Chase Smith Policy Center at the University of Maine, increases in food stamp use in earlier years (2001-2006) were explained more by changes in the administration of the program, such as increased outreach efforts rather than by increases in the level of need. However, the current increase in food stamp program participation is likely closely related to increased levels of need related to the economic downturn.[34]

In 2007-08, 100,569 Mainers living in 48,278 Maine households received Low Income Home Energy Assistance Program benefits (9.3% of all households); household rates ranged from 3.9% in Cumberland County to 19.8% in Aroostook County.[34]

Table 3.1.6. Monthly Number of Persons Participating in the Supplemental Nutrition Assistance Program (2008-2009)

	Maine #	US #
June 2008	179,373	28,703,505
May 2009	206,968	34,409,488
June 2009	210,997	35,122,123

Data Source: Kaiser Family Foundation, State Health Facts, based on USDA Food and Nutrition Service data.

Housing

According to 2005-2007 ACS data, 78.5% of Maine's housing units are occupied. Among Maine's 542,424 occupied housing units, 72.9% are owner-occupied and 27.1% are rented. The median gross monthly rent is $650. One-third of renter-occupied units consume 35% or more of the household incomes of renters. Approximately two-thirds of Maine's owner-occupied housing units have mortgages; 15.8% of owner-occupied housing units with mortgages have housing costs which consume 35% or more of the household incomes of owners.[3]

Among the Maine's occupied housing units, 6.3% have no vehicles available, 32.6% have one vehicle, and 61.1% have 2 or more vehicles available. Four percent of occupied housing units have no telephone service available. Nearly 70% (68.5%) of Maine's occupied housing units are detached single-unit structures, and 9.3% are mobile homes. Nearly 3 of 10 housing units (29.1%) were built before 1940.[3]

Finding affordable housing is a challenge for many Maine residents. According to a 2008 MSHA Report on housing costs in Maine, the median price of homes increased 69% between 2000 and 2007, yet Maine's median income increased only 20% during the same period. The most affordable communities are in the more rural parts of the state (Aroostook, Piscataquis, and Somerset) with the least affordable in the southern and coastal areas.[35] Similarly, rents increased almost twice as fast as income, leaving Aroostook county as the only county with affordable housing costs.[36]

In 2007, over 7,000 people stayed in Maine's emergency shelters, including domestic violence shelters. Of the 7,083 people who used emergency shelters, 15% used domestic violence shelters, and of the remaining: 47% were adult individuals, 22% were people in families (one or more adults with at least one child under age 18) and 16% were unaccompanied youth (persons age 23 or younger).[37]

Section 3.2: Women of Reproductive Age

Women of Reproductive Age: Pregnancy

This section presents information on Maine pregnancies and births. Data are shown according to characteristics that we consider useful in monitoring trends in infant and maternal health and in improving our understanding of pregnancy outcomes. Information specific to birth outcomes, including infant health, is located in the "Infant Health" section (Section 3, Part 3).

Notes on Primary Data Sources

Maine, like other states across the country, collects pregnancy-related data through its vital statistics system, as required by state statute. Pregnancy and infant mortality estimates based on vital statistics data are impacted by reporting requirements, as well as data limitations such as the completeness and accuracy of the information contained on birth, fetal death, infant death, and induced abortion certificate forms. In addition, the reported rate of fetal loss will depend on the degree to which losses at very early gestations are detected. Therefore, variations in reporting requirements and practices have implications for estimating and comparing rates across and within states.

A pregnancy may result in a live birth, a fetal loss, or an induced abortion. These outcomes are influenced by health status, access to services, and other individual and community level factors.[38] Pregnancy rates and outcomes are available from three primary sources: Maine and national vital statistics, the National Survey of Family Growth (NSFG), and estimates provided by the Guttmacher Institute. Each data source has unique attributes and limitations, and no single source adequately describes the true rate of pregnancy and outcomes in Maine. Fetal loss, or

mortality, is generally divided into three periods: early (less than 20 completed weeks of gestation), intermediate (20–27 weeks), and late (28 weeks or more). Although the vast majority of fetal deaths occur early in pregnancy, most states in the U.S. only report fetal deaths at 20 weeks of gestation or more.[39] Maine reports fetal losses occurring at 20 weeks or greater gestation.

Pregnancy Rate and Outcomes

Pregnancies

According to Maine vital statistics data, there were 16,267 known pregnancies among Maine residents in 2008; the pregnancy rate among women aged 15-44 was 65.1 per 1,000 (Table 3.2.1).[40] The components of Maine's pregnancy count are live births, reported fetal deaths of 20 weeks gestation or more, and reported induced abortions occurring in the state. In 2008, 83.6% of pregnancies ended in live births, 16.1% ended in induced abortions, and 0.3% ended in fetal deaths (>20 weeks).[40] Because Maine's pregnancy count excludes fetal losses occurring prior to 20 weeks gestation, the reported count is an undercount of the true number of pregnancies.

Using a broader definition of fetal loss, the Guttmacher Institute reports a pregnancy rate for Maine that is considerably higher (76 per 1,000 women aged 15-44)[41] than the state-calculated rate (65.1 per 1,000). Based on research conducted by the Guttmacher Institute, 71% of pregnancies among Maine residents ages 15-44 in 2005 resulted in live births, 14% in in-state induced abortions, and 15% in fetal loss. Based on their findings, a greater proportion of Maine pregnancies resulted in a live birth (71%) than in the U.S. overall (66%); estimates of fetal loss were similar for Maine and the nation (Table 3.2.1).[42]

Data from the NSFG, which include pregnancies and pregnancy loss from recognized pregnancies occurring at any gestational age, indicate that 64.6% of pregnancies among U.S. women resulted in a live birth, 18.8% in an induced abortion, and 16.6% in a fetal death in 2005. Among non-Hispanic white women, 69.2% resulted in a live birth, 12.5% in an induced abortion, and 18.3% in a fetal death. The 2005 national pregnancy rate estimate based on the NSFG was 103 pregnancies per 1,000 women aged 15-44; the overall rate has ranged from 102 to 104 pregnancies per 1,000 since 1995. The pregnancy rate among non-Hispanic white women was considerably lower (84.3 per 1,000).[43, 44]

Table 3.2.1: Pregnancy Rate and Outcomes, Maine and United States, 2005 and 2008

	Maine reported pregnancies 2008 [a]	Maine estimated pregnancies 2005 [b]	U.S. estimated pregnancies 2005 [b]
Estimated pregnancy rate (women aged 15 – 44 years)	65.1 per 1,000	75.9 per 1,000	101.6 per 1,000
Pregnancy outcome percentages			
Live birth	84%	71%	66%
Fetal loss	0.3%	15%	15%
Induced abortion	16%	14%	19%

Data Sources and Notes:
[a] Maine Vital Records Data; preliminary 2008 resident data, fetal loss limited to gestations of 20 weeks or greater.
[b] Guttmacher Institute; fetal loss estimated as 20% of births plus 10% of abortions.

Based on an analysis of fetal deaths at 20 weeks or more gestation, the U.S. fetal mortality rate was 6.2 per 1,000 live births and specified fetal deaths in 2003, and 4.9 per 1,000 live births and fetal deaths among non-Hispanic white women. In Maine, the rate was 3.6 per 1,000 live births and fetal deaths.[40] Across the U.S., rates of fetal mortality ranged between 3.1 and 9.2 per 1,000. Maine's fetal mortality rate was fourth lowest in the nation, although reporting completeness may account for some of the differences in fetal and perinatal mortality rates among states.[45]

Pregnancy Outcomes by Maternal Age

The proportion of Maine pregnancies resulting in a live birth was lowest among 10-19 year olds (40.4% among 10-14 year olds and 70.8% among 15-19 year olds) and highest among 30-34 year old women (90.4%). Induced abortions were most common within the lowest age groups, decreasing to 8% of pregnancies among 30-34 year olds, and then increasing slightly among older women. Reported fetal deaths were rare and comprised 0.38% of reported pregnancies (Table 3.2.2).[40]

Table 3.2.2: Outcomes for Reported Pregnancies by Maternal Age, Maine, 2006 - 2008

	All pregnancies	Live births		Fetal Deaths		Induced abortion	
Maternal age	Average # of pregnancies per year	Annual average #	%	Annual average #	%	Annual average #	%
10 – 14	17	7	40.4	0	0.0	10	59.6
15 – 19	1,605	1,136	70.8	7	0.4	461	28.7
20 – 24	4,503	3,567	79.2	18	0.4	919	20.4
25 – 29	4,701	4,112	87.5	13	0.3	576	12.2
30 – 34	3,502	3,165	90.4	13	0.4	324	9.3
35 – 39	1,843	1,630	88.5	7	0.4	206	11.2
40 – 44	395	315	79.8	4	0.9	76	19.2
45 – 54	24	21	87.5	0	0.0	3	12.5
Total [a]	16,621	13,956	84.0	63	0.4	2,603	15.7

[a] Includes a total of 92 women with unknown age during period 2006 - 2008.
Note: Rates with a small number in the numerator will have substantial random variation over time (a large standard error), caution should be taken when making comparisons or assessing trends with rates calculated with fewer than 20 events.

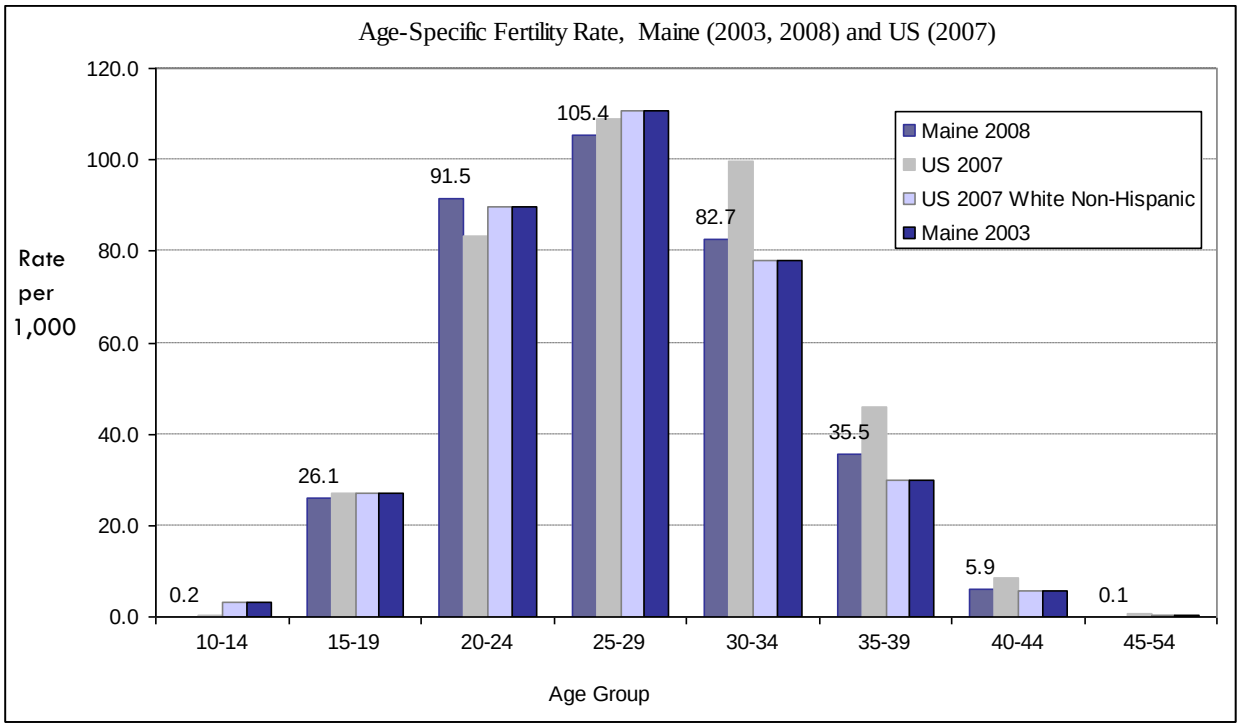
Data Source: 2006 - 2008 Maine Vital Records Data; preliminary 2008 resident data

Fertility Rate

Fertility rates can be used to estimate changes in population growth, and accordingly, to plan for appropriate systems of care and support.[38] The general fertility rate is expressed by the number of live births in a given population divided by the female population age 15-44 years and is reported per 1,000 population. In addition to the general fertility rate, age-specific fertility rates (generally referred to as birth rates) are displayed below.

In a comparison of 2008 Maine birth data to 2007 data from the NCHS, the fertility rate among women ages 15-44 was approximately 20% lower in Maine than among U.S. women overall (55.6 vs. 69.5 per 1,000) and 7% lower than among non-Hispanic white U.S. women.[46] Maine's fertility rate was similar to other states in the Northeast region, including Vermont, New Hampshire, and Rhode Island.[46, 47] Similar to national patterns, the birth rate was highest among women between the ages of 25-29 (105.4 per 1,000), followed by women in their early twenties (91.5 per 1,000), and women in their early thirties (82.7 per 1,000; Figure 3.2.1; Table 3.2.3). In general, Maine's fertility rate has not changed in recent years (e.g., 54.5 per 1,000 in 2008 and 52.0 per 1,000 in 2003), though recent rates are significantly lower than rates of two decades ago (58.2 per 1,000 in the period 1989-1993).[40]

Figure 3.2.1: Fertility Rates by Age Group, Maine and United States



Data source: 2003, 2008 Maine Vital Records Data and 2007 National Center for Health Statistics

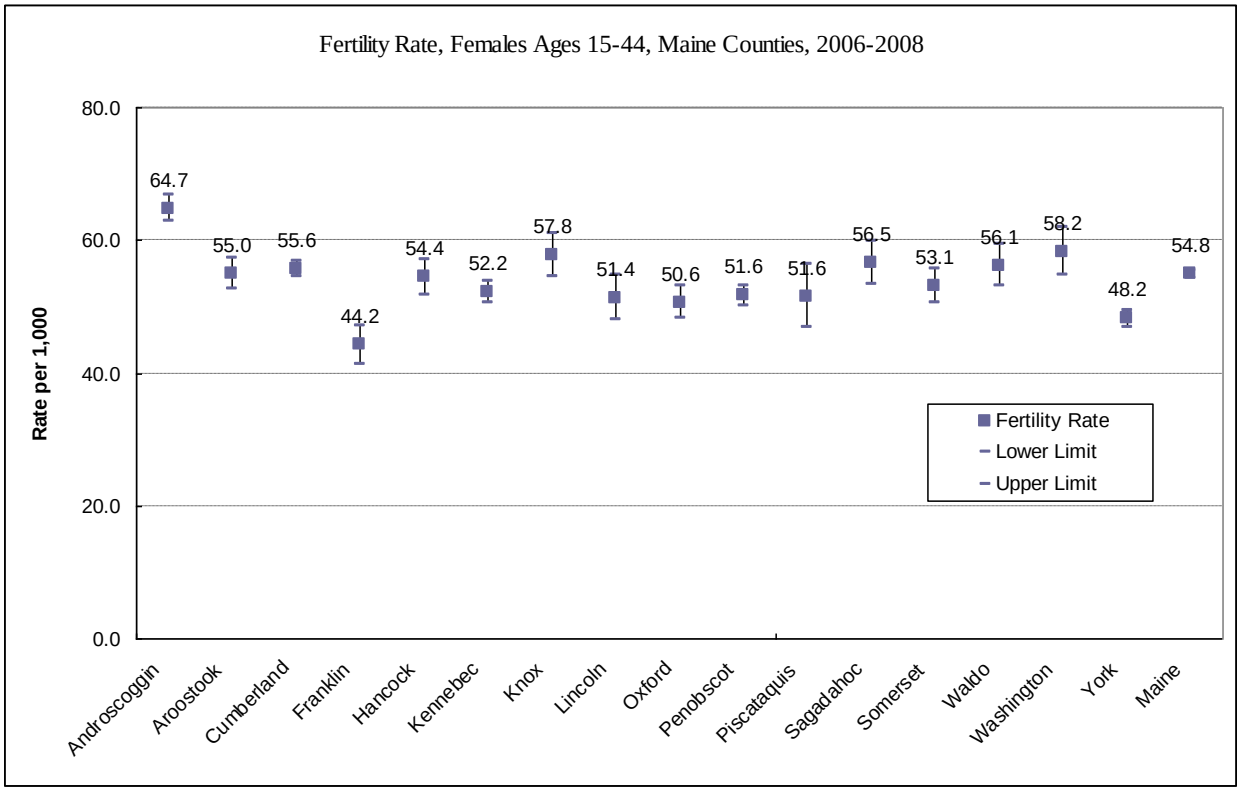
Table 3.2.3:Age-Specific Fertility Rate (per 1,000 Women), Maine and United States, 1999 - 2008

Maternal age	Maine 2008 per 1,000 Women	U.S. 2007 per 1,000 Women	U.S. Non-Hispanic White 2007 per 1,000 Women	Maine 1999-2003 per 1,000 Women
10 – 14	0.2	0.6	0.2	0.2
15 – 19	26.1	42.5	27.2	27.2
20 – 24	91.5	106.4	83.3	89.9
25 – 29	105.4	117.5	108.8	110.8
30 – 34	82.7	99.8	99.7	78.1
35 – 39	35.5	47.5	45.8	29.8
40 – 44	5.9	9.5	8.6	5.6
45 – 54	0.1	0.6	0.6	0.3
Total	54.5	69.5	60.1	51.1

Data Source: 1999 - 2008 Maine Vital Records Data and 2007 NCHS Data

There is regional variation in the fertility rate across Maine (Figure 3.2.2). The rate is highest among women in Androscoggin County (64.7 per 1,000) and is lowest in Franklin and York counties (44.2 and 48.2 per 1,000, respectively).[40]

Figure 3.2.2. Fertility rates among females age 15-44 by county, Maine, 2006-2008



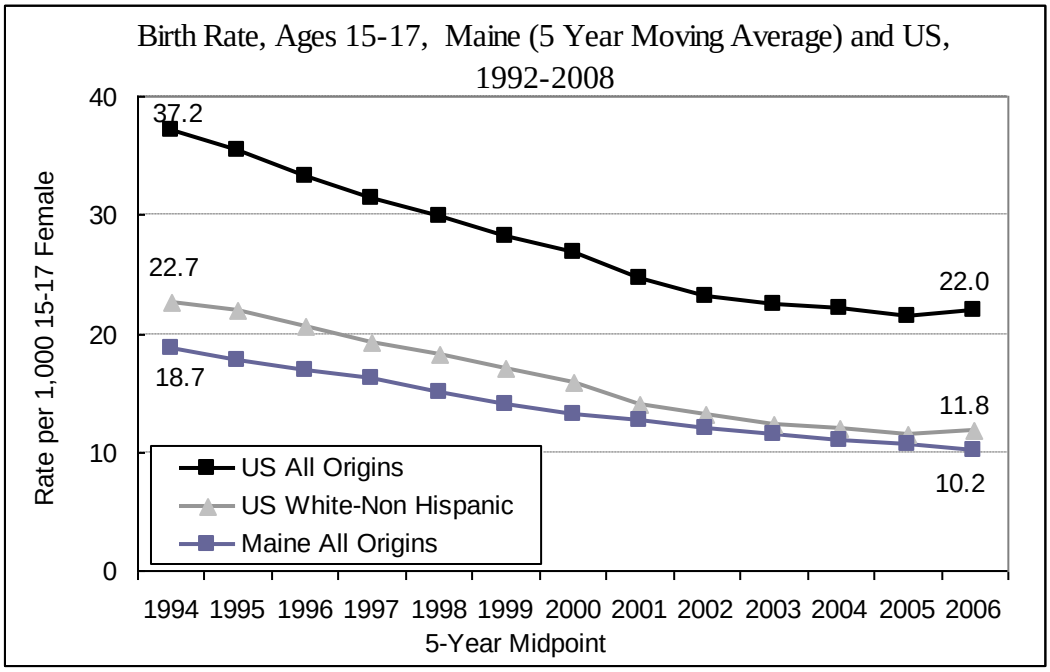
Data source: 2006-2008 Maine Vital Records Data, US Census

Birth Rate (Age-Specific Fertility Rate) among Teens

The birth rate among teens aged 15 to 19 in Maine was 26.1 per 1,000 15-19 year old female population, a rate equivalent to approximately one birth for every 38 adolescent females. In 2008, there were 268 births to teen mothers between the ages of 15 and 17; accounting for 2.0% of Maine births.[40]

The birth rate among teens aged 15-17 has been declining since the early 1990s, similar to national trends (Figure 3.2.3). In Maine, the 5-year average birth rate among teens aged15-17 declined by 45% between the periods of 1992-1996 and 2004-2008. The birth rate declined among teens aged 15-17 of all races/ethnicities and among non-Hispanic white teens (by 41% and 48% respectively). Maine's teen birth rate has been consistently lower than the U.S. rate. Based on data between 2004 and 2008, Maine's rate of teen births was 10.2 per 1,000 females aged 15-17 compared to 22.0 per 1,000 in the United States. [40],[48] Maine's rate is slightly lower than the rate among U.S. non-Hispanic white adolescents (11.8 per 1,000). Maine is ranked third lowest in the nation on this measure.[48]

Figure 3.2.3: Birth rates among adolescents age 15-17 years, Maine and the U.S., 1992-2008



Data source: 1992-2008 Maine Vital Records Data and 1993-2006 NCHS Data

Live Births

There were 13,604 live births to Maine residents in 2008.[40] Additional birth-related data can be found in the "Infant Health" section of this document.

Method of Obstetric Delivery

The distribution of delivery method among Maine residents in 2008 was similar to 2007 U.S. births. Nearly seven in ten Maine births were delivered vaginally and approximately 30% by Cesarean section (C-section). Rates of Cesarean delivery have increased by more than 40% over the past decade in Maine and the U.S (Table 3.2.4). A HP2010 objective is to reduce first time C-section deliveries to no more than 15% of all live births.[49] In Maine, the 2008 percentage of live births that were delivered through primary C-section was 18.8%; 11.8% of live births were delivered through repeat C-section.[40]

Throughout Maine, the percentage of deliveries that occurred through C-section (either primary or repeat) ranged from 26.3% to 31.7%. In 2004-2008, a lower percentage of women in Hancock (26.3%) and York (27.4%) counties gave birth by C-section than Maine women overall (29.5%). The rate of C-section increased with maternal age; nearly 38% of women ages 35 and older who gave birth between 2006 and 2008 had C-section deliveries. The most dramatic increase in C-section deliveries occurred among teens: between 1999 and 2008, C-sections among 10-19 year olds increased by 61% (from 14.4% to 23.2%).[40] Maine's distribution of C-section by maternal age is similar to the U.S. overall (Table 3.2.5).[48]

Table 3.2.4: Percent of Births with Cesarean Delivery (Primary and Repeat), Maine and United States, 1999 - 2008

	Maine			U.S.
Year	% Primary C-section	% Repeat C-section	% Total C-section	% Total C-section
1999	13.1	8.4	21.5	22.0
2000	14.7	8.3	22.9	22.9
2001	14.6	9.7	24.2	24.4
2002	15.8	10.1	25.9	26.1
2003	16.4	10.0	26.4	27.5
2004	16.8	11.0	27.8	29.1
2005	17.7	10.7	28.3	30.3
2006	18.3	11.7	30.0	31.1
2007	18.4	11.7	30.1	31.8
2008	18.8	11.8	30.5	--

Data Source: 1999 - 2008 Maine Vital Records Data and NCHS Data

Table 3.2.5: Rate of Cesarean Delivery (Primary and Repeat) (per 100 Births), by Maternal Age, Maine and United States, 1999 - 2008

Age Group	Maine 1999 - 2001	Maine 2006 -2008	U. S. 2006
All ages	22.9	30.2	31.1
Under 20	14.4	23.2	22.2
20-24	19.8	25.9	26.4
25-34	24.0	31.4	32.1
35 and above	30.4	37.6	42.1

Data Source: 1999 - 2008 Maine Vital Records Data and NCHS Data

Maine's rate of vaginal birth after cesarean (VBAC) delivery is slightly lower than in the U.S. overall (5.6 vs. 7.6 per 100, respectively), less than 1% of Maine's total births are delivered vaginally after a previous C-section.[40],[48] VBAC is offered only by facilities equipped to handle emergency C-sections, since VBAC includes risk of rupture of a C-section scar or the uterus during labor. Throughout Maine between 2004 and 2008, VBAC ranged from 3.0% in Penobscot county to 9.3% in Piscataquis county. The percentage of VBAC deliveries in Penobscot County was significantly less than among Maine women overall (3.0 vs. 5.8%, 2004-2008, data not shown).[40]

Delivery Characteristics (Location and Attendant)

Delivery Location

Over the past five years, less than 2% of births to Maine residents were delivered out-of hospital; this corresponded to an average of 200 births per year. Of these, nearly three-quarters were at-home births (1.1% of total births), and one-quarter were in free-standing birthing centers (0.3%

of total births).[40] The remaining out-of hospital births occurred in a clinic or doctor's office or the location was not specified (Table 3.2.6). It is important to note that it is not possible to determine from birth certificate data whether the location of delivery was intended or unintended.

The distribution of delivery location in Maine residents has been similar to U.S. births overall. A slightly greater proportion of home births occurred in Maine than in the U.S. (1.1 vs. 0.6%).[48] Residents of Waldo and Hancock counties were more likely to give birth at-home than Maine women overall (3.7% and 3.1%, respectively vs. 1.1%; 2004-2008, data not shown). Educational attainment was positively related to having an out-of-hospital birth. Women who had greater than a high school education were less likely to have a hospital birth than Maine women with no post-secondary education (98.1% vs. 99.4%).[40]

Table 3.2.6: Birth Location, Maine Residents, 2004 - 2008

	Hospital	Freestanding birthing center	Clinic/ doctor office	Residence/ at-home	Other	Unknown
Average annual %	98.6	0.3	0.00	1.1	0.01	0.01
Average annual #	13,506	39	<1	144	2	<1

Data Source: Maine Vital Records Data, 2004-2008

High Risk Birth Facility

Very low birthweight infants (<1,500 grams; VLBW) are more likely to survive and thrive if they are born and cared for in an appropriately staffed and equipped facility. Birth facilities can be designated as Level I, II, or III, which correspond to increasing ability to manage high-risk births. Maine has two Level III facilities, which are the most advanced neonatal care facilities and have the staffing and technical capability to manage high-risk obstetric and complex neonatal patients. In Maine, further work is needed to identify women who are likely to have a high-risk birth, and to insure that these women give birth in an appropriate level facility. Between 2004-2008, 82% of Maine VLBW infants were born at Level III facilities. More than 130 VLBW infants were born at Level I or II facilities. Between 1999 and 2008, the five-year moving average of VLBW infants delivered at Level III facilities has ranged between 80.7% and 82.2%.[40] The HP2010 objective is to increase the proportion of VLBW infants born at Level III hospitals or sub-specialty perinatal centers to 90%.[49]

Access to appropriate level of care for a safe delivery was associated with maternal age, maternal education, and residence (Table 3.2.7). A greater proportion of younger mothers (<25 years old) delivered their VLBW infant at a Level I/II facility (22.2%) than older mothers (12.7%). A greater proportion of mothers with less than a high school education delivered their VLBW infant at a Level I/II facility (27.4%) than mothers with either a high school education (21%) or more than a high school education (9.3%). The geographic distribution of Level III facilities increases the challenge of improving the proportion of VLBW infants in Level III hospitals. To date, the only two counties in Maine that have achieved the HP2010 goal for VLBW infants born in Level III facilities are the counties that contain Maine's two Level III facilities (Penobscot and Cumberland). Mothers in Knox and Androscoggin counties have been significantly less likely than Maine mothers overall to deliver their VLBW infants in a Level III facility.[40]

Table 3.2.7: Characteristics of Very Low Birthweight Births by Birth Facility Level, Maine, 2004 – 2008

	Level I or II		Level III	
	N	%	N	%
5 year total (2004 - 2008)	132	16.2	667	82.0
Maternal age				
< 20 years	20	22.0	70	76.9
20 - 24 years	46	22.6	155	76.0
25 - 34 years	59	14.5	330	83.5
35 + years	7	5.6	112	91.1
Mother's race				
White	116	15.3	626	82.8
Non-White	16	29.6	38	70.4
Education				
< High school	31	27.4	82	72.3
High school	61	21.0	226	77.9
> High school	37	9.3	348	87.9
Unknown	3		11	

Data Source: Maine Vital Statistics Data, 2004 - 2008

Delivery Attendant

The distribution of birth attendants in Maine differs from the U.S. as a whole. In 2008, 82% of all Maine births were attended by physicians (70.0% Doctors of Medicine and 12.1% Doctors of Osteopathy). [40] Nationally in 2007, 91.5% of births were attended by physicians (86.7% Doctors of Medicine and 4.8% Doctors of Osteopathy).[46] Within Maine, the proportion of births attended by osteopathic physicians has increased by 14% in the past decade, while the proportion of births attended by Doctors of Medicine has decreased by 8%.[40]

Between 1999 and 2008, there was a 42% increase in the proportion of Maine births attended by certified midwives. (Most midwife-attended births are by certified midwives. Less than 1% of Maine births were attended by non-certified midwives.)[40] In 2008, one in six Maine births (16.6%) was attended by a certified midwife;[40] nationally, 7.4% of all births were attended by certified midwives in 2007 (Table 3.2.8).[46] Nearly all births attended by Doctors of Medicine, Doctors of Osteopathy, and certified midwives were delivered in hospitals (99.3-100%), while 94.0% of births attended by non-certified midwives were home births.[40]

Table 3.2.8: Birth Attendant, Maine, 2004-2008

	Doctor of medicine	Doctor of osteopathy	Certified nurse midwife	Other midwife	Other	Unknown
2008: %	70.0	12.1	16.6	1.0	0.3	<0.1
2004 - 2008: Average %	72.3	11.6	14.7	0.9	0.4	<0.1
2004 - 2008: Average #	10,110	1,626	2,056	127	55	7

Data Source: 2004-2008 Maine Vital Records Data

There is significant geographic variation in birth attendant in Maine. Based on births between 2004 and 2008, residents of Franklin and Sagadahoc Counties were more likely to have a birth attended by a doctor of medicine than Maine women overall (87.9% and 84.1%, respectively, vs. 72.3%). Residents of Somerset and Kennebec counties were more likely to have a birth attended by a doctor of osteopathy than Maine women overall (26.5% and 23.6%, respectively, vs. 11.6%), while residents of Knox, Lincoln, and Hancock counties were more likely to have a birth attended by a certified midwife than Maine women overall (35.1%, 32.2% and 31.5%, respectively, vs. 14.7%).[40]

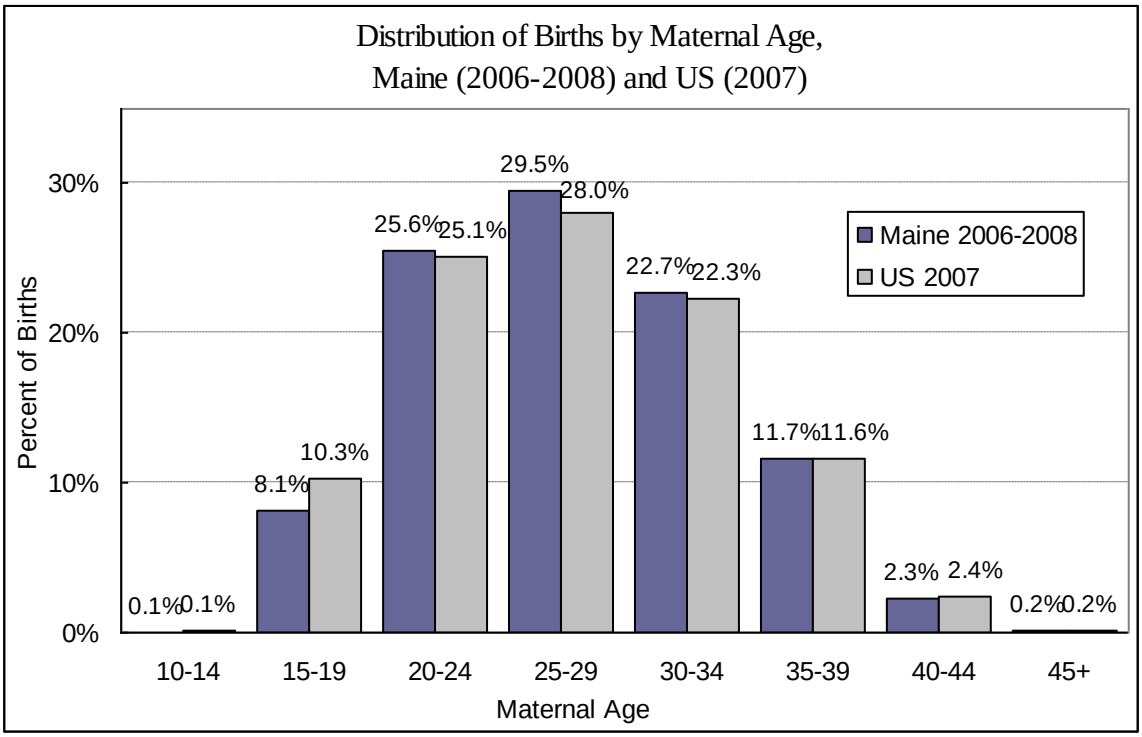
Maternal Characteristics

Maternal Age at Birth

In 2008, maternal age at the time of birth in Maine ranged from ages 13 to 52. Maine's mean maternal age was 27.5 years,[40] which was similar to the national mean (27.4 years) in 2006.[48] Maternal age at birth has not changed in the last decade (27.3 years in 1999). Among first-time mothers, the mean age at first birth was 25.6 years,[40] similar to the U.S. mean of 25.0 years in 2006. Nationally, 2006 marked the first decline in the mean age at first birth since the late 1960s.[48]

Between 2006 and 2008, the largest proportion of Maine births was among women in their twenties (29.5% of births were among women age 25-29; Figure 3.2.4; Table 3.2.9). Less than 1% of births were to Maine women outside the ages of 15-44 (0.2% of births were to women aged 45 years or more and 0.1% of births were to women younger than 15 years). Teen mothers accounted for one in 12 Maine births.[40] The proportion of births born to teens between the ages of 15 and 19 years was slightly lower in Maine than in the US overall (8.1% vs. 10.3%).[46]

Figure 3.2.4:



Data source: 2006-2008 Maine Vital Records Data and 2007 NCHS Data

Table 3.2.9: Maternal Demographics, Maine and United States, 2006 - 2008

	Maine 2006 - 2008 %	U.S. 2006 %
Age		
Under 20	8.2	10.4
20 - 29	55.0	53.0
30 – 39	34.4	34.0
40 and above	2.4	2.6
Education		
Less than HS graduate	10.8	26.4
High school graduate	33.8	50.3
Post-high school education	55.0	23.3
Hispanic	1.6	24.4
Black	2.4	15.7
Marital status - Married	62.9	61.5
Parity		
Without previous live birth	44.6	39.8
With 1 previous live birth	33.6	31.8
With 2 or more previous live births	21.8	27.9
Plurality		
Singleton	96.8	96.6
Twins	3.1	3.2

Data Source: 2006 - 2008 Maine Vital Records Data; and National Center for Health Statistics

Maternal Education

Nearly nine of 10 Maine births were to mothers with at least a high school education, a proportion higher than in the U.S. overall (89.2 [48] vs. 73.6%[40]; Table 3.2.9).

Maternal Race/Ethnicity

Less than 2% of Maine births were among Hispanic women and 2.4% of births were among black women. The proportion of births among Black women in Maine recently has increased slightly, from an average of 113 births per year in 1994-2003 to an average of 332 births per year in 2006-2008 (0.8% and 2.4%, respectively; Table 3.2.10).[40] This increase is partially attributable to immigration patterns to Maine over the last decade.[50] Of the black women giving birth in recent years, nearly 50% were of Somali origin and eight percent were of Sudanese origin.[40]

Table 3.2.10: Maternal Race, Live Births, Maine Resident Data, 1994 - 2008

	1994 – 2003		2006 – 2008 [a]	
Maternal race	Annual average #	%	Annual average #	%
White	13,349	96.9%	13,236	94.9%
Black	113	0.8%	332	2.4%
Asian/Pacific Islander	177	1.3%	233	1.7%
American Indian/Native American	103	0.7%	111	0.8%
Other	4	<0.1%	25	0.2%
Unknown	31	0.2%	16	0.1%
Average annual births	13,777		13,826	
[a] 2008 data are preliminary				

Data Source: 1994 - 2008 Maine Vital Records Data

Marital Status

Similar proportions of Maine and U.S. births were to married women (62.9%[40] vs. 61.5%[46]).

Paternal Age at Conception

Based on 2004-2007 Maine PRAMS data, paternal age at the time of conception ranged between 12 and 59 years. Less than 6% of fathers were less than 20 years; 18.3% were between 20 and 24 years; 52% were between 25 and 34 years; and 23.7% were older than 35 years. Nearly 71% of births to Maine women under the age of 20 were fathered by men under the age of 20.[51]

Maternal Parity, Interpregnancy Interval

Between 2006-2008, nearly one-third of births were to women with one previous live birth and 21.8% were to women with two or more previous live births. A greater proportion of Maine births were to first-time mothers (44.6%)[40] than in the U.S. overall (39.8%).[46]

An objective of HP2010 is to reduce the proportion of births occurring within 24 months of a previous birth to 6% or less.[49] Based on data from Maine PRAMS, 11.2% of Maine mothers gave birth within less than 2 years of a previous birth. The interpregnancy interval among women with a previous live birth ranged between 0 and 24 years in the period 2004- 2007.[51]

Plurality

Most Maine births between 2006-2008 were singleton births (96.8%), which is similar to the U.S. overall,[46] and has remained steady over the past decade.[48]

Preconception Care

Planning for pregnancy and maintaining good health prior to pregnancy improve a woman's chance of having a healthy pregnancy and baby. Health promotion activities aimed at improving preconception care can include providing education, screening, and interventions for women of reproductive age, including those not actively trying to become pregnant, to reduce risk factors that negatively affect maternal and infant health.[52],[53]

Pre-pregnancy Healthcare Consultation

According to 2004 – 2007 Maine PRAMS data, 32.0% of women who recently gave birth had received preconception care from a doctor, nurse, or other health care worker. Women who reported that their most recent pregnancy was intentional were more likely to have had a prepregnancy consultation than women who were not actively trying to become pregnant (51.6% vs. 10.7%). Women who reported a prepregnancy consultation were more likely to have taken a multivitamin or prenatal vitamin at least four times a week in the month before they got pregnant than women with no prepregnancy consultation (56.6% vs. 15.8%).[51]

Preconception care was positively related to maternal age, educational attainment, and receiving private insurance. The older a woman was at the time of her most recent pregnancy, the more likely she was to receive preconception care. For example, 46% of women who were 35+ years old consulted a healthcare professional to prepare for a healthy pregnancy compared to 13% of women who were less than 20 years old. Women with more years of formal education were more likely to consult a healthcare professional to prepare for a healthy pregnancy. For example, 41.5% of women who earned more than a high school education consulted a healthcare professional before pregnancy compared to 20.9% of women who earned a high school diploma and 15.8% of women who had less than a high school education. One in five women (~20%) who were covered by MaineCare had a discussion with a health care worker about a healthy pregnancy compared to 41.3% of women who had health insurance other than MaineCare.[51]

Contraception/Family Planning

According to data from the 2004 Maine BRFSS, 74% of Maine women between 18 and 44 years old were trying to prevent becoming pregnant. The primary birth control methods reported by women were surgical procedures (45.4%), birth control drugs (34.1%), and condoms (13.8%). Among the women not currently pregnant and not using birth control, 34.8% indicated that they wanted to become pregnant or did not care if they became pregnant. When asked how they felt about having a child sometime in the future, 44.6% of Maine women indicated that they wanted to have a child, 31.4% did not want a child, and 23.9% were ambivalent. Of women not currently pregnant, 17.4% wanted to have a child in the next year.[54]

Based on PRAMS data, the majority of new mothers in Maine reported they or their partners were using contraception to prevent pregnancy after their most recent birth (85.4%). Eighty-five percent of new mothers reported discussing post-pregnancy birth control methods with a health care provider during a prenatal care visit, and 88.6% were asked by their provider if they planned to use birth control after the birth of their baby.[51]

Unintended Pregnancy

Unintended pregnancy is defined as the percent of new mothers who reported on PRAMS that they had not wanted to become pregnant at the time they conceived (i.e., they wanted to become pregnant later or not at all). Based on data from 2004-2007 PRAMS, about 1 in 3 (37%) new mothers in Maine reported that the birth of their most recent child was unintended. This is likely an underestimate of unintended pregnancy because many unwanted pregnancies do not result in

a live birth. Of new mothers who reported an unintended pregnancy, 47% were not doing anything to keep them from getting pregnant.[51]

The percent of new mothers reporting an unintended birth has increased in recent years in Maine from 33.5% in 2002 to 38.5% in 2006, but this change is not statistically significant.[51]

In 2004-2007, the highest percent of unintended births occurred among youth under the age of 20 years; among new mothers under the age of 20 years, 71.3% reported that the birth was unintended. Thirty-six percent of new mothers 20-34 years old reported that their birth was unintended and 24.1% of mothers age 35 and older reported that their birth was unintended.[51]

One of Maine's MCH state performance measures tracks the percent of unintended births among youth under the age of 24. In 2007, 56.8% of births in this age group were unintended. Similar to the percent of unintended births overall, the percent of unintended births among this population has increased over time since 2004,from 46.9% to 56.8% but remains lower than it was earlier this decade; between 2000-2002, the average percent of unintended births was 61.7%.[51]

Based on 2004-2007 PRAMS data, having an unintended birth was not associated with race or ethnicity among Maine women, but was related to indicators of socioeconomic status, including income, educational attainment, and health insurance. Women with an annual household income of less than $50,000 per year were more likely to report an unintended birth compared to women with household incomes of $50,000 or more. More than half of women with household incomes less than $25,000 and 31.7% of women making $25,000-$49,999 reported an unintended birth, compared to 19% of those making $50,000 or more. We see the same pattern with poverty status and educational attainment. Women at 185% of the FPL or less were almost two times more likely than other women to have an unintended birth. In 2004-2007, 60% of women with less than a high school education reported an unintended birth compared to 21% of college educated women.[51]

Women who reported that their birth was unintended were less likely to have health insurance before their pregnancy than women who reported that their birth was intended (46.3% vs. 71.8%). Among women with health insurance, a greater proportion of women with MaineCare had an unintended birth compared to privately insured women (39.2% vs. 20.7%). Women with an unintended pregnancy were more likely to have been enrolled in WIC compared to women with an intended pregnancy (51.9% vs. 28.2).[51]

Unintended births are related to many factors that could negatively impact the health of women and infants. Women in Maine who had unintended births were less likely than other women to receive prenatal care in the first trimester (79% vs. 90%) and were less likely to receive at least adequate prenatal care as measured by the Kotelchuck Index (84% vs. 90%). Women who had an unintended birth were more likely to smoke during the last 3 months of their pregnancy (27% vs. 13%) and were 2 times more likely than other women to report experiencing three or more stressful life events prior to the birth of their child (48% vs. 23%). Women who reported an unintended birth were also more likely than other women to report experiencing domestic violence from a current or ex-partner during the 12 months prior to their pregnancy (6.8% vs.

2.6%) and to report abuse during their pregnancy (3.6% vs. 1.2%). Women who had an unintended birth were also more likely to report a diagnosis of depression after the birth of their child compared to women whose child was intended (19% vs. 11%).[51]

Unintended births were not more likely to be premature or to be born at a low birth weight. However, women who had not intended to get pregnant were less likely to report ever having breastfed their baby compared to women with intended births (71% vs. 84%).[51]

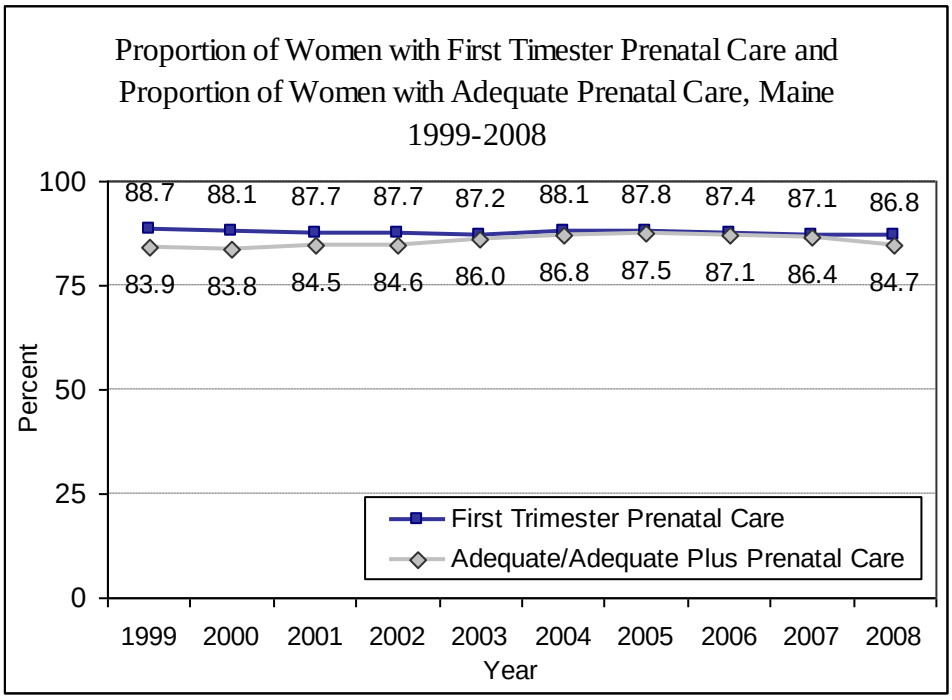
Prenatal Care: Entry and Utilization

Prenatal care is the comprehensive care that women receive and provide for themselves throughout their pregnancy. Early and ongoing adequate prenatal care is important to a healthy pregnancy and baby.[49]

Between 1999 and 2008, the average proportion of Maine women giving birth who received early prenatal care (defined as initiated in the first trimester) was 87.7% (Figure 3.2.6). Since 2003, this figure has remained fairly stable, with early prenatal care estimates ranging from 83.8%-87.5%.[40] Maine is close, but has not yet met the HM2010 and HP2010 goals of early prenatal care for 90% of live births.[49], [55] Maine's proportion is similar to that among U.S. non-Hispanic white women (88.1%).[48]

Between 1999 and 2008, the average proportion of Maine women giving birth who received adequate or greater than adequate prenatal care (defined as 80% or higher on the Kotelchuck Index) was 85.6%. Fewer women receive adequate prenatal care than the proportion of women who initiate prenatal care in the first trimester.[40]

Figure 3.2.6



Data source: 1999-2008 Maine Vital Records Data

Disparities

Inadequate prenatal care, including late initiation of care, infrequent prenatal visits, or no care at all, is associated with poor infant and maternal outcomes.[49] It remains important to identify who is less likely to receive early and adequate prenatal care, and focus public health efforts on them. Of Maine women who gave birth in 2008, nearly 1,800 (13%) did not initiate prenatal care in the first trimester of their pregnancy and more than 2,000 (15%) did not receive adequate prenatal care (Table 3.2.11).[40]

Table 3.2.11: Prenatal Care Initiation, Maine Resident Data, 2008

Prenatal Care Initiation	#	%
First trimester	11,813	86.8
Second trimester	1,495	11.0
Third trimester	236	1.7
None	51	<1.0
Unknown	69	<1.0

Data Source: 2008 Maine Vital Records Data

In 2008, women were less likely to receive early prenatal care if they were younger, less educated, or a race other than white (Table 3.2.12). The proportion of adolescent mothers who received prenatal care in the first trimester was 77.5% and the proportion who received adequate or adequate plus prenatal care was 77.9%. In comparison, the proportion of women in older age groups who received early prenatal care and adequate prenatal was 84% and greater. Women of color were less likely to receive both early and adequate prenatal care. The proportion of non-white Maine mothers who received prenatal care in the first trimester was 78.6%; among white women the proportion was 87.4%. A similar difference was observed in the proportion of non-white Maine women who received adequate or adequate plus prenatal care (78.3%) compared to white women (85.1%). Women without a high school diploma were less likely to receive both early and adequate prenatal care. The proportion of women without a high school diploma who received prenatal care in the first trimester was 73.0%, compared to 85.3% of women with a high school diploma and 90.7% among women with post-secondary education. Similarly, the proportion of women without a high school diploma receiving adequate or adequate plus prenatal care was 71.7% compared to 84.1% among women with a diploma and 87.9% among women with post-secondary education.[40] In addition, women who were unmarried, had MaineCare insurance or were uninsured prior to their pregnancy, had an unintended pregnancy, or had recently experienced multiple stressful life events (e.g., family illness or death, a divorce, moving, and problems with bills) were less likely to receive early prenatal care (data not shown). [51]

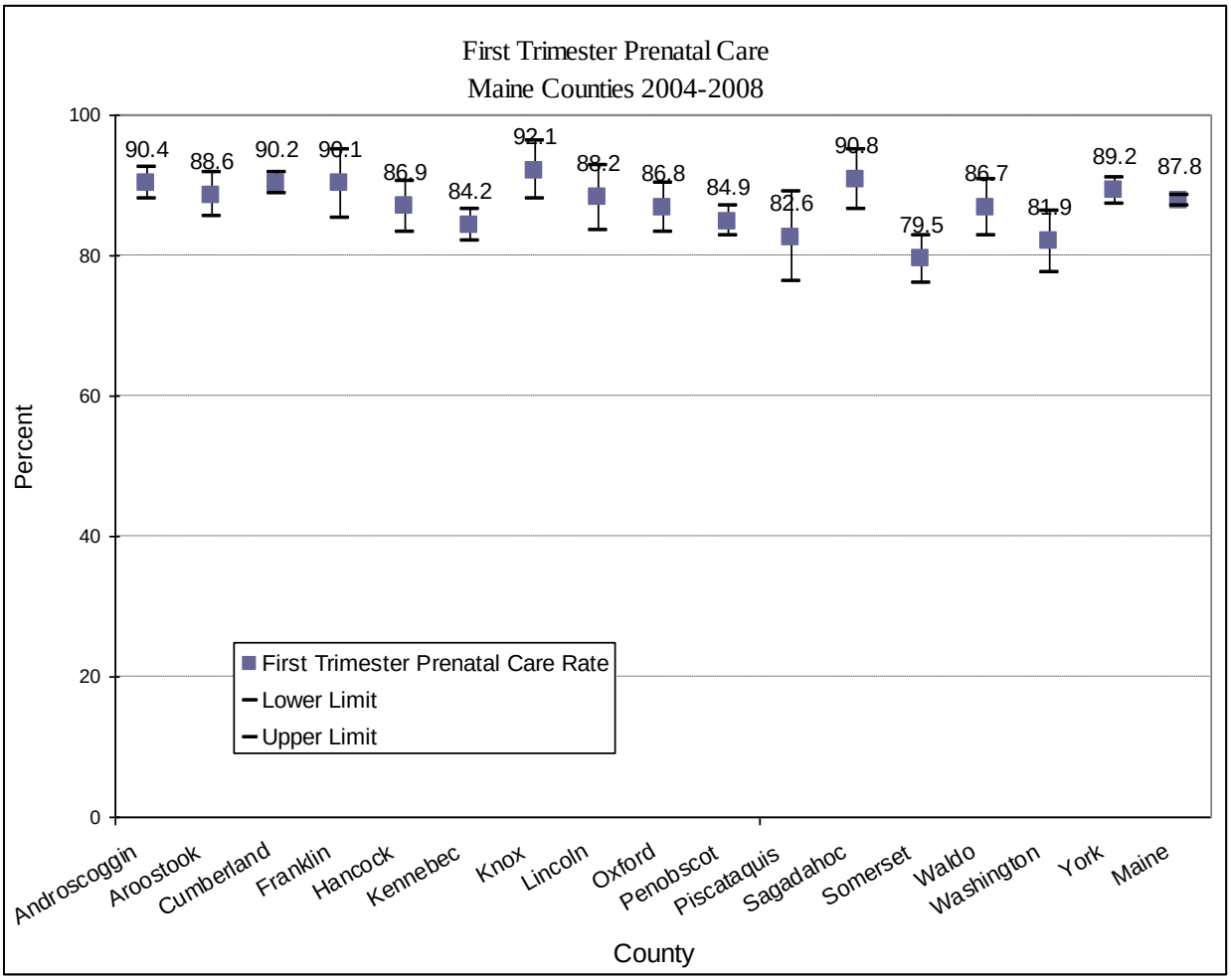
Table 3.2.12: Early Initiation and Adequate Prenatal Care, Maine, 2008

	Early initiation %	Adequate or adequate plus care %
Age		
< 20	77.5	77.9
20 – 24	84.7	83.7
25 – 34	89.1	86.3
35 +	87.9	84.4
Race		
White	87.4	85.1
Non-White	78.6	78.3
Education		
< High school	73.0	71.7
High school graduate	85.3	84.1
> High school	90.7	87.9

Data Source: 2008 Maine Vital Records Data

There is great geographic variation of prenatal care initiation among women in Maine's counties (Figure 3.2.7). Based on births between 2004 and 2008, residents of Somerset and Washington counties were less likely to receive first trimester prenatal care than Maine women overall (79.5% and 81.9%, respectively, vs. 87.8%). Women in the Downeast, Central, and Penquis public health districts were less likely to receive early prenatal care than women in other districts. Women in the Cumberland (80.8%) and Central (81.4%) districts were less likely to receive adequate prenatal care than Maine women overall (86.8%).[40]

Figure 3.2.7



Data source: 2008 Maine Vital Records Data

Approximately 13% of pregnant women who wanted prenatal care indicated that they did not receive it as early as they would have liked. Based on 2004-2007 PRAMS, among the women who entered prenatal care late, 33.2% indicated that they did not receive care as early as they would have liked. It was more common for women under the age of 20 to indicate that they did not receive prenatal care as early as they would have liked (25.2%) compared to any other age group (12.4% among women ages 20-34 and 9.8% among women ages 35 and greater). In addition, 22.3% of women with less than a high school education, 18.9% of women whose pregnancy was unintended, and 15.0% of women without a previous live birth indicated that they did not receive prenatal care as early as they would have liked. At least 5% of pregnancies were recognized after the first trimester, which is a limiting factor in the percentage of women who can be expected to receive early prenatal care.[51]

Barriers in Receiving Prenatal Care

Overall, 74.2% of women who wanted prenatal care reported that they experienced no problems receiving prenatal care, while 15.0% experienced one problem, and 10.7% experienced two or more problems. Of the women who entered prenatal care after the first trimester, 51.8% reported

experiencing no problems in getting prenatal care, while 21.0% experienced one problem, and 27.3% experienced two or more problems.[51]

There are many reasons why women may not receive early prenatal care, including structural, financial, and personal factors (Table 3.2.13). The top five barriers identified by Maine women who received late or no prenatal care included: "I couldn't get an appointment when I wanted it" (14.3%), "I didn't have enough money or insurance to pay for my visits" (12.7 %), "I didn't have my Medicaid/MaineCare card" (10.0 %), "I had too many other things going on" (10.0%), and "the doctor or my health plan would not start care as early as I wanted" (7.3%). Nearly one in five PRAMS respondents who received late or no prenatal care provided (through write-in response) a reason other than those included on the questionnaire. Other problems included not knowing they were pregnant early enough, denial or ambivalence about their pregnancy, problems in finding a provider, and problems finding a provider who would accept MaineCare. A few women indicated that a doctor or midwife stated they would not begin prenatal care visits until the 12th week of pregnancy.[51]

Table 3.2.13: Prenatal Care Barriers, Maine, 2004 - 2007

Women who indicated that any of the following were "…a problem for you during your most recent pregnancy"	Among women with early prenatal care [a]		Among women with late or no prenatal care [a]	
	%	95% CI	%	95% CI
I couldn't get an appointment when I wanted one	7.0	6.2 - 8.0	14.3	10.8 - 18.8
I didn't have enough money or insurance to pay for my visits	3.8	3.2 - 5.5	12.7	9.5 - 16.8
I had no way to get to the clinic or doctor's office	2.7	2.1 - 3.4	9.0	6.1 - 13.0
I couldn't take time off from work	2.7	2.2 - 3.3	6.0	3.8 - 9.4
The doctor or my health plan would not start care as early as I wanted	4.8	4.1 - 5.6	7.3	4.8 - 11.0
I didn't have my Medicaid/MaineCare card	4.4	4.1 - 5.6	10.0	7.1 - 13.9
I had no one to take care of my children	3.4	2.8 - 4.2	7.8	5.1 - 11.6
I had too many other things going on	2.9	2.3 - 3.6	10.0	7.1 - 13.9
I didn't want anyone to know I was pregnant	2.4	1.9 - 3.1	8.2	5.5 - 12.0
Other	5.1	4.2 - 6.2	19.1	14.3 - 25.0
[a] Prenatal care initiation as recorded on birth certificate linked to PRAMS record				

Data Source: 2004 - 2007 Maine PRAMS Data

Characteristics of Prenatal Care

According to 2004-2007 PRAMS data, 57.8% of Maine women received most of their prenatal care at a private doctor's office or Health Maintenance Organization (HMO), 15.0% from a midwife, 8.5 % at a hospital clinic, 7.0% at a rural health center, and 6.2% in a family practice residency.[51]

Nearly three-quarters (73.1%) of women who received prenatal care reported their prenatal care was paid for by one source; one in five had prenatal care costs paid for by two sources. More than half (55.8%) of new mothers reported that health insurance covered part or all of their prenatal care visit costs, 44% reported that MaineCare or Medicaid covered part or all of their prenatal care visits, and 15.8% reported that all or part of their prenatal care was paid for by personal income. One in eight new mothers indicated they still owe money for prenatal care bills.[51]

Content of Provider Prenatal Care Discussions

Prenatal care offers important opportunities for providers to counsel patients about behaviors and conditions that may impact maternal and infant health outcomes. Findings from PRAMS data suggest that prenatal care providers do not always provide all pregnant women with maternal health care information about risk behaviors, pregnancy complications, or prenatal care procedures. Most Maine women received counseling on topics that may impact maternal and infant outcomes, but the percentage of women who received counseling about specific topics varies considerably (Table 3.2.14). Ninety-three percent of women reported receiving counseling about birth defects screening, while the percentage of women who reported a discussion about intimate partner violence was much lower (47.2%). One in eight new mothers reported they had not had a discussion with their health care provider about what to do if their labor began early, one in 10 had not had a discussion about breastfeeding during a prenatal care visit, and one in 14 women had not discussed screening for birth defects or genetic disease.[51]

Table 3.2.14: Prenatal Care Provider Discussion Content, Maine, 2004 - 2007

"During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the following? Include distribution of reading materials and video watching."	%	95% CI
Doing tests to screen for birth defects or diseases that run in my family	92.7	91.7 - 93.5
Medicines that are safe to take during my pregnancy	91.8	90.9 - 92.7
Breastfeeding my baby	89.8	88.8 - 90.7
What to do if my labor starts early	87.7	86.6 - 88.8
Birth control methods to use after my pregnancy	84.5	83.2 - 85.6
Getting tested for HIV (the virus that causes AIDS)	79.1	77.8 - 80.4
How smoking during pregnancy could affect my baby	78.0	76.6 - 79.3
How drinking alcohol during pregnancy could affect my baby	77.2	75.8 - 78.6
How using illegal drugs could affect my baby	68.9	67.3 - 70.4
Using a seat belt during my pregnancy	57.5	55.8 - 59.1
Physical abuse to women by their husbands or partners	47.2	45.5 - 48.8
"During any of your prenatal care visits, did a doctor, nurse, or other health care worker ask you…	%	95% CI
How much alcohol you were drinking	75.1	73.7 - 76.5
If someone was hurting you emotionally or physically	48.8	47.1 - 50.4
If you were using illegal drugs	68.9	67.4 - 70.4
If you wanted to be tested for HIV	75.4	73.9 - 76.7
If you planned to use birth control after your baby was born	86.6	85.5 - 87.7

Data Source: 2004 - 2007 Maine PRAMS Data

Maternal Health-Related Behaviors

Assessing pre-pregnancy risk is a key component of the understanding the health of pregnant women and their infants. Health risks and modifiable behaviors that are known to affect pregnancy outcomes include weight, tobacco use, folic acid intake, alcohol use, and oral health.

Prepregnancy Body Mass Index

Data from PRAMS allow the calculation of prepregnancy body mass index (BMI) based on self-reported height and weight. A BMI of less than 19.8 is classified as underweight, overweight if between 26.0 and 29.0, and obese if greater than 29.0. According to Maine PRAMS data, nearly one in four (24.2%) new mothers were classified as obese before their most recent pregnancy, 12.7% were classified as overweight, and one in ten women were classified as underweight.[51] Among the 26 PRAMS reporting areas/states in 2004, the prevalence of prepregnancy obesity was 21.9%, ranging from 15.7% in Utah and 26.6% in Arkansas.[53]

The prevalence of prepregnancy obesity was highest among women aged 20-35 years (25.6%), Hispanic women (37.2%), and women with MaineCare coverage (29.0%). Women with a previous live birth (27.0%), women with an interpregnancy interval of less than two years

(34.1%), and women who exercised less than one day a week (31.4%) were also more likely to be obese prior to their pregnancy. Obesity prior to pregnancy was also associated with health conditions such as prepregnancy diabetes (43.9%), gestational diabetes (42.7%), and a history of hypertension.[51]

Pregnancy Weight Gain

Pregnancy weight gain recommendations are based on maternal height and weight, as well as other factors. According to Maine birth certificate data, Maine women are more likely than U.S. women to report insufficient (inadequate) weight gain and less likely than U.S. women to report excessive weight gain during pregnancy. A limitation of the birth certificate data is that maternal BMI cannot be calculated, only total weight gained during pregnancy is recorded. Among live births in Maine in 2008, 16.8% of births were to women who gained less than 16 pounds during pregnancy,[40] which is considered inadequate for most women (Table 3.2.15). This proportion of inadequate weight gain is greater than among U.S. women (13.1%).[48]

An additional 15.8% of Maine women reported weight gain greater than 40 pounds, which is considered excessive for all pregnancies (Table 3.2.15).[40] Maine's rate of excessive pregnancy weight gain was lower than the proportion reported among U.S. women (20.7%).[48] The proportion of Maine women with adequate pregnancy weight gain has varied little, ranging from 70.2% in 1999 to 67.3% in 2008.[40]

Table 3.2.15: Pregnancy Weight Gain, Maine and US Resident Data, 2006, 2008

Weight gain	Maine 2008 %	U.S.2006 %
< 0 - 15 pounds	16.8	13.1
16 - 40 pounds	66.7	66.2
> 40 pounds	15.8	20.7

Data Source: 2008 Maine Vital Records Data

Tobacco

Tobacco use preconception can cause reduced fertility and conception delay, tobacco use during pregnancy increases the risk for pregnancy complications, and exposure to secondhand smoke after delivery increases an infant's risk for respiratory tract, ear infections, and sudden infant death syndrome (SIDS).[48] Two HP2010 objectives address smoking during pregnancy: 1) to reduce the prevalence of cigarette smoking among pregnant women to 1%, and 2) to increase the percentage of pregnant smokers who stop smoking during pregnancy to 30%.[49]

In 2008, more than one in six (16.2%) Maine birth certificates indicated tobacco use during pregnancy. The reported number of cigarettes smoked per day ranged from 1 to 40 cigarettes.[40] According to 2004-2007 PRAMS data, one-third of Maine mothers smoked at least 100 cigarettes in the last 2 years; 31.3% reported smoking in the 3 months prior to getting pregnant, 18.6% reported smoking during the last 3 months of pregnancy, and 23.1% reported continuing, resuming, or beginning smoking after giving birth (Table 3.2.16).[51]

Previous studies have shown that women tend to underreport smoking and over report quitting. More pregnant smokers are identified through PRAMS than birth certificates,[48] even though the PRAMS question limits tobacco use to the last three months of pregnancy, while the birth certificate records tobacco use during any point in pregnancy. A similar finding was observed in Maine; 15.2% of PRAMS linked birth certificates (95% CI 14.2-16.5%) indicated tobacco use at any time during pregnancy, while 18.6% (95% CI 17.3-20.0%) of PRAMS respondents had self-reported tobacco use during the last three months of pregnancy.[51] One could conclude that the proportion of Maine women who smoked at any time during their pregnancy was probably greater than 18.6%, since women would likely quit only after they realized that they were pregnant.

Between 2004 and 2007, the proportion of smokers who abstained during pregnancy was 40.3%. Of the Maine mothers who had quit smoking during pregnancy, 60.4% remained quit after delivery. [51]

Thirty-four percent of women under the age of 20 smoked cigarettes in the last 3 months of pregnancy. Smoking during pregnancy was inversely related to age, and only 7% of women 35 years or older reported smoking during the last 3 months of their pregnancy. Forty-five percent of women who had less than a high school education smoked cigarettes in the last 3 months of pregnancy. Smoking during pregnancy was inversely related to educational attainment; seven percent of women with more than a high school education reported smoking during the last 3 months of their pregnancy.[51]

Table 3.2.16: Tobacco Use, Maine, 2004 - 2007

Pregnancy smoking status	%	95% CI
Nonsmoker before and during pregnancy	68.8	67.2 - 70.4
Pre-pregnancy smoker who abstained during last 3 months of pregnancy	12.5	11.5 - 13.7
Pre-pregnancy smoker who smoked less during last 3 months of pregnancy	13.0	11.9 - 14.2
Pre-pregnancy smoker who smoked same or more during last 3 months of pregnancy	5.6	4.8 -6.4

Data source: 2004 - 2007 Maine PRAMS Data

Tobacco Counseling

More than three of four new Maine mothers reported that during a prenatal health care visit, their health care provider discussed how smoking during pregnancy could affect their baby. Among women who smoked in the three months before they were pregnant and had received prenatal care, 72.8% received at least some form of prenatal counseling on smoking cessation, according to 2004 – 2007 data from PRAMS. Receiving prenatal smoking cessation counseling was significantly associated with insurance provider. Among prepregnancy smokers covered by private insurance, 53% received prenatal smoking cessation counseling compared to 78.6% of women whose prenatal care was paid for by MaineCare, or Medicaid.[51]

PRAMS data indicate that Maine women who smoked before their pregnancy may not be receiving the most effective smoking cessation treatment during their pregnancy (Table 3.2.17).

Only 62.7% of women reported that their prenatal provider spent time during a prenatal care visit discussing how to quit smoking. Less than one-third of pregnant women reported that they were referred to a national or state quit line, and 40.7% reported that their provider suggested they set a specific date to stop smoking. Few women reported that their provider prescribed or recommended a tobacco cessation aid such as a pill, nicotine gum, nicotine patch, or nicotine inhaler (Table 3.2.17).[51]

Table 3.2.17: Tobacco Cessation Activities during Prenatal Visits, Prepregnancy Smokers, Maine, 2004 - 2007

"During any of your prenatal visits, did a doctor, nurse, or other health care worker…"	%	95% CI
Spend time discussing how to quit smoking	62.7	59.4 - 66.0
Suggest that you set a specific date to stop smoking	40.7	37.4 - 44.1
Prescribe a nicotine nasal spray or nicotine inhaler	4.9	3.6 - 6.6
Prescribe a pill like Zyban to help you quit	7.9	6.2 - 10.0
Recommend using nicotine gum	15.0	12.7 - 17.6
Recommend using a nicotine patch	22.6	19.8 - 25.6
Suggest you attend a class or program to stop smoking	21.0	18.4 - 24.1
Provide you with booklets, videos, or other materials to help you quit smoking on your own	39.5	36.2 - 42.9
Refer you to counseling for help with quitting	10.2	8.3 - 12.5
Ask if a family member or friend would support your decision to quit	33.8	30.6 - 37.1
Refer you to a national or state quit line	31.7	28.6 - 35.0

Data Source: 2004 - 2007 Maine PRAMS Data

Multivitamin/Prenatal Vitamin Use Before Pregnancy

A national HP2010 goal is to increase to 80% the proportion of women of childbearing age who consume 400 micrograms of folic acid daily.[49] Multivitamins or prenatal vitamins typically contain folic acid and when taken in sufficient amounts, can help reduce the risk of neural tube defects (NTD), particularly spina bifida and anencephaly. Studies have shown that 400 micrograms of folic acid taken daily before pregnancy can reduce the risk of having a child with a NTD by 50%. The majority of Maine women took an inadequate amount of multivitamins or prenatal vitamins in the month before pregnancy. According to 2004 – 2007 data from PRAMS, 60.3% of new mothers took a prenatal vitamin or multivitamin fewer than 4 times a week in the month before they got pregnant with their new baby.[51]

Taking a multivitamin or prenatal vitamin was positively associated with age and formal education. Among women 35 years and older, 58% took a multivitamin or prenatal vitamin at least 4 times a week, compared to 17% of women who were less than 20 years old. Roughly half (52%) of women who earned more than a high school education took a multivitamin, compared to 16% of women who earned less than a high school education.[51]

Alcohol

HP2010 objectives related to alcohol use include increasing the proportion to 95% of women who abstain from alcohol during their pregnancy and increasing to 100% the proportion of women who report no binge drinking during their pregnancy (four or more drinks on a single occasion).[49] In 2004-2007 PRAMS, 65.1% of Maine new mothers reported they had any alcohol in the three months before becoming pregnant; 9% reported alcohol use in the last three months of pregnancy.[51] According to national BRFSS data, the prevalence of alcohol use and binge drinking has not changed substantially in nearly two decades.[56]

Although abstaining from alcohol use during pregnancy is a goal for all women, not all pregnant women report discussions with prenatal health care providers on this topic. More than three of four new Maine mothers (77.2%) reported that during a prenatal health care visit, a health care provider had discussed how drinking alcohol during pregnancy could affect their baby, and 75.1% reported that their prenatal care provider asked them how much they were drinking during pregnancy.[51]

Oral Health

The 2007 PRAMS survey found that only 38.6% of Maine new mothers had had their teeth cleaned during their most recent pregnancy and 29.9% had had them cleaned after that pregnancy. (Note: These two groups are not mutually exclusive.) Over half (53.9%) of the new mothers did not report having their teeth cleaned either during or after their most recent pregnancy, indicating that they had most likely not had their teeth cleaned during the past year. Less than half (45.3%) of the women said that a dental or other health care worker had talked with them during their pregnancy about how to care for their teeth and gums.[57]

Maternal Morbidity/Pregnancy Complications

Maternal Medical Risks

Gestational diabetes and pregnancy-associated hypertension and were the two most common maternal medical risk factors recorded on birth certificates in 2008 (Table 3.2.18). Maine's rate of pre-pregnancy and gestational diabetes was slightly higher than the national rate (5.6 vs. 4.2 per 100 live births; Table 3.2.18).[40] According to 2007 PRAMS data, prevalence of gestational diabetes among new mothers in Maine did not vary by insurance status, race, income or education.[57]

Maine's rate of pregnancy-associated hypertension was slightly higher than the national rate (5.1 vs. 3.9 per 1,000 live births; Table 3.2.18).[40]

Based on 2004-2007 data from the Maine PRAMS linked birth certificates, among Maine mothers with a previous live birth, 13.1% had a previous low birthweight and/or preterm baby.[51]

Table 3.2.18: Maternal Medical Risks, Live Births, Maine Resident Data, 2008

Maternal medical risks	# of births where mother had condition	% of births
Anemia	260	1.9
Acute or chronic lung disease	286	2.1
Diabetes, gestational	648	4.8
Diabetes, pre-existing	103	0.8
Hydramnios/oligohydramnios	339	2.5
Hypertension, pregnancy	700	5.1

Data Source: Maine Vital Records Data; preliminary 2008 resident data

Concerns about the severity of influenza virus infection during pregnancy has led to implementation of enhanced national surveillance for pandemic H1N1 influenza virus infections in pregnant women in the U.S. by the CDC. The 2009 influenza virus infection has been identified as the cause of a widespread outbreak of febrile respiratory infection in the U.S. and worldwide.[58] Since the 2009 H1N1 influenza vaccine first became available in October 2009, an estimated 20% of the U.S. population reported they had received at least 1 dose of 2009 H1N1 vaccine, including 38% of pregnant women. These results were based on a CDC analysis of results from the National 2009 H1N1 Flu Survey and BRFSS survey, conducted during December 27, 2009--January 2, 2010, and December 1--27, 2009, respectively. [59]

Obstetric Procedures

Since 1999, there has been reduced use of most obstetric procedures as reported on birth certificates in Maine. In this decade, rates of amniocentesis, stimulation of labor, tocolysis, electronic fetal monitoring, and ultrasound have decreased, while induction of labor has increased (Table 3.2.19) In Maine, the current proportion of labor induction is 19.4 per 100 live births, and has increased by 12% since 1999. Maine's proportion of induction is slightly lower than nationally; among all U.S. women the rate is 22.5 per 100 live births and 26.7 per 100 among non-Hispanic white women. Nationally, the rate of labor induction has doubled since 1990. Tocolysis, or the use of agents to inhibit or postpone uterine contractions to prevent preterm delivery,[48] was reported among 1.9% of Maine births in 2008,[40] similar to the U.S. percentage of 1.7%.[48]

Table 3.2.19: Obstetric Procedures, Live Births, Maine Resident Data, 1999-2008

	2008		2003		1999	
Obstetric procedure	# of births with procedure	%	# of births with procedure	%	# of births with procedure	%
Amniocentesis	229	1.7	293	2.1	492	3.6
Electronic fetal monitoring	11,977	88.0	12,703	91.7	12,166	89.4
Induction of labor	2635	19.4	2,734	19.7	2,349	17.3
Stimulation of labor	1,814	13.3	2,193	15.8	2,362	17.4
Tocolysis	261	1.9	264	1.9	724	5.3
Ultrasound	9,644	70.9	10,136	73.2	10,147	74.6
Other	320	2.4	202	1.5	328	2.4
None	738	5.4	632	4.6	438	3.2

Data Source:1999 - 2008 Maine Vital Records Data; preliminary 2008 resident data

Labor Complications

No labor complications were reported among 71% of Maine live births in 2008. The proportion of births with no reported labor complications has increased by 15% since 1999; in that year, 61.5% of births had had no labor complications reported on birth certificates.[40]

According to the NCHS, moderate or heavy meconium staining, precipitous labor, and breech and malpresentation are three labor/delivery characteristics that may require medical intervention and can affect the infant's health.[48] Meconium staining occurred among 5.4% of Maine births in 2008, slightly higher than among births nationally (4.8%). Breech/malpresentation was reported among 6.0% of Maine births, again slightly higher than the national percentage of 5.4%, and precipitous labor was reported among 3.1% of Maine births and 2.1% nationally.[40],[48]

Maternal Mental Health

Depression and Anxiety

Based on 2004-2007 Maine PRAMS data, 8.3% of new mothers reported feeling down, depressed, or hopeless "often" or "always" after the birth of their new baby; 7.1% reported that they often or always had little interest or pleasure in doing things after the birth of their baby. Among new mothers, 14% reported that their health care provider had told them that they had depression since giving birth to their baby. Overall, about 1 in every 5 new mothers (19.3%) reported either depressive symptoms or having received a diagnosis of depression.[51]

There were no differences in postpartum depression by race, public health district, or insurance status. However, among women reporting postpartum depression, 70.2% were insured by MaineCare compared to 42.2% of non-depressed women. Women reporting postpartum depression were more likely than non-depressed women to have less than a high school

education (19.4% vs. 10.7%) and they were less likely to report household incomes of at least $50,000 (39.9% vs. 18.8%). Women with postpartum depression tended to be younger than non-depressed women; among women reporting postpartum depression, about 1 in 3 (36.4%) were between the ages of 20-24 compared to 23.8% of non-depressed women.[51]

About half (50.6%) of women who reported postpartum depression indicated that their pregnancy was unintended compared to 33.8% of non-depressed women. More than 1 in 10 (11.2%) women with postpartum depression reported experiencing intimate partner violence before or during their pregnancy; this is three times higher than women who did not report postpartum depression (3.3%). Depressed women were also about 4 times more likely to report six or more stressful life events prior to their pregnancy compared to women who did not develop postpartum depression (16.1% vs. 4.3%).[51]

Self-reported postpartum depression was also associated with higher levels of smoking after pregnancy; 37.7% of women who reported post-partum depression were smoking after their pregnancy compared to 19.6% of non-depressed women. Depressed mothers were also less likely to have ever breastfed their baby (69.9% vs. 81.0%).[51]

Intimate Partner Violence During Pregnancy

Between 2004-2007, about five percent of new mothers in Maine reported experiencing intimate partner abuse (or domestic violence) around the time of pregnancy. New mothers who experienced domestic violence (DV) were more likely to be younger (less than 20 years old), have less than a high school education, and have household incomes less than $10,000 per year. Seventy percent of new mothers in Maine who experienced intimate partner violence around the time of pregnancy were not trying to get pregnant at the time they conceived. Almost 1 in 3 (29.4%) new mothers in Maine who experienced DV around the time of pregnancy were diagnosed with post-partum depression, compared to 12.5% of women who were not DV victims.[51]

Maternal Mortality

In 2006, the U.S. maternal mortality ratio was 13.3 maternal deaths per 100,000 live births,[60] the highest in decades. In Maine, there have been two maternal deaths in the past 10 years (1999-2008), for a ratio of 1.3 maternal deaths per 100,000 live births.[40] The HP2010 goal is to reduce the maternal mortality rate to no more than 3.3 per 100,000 live births.[49]

The number of maternal deaths does not include all deaths of pregnant women, but only deaths reported on the death certificate that were assigned to causes related to or aggravated by pregnancy or pregnancy management (International Classification of Diseases [ICD]–10 codes A34, O00–O95, and O98–O99). Excluded from this count are deaths that occur more than 42 days after the termination of pregnancy and deaths of pregnant women due to unintentional injuries, homicides, and suicides.[60]

Most U.S. maternal deaths were attributed to direct obstetric causes including eclampsia and pre-eclampsia, hemorrhage and placenta previa, obstetrical tetanus, obstetric embolism, and other

direct causes. Possible explanations for the national increase in maternal deaths include a rise in the number of C-sections, particularly among women who have undergone several previous c-sections, and the rise in obesity. Race/ethnicity and quality of care may also factor into the maternal mortality rate.[60]

Women of Reproductive Age: Indicators of Health among 18 - 44 year old Maine Women

This section reports information on the health of Maine women of reproductive age, 18 - 44 years old.

Women's Health in General

Nine out of 10 (91.5%) Maine women ages 18 - 44 years rated their general health as good (23.6%), very good (40.7%), or excellent (27.2%) in 2008; 8.5% rated their health as fair or poor. More specifically, 38.2% of women said that on at least one of the last 30 days their physical health had not been good; 47.6% reported that on at least one day their mental health had not been good. More than a third (36.8%) of the women who reported that their physical or mental health had not been good also said that poor physical or mental health had kept them from doing their usual activities.[54]

Morbidity Among Women

Asthma

Asthma is a chronic condition that causes inflammation of an individual's airways, which can lead to coughing, chest tightness, and difficulty breathing. Women are more likely than men to be diagnosed with asthma, be hospitalized for asthma, and visit the ED for asthma. On the 2008 BRFSS, 17.8% of Maine women 18 years and older reported that they had ever been told they had asthma, compared to 13.5% of men. Of the women with a lifetime diagnosis of asthma, 76% reported that they currently have asthma.[61]

Each year, approximately 150 women age 20-44 are hospitalized for asthma and about 3,000 visit the ED for an asthma attack. Asthma was the principal diagnosis for 1.3% of hospitalizations among Maine women ages 15-44 in 2007, a rate of 6.7 per 10,000.[62] In 2006, the ED visit rate for asthma among women age 15-44 was 110.0 per 10,000. The rates of asthma hospitalization among women have declined over time, while ED rates have not changed significantly.[62]

In an analysis of 2005 BRFSS data, which included both men and women, asthma prevalence was associated with measures of socioeconomic status as well as other health conditions. MaineCare recipients were 2 times more likely to report having current asthma than people with other health coverage. Current asthma was more prevalent among those with household incomes less than $25,000 compared to those with higher incomes. Asthma prevalence among those with less than a high school education was higher than those with a college degree. Those with current asthma were more likely to be unemployed compared to those without asthma. People with current asthma were more likely to be obese compared to those without asthma. People with current or lifetime asthma were more likely to have had at least 1 day in the past month when their mental health was not good. They were also more likely to report having had at least 1 day

in the past month when their physical health was not good and they were more likely to report that they had activity limitations due to poor physical or mental health.[63]

Diabetes

Among Maine women age 18 years and older, 6.6% reported having non-gestational diabetes on the 2008 BRFSS. This is statistically lower than the prevalence among Maine men (10.1%). An additional 1.4% of women reported having diabetes related to pregnancy, and 1.3% reported pre- or borderline, diabetes. Women under age 44 were less likely to report diabetes compared to women over age 44.[61] (See Section 3, Part 3 and Table 3.2.18 for information on gestational diabetes.)

Cancer

Maine's 2005 cancer rate was higher than that of the U.S., and was statistically higher than the Maine rate in 1995. However, cancer mortality rates in Maine and the U.S. have been decreasing over time.[64, 65]

Women's cancer incidence rates in Maine and nationally are lower than men's. In 2005, there were 3,918 new cases of cancer diagnosed among women in the state and 1,526 women died of cancer. The 2005 age-adjusted cancer incidence rate among women was 464.9 per 100,000 compared to 593.2 per 100,000 among men. Maine's 2001-2005 age-adjusted cancer incidence rate among females under age 50 (125.5 per 100,000) was the 10th highest in the U.S. and significantly higher than the U.S. rate (116.6 per 100,000). With respect to cancer mortality, Maine's 2001-2005 age-adjusted rate (20.4 per 100,000) for females under 50 was 25th highest nationally, but not higher than the corresponding U.S. rate (20.9 per 100,000).[65]

Of the different types of cancer, breast cancer has the highest incidence among women. Female breast cancer incidence has not changed significantly over the past decade and has been similar to the U.S. white female rate. In 2005, a total of 1,078 Maine women were diagnosed with breast cancer, for an age-adjusted incidence rate of 130 per 100,000. Unlike cancer incidence, Maine's age-adjusted breast cancer mortality rates decreased from 32 to 22 per 100,000 women between 1995 and 2005. In 2005, a total of 198 Maine women died from breast cancer, which was the second leading cause of cancer deaths among Maine females under 50 between 2001-2005.[64] Maine's breast cancer mortality rate (4.8 per 100,000) was not significantly different from the U.S. rate (5.5 per 100,000).[65]

Although breast cancer has the highest incidence among women in Maine, women's cancer mortality rates are highest for lung cancer. Men's lung cancer mortality rates are higher than women's, but while male lung cancer mortality rates have declined significantly between 1995 and 2005, there was no evidence of a change in female rates.[64] This pattern is consistent with U.S. trends in lung cancer death rates. The leading cause of cancer deaths among Maine females under 50 between 2001- 2005 was lung and bronchus cancer. Maine's rate of 4.0 per 100,000 was significantly higher than the U.S. rate of 3.0 per 100,000.[65]

Breast Cancer Screening

American Cancer Society guidelines for breast cancer screening among 18 - 44 year old women recommend that 20-39 year old women receive a clinical breast exam (CBE) at least every 3 years and women aged 40 and over receive a CBE annually. Annual mammography is

recommended beginning at age 40.[66] HP2010 does not have a CBE objective, but does include a goal to increase the proportion of women aged 40 years or older who have had a mammogram in the preceding 2 years to 70%.[49] HM2010 sets a target of 75% for women aged 40-49 having had both a CBE and a mammogram in the past 2 years.[55]

The 2008 BRFSS survey found that 93.4% of 20-39 year old Maine women reported that they had ever had a CBE and 88.9% reported that they had had one within the past 3 years. Nearly all (99.5%) of 40-44 year old Maine women reported ever having had a CBE, but only 74.8% reported having had one in the past year. Eight out of 10 (80.9%) 40-44 year old women reported ever having had a mammogram; 72.5% reported having had one in the past 2 years. Almost three-fourths of 40-44 year old Maine women reported having had both a CBE and a mammogram in the past 2 years.[54] Maine has met the HP2010 goal, but not the HM2010 goal for breast cancer screening among 40-44 year old women.[49],[55] (Note: The number of 40-44 year old women participating in the 2008 BRFSS was too small to allow for analysis of breast cancer screening by demographic subgroups.)

Cervical Cancer Screening

HP2010 cervical cancer screening goals are to increase the percentage of 18+ year old women who have ever had a papanicolau (Pap) test to 97% and the percentage of women in this age group who have had a Pap test within the preceding 3 years to 90%.[49] HM2010 sets a higher target of 92% for 18+ year old women having had a Pap test within the prior 3 years.[55]

The 2008 BRFSS survey found that 92.7% of 18-44 year old Maine women reported ever having had a Pap test and 88.2% reported having had a Pap test in the preceding 3 years. The percentage of women who had had a Pap test in the prior 3 years varied significantly by age, education, and income, and, while Maine has not yet met the HP2010 and HM2010 Pap test goals for 18 - 44 year old women as a whole, some demographic subgroups have met the goals. Women aged 25-34 and 35-44 were significantly more likely than 18-24 year old women to have had a Pap test in the prior 3 years (93.4% and 92.8% vs. 74.3%, respectively). College graduates were significantly more likely to have had the test in the past 3 years than women with a high school education/general educational development (GED) or less (i.e., no post-secondary education) (94.6% vs. 79.3%). Women with a household income of $50,000 or more were significantly more likely to meet the Pap test goals than women with household incomes less than $25,000 or $25,000-$49,999 (96.4% vs. 83.2% and 87.4%, respectively). No significant differences were seen by public health district (data not shown).[54]

Oral Health

Tooth Condition

Available information about tooth condition among reproductive-age Maine women is limited to a single question about tooth loss on the BRFSS survey. In 2008, three-fourths (74.7%) of Maine 18-44 year old women reported that they had not had any teeth removed due to gum disease or tooth decay.[54] Maine has met, for this population group, the HP2010 goal to increase the proportion of adults who have never had a permanent tooth extracted because of dental caries or periodontal disease to 42%.[49]

The percentage of women who had not had any teeth removed varied significantly by age, education, and household income. Tooth loss was significantly more common among (a) 35-44 year olds as compared with 18-24 year olds; (b) women with less than a college degree as compared with college graduates, and (c) women with annual household incomes less than $50,000 as compared with those with incomes of $50,000 or more. No significant differences were seen by dental insurance coverage or public health district.[54]

The number of teeth removed due to tooth decay or gum disease was significantly associated with a woman's self-reported health in general. For example, 85.1% of the women who reported excellent general health and 78.6% of the women with very good general health had not had any teeth removed, as compared with only 63.4% of the women with good general health and 54.4% of the women with fair or poor general health.[54]

Use of the Oral Health Care System

In 2008, nearly three-fourths (72.4%) of 18-44 year old Maine women reported that they had visited a dentist, dental hygienist, or dental clinic in the past year.[54] Maine has met, for this population group, the HP2010 goal to increase the percentage of children and adults who use the oral health care system each year to 56%.[49] Two-thirds (68.0%) of 18-44 year old women had had their teeth cleaned in the past year.[54]

Past year dental visits and teeth cleaning varied significantly by age, education, and household income; the patterns seen were similar to those reported for tooth loss above (Table 3.2.20). In general, (a) 35-44 year old women were more likely than 25-34 year olds to have had a dental visit; (b) college graduates were more likely than women with a high school education/GED or less (i.e., no post-secondary education) to have had a dental visit, and (c) women with annual household incomes of $50,000 or more were more likely to have had a dental visit than were women with annual incomes under $50,000. The same patterns were seen for teeth cleaning.[54]

Table 3.2.20: Oral Health, 18 - 44 Year Old Maine Women, 2008

	% with no teeth removed due to gum disease or tooth decay	% with any dental visit[a] in past year	% who had teeth cleaned in past year
Overall	74.7 (71.5 - 77.7)	72.4 (68.8 - 75.7)	68.0 (64.3 - 71.5)
Age			
18 - 24 years	81.9 (73.0 - 88.3)	68.5 (58.1 - 77.3)	63.5 (53.0 - 72.8)
25 - 34 years	77.2 (71.8 - 81.8)	67.9 (62.3 - 73.1)	63.7 (57.9 - 69.1)
35 - 44 years	68.4 (64.0 - 72.5)	78.2 (74.1 - 81.8)	74.1 (69.8 - 78.1)
Education			
HS/GED or less	63.5 (56.8 - 69.8)	63.5 (56.5 - 70.0)	56.8 (49.6 - 63.8)
Some college	74.6 (68.6 - 79.7)	72.5 (66.1 - 78.1)	68.5 (62.0 - 74.5)
College graduate	85.3 (81.0 - 88.7)	80.4 (75.1 - 84.8)	77.3 (71.8 - 82.1)
Household income			
< $25,000	66.4 (58.5 - 73.4)	57.2 (48.9 - 65.0)	48.1 (39.6 - 56.7)
$25,000 - $49,999	70.1 (63.7 - 75.8)	63.4 (56.1 - 70.2)	57.4 (50.1 - 64.3)
$50,000 +	82.6 (78.3 - 86.2)	86.2 (81.7 - 89.8)	84.6 (80.0 - 88.3)
Dental insurance			
No	73.1 (66.2 - 78.9)	58.9 (51.3 - 66.2)	52.9 (45.0 - 60.6)
Yes	77.7 (72.3 - 82.2)	79.1 (72.7 - 84.3)	77.5 (70.9 - 82.9)
District			
Aroostook	63.2 (47.3 - 76.7)[b]	80.3 (64.5 - 90.2)[b]	73.2 (55.5 - 85.7)[b]
Central	68.9 (59.7 - 76.9)	71.0 (61.5 - 79.0)	68.6 (59.0 - 76.8)
Cumberland	81.8 (73.8 - 87.8)	79.4 (68.7 - 87.1)	76.4 (65.6 - 84.6)
Downeast	77.2 (65.5 - 85.7)[b]	68.6 (56.5 - 78.6)[b]	61.2 (48.2 - 72.8)[b]
Midcoast	73.3 (64.8 - 80.5)	71.3 (61.7 - 79.4)	67.4 (57.8 - 75.8)
Penquis	79.0 (69.7 - 86.0)	76.2 (66.6 - 83.7)	72.4 (62.3 - 80.6)
Western	71.6 (63.8 - 78.4)	67.6 (59.1 - 75.1)	60.4 (51.6 - 68.6)
York	79.1 (68.1 - 87.0)	68.1 (56.7 - 77.6)[b]	64.3 (53.2 - 74.1)[b]

[a] Dental visit includes visit to dentist, dental hygienist, or dental clinic
[b] Use caution when interpreting; denominator < 50 or confidence interval half-width > 10

Data Source: Maine 2008 Behavioral Risk Factor Surveillance System Data

Having any kind of insurance coverage that paid for some or all of her routine dental care significantly increased the likelihood that a woman had had her teeth cleaned or had had a dental visit in the past year. In 2008, nearly two-thirds (63.6%) of 18-44 year old Maine women reported that they had had at least some dental coverage for routine care. Women with annual household incomes of $50,000 or more were significantly more likely than those with household incomes less than $25,000 or with incomes $25,000-$49,999 to have dental coverage (77.7% vs. 42.9% and 56.6%, respectively). No significant differences in dental coverage were found by age or education (data not shown). Dental coverage by district was not examined due to small sample sizes.[54]

The 2008 BRFSS asked women who had not visited the dentist or dental clinic in the past year their main reason for not going. Nearly half (45.0%) cited cost. The next two most commonly

cited reasons were "no reason to go" (e.g., no problems with teeth, no teeth) (13.6%) and "other priorities" (10.6%). The reasons given varied significantly by dental insurance status; these results should, however, be interpreted with caution due to small sample size and wide confidence intervals. Cost was cited as the main reason by 77.1% of those without dental coverage. There was no dominant leading reason among women with dental coverage; instead, "fear, apprehension, nervousness, pain, dislike going," "no reason to go," "other priorities," "have not thought of it," and "cost" were each cited by 13.3%-16.1% of the women who had dental coverage.[54]

Infectious Disease

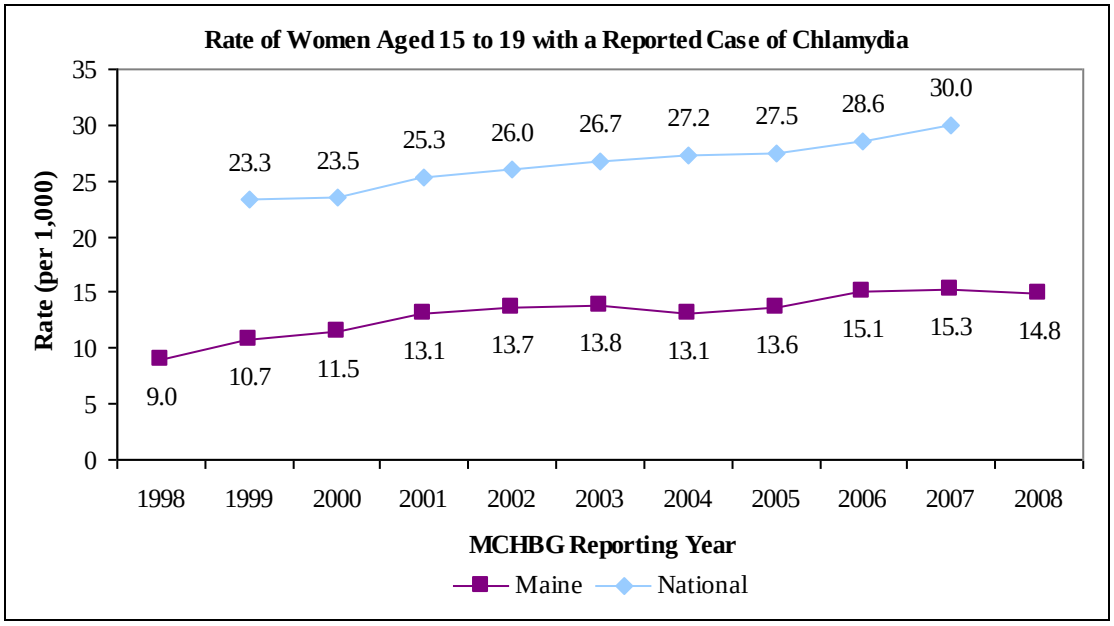
Sexually-transmitted Diseases

Of the reported sexually transmitted diseases (STD), chlamydia is the most frequently reported in Maine and the number of reported case continues to increase. Between 1996 and 2008, the number of chlamydia cases in Maine increased from 965 to 2,594 [67], [68]; since 2002, the number has increased about 7% each year on average. The 2007 count represented a 10.3% increase over the 2006 count. In 2008, the count rose by 1.8%, a lower percentage increase compared to previous years.[67]

More than 70% of chlamydia diagnoses are among females. However, females are more likely to be symptomatic and to be tested than men for the disease, so the prevalence among men may be higher than the data suggest.[69]

Youth are disproportionately diagnosed with chlamydia. Three out of four cases in 2008 occurred among those under age 25; 30% of cases were diagnosed among those age 15-19 years and 42% were among those age 20-24 years.[69] The rate of chlamydia diagnoses among young women has been increasing in Maine and the U.S. over the past 10 years (Figure 3.2.8). However, Maine's rate is lower than the rate in the U.S. Between 1998-2008, Maine's chlamydia rate among 15-19 year olds increased from 9.0 to 14.8 per 1,000.[70, 71] A similar increase has been seen among women age 20-44, among whom the rate has almost tripled–from 2.0 per 1,000 in 1998 to 5.7 per 1,000 in 2008.[72]

Figure 3.2.8:



The number of gonorrhea cases in Maine increased from 56 in 1996 to a high of 231 in 2003. Since 2003, the number of new gonorrhea cases diagnosed each year has declined;[67] in 2008, there were 96 new cases of gonorrhea. One in 5 (20%) of the 2008 cases was less than 20 years old; another 43% were 20-29 years old. Slightly less than half (45%) of the 2008 cases of gonorrhea in Maine were among females,[69] but the proportion of women affected by the disease has increased in recent years while it has decreased among men. The overall decline among men may be related to a decline in the transmission of male gonorrhea through male-to-male sexual contact.[70]

Rates of gonorrhea among youth aged 15-19 have fluctuated over the past 10 years. In 2008, there were 19 cases of gonorrhea diagnosed in this age group, a rate of 21.7 per 100,000. In 1996, the gonorrhea rate among 15-19 year olds was 17 per 100,000.[67] Maine's gonorrhea rates among 15-19 year olds have been much lower than the U.S. In 2007, Maine's gonorrhea rate was 1/30th of the U.S. rate.[70]

Between 2006-2008, syphilis reemerged as a high priority infectious disease. In Maine, 20 new syphilis cases were diagnosed in 2008, the highest since 1990.[70] This increase has also been seen nationally. In 2008, 95% of cases were among males between the ages of 45-54.[68] All reported cases were infected through sexual contact with other males; the increase could relate to increased anonymous sexual encounters and increased infections of Maine residents who travel out-of-state to urban areas.[68], [70].

Between 1987 and 2007, 1,560 people were diagnosed with HIV and 1,154 were diagnosed with acquired immune deficiency syndrome (AIDS). Since 2000, there have been an average of 50 new cases of human immunodeficiency virus (HIV) diagnosed each year; in 2007, there were 52 new HIV diagnoses and 38 new AIDS diagnoses. Women comprised 5 of the HIV cases and 2 of the AIDS cases. On average, between 2003-2007, 13% of new HIV diagnoses were among

women. In 2007, there were 19 deaths among persons with AIDS. Due to successful treatment options, the number of people living with AIDS has increased, even though the numbers of new cases and deaths have decreased; each year since 1985 there have been more new AIDS diagnoses than deaths due to AIDS in Maine. As of December 2007, approximately 1,565 people were living with diagnosed HIV (including AIDS) in Maine. It is estimated that 16% of those living with HIV/AIDS are women.[67]

About 1 in 3 (29%) people diagnosed with HIV in 2007 were in their twenties. It is possible that many diagnosed in their twenties were infected in their teens. It is estimated that 29 Maine youth between the ages of 0-19 are currently living with HIV/AIDS.[67]

The two most common modes of transmission for people who were newly diagnosed with HIV in 2007 were men having sex with men (MSM) (63% of new diagnoses) and heterosexual contact "non at-risk partners" (27% of new diagnoses). However, the proportion of HIV infections attributed to heterosexual contact could be inflated, since both MSM contact and injection drug use are underreported. Among women, 100% of 2007 HIV diagnosis transmissions were through heterosexual contact. Only 4 mother-to-infant transmissions have been reported since 1996.[67]

The non-white and Hispanic population make up approximately 3% of Maine's population (based on the 2000 Census), but represent 16% of people living with diagnosed HIV.[67]

The proportion of Maine youth who reported, on a school survey, learning about AIDS or HIV infection in school has declined significantly in recent years. For middle school students, the decrease was from 85% in 1997 to 82% in 2001 to 73% in 2003. For high school students, the decline was from 94% in 2001 to 88% in 2003.[73]

Hepatitis C

The Hepatitis C virus is spread when blood from an infected individual enters the body of a non-infected individual. Most people become infected through sharing needles to inject drugs. An estimated 3.2 million people in the U.S. have chronic Hepatitis C infection, and an estimated 20,000 Mainers have chronic Hepatitis C. Hepatitis C affects Mainers of all ages, ethnic groups, socioeconomic classes, and geographic areas (rural/urban). From 1997, when official case reporting was initiated, until 2002, there was a steady increase in the number of people diagnosed with Hepatitis C. Since 2002, the number of new cases has remained relatively stable, fluctuating slightly from year to year.[74] In 2008, 1,377 cases were reported, of whom slightly more than 1 out of 3 (37%) were among females. Among both men and women, the largest number of cases was reported among those aged 45-54 years.[68]

Flu

HP2010 immunization goals for adults include increasing the percentage to 60% of non-institutionalized high-risk adults aged 18 to 64 years who receive the influenza and pneumococcal vaccines.[49] The 2007 BRFSS survey found that 38.5% of high risk Maine adults aged 18-49 years received an influenza vaccination during the previous year; among all other ages, 22.9% received the vaccine.[75]

For persons in the Advisory Committee on Immunization Practices (ACIP) initial target groups, (pregnant women, health-care and emergency medical services personnel, children and young adults aged 6 months through 24 years, and persons aged 25--64 years who have medical conditions that put them at higher risk for influenza-related complications) 2009 H1N1 vaccination coverage in Maine from October 2009 and January 2010 was 50.8% (U.S. median: 33.2%). The vaccination coverage for adults aged 25-64 years with high-risk conditions was 35.3% in Maine and 25.2% nationally. Among adults aged 25-64 not in the initial target group, coverage was 22.9% in Maine and 14.4% nationally.[76]

Injury

Unintentional injury was the leading cause of death among 18-44 year old Maine women in 2002-2006. Suicide was the fourth leading cause of death, and homicide the seventh during this 5-year period.[77]

In 2003-2007, injury as a whole was responsible for 40.1% of deaths among 18-44 year old Maine women (Table 3.2.21). There were an average of 77 injury deaths in this group each year.[40]

Table 3.2.21: Number and Percent of Events for Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits, 18 - 44 Year Old Maine Women, 2003 - 2007

	Average # per year	Average annual rate (per 100,000)	% of all deaths, discharges, or visits
Injury deaths	77	32.6	40.1
Injury hospital discharges	788	335.2	3.0
Injury outpatient ED visits	31,147	13,254.3	21.4

Data Sources: 2003-2007 Maine Vital Statistics Data; 2003-2007 Maine Hospital Discharge Data; 2003-2007 Maine Hospital Outpatient Data

For every injury death among 18-44 year old Maine women in 2003-2007, there were 10 hospital discharges with an injury principal diagnosis; the average annual number of injury discharges was 788 (Table 3.2.21). Injury outpatient emergency ED visits (i.e., visits with an injury principal diagnosis where there was a routine discharge to home or self-care) were 40 times more common than injury hospital discharges during 2003-2007. On average, 18-44 year old women experienced more than 31,000 injury outpatient ED visits each year during this period (Table 3.2.21).[62]

Data on intent in the case of mortality is usually known via death certificates. Hospital discharges and outpatient ED visits are also coded for intent, but the data is less precise due to those visits where it is not known or is not recorded. Unintentional injuries represented the majority of injury events among 18-44 year old women, from a high of 81.0% of injury outpatient ED visits to a low of 53.1% of injury hospital discharges. The largest proportion of injury events due to intentional self-injury was seen in hospital discharges, where a third (34.6%) of the injury discharges of 18-44 year old women were reported to be the result of self-inflicted intent (Table 3.2.22).[62]

Table 3.2.22: Intent of Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits, 18 - 44 year old Maine Women, 2003 - 2007

Event type and intent	%
Injury deaths	
Unintentional	71.3
Suicide	17.8
Homicide	7.6
Undetermined	2.9
Other	0.5
Injury hospital discharges	
Unintentional	53.1
Self-inflicted	34.6
Assault	1.0
Undetermined	3.0
Other	0.8
Unknown	7.6
Injury outpatient ED visits	
Unintentional	81.0
Self-inflected	1.2
Assault	3.2
Undetermined	0.3
Other	0.2
Unknown	14.1

Data Sources: 2003-2007 Maine Vital Statistics Data; 2003-2007 Maine Hospital Discharge Data; 2003-2007 Maine Hospital Outpatient Data

Like intent, the specific leading causes of injury varied somewhat by severity among 18-44 year old Maine women. The one commonality was unintentional motor vehicle traffic incidents (where "traffic" refers to incidents occurring on a public highway or street), which were the leading cause of injury deaths and the second leading cause of injury hospital discharges.[40],[62] Intentional self-harm appeared as one of the two leading causes only for hospital discharges, where a third (33.0%) of the injury discharges were due to self-inflicted poisoning (Table 3.2.23).[62]

Table 3.2.23: Top Two Leading Causes of Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits among 18 - 44 Year Old Maine Women and the Percentage of Those Events Due to Each Cause, 2003 - 2007

Event type and leading causes	%
Injury deaths 1. Unintentional motor vehicle traffic 2. Unintentional poisoning	 31.1 30.3
Injury hospital discharges 1. Self-inflicted poisoning 2. Unintentional motor vehicle traffic	 33.0 19.4
Injury outpatient ED visits 1. Unintentional fall 2. Unintentional overexertion	 19.1 15.1

Data Sources: 2003-2007 Maine Vital Statistics Data; 2003-2007 Maine Hospital Discharge Data; 2003-2007 Maine Hospital Outpatient Data

The 2008 BRFSS survey provides some information about injury preventive and risk behaviors among Maine adults. Eight of every 10 (84.0%) 18-44 year old Maine women reported that they always wore a seat belt when driving or riding in a car; 0.5% said they never wore a seat belt. The percentage of women who reported always wearing a seat belt increased with education. College graduates were significantly more likely to always wear a seat belt than women with a high school education/GED or less (i.e., no post-secondary education) (90.5% vs. 76.9%, respectively). Women with annual household incomes of $50,000 or more were significantly more likely to wear seat belts all the time than those with household incomes under $25,000 (89.4% vs. 78.3%, respectively). No significant differences were seen by age or public health district.[54]

Three percent (3.0%) of 18-44 year old women who drank alcohol *in the past 30 days* reported that there had been one or more occasions during that time period when they drove after having *perhaps too much to drink*.[54]

Mental Health

Data from the 2006 BRFSS reveal that 26.7% of women in Maine reported a past history or current symptoms of depression. Of women of childbearing age (age 18-44 years), 11.9% reported current symptoms of moderate or severe depression (defined as a score of >14 on the Patient Health Questionnaire [PHQ-8]) and 16.5% reported frequent mental distress. More than 1 in 4 (28.9%) reported having a past history of depression and 24.9% reported having a past history of anxiety disorder. Among women age 18-44 with at least one child under age 18 in the household, 9.6% reported current depression and 21.5% had ever been told by a health professional that they had depression.[54]

Excluding hospitalizations related to childbirth, mental health disorders were the leading cause of inpatient hospitalizations among women age 15-44 in 2007. There were 4,081 hospitalizations for a mental health condition among women of reproductive age, accounting for 30% of hospitalizations. The most common condition warranting hospitalization was affective

psychosis (48%), followed by drug psychoses (13.3%), adjustment reaction (7.5%), alcoholic psychoses (6.7%), and depressive disorder (6.0%).[62]

Suicide

About 160 Maine residents die of suicide each year, 1,100 are hospitalized for a self-inflicted injury, and 1,500 are treated in an ED. [40],[62] Suicide is the fourth leading cause of death among women age 15-44 years and the 10th leading cause of death for Mainers overall.[77]

Men are more likely to die by suicide compared to women. Between 2002 and 2006, 76 women between the ages of 15-44 died by suicide, an average of 15 deaths per year. The suicide rate among 15-44 year old women during this 5-year period was 5.1 per 100,000. During this same time period, the suicide rate among men age 15-44 was 22.0 per 100,000—more than 4 times the rate of women. The highest suicide rates for women were among those age 35-64 (7.4 per 100,000). The rates among 15-19 year olds, 20-24 year olds, and 25-34 year old women were: 3.1 per 100,000, 4.4 per 100,000, and 5.6 per 100,000, respectively. There has not been a statistically significant change in the suicide rate among women over the past 20 years.[77]

Although men are more likely to die by suicide, women are more likely to be hospitalized and visit an ED for a self-inflicted injury. In 2006, the age-adjusted hospitalization rate for a self-inflicted injury among women was 10.9 per 10,000, compared to 8.2 per 10,000 among men; the outpatient ED rate among women in 2006 was 16.4 per 10,000, compared to 13.7 per 10,000 men. Both differences were statistically significant. For both men and women, hospitalization rates for self-inflicted injury decreased over time, but outpatient ED visits have increased.[62]

The highest hospitalization rates for self-inflicted injury among women were in those aged 15-19. Those between the ages of 20-34 also have elevated rates compared to women over age 35 (Table 3.2.24).[62] Interpretation of self-inflicted injury data is limited as hospital discharge coding does not indicate the intent of the self-inflicted injury (i.e., death).

Table 3.2.24: Hospitalizations for Self-inflicted Injury by Gender and Age, Maine, 2002-2006

	Women		Men	
Age group	# of inpatient discharges	Rate per 10,000 (95% CI)	# of inpatient discharges	Rate per 10,000 (95% CI)
10 – 14	127	6.1 (5.0 - 7.2)	72	3.3 (2.5 - 4.2)
15 - 19	524	23.2 (21.3 - 25.2)	294	12.3 (10.9 - 13.8)
20 – 24	359	17.5 (15.7 - 19.3)	293	13.6 (12.1 - 15.2)
25 - 34	671	17.9 (16.6 - 19.3)	480	13.1 (11.9 - 14.3)
35 -64	1,629	11.1 (10.6 - 11.7)	1,018	7.3 (6.8 - 7.7)
65 +	107	2.0 (1.6 - 2.3)	71	1.8 (1.4 - 2.2)

Data Source: 2002-2006 Maine Hospital Discharge Data

According to data from the 2007 BRFSS survey, 2.3% of adult women in Maine considered killing themselves in the preceding 12 months. This is similar to the percentage of men who reported considering suicide.[54]

Violence Against Women

Domestic Violence

Each year over 15,000 women in Maine (3.0%) are frightened for their safety or the safety of their family or friends because of anger or threats by a current or former intimate partner. Annually, over 7,000 women in Maine (1.4%) are physically or sexually assaulted by an intimate partner.[54] National surveys, such as the National Violence Against Women Survey, conducted in 1995-1996, have found similar results (1.5%).[78] Over half (57%) of women who were physically or sexually assaulted by a partner in 2007 were injured as a result of the violence.[54]

On average, about 45% of homicides in Maine each year are related to domestic conflicts. In Maine, a domestic assault is reported to police every 91 minutes. In 2007, there were 5,771 domestic assaults reported to police, representing almost half (47.9%) of all reported assaults. In 2007, the number of DV assaults reached a ten-year high. The number of assaults has increased each year since 1998, in which there were 3,855 assaults (34% of the total assaults in the state. The number of DV assaults in 2007 was 50% higher than in 1998, and accounted for 48% of all assaults in Maine.[79]

The highest rates of arrests for domestic assaults were in the Central and Western Public Health Districts; the lowest rates were in Downeast District (Table 3.2.25).[79]

Table 3.2.25: Domestic Violence Assaults Reported to Police by Maine Public Health District, 2007

District	Count	Rate per 1,000	95% CI
Aroostook	229	31.8	27.8 - 36.2
Central	1,050	60.9	57.2 - 64.7
Cumberland	1,122	40.7	38.4 - 43.2
Downeast	182	21.2	18.2 - 24.5
Midcoast	447	29.7	27.0 - 32.6
Penquis	522	31.5	28.8 - 34.3
Western	1,196	61.8	58.4 - 65.4
York	1,023	50.8	47.7 - 54.0
Total	5,771	43.8	42.7 - 45.0

Data Source: Crime in Maine, 2007 report

Sexual Assault

In a recent study, nearly one in five adult Maine residents reported that they have been the victim of rape or attempted rape during their lifetime; 28.5% of female respondents and 7.4% of male respondents have experienced this devastating crime at some point in their lives.[80] In any 12 month period, we estimate that roughly 14,000 Maine residents may be the victim of rape or unwanted sexual activity.[54]

Each year about 330 rapes are reported to Maine police.[79, 81] In 2007, there were 391 rapes reported, a rate of 0.30 per 1,000. This was an increase of 15% from 2006 and was the highest number of rapes reported in a single year in Maine over the past 10 years. Maine's rate of rape has fluctuated over time. The lowest rate in the past ten years was in 1998, in which 229 rapes were reported for a rate of 0.19 per 1,000 population.[79]

Maine's rate of rape varies by public health district. Based on data from 2003-2007, Central, Western, and York Districts had rates of rape that were statistically higher than the state average (Table 3.2.26).[79]

Table 3.2.26: Rape by Maine Public Health District, 2003 - 2007

District	# of rapes	Rate per 10,000	95% CI
Aroostook	56	1.5	1.2 - 2.0
Central	297	3.5	3.1 - 3.9
Cumberland	378	2.8	2.5 - 3.1
Downeast	42	1	0.7 - 1.3
Midcoast	126	1.7	1.4 - 2.0
Penquis	94	1.1	0.9 - 1.4
Western	380	3.9	3.6 - 4.4
York	346	3.5	3.1 - 3.8
Maine	1,719	2.6	2.5 - 2.7

Data Sources: Crime in Maine, 2003-2007 reports

Almost half (48.6%) of Maine women who have ever been sexually assaulted have been diagnosed with depression (compared to 17.5% of those who have never been sexually assaulted); more than one third (38%) of sexual assault victims have been diagnosed with anxiety disorder (compared to 14.2% of non-victims).[54]

Mortality Among Women

In 2003-2007, the mortality rate among Maine women ages 20-44 was 80.9 per 100,000, similar to the 1999-2003 rate (83.0 per 1000,000).[40]

Between 2003-2007, more than 1 in 4 (27.6%) women of reproductive age died as the result of unintentional injury, the leading cause of death among Maine women age 20-44 years.[40] Malignant neoplasms were the second leading cause of death and were responsible for 23.1% of

deaths (Table 3.2.27). Maine's distribution of leading causes of death among women of reproductive age is similar to the pattern observed among U.S. non-Hispanic white women, although the overall mortality rate among Maine's women appears to be slightly lower (83.0 vs. 93.1 per 100,000).[60]

Table 3.2.27: Mortality among Women aged 20 – 44, Maine and United States, 2003-2007

Women aged 20-44	Maine 2003-2007	U.S. Non-Hispanic White 2006
Number of deaths	914	30,123
Mortality rate (per 100,000)	80.9 per 100,000	93.7 per 100,000
Top leading causes (percent of total)		
Unintentional injury	27.6%	25.9%
Malignant neoplasms	23.1%	21.5%
Heart disease	10.1%	9.6%
Suicide	7.1%	7.7%
Homicide	3.0%	2.5%
Percent of deaths due to injury (all intents)	37.6%	36.1%
Note: Leading causes of death were categorized using 50 cause of death groups; 139 Maine deaths among females 20 - 44 years were classified in the "residual codes" category.		

Data Source: Maine Vital Records Data; National Center for Health Statistics Data

Health-Related Behaviors

Risk Factors for Chronic Diseases/Adverse Perinatal Outcomes

Information on select risk factors for chronic diseases or adverse perinatal outcomes is available from the BRFSS survey. These include: (a) current smoking; (b) heavy drinking (defined among females as more than 1 drink per day in the past 30 days) or binge drinking (defined among females as 4 or more drinks on one occasion in the past 30 days); (c) overweight (BMI 25.0-29.99) or obesity (BMI 30.0+), and (4) no physical activity or exercise outside of her regular job in the past 30 days.[54]

In 2008, two-thirds (65.9%) of 18-44 year old Maine women reported at least one of these risk factors (Table 3.2.28). Looking at the risk factors individually, nearly half (46.1%) of the women were overweight or obese (23.7% and 22.4%, respectively); 18.4% of the women were current smokers; 7.2% were heavy drinkers; 18.2% were binge drinkers, and 18.0% reported no physical activity or exercise outside their regular jobs.[54]

Each of the risk factors, with the exception of heavy drinking, was significantly associated with at least one demographic variable (Table 3.2.28). Current smoking was significantly more common among women with lower levels of education or household income. Conversely, engaging in physical activity or exercise outside of work was significantly associated with higher income; women with incomes of $50,000 or more were significantly more likely to engage in physical activity than women with incomes of $25,000-$49,000. Binge drinking was significantly more common among younger women, while being overweight or obese was

significantly more common among older women. Having at least one of these risk factors was significantly more likely among women with less education or lower household income.[54]

Small sample sizes make it difficult to get precise prevalence estimates at the district level; however, three significant district-level differences were seen. Women in the Western district were: (a) significantly more likely to be current smokers than women in the Cumberland district, and (b) significantly less likely to do any physical activity than women in the Cumberland or York districts.[54]

One in four (25.9%) 18-44 year old Maine women had multiple chronic disease risk factors: 19.6% had two risk factors, 5.3% had three risk factors, and 1.1% had all four risk factors (treating overweight or obese as a single risk factor and heavy or binge drinking as a single risk factor). Women with less education or lower household income were significantly more likely to have multiple risk factors. Women in the Cumberland district were significantly less likely to have multiple risk factors than women in the Aroostook, Central, and Western districts. Women in the Penquis district also were significantly less likely to have multiple risk factors than women in the Western district (Table 3.2.28).[54]

The three most common combinations of risk factors were: (1) overweight or obesity plus no physical activity or exercise outside of her regular job (found among 5.9% of 18-44 year old women); (2) overweight or obesity plus current smoking (4.1%), and (3) overweight or obesity plus heavy or binge drinking (3.9%). Nearly half (44.9%) of the women who were overweight or obese had at least one additional risk factor.[54]

Fruit and vegetable consumption was not included in the 2008 Maine BRFSS, so it could not be included in the risk factor analyses described above. In 2007, only one of every three (32.0%) 18-44 year old Maine women reported eating five or more servings of fruits and vegetables per day. The percentage did not differ significantly by age, household income, or district (data not shown). Fruit and vegetable consumption increased with increasing education; women who were college graduates were significantly more likely than women who had a high school diploma/GED or less to consume five or more servings per day (39.3% vs. 26.6%, respectively).[54]

Table 3.2.28: Percent of 18 - 44 Year Old Maine Women Who Report Having Select Risk Factors for Chronic Disease and Adverse Perinatal Outcomes, 2008

	Current smoker	Heavy drinking	Binge drinking	Overweight or obese	No physical activity or exercise	1 or more risk factors	2 or more risk factors[a]
Overall	18.4 (15.7 - 21.3)	7.2 (5.3 - 9.8)	18.2 (15.2 - 21.7)	46.1 (42.4 - 49.9)	18.0 (15.4 - 20.9)	65.9 (62.2 - 69.4)	25.9 (22.9 - 29.2)
Age							
18 - 24 years	19.0 (12.4 - 27.9)	7.8 (3.2 - 18.2)	26.9 (18.3 - 37.6)	26.5 (18.6 - 36.4)	15.7 (9.8 - 24.2)	60.5 (50.2 - 70.0)	20.4 (13.5 - 29.6)
25 - 34 years	20.3 (16.2 - 25.1)	6.7 (4.2 - 10.4)	19.4 (15.2 - 24.5)	52.9 (47.0 - 58.8)	16.4 (12.7 - 21.0)	68.8 (63.1 - 74.0)	29.9 (24.9 - 35.4)
35 - 44 years	16.5 (13.5 - 20.0)	7.3 (5.1 - 10.3)	12.1 (9.3 - 15.5)	52.6 (47.9 - 57.3)	20.7 (17.1 - 24.7)	66.9 (62.3 - 71.1)	26.1 (22.2 - 30.3)
Education							
HS/GED or less	28.6 (23.0 - 35.0)	8.8 (5.1 - 14.9)	21.1 (15.3 - 28.4)	48.9 (41.7 - 56.0)	25.4 (20.0 - 31.7)	75.7 (69.1 - 81.3)	33.3 (27.3 - 39.9)
Some college	20.4 (15.7 - 26.0)	6.1 (3.2 - 11.2)	15.8 (11.3 - 21.7)	51.6 (44.4 - 58.7)	17.8 (13.4 - 23.2)	67.6 (60.3 - 74.2)	28.7 (23.1 - 34.9)
College graduate	7.1 (4.7 - 10.7)	6.7 (4.2 - 10.4)	17.5 (13.2 - 22.8)	39.3 (34.0 - 44.9)	11.3 (8.3 - 15.2)	55.5 (49.9 - 60.9)	16.8 (13.0 - 21.4)
Household income							
$25,000	32.3 (25.4 - 40.1)	6.6 (3.1 - 13.6)	17.4 (11.8 - 24.9)	52.7 (43.9 - 61.3)	20.6 (14.5 - 28.3)	77.3 (68.6 - 84.1)	36.2 (28.9 - 44.3)
$25,000-$49,999	19.3 (14.7 - 25.0)	8.4 (4.4 - 15.4)	19.4 (13.7 - 26.7)	48.7 (41.6 - 56.0)	25.0 (19.6 - 31.2)	72.4 (65.7 - 78.3)	29.8 (24.0 - 36.3)
$50,000+	10.7 (7.9 - 14.5)	7.9 (5.2 - 11.8)	19.4 (15.0 - 24.6)	43.7 (38.4 - 49.1)	11.3 (8.5 - 15.0)	59.5 (54.1 - 64.6)	19.4 (15.6 - 23.9)
District							
Aroostook	21.8 (11.4 - 37.6)[b]	7.0 (2.2 - 20.3)[b]	16.8 (8.6 - 30.2)[b]	43.5 (28.3 - 60.0)[b]	22.7 (13.0 - 36.7)[b]	53.3 (37.0 - 69.0)[b]	36.6 (23.1 - 52.6)[b]
Central	21.5 (15.0 - 29.9)	5.4 (2.6 - 10.8)	18.6 (11.9 - 28.0)	43.0 (33.7 - 52.8)	21.8 (15.1 - 30.4)	64.3 (54.2 - 73.3)	30.0 (22.1 - 39.4)
Cumberland	9.7 (5.7 - 16.1)	12.0 (5.7 - 23.5)	19.9 (12.2 - 30.8)	34.8 (26.7 - 43.9)	11.8 (6.9 - 19.3)	60.2 (50.4 - 69.2)	13.8 (8.8 - 20.9)
Downeast	14.3 (8.0 - 24.2)	5.0 (1.5 - 14.8)	21.7 (12.1 - 35.9)[b]	54.6 (40.8 - 67.9)[b]	14.6 (7.6 - 26.1)	72.5 (59.3 - 82.6)[b]	22.8 (14.2 - 34.4)
Midcoast	21.8 (15.6 - 29.6)	2.8 (1.1 - 7.3)	13.1 (8.4 - 19.8)	46.7 (37.4 - 56.2)	19.0 (12.0 - 28.7)	64.9 (55.1 - 73.6)	24.8 (18.3 - 32.7)
Penquis	21.2 (14.2 - 30.4)	4.0 (1.5 - 10.3)	10.4 (5.4 - 19.1)	47.3 (36.7 - 58.1)[b]	15.6 (9.8 - 24.1)	69.6 (58.7 - 78.8)	18.8 (12.5 - 27.3)
Western	24.4 (17.8 - 32.5)	7.2 (3.8 - 13.4)	16.2 (10.9 - 23.6)	56.5 (47.6 - 65.0)	27.4 (20.3 - 35.9)	72.8 (64.2 - 80.0)[b]	38.9 (30.9 - 47.6)
York	12.5 (6.2 - 23.8)	9.3 (4.6 - 17.7)	27.7 (18.0 - 40.0)[b]	48.3 (37.6 - 59.1)[b]	10.0 (5.7 - 17.0)	66.1 (55.8 - 75.1)	23.3 (15.1 - 34.1)

[a] Treating overweight or obese as a single risk factor and heavy or binge drinking as a single risk factor
[b] Use caution when interpreting; denominator <50 or confidence interval half-width >10

Data Source: Maine 2008 Behavioral Risk Factor Surveillance System Data

Preventive Health Care

Cholesterol Screening

HP2010 and HM2010 share the goal of increasing the proportion of adults who have had their blood cholesterol checked in the prior 5 years to 80%.[49, 55] In 2007, 77.0% of 18-44 year old Maine women reported that they had ever had their cholesterol checked and 72.0% reported they had had it checked in the preceding 5 years. One in five (20.4%) women who had had their cholesterol checked in the preceding 5 years had been told it was high.[54]

While Maine has not yet met the goal for cholesterol screening among 18-44 year old women as a whole, some demographic subgroups have met the goal. Cholesterol screening increased with age and educational attainment. Women 35-44 years old were significantly more likely to have had their cholesterol checked in the preceding 5 years than 18-24 year old women (83.9% vs. 54.0%). College graduates were significantly more likely to have been screened in the past 5 years than women with a high school education/GED or less (i.e., no post-secondary education) (79.1%% vs. 65.1%). There was no clear consistent trend associated with household income, but women with $50,000 or higher household incomes were significantly more likely than those with $25,000-$49,999 household incomes to have been screened in the past 5 years (79.1% vs. 66.7%). Public health district specific screening percentages ranged from 53.8% to 78.5%, but the only statistically significant difference was that the screening rate was lower in the Downeast district than in the Penquis, Central, and York districts (53.8% vs. 75.4%, 77.7%, and 78.5%, respectively).[54]

HIV Screening

In 2008, nearly half (48.4%) of 18-44 year old Maine women reported having ever been tested for HIV (outside of a blood donation). The percentage of women who had been tested varied significantly by age and education. Women 25-34 years old were significantly more likely to have been tested for HIV than 35-44 year olds, who in turn were significantly more likely than 18-24 year olds to have ever been tested (64.5% vs. 49.1% vs. 26.2%, respectively). College graduates were significantly more likely to have been tested than women with a high school education/GED or less (i.e., no post-secondary education) (53.4% vs. 39.7%). The percentage of 18-44 year old Maine women who reported ever having been tested for HIV did not vary significantly by household income or public health district (data not shown).[54]

Flu Shot

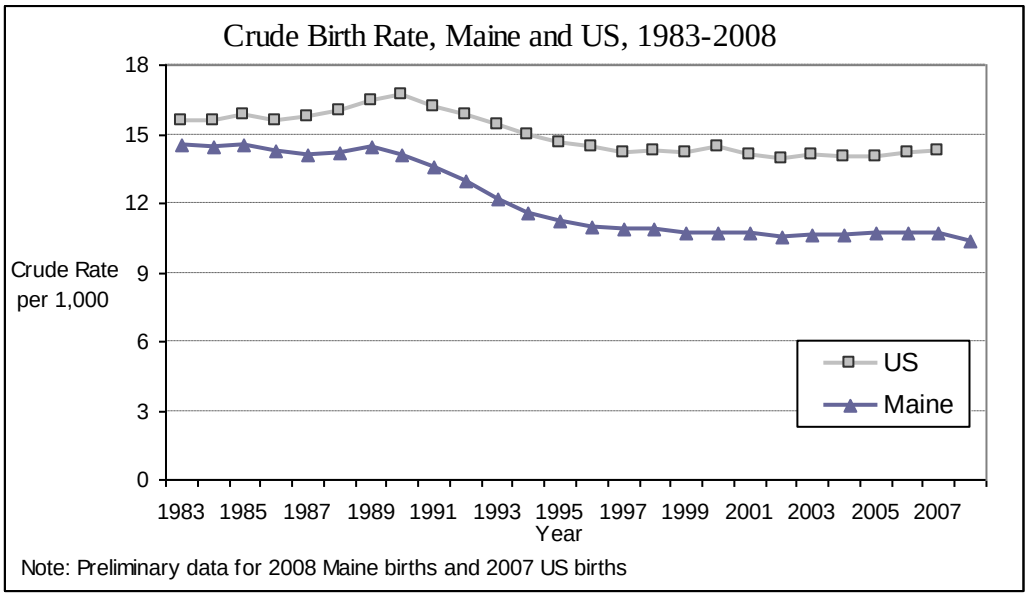
In 2008, almost one in three (28.6%) 18-44 year old Maine women reported receiving a flu shot in the past 12 months. The percentage of women who had received a shot increased with age; 35-44 year old women were significantly more likely than 18-24 year old women to have had a flu shot (33.3% vs. 19.1%, respectively). No significant differences were seen by education or household income (data not shown). The only statistically significant differences at the public health district level were between the Western and York districts (34.2% vs. 16.9%).[54]

Births

There were 13,608 live births to Maine residents in 2008. This number is similar to that recorded earlier in the decade, but during the 25-year period between 1983 and 2008, Maine's birth rate decreased nearly 30%, from 14.5 to 10.3 per 1,000 total female population.[40] The decline was most pronounced in the 1990s (Figure 3.3.1).

Maine's birth rate is significantly lower than in the United States. Over the past two decades, there has been increased divergence between the Maine and U.S. rates. In 2007, Maine's birth rate was the lowest in the nation.[46]

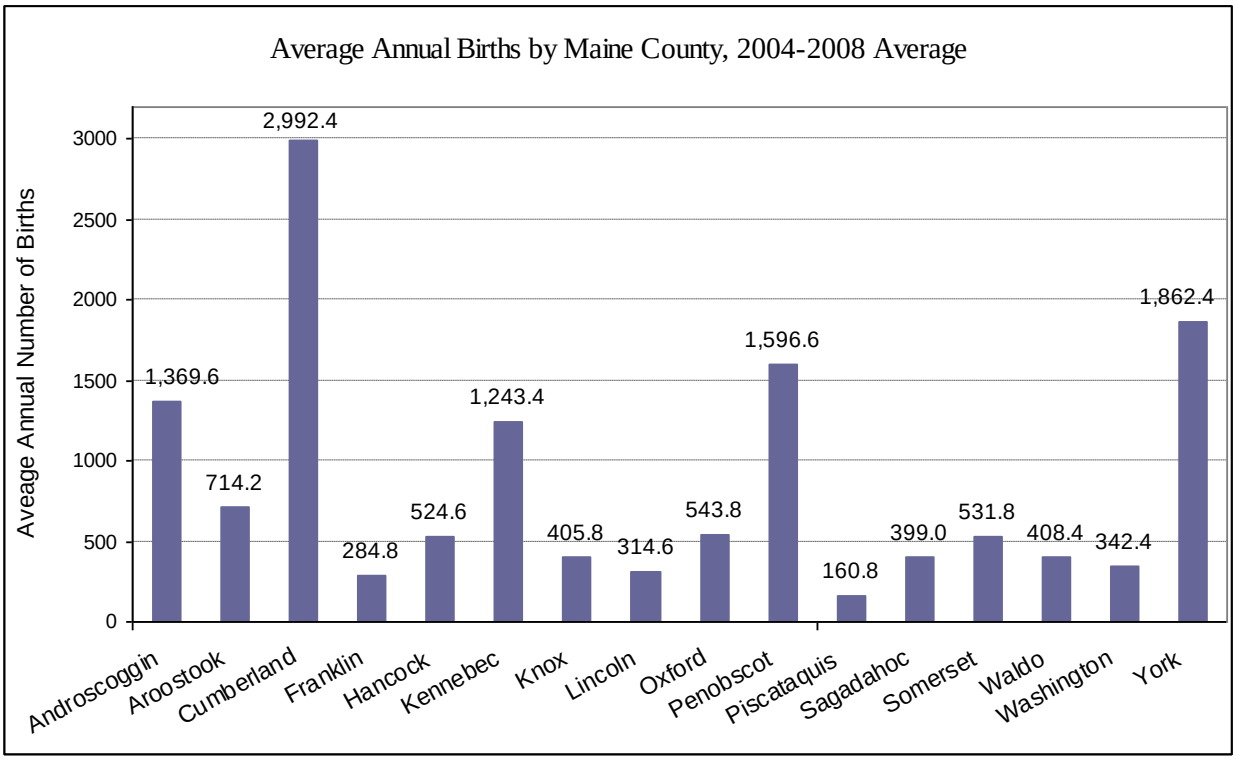
Figure 3.3.1



Data Source: 1983-2008 Maine Vital Records Data and 2007 NCHS Data

More than 40% of Maine infants were born to mothers residing in Cumberland, York, or Penobscot counties (Figure 3.3.2). The distribution of births across counties mirrors the geographic distribution of women of reproduction age in Maine.[40]

Figure 3.3.2



Data Source: Maine Vital Records Data, 2008 birth data are preliminary

Infant Characteristics

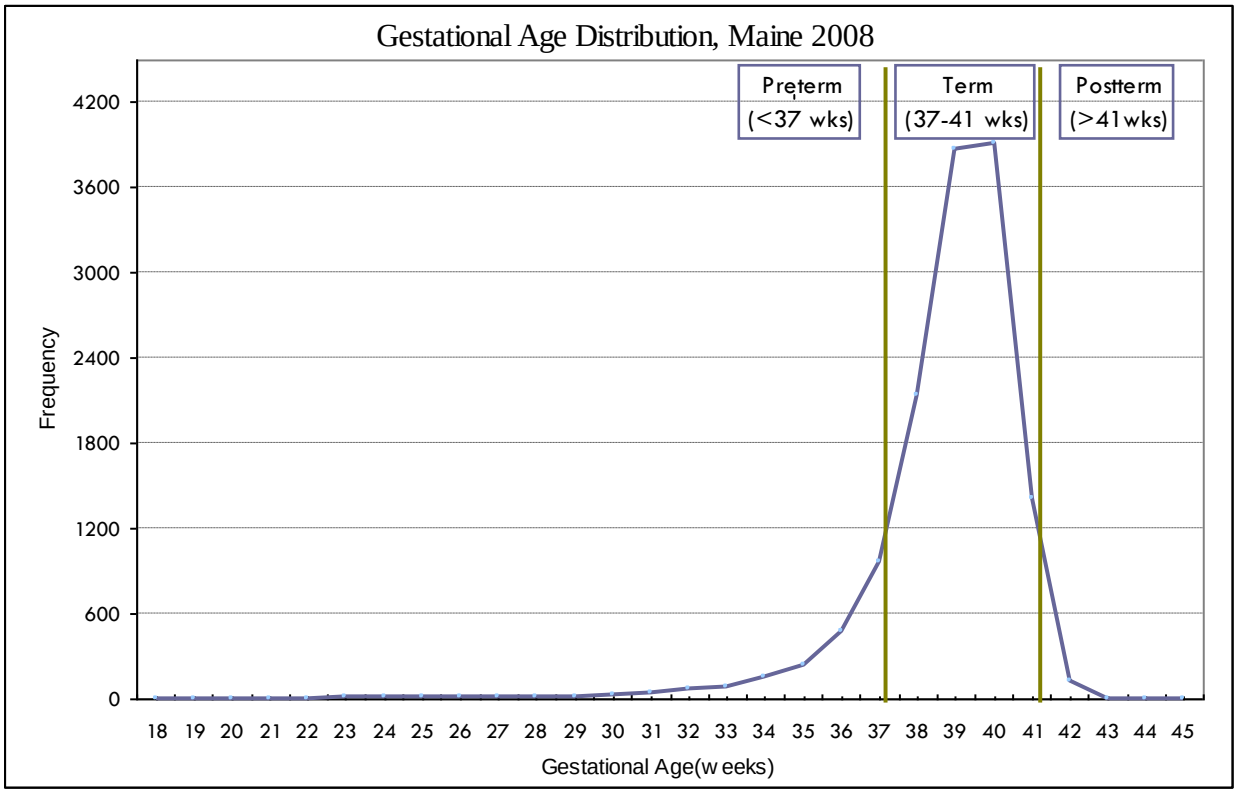
Gender

Over the last decade, an average of 51.5% of births were male and 48.5% were female, for a male:female sex ratio of 1.05, with 315 more male births per year.[40] The sex ratio in Maine is the same as the U.S. ratio.[46]

Preterm Birth

In 2008, the mean gestational period of all births in Maine was 38.8 weeks. Using the clinical estimate from Maine's birth certificates, approximately 90% of births were classified as full term (37-41 weeks), 8.7% were classified as preterm (under 37 weeks), and 1.0% were postterm births (42 weeks and over) (Figure 3.3.3).[40] Another methodology for determining gestational age, which is used by the NCHS, is based on maternal reports of last menstrual period (LMP). All U.S. data on preterm birth are based on this method. Using LMP, 11.1% of Maine births were preterm in 2006 compared to 12.8% of all U.S. births and 11.7% of birth among non-Hispanic whites in the United States.[48] The HP2010 goal is 7.6% of live births.[49]

Figure 3.3.3



Data Source: Maine Vital Statistics Data, 2008

Looking at 5-year average rates, an increasing proportion of Maine babies are born premature. In 1984-1988, 5.4% of live births were premature based on the clinical estimate of gestation recorded on the birth certificate. This proportion increased steadily to 9.2% in 2004-2008. This translates to a 70% increase in Maine's prematurity rate between 1984-1988 and 2004-2008. The 9.2% premature births in 2004-2008 represent an average of 1,281 per year. During that same time period, roughly one out of every seven premature babies in Maine was born *very premature* (less than 32 weeks gestation), an average of 192 each year.[40]

Women at the ends of the maternal age continuum (i.e., <15 yrs and >44 yrs) are at greater risk for having a premature birth (Table 3.3.1). However, premature births among women less than 15 years or more than 44 years account for less than 1% of premature births in Maine. Most premature babies in the state were born to 20-34 year old mothers—the age group with the highest number of births overall (Table 3.3.1).[40]

Table 3.3.1: Distribution of Prematurity by Maternal Age, Maine (2004-2008)

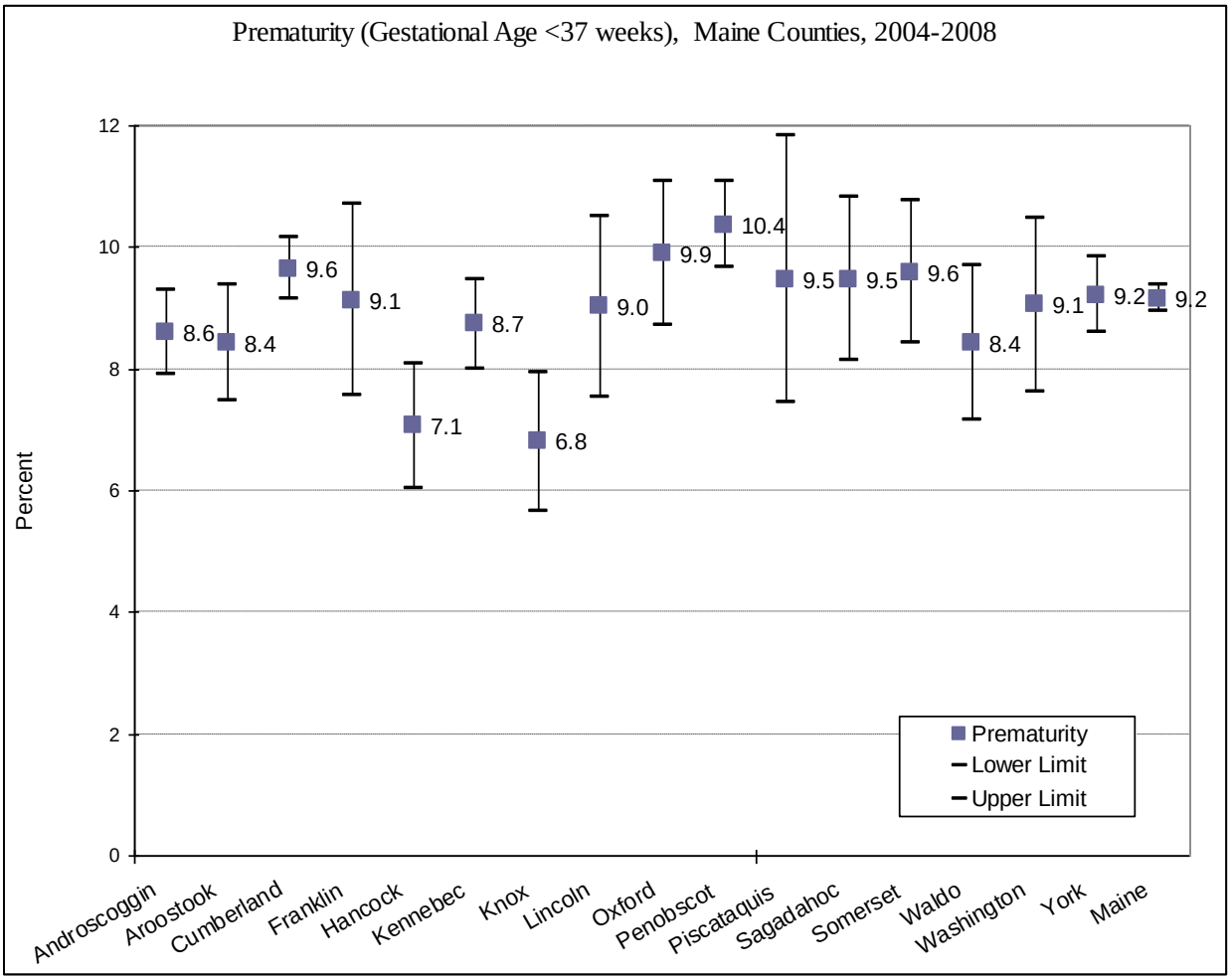
Maternal Age (Years)	Premature % (<37 weeks)	Very Premature % (<32 weeks)
10 - 14 [a]	27.7	12.2
15 – 19	9.6	1.2
20 – 24	8.8	1.2
25 – 29	9.0	1.3
30 – 34	8.9	1.4
35 – 39	10.1	1.5
40 – 44	10.5	1.4
45 + [a]	25.2	2.4
Total	9.2	1.5

[a] Small number of events
Maine total includes births with unknown maternal age (approximately 2.8% of births).
Maine's prematurity data reflect the clinical estimate of gestation.

Data Source: Vital Statistics Data, 1999-2008

Overall, Maine's prematurity rates were similar across Maine's counties, although in two counties, the rates were significantly different than the state as a whole (6.8% in Knox County and 10.4% in Penobscot County; Figure 3.3.4).[40]

Figure 3.3.4

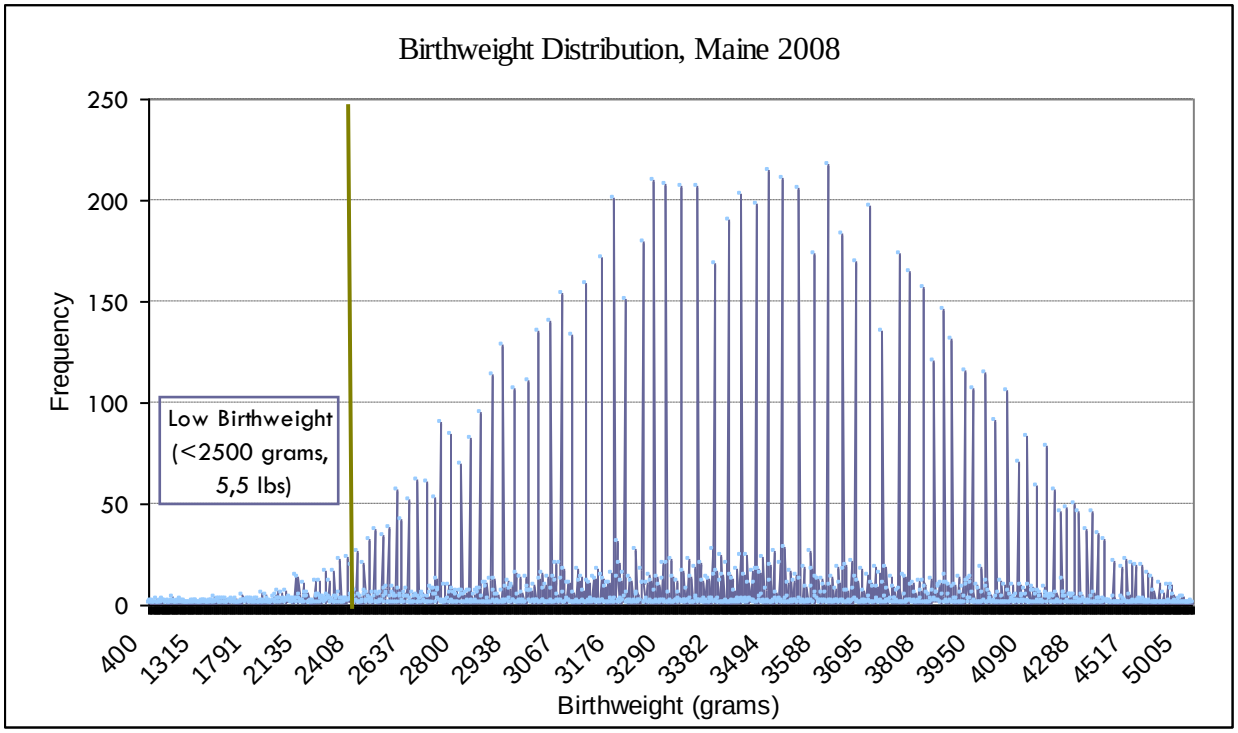


Data Source: Maine Vital Statistics Data, 2004-2008

Birthweight

In 2008, infant birth weights in Maine ranged from 400 grams (less than 1 pound) to 5,750 grams (12.7 pounds).[40] The mean birth weight was 3,367 grams, approximately 7.4 pounds; the median was 3,400 grams (7.5 pounds). One in 10 infants was born weighing less than 2,670 grams (6.0 pounds) and one in 10 weighed more than 4,050 grams (8.9 pounds; Figure 3.3.5). Maine's mean birthweight was slightly higher than births to all U.S. women (3,298 grams), and similar to births to non-Hispanic white women (3,357 grams).[48]

Figure 3.3.5:



Data Source: Maine Vital Statistics Data, Preliminary 2008 Resident Data

Low Birthweight

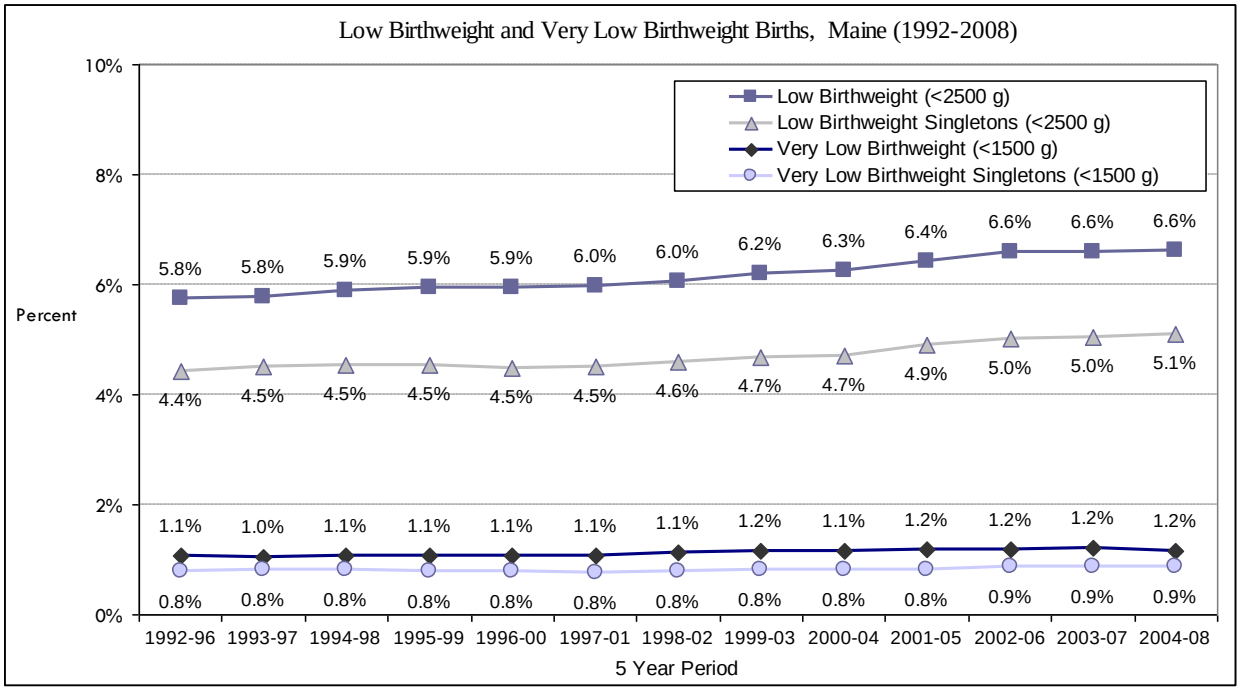
Between 2004-2008, 6.6% of all Maine births and 5.2% of singleton births were low birthweight (<2500g), an average of 925 births per year. During the same time period, an average of 163 infants each year, were VLBW babies (<1500 grams). Among singleton births, 1% were VLBW.[40]

Maine's low birthweight proportion (6.6%) for 2004-2008 was lower than the proportion among U.S. births overall (8.3%) and among U.S. non-Hispanic white mothers (7.3% for 2006).[40, 48], Maine has not yet met the HP2010 goals for low birthweight (5.5% of live births) or VLBW (0.9% of live births).[49]

Over the past 20-years, the proportion of low birthweight births in Maine has increased steadily from 5.2% in 1989-1993 to 6.6% in 2004-2008, a 27% increase.[40] The low birthweight rate has been rising in the United States as well (Figure 3.3.6). Between 1990 and 2006, the U.S. rate of

low birthweight births increased 19%; there was a 30% increase among non-Hispanic white women during this period.[48]

Figure 3.3.6:



Data Source: Maine Vital Statistics Data, 1992-1998

Between 2004-2008, women aged 25-34 years were less likely than other women to give birth to a low birthweight infant, but due to the higher birth rate in this age group, nearly half of all low birthweight babies were born to women in this group. Mothers aged 20-24 accounted for 27% of all low birthweight infants. Low birthweight births among women less than 15 years and women more than age 44 years accounted for less than one percent of low birthweight births in Maine. However, women in these age groups are at increased risk of having a low birthweight baby (Table 3.3.2).[40]

Table 3.3.2: Distribution of Low Birthweight by Maternal Age, Maine (2004-2008) and US (2006)

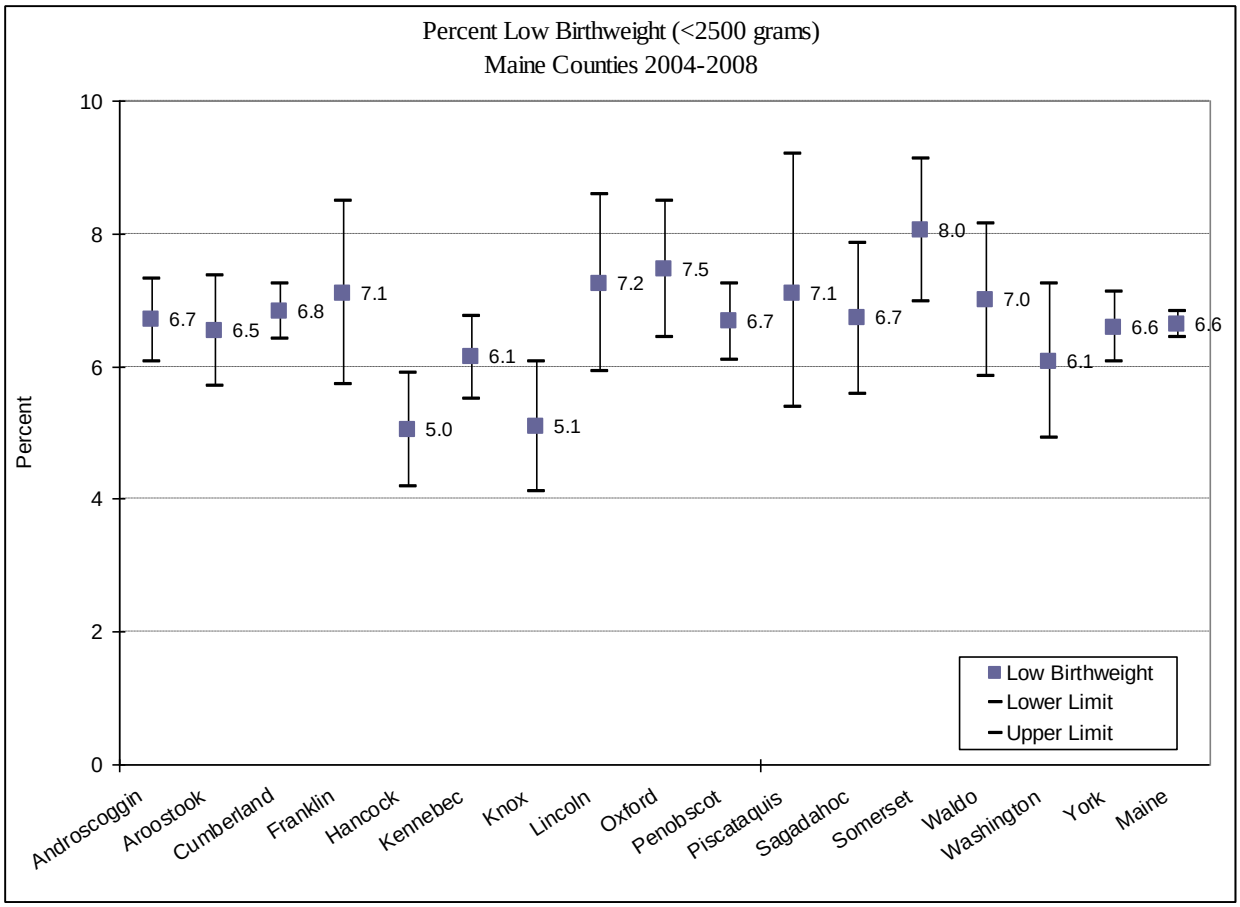
	% Low birthweight (<2500 g)			% Very low birthweight (<1500g)		
Maternal age (yrs)	Maine **(2004-2008)**	USA **(2006)**	USA **Non-Hispanic White (2006)**	Maine **(2004-2008)**	USA **(2006)**	USA **Non-Hispanic White (2006)**
10 - 14*	18.2	13.4	12.3	9.1	3.1	3.6
15 – 19	8.0	10.0	8.9	1.6	1.8	1.6
20 – 24	7.9	8.3	7.4	1.2	1.4	1.2
25 – 29	6.2	7.5	6.7	1.0	1.3	1.1
30 – 34	6.0	7.6	6.9	1.2	1.4	1.1
35 – 39	6.4	8.8	7.9	1.2	1.7	1.3
40 – 44	8.2	11.0	9.9	1.5	2.0	1.7
45 + *	18.1	20.3	20.4	3.1	3.5	3.1
Total	6.6	8.3	7.3	1.2	3.1	1.2

*Small number of events
Maine total includes births with unknown maternal age (approximately 2.8% of births).

Data Source: Vital Statistics Data, 1999-2008 and NCHS, 2006

The 5-year average percent of low birthweight infants ranged from lows of 5.0% and 5.1% in Hancock and Knox counties, respectively to a high of 8.0% in Somerset County (Figure 3.3.7).[40]

Figure 3.3.7



Data Source: Maine Vital Statistics Data, 2004-2008

Congenital Anomalies/Birth Defects

In the United States, about 1 in every 33 babies is born with a birth defect. Birth defects are the leading cause of infant mortality, accounting for 20% of infant deaths nationwide. Babies that survive with a birth defect have a higher chance of long-term disability and illness.[82]

The causes of about 70% of birth defects are unknown. Many birth defects happen early in pregnancy, often before a woman knows she is pregnant. There were 418 birth defects diagnosed in 292 babies in Maine between 2004-2007, a birth defect rate of 59 birth defects per 10,000 live births. The most common birth defects are heart defects, orofacial defects (i.e., cleft lip and palate), and NTD, which are defects of the spine (spina bifida) and brain (anencephalus; Table 3.3.3).[83]

Table 3.3.3: Selected Birth Defects Counts and Birth Prevalence, Maine and US

Defects	Maine+	
	Annual # of cases	Birth Prevalence per 10,000 live births to Maine residents
Central nervous system		
Anencephalus	7	1.00
Spina bifida without anencephalus	14	2.00
Cardiovascular		
Transposition of great arteries	24	3.42
Tetralogy of Fallot	22	3.14
Atrioventricular septal defect	--	--
Hypoplastic left heart syndrome	17	2.42
Orofacial		
Cleft lip with and without cleft palate	50	7.13
Cleft palate without cleft lip	44	6.27
Musculoskeletal		
Upper limb defect	--	--
Lower limb defect	--	--
Gastroschisis	27	3.85
Chromosomal		
Down syndrome	60	8.55

+ estimates based on pooled data from birth years 2003-2007
-- No data available
Note: Due to variability in the methods used by state birth defects surveillance systems and differences in populations and risk factors, prevalence estimates may not be directly comparable with national estimates or those of other states.

Data Source: Maine Birth Defects Surveillance System, ChildLink Data System

Newborn Medical Conditions Screened by the Maine Newborn Bloodspot Screening Program

Maine's Newborn Bloodspot Screening Program currently tests infants for 32 conditions. In 2006-2008, the most common condition identified was congenital hypothyroidism, followed by cystic fibrosis (Table 3.3.4). During this period, all confirmed cases received treatment (see Population-based services under the MCH capacity section for more information on Maine's Newborn Bloodspot Screening Program).[84]

Table 3.3.4: Confirmed Cases of Conditions Tested by Maine's Newborn Screening Program, 2006-2008

Type of screening test	# of Confirmed Cases		
	2008	2007	2006
Phenylketonuria (PKU)	2	0	1
Congenital hypothyroidism (primary)	11	8	10
Galactosemia	0	1	0
Sickling Disorders	0	0	2
Maple Sugar Urine Disease	0	0	0
Homocystinuria	1	0	0
Congenial Adrenal Hyperplasia	1	0	0
Biotinidase Deficiency	0	1	3
MCAD	0	2	1
Toxoplasmosis	0	0	0
"Expanded Metabolics"	2	2	3
Cystic Fibrosis*	8*	0	--
*population-wide testing for CF did not begin until 2008.			

Data Source: Maine's ChildLink Data system

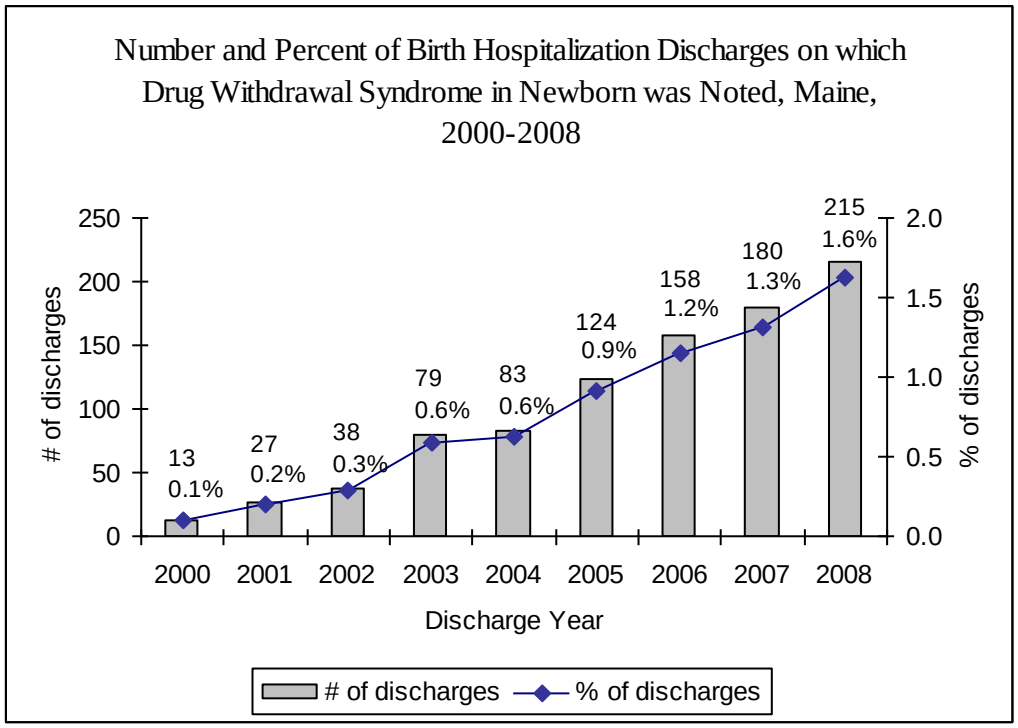
Drug-Affected Newborns

Health care providers are required to report known or suspected instances of infants who were "born affected by illegal substance abuse" or "suffering from withdrawal symptoms resulting from prenatal drug exposure, whether or not the prenatal exposure was to legal or illegal drugs." [85] In some cases, exposure has been confirmed at the time the report is made; in other instances, test results are still pending. Some hospitals report babies whose mothers self-report drug use during pregnancy.

The OCFS received reports of 983 drug-affected babies in 2005-2008. The number of reports received per year increased steadily from 165 in 2005 to 343 in 2008. The largest numbers of reports were from Eastern Maine Medical Center and Maine Medical Center, where the state's level III Neonatal Intensive Care Units (NICU) are located.

Hospital discharge data are another source of information on drug-affected newborns. "Drug withdrawal syndrome in newborn" (ICD-9-CM 779.5) was noted on 215 (1.6%) of the Maine birth hospitalization discharges in 2008 (where birth hospitalization is defined as the admission date being the same as the date of birth). This represents a 16-fold increase since 2000, when only 13 birth hospitalization discharges were noted to involve drug withdrawal syndrome (Figure 3.3.8). No information is available about what drugs were involved. [62]

Figure 3.3.8.



Data Source: Maine Hospital Outpatient Data

Birth hospitalization discharges with drug withdrawal syndrome in newborn coded between 2000-2008 were significantly more likely than other birth hospitalization discharges to (a) have Medicaid as the expected primary payer (81.9% vs. 34.8%); (b) involve a cesarean delivery (33.9% vs. 27.6%); (c) have an intensive care accommodation revenue code (40.7% vs. 6.1%), and (d) have a discharge status other than a routine discharge to home (e.g., discharged to home under home health service care) (39.5% vs. 7.5%). Median length of stay was more than four times longer for birth hospitalizations of newborns with drug withdrawal syndrome than birth hospitalizations of other newborns (9.5 vs. 2.1 days).[62]

Drug withdrawal syndrome in newborns has been noted for newborn residents of every public health district in the state; however, the distribution of drug withdrawal syndrome discharges differs from the distribution of birth hospitalization discharges overall. The Western district represented only 5.8% of drug withdrawal syndrome discharges as compared with 15.7% of all birth hospitalization discharges. Penquis and Downeast districts, on the other hand, represented a much larger proportion of drug withdrawal syndrome discharges than birth hospitalization discharges overall (27.6% vs. 12.8% and 11.3% vs. 6.2%, respectively). It is difficult to determine whether district level differences represent true differences in the incidence of drug withdrawal syndrome in newborns across the state or are due, at least in part, to better recognition and diagnostic coding of the syndrome at certain hospitals.

Three-quarters (74.5%) of the drug withdrawal syndrome birth hospitalization discharges between 2000-2008 were from Maine Medical Center or Eastern Maine Medical Center, as compared with just under a third (31.2%) of birth hospitalization discharges overall.[62] We

cannot tell whether the high percentage of drug withdrawal syndrome discharges at these two hospitals was due to (a) a higher incidence of drug withdrawal syndrome in the areas served by these facilities; (b) planned delivery (or transfer during labor) of high-risk pregnancies at these facilities, which have the only level III NICUs in the state; (c) increased recognition and coding of drug withdrawal syndrome at these hospitals, or some combination of these three factors.

Another measure of prenatal exposure to drugs is an indicator on the birth hospitalization discharge that the newborn was affected by a noxious influence via the placenta or breast milk. This category does not include drug withdrawal syndrome in newborn, but a child could be noted to have both conditions. During 2000-2008, 175 birth hospitalization discharges included a diagnostic code indicating the newborn was affected by narcotics, hallucinogenic agents, and/or cocaine via the placenta or breast milk (ICD-9-CM 760.72, 760.73, 760.75). Twenty-three (13.1%) of these discharges also had drug withdrawal syndrome in newborn coded. [62]

The hospital discharge numbers reported here reflect birth hospitalization discharges and not necessarily unique children. For example, if a newborn was transferred to another hospital on the day they were born, there will be two birth hospitalization discharges for that infant. Another limitation of using birth hospitalization discharges is that some drug-affected newborns might not be diagnosed as such until after their birth hospitalization and therefore not included in these counts.

Abusive Head Trauma

Abusive head trauma, which includes Shaken Baby Syndrome, can be caused by direct blows to the head, dropping or throwing a child, or shaking a child. Thirty-nine Maine residents under 2 years of age were hospitalized for AHT between 2000-2008. Four of these children had multiple hospital discharges on which AHT was noted. (Data reported here are limited to initial AHT hospitalizations.) Two-thirds (66.7%) of the children were male. The most common reported perpetrator was the father, stepfather, or boyfriend (28.2%), followed by a non-related caregiver (10.3%); the relationship of the perpetrator to the child was not noted for 53.8% of the children.[62]

The median age at the child's first AHT hospitalization was 3 months; 79.5% of the children were 6 months of age or younger. Medicaid was the expected primary payer for 82.1% of the hospitalizations. Nine out of ten of the discharges (89.7%) were from two of Maine's three trauma centers. The median length of hospital stay was nearly 5 days. Four children died in the hospital.[62]

The number of children hospitalized for AHT fluctuated widely from year to year, from a low of 0 to a high of 9. It is difficult to identify temporal trends due to small numbers; however, the number of initial AHT hospitalizations was lower in 2000-2002 (n=7) than in 2003-2005 (n=16) or 2006-2008 (n=16).[62] It is not clear, however, whether the higher numbers in the later 3-year periods as compared with 2000-2002 represent an increase in the incidence of AHT, increased awareness and diagnosis of AHT, and/or improved diagnostic coding in the hospital discharge dataset that allowed us to more accurately identify children with AHT. In addition, we might still be under-ascertaining AHT due to factors such as incomplete cause of injury coding in the hospital discharge dataset.

According to Maine's 2004-2007 PRAMS, a representative survey of new mothers in Maine, most Maine mothers (95.5%) have heard or read about the consequences of shaking an infant from at least one source. The most common sources reported by women were magazine or newspaper articles (76.5%), a health care provider (75.7%), and radio or television (66.7%).[51]

Infant Care Practices

Sleep Position

For nearly two decades, the AAP has recommended that infants be placed on their backs to sleep, because infants who sleep prone have an increased risk of dying from SIDS. The AAP continues to recommend that infant caregivers use the back sleep position during every sleep period, particularly when the infant's accustomed position is supine, unless the side or prone position is medically indicated.[86]

Between 2004 and 2007, three-fourths of Maine mothers most often placed their infants on their backs to sleep (77.0%),[51] as recommended by the AAP, exceeding the HP2010 objective of 70%.[49] Nearly one in nine new mothers (11.8%) most often placed their infants on their sides to sleep, 9.2% of new mothers placed their infants prone (on their stomachs), and less than 2% used a combination of positions (Table 3.3.5).[51]

Using the recommended sleeping position was more common among mothers over the age of 20 and among women with higher educational attainment. Among women under the age of 20, three out of 10 mothers most often placed their baby prone or on the infant's side (31.3%); this is significantly higher than mothers of older age groups. More than one-third of new mothers with less than a high school education placed their baby prone or on the infant's side (35.0%), compared to 25.7% of mothers who had a high school education and 19.0% of mothers who had more than a high school education (Table 3.3.5).[51]

Sleep Location

The AAP has recommended that infants not "co-sleep" (i.e., share a bed with parents); they should sleep in a separate but proximate sleeping environment. Evidence reviewed by the AAP task force suggests that bed sharing is more hazardous than use of separate sleep surfaces.[86] According to 2004 – 2007 data from Maine PRAMS, 56.3% of Maine mothers reported that their infant rarely or never shares a bed. Roughly 25% reported that their baby always or almost always sleeps in the same bed with them or someone else, and 20% reported that their infant sometimes shares a bed (Table 3.3.5).[51]

Car Seat Use

In 2004-2007 Maine PRAMS data, over 99% of women reported that their baby is always in an infant car seat when riding in a car, van, or truck. In addition, nearly all Maine mothers indicated that their infant is placed in the back seat of the vehicle (Table 3.3.5).[51] Maine's percentage of car seat use very nearly achieves the HP2010's objective of 100%.[49]

Table 3.3.5: Infant Mortality Risk Factors, PRAMS, 2004- 2007

	%	95% CI
Usual Sleep Position		
Supine	77.0	75.6 - 78.4
Prone	9.2	8.3 - 10.2
Side	11.8	10.8 - 13.0
Multiple	1.9	1.0 - 2.0
Frequency of Co-Sleeping		
Always	10.1	9.2 - 11.2
Often	14.2	13.1 - 15.4
Sometimes	19.4	18.1 - 20.8
Rarely	27.5	26.0 - 29.0
Never	28.8	27.3 - 30.3
Frequency of Infant Car Seat Use		
Always	99.3	99.0 - 99.5

Data Source: PRAMS, 2004- 2007

Exposure to Secondhand Smoke

Most Maine mothers (95.6%) report that their infant is never in the same room with someone who is smoking; 90.7% of Maine mothers have completely banned smoking inside their homes.[51] These data indicate that Maine has met the HP2010 objective that no more than 10% of infants or children be exposed to secondhand smoke.[49]

Breastfeeding

Based on data from PRAMS (2004-2007), an estimated 78.9% of new mothers in Maine report having ever breastfed their baby;[51] this exceeds the HP2010 Goal of 75%.[49] Initiation of breastfeeding is positively associated with maternal age, educational attainment, and income. Mothers insured under MaineCare are less likely to have breastfed (65%) compared to women who received some form of insurance other than Medicaid or MaineCare (85%). According to PRAMS data, there is no statistically significant association between breastfeeding and maternal race. However, we should note that, in Maine, analyses of race/ethnicity have limited power to detect relations due to Maine's racial/ethnic homogeneity. There were also no statistically significant differences among Maine counties. Breastfeeding prevalence ranged from a low of 71% in Aroostook County to a high of 84% in Cumberland.[51]

Among the reasons cited by Maine mothers for not initiating breastfeeding, "I did not like breastfeeding" ranked highest at 45.6%. More than one-quarter of new mothers indicated that a reason for not initiating breastfeeding was "I had other children to take care of," and one in five new mothers indicated that going back to work or school was a reason for not breastfeeding (Table 3.3.6).[51]

The AAP recommends that infants be breastfed for the first 6 months of life.[87] According to the NIS, 80% of Maine children born in 2006 were ever breastfed, 48% were breastfeeding at 6 months and 26% were breastfeeding at 12 months of age. Thirty-nine percent of Maine children

were exclusively breastfed for the first 3 months and 18% were exclusively breastfed for 6 months.[88] Among mothers participating in the 2006 PRAMS survey who had initiated breastfeeding but reported that they no longer were breastfeeding, the top four reasons cited were: "I thought I was not producing enough milk" (40.3%), "breast milk alone did not satisfy my baby" (38.0%), "my baby had difficulty nursing" (32.9%), and "my nipples were sore, cracked or bleeding" (25.7%; Table 3.3.6).[57]

Table3. 3.6: Self-Reported Reasons for Not Breastfeeding, PRAMS, 2004- 2007

Reasons for Not Breastfeeding among Women Not Initiating Breastfeeding	%	95% CI
I didn't like breastfeeding	45.6	41.9 - 49.3
I had other children to take care of	27.9	24.7 - 31.4
I went back to work or school	17.8	15.2 - 20.8
I was sick or on medication	13.6	11.3 - 16.3
I wanted my body back to myself	13.2	10.8 - 15.9
I had too many household duties	12.8	2.1 - 4.3
I didn't want to be tied down	10.0	8.0 - 12.4
I was embarrassed to breastfeed	8.0	6.2 - 10.3
My baby was sick and could not breastfeed	3.0	2.1 - 4.3

Data Source: PRAMS, 2004- 2007

According to PRAMS data, among Maine mothers who gave birth in a hospital, nearly 93% reported that hospital staff gave them information about breastfeeding and 77.5% were given a telephone number to call for help with breastfeeding. More than six of ten new mothers who gave birth at a hospital were given a gift basket containing infant formula, although this practice decreased between 2004 and 2007 from 67.9 to 53.0% (Table 3.3.7).[51]

Table 3.3.7: Hospital Practices in Support of Breastfeeding, PRAMS, 2004- 2007

"This question asks about things that may have happened at the hospital where your new baby was born". (% among mothers giving birth at a hospital.)	%	95% CI
Hospital staff gave me information about breastfeeding	92.3	91.3 - 93.1
My baby stayed in the same room with me at the hospital	87.5	86.4 - 88.5
I breastfed my baby in the hospital	76.4	75.0 - 77.9
I breastfed my baby in the first hour after my baby was born	56.4	54.7 - 58.0
Hospital staff helped me learn how to breastfeed	67.9	66.3 - 69.5
My baby was fed only breast milk at the hospital	54.3	52.6 - 56.0
Hospital staff told me to breastfeed whenever my baby wanted	71.0	69.4 - 72.5
The hospital gave me a gift pack with formula	61.6	60.0 - 63.2
The hospital gave me a telephone number to call for help with breastfeeding	77.5	76.1 - 78.9

Data Source: PRAMS, 2004- 2007

Infant Mortality/Fetal losses

Fetal and infant deaths may occur at any point from conception, to birth, and up to one year of life. Infant and fetal mortality reflect the state of maternal health and the quality and accessibility of primary health care available to women and infants.

The following measures are reported in this section:
Fetal Losses: 20 weeks or more gestation
Infant mortality: deaths between 1 and 365 days.
Perinatal mortality: deaths among fetuses and young infants. 2 rates are used: 1) infant deaths at less than 28 days of age and fetal deaths at 20 weeks or more and 2) infant deaths at less than 7 days of age and fetal deaths at 28 weeks or more.
Neonatal mortality: deaths of infants less than 28 days.
Postneonatal mortality: deaths occurring between 28 days and 1 year.

Fetal Losses

Based on an analysis of fetal deaths at 20 weeks or more gestation, the U.S. fetal mortality rate was 6.2 per 1,000 live births and specified fetal deaths in 2003, and 4.9 per 1,000 live births and fetal deaths among non-Hispanic white women. In Maine, the rate was 3.6 per 1,000 live births and fetal deaths.[40] Across the U.S., rates of fetal mortality ranged between 3.1 and 9.2 per 1,000. Maine's fetal mortality rate was fourth lowest in the nation, although reporting completeness may account for some of the differences in fetal and perinatal mortality rates among states.[45]

Infant mortality

Between 2003 and 2007, 420 Maine babies died before their first birthday, an average of 84 deaths per year. The infant mortality rate between 2003-2007 was 6.0 infant deaths per 1,000 live births. This rate was higher than the previous five year average of 5.0 infant deaths per 1,000 live births, but lower than the rate observed two decades ago (8.1 per 1,000). Maine's 2003-2007 infant mortality rate was higher among black infants (8.6 per 1,000) than white infants (5.8 per 1,000).[40] Maine's 2007 infant death rate (6.2 per 1,000 live births) was lower than U.S rate of 6.8 per 1,000, but slightly higher than the U.S. non-Hispanic white infant mortality rate (5.7 per 1,000) for 2007.[40, 89] Maine has not yet met the HM2010 goal of 4.6 infant deaths per 1,000 live births or the HP2010 goal of 4.5 per 1,000 live births.[49, 55]

Nearly half of Maine's infant deaths occurred in the first 24 hours after birth, 14.5% occurred between two and seven days after birth, and 10.5% between 8 and 28 days after birth. The remaining 28% of infant deaths occurred during the postneonatal period between 29 and 365 days after birth.[40]

Causes of Infant Deaths

More than 70% (71.7%) of deaths were coded into ten leading causes. Nearly half of the infant deaths in Maine between 2003-2007 were caused by three groups of conditions: congenital anomalies (23.8% of total infant deaths), disorders related to short gestation and low birthweight (16.4%), and SIDS (8.1%; Table 3.3.8).[40] Other leading causes of death among infants between 2004-2007 included deaths related maternal pregnancy complications (6.2%), placenta cord

membranes (4.7%), bacterial sepsis (3.3%), neonatal hemorrhage (2.4%), and respiratory distress (2.1%), necrotizing enterocolitis (1.9%), and unintentional injury (1.9%).

The leading cause of death among Maine and U.S. infants included a grouping of congenital malformations, deformations, and chromosomal abnormalities. Between 2003-2007, 100 infant died due to congenital anomalies, a rate of 1.5 per 1,000 live births.[40] The U.S. rate of death for these conditions is 1.3 per 1,000 (the rate is the same for U.S. non-Hispanic whites).[89]

Causes related to short gestation and low birth weight were the second leading cause of infant mortality in Maine between 2003-2007. Sixty-nine Maine infants died from this cause between 2003-2007, a rate of 0.98 per 1,000 live births. There were 18 deaths in 2007.[40] The 2007 overall U.S. rate was 1.1 per 1,000 live births; the U.S. rate among non-Hispanic white infants was 0.80 per 1,000.[89]

SIDS was the third leading cause of death among infants in Maine between 2004-2007. Thirty-four (34) babies died from SIDS in Maine during this time; there were 4 SIDS deaths in 2007. The SIDS mortality rate in Maine between 2003-2007 was 0.5 per 1,000 live births, the same as the national rate.[40] Maine has not yet met the HP2010 goal of 0.25 SIDS deaths per 1,000 live births.[49]

Table 3.3.8: Infant Mortality, Maine Resident Data, 2003-2007, and US, 2007

	Maine, 2003-2007 Total	**US 2007 Total**	**US 2007 Non-Hispanic White**
Number of infant deaths	420		--
Infant mortality rate (per 1,000 live births)	6.0	6.8	5.7
Black infant mortality rate	8.6	12.9	
White infant mortality rate	5.8	5.7	
Mortality Rate among top leading causes			
Congenital anomalies	1. 44	1.3	1.3
Disorders related to short gestation and low birth weight	1.0	1.1	0.8
Sudden infant death syndrome	0.5	0.5	0.5
Maternal complications	0.4	0.4	0.3
Complications of placenta, cord, membranes	0.3	0.3	0.2
Perinatal Mortality Rate I (Fetal deaths of at least 20 weeks gestation and infants through 28 days)	8.7	10.7*	8.5*
Perinatal Mortality Rate II (Fetal deaths of at least 28 weeks gestation and infants through 7 days)	5.8	6.7*	5.4*
Neonatal (0-27 days)	4.3	4.4	3.7
PostNeonatal (28 days – 1 year)	1.7	2.4	2.0
Leading causes were categorized using 71 cause groups; 67 deaths were classified in the "residual codes" category. *2005			

Data Source: 2003-2007 Maine Vital Records Data; Preliminary 2007 morality data, US 2007, Preliminary

Characteristics of Infant Deaths

Between 2003-2007, one in four infants who died before one year weighed less than 500 grams at birth; 29% weighed between 500 and 1,499 grams, and 11% were between 1,500 grams and 2,499 grams. Less than one-third of infant deaths were among infants born at "normal" birthweight (at least 2,500 grams). Eighty-three percent of infant deaths were singleton births.[40]

Sixty percent of infant deaths occurred among very preterm infants, born less than 34 weeks gestation, 10% occurred among late preterm infants (34-36 weeks gestation), and 30% of deaths were among infants born at 37 weeks or more gestation.[40]

Data from 2003-2007 indicated no statistically significant differences among Maine's public health districts on their infant mortality rates (Table 3.3.9).[40]

Table 3.3.9: Infant Mortality by Public Health District, Maine Resident Data, 2003-2007

District	Rate per 1,000 Live Births	95% CI
York	5.7	4.3 - 7.5
Cumberland	5.7	4.6 - 7.0
Western	6.8	5.4 - 8.6
Midcoast	5.1	3.6 - 6.9
Central	5.7	4.3 - 7.5
Penquis	6.3	4.7 - 8.1
Downeast	4.4	2.6 - 6.8
Aroostook	6.6	4.2 - 9.9
Maine*	6.0	5.4 - 6.6
*Includes 21 Maine mothers with missing county data		

Data Source: Maine Vital Records Data Files.

Perinatal Mortality

Two definitions of perinatal mortality are commonly used to describe the burden of fetal and young infant deaths. The first includes infant deaths at less than 28 days of age and fetal deaths at 20 weeks or more. In Maine, fetal deaths at 20 weeks or more gestation are required to be reported to the State. The second, more restrictive definition includes infant deaths at less than 7 days of age and fetal deaths at 28 weeks or more.

Perinatal mortality I: Infant deaths at less than 28 days, fetal deaths at 20 weeks or more: Using this definition, there were 616 perinatal deaths between 2003 and 2007, an average of 123 per year. Over this period, 303 (49%) were infant deaths within 28 days of birth and 313 (51%) were fetal deaths at 20 weeks or more gestation.[40] The average annual perinatal mortality rate for this 5-year period was 8.7 per 1,000 live births plus fetal deaths, similar to the 2005 U.S. rate of 8.5 per 1,000 for non-Hispanic white mothers.[39]

Perinatal mortality II: Infant deaths at less than 7 days, fetal deaths at 28 weeks or more: Based on the second definition of perinatal mortality, the average annual perinatal mortality rate

between 2003 and 2007 was 5.4 per 1,000 live births plus late fetal deaths. Of the 411 deaths occurring in Maine during this 5-year period, 219 (63%) were infant deaths within 7 days of birth and 153 (37%) were fetal deaths at 28 weeks or more gestation. Looking at a 20-year historical period, the perinatal death rate declined from 6.4 per 1,000 in 1989-1993 to 5.5 in 1994-1998 and has since remained fairly stable.[40] Maine's rate is similar to the 2005 U.S. rate (5.4 per 1,000) for non-Hispanic white mothers.[39]

Maine has yet not met the HP2010 goal for perinatal mortality (4.5 per 1,000).[49]

Neonatal Mortality

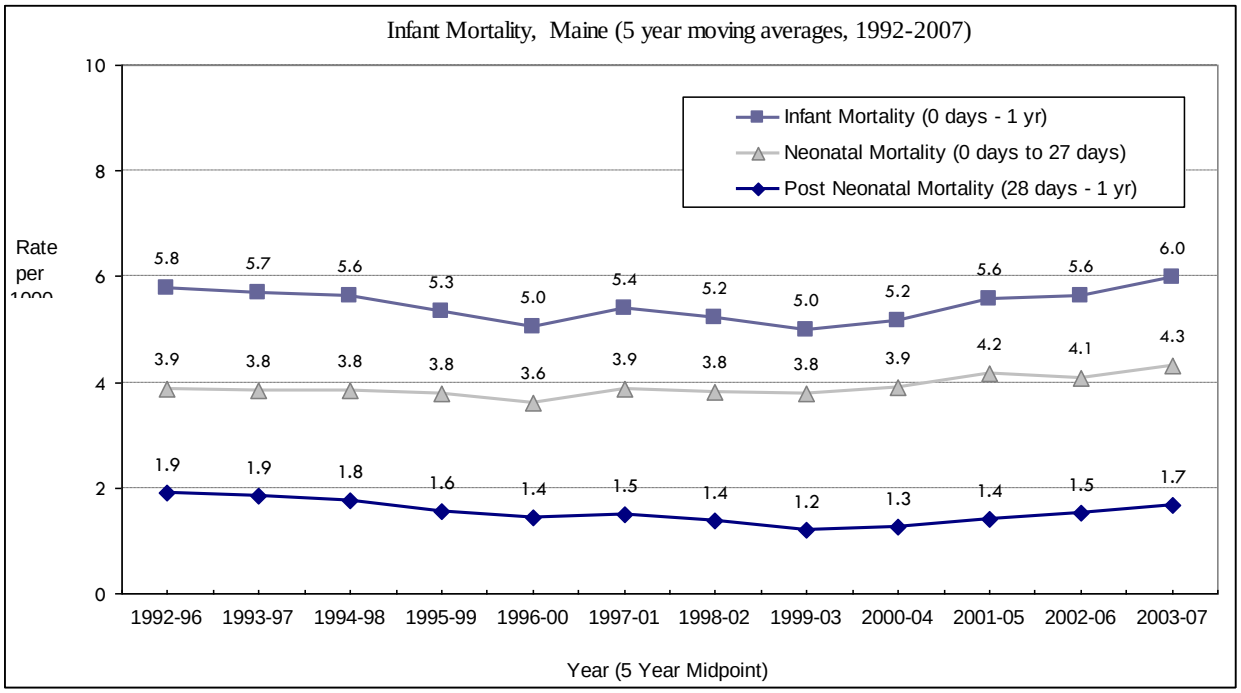
There were 303 neonatal deaths in Maine between 2003 through 2007, a yearly average of 61 deaths of infants less than 28 days.[40] The average annual neonatal mortality rate was 4.3 per 1,000 live births. The five-year moving average rates have increased gradually since the period 1998-2003 (Figure 3.3.9). Maine's most recent 5-year rate was slightly greater than the 2007 U.S. rate (3.7 per 1,000) among infants of non-Hispanic white mothers.[89] Maine has not yet met the HP2010 goal of 2.9 neonatal deaths per 1,000 live births.[49]

One in four neonatal deaths was attributed to congenital malformations, deformations and chromosomal abnormalities and 22% of deaths were related to short gestation and low birth weight.[40]

Postneonatal Mortality

There were 117 postneonatal deaths in Maine from 2003 through 2007, an average of 23 postneonatal deaths per year.[40] The average annual postneonatal mortality rate for this period was 1.7 per 1,000 live births, continuing a gradual increase from 1.2 per 1,000 in 1999-2003 (Figure 3.3.9). Maine's rate was slightly less than the 2007 US rate of 2.0 per 1,000 among babies of non-Hispanic white mothers.[89] More than one in four deaths among infants who survived more than 28 days was due to SIDS (26.5%), and 23.9% were attributed to congenital malformations, deformations, and chromosomal abnormalities.[40] Maine has not yet met the HP2010 goal of 1.2 postneonatal deaths per 1,000 live births.[49]

Figure 3.3.9



Data Source: Maine Vital Records Data Files

Section 3.4: Child and Adolescent

Child Demographics

This section reports information on characteristics that affect the physical, social, and emotional health of Maine's children.

Child Population

Children under 18 years made up 20.8% of the state's 1.32 million people in 2008; across the state's 16 counties the proportion of children ranged from 18.9% to 22.6%. More than half (51.3%) of children under age 18 were male and 48.7% were female. Children represented a smaller proportion of the population in Maine than they did in the United States as a whole, where 24.3% of the population was under 18 years of age. An additional 8.6% of Maine's population was young adults between the ages of 18 and 24 years.[1]

The proportion of children and young adults as a percent of Maine's population is declining. Based on projections compiled by the Population Division of the U.S. Census Bureau, by the year 2020 Maine's population of children ages 0-19 is expected to be 12% less than in 2000.[4] The largest decrease is expected to occur among youth ages 15-19, projected to be 24% less in 2020 than in 2000. Similarly, the Maine DOE has projected a 10.4% statewide decrease in resident enrollment between 2005 and 2014.[90] The projected decrease will be more dramatic in certain regions of the state; Washington, Piscataquis, and Franklin school enrollment is projected

to decrease by more than 20% between 2005 and 2014. Maine public school enrollment has decreased by 7.6% between 1996 and 2005.[90]

Table 3.4.1: Child Population, Maine 2008

County	Under 5 Years	Ages 5 - 17	Total Under 18 Years	Percent of Population < 18	Total Ages 18 - 24	Percent of Population 18 - 24
Androscoggin	6,881	17,296	24,177	22.6%	8,990	8.4%
Aroostook	3,527	10,502	14,029	19.6%	6,030	8.4%
Cumberland	15,505	43,796	59,301	21.5%	23,869	8.6%
Franklin	1,431	4,269	5,700	19.1%	3,629	12.2%
Hancock	2,684	7,556	10,240	19.3%	4,508	8.5%
Kennebec	6,401	18,494	24,895	20.6%	10,623	8.8%
Knox	2,065	5,866	7,931	19.5%	2,796	6.9%
Lincoln	1,580	4,974	6,554	18.9%	2,301	6.6%
Oxford	2,959	8,533	11,492	20.3%	4,125	7.3%
Penobscot	8,266	21,942	30,208	20.3%	17,134	11.5%
Piscataquis	830	2,400	3,230	19.0%	1,261	7.4%
Sagadahoc	2,109	6,109	8,218	22.6%	2,603	7.2%
Somerset	2,709	8,118	10,827	21.1%	3,731	7.3%
Waldo	2,045	5,912	7,957	20.8%	3,161	8.2%
Washington	1,741	4,824	6,565	20.2%	2,523	7.8%
York	10,726	32,817	43,543	21.6%	15,398	7.6%
Maine	71,459	203,408	274,867	20.9%	112,682	8.6%

Data Source: U.S. Census

Households with Children

According to estimates from the 2005-2007 ACS, 30.4% of households in Maine included one or more children under age 18, which is slightly fewer than in the US overall (34.6%). Of the households with a child under age 18, 23.3% were female-headed households; 10.8% were male-headed households.[3]

Grandparents are the primary caregivers for a small proportion of children in Maine. The 2005-2007 ACS found that 1.7% of Maine adults over age 30 were living with their grandchildren, similar to findings from the 2000 Census. Of these, 41.8% were *grandparent caregivers*, defined as having primary responsibility for co-resident grandchildren younger than 18. One-third (32.4%) of Maine's grandparent caregivers had been responsible for their grandchildren for five or more years. In the United States, 3.5% of adults over 30 were living with their grandchildren and 40.8% were responsible for caring for these children.[3]

Residence and Neighborhood

About 29.2% of Maine children ages 0-17 lived in urban core areas, 20.2% in suburban areas, 19.6% in large town areas, and 31.0% in the small town rural areas of the state.[91] Characteristics of Maine's neighborhoods reflect Maine's rural nature. Based on data from the 2007 NSCH, fewer Maine children than children in the US overall lived in a neighborhood with all of the following amenities: a park, sidewalks, a library, and a community center (40.5% vs. 48.2%). A greater proportion of Maine children than children in the U.S. overall, lived in neighborhoods with poorly kept or dilapidated housing (23.7% vs. 4.6%). The majority of Maine children (85.0%) lived in neighborhoods that are supportive, and a greater proportion of Maine parents than US parents considered their neighborhoods as usually or always safe (93.3% vs. 86.1%).[92]

Race/Ethnicity

According to the 2005-2007 ACS, 91.0% of Maine's children under age 18 were non-Hispanic white and 1.8% were Hispanic.[3] While Maine's population is predominantly white, the state is gradually becoming more racially diverse. In the 2006-2007 academic year, 193,986 Maine children were enrolled in public and approved private schools in grades pre-kindergarten to 12th grade. The proportion of students who were white decreased from 97.5% in the 1993-1994 school year to 94.6 % in the 2006-2007 academic year. Less than three percent (2.3%) were Black or African American; 1.4% were Asian/Pacific Islander; 0.7% were American Indian; and 1.0% were Hispanic.[15]

Language and Diversity

"Culturally and linguistically diverse" (CLD) and "linguistically isolated" are terms used to describe diversity and refer to "individuals from homes and communities where English is not the primary language of communication, although the individual may be bilingual or a monolingual English speaker."[93] Many children in immigrant families live in linguistically isolated households: they and/or their parents are limited in their spoken English. The number of Maine children in immigrant families has increased by 24% since 2000. Currently 6% of Maine children under age 18 are foreign-born or have at least one foreign-born parent. Based on 2005-2006 ACS data analyzed by the Urban Institute, 0.74% of Maine children live in a linguistically isolated household and 12.8% of children with immigrant parents live in a household that is linguistically isolated.[94]

According to data from the Maine DOE, 4,606 students were described as "Limited English Proficient" (LEP) during the 2007-2008 school year. LEP refers to "students who have insufficient English to succeed in English-only classrooms." Six languages account for 67.7% of the languages spoken by Maine's LEP students. The six common languages recorded were Somali (spoken by 30.4% of LEP students), Spanish (12.2%), French (7.4%), Khmer (6.6%), Chinese (5.8%) and Passamaquoddy (5.1%). In 2002, the most common languages spoken by Maine's LEP students were French (spoken by 16.8% of LEP students), Spanish (12.9%), Passamaquoddy (10.7%), Somali (9.2%), and Khmer (8.9%). LEP students make up a small, but growing, proportion of Maine's school children. During the 2007-2008 2.4% of Maine's students were LEP while 1.6% were in 2003-2004.[95] These figures highlight the demographic changes related to immigration occurring in Maine.

The changes in Maine's multilingual community are occurring more rapidly in certain regions of the state. For example, Portland's multilingual community has grown exponentially. According to Portland Public Schools Multilingual and Multicultural Center, the district has over 1,800 students who come from homes where over 60 different languages are spoken. The students represent about 25% of Portland Public Schools' total enrollment; approximately 1,400 are enrolled as English language learners.[96]

Education Factors

Beginning in 2008, Maine counts on-time graduates as those who receive a regular diploma by the end of the fourth year after entering ninth grade for the first time. Approximately eight in 10 members (82.9%) of the Maine Class of 2008 secondary school students) completed high school with a regular diploma; the county-specific range was 76.8% to 86.8% (secondary school students enrolled in public schools or private schools with 60% or more in public funding (Table 3.4.2).[97] Completion rates ranged from 64.3% to 100% (this rate includes diplomas received by students with disabilities granted five/six years by their Individualized Education Plan (IEP) and LEP students granted five/six years as part of their documented Personal Learning Plans).

More than four percent (4.1%) of public secondary school students dropped out during the 2007-2008 school year (Table 3.4.2). The statewide dropout rate had been between 2.8% and 3.2% since the 1990-1991 school year. "Dropout" defines any person who has withdrawn for any reason except death, or been expelled from school before graduation or completion of a program of studies and who has not enrolled in another educational institution or program. Females were more likely to complete school (87.9%) and less likely to drop out (3.47%) than males (81.1% and 4.75%, respectively).[98]

More than seven in ten (71.8%) of Class of 2005 public high school graduates in Maine intended to enroll in some type of postsecondary program, including post secondary high school courses, junior college, college or university, vocational/technical, and other continuing education. The range across Maine counties was 63.2% to 80.0% (Table 3.4.2).[99]

Based on data from the 2005-2007 ACS, nearly one in seven (15%) Maine young adults between the ages of 18 and 24 were described as "not actively engaged" which is defined as those not attending school, not working, and had not attained a degree beyond high school.[3]

Based on 2005-2006 ACS data analyzed by Kids Count, 42% of three- to four-year-olds, and 53% of Maine's three-to five-year-olds are enrolled in nursery school, preschool or kindergarten.[100]

Table 3.4.2: Education Attainment 2007-2008

	% of Class of 2008 public school students who completed high school with regular diploma in 4 years	% of public secondary school students who dropped out during 2007-2008 school year	% of public high school graduates who intend to enroll in post secondary programs (2005)
State of Maine Total	83.5	4.13	71.8
Maine Public Schools	82.9	4.29	--
Private 60% Publicly Funded	91.5	2.22	--
Androscoggin	76.8	5.95	73.6
Aroostook	84.5	3.30	80.0
Cumberland	84.9	3.95	77.4
Franklin	83.0	2.99	76.4
Hancock	83.3	4.76	70.0
Kennebec	80.3	4.92	75.7
Knox	86.8	2.80	63.8
Lincoln	82.9	6.30	63.2
Oxford	82.6	5.26	72.3
Penobscot	80.6	4.80	71.2
Piscataquis	85.5	4.25	69.5
Sagadahoc	84.2	3.10	65.1
Somerset	80.1	4.95	65.6
Waldo	86.0	3.57	62.7
Washington	82.5	3.71	65.5
York	85.4	3.35	66.2

Data Source: Maine Department of Education

Maine has developed "grade level expectations" in reading, mathematics, and science. According to Maine's DOE, 71% of Maine's 3rd-8th grade students met or exceeded the State's achievement level standards in reading during the 2009 school year, while 23% partially met standards, and 6% did not meet standards. Forty percent of Maine's 3rd-8th grade students did not meet math standards, and 41% of 5th and 8th grade students did not meet science standards.[101]

Data from the integrated MYDAUS-Youth Tobacco Survey (YTS) indicate that many students in Maine identify as having a low commitment to school and low academic achievement. For example, 52% of 6th grade students and 45.7% of 12th grade students reported low commitment to school, and 40% of 6th grade students and 46.5% of 10th grade students report low achievement. Maine students also report positive school-related behaviors including participating in clubs, organizations and activities at school (82.6% of 6th-12th grade students).[102]

Health Insurance and Access to Medical Care

Maine's uninsured rates among children are lower than the national average. According to 2007 estimates, 4.9% of Maine children, age 0 to 18, or an estimated 15,000 children do not have health insurance compared to 11.3% of children nationally. According to the U.S. Census CPS, 5.7 % of young Mainers between the ages of 0 to 5 are uninsured compared to 10.5% nationwide (Table 3.4.3).[103] According to the NSCH, from 2003 to 2007, health insurance rates among children age 0-17 years nationwide have decreased from 91.2 to 90.9 % insured. Comparatively, in Maine, health insurance rates increased during the same time period from 93.3 to 95%.[104, 105] This rate increase in Maine may be due to the eligibility criteria for MaineCare, the state Medicaid/State Children's health Insurance Program (SCHIP). In Maine, children living in families <200% of FPL are eligible for MaineCare.[106]

Currently, 46.1% of Maine children under age 18 participate in MaineCare, the federally and state funded health insurance program. According to the Maine Children's Alliance, 38% of children under age 18 were living in low-income families defined as households with incomes less than 200 percent of the FPL. An estimated 11,000 currently uninsured children from low-income households are eligible for MaineCare.[107]

Table 3.4.3: Health Insurance Coverage (2007) Ages 0 – 18

	Maine		United States
	#	%	%
Employer	182,561	61.3%	59.3%
Individual	13,775	4.62%	5.3%
Medicaid	103,721	34.8%	27.6%
Uninsured	14,584	4.9%	11.3%

Data Source: U.S. Census Current Population Survey

Data from the 2007 NSCH estimate that 9.0% of Maine children were uninsured at some point in the previous year. Among those with insurance, 21.4% of parents described their child's insurance coverage as inadequate, defined as their child's health needs have not always been met, the child has not always been allowed to see needed providers, and the out-of-pocket expenses have not always been reasonable. A greater proportion of parents of privately insured children described their child's health insurance as inadequate than parents of children covered by MaineCare (26.3% vs. 11.9%).[92]

Children who have a special health need are especially vulnerable to health complications if they are not adequately insured. According to a recent national survey of children with special health needs, 74.6% of Maine families who have children with special health needs report that they have "adequate private and/or public insurance to pay for services they need" as compared to the national rate of 66.9%. Children with special health needs often require more medical services than children without special health needs. For example, 17.2% of Maine families pay $1000 or more out of pocket in medical expenses per year for their child who has the special need and 19.3% of families experience financial problems as the result of their child's special needs condition.[108]

To combat Health Professional Shortage Areas (HPSA), Maine has 18 SBHCs, 41 rural health clinics and 18 FQHCs which provide primary health and other health care services to underserved populations and are often the single provider of primary care services in many of the state's rural and underserved areas. An estimated 165,458 Mainers were served by a FQHC in 2008.[109]

Based on data from the NSCH, 5.8% of Maine children had an unmet need for medical, dental, mental health, or other health care during the previous year.[92] According to a 2009 report by the USM Muskie School of Public Service on children served by MaineCare, 98% of parents surveyed indicated that their children have a usual place of care for well and sick doctor visits. Also, 95% of 1,403 responding parents indicated that their children received a preventative medical visit in the last 12 months. Nearly 3 in10 (27%) MaineCare parents surveyed who had a child with special health care needs indicated that their children had unmet health care needs compared to 16% of the 1,215 parents interviewed who had children without special health needs.[110]

There are approximately sixteen pediatric dentists in the state of Maine and twenty-one oral health clinics.[111] Still, the NSCH found that in 2007, 80.9% of parents indicated that their child has seen a dentist for one or more preventive dental care visits such as check-ups and dental cleanings during the past 12 months/since his or her birth.[92] For low-income children receiving MaineCare, however, a recent report by the USM found that 25% of 1,401 parents surveyed indicated that their children did not receive a preventative dental care visit in the last 12 months.[110]

Poverty

Children are more likely than either working-age or older adults to be living in poverty. Statewide, 21.8.% of children under 5 years were below the FPL, (Table 3.4.4), as were 16.7% of children 5-17, and 11.9% of individuals ages 18-64. Poverty rates have increased in the past decade; the comparable percentages in 1999 were 16.2%, 12.9%, and 10.0%, respectively. The recent national rates of child poverty under the age of five and ages 5 – 17 were 21.1% and 16.7% respectively.[3] According to the Margaret Chase Smith Policy Center, the poverty rate is considered a "lagging" indicator as it tends to rise after the official end of recessions; therefore, poverty rates in the near future will likely show an increase as it will reflect the recent national economic downturn.[34]

According to the 2005-2007 ACS, 14.6% of families with children under the age of 18 and 20.5% of families with children under age 5 in Maine lived below poverty (Table 3.4.4). Female-headed households were more likely to be at or near the federal poverty threshold than other households. Between 2005 and 2007, 38.9% of female headed households with a child under age 18, and 59.4% with a child under the age of five reported incomes below 100% of the poverty line, slightly higher than among similar households in the U.S. (36.9% and 45.5%, respectively).[3]

There is considerable variation in poverty and income measures across Maine counties. For example, the county-specific proportions of children under age five who are below the FPL range from 9.1% to 33.5% (Table 3.4.4).[3]

Table 3.4.4: Proportion of Children below Federal Poverty Level (2005-2007)

	% of individuals under 5 years of age	% of individuals 5 - 17 years of age	% of families with related children < 5 yrs	% of families with related children < 18 yrs	% of families with female householder, no husband present, with related children < 5 yrs	% of families with female householder, no husband present, with related children < 18 yrs	% of students receiving free lunch, 2008	% of students receiving reduced-fee lunch, 2008
United States	21.1	16.7	16.2	15.1	45.5	36.9	----	-----
Maine	21.8	14.5	20.5	14.6	59.4	38.9	31.4	7.6
Androscoggin	33.5	20.9	24.2	18.9	77.5	46.0	38.1	8.0
Aroostook	25.5	18.5	27.7	20.2	63.0	47.6	39.0	10.4
Cumberland	17.7	11.3	17.2	10.7	53.1	34.2	22.4	4.9
Franklin	18.9	18.2	15.2	17.1	93.3	52.6	38.7	9.2
Hancock	9.1	11.9	3.2	9.8	9.0	33.4	26.8	8.3
Kennebec	23.8	17.8	16.4	16.4	41.5	40.6	32.1	8.0
Knox	24.3	9.5	26.5	14.3	73.1	35	31.6	7.3
Lincoln	23.2	9.3	20.4	10.7	80.2	34.8	35.4	9.9
Oxford	34.0	15.8	25.4	18.6	27.1	35.9	41.4	9.2
Penobscot	22.1	15.1	22.5	15.5	67.2	39.7	34.5	7.8
Piscataquis *	--	--	--	--	--	--	42.8	10.9
Sagadahoc	15.2	14.7	14.9	14.9	77.2	48.0	25.4	7.1
Somerset	33.9	18.7	36.2	21.8	68.2	46.9	43.2	10.6
Waldo	30.4	19.3	27.2	19.1	54.1	39.6	40.9	9.7
Washington	30.4	27.1	29.3	26.6	77.1	59.0	46.2	10.5
York	11.4	8.4	12.0	8.7	55.5	28.2	23.4	6.8
*Data not available due to small population size.								

Data Source: 2005-2007 American Community Surveys and Maine Department of Education

The Maine Center for Economic Policy has created a method of estimating of what Maine families need to earn to make ends meet in today's marketplace; this *livable wage* is based on a basic needs budget that takes into account actual living expenses, including housing, health care, child care, transportation, and taxes. The livable wage is considerably higher than both the FPL and the income of a minimum wage earner. The annual income required for a 2-parent (2-earner) 2-child Maine family to meet a basic needs budget is $54,384. The county-specific livable wage for this family type ranged from $47,746 (Aroostook County) to $58,515 (Cumberland County). Among 1-parent Maine families with 1 child in pre-school and 1 in public school, the annual income required was $41,615, with county-specific estimates ranging from $28,504 (Aroostook County) to $45,844 (Cumberland County).[26] Therefore, although significant portions of the

MCH population are under the FPL, even higher proportions are in families that do not earn livable wages.

TANF

Throughout Maine, 10.9% of children under the age of 20 received TANF. The racial distribution of children receiving TANF highlights income disparities in Maine. Black/African American children were more likely to have received TANF in the past year than White children.[112]

Table 3.4.5: Maine TANF and SNAP Among Population 0 - 19 years by Race, 2008

Race	Total Population Ages 0 - 19	# Receiving TANF	% TANF	# Receiving SNAP	% SNAP
White	289,396	27,069	9.4%	76,631	26.48%
Black	6,339	1,436	22.6%	3,031	47.82%
Asian	3,676	173	4.7%	425	11.56%
Native American	2,480	310	12.5%	800	32.26%
Pacific Islander	146	24	16.4%	48	32.88%
Combined	7,129	749	10.5%	1,642	22.97%
Unknown		3969		12,452	13.10%
Total	309,166	33,730	10.9%	95,029	30.74%
Percent missing		11.8			

Data Source Maine Office of Integrated Access and Support

Food Security

Food security is another indicator of poverty and it measures a household's ability to meet basic needs. The U.S. Department of Agriculture (USDA) defines food security as "access by all people at all times to enough food for an active, healthy life." In 2005-2007, 86.7% of Maine's population was food secure. This falls short of the national average of 88.9%.[3]

Maine's SNAP is called the Food Supplement Program and helps those with low-incomes purchase food. Food stamp enrollment indicates the overall number of people needing assistance with basic needs. In November 2008, approximately 14% of Maine's overall population was receiving food stamps; 30.7% of children under age 20 received assistance in 2008. The proportion has risen dramatically in the past year.[33]

Table 3.4.6: Monthly Number of Persons Participating in the Supplemental Nutrition Assistance Program (All ages)

	Maine #
June 2008	179,373
May 2009	206,968
June 2009	210,997

Data: Maine Supplemental Nutrition Assistance Program

The MCHS is a cross-sectional survey of kindergarten, third grade and fifth grade students attending public schools in Maine and was last administered during the 2003-2004 school year. Of the kindergarten and third graders whose parents were surveyed, 10.6% came from families who are food insecure and 3.9% came from families who are hungry. More than one in nine parents could not afford to provide balanced meals for their families. Within the six regions defined by the survey, the proportion of food insecurity ranged from 7.4% to 16.2%.[113]

The Federal Free and Reduced Lunch Program is administered by the USDA. To be eligible for reduced-price lunch, family income must be no more than 185 percent of the federal poverty guidelines and free lunch eligibility begins at a family income of 130 percent of the federal poverty guidelines. Based on 2009 data from the Maine DOE, approximately one in three (31.4%) Maine students received a free school lunch and 7.6% received a reduced fee lunch for a total of 39% of students eligible for free or reduced lunches.[114] The range within Maine's counties was 27.3% and 56.7% eligibility.[115] In 11% of school districts throughout Maine, more the 75% of students were eligible for free or reduced lunches and one-third of school districts had rates between 50% and 75%. According to the Margaret Chase Smith Policy Center the number of eligible students and participation rates have increased each year for the past seven years and is similar to the increases seen in the Maine Supplemental Nutrition Assistance program.[34]

Homelessness

Homeless children are by most accounts among the fastest growing segments of the homeless population. Compared to their peers, homeless children are more likely to have health problems, developmental delays, learning disabilities, emotional difficulties, and mental disorders.

Homelessness has increased significantly in Maine in recent years. A "Point in Time" survey conducted by the MSHA on January 28, 2009 revealed 871 people, including 155 children, were homeless. Factors most frequently cited as reasons for homelessness included: chronic disability (32%), domestic violence (19%), severe and persistent mental illness (16%), and chronic substance abuse (16%).[116] In a January 2009 MSHA report on rural homelessness, providers noted anecdotally seeing an increase in teen parents and young families between the ages of about 16-24 who lack skills needed to live independently thus increasing the burden on shelters.[117]

In 2007, of the 7,083 people who used emergency shelters, 22% were people in families (one or more adults with at least one child under age 18) and 16% were unaccompanied youth (persons age 23 or younger). Maine's emergency shelters and programs served a total of 513 families in 2007 which included 1,543 people of whom 867 were children under age 18. The most common reason for homelessness given by families in shelters was eviction; three in four families staying in shelters were led by a female head of household.[37]

Throughout 2007, Maine's emergency shelters and programs served 1,048 unaccompanied youth; 59% male and 41% female. Approximately 30% of unaccompanied youth were age 17 or under, while 37% were age 18 to 20 and 33% age 21 to 23. The most common reasons for homelessness given by unaccompanied youth in shelters were health or safety, substance abuse, lack of employment, housing affordability, and family conflict. Males reported substance abuse

as a primary contributor at over twice the rate as females, while females reported family conflict as a primary contributor at a 50% higher rate than males.[37]

Youth in Foster Care

In 2009, 1,975 children in Maine lived apart from their families in out-of-home care, compared with 2,309 children in 2005. In 2009, 27.4 % of the children living apart from their families were age 3 or younger, and 29.9% were 15 or older. Of the children in out-of-home care in 2009, 84.3% were white, 3.2% black, 3.9% Hispanic, 1.2% American Indian/Alaskan Native, and 11.3% children of other races or unknown.[118]

Of the 2,309 children in out-of home care in 2005, 991 children exited out-of-home care in 2005 and of these children, 46.1% were reunited with their parents or other family members. More than 13% (316) of children were legally adopted through the public child welfare agency in Maine and 36.1% of children in out-of home care in 2005 were waiting to be adopted. [118]

Youth in Detention

7,092 children younger than 18 were arrested in Maine in 2007, similar to the number of arrests in 2005. Nearly three-quarters of the arrests were among males (72%). Of the arrests in 2007, 110 were for violent crimes including forcible rape, robbery, or aggravated assault and 59 were for possession of a weapon. Eight percent of arrests were due to drug abuse violations including possession, sales, or manufacturing. One-third of arrests were among 17-year–olds and one-quarter were among 16-year–olds, 19.8% were among 15-year-olds, and 21.9% were among youth under age 15.[79] A 2006 census of juvenile offenders showed 210 children in juvenile correction facilities in Maine. In comparison, in 1997, 318 juveniles were in residential placement.[119]

Youth Unemployment

Mirroring the recent national economic experience, Maine's unemployment rate significantly increased between August 2008 and August 2009, from 5.4% to 8.6%.[120] Youth unemployment estimates available for 2008 are now dated; and more recent data by age group is not yet available. The average annual rate among Maine's 16 to 19 year-olds in 2008 was 14.1%; the pattern of higher unemployment rates among 16 to 19 year-olds may still hold true.[121]

Child Care

Based on data from the 2007 NSCH, 56.6% of children under the age of 6 were cared for by non-relatives or relatives other than their parents for 10 or more hours per week. The parents of 35.8% percent of children under the age of 5 had to make emergency child care arrangements in the last month and/or change their employment due to child care reasons in the past year. Nearly one in ten (9.4%) of children age 6-11 had recently spent time home alone without supervision.[92]

In FY2008, Maine had a monthly average of 3,100 children served by subsidized child care with Child Care Development Fund (CCDF) assistance; 39% of children were ages 0-3 years, 28% were 4-5 years, and 33% were 6-12 years.[122] The income eligibility guidelines for the child care subsidy program were lowered to 75% of the state median income in FY2008 - a family of three is eligible up to $40,828, or 232% FPL. The upper limit of eligibility or exit eligibility remains at 85% of the state median income - a family of three is eligible up to $46,272. The average cost of

care per child is $5,436 per year. On average 78.2% of the cost of child care is provided by the CCDF subsidy and 21.8% of the cost through parent fees.[123] The total number of children receiving childcare assistance across all subsidy systems in FY2008 was 9,343: 3,243 children through CCDF; 3,040 through TANF Transitional; and 3,060 through the ASPIRE (Additional Support for People in Retraining and Employment) program. The number of children on a waitlist as of January 2009 was 1,147; the waiting period for a child/family to receive a subsidy ranges from 6 months to 2 years. [124]

Head Start is a national, comprehensive, early education program for children under age 5 with disabilities or meeting income eligibility guidelines. In 2008, 4,846 children were enrolled in Head Start; of that number, 18% were children ages 0-3 years old and approximately 20% were diagnosed with one or more disabilities. According to the Maine DHHS, every year for the past eight years, approximately two-thirds of children eligible for this program have not been enrolled.[124]

Childhood/Adolescent Mortality

Between 2003 and 2007, there was an average of 94 deaths each year to Maine children ages 1-19; the average annual death rate was 31.0 per 100,000 children. Child death rates in Maine have decreased by nearly 20% over the last two decades (from 38.1 per 100,000 between 1983-1987). Unintentional injury and malignant neoplasms were the top 2 leading causes of death for all of the childhood age groups. Child death rates were higher for boys (38.9 per 100,000) compared to girls (22.7 per 100,000). Child death rates are highest among those under age 1 (see Infant Health, Section 3, Part 2 for more information on infant mortality). Among children over age 1, the highest death rates are among those ages 15-19 and ages 1-4.[40]

1-4 year olds: Maine children, aged 1-4, had a mortality rate of 28.0 per 100,000, similar to the 2006 rate for U.S. children overall (28.4 per 100,000) and for U.S. non-Hispanic whites (25.0 per 100,000). [40],[60] Maine has not yet met the HP2010 goal of 18.6 per 100,000.[49]

5-9 year olds: Maine children in this age group had a mortality rate of 12.9 per 100,000, similar to the 13.9 per 100,000 2006 rate among U.S. children and the rate of 12.9 per 100,000 among U.S. non-Hispanic white children aged 5-9. [40],[60] Maine's mortality rate was slightly above the HP2010 goal of 12.3 per 100,000.[49] All of the leading causes of death for this age group in Maine, except meningitis, appeared among the top ten leading causes of death in the United States in 2003-2006, although the rank ordering was slightly different. Unlike U.S. children in this age group, homicide was not one of the leading causes of death in Maine.[77]

10-14 year olds: Maine children, aged 10-14 years, had a mortality rate of 17.4 per 100,000, similar to the 2006 rates for U.S. children overall (16.6 per 100,000) and U.S. non-Hispanic white children (15.0 per 100,000). [40],[60] Maine's rate was slightly higher than the HP2010 goal of 16.8 per 100,000.[49] The top five leading causes of death in this age group in Maine appeared among the top six causes of death in the United States in 2003-2006; although, unlike U.S. children in this age group, homicide was not one of the leading causes of death in Maine.[77]

15-19 year olds: Maine's mortality rate of 59.4 per 100,000 for 15-19 year olds was similar to the 2006 rates of 64.4 per 100,000 for U.S. youth overall and 59.1 per 100,000 among U.S. non-Hispanic white youth.[40],[60] Maine's mortality rate was well above the HP2010 goal of 39.8 per 100,000.[49] Until this age group, there is little difference in mortality between girls and boys. However, the mortality rate among 15-19 year old boys is 1.8 times higher than girls (76.5 vs. 41.5 per 100,000). This gender gap in mortality is maintained until age 30.[40]

Table 3.4.7: Number of Deaths, Mortality Rate, and Leading Causes of Death for Children Ages 1-19, Maine, 2003 -2007

	Rank	1 - 4 year olds	5 - 9 year olds	10 - 14 year olds	15 - 19 year olds
Number of deaths[60]		77	47	73	274
Average annual mortality rate per 100,000 population[60] (95% CI)		28.0 (21.8 - 34.3)	12.9 (9.2 - 16.7)	17.4 (13.4 - 21.4)	59.4 (52.4 - 66.5)
Top 5 leading causes of death by age and the percent contribution of each of the leading causes of death. (*Additional causes listed in the case of ties.)*	1	Unintentional injury (33.8%)	Unintentional injury (42.6%)	Unintentional injury (37.0%)	Unintentional injury (56.2%)
	2	Congenital anomaliesa (13.0%)	Malignant neoplasms (14.9%)	Malignant neoplasms (11.0%)	Suicide (16.8%)
	3	Malignant neoplasms (9.1%)	Congenital anomalies[a] (6.4%)	Heart disease (8.2%)	Malignant neoplasms (5.8%)
	4	Influenza & pneumonia (6.5%)	In situ/benign neoplasms (2.1%) Heart disease (2.1%) Meningitis (2.1%) Cerebrovascular diseases (2.1%)	Congenital anomalies[a] (5.5%)	Heart disease (4.0%)
	5	Heart disease (5.2%)		Influenza and pneumonia (4.1%)	Homicide (2.6%)
	All other causes	(32.4%)	(27.7%)	(34.2%)	(14.6%)

Note: Leading causes of death were categorized using 113 causes of death groupings; a number of deaths fell into the "residual codes category" (ages 1 - 4: 13 deaths; ages 5 - 9: 13 deaths; ages 10 - 14: 13 deaths; ages 15 -19: 28 deaths).
[a] Congenital malformations and chromosomal abnormalities

Data Source: Maine Vital Records Data

Childhood/Adolescent Injuries

Unintentional injury was the leading cause of death among 1-19 year old Mainers in 2002-2006. Suicide was the second leading cause of death among 15-19 year olds and the ninth leading cause of death among 10-14 year olds during this 5-year period. Homicides were less frequent, but were still among the top 10 causes of death for 1-4, 10-14, and 15-19 year olds.[77]

In 2003-2007, injury as a whole (including all intents) was responsible for 34.1% of deaths among Maine 0-19 year olds (Table 3.4.8). There was an average of 61 injury deaths in this age group each year during this 5-year period. The greatest impact was seen among 15-19 year olds, where injury was the underlying cause for three of every four deaths (76.7%).[40]

Table 3.4.8: Number and Percent of Events for Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits, Maine Infants, Children, and Youth, 2003-2007

	Age Group				
	< 1 year olds	1-4 year olds	5-9 year olds	10-14 year olds	15-19 year olds
Injury deaths					
Average # per year	3	6	4	6	42
Average annual rate (per 100,000)	18.8	10.6	5.5	7.6	45.6
% of all deaths	3.1%	37.7%	42.6%	43.8%	76.6%
Injury hospital discharges					
Average # per year	41	123	102	170	455
Average annual rate (per 100,000)	295.7	223.0	140.8	202.3	494.0
% of all discharges	0.3%	8.7%	10.4%	13.3%	12.6%
Injury outpatient ED visits					
Average # per year	869	8,570	8,595	14,245	18,595
Average annual rate (per 100,000)	6,301.6	15,590.8	11,839.5	16,954.7	20,171.4
% of all visits	7.8%	25.5%	33.8%	48.6%	36.3%

Data Source: Maine Vital Records Data, Maine Hospital Discharge Datasets

There were 15 hospital discharges with an injury principal diagnosis for every injury death among 0-19 year olds in 2003-2007; the average annual number of injury discharges was 891. Youth 15-19 years old were at greatest risk, with an average annual rate of 494.0 per 100,000. The proportion of hospital discharges for which injury was the principal diagnosis increased with age, to a high of 12.6% among 15-19 year olds and 13.3% among 10-14 year olds.[62]

Injury outpatient ED visits (i.e., visits with an injury principal diagnosis where there was a routine discharge to home or self-care) were 57 times more common than injury hospital discharges among 0-19 year olds in 2003-2007. On average, there were over 50,000 injury outpatient ED visits each year during this period. Fifteen to nineteen year olds were at highest risk, with an average annual injury ED rate of over 20,000 per 100,000. Injuries were the principal diagnosis for 33.7% of outpatient ED visits in this age group. The greatest impact was seen among 10-14 year olds, where nearly half (48.6%) of outpatient ED visits had an injury principal diagnosis.[62]

The majority of injury deaths, hospital discharges, and outpatient ED visits were due to unintentional causes; however, intent did vary by both age and injury severity (assuming that deaths involved more severe injuries than hospital discharges, which in turn involved more

severe injuries than outpatient ED visits) (Table 3.4.9). Data on intent were less precise for injury hospital discharges and outpatient ED visits, where intent was not always known. Intentional self-injury was seen more often among deaths and hospital discharges and represented about one in five of these injury events among 15-19 year olds. The highest proportion of injury events due to homicide/assault was seen among deaths and hospital discharges in children under 1 year of age.[40],[62] Across all age groups, at least 8 of every 10 injury outpatient ED visits were due to unintentional injuries; intent was unknown for the majority of the remaining visits.[62]

Table 3.4.9: Intent of Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits, Maine Infants, Children, and Youth, 2003-2007

	Age Group				
	< 1 year olds %	1 - 4 year olds %	5 - 9 year olds %	10 - 14 year olds %	15- 19 year olds %
Injury deaths					
Unintentional	61.5	89.7	100.0	84.4	73.3
Suicide	0.0	0.0	0.0	6.3	21.9
Homicide	15.4	10.3	0.0	6.3	3.3
Undetermined	15.4	0.0	0.0	3.1	1.4
Other	7.7	0.0	0.0	0.0	0.0
Unknown	0.0	0.0	0.0	0.0	0.0
Injury hospital discharges					
Unintentional	63.2	89.4	91.4	82.2	65.9
Self-inflicted	0.0	0.2	0.4	8.1	19.5
Assault	23.0	3.3	0.2	0.6	3.4
Undetermined	6.9	0.8	1.0	0.9	2.9
Other	0.0	0.2	0.6	0.7	0.5
Unknown	6.9	6.2	6.5	7.4	7.8
Injury outpatient ED visits					
Unintentional	84.3	85.7	86.4	85.5	80.9
Self-inflicted	0.0	<0.1	<0.1	0.4	1.6
Assault	0.4	0.2	0.4	1.0	3.6
Undetermined	0.3	0.2	0.1	0.2	0.5
Other	0.1	0.1	<0.1	<0.1	0.1
Unknown	14.9	13.8	13.1	12.8	13.3

Data Source: Maine Vital Records Data, Maine Hospital Discharge Datasets

Like intent, the specific leading causes of injury varied somewhat by age group and severity, though there were some important commonalities (Table 3.4.10). The leading cause of injury deaths among 1-19 year olds was unintentional motor vehicle traffic incidents (where "traffic" refers to incidents occurring on a public highway or street); these incidents had the greatest impact in 15-19 year olds, among whom they accounted for half (51.4%) of injury deaths in 2003-2007. Unintentional motor vehicle traffic incidents also were the leading cause of injury hospital discharges among 15-19 year olds and the second leading cause of injury discharges among 5-9 year olds.[40],[62]

An analysis of teen (16-19 year olds) driver injury and death in Maine in 2003-2007 found that, on average, there were 5,121 injury outpatient ED visits involving teen drivers in the state each year, 336 nonfatal injury hospitalizations of teen drivers, and 61 teen driver deaths. A third

(34%) of the deaths, 53% of the nonfatal hospitalizations, and 10% of the outpatient ED visits involved traumatic brain injuries. In nearly 9 of every 10 (87%) motor vehicle traffic deaths of 16-19 year olds in Maine, the driver was a teen.[125]

Table 3.4.10: Top Two Leading Causes of Injury Deaths, Hospital Discharges, and Outpatient Emergency Department (ED) Visits among Maine Infants, Children and Youth and the Percent of Those Events Due to Each Cause, 2003-2007

	Age Group				
	< 1 year olds	1 - 4 year olds	5 - 9 year olds	10 - 14 year olds	15 -1 9 year olds
Injury deaths	Unintentional suffocation (30.8%) Homicide unspecified (15.4%)	Unintentional motor vehicle traffic (20.7%) Unintentional drowning (20.7%)	Unintentional motor vehicle traffic (60.0%) Unintentional drowning (10.0%)	Unintentional motor vehicle traffic (31.3%) Unintentional other land transport (15.6%)	Unintentional motor vehicle traffic (51.4%) Suicide firearm (11.4%)
Injury hospital discharges	Unintentional fall (24.5%) Assault, other specified, classifiable (14.2%)	Unintentional fall (27.2%) Unintentional poisoning (21.0%)	Unintentional fall (40.1%) Unintentional motor vehicle traffic (11.5%)	Unintentional fall (27.2%) Unintentional transport other (14.6%)	Unintentional motor vehicle traffic (26.0%) Self-inflicted poisoning (18.4%)
Injury outpatient ED visits	Unintentional fall (41.2%) Unintentional struck by or against (9.7%)	Unintentional fall (33.6%) Unintentional struck by or against (13.5%)	Unintentional fall (29.6%) Unintentional struck by or against (17.9%)	Unintentional struck by or against (24.3%) Unintentional fall (23.5%)	Unintentional struck by or against (19.9%) Unintentional fall (14.7%)

Data Source: Maine Vital Records Data, Maine Hospital Discharge Datasets

Unintentional falls were the leading cause of injury hospital discharges among 0-14 year olds and one of the two leading causes of injury outpatient ED visits among 0-19 year olds.[62]

Unintentional struck by or against incidents only appeared as a leading cause among injury outpatient ED visits, where they were the leading cause among 0-9 year olds and the second leading cause among 10-19 year olds.[62] (Struck by or against includes instances such as being hit by a falling object or colliding with a person or object.)

Causes involving intentional self-injury did not appear as one of the two leading causes of injury until age 15-19 years, when suicide firearm was the second leading cause of injury deaths and self-inflicted poisoning was the second leading cause of injury hospital discharges.[62]

The YRBS, a representative survey of Maine middle and high school students, provides information about injury preventive and risk behaviors. According to 2007 YRBS data, 6 out of

10 (60.7%) middle school students reported that they always wore a seat belt when riding in a car; 2.5% said they never wore a seat belt. Among high school students, only half (51.5%) reported that they always wore a seat belt when riding in a car driven by someone else *in the past 30 days*; 4.4% said they never wore a seat belt. (The 2007 YRBS did not ask high school students how often they wore a seat belt when they were driving.) Nearly a third (30.5%) of middle school students reported that they had ever ridden in a car driven by someone who had been drinking alcohol. When high school students were asked about their experiences *in the last 30 days*, 8.8% said they had driven a car or other vehicle after drinking alcohol, 21.8% said they had ridden in a car or other vehicle driven by someone who had been drinking alcohol, and 22.8% said they had ridden in a car or other vehicle driven by someone who had been taking illegal drugs such as marijuana.[73]

A third (35.7%) of Maine middle school students who ride a bicycle reported that they never wore a helmet; only 16.5% said they always wore a helmet. Over half (55.5%) of Maine high school students who rode a bicycle *in the prior 12 months* said they never wore a helmet during that time period; only 14.4% reported that they always wore a helmet.[73]

Half (50.9%) of the middle school students who rollerblade or ride a skateboard reported that they never wore a helmet; only 12.7% said they always wore a helmet.[73]

Youth Suicide

Suicide is the second leading cause of death among youth aged 10-24 years. Between 2002-2006, there were 89 suicide deaths among youth, an average of 18 deaths per year.[77]

Suicide rates in Maine have fluctuated among those aged 10-24 over the past 10 years. There has been a slight decline in recent years in suicide rates among those age 15-19, but little consistent change in rates among those aged 10-14 or 20-24 years.[77]

Among youth aged 10-24, firearms were the most common method for suicide, accounting for over half of the suicides among this age group between 2002 and 2006. The second leading method of suicide among youth was suffocation, which accounted for about 1/3 of suicide deaths.[77]

Youth are more likely than adults to be hospitalized for a self-inflicted injury. In 2006, those between the ages of 20 and 24 had the highest hospitalization rate (16.3 per 10,000). However, between 2004 and 2006, girls aged 15-19 had the highest hospitalization rate (23.0 per 10,000) of any age group. They also had the highest rate (55.8 per 10,000) of outpatient ED visits for self-inflicted injury. The inpatient hospitalization rate for self-inflicted injury among youth aged 10-24 years old was 11.5 per 10,000; the rate among females aged 10-24 was 13.6 per 10,000 and the rate among males was 9.5 per 10,000. The outpatient ED rate for suicide among youth aged 10-24 was 32.3 per 10,000 (females=33.4, males=31.1).[62]

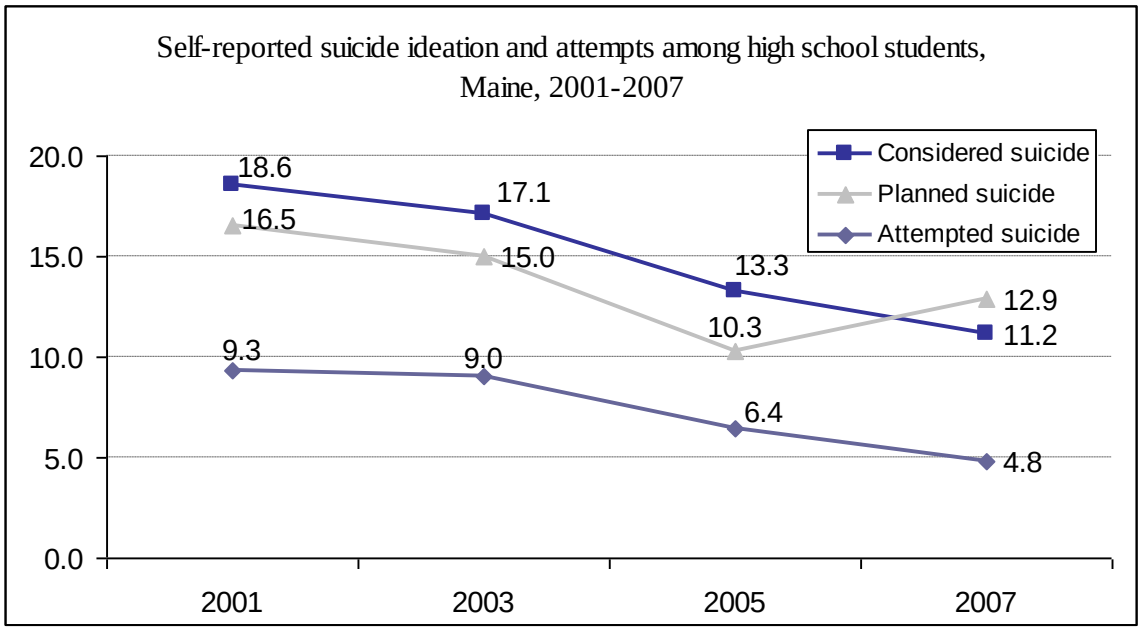
Rates of hospitalization for self-inflicted injury among youth decreased slightly during the last 3-year period, but otherwise have remained relatively stable since 2000. Outpatient ED visits for self-inflicted injury among youth have increased over the past 7 years.[62]

Data on suicidal behavior that did not result in death or a visit to a hospital are captured through school-based surveys of youth, specifically Maine's YRBS. The middle school survey for the 2007 YRBS included questions about suicidal behavior at any point in the student's life - 16.6% of Maine middle school students reported that they had seriously thought about killing themselves; 9.6% reported that they had made a plan to kill themselves, and 5.8% reported that they had tried to kill themselves.[73]

The 2007 YRBS high school survey included questions about sadness/hopelessness and suicidal behavior during the 12 months prior to the survey. More than one in five (22.2%) Maine high school students reported that they had felt so sad or hopeless almost every day for 2 weeks or more in a row that they stopped doing some usual activities. About 1 in 10 (11.2%) Maine high school students had seriously considered attempting suicide, 12.9% had made a plan about how they would attempt suicide, and 4.8% had attempted suicide one or more times.[73] Maine has not yet met the HP2010 goal to reduce the proportion of adolescents who have attempted suicide to 1%.[49]

There have been significant declines in the percent of adolescents reporting suicide ideation and attempts over time (Figure 3.4.1).

Figure 3.4.1. Self-reported suicide ideation and attempts among Maine high school students, 2001-2007



Data Source: Maine Youth Risk Behavior Survey

Suicide-related thoughts and behaviors are more commonly reported by females than by males. Based on analyses from the 2001-2005 YRBS surveys, almost 1 in 4 (23.6%) high school girls and 1 in 6 (16.1%) high school boys reported considering or planning a suicide attempt. Girls were also more likely than boys to actually attempt suicide (10.0% vs. 6.0%). Black, Pacific Islander/Native Hawaiian, and Asian youth, as well as youth of Hispanic ethnicity reported higher levels of suicide ideation and attempts compared to non-Hispanic white youth. However,

due to the low number of minority youth participating in the survey, we were unable to present disaggregated results for each group. Native American youth were not more likely than other youth to report suicide ideation, but the very small sample size limits the reliability of this finding.[126]

According to the YRBS, youth who had same sex or bisexual contact were more likely than youth who had sexual contact with someone of the opposite sex only or youth with no sexual contact to report both suicide ideation and attempts. Almost 40% of youth who reported same sex/bisexual contact considered suicide or planned an attempt in the previous 12 months compared to 21% of youth who had opposite sex contact only and 15% of youth who had never had sexual contact. Almost 1 in 4 (23%) youth who reported same sex/bisexual contact attempted suicide in the past year.[126]

Other risks associated with suicide ideation and attempts included poor grades and substance use. Smoking any cigarettes in the past month was associated with suicide ideation and more than 1 in 3 (36%) youths who smoked on at least 20 of the past 30 days reported suicide ideation in the past year. Youth who smoked were about three times more likely than non-smokers to report attempting suicide in the past year. Youth who reported suicide ideation and attempts were also more likely to report recent binge drinking and use of illegal drugs, such as marijuana, cocaine, heroin, steroids, and unauthorized prescription medication.[126]

Peer victimization was also a risk factor associated with suicide among youth. High school students in 2001-2005 who reported, on the YRBS survey, that they had been the victim of dating violence in past year were two times more likely than non-victims to report suicide ideation (37% vs. 17%) and suicide attempts (17% vs. 7%) in the past year. Almost half (46%) of students who had been the victims of sexual assault during their lifetime reported suicide ideation in the past year compared to 17% of non-victims; 1 in 4 victims actually attempted suicide in the past year. Youth who reported that they had been the target of racially offensive remarks or attacked based on their race or ethnicity at school or on the way to school were more likely to report suicide ideation and attempts compared to students who did not endure this behavior. The same held true for victims of comments or attacks based on perceived sexual orientation. About one-third of victims of racial harassment/attacks and 44% of victims of harassment/attacks based on sexual orientation considered or planned a suicide attempt in the past year. One in 5 victims of harassment based on sexual orientation attempted suicide in the past year.[126]

Child Abuse and Neglect

Child Abuse and Neglect (not including shaken baby/abusive head trauma)

According to Maine statute, child abuse or neglect is defined as "a threat to a child's health or welfare by physical, mental or emotional injury or impairment, sexual abuse or exploitation, deprivation of essential needs or lack of protection from these by a person responsible for the child." (Title 22 MRSA, Chapter 1071, Subsection 4002). During 2008, Maine's OCFS received almost 19,000 referrals for Child Protective Services (CPS) intervention in a family situation; 6,178 reports involving 12,141 children were assigned to a caseworker for a "child protective assessment". The assessments revealed that the most common family stress

factors included physical/mental health problems, alcohol/drug problems by the parent, and domestic violence. Child abuse or neglect was found in about 40% of the CPS assessments.[127]

Each year states are required to submit data to the federal government on reported child abuse and neglect. These data are published in an annual Child Maltreatment Report. Based on this report, there were 4,118 child victims of abuse in Maine in 2007, a rate of 14.7 per 10,000.[128] Maine has not yet met the HM2010 goal to reduce the annual number of substantiated child abuse and neglect cases to 2,080 or the HP2010 objective of 10.3 per 1,000.[49, 55] Neglect was the most common type of abuse noted, followed by emotional abuse, physical abuse, and sexual abuse, in that order. Twenty-eight percent of cases involved multiple types of maltreatment. The majority of the victims were between the ages of 0-4 years. Boys were more likely than girls to be identified as the victims of abuse, but girls were twice as likely to be the victim of sexual abuse. About 1 in 10 victims (11.8%) were reported to have a disability. The most common disability reported was emotional disturbance. For almost 1 in 3 victims (27.3%), having a DV caregiver was recorded as a risk factor.[128]

Child victimization rates in Maine declined between 2003-2005, but increased in 2006 and again in 2007. U.S. rates stayed consistent between 2003-2006, and declined slightly in 2007.[128]

The 2007 overall DHHS child custody rate for Maine was 6.5 per 1,000. The Central Public Health District had the highest number and rate of children in DHHS custody in the state. This is primarily driven by Somerset County, which has a child custody rate of 12.7 per 1,000. The second highest county child custody rate was in Washington County, which had a child custody rate of 10.6 per 1,000 (Table 3.4.11).[127]

Table 3.4.11: Rate of children (age 0 - 17 years) in DHHS Custody per 1,000 by Public Health District, Maine

District	# children in custody	Population 0 - 17	Rate per 1,000
Aroostook	89	14,301	6.2
Central	353	36,485	9.7
Cumberland	333	59,810	5.6
Downeast	116	17,188	6.7
Midcoast	166	31,359	5.3
Penquis	277	33,945	8.2
Western	217	41,952	5.2
York	252	44,370	5.7
Maine	1,803	279,410	6.5

Data Source: Office of Child and Family Services Child Protective Services

Adolescent Violence and Victimization

Based on data from Maine's 2007 YRBS, 5.3% of adolescents reported not attending school at least one day in the past 30 days because they felt unsafe at school or on their way to or from school.[73] The percent of youth missing school because they felt unsafe has not changed since 1999, and there were no differences between boys and girls on this indicator. According to data

from the 2007 NSCH, 3.8% of Maine parents reported that their child is sometimes safe at school, and 96% reported that their child is usually or always safe at school. Most parents felt that they lived in safe communities: 93% reported that their community is usually or always safe, 5.3% reported that it is sometimes safe, and 1.2% reported that it is never safe. Maine parents were more likely than other parents in the United States to report that their schools and communities were safe.[92]

According to the Maine middle school 2007 YRBS, about 1 in 3 (36.5%) middle school students have ever carried a weapon (including gun, knives, or other weapon). About 15% of Maine high school students carried a weapon in the past 30 days; 4.6% reported carrying a gun. Five percent of high school students reported having carried a weapon *to school* in the past 30 days, and 6.8% reported ever being threatened by a weapon on school property.[73]

Half of Maine middle school students (49.4%) have ever been in a physical fight—65% of boys and 32% of girls; 5.7% have sustained an injury that required medical attention. About 1 in 5 (26.5%) Maine high school students have been in a fight in the past year (33% of boys and 19.3% of girls). One in ten (10.1%) have been in a fight on school property in the past year and 3.3% sustained an injury that required medical attention.[73]

Data on bullying behavior are not available at this time, but it estimated that about 30% of youth in the United States are involved in bullying behavior. In a national survey of students in grade 6-10, 11% of students reported being the victim of bullying, 13% reported bullying others, and 6% reported both bullying behavior and being the victim of bullying.[129]

One in ten (10%) adolescent girls and 6.1% of adolescent boys reported that they have ever been forced to have sex; overall, 8.1% of Maine high school students had been forced to have sex. Twelve percent of Maine high school students have been hit, slapped, or otherwise physically hurt by a dating partner in the past year. There were no gender differences on this indicator.[73]

Child Mental and Behavioral Health

The 2007 NSCH found that, based on parental/guardian report, 7.2% of Maine 0-17 year olds had "any kind of emotional, developmental, or behavioral problem that required treatment or counseling" lasting 12 months or longer; this was not significantly different from the 5.9% reported for 0-17 year olds nationwide. Looking only at 2-17 year olds, 7.6% of Maine children were reported to be on medications for attention-deficit hyperactivity disorder (ADHD), emotions, concentration, or behavioral issues. Again, this was not significantly different from the 6.2% reported nationwide.[92]

The NSCH survey also asked about whether the child currently had, or had had at some point, specific conditions (Table 3.4.12); these questions were only asked for 2-17 year olds. (State-level data were not available for autism or autism spectrum disorder.) The most common of the four conditions was attention-deficit disorder (ADD) or ADHD; based on parental/guardian report, 6.5% of Maine 2-17 year olds currently had this condition and another 1.8% had had it in the past, but no longer did. The second most common of the four conditions was anxiety problems; 6.0% of Maine children were reported to have this condition at the time of the survey

and another 2.0% had had it in the past but no longer did. Smaller percents of Maine children were reported to currently have depression (3.5%) or behavioral or conduct problems (3.1%). The prevalence of each condition among Maine children was not significantly different from what was found nationwide, with the exception of current anxiety problems, which were twice as common in Maine as they were nationwide.[92]

Table 3.4.12: Percent of 2 - 17 year old children with select conditions, National Survey of Children's Health, 2007

	Maine **% (95% CI)**	Nationwide **% (95% CI)**
ADD or ADHD		
Currently	6.5 (5.0 - 8.0)	6.4 (6.0 - 6.8)
At some point, but not currently	1.8 (0.8 - 2.9)	1.8 (1.6 - 2.0)
Anxiety problems		
Currently	6.0 (4.3 - 7.7)	2.9 (2.6 - 3.1)
At some point, but not currently	2.0 (1.3 - 2.7)	1.6 (1.4 - 1.9)
Depression		
Currently	3.5 (2.1 - 4.8)	2.0 (1.7 - 2.2)
At some point, but not currently	1.8 (1.0 - 2.6)	1.7 (1.5 - 2.0)
Behavioral or conduct problems		
Currently	3.1 (2.0 - 4.2)	3.3 (3.0 - 3.6)
At some point, but not currently	1.1 (0.5 - 1.7)	1.1 (0.9 - 1.2)
Note: Conditions are not mutually exclusive		

Data Source: 2007 NSCH

Parents/guardians of 6-17 year olds also were asked about positive social skills (e.g., gets along well with others; tries to understand others' feelings; tries to resolve conflicts; shows respect for others) and problematic social behaviors (e.g., argues too much; disobedient; bullies or is cruel to others; stubborn, sullen, or irritable). One in 20 (4.8%) Maine children in this age group were reported not to consistently exhibit positive social skills and one in 10 (10.6%) were reported to consistently exhibit problematic social behaviors. Neither figure was significantly different from what was reported nationwide (6.4% and 8.8%, respectively).[92]

Chronic Disease

Asthma

Asthma is a chronic inflammatory disorder of the airways. Airway inflammation can lead to wheezing, breathlessness, chest tightness, and coughing, especially at night or in the early morning. Children are disproportionately affected by asthma, having a higher prevalence of the condition, and higher rates of ED visits and hospitalizations. According to the 2007 NSCH, 9% of children age 0-17 in Maine currently have asthma. An additional 4.2% had the condition at some point, but do not currently. This is similar to the prevalence nationwide. Of those who had asthma currently, 75% of parents rated their child's asthma as "mild," 19.7% rated their child's asthma as "moderate," and 5.3% rated their child's asthma as "severe." There were no statistically significant differences in the prevalence of current asthma by race, income, or insurance status on the 2007 NSCH.[92]

Based on data from the 2007 YRBS, about 1 in 4 (25.8%) high school students in Maine reported ever being diagnosed with asthma. This is similar to the prevalence in the United States. About 14% (13.9%) reported still having the condition. This is higher than the U.S. prevalence of 10.9%. Among Maine middle school students, 21.6% reported ever being diagnosed with asthma and 12.3% reported currently having the condition. Of those with asthma, 5% reported having had an asthma attack in the past year.[73]

Each year about 250 children in Maine are hospitalized and about 2,000 visit the ED for asthma. In 2007, 2.6% of hospitalizations among children age 1-19 were for asthma. Asthma was the principal diagnosis for 0.9% of inpatient hospitalizations among Maine children less than a year old in 2007 (this excludes hospitalizations for the birth of the child). The corresponding percents for 1-4, 5-9, 10-14, and 15-19 year olds were 8.9%, 4.1%, 2.2%, and 0.5%, respectively.[62]

Between 2000 and 2007, the asthma hospitalization rate among children under age 5 fluctuated. However, the rate in 2007 (18.9 per 10,000) was the lowest in recent years. The rate for 5-14 year olds has declined consistently over the same time period. Between 2000 and 2007, there was an average annual decline of 2.0%.[62, 130] The 2007 rate among 5-14 year olds was 5.4 per 10,000.[62]

Diabetes

Most children with diabetes have Type I diabetes, an autoimmune disorder that destroys insulin producing cells. However, the incidence of Type II diabetes has been increasing in recent years. Many attribute this increase to increasing rates of obesity among children. Data on the prevalence of diabetes among children in Maine are not available. Based on estimates from the NSCH, about 0.4% of U.S. children aged 0-17 years have type II diabetes. Nationally the prevalence of childhood diabetes does not vary by gender.[92]

Cancer

Pediatric cancer deaths are rare in Maine. Between 2001 and 2005, Maine had an average of 10 deaths per year among children and youth under age 20. The average annual pediatric cancer death rate for Maine was 3.0 per 100,000, which was similar to the U.S. rate of 2.7 per 100,000. The incidence of cancer among children under age 20 between 2001-2005 was 19.3 per 100,000, which was statically higher than the U.S. incidence of childhood cancer (16.7 per 100,000).[65]

Oral Health

Tooth Condition

The 2007 NSCH asked parents/guardians (hereafter referred to as “parents”) of 1-17 year olds how they would describe the condition of their child’s teeth. It is important to note that this information is based on parental report; the survey did not include a professional examination of the child’s teeth. Eight of every ten Maine parents (79.7%) reported that their child’s teeth were in excellent or very good condition (Table 3.4.13), which was significantly higher than the 70.7% figure reported nationwide. Seventeen percent of the parents reported that their child had had decayed teeth or cavities in the past 6 months, which was not significantly different from the U.S. estimate (19.4%).[92]

Table 3.4.13: Oral Health, Maine Children and Youth,
National Survey of Children's Health, 2007

	% with teeth in excellent or very good condition	% with decayed teeth or cavities in past 6 months	% with preventive dental care visit in past year
Overall	79.7 (76.9 - 82.4)	16.7 (14.3 - 19.0)	80.9 (78.4 - 83.4)
Sex			
Male	80.0 (76.5 - 83.5)	14.7 (11.9 - 17.6)	81.7 (78.3 - 85.1)
Female	79.2 (75.0 - 83.4)	18.6 (14.8 - 22.4)	80.0 (76.3 - 83.7)
Age			
1-5 years	90.6 (86.9 - 94.3)	7.6 (4.8 - 10.4)	49.3 (43.6 - 55.0)
6-11 years	71.1 (65.6 - 76.5)	24.4 (19.5 - 29.3)	91.7 (88.3 - 95.2)
12-17 years	79.6 (75.5 - 83.7)	16.2 (12.6 - 19.9)	93.3 (90.0 - 95.8)
Household income			
0-99% FPL	62.7 (52.6 - 72.7)	22.6 (13.8 - 31.5)	71.8 (62.8 - 80.7)
100-199% FPL	71.3 (64.6 - 78.1)	23.9 (17.9 - 30.0)	75.4 (69.1 - 81.7)
200-399% FPL	82.9 (79.5 - 86.3)	14.7 (11.7 - 17.8)	84.0 (80.6 - 87.4)
400%+ FPL	92.7 (90.3 - 95.1)	9.4 (6.6 - 12.2)	86.6 (83.3 - 89.9)
Health insurance			
Public	67.9 (62.0 - 73.8)	26.9 (21.5 - 32.4)	76.8 (71.6 - 81.9)
Private	86.0 (83.2 - 88.8)	12.0 (9.7 - 14.3)	83.0 (80.1 - 85.9)
Uninsured	76.9 (65.6 - 88.1)	7.4 (2.1 - 12.6)*	83.6 (74.5 - 92.7)
Medical home			
No	70.8 (65.6 - 76.1)	23.9 (19.0 - 28.8)	80.6 (75.8 - 85.4)
Yes	84.8 (81.7 - 87.9)	12.8 (10.3 - 15.4)	80.9 (77.9 - 83.9)
Special health care needs			
No	82.2 (79.3 - 85.1)	14.9 (12.4 - 17.4)	79.2 (76.3 - 82.1)
Yes	69.7 (63.2 - 76.3)	23.8 (17.7 - 29.9)	87.6 (83.2 - 92.0)

* Use caution when interpreting. Sample size is too small to meet standards for reliability or precision; relative standard error is >30%.
FPL: Federal poverty level

Data Source: NSCH

Both measures (i.e., tooth condition and cavities) showed significant variation among Maine children by age, household income, type of health insurance, medical home status, and special health care needs status. In general, (a) 1-5 year olds fared better (i.e., higher percent with excellent or very good condition of teeth and lower percent with decayed teeth or cavities) than 6-11 year olds or 12-17 year olds; (b) children in higher income groups fared better than those in lower income groups; (c) children with private insurance fared better than those with public insurance; (d) children with a medical home fared better than those who did not have a medical home, and (e) children without special health care needs fared better than those who had such needs. No significant differences were seen by sex on either measure.[92] (See Table 3.4.13 for details.)

Other dental problems experienced by 1-17 year old Maine children in the past 6 months, as reported by their parents on the 2007 NSCH, included toothache (reported for 8.4% of the children), broken teeth (2.6%), and bleeding gums (2.5%).[92]

The 2002 MCHS included a dental screen by a trained professional and found that nearly a third (31.2%) of Maine kindergartners had current or past tooth decay/dental caries experience. Almost one in five (18.4%) had untreated tooth decay. Untreated tooth decay in kindergartners was less common among children with private insurance (13.5%) than among children insured through MaineCare (26.4%) or children with no health insurance (34.1%). Kindergartners who had not been to the dentist in the past year were twice as likely to have untreated caries.[131] These results should be interpreted with caution; the survey had a relatively low overall response rate (40%) and the results might not be generalizable to the entire state. More up-to-date information on tooth condition among Maine children will be available when the results of the 2009 Maine IYHS, which included a dental screen for kindergarteners, 3rd and 5th graders, are released.

The Head Start Program Information Report provides additional oral health information on the subset of Maine children who are enrolled in Head Start preschool programs. Three-fourths (73.4%) of these children completed an oral health examination in the 2007-2008 program year. Most (92.2%) of the children who completed the examination received preventive care; one in four (24.3%) were diagnosed as needing treatment. The report did not provide further information about what problems were found that needed treatment.[132]

Use of the Oral Health Care System

The 2007 NSCH found that 80.9% of Maine 1-17 year olds had seen a dentist one or more times in the past 12 months for preventive dental care visits such as check-ups or dental cleanings (Table 3.4.13); this figure is not significantly different from the national figure of 78.4%.[92] Maine has met the HP2010 goal to increase the percent of children and adults who use the oral health care system on a yearly basis to 56% for Maine children as a whole, and within population subgroups reported on the NSCH, except 1-5 year olds (see Table 3.4.13 for details).[49] The only significant differences observed among subgroups were that (a) 1-5 year olds were significantly less likely than 6-11 or 12-17 year olds to have had a preventive care visit; (b) children with household incomes less than 100% or 100%-199% of the FPL were less like to have had a preventive care visit than children with household incomes of 400% or more of the federal poverty level, and (c) children who did not have special health care needs were less likely than those with such needs to have had a preventive care visit.[92]

The 2007 NSCH estimate that 93.3% of Maine 12-17 year olds had a preventive dental care visit in the past 12 months was higher than that obtained by the 2007 Youth Risk Behavior Survey (YRBS), on which only 81.4% of Maine middle school students and 80.9% of Maine high school students reported that they had seen a dentist or dental hygienist for a check-up, exam, teeth cleaning, or other dental work during the past 12 months.[92],[73] The YRBS results did not differ significantly by sex, age, or grade (data not shown).[73] The different results on the two surveys could be due, at least in part, to differences in question wording and/or to the respondent being the parent on the NSCH and the youth on the YRBS.

Parental awareness (or lack thereof) about the need for routine preventive dental care likely played an important role in whether a child had had a preventive dental visit in the prior year, especially in the younger age groups. The 2003 NSCH asked parents/guardians of children who did not have a routine preventive dental care visit in the prior year whether the child had needed such care. None of the parents of 1-2 year olds, 4.1% of the parents of 3-4 year olds, 21.7% of

the parents of 5-11 year olds, and 35.3% of the parents of 12-17 year olds who did not receive routine preventive care thought their child had needed such care.[133] (Comparable information is not available from the 2007 NSCH.)

Three percent (3.0%) of Maine parents/guardians reported on the 2007 NSCH that there had been a time during the prior 12 months when their 1-17 year old child had needed dental care but it had been delayed or not received; this is comparable to the national estimate of 2.8%. The survey did not ask why the dental care was delayed or not received. [92]

Communicable Disease

Influenza

Influenza is a virus characterized by fever, muscle aches, cough, sore throat and runny nose. It occurs primarily in the winter months and is spread person to person through coughs and sneezes. Health care providers in Maine are not required to report influenza cases to the Maine CDC, but many voluntarily report positive tests. Of the positive tests reported during the 2007-2008 flu season, 31% were pediatric cases.[134]

Pertussis

Pertussis (also known as "whooping cough") is a highly contagious bacterial infection of the respiratory track. It is spread by coughing or sneezing. Pertussis is preventable through a vaccine. Rates of pertussis have fluctuated over time. In 2008, 49 people in Maine were diagnosed with pertussis. Between 2003-2007, the median number of cases was 91 and the median age was 10 years old.[68]

Lyme Disease

Lyme disease is transmitted through the bite of a deer tick infected with the disease. Symptoms include: rash, fever, headache, joint and muscle pain, fatigue, arthritis, Bell's palsey. In 2008, 908 (69.0 per 100,000) people in Maine were diagnosed with Lyme disease. The Maine rate of Lyme disease is more than 7 times higher than the national rate of 9.2 per 100,000. The highest incidence of Lyme disease in the United States is in New England. In 2007, Maine had the 5th highest incidence of Lyme Disease in the U.S.[135] In the United States, rates of lyme disease have been climbing consistently over time.[136] In Maine, there has been a dramatic increase in the incidence of lyme disease in recent years. In 2004, there were about 20 cases of lyme disease per 100,000 population. By 2008, this had increased to 69 per 100,000. The median number of cases reported each year between 2003-2007 was 245. The median age of diagnosis was 45, but it is most common among boys age 5-19 and among those over age 35.[68]

Sexually Transmitted Diseases

In 2009, 74% of chlamydia cases and 29% of gonorrhea cases were diagnosed in people aged 15-24. Rates of chlamydia among Maine 15-19 year-olds have increased over the past 10 years. In 1996, the rate was 480 per 100,000 population; in 2007, the rate reached a high of 863.8 per 100,000. Despite this increase, Maine's 2007 chlamydia rate among 15-19 year olds was approximately half the U.S. rate.[70] Gonorrhea rates among 15-19 year olds in Maine have decreased in recent years–from 57 to 15 cases/100,000 population between 2004 and 2007. Similar to chlamydia, the 2007 rate of gonorrhea among 15-19 year olds in Maine was approximately 1/30 of the national rate.[70]

Currently, 29 people between the ages of 0 and 20 and 235 people between the ages of 20-29 are living with a diagnosis of HIV/AIDS in Maine. In 2007, there were no new HIV diagnoses among those under age 20; 15 HIV cases were diagnosed among those between the ages of 20-29. There were no HIV diagnoses among those under age 20. Twenty-nine percent (29%) of diagnoses in 2007 were among people in their twenties. It is likely that many of those who test positive for HIV in their twenties were infected several years earlier.[137]

Immunizations

HP2010 goals include achieving 90% coverage among 19-35 month olds for six vaccines and 80% coverage in that age group for the 4:3:1:3:3 series.[49] HM2010 goals cover a larger number of vaccines and are generally more ambitious than HP2010 goals.[55] Maine overall has met the HP2010 goals for haemophilus (Hib), measles, mumps, rubella (MMR), and polio for the population overall. However, vaccination for polio and MMR among WIC participants has not reached the HP2010 objectives (Table 3.4.14).[138]

Maine has not yet met the HP2010 objectives for vaccination for diptheria, pertussis and tetanus (DPT), Varicella, and the 4:3:1:3:3 series. At the time of the last needs assessment, Maine had met the HP2010 goal for Hep B, but the most recent vaccination estimates from the NIS revealed a decline in this measure to below the HP2010 goal of 90%. Non-WIC participants have met the DTP, Varicella, and 4:3:1:3:3 goals. Recent coverage information is not available for children below the poverty level due to the small sample size of the NIS. Maine has not yet met any of the HM2010 immunization goals.[138]

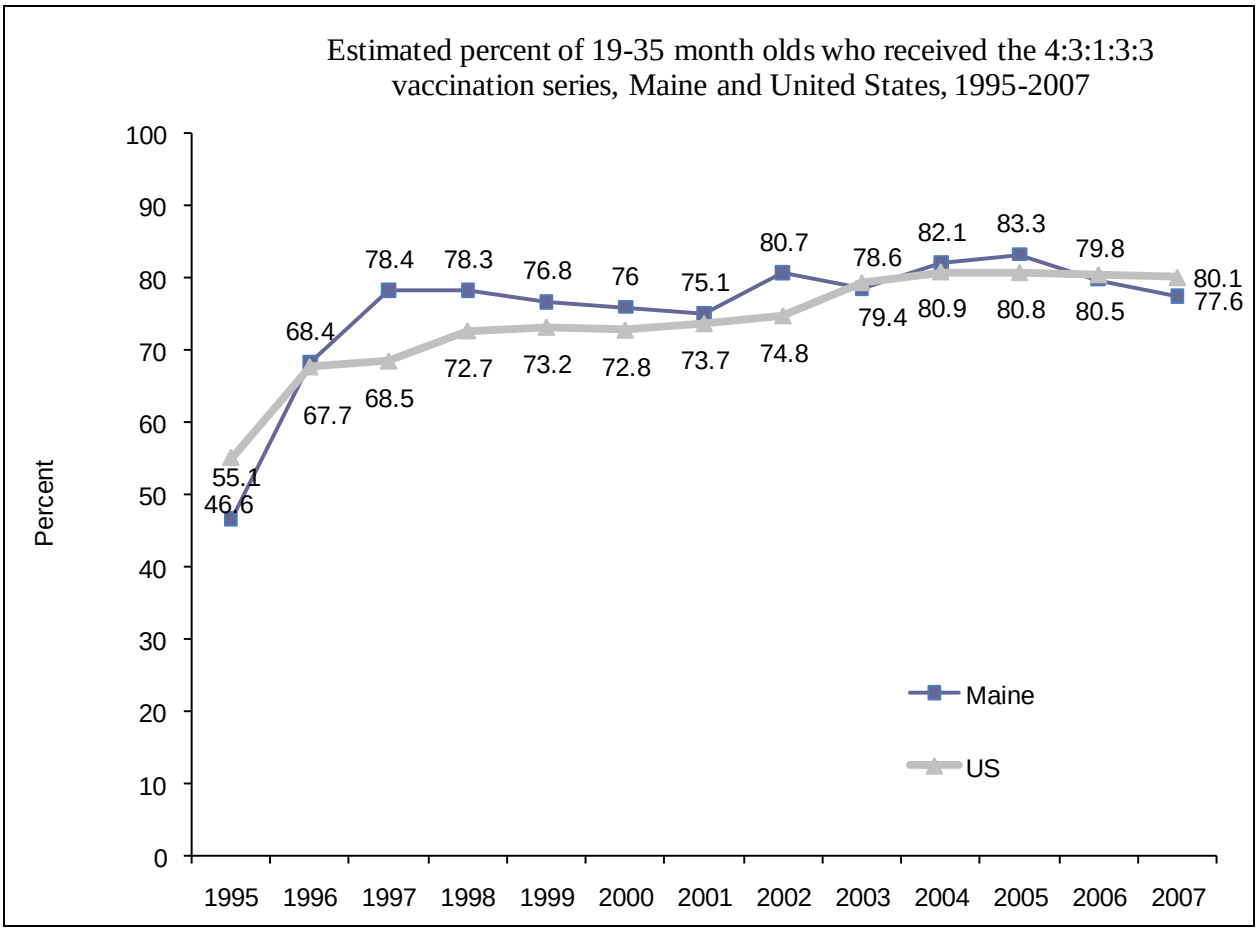
Table 3.4.14: Estimated Vaccination Coverage among Children 19-35 Months of Age, Maine and United States, National Immunization Survey, 2007, and Healthy People and Healthy Maine 2010 Goals

Vaccination Coverage (%)								
		Maine					Goals	
	United States	Overall	WIC participants	Non-WIC participants	Below poverty level	At or above poverty level	Healthy People 2010	Healthy Maine 2010
4 + DPT	84.5	86.7	82.4	90.2	NA	89.9	90	98
3 + Polio	92.6	91.2	88.1	93.7	NA	94.7	90	99
1 + MMR	92.3	90.2	87.8	92.0	NA	94.3	90	99
3 + Hib	92.6	94.1	90.4	97.3	NA	97.6	90	99
3 + HepB	92.7	88.3	84.0	91.9	NA	91.3	90	95
1 + Var	90.0	85.5	84.8	95.8	NA	87.9	90	90
3 + PCV	90.0	91.9	89.3	94.1	NA	95.2	---	---
4 + PCV	75.3	82.5	76.9	87.0	NA	86.7	---	---
4:3:1	NA	NA	NA	85.9	NA	86.2	---	95
4:3:1:3	81.8	82.0	NA	85.9	NA	85.6	---	90
4:3:1:3:3	80.1	77.6	NA	83.7	NA	82.0	80	90
4:3:1:3:3:1	77.4	72.9	NA	76.9	NA	76.9	---	---
4:3:1:3:3:1:4	66.5	67.0	NA	72.4	NA	72.0	---	---

Data Source: National Immunization Survey

Maine's immunization rates were once among the highest in the United States and they have not changed statistically over time, but while immunization rates have increased in the United States overall, Maine's rates have not (Figure 3.4.2). Maine now has one of the lowest immunization rates in the country. In 2007, according to the NIS, the percent of Maine's 19-35 month old children who had received the 4:3:1:3:3 was the 10th lowest in the nation. [138]

Figure 3.4.2.



Data Source: National Immunization Survey

HP2010 goals for kindergartners and 1st graders include 97% coverage for DTaP and polio vaccines and 96% for MMR vaccines.[49] Maine is close to meeting these goals. Vaccination coverage among Maine children enrolled in kindergarten during the 2006-07 school year were:[139]

Polio:	93.6%
DTP/DTaP/DT:	94.5%
MMR:	93.2%
Varicella:	90.5%.

Maine's vaccination law permits exemptions for vaccination at school entrance for reasons relating to religion, medical issues, and personal beliefs. All states offer vaccine exemptions for medical reasons and 48 states permit exemptions based on religious beliefs. Maine is one of 19

states that allows for personal or philosophical exemptions from vaccination at school entrance.[140] According to data from the Maine Immunization Program, about 4.0% of children were exempted from vaccination during the 2007-2008 academic year; this translated into 583 children. Of the exemptions granted during 2007-2008, 85% were philosophical exemptions, 10.6% were medical exemptions, and 3% were religious exemptions. The number of exemptions granted in Maine has increased over time. In 2004-2005, there were 433 total exemptions, about 3.1% of the kindergarten population; in 2007-2008, there were 583 exemptions, or 4% of kindergarteners. The number of exemptions in all categories increased between 2004 and 2008. The largest percent change occurred among religious exemptions, which increased 113% from 8 in 2004-2005 to 17 in 2007-2008. The greatest absolute change occurred in philosophical exemptions, which increased 35% from 372 to 504. Medical exemptions increased 17% from 53 to 62.[141]

In a recent report on influenza vaccination among children aged 6-23 months, 35.5% of Maine children received at least 1 dose of the vaccine and 21.3% were "fully vaccinated." The definition of "fully vaccinated" was based on the recommendations from the ACIP and included previously unvaccinated children <9 years who had received 2 doses of influenza vaccine and previously vaccinated children <9 years who received 1 dose of the vaccine. Maine's ranked about 24th in the United States in the percent of Maine's children who were fully vaccinated.[142]

Environment and Health

Lead Hazard

Lead is a toxic metal that was used for many years in products including paint, leaded gasoline, batteries, solder and pipes, and ammunition. The Maine Department of Environmental Protection estimates that more than 60% of the housing in Maine may contain lead paint and that most lead poisonings in Maine are caused by exposure to dust from old lead paint. The risk of childhood lead poisoning is greatest for families living in housing built before 1950.[143] In 2008, Maine had a total of 700,550 housing units, more than one third (33.4%) of which was built before 1950, a greater proportion than in the U.S. overall (20.0%).[144] Across Maine's counties, the proportion of pre-1950 housing ranges from 29.8% in York County to 44.0% in Knox County.[3]

Maine's Lead Poisoning Control Act was amended in 2002 to require that all children covered by MaineCare must have their blood lead levels tested at 1 and 2 years of age. Children who are not covered by MaineCare also must have their blood lead levels tested at 1 and 2 years of age unless the child's primary health care provider, based on professional judgment and the lead poisoning risk assessment tool, determines that the child's level of risk does not warrant testing.[145]

The Maine Childhood Lead Poisoning Prevention Program (CLPPP) tracks lead poisoning through the collection and analysis of blood lead test results for children under the age of 6 years. An elevated blood lead level (eBLL) is a blood lead level greater than or equal to 10 micrograms per deciliter of blood The proportion of 1 year old Maine children screened for eBLL in 2007 was 48.0%, a significant increase from the proportion in 2001 (39.2%). Over the same time period, the screening rate for Maine 2 year olds also increased significantly - from 15.7% to 23.3%. For 1 year old children, the blood lead screening percent was highest in the Aroostook Public Health District (67.7%) and lowest in the Central Public Health District (28.8%).[146]

More than two-thirds of children (67.1%) born in 2003 were screened for eBLL levels before 3 years of age. Throughout Maine, the proportion of children screened ranged from 57.8% in the Cumberland Public Health District to 80.2% in the Aroostook Public Health District (Table 3.4.15).[146]

Table 3.4.15: Percent of Children Born in 2003 with a Blood Lead Screening Test between 0 – 36 Months of Age by Public Health District, Maine

Location	Population	# Tested	%	95% CI
Aroostook	656	526	80.2	77.1 - 83.3
Central	1,752	1,309	74.7	72.7 - 76.7
Cumberland	3,042	1,759	57.8	56.0 - 59.6
Downeast	870	618	71.0	68.0 - 74.0
Midcoast	1,517	897	59.1	56.6 - 61.6
Penquis	1,735	1,143	65.9	63.7 - 68.1
Western	2,133	1,646	77.2	75.4 - 79.0
York	2,147	1,370	63.8	61.8 - 65.8
Maine	13,858	9,294	67.1	66.3 - 67.9

Data Source: Maine Environmental Health Tracking Program

Between 2003 and 2007, 16.9% of children between 0 and 71 months received a blood lead screening test; the percent of children with an eBLL among those screened was 1.3%. Throughout Maine's Public Health Districts, the range was 0.3% in the Aroostook Public Health District to 1.7% in the Western Public Health District (Table 3.4.16).[146]

Table 3.4.16: Percent of Children with an Elevated Blood Lead Test, among Those Screened by Public Health District, Maine 2003-2007 Combined, Age 0-71 months

Location	# Screened	# EBLL	%	95% CI
Aroostook	3,916	10	0.3	0.1 - 0.5
Central	10,253	108	1.1	0.9 - 1.3
Cumberland	12,888	173	1.3	1.1 - 1.5
Downeast	4,737	54	1.1	0.8 - 1.4
Midcoast	6,312	94	1.5	1.2 - 1.8
Penquis	9,163	115	1.3	1.1 - 1.5
Western	12,600	216	1.7	1.5 - 1.9
York	9,616	139	1.4	1.2 - 1.6
Maine	69,715	913	1.3	1.2 - 1.4

Data Source: Maine Environmental Health Tracking Program

Water Fluoridation

As of December 31, 2008, 48.0% of Maine's population was on public water supply. Maine had 67 fluoridated community water systems that served 133 communities, including three communities with naturally occurring fluoride. Just over a third (38.3%) of the total Maine population and more than three-quarters (79.6%) of the population on public water supply received fluoridated water.[1, 147]

Second-hand Smoke

Based on data from the 2003 and 2004 MCHS, one in four kindergarten and third grade children were exposed to environmental tobacco smoke exposure. Children covered by MaineCare and children with no insurance coverage were more likely to be exposed to tobacco smoke than children with Private/HMO insurance coverage (47.2% and 38.5% vs. 15.1%).[113] Throughout Maine, 17.3% of households with kindergarten and third-grade children contained at least one tobacco-smoker and 11% of children breathed or smelled tobacco smoke nearly every day. The 2007 NSCH found that 27.6% of Maine children ages 0-17 live in households where someone smokes.[92]

Teen Pregnancy and Sexual Behavior

About 1 in 10 (11.9%) middle school students in Maine have had sexual intercourse, according to data from Maine's 2007 YRBS, a significant decrease from 1997 (23%). In 2007, middle school boys were more likely than girls to report having had sex (14.9% vs. 8.9%) and those in 8th grade were more likely than those in grade 6 and 7 to have had sexual intercourse. Three percent of middle school students reported having had intercourse before age 11. Four percent reported having had four or more sexual partners. Of middle school students who had had intercourse, 72% reported having used a condom during their last sexual intercourse. About one third of middle school students (32.3%) reported having talked with their parents/guardians about sex in the prior 6 months. This is significantly lower than 2003 when almost half (45%) of middle school students reported talking with their parents/guardians about sex.[73]

Among Maine high school students, almost half (45.4%) reported on the 2007 YRBS that they had had intercourse, down from 52% in 1997, though the difference is not statistically significant. Maine is close to meeting the HM2010 goal of increasing to 60% the proportion of 9th-12th graders who have never had sexual intercourse.[55] There was not a gender difference in high school students reporting sexual intercourse, but older adolescents were more likely than younger adolescents to have had sex. The proportion of Maine students reporting sexual intercourse ranged from 27.3% of 9th graders to 65% of 12th graders. Five percent of high school students reported having had intercourse before 13 years of age; 12% reported having had four or more sexual partners. About one third (33.4%) of high school students reported having had intercourse within the past 3 months (i.e., sexually active). More than half (59%) of sexually active students reported using a condom during their last sexual intercourse and 36.1% reported using birth control pills.[73] Maine has met the HM2010 goal of increasing the proportion of 9th-12th graders who used condoms at last intercourse to 58%.[55] Reported condom use in 2007 was the highest it had been since 1997 when the YRBS began asking this question. One in 4 sexually active high school students (26%) reported that they had consumed alcohol or used drugs before their last intercourse. One in 10 (10.1%) students reported that they had been forced to have sexual intercourse. Less than half (42%) of high school students reported having talked with

their parents/guardians about sex in the past 6 months, significantly lower than in 2003 (56%), similar to the pattern observed among middle school students (see above). [73]

In 2009, 74% of chlamydia cases and 29% of gonorrhea cases were diagnosed in people aged 15-24. Rates of chlamydia among Maine 15-19 year-olds have increased over the past 10 years. In 1996, the rate was 480 per 100,000 population; in 2007, the rate reached a high of 863.8 per 100,000. Despite this increase, Maine's 2007 chlamydia rate among 15-19 year olds was approximately half the U.S. rate.[137]

Gonorrhea rates among 15-19 year olds in Maine have decreased in recent years from 57 to 15 cases/100,000 population between 2004 and 2007. Similar to chlamydia, the 2007 rate of gonorrhea among 15-19 year olds in Maine was approximately 1/30 of the national rate.[137]

Currently, 29 people between the ages of birth and 20 and 235 people between the ages of 20-29 are living with a diagnosis of HIV/AIDS in Maine. In 2007, there were no new HIV diagnoses among those under age 20; 15 HIV cases were diagnosed among those between the ages of 20-29. There were no HIV diagnoses among those under age 20. Twenty-nine percent (29%) of diagnoses in 2007 were among people in their twenties. It is likely that many of those who test positive for HIV in their twenties were infected several years earlier.[137]

Healthy Weight, Physical Activity, and Nutrition

Overweight and obesity.

HP2010 set goals to reduce the proportion of children aged 6-19 years who are overweight or obese to 5%;[49] Maine has not yet met the HP2010 goals. The 2007 NSCH found that 4.9 % of Maine children were underweight (i.e., <5th percentile); 15.3% were overweight (85-94th percentile) and 12.9% were obese (>94th percentile). Maine's 2007 estimates of childhood overweight and obesity were similar to the U.S. overall (Table 3.4.17).[148]

Table 3.4.17: Percent of children by weight status, Maine and US

Region	Underweight (less than 5th percentile)	Healthy weight (5th to 84th percentile)	Overweight (85th to 94th percentile)	Obese (95th percentile or above)
Maine	4.9 (3.1 - 6.7)	66.9 (62.9 - 70.8)	15.3 (12.3 - 18.3)	12.9 (10.1 - 15.7)
Nationwide	5.2 (4.6 - 5.7)	63.2 (62.0 - 64.4)	15.3 (14.4 - 16.1)	16.4 (15.4 - 17.3)

Data Source: 2007 NSCH

Data from Maine's 2007 YRBS indicated that 12.8% of high school students were at or above the 95th percentile for BMI, with significant differences by gender; 7.6% of females and 17.5% of males were obese. An additional 13.1% of students were overweight (at the 85th- 94th percentile of BMI). Thirty percent of Maine's high school students described themselves as slightly or very overweight. A greater proportion of female students (33.9%) considered themselves overweight than male students (25.3%). Nearly half of all Maine's high school students (46.3%) were trying to lose weight: 64% of females and 29.3% of males. Nearly two-thirds of students reported that they exercised to lose weight or to keep from gaining weight during the 30 days prior to the survey, and 41.6% ate less food, fewer calories, or foods low in fat. In addition, 10.2% of students fasted for 24 or more hours, 6.3% vomited or took laxatives,

and 4.9% used diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight during the 30 days prior to the survey.[73]

HM2010 physical activity goals for adolescents include: (a) increase to 40% the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days; (b) increase to 85% the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion, and (c) increase to 85% the proportion of adolescents who view television 2 or fewer hours per day.[55]

According to YRBS data, less than half (43.1%) of Maine's high school students met national recommended levels of physical activity. Among Maine's high school students: a) 56.9% did not do any kind of physical activity that increased their heart rate and made them breathe hard for at least 60 minutes per day five or more times a week, b) 93.3% did not attend daily physical education classes, c) 62.2% did not attend did not attend a weekly physical education class, d) 23.6% watched three or more hours of TV per day on an average school day, and e) 21.4% used a computer for fun or video games for three hours or more per day.[73]

A HM2010 goal is for 35% of adolescents to consume five or more daily servings of fruits and vegetables.[55] Of Maine adolescents, in 2007, 79.6% did not eat five or more daily servings of fruits and vegetables; 19.9% drank a can, bottle or glass of soda one or more times per day.[73]

Tobacco, Alcohol and Substance Use

The integrated MYDAUS-YTS assesses the use of alcohol, tobacco, and other substances among Maine middle and high school students (6th through 12th grade), and identifies risk and protective factors that influence a student's choice of whether or not to engage in these and related harmful behaviors.[102] The MYDAUS-YTS was last administered in 2008. Another source of data related to youth substance use is the YRBS, which was last administered in 2007.[149] The YRBS survey provides data representative of 9th through 12th grade students in public schools throughout Maine, and results can be compared with national rates. (Maine's survey does include a middle school component (7th-8th grade), though these data are not on the web query system) In the following section we summarize MYDAUS-YTS data, with 2007 YRBS results presented to illustrate national comparisons.

Alcohol

The 2008 MYDAUS-YTS found that 71.0% of 12th graders had ever used alcohol (Table 3.4.18). One in six (6.5%) high school students indicated they had consumed their first drink of alcohol before age 13. Overall, 25.3% of Maine's 6th through 12th graders reported alcohol use in the past 30 days, significantly lower than eight years ago, in 2000 (30.9%). Throughout Maine, 5.3% of 6th graders, 25.4% of 9th graders, and 46.2% of 12th graders reported using alcohol in the last 30 days.[102] According to the YRBS, 39.3% of Maine's 9th through 12th graders reported current alcohol use, not significantly lower than reported nationally (44.7%).[149]

According to MYDAUS-YTS data, nearly one in nine 9th graders (11.0%) and nearly one in four 12th graders (26.2%) reported binge drinking in the two weeks prior to the survey. The prevalence of binge drinking among 6th through 12th graders has significantly decreased between

2000 and 2008 (15.8% vs. 12.5%).[102]. Maine has not yet met the HP2010 goals to (a) increase to 29% the proportion of high school seniors who have never used alcoholic beverages; (b) to increase to 89% the proportion of adolescents who have not used alcohol in the last 30 days, or (c) to decrease to 11% the proportion of high school seniors who engaged in binge drinking during the last 2 weeks.[49]

Marijuana

Among Maine's youth, marijuana was the most commonly used illicit drug, for both lifetime and past 30 day use. The 2008 MYDAUS-YTS found that one in five 9th graders, and nearly half (45.6%) of 12th graders reported ever using marijuana (Table 3.4.18). Among Maine's high school students, 7.1% indicated they had tried marijuana for the first time before age 13. Overall, 12.7% of Maine's 6th through 12th graders reported marijuana use in the past 30 days, significantly lower than in 2000 (15.6%). In addition, one in nine 9th graders and one in four 12th graders used marijuana during the last 30 days.[102] Maine has not yet met the HP2010 goal to reduce to 0.7% the proportion of adolescents reporting marijuana use during the past 30 days.[49] The proportion of youth who reported having ever used marijuana was nearly twice the proportion of youth who reported current use.

Tobacco

Maine has not yet met the HM2010 goal to reduce the proportion of 9th-12th graders who smoke cigarettes to 15% or the HP2010 goal to reduce the proportion of 9th-12th graders who smoked cigarettes in the last 30 days to 16.[49] Overall, 12.1% of Maine's 6th through 12th graders reported cigarette smoking in the past 30 days, significantly lower than reported use in 2000 (17.3%). Results of the 2008 MYDAUS showed that 2.1% of 6th graders, 12.4% of 9th graders, and 23.6% of 12th graders had smoked cigarettes in the 30 days prior to the survey (Table 3.4.18).[102] According to YRBS data, 14.0% of Maine's 9th through 12th graders reported current cigarette smoking, significantly lower than reported nationally (20.0%). One in seven (13.8%) high school students reported they smoked cigars, cigarillos, or little cigars on one or more of the past 30 days prior to the survey; the proportion was significantly higher among males than females (19.8% vs. 7.8%).[149]

Throughout Maine, twice as many students reported ever having smoked cigarettes as reported smoking currently. One in ten high school students indicated they had smoked a whole cigarette for the first time before the age of 13. Less than one percent of students reported smoking an average of 20 or more cigarettes per day. Among Maine high school students who reported current cigarette use, nearly half (44.6%) indicated they had tried to quit smoking cigarettes during the past 12 months.[149]

Other Substances

Other substances that at least 5% of students reported using in the last 30 days included: (a) prescription drugs not prescribed for them (5.1% of 9th graders; 8.9% of 12th graders), (b) smokeless tobacco (4.6% of 9th graders; 9.6% of 12th graders), and (c) inhalants (4.0% of 6th graders; 4.8% of 9th graders) (Table 3.4.18).[102] Maine has not yet met the HP2010 goal to reduce to 0.7% the proportion of adolescents who used inhalants in the past year.[49] According to the 2008 MYDAUS-YTS, the proportion of 6th-12th grade students who reported ever using prescription drugs that were not prescribed for them has decreased significantly since 2000 (10.8% vs. 17.7%).[102] According to 2007 YRBS data, similar proportions of Maine and U.S. 9th-12th graders reported lifetime methamphetamine use (5.0% and 4.4%) and lifetime inhalant use (13.3% and 13.3%).[149]

Table 3.4.18: Substance use, Maine Youth Drug and Alcohol Use Survey, (Percent) 2008

Substance	6th graders %	9th graders %	12th graders %
Alcohol			
Ever use	13.3	45.9	71.0
Use in last 30 days	5.3	25.4	46.2
Binge drinking in last 2 weeks [a]	1.8	11.0	26.2
Marijuana			
Ever use	1.9	20.2	45.6
Use in last 30 days	1.2	11.4	25.4
Cigarettes			
Ever use	6.3	25.1	43.5
Use in last 30 days	2.1	12.4	23.6
Prescription Drugs Not Prescribed For You			
Ever use	3.7	10.0	18.7
Use in last 30 days	1.8	5.1	8.9
Smokeless Tobacco			
Ever use	2.5	9.4	19.5
Use in last 30 days	1.4	4.6	9.6
Cocaine			
Ever use	0.9	3.1	7.9
Use in last 30 days	0.6	1.5	3.1
Hallucinogens			
Ever use	0.8	3.5	9.2
Use in last 30 days	0.7	1.7	3.0
Stimulants			
Ever use	0.7	2.5	4.5
Use in last 30 days	0.5	1.2	2.1
Inhalants			
Ever use	8.1	12.4	9.3

Substance	6th graders %	9th graders %	12th graders %
Use in last 30 days	4.0	4.8	2.6
Ecstasy			
Ever use	0.6	2.6	5.9
Use in last 30 days	0.5	1.1	1.9
Heroin			
Ever use	0.8	1.6	2.4
Use in last 30 days	0.7	1.0	1.3
Other Illegal Drugs			
Ever use	1.7	10.5	15.2
Use in last 30 days	1.0	5.7	8.4
[a] Defined as 5 or more alcoholic drinks in a row			

Data Source: 2008 MYDAUS

Other Prohibitive Behaviors Related to Substance Use

Other substance use behaviors reported by Maine students include having been drunk or high at school (one in eight 6th-12th graders), and having sold illegal drugs (6.3%).[102] According to 2007 YRBS data, 29.1% of Maine 9th-12th graders reported that they have been offered, sold, or given an illegal drug by someone on school property during the 12 months before the survey; Maine's prevalence was higher than among U.S. students overall (22.3%). Less than three percent of high school students have used a needle to inject any illegal drug into their body and 3.4% have taken steroid pills or shots without a doctor's prescription. Approximately three percent (2.5%) of high school students who reported current alcohol use indicated that they usually bought the alcohol in a store during the 30 days prior to the survey.[149] In addition, 44.1% of 12th graders perceive that their parents' attitudes towards alcohol, cigarette, or marijuana use as favorable and 47.2% perceive their community's laws and norms as favorable to drug use.[102]

General Health Status and Preventive Medical Care

Based on data from the 2007 NSCH, parents/guardians of 90.9% of Maine children reported that their child was in excellent or very good health; 79.9% reported that their child had excellent or very good oral health. The majority (92.2%) of children had a preventive medical visit in the past year, and 80.9% had a preventive dental visit in the past year. Approximately two-thirds (65.5%) of children received care within a "medical home." [92]

Strengths—Connection to School, Family, Neighborhood

Promoting Child and Adolescent Resiliency

Research has shown that certain factors help to decrease adolescent risk behaviors and promote positive adolescent health and well-being. These factors include connectedness to school, parents, and community.[150]

In 2007, based on data from the NSCH, 80% of youth in Maine were usually or always engaged in school. Boys were more likely than girls to never, sometime, or rarely be engaged in school (25.5% vs. 13.6%). About 87% of youth always or usually cared about how they do in school and only about 14% never, rarely, or only sometimes did their homework. Boys were less likely than girls to do their homework regularly. Maine is similar to the U.S. on these indicators.[92] According to Maine's YRBS, 75% of Maine high school students and 74% of middle school students agreed or strongly agreed that there is a teacher who cares about them and gives them encouragement.[73] Based on NSCH data, 87% of Maine youth aged 5-17 years participated in an extracurricular activity—girls were more likely than boys to do so.[92] According to 2007 YRBS data, 60% of high school students and 75% of middle school students participated on a sports team and about 53% of high school students and 49% of middle school students participated in an extracurricular activity other than a sports team at least 1 hour each week.[73]

Parental engagement with children has been shown to be important for positive development. According to the 2007 NSCH, 98% of Maine parents took their child on an outing at least once in the previous week (14.4% took their child for an outing on a daily basis), 70% read to their child, and 67% sang or told stories to their child on a daily basis. Maine parents were more likely than other parents in the U.S. to report these behaviors. Eighty percent of Maine parents reported having a family dinner with their children at least 4 days each week.[92] Over 80% of Maine high (83.3%) and middle (87.0%) school students reported that their parent or guardian really cares about them and gives them help and support when they needed.[73]

Feeling supported and connected to one's community is also important to promote child and adolescent resiliency. Over 80% of children performed community service at least once in the past year, and 85% of parents on the 2007 NSCH reported that their children lived in supportive communities.[92] Among Maine high school students, 57% agreed or strongly agreed that they matter to people in their community. Similarly, 60% of Maine middle school students reported that they matter to people in their community.[73]

Section 3.5: Children and Youth with Special Health Care Needs

Identifying Children with Special Health Care Needs

Children with special health care needs (CSHCN) are "those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."[151]

According to researchers at the Child and Adolescent Health Measurement Initiative, the prevalence of children with special health care needs is best expressed as a range of values, and multiple data sources should inform program planning and research. Data describing disability or special health needs among Maine children are available from numerous sources, including the ACS, the NS-CSHCN, the NSCH, and IDEA service data. Although these data sources do not use common definitions or data methods, and yield different estimates of the proportion of children in Maine who have special needs; they each contribute to our understanding of CSHCN in Maine.

Prevalence and Demographic Characteristics

Prevalence

Prevalence estimates of current disability or special health needs among Maine children range from 10% to 20%, depending on the definition used. On many core measures pertaining to CSHCN, the prevalence of CSHCN and the impact among CSHCN and their families is greater in Maine than in the U.S. overall (Table 3.5.1).

Table 3.5.1: Summary of Maine/US CSHCN Data Comparisons

Indicator	Maine Result	US Comparison	Comparison
CSHCN prevalence ages 0 - 17 (2005-2006 NS-CSHCN)	17.7% (16.5 - 18.8)	13.9% (13.7 - 14.1)	Maine: higher prevalence
CSHCN prevalence ages 0 – 17 (2007 NSCH)	19.8% (17.5 - 22.2)	19.2%	Maine not different from US
Disability Prevalence: Ages 5 - 15 (ACS Estimate 2005-2007)	10.0% (6.2 - 6.4)	6.3% (6.2 - 6.4)	Maine: higher prevalence
Disability Prevalence: Ages 16 -20 (ACS Estimate 2005-2007)	9.3%	6.9%	Maine: higher prevalence
Mental Disability Prevalence: Ages 5 - 15: (ACS Estimate 2005-2007)	12.1% (11.1 - 13.1)	6.7% (6.6 - 6.9)	Maine: higher prevalence
CSHCN age 2 - 17 who currently have problems with anxiety (2007 NSCH)	20.8% (14.9 - 26.8)	11.4% (10.4 - 12.5)	Maine: higher prevalence
Children ages 0 - 2 served under IDEA (2007 US Dept of Education)	2.4%	2.5%	Maine not different from US
Children ages 3 - 21 served under IDEA (2007 US Dept of Education)	11.3%	8.5%	Maine: higher prevalence

Prevalence: Based on the National Survey of Children with Special Health Care Needs

According to the NS-CSHCN, which was conducted in 2001 and again in 2005-2006, there were nearly 49,000 CSHCN in Maine, representing 17.7% of children under age 18 (Table 3.5.2). The recent estimate was slightly higher than the 2001 estimate of 15.5%. Maine's prevalence estimates for both years were significantly higher than national estimates (13.9% and 12.8%, for 2001 and 2005-2006, respectively). One in four Maine households with children (25.7%) had one or more CSHCN, significantly greater than the national percentage (21.8%). Of the 25.7% households with CSHCN, 20% had one CSHCN living in the household and 5.1% had two more CSHCN.[91]

The NSCH used a similar definition to what was used in the NS-CSHCN, although the survey used a slightly different methodology. The estimate of CSHCN based on this survey, last administered in 2007, was slighter higher than the NS-CSHCN (19.8% vs. 17.7%).[92]

According to the NS-CSHCN, among Maine's CSHCN population, 60.5% were male, 93.8% were non-Hispanic white, 48.2% were between 12 and 17 years old, and 43.2% lived in households with incomes less than 200% of the FPL.[6] Approximately one-third (30.4%) of Maine CSHCN resided in areas defined as "urban core," 18.5% in "suburban" areas, 18.2% in "large towns," and 32.9% resided in "small town/rural" areas of Maine.[152]

It cannot be determined whether the slight increase in Maine's prevalence rate between 2001 and 2005/06 is due to a true increase in the number of CSHCN. It is possible that the increase is due, at least in part, to increased awareness of conditions on the part of professionals or the public, leading to increased diagnosis and access to services. Similarly, we cannot tell whether the prevalence difference between Maine and the U.S. is due to a true difference in the percentage of the child population who have special health care needs or to better identification of CSHCN or better service provision in Maine than in the nation. In addition to improved detection and service delivery, there may be other factors that impact the estimation of prevalence. We also cannot determine the reason for the higher estimate obtained in 2007 NSCH.

In 2005/06, the prevalence of CSHCN was higher among older children, males, and children below 100% of the FPL. These patterns were similar to those found in 2001 (Table 3.5.2).[6]

Table 3.5.2: Comparisons of the Percentage of Children with Special Health Care Needs, by Age, Gender, Income, Maine and US, 2005/2006 and 2001

	CSHCN ages 0 - 17 2005 - 2006		CSHCN ages 0 - 17 2001	
	%	95% CI	%	95% CI
Maine Children- Ages 0 - 17	17.7	16. 5 - 18.8	15.5	13.7 - 14.1
US Children - Ages 0 - 17	13.9	13.7 -14.1	12.8	12.6 - 13.0
Maine Percent by age				
0 - 5 years	9.4	7.8 - 11.1	8.8	7.2 - 10.3
6 - 11 years	19.9	17.8 - 21.0	16.2	14.4 - 17.9
12 - 17 years	22.2	20.2 - 24.1	20.1	18.2 - 22.0
Maine Percent by sex				
Male	20.9	19.2 - 22.6	18.5	16.9 - 20.1
Female	14.3	12.9 - 15.7	12.3	10.9 - 13.7
Maine Percent by poverty level				
0-99% FPL	27.3	(22.9-31.8)	23.2	--
100-199% FPL	19.4	(16.8-22.0)	16.3	--
200-399% FPL	15.1	(13.4-16.8)	14.9	--
400% FPL or more	15.4	(13.3-17.5)	14.1	--

Data Source: NS-CSHCN 2001 and 2005/2006

Functional Limitation/Special Health Care Need: MaineCare Estimate

An additional source of information about CSHCN in Maine is information from parents of children currently enrolled in or recently disenrolled from MaineCare; CSHCN in this survey sample were identified using a single question. Because the MaineCare screener was limited to functional limitations, these findings are not directly comparable to other estimates.

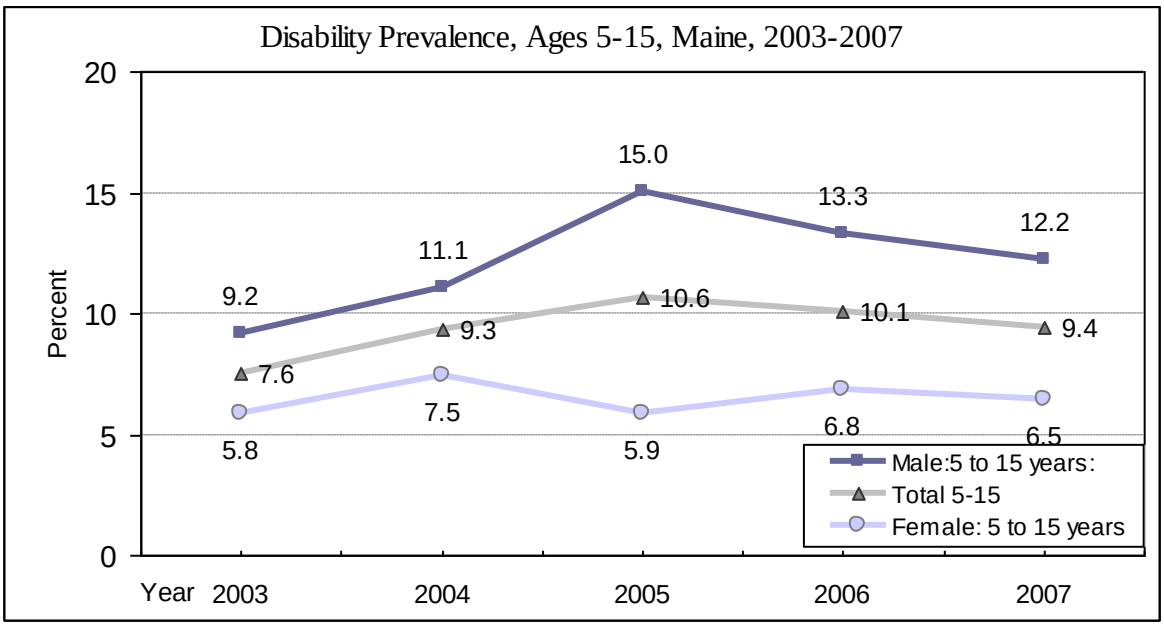
The 2008 survey of Family Satisfaction with Children's Health Care in MaineCare and the SCHIP found that 14.7% of parents of new and current enrollees identified their child as having a special health care need. The proportion of children with limiting conditions increased with age: 11% of children age five or younger and 16% of children aged six and older were reported to have a special health care need. Prevalence of CSHCN did not vary by region of residence. The most prevalent conditions among 2 to 17 year olds included developmental delays, one or more mental health conditions, asthma, and autism. For more than 21% of these children, parents reported more than one condition that limited the child's activities.[110]

Disability Prevalence: American Community Survey

Based on data from the U.S. Census ACS, there were nearly 17,500 non-institutionalized children aged 5-15 in Maine with at least one sensory, physical, mental, and/or self-care disability; nearly 8,400 non-institutionalized youth aged 16-20 were reported to have at least one sensory, physical, mental, self-care, go-outside-home, and/or employment disability. The prevalence of disability in Maine was higher than in the U.S. among those aged 5-15 (10.0% vs. 6.3%) and among those aged 16-20 (9.3% vs. 6.9%). The disability with the highest prevalence among 5-15 year olds and 16-20 year olds was mental disability.[3]

The estimated proportion of disability among children aged 5-15 years in Maine counties ranged from approximately 7% in Franklin and Cumberland Counties to more than 13% in Washington and Androscoggin Counties. Based on yearly ACS estimates, the prevalence of disability status among children age 5-15 years has increased slightly over time. This is primarily due to an increase in the prevalence among boys; the proportion of girls with a reported disability in Maine has remained stable over time.[3]

Figure 3.5.1



Data Source: American Community Survey, 2003-2007

Types of Limitations and Functional Impact

Limitation Type among Ages 0-17

The NS-CSHCN can be used to look at four subgroups of children, defined by whether or not the child has a condition that results in functional limitations and how the child's condition is managed:

(1) Children whose special health care needs result in functional limitations;

Children whose special health care needs do not result in functional limitations and are managed by :

(2) Prescription medications only;

(3) Above routine service use only;

(4) Both prescription medications and above routine service use.

In 2005/06, one in four (24.5%) Maine CSHCN had conditions that resulted in functional limitations. The most common subgroup of children comprised those without functional limitations whose needs were managed by prescription medication only (39.2%). Less common were children without functional limitations whose needs were managed by routine use of services only (14.4%) or by both prescription medication and routine use of services (21.9%). These findings were consistent in Maine between 2001 and 2005/2006, and were similar to national estimates. In the U.S., between 2001 and 2005/2006, an increase was observed in the proportion of children with special health care needs without functional limitation who were managed only by prescription medication (36.7% vs. 43.7%). Although an increase was observed in Maine, the change was not statistically significant.[6]

Table 3.5.3: Percent (95% CI) of CSHCN who Have Specific Types of Special Health Care Needs, 2001 and 2005/06

Special health care need subgroup	Maine 2005/06	Maine 2001	Nation 2005/06	Nation 2001
(1) Conditions result in functional limitations	24.5 (21.6 - 27.4)	21.7 (18.5 - 24.8)	21.3 (20.7 - 21.9)	21.3 (20.7 - 22.0)
Conditions that do not result in functional limitations and are managed by:				
(2) Prescription medication only	39.2 (35.8 - 42.6)	36.7 (35.9 - 37.5)	43.7 (42.9 - 44.4)	36.7 (35.9 - 37.5)
(3) Above routine use of services only	14.4 (12.1 - 16.6)	18.5 (15.4 - 21.6)	14.3 (13.7 - 14.8)	18.2 (17.5 - 18.9)
(4) Prescription medication and above routine use of services	21.9 (19.1 - 24.7)	23.1 (20.1 - 26.2)	20.7 (20.1 - 21.3)	23.7 (23.0 - 24.4)

Data Source: NS-CSHCN 2001 and 2005/2006

The NS-CSHCN collects information on the impact the child's special health care needs have on his or her life. Although the parents/guardians of over one third (35.1%) of all Maine CSHCN reported that their child's condition never affected their ability to do things, there were significant differences according to the type of special needs. The parents/guardians of children with functional limitations reported that their child's life was affected more frequently and to a greater degree than was reported for children without functional limitations.[6]

In terms of frequency, parents of CSHCN with functional limitations were more likely to report that their child's health condition always affected the child's ability to do things (51.7%), while parents of children managed by only prescription medication were more likely to report that their child's condition never affected their child's ability to do things (64.2%). In terms of degree, over one third (39.4%) of CSHCN with functional limitations were affected a great deal by their condition, while those managed by only prescription medication were more likely to never be affected by their condition (64.2%).[6]

Table 3.5.4: Percent (95% CI) of Maine CSHCN whose Parents Reported Specified Impact of Health Conditions on Ability to Do Things, by Special Health Care Need Subgroup, 2005/06

Measure	Total CSHCN	CSHCN with functional limitations	CSHCN managed by prescription medication only	CSHCN managed by above routine service use only	CSHCN managed by prescription medication& above routine service use
How often health conditions affected ability to do things-					
Never	35.1 (31.4 - 38.3)	--	64.2 (58.4 - 70.1)	25.1 (16.0 - 34.2)	27.4 (20.3 - 34.6)
Sometimes	39.6 (35.9 - 43.4)	27.0 (19.9 - 34.1)	33.0 (27.3 - 38.7)	53.0 (42.7 - 63.2)	56.9 (48.5 - 65.3)
Usually	9.6 (7.3 - 11.9)	19.8 (13.9 - 25.7)	--	14.6 (7.2 - 22.1)	--
Always	15.6 (12.7 - 18.6)	51.7 (43.8 - 59.6)	--	--	--
How much health conditions affected ability to do things-					
Never	35.1 (31.4 - 38.8)	--	64.2 (58.4 - 70.1)	25.1 (16.0 - 34.2)	27.4 (20.3 - 34.6)
Very little	22.8 (19.5 - 26.1)	--	22.8 (17.7 - 27.8)	29.4 (19.9 - 38.9)	33.2 (25.2 - 41.3)
Somewhat	29.3 (25.9 - 32.8)	49.5 (41.5 - 57.4)	11.8 (7.8 - 15.8)	39.0 (29.1 - 48.0)	31.9 (24.4 - 39.4)
A great deal	12.7 (10.0 - 15.4)	39.4 (31.5 - 47.2)	--	--	--
Note: -- Denotes an estimate based on sample size too small to meet standards for reliability or precision; the relative standard error is greater than 30%.					

Data Source: NS-CSHCN 2001 and 2005/2006

Health Status and Service Utilization

Health Status among Maine Children Ages 0-17

Maine CSHCN were significantly less likely to be in excellent or very good overall health, as rated by their parents or guardians, than children who did not have special health care needs (73.7% vs. 95.1%). Half of CSHCN currently have one or more chronic conditions rated as moderate or severe.[105]

In the 2005/06 NS-CSHCN survey, parents/guardians were asked if, to the best of their knowledge, their CSHCN had certain conditions. No information was collected on who diagnosed the child and providers were not contacted to confirm diagnoses.[6]

In Maine, the five most common conditions among CSHCN were: allergies (45.1%), asthma (38.8%), ADHD or ADD (30.6%), depression, anxiety, eating disorder, or other emotional disorder (28.8%), and migraines or frequent headaches (16.9%; Table 3.5.5). These five conditions were also the most common ones among CSHCN in the nation.[6]

Compared to the national rate, Maine CSHCN had significantly higher rates of depression, anxiety, eating disorder, or other emotional problems, and autism or autism spectrum disorder. In contrast, Maine CSHCN had a significantly lower rate of allergies than did CSHCN in the nation as a whole (45.1 vs. 53.0%).[6]

Table 3.5.5: Percent (95% CI) of CSHCN Who Have Select Conditions, As Reported by Parent, 2005/06

Conditions Reported	Maine CSHCN 2005/06	Nation CSHCN 2005/06
Allergies	45.1 (41.3 - 49.0)	53.0 (52.2 - 53.8)
Asthma	38.8 (35.0 - 42.6)	38.8 (35.0 - 42.6)
Attention deficit hyperactivity disorder (ADHD) or attention deficit disorder (ADD)	30.6 (26.9 - 34.3)	29.8 (29.0 - 30.6)
Depression, anxiety, eating disorder, or other emotional problems	28.0 (24.5 - 31.5)	21.1 (20.5 - 21.8)
Migraines or frequent headaches	16.9 (13.9 - 19.9)	15.1 (14.5 - 15.7)
Mental retardation or developmental delay	11.5 (9.0 - 14.0)	11.4 (10.9 - 12.0)
Autism or autism spectrum disorder	8.1 (6.0 - 10.2)	5.4 (5.0 - 5.8)
Heart problems, including congenital heart disease	5.3 (3.4 - 7.2)	3.5 (3.2 - 3.8)
Epilepsy or other seizure disorder	3.7 (2.3 - 5.1)	3.5 (3.2 - 3.8)
Arthritis or other joint problems	3.5 (2.1 - 4.9)	4.2 (3.9 - 4.6)
Diabetes	2.3 (1.2 - 3.5)	1.6 (1.4 - 1.8)

Data Source: NS-CSHCN 2005/2006

Service Need and Access

CSHCN can require a broad range of services including: occupational, physical, respiratory, and speech therapy; prescribed medications; durable medical equipment; counseling, and specialty care. Health care providers, community organizations, and other service providers must collaborate to break down barriers that impede access to care. The NS-CSHCN collected information on services that CSHCN needed and whether those needs were met.

The percent of Maine CSHCN who needed select services ranged from 2.1% to 89.5%. The three most commonly needed services were prescription medications (89.5%), routine preventive care (83.3%), and preventive dental care (84.3%) (Table 3.5.6). Most children who needed a service received what they needed (range: 82.6% to 99.8%).[6]

The three service types for which the highest percentage of children received all needed services were: medical supplies (99.8%), prescription medications (99.5%), and routine preventive care (99.4%). The three services types for which the lowest percentage of children received all needed services were: substance abuse treatment or counseling (82.6%), mental health care or counseling (88.4%), and other dental services outside of preventive care (88.9%) (Table 3.5.6).[6]

Table 3.5.6: Percent (95% CI) of Maine CSHCN that Needed and Received Select Services, 2005/06

Type of service	% of CSHCN that needed service	Of CSHCN that needed service, % that received all needed service
Prescription medications	89.5 (87.2 - 91.9)	99.5 (99.0 - 100)
Routine preventive care	83.3 (80.3 - 86.4)	99.4 (98.8 - 100)
Preventive dental care	84.3 (81.3 - 87.3)	92.2 (90.1 - 94.4)
Care from a specialty doctor	49.2 (45.3 - 53.1)	96.0 (93.9 - 98.2)
Eyeglasses or vision care	32.3 (28.7 - 36.0)	93.6 (90.0 - 97.2)
Mental health care or counseling	30.0 (26.4 - 33.6)	88.4 (83.5 - 93.2)
Physical, occupational, or speech therapy	28.8 (25.3 - 32.3)	90.3 (86.1 - 94.5)
Other dental care	24.6 (21.4 - 27.9)	88.9 (84.0 - 93.9)
Medical supplies	18.5 (15.5 - 21.5)	99.8 (99.3 - 100)
Durable medical equipment	9.8 (7.6 - 11.9)	97.7 (99.3 - 100)
Home health care	6.4 (4.5 - 8.3)	94.0 (87.8 - 100)
Hearing care/aids	4.5 (2.8 - 6.2)	98.0 (94.1 - 100)
Mobility aids or devices (CSHCN aged 8-17 only)	3.9 (2.5 - 5.3)	93.9 (85.5 - 100)
Communication aids or devices (CSHCN aged 3-17 only)	2.4 (1.1 - 3.6)	89.9 (75.8 - 100)
Substance abuse treatment or counseling (CSHCN aged 8-17 only)	2.1 (0.9 - 3.3)	82.6 (64.3 - 100)

Data Source: NS-CSHCN 2005/2006

Supportive services can also be important for family members of CSHCN (Table 3.5.7). Approximately one in six (17.4%) parents of CSHCN in Maine reported needing family mental health care and counseling, making it the most commonly reported needed service for families. Of parents needing family mental health care and counseling, 15.4% reported not receiving all needed care and services. Family respite care was needed by fewer families (5.8%); however, only 60.4% of families needing this service received the care they needed.[6]

Table 3.5.7: Percent (95% CI) of Maine Families of CSHCN that Needed and Received Select Types of Supportive Care, 2005/06

Type of supportive care	% of families that needed care	Of families that needed care, % that received all needed care
Family mental health care and counseling	17.4 (14.3 - 20.4)	84.6 (77.6 - 91.6)
Family genetic testing and counseling	6.3 (4.3 - 8.4)	81.9 (69.6 - 94.3)
Family respite care services	5.8 (4.1 - 7.5)	60.4 (45.6 - 75.1)

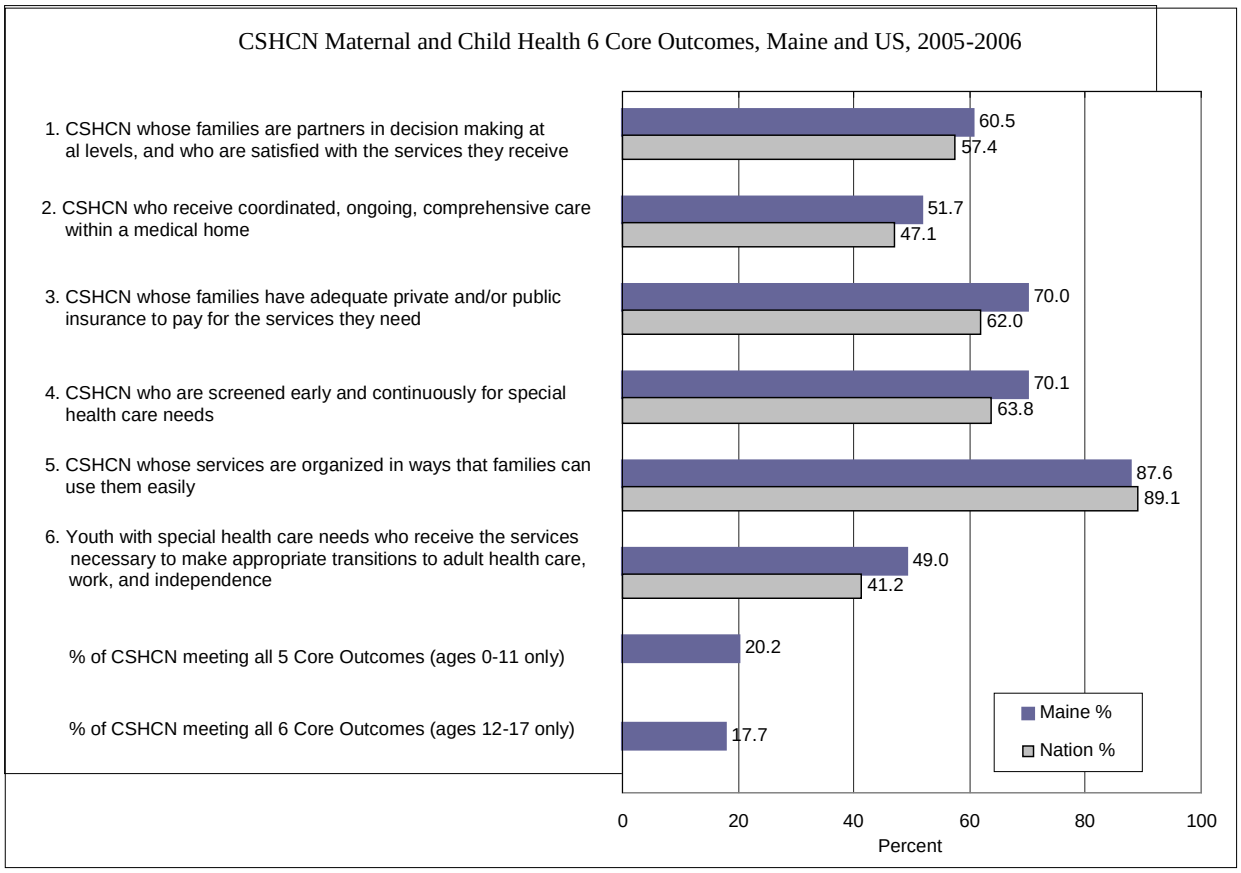
Data Source: NS-CSHCN 2005/2006

Core MCHB Outcomes

State Title V programs are responsible for working with community, state, and federal partners to measure and monitor progress in achieving six core outcomes relevant to CSHCN (Figure 3.5.2). Although Maine is comparable to or better than the nation as a whole on several MCHB core outcomes related to access to care, based on parent reports, approximately eight of ten Maine CSHCN have not meet all core outcomes.

Based on 2005/06 data, Maine performed better than the nation as a whole on three of the six MCHB core outcome measures (outcome #3, 4, 6) and was comparable to the nation on the other three measures (#1, 2, 5).[6] There were, however, disparities among subgroups of Maine CSHCN. For many measures, CSHCN with functional limitations encountered more challenges than did children whose conditions were managed by prescription medication only.

Figure 3.5.2



Data Source: NS-CSHCN 2005/2006

Medical Home

The AAP defines a medical home as: "primary care that is accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective" [153]. By having a medical home, CSHCN receive efficient and comprehensive healthcare. The core outcome summarizing coordinated, ongoing, comprehensive care is derived from 19 survey questions on the NS-CSHCN survey, some of which are described here.

Based on the 2005/06 NS-CSHCN, 51.7% of Maine CSHCN had a medical home, comparable to the national figure of 47.1%. Over 95% of Maine CSHCN had a place to go for health care, whether it was for routine preventive care or when the child was sick. When a child got ill, 85% went to a doctor's office, 7.5% went to a clinic or health care center, 4.3% went to an ED, and 2.9% went to another place. Overall, parents of 92% of CSHCN reported that their child was not delayed or did not go without medical care when needed. However, CSHCN with functional limitations were significantly more likely to have delayed care or go without care when needed than were CSHCN managed by prescription medication only (13.2% vs. 4.2%). The percentage of CSHCN who had a medical home was significantly higher for CSHCN whose conditions were managed by prescription medication only (61.3%) than children whose conditions resulted in functional limitations (39.0%).[6]

Table 3.5.8: Percent (95% CI) of CSHCN Who Have a Medical Home, 2005/06

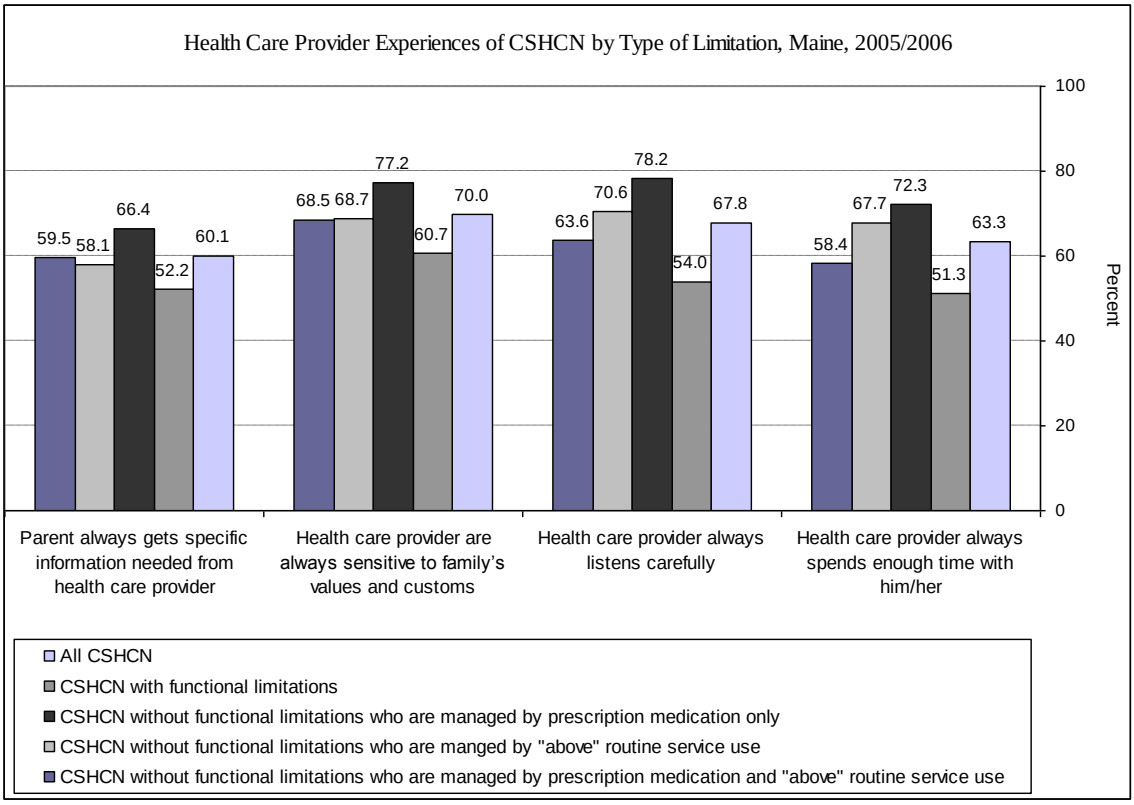
MCHB core outcome	Maine 2005/06	Nation 2005/06
CSCHN who receive coordinated, ongoing, comprehensive care within a medical home	51.7 (47.8 - 55.6)	47.1 (46.3 - 48.0)

Data Source: NS-CSHCN 2005/2006

Overall, many parents of Maine CSHCN reported positive experiences with their health care providers (Figure 3.5.3). A majority of parents reported that: a) their child's health care provider always spent enough time with them (63%), b) their child's health care provider always listened carefully to them (68%), c) their child's health care provider was always sensitive to their family's values and customs (70%), and d) they always received needed information from their child's health care provider (60%).[6]

However, there were differences in reported satisfaction by type of special health care need (Figure 3.5.3). Compared to parents of CSHCN with functional limitations, parents whose children were managed by prescription medication only were significantly more likely to report that their child's health care provider was always sensitive to their family's values and customs, and that they always got specific information needed from their provider. [6]

Figure 3.5.3



Data Source: NS-CSHCN 2005

Health Insurance

Health insurance coverage is essential for ensuring timely and appropriate medical care of CSHCN. Research indicates that insurance coverage is strongly associated with the ability to get needed medical care, dental care, mental health services, and prescription medication. Uninsured CSHCN were four times more likely than insured CSHCN to have unmet needs.[6]

Three percent of Maine CSHCN had no form of health insurance at the time of the 2005/06 survey. Half (51%) of CSHCN had private health insurance coverage only, 33% had public insurance only, and 13% had a combination of public and private insurance. (Public insurance includes Medicaid, the SCHIP, and military health care [CHAMPUS, CHAMP-VA, and TRICARE]). In 2005/06, 70% of parents of CSHCN in Maine reported that their child had adequate private and/or public insurance to pay for the services they needed (Table 3.5.9). Maine's percentage did not change significantly from 2001 to 2005/06, and was significantly higher than the national percentage for both time periods.[6]

Table 3.5.9: Percent (95% CI) of CSHCN with Adequate Health Insurance, 2001 and 2005/06

MCHB core outcome	Maine 2005/06	Maine 2001	Nation 2005/06	Nation 2001
CSCHN whose families have adequate private /public insurance to pay for needed services	70.0 (66.5 - 73.6)	67.3 (63.4 - 71.2)	62.0 (61.2 - 62.8)	59.6 (58. 7- 60.5)

Data Source: NS-CSHCN 2005/2006

The MCHB core outcome measure of adequate health insurance was derived from three NS-CSHCN questions. Parents were asked how often their child's health insurance benefits met their child's needs, how often costs not covered by the child's insurance were reasonable, and how often current health insurance allowed their child to see needed providers.

Parents of 61.4% of Maine CSHCN reported that their health insurance coverage always met their child's needs. Parents of children whose needs were managed by prescription medication only were significantly more likely to report that their child's health insurance always met their child's needs than were parents of children with functional limitations or parents of children whose needs were managed by a combination of prescription medication and routine service use (70.0%, 56.3%, and 55.2%, respectively). Three-quarters (74.2%) of parents reported that their child's health insurance always allowed them to see needed providers. Parents of children whose needs were managed by prescription medication only were more likely to report that their child's current health insurance always allowed them to see needed providers than were parents of children with functional limitations (81.5% vs. 67.1%). About one-third (35.9%) of parents reported that out-of-pocket costs were always reasonable; no significant differences by special health care need type were seen for this measure (Table 3.5.10).[6]

Table 3.5.10: Percent (95% CI) of Maine Parents that Reported Adequate Health Insurance, by Special Health Care Need Subgroup, 2005/06

Measure	Total CSHCN	CSHCN with functional limitations	CSHCN managed by prescription medication only	CSHCN managed by above routine service use only	CSHCN managed by prescription medication & above routine service use
Health insurance always met child's needs	61.4 (57.4 - 65.2)	56.3 (48.4 - 64.2)	70.0 (64.3 - 75.7)	55.8 45.4 - 66.2)	55.2 (46.9 - 63.6)
Costs not covered by child's insurance were always reasonable	35.9 (32.0 - 39.7)	37.7 (29.5 - 45.8)	35.9 (30.0 - 41.9)	38.6 (28.5 - 48.8)	32.3 (24.1 - 40.6)
Current health insurance always allowed child to see needed providers	74.2 (70.9 - 77.6)	67.1 (59.8 - 74.5)	81.5 (76.9 - 86.1)	70.6 (61.4 - 79.8)	71.5 (64.0 - 78.9)

Data Source: NS-CSHCN 2005/2006

Partnership and Satisfaction

The family's involvement in and satisfaction with the care of their CSHCN are essential to ensuring consistent and quality care. The U.S. MCHB states: "Families are the constants in the child's life and are pivotal in making any system work. Family members, including those representative of the culturally diverse communities served, must have a meaningful, enduring, and leading role in the development of systems at all levels of policy, programs, and practice."[153]

Nearly two-thirds (60.7%) of parents of Maine CSHCN reported that they were partners in decision making at all levels and were satisfied with services received (Table 3.5.11). This estimate did not change significantly between 2001 and 2005/06 and was comparable to the national figure in both years.[6]

Table 3.5.11: Percent (95% CI) of CSHCN whose Families Report Partnering and Satisfaction, 2001 and 2005/06

MCHB core outcome	Maine 2005/06	Maine 2001	Nation 2005/06	Nation 2001
CSCHN whose families report that they are partners in decision making at all levels, and who are satisfied with the services they receive	60.7 (56.9-64.5)	62.8 (56.2-69.3)	57.4 (56.5-58.2)	57.5 (56.0-59.0)

Data Source: NS-CSHCN 2005/2006

The outcome measure that assessed partnering in decision-making and satisfaction with services received was derived from two questions on the NS-CSHCN. The first question asked parents how often their child's health care provider helped them feel like a partner in their child's care. The second question asked how satisfied parents were with the services that their child received.

Overall, 71.8% of parents reported that their health care provider always helped them feel like a partner in their child's care. There were no significant differences between types of CSHCN. Nearly two-thirds of parents (61.7%) were very satisfied with the services their child received. Parents' satisfaction with their child's services differed somewhat by type of special health care need (Table 3.5.12). A significantly higher percentage of parents with CSHCN managed by prescription medication only reported that they were very satisfied as compared to the other special needs subgroups.[6]

Table 3.5.12: Percent (95% CI) of Maine Parents that Always Felt Like Partners and Were Very Satisfied with Services, by Special Health Care Need Subgroup, 2005/06

Measure	Total CSHCN	CSHCN with functional limitations	CSHCN managed by prescription medication only	CSHCN managed by above routine service use only	CSHCN managed by prescription medication& above routine service use
Health care provider ALWAYS helped parent feel like a partner in child's care	71.8 (68.3 - 75.3)	63.4 (55.8 - 80.9)	76.2 (71.0 - 81.4)	72.8 (63.4 - 82.2)	73.0 (65.3 - 80.7)
Parent was VERY SATISFIED with services child received	61.7 (57.9 - 65.5)	44.4 (36.5 - 52.4)	77.0 (71.7 - 82.2)	56.8 (46.7 - 66.9)	57.8 (49.3 - 66.3)

Data Source: NS-CSHCN 2005/2006

Screening

In relation to screening, the MCHB states that "Infants and children with high risk health conditions must be identified early in order to help assure that they and their families receive care and assistance to prevent future morbidity and promote optimal health."[153] Information on this core outcome measure was collected on the 2005/06 survey. The screening core outcome measure focused on two areas of preventive care: a) routine preventive care such as physical examinations and well child checkups, and b) preventive dental care.

In Maine, 70.1% of CSHCN were screened early and continuously for special health care needs, significantly more than nationally (63.8%; Table 3.5.13). About 8 in 10 Maine CSHCN were reported to have received preventative care (83.3%) or preventive dental care (84.3%) within the previous year. Of these, 99.4% received routine preventive care and 92.2% received preventive dental care (Table 3.5.14).[6]

Table 3.5.13: Percent (95% CI) of CSHCN that Received Screening, 2005/06

MCHB core outcome	Maine 2005/06	Nation 2005/06
CSHCN who are screened early and continuously for special health care needs	70.1 (66.4 - 73.7)	63.8 (63.0 - 64.6)

Data Source: NS-CSHCN 2005/2006

Table 3.5.14: Percent (95% CI) of Maine CSHCN that Needed Preventive Care and Received All Needed Care, 2005/06

Type of care	% of CSHCN that needed care	Of CSHCN that needed care, % that received all needed care
Routine preventive care	83.3 (80.3 - 86.4)	99.4 (98.8 - 100)
Preventive dental care	84.3 (81.3 - 87.3)	92.2 (90.1 - 94.4)

Data Source: NS-CSHCN 2005/2006

Organization of Community Based Services

Community based service systems are programs and interventions provided at the community level aimed at supporting CSHCN and their families with comprehensive services. Services include early intervention programs, childcare facilities, vocational training, rehabilitation programs, and other community programs.[153] Due to changes in the NS-CSHCN 2005/06 survey, this measure cannot be compared between the two years; only 2005/06 data are reported here. This core outcome measure is based on a single survey question that asked if parents of CSHCN had any difficulty trying to use community-based services for their child.

In 2005/06, 87.6% of the parents of Maine CSHCN reported that services for their child were organized in ways that they could use them easily, comparable to the national estimate of 89.1% (Table 3.5.15). Parents of CSHCN with functional limitations were significantly less likely to report that services were organized in ways that they could easily use them than were parents of the other three groups of CSHCN (72.5% vs. 87.9%-96.0%).[6]

Table 3.5.15: Percent (95% CI) of CSHCN Whose Services Are Organized in Ways That Families Can Use Them Easily, 2005/06

MCHB core outcome	Maine 2005/06	Nation 2005/06
CSCHN whose services are organized in ways that families can use them easily	87.6 (85.1-90.2)	89.1 (88.6-89.6)

Data Source: NS-CSHCN 2005/2006

Transition

Youth with special health care needs should be discussing their changing health care needs with providers as they transition into adulthood. The MCHB states that: "Health care services must not only be delivered in a family-centered manner, but must prepare individuals to take charge of their own health care and to lead a productive life as they choose."[153]

In 2005/06, parents of about half (49.0%) of Maine CSHCN aged 12-17 years reported that their adolescent received services to assist with transition, significantly higher than nationally (41.2%) (Table 3.5.16). Significant differences were seen by type of special health care need, with only 36.8% of Maine youth with functional limitations receiving services that would assist them with transition into adulthood as compared with 59.8% of CSHCN managed by prescription medication only.[6]

Table 3.5.16: Percent (95% CI) of CSHCN Aged 12-17 that Received Services to Assist in Transitioning to Adulthood, 2005/06

MCHB core outcome	Maine 2005/06	Nation 2005/06
Youth with special health care needs who receive the services necessary to make appropriate transitions to adult health care, work, and independence	49.0 (43.3 - 54.7)	41.2 (39.9 - 42.5)

Data Source: NS-CSHCN 2005/2006

This core outcome measure was derived from survey questions that asked about whether providers encouraged youth to increase responsibility for self-care, and (when needed) discussed transitioning to adult health care, how to maintain health insurance coverage, and changing health care needs.

Transitioning to Adult Health Care

Half (49.9%) of Maine CSHCN aged 12-17 years were seeing health care providers who treated both children and adults; the percentage did not differ significantly by special health care need type. An additional 11.3% of parents reported that their child's provider had already talked with them about eventually having their child see providers who treat adults. Parents of 6.2% of the youth reported that they had not had such a discussion, but that it would have been helpful. Parents of nearly one-third (32.6%) of Maine youth with special health care needs, however, reported that they had not had such a discussion with their child's provider and they did not think such a discussion would have been helpful.[6] This finding, along with those reported below, suggests that parents of many 12 to 17 year old Maine youth with special health care needs do not recognize the importance of transition services.

Changing Health Care Needs

Just over half (54.3%) of parents of Maine 12-17 year old CSHCN reported that their child's provider had already talked with them or their child about his/her health care needs as he/she becomes an adult. One in five (19.3%) reported that such a discussion had not taken place, but that it would have been helpful, and one fourth (26.4%) reported that they had not had such a discussion and did not think it would have been helpful (Table 3.5.17).[6]

Maintaining Insurance

Only 19.3% of parents of 12-17 year old Maine CSHCN reported that they had had a discussion with someone about how to keep or obtain some type of health insurance for their child as he/she becomes an adult; another 38.5% reported that they had not had such a discussion, but that it would have been helpful. Many parents (42.2%), however, had not had such a discussion and did not think that it would have been helpful (Table 3.5.17).[6]

Half (49.1%) of parents reported that their CSHCN's health care provider always encouraged their child to take responsibility for his/her health care needs. Variation by special health care need type was seen, ranging from a low of 37.0% among children with functional limitations to a high of 62.6% among children whose needs were managed by prescription medication only.[6]

Table 3.5.17: Percent (95% CI) of Parents of Maine CSHCN Aged 12-17 That Report Discussions about Transition Issues, 2005/06

Measure	Already have discussed this	Have not discussed this because:	
		Discussion would not have been helpful	Discussion would have been helpful
Discussion about youth's health care needs as he/she becomes an adult	54.3 (48.7 - 59.9)	26.4 (21.3 - 31.5)	19.3 (14.8 - 23.9)
Discussion about how to keep or obtain health insurance as youth becomes an adult	19.3 (14.7 - 23.9)	42.2 (36.8 - 47.7)	38.5 (33.0 - 44.0)

Data Source: NS-CSHCN 2005/2006

Other CSHCN Service Use

Meeting the needs of different types of CSHCN is the responsibility of different agencies or programs throughout Maine depending on the specific condition (e.g., physical/medical, developmental, education related, mental health, etc.). Through the Department of Education, Maine provides early intervention services to eligible children under age 3 and special education services to children ages 3 -20.

Disability: IDEA Department of Education Estimates

Each year nearly 1,000 Maine children under age 3 (2.4%) receive early intervention services under the IDEA. In addition, special education services are received by 3,389 Maine children between 3 and 5 years old (9.0%), 29,045 children between 6 and 17 years old (14.9%), and 1,492 youth between 18 and 21 years old (2.2%). In general, the proportion served in Maine is greater than in the U.S. overall. In 2007, more than half of the 3-5 year olds had speech or language impairments reported as their primary disability; another 22.4% of children had developmental delays. The five most common disability categories (reported as primary disability) among 6-11 year olds in 2007 were specific learning disabilities, speech or language impairments, other health impairment, multiple disabilities, and autism. Among 12-17 year olds, the most common primary disability categories were specific learning disabilities, other health impairments, emotional disturbance, and multiple disabilities. [154]

Infants or toddlers are eligible for early intervention services if they are under three years of age and have delays in cognitive, physical, communication, social/emotional, or adaptive development, or if they have a diagnosed physical or mental condition that has a high probability of resulting in developmental delay.[155] In 2007, Maine served nearly 1,000 children under age 3 and ranked 27th highest among states in the percentage of infants and toddlers receiving services; in 2003 Maine was ranked 12th. The percentage of Maine 0-2 year olds receiving early intervention services under the IDEA rose from 1.1% in 1994 to 2.6% in 2003. There has not been a significant change in the percentage of the population served since 2003. [154]

Table 3.5.18: Percent of Infants and Toddlers Receiving Early Intervention Services under the IDEA, Part C, Maine and US, 2003-2007

YEAR	# Served Maine ages 0-2 years	% Served Maine ages 0 - 2 years	% Served U.S. ages 0 - 2 years
2007	996	2.4	2.5
2006	1,023	2.4	2.3
2005	1,182	2.8	2.3
2004	1,169	2.8	2.2
2003	1,105	2.6	2.1

Data Source: U.S. Department of Education, Office of Special Education Programs, Data Analysis System

Eligibility criteria for special education in Maine are defined in the Maine Unified Special Education Regulations. In Maine, a child with a disability is defined as a child who is between 3 and 20 years old, has not graduated with a regular high school diploma, has been observed in the classroom setting, and has been determined to have a disability that requires the provision of special education and supportive services. Eligible disabilities are restricted to 14 conditions: autism, deaf-blindness, deafness, developmental delay, emotional disturbance, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, other health impairment), speech or language impairment, specific learning disability, traumatic brain injury, or visual impairment including blindness.[155]

In 2007, Maine served 3,389 children between 3 and 5 years old, 29,045 children between the ages of 6-17 years, and 1,492 youth between 18-21 years. The proportion of children served in Maine was greater than the proportion in the U.S. overall for those aged 3-5 years (9.0% vs. 5.7%) and for those aged 6-17 years (14.9% vs. 11.4%). Maine ranked 5th highest among the states in the percentage of children ages 3-5 served under the IDEA and 4th for those ages 6-17 years. [154]

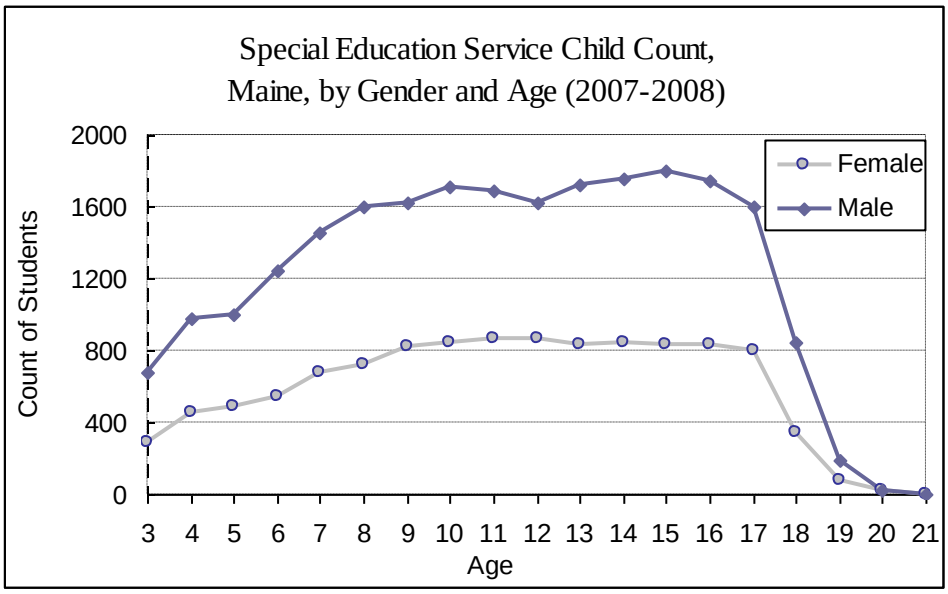
The percentage of Maine 3-5 year olds receiving special education services under the IDEA decreased from 11.2% in 2003 to 9.0% in 2007. Among those aged 6-17 years, the percentage served also decreased slightly from 15.4% in 2003 to 14.9% in 2007. There was no change in the percentage served among those aged 18-21 years. Within every age group, males were more likely to receive special education services than females. The proportion of children aged 5-15 receiving special education services ranged from approximately 11.6% in Cumberland County to more than 18% in Somerset and Knox Counties. The majority of those served by the IDEA were white, non-Hispanic (96.6%), similar to the ethnicity profile of Maine's children.[154]

Table 3.5.19: Percent of children 3-21 receiving special education services under IDEA, Maine and US, 2007

Age	# Served Maine 2007	% population served Maine 2007	% population served Maine 2003	% population served US 2007
Ages 3 - 5	3,889	9.0	11.2	5.7
Ages 6 - 17	29,045	14.9	15.4	11.5
Ages 18 - 21	1,492	2.2	2.1	2.0

Data Source: Education, Office of Special Education Programs, Data Analysis System (DANS)

Figure 3.5.4



Data Source: Maine Department of Education, 2007 EF-S-05 Reports

The IDEA data on 3-21 year olds also report the type of child disability. Only one disability is reported per child; if a child has more than one disability, the primary disability on his or her individualized education plan is reported. In 2007, more than half (55.8%) of the 3-5 year olds who received IDEA services were categorized as having "speech or language impairments" as their primary disability; 22.4% were categorized as having a "developmental delay." The five most common primary disability categories among 6-11 year olds in 2007 were: specific learning disabilities (24.7%), speech or language impairments (35.6%), other health impairments(15.5%), multiple disabilities (7.4%), and autism (6.9%). Among 12-17 year olds, the most common primary disability categories in 2007 were: specific learning disabilities (40.0%), other health impairments(19.7%), emotional disturbance (11.7%), and multiple disabilities (11.0%).[154]

Qualitative Results

In an effort to learn more about the strengths and needs of Maine's women, children and families, all focus group participants were asked one common question; "What do you think are

the most important health and safety needs facing Maine?" Following is a list of the most frequently cited responses.

- Healthy eating and relationship to obesity rates among both adults and children in Maine including lack of parental education about preventive health, how to prepare healthy foods, and general nutrition information. Many expressed concern about the lack of affordable fresh vegetables and fruits for low income families.
- Substance abuse (alcohol, and other drugs) particularly by pregnant women. *"We need to better address the degree and depth of pregnant women that are dealing with substances, chronic addiction to opiates in Maine is epidemic".* Still others talked about substance use in families in general and their use leading to domestic violence.
- Further complicating this issue (DV) is the current economic climate that has pushed many already stressed family members into directing that stress toward a partner or other family member. *"We need to better educate women about domestic violence, how to protect their children, and themselves during pregnancy as women are more vulnerable and the baby is a target of hitting."*
- Factors associated with substance abuse were also seen as leading to an increase in child abuse and neglect.
- Access to oral health for both children and adults as many dentists limit or do not accept MaineCare patients. Others have to travel long distances to access pedodontic care.
- Mental health (adults and children) and lack of services for; this included access to mental health services for refugees, lesbian, gay, bisexual, transgender and questioning and young teens. Focus group participants discussed the increased self-injury, suicide, depression, trauma and post-partum depression among pregnant women and teens. *"I would say that that's probably one of the number one issues at the core of all these other symptoms, people are not mentally healthy."*
- Poor or lack of parenting skills was frequently mentioned as an ongoing need. Immigrant families expressed a need for enhanced parenting classes for those families experiencing clashes between their cultural parenting skills and their children who have assimilated into American culture.
- Lack of affordable and comprehensive health care. While Maine makes insurance available to women and children through MaineCare, participants indicated it was problematic in that providers, both primary care providers and specialists, limit the number of MaineCare patients they treat due to reimbursement rates and missed appointments. Others talked about the families living on the edge and having to forego healthcare. Yet others, including teens, talked about the lack of insurance for the over 18 year old population that are not in school fulltime or have an employer that does not provide insurance. Access to healthcare systems was also seen as an issue for *"certain disenfranchised populations, those who are homeless or have certain behaviors which alienate them from the medical system such as substance abuse or serious mental illness."*

<u>What is Working Well in Maine</u>

To gain better insight on what was working well researchers asked all focus group and key informants, except youth and CSHN the following question. "What do you believe Maine is doing well to address the health and safety needs of women, infants, children, and adolescents?

Focus Group and key informant participants clearly articulated what Maine programs, both within state government and those organizations around the state serving the MCH population were doing well. Specifically, they praised HV, WIC, Head Start, Newborn Screening, Community Action Programs (CAP), and School Based Health Centers (SBHC). SBHCs were described as *"the way to go, it is a real positive in the state, the more healthcare that we can provide children in the setting they are in is better so they don't miss school."* They [SBHC] were seen as providing a mechanism to create access to healthcare for many children who otherwise would end up in the ED because parents delayed preventive care. Many participants encouraged increasing the number of SBHCs. "*Imbedding health clinics in schools will have a huge significance for rural areas."*

The MIPP was applauded for using a public health approach to violence prevention. Participants shared that Maine has been doing better at advocating for youth and their needs and involving the youth voice in planning efforts. Teen groups expressed their appreciation at being asked to participate in the assessment process.

Stakeholders related to us that Maine is one of a few states that focus tobacco settlement funds on preventive healthcare issues, a model for other states. Maine is seen as a leader in the area of tobacco cessation, and the no smoking campaigns have had positive impacts in communities across the state. Reduction of second hand smoke and creation of smoke free public spaces and no smoking in cars legislation were perceived as enhancing the health of Maine people.

Through expansion of healthcare coverage for children focus group and key informants perceive Maine as a leader in getting children access to healthcare and in doing so, has reduced the number of uninsured children quite dramatically. Others talked about Maine's leadership in expanding MaineCare to provide access to care for pregnant women.

Focus Group participants viewed the newly formed public health infrastructure, through the creation of eight public health districts, as a real strength and an opportunity to provide enhanced services at the community level.

Programs such as Family Planning were perceived as helping to reduce teen pregnancy rates through their holistic and comprehensive approach to healthcare. Accompanying this effort has been the comprehensive sex education program in Maine schools.

Maine's federally qualified health centers (FQHC) were seen as a strength in that access is made available for the underemployed and/or uninsured and underinsured residents in need of services. They were seen as doing a *"great job of reaching out to rural, isolated, minority and impoverished women".*

To determine what was not working so well or needed strengthening we asked; "What do you believe Maine is not doing well to address the health and safety needs of women, infants, children, and adolescents?"

The theme mentioned most often in response to this question was the increase in mental health needs and lack of counseling services available to families. In particular, post-partum depression was seen as a significant need. Women will seek services for their children but often do not recognize and attend to their own health needs. Participants expressed a desire for health care providers to pay closer attention to the mental health of new mothers and educate them on the signs and symptoms. *"Sometimes I think people are going back to their 6-week check-up and hurrying back to work, dropping their child off, maybe that's not what they wanted, they have to*

go to work and sometimes it [depression] doesn't show up till later, but then they don't go back to the doctor until one year later, so…a lot of these moms are not being supported or those symptoms aren't being seen because no one is seeing them." Others expressed concern over the lack of mental health services for children and adolescents. Often there are long waits due to staff turnover. Participants viewed financial cuts to mental health services as the cause for reduction in or elimination of preventive mental health services that has resulted in a return to reactive care. This was viewed as taking a major step backwards with negative impacts on families. Participants felt the often co-occurring substance abuse and mental health treatment need to be coordinated and not seen as separate service silos. *"We need to be doing better with women with substance use issues and integrating their prenatal care and their substance treatment and mental health treatment."*

While Maine was acknowledged for taking on the issue of DV, many still feel there is much work to be done through better education and support. Concern was expressed at the rise in DV rates with a clear link to suicide and homicide. Many attributed this, in part, to lack of support for returning military personnel. *"We're seeing a large increase in broken families, domestic violence, substance abuse within the [returning] military families and they're feeling isolated."*

According to many, there is not enough physical education in schools and this is viewed as a contributing factor to obesity among Maine's young people. More energy needs to be devoted to addressing eating disorders, teen body image and healthy eating on fixed budgets. Services were seen as being somewhat fragmented and include: 1) transitional services for refugees i.e. moving from refugee assistance to being on their own; and 2) children turning 18 in the CSHN Program transitioning to adult services, when the needs remain generally the same. Assistance on learning to navigate various systems is lacking. A CSHN parent framed it as; *"that transition to adulthood is a drop off a cliff. It really is. They lose all their support systems. It is a loss of services, loss of support, and loss of relationships. They're out of the school system, usually a place where they've been with a set of friends. They all scatter to the winds to do their stuff and these kids are left behind."*

Others wondered how or what could be done about the lack of reliable transportation, which has a significant impact on family's ability to meet their needs in getting to health care, work, or childcare. Consistency, availability and accessibility to transportation around the state differs. The lack of transportation for children with disabilities and special health needs is often not available or looks different in different areas of the state.

We heard often about teaching parents how to be good parents. One teen participant framed it as, *"I think parents need to be prepared before the babies are born because I see so many parents and the babies are so little and they don't know what to do and it's sad, they really don't."*

With respect to oral health, in addition to the lack of dentists, and inability of uninsured and underinsured to pay for dental services there exists in Maine a lack of perceived value of good oral health. Participants suggested that *"we need more education because there's no reason for any child to have a cavity but we're not seeing the follow through with the parents yet."*

Section IV – MCH PROGRAM CAPACITY BY PYRAMID LEVELS

Maine's assessment of the population's needs includes an analysis of the capacity of the system to meet those needs. This includes providing an understanding of the availability, accessibility and quality of existing resources throughout the systems of care serving Maine's mothers and children.

Quality health care for the maternal and child population ensures appropriate treatment for illness and injury, reduces the risk of preventable diseases and is directly correlated to an overall state of physical, mental and emotional health. Access to healthcare does not necessarily correlate with quality of care. According to the IOM access is defined as "the timely use of personal health services to achieve the best possible health outcomes."[156] Access to care is most commonly measured by assessing utilization rates and tracking indicators of appropriate and consistent utilization.[157] Key to determining access is understanding that utilization rates are affected by financial influences such as having health insurance and non-financial influences such as the local availability of services and the proximity of professional providers.[158]

Section 4.1 Direct Health Care Services

Maine's Health Professional Workforce

For a range of health professions, the universe of Maine's professional workforce is maintained by individual health professional boards active in Maine. Health workforce estimates based on these lists of providers registered with each board or licensing agency may be overestimates of true capacity as the lists include active and inactive providers, as well as providers residing but not practicing in Maine. Information about Maine's health professional workforce is also obtained from Maine Cooperative Health Manpower Resource Inventory surveys conducted by the Maine ODRVS. Location of employment, activity status, and practice and demographic characteristics are estimated from the responses of health professionals who complete these surveys, therefore estimates based on limited responses to the manpower surveys will underestimate the health professional workforce capacity. As seen in the table below, the response rates from recent ODRVS surveys range from 77.4% among allopathic physicians to 24.6% among pharmacy technicians.[159]

Table 4.1.1 Estimates of Number of Health Professionals in Maine, 2006-2008

Profession	Data year	Board universe [a] #	Responses to manpower surveys #	Response rate %
Alcohol/drug counselors	2006	968	445	46.0
Allopathic physicians	2007-2008	3,394	2,626	77.4
Dental radiographers	2006-2008	1,200	328	27.3
Dentists	2008	730	534	73.2
Denturists	2006-2007	20	15	75.0
Dietetics	2007	381	272	71.4
Nurses	2006-2008	NA	11,798	56.5
Occupational therapy	2007	969	479	49.4
Osteopathic physicians	2007-2008	611	423	69.2
Pharmacists	2008	1,050	543	51.7
Pharmacy technicians	2006	2,280	561	24.6
Physical therapy	2008	1,471	805	54.7
Physician assistants	2006	435	273	62.8
Psychologists	2006	562	369	65.7
Radiation technology	2006	1,461	855	58.5
Registered dental hygienists	2006	1,157	747	64.6
Respiratory care	2006	557	328	58.9
Social workers	2006-2007	5,265	1,974	37.5
Speech language	2006	676	380	56.2

[a] Includes licensees who live and/or work in Maine

Data Source: Maine Cooperative Health Manpower Resource Inventory; prepared datasets and survey response rates at the Office of Data, Research, and Vital Statistics as of October 2009

Primary Health Care

Providers

Based on survey data collected in 2008 by ODRVS, which counts the number of providers in active practice, there were nearly three thousand active allopathic (MD) and osteopathic (DO) physicians practicing in Maine. Estimates of Maine's primary care providers may be an undercount of the true number of physicians practicing in Maine, as only 77.2% of known MDs and 69.2% of DOs participated in the survey. Based on responses from the 2008 survey of Maine physicians, less than half of Maine's active physicians (1,392) indicated their specialty was in one of the primary care areas of practice, that is, general practice, family practice, obstetrics, gynecology, internal medicine, and pediatrics. Statewide, there are 946 Maine residents per active primary care physician (MD/DO). The county specific ratios range from 677 residents to 1 primary care physician in Cumberland County to 2,271:1 in Sagadahoc County. [159]

The 2008 survey found that 407 active physicians (MD/DO) listed family practice as their primary specialty, 189 active physicians listed pediatrics as their primary specialty, and another 18 listed a pediatric subspecialty (e.g., pediatric cardiology). Other primary specialties of

particular interest for MCH populations included: internal medicine (n=466); general practice (n=217); psychiatry (n=142); child/adolescent psychiatry (n=16); obstetrics and gynecology (n=120); gynecology (n=5); neonatology/perinatology (n=4), and adolescent medicine (n=3).[159]

In 2008, there were 1,454 Maine children under 18 years of age per clinically active pediatrician. Again, access to pediatricians was greatest in Cumberland County (770.1 per pediatrician). According to the survey responses, there are no pediatricians active in Sagadahoc County and only one pediatrician active in Lincoln and Oxford counties. Although residents of Cumberland County represent 21% of Maine's population, nearly 33% of all physicians, 29.3% of primary care physicians, and 40.7% of pediatricians are located in this county.[159] Estimates of Maine's primary care providers may be an undercount of the true number of physicians practicing in Maine, as only 77.2% of known MDs and 69.2% of DOs participated in the survey.

Table 4.1.2: Measures Related to Primary Health Care Capacity, Maine, 2008

County of employment	# of physicians[a] (MD/DO)	# of primary care physicians[a] (MD/DO)	Population per primary care physician[a] (MD/DO)	# of pediatricians[a] (MD/DO)	Child population per pediatrician	Total population #	Population < 18 years #
Total	2,907	1,392	945.7	189	1,454.3	1,316,456	274,867
Androscoggin	261	113	945.8	11	2,197.9	106,877	24,177
Aroostook	137	65	1,102.2	8	1,753.6	71,646	14,029
Cumberland	955	408	676.6	77	770.1	276,047	59,301
Franklin	45	30	995.2	5	1,140.0	29,857	5,700
Hancock	91	54	984.0	3	3,413.3	53,137	10,240
Kennebec	311	161	751.3	19	1,310.3	120,959	24,895
Knox	73	35	1,162.5	3	2,643.7	40,686	7,931
Lincoln	58	36	961.9	1	6,554.0	34,628	6,554
Oxford	42	28	2,026.5	1	11,492.0	56,741	11,492
Penobscot	409	193	770.2	32	944.0	148,651	30,208
Piscataquis	21	14	1,211.5	2	1,615.0	16,961	3,230
Sagadahoc	29	16	2,270.8	0	--	36,332	8,218
Somerset	50	35	1,467.9	2	5,413.5	51,377	10,827
Waldo	55	30	1,278.1	5	1,591.4	38,342	7,957
Washington	48	30	1,083.3	3	2,188.3	32,499	6,565
York	273	139	1,451.0	16	2,721.4	201,686	43,543
Unknown	11	5	0.0	--	--	--	--

[a] Licensed, active professionals working in Maine who responded to the Maine Cooperative Health Manpower Resource Inventory survey.

Data Source: Office of Data, Research, and Vital Statistics and 2008 population data from U.S. Census Estimates

The HRSA designates three types of HPSAs: geographic, population-group, and facility.[160] Geographic HPSAs can include portions of counties, entire counties, or a group of contiguous counties. Population-group HPSAs include groups such as migrant farm workers or low-income urban populations. Facility HPSAs include correctional institutions, health centers, and certain

rural health clinics. Areas, population groups, or facilities meeting applicable criteria receive HPSA designation. Based on HRSA information, there are 82 designations of primary care HPSAs in Maine; 15 of these designations refer to services area shortages, 22 to shortages among population groups and 45 to shortages within facilities.[161] The underserved population, defined as from areas with more than 2,000 population per 1 primary care health provider is estimated at 77,083; the number of additional primary care practitioners needed in designated HPSAs so that a population-to-practitioner ratio of 2,000 to 1 is achieved and the population is adequately served, is 21. Each of Maine's 16 counties contains at least one town that is a federally designated primary care HPSA; 15 counties contain at least one town that is a federally designated medically underserved area or population.[162, 163] Maps of these areas are included in the Appendix. The greatest number of HPSAs are found in Aroostook and Washington Counties, the most rural regions of the state, as well as Cumberland County, the most urban, population dense county in Maine and home to Maine's largest city, Portland.[161]

Capacity of Institutions

Maine has two primary referral centers for health care needs: Maine Medical Center (MMC) in Portland and Eastern Maine Medical Center in Bangor.[164, 165] In addition, there are 36 acute care hospitals (30 are birth hospitals with obstetrical services); 15 critical access hospitals (an increase of 3 from 2005); 19 FQHCs (and increase of 2 from 2005); 1 FQHC Look-Alike (Community Clinical Services of St. Mary's Health System in Lewiston) and 50 community health centers; 5 Indian Health Service funded health centers (3 on Reservations, 1 in Presque Isle, 1 in Houlton). Maine's safety net providers provide primary health and other health care services to underserved populations and are often the single provider of primary care services in many of the state's rural and underserved areas. Included in the Appendix are maps prepared by Maine's ORHPC of current health care safety net providers and sites and FQHCs in Maine.[164]

There is one osteopathic medical school in Maine at the University of New England. In 2009 MMC began an affiliation with Tufts University School of Medicine in Boston, an allopathic medical school; 20 of 36 seats will be reserved for Maine students. Three schools (University of Southern Maine, University of Maine at Orono, and Husson College) offer Nurse Practitioner Programs.[165]

School Health.

SBHCs provide a safety net for children who might not otherwise seek needed health care services. Maine has very few teen health specialists and few health centers with teen walk-in hours. School health centers are a point of access for comprehensive health care. In addition, these centers coordinate their activities with the adolescent's medical home. Not every Maine community has created the necessary partnership between health care providers and schools; there are currently 27 schools with SBHCs in the state.[165] In 2009-2010, the TYAH Program at the Maine CDC provided base funding for 18 SBHCs.[166] In FY08 7,994 students were enrolled in 20 funded SBHCs. There were 13,936 encounters; 31% of all visits were for mental health services, 31% of the primary diagnoses at medical visits were for preventive services, and approximately 51% of the users had a preventive care visit. Most SBHC enrollees (92%) had an identified primary care provider; 85% of those enrolled in SBHC's had insurance (public or private), 47% with MaineCare, while 4% had no insurance. SBHC staff assisted those children with no insurance in getting connected with insurance providers.[165]

About 51% of users were screened for major adolescent risk behaviors including tobacco use, physical inactivity, poor nutrition, sexual activity, substance abuse, depression, and behaviors connected to unintentional injury. Changing adolescent health behaviors can be challenging but data from the SBHCs shows that when unhealthy behaviors were identified, intervention was possible and change did occur. For example, of the 204 youth identified as tobacco users, 104 received treatment that resulted in 13 reducing or quitting tobacco use, and of the 324 identified with poor nutrition, 270 received an intervention with 22 showing improvement. Data on SBHC services continued to improve in quality and detail through the assistance of an in-state helpdesk, and contracted data analysis services.[165]

Primary care health center program: HRSA provides support for health centers that meet certain criteria under the Medicare and Medicaid Programs; including grant-supported FQHCs**,** FQHC look-alikes and outpatient health programs/facilities operated by tribal organizations.[167] Types of recognized FQHCs include community health centers, migrant health centers, healthcare for the homeless programs and public housing primary care programs.

Maine's Title V Program partners with the ORHPC in the development and delivery of health care services for the MCH population. The ORHPC determines areas of health care service and provider shortages and works with the FQHCs, as well as hospitals, when they desire to change their status to critical access hospitals. The FQHCs provide primary health and other health care services to underserved populations. In Maine, the underserved is primarily due to poverty, lack of health insurance and geographic isolation. The FQHCs are intricately involved in the delivery of health services to the MCH population as they guarantee access to services for all patients regardless of the patient's ability to pay. The FQHCs are often the single provider of primary care services in many of the state's rural and underserved areas.[165]

In 2008, the HRSA primary care health center program made the following impact on health care service delivery in Maine. These centers served 165,458 patients, or 12.6% of Maine's population. Statewide, 14% of women ages 18-44 received services through these programs. Slightly more than one-quarter (26.6%) of all patients were under the age of 20. These programs provided 138,935 patients with medical services and employed the full-time equivalent (FTE) of 416 medical service providers, including the FTE of 88.1 physicians, 48.7 nurse practitioners, 28.9 physician assistants, and 2.2 certified nurse midwives. Private health insurance was the principal payer source for 41.0% of patients, while 28.8% were covered by Medicaid, 17.7% by Medicare, and 12.5% were uninsured.[168]

Table 4.1.3: Full-time Equivalents, Patient Encounters, and Number of Patients in HRSA Primary Care Health Center Program by Major Service Categories, Maine, 2008

Major service category	Health professional category	# of FTEs	# of encounters	# of patients
Medical services	Total	415.7	496,762	138,935
	Total physicians	88.1	273,787	--
	Family physicians	63.9	210,370	--
	General practitioners	0	2	--
	Internists	8.4	26,994	--
	Obstetrician/gynecologists	3.7	5,513	--
	Pediatricians	9.6	23,607	--
	Other specialty physicians	2.6	7,301	--
	Total mid-levels	79.9	205,910	--
	Nurse practitioners	48.7	119,378	--
	Physician assistants	28.9	82,902	--
	Certified nurse midwives	2.2	3,730	--
	Nurses	69.7	--	--
	Other medical personnel	142.9	--	--
	Laboratory	31.9	--	--
	X-ray personnel	3.3	--	--
Dental services	Dentists, hygienists, assistants, techs	68.7	65,273	29,897
Mental health services	Psychiatrists, licensed clinical psychologists, licensed clinical social workers, other licensed mental health providers, other mental health staff	40.7	43,184	6,214
Substance abuse services		10.6	12,054	1,320
Other professional services		12.63	30,465	6,645
Enabling services		51.9	18,748	9,666

Data Source: Health Resources and Services Administration, Health Center Data, Uniform Data System, State Summary for Maine for 2008

Accessibility

HP2010 states that limited access to health care comes from more than a shortage of health care providers and a lack of facilities. Other barriers include financial ones (e.g., lack of insurance), structural ones (e.g., no facilities or health care professionals nearby), and personal ones (e.g., environmental challenges in the case of the disabled).[169]

Many active Maine pediatricians are currently at or near capacity; a 2000 (most recent data available) survey of AAP members in Maine found that 69.7% were at-capacity in terms of patient caseload, 9.0% were over capacity, and 32.6% were under capacity.[170] Nearly all (99.0% currently participated in Medicaid and 95.8% currently participated in the SCHIP. 78.7% said they accepted all Medicaid patients, 83.3% said they accepted all SCHIP patients, and 80.9% reported they accepted all private patients. Nearly two-thirds (64.8%) said that Medicaid payments did not cover overhead; 27.3% did not know if Medicaid payments covered their

overhead. Low reimbursement was rated "very important" as a reason for limiting participation in Medicaid by 57.6% of pediatricians. Other reasons (and the proportion of pediatricians who rated each as very important) were: unpredictable payments (32.1%); increasing state managed care requirements (26.0%); ED use (25.6%); payment delays (25.6%); paperwork concerns (25.0%); missed appointments (22.4%); Medicaid patients less compliant (19.3%); Medicaid program too complex (18.8%), and regulations interfere with quality medical care (11.0%). A third (32.6%) of pediatricians who responded to the survey indicated they would see more Medicaid patients if there were increased reimbursement; they reported, on average, that reimbursement for 89.3% of the customary fee for well-child visits would be needed to accept all Medicaid patients.[170]

For those who can physically access a primary care provider, cost can still remain a significant barrier to care. For example, nearly ten percent (9.9%) of the Maine population reported not seeing a doctor in the past 12 months because of cost.[171] For the maternal and child population, primary care is essential, as any gap in care can result in serious long-term health concerns. While 87.7 % of Maine mothers began prenatal care in the first trimester, 60.1% of Maine women who began prenatal care late or not at all indicated that they did not receive prenatal care as soon as they would have liked, if at all; less than 1% of the women surveyed indicated that they did not receive any prenatal care.[172] According to 2007 PRAMS data, 4.9% of women in Maine indicated cost or lack of adequate health insurance as a problem in accessing prenatal care during their pregnancy.[57]

According to a recent national survey, 25.4% of Maine families who have CSHCN report that they do not have adequate private and/or public insurance to pay for services they need. In addition, 17.2% of Maine families pay $1000 or more out of pocket in medical expenses per year for their child who has the special need and 19.3% of families experience financial problems as the result of their child's special needs condition.[108, 173]

Children who have a special health care need are especially vulnerable to the effects of underinsurance/un-insurance on several MCHB core outcomes for CSHCN.[174] For example, according to research based on data from the NS-CSHCN, underinsured CSHCN were approximately half as likely to have received coordinated ongoing comprehensive care than those not underinsured. A recent report on children served by MaineCare found that 27% of the 209 parents surveyed who had a child with special health care needs indicated that their children had a delayed or unmet need for care (medical, dental or mental health) in the prior year, compared to 16% of the 1,215 parents interviewed who had children without special health needs.[110, 175]

Based on 2004 health expenditure data from the CMS analyzed by the Kaiser Family Foundation, per capita spending for health care services in Maine ($6,540) was higher than national spending ($5,283).[176, 177] This measure of health care expenditures includes spending for all privately and publicly funded personal health care services and products (e.g., hospital care, physician services, nursing home care, prescription drugs, etc.) Average annual growth in expenditures between 1991 and 2004 (most recent data available) was 7.8% in Maine while 5.5% across the U.S. and 5.9% in New England. Hospital care accounts for more than a third (35.3%) of Maine's health service expenditures.[176]

Table 4.1.4: Health Care Expenditures per Capita, Maine and United States, 2004

	Health care expenditures per capita		Distribution of expenditures	
	Maine $	U.S. $	Maine %	U.S. %
Hospital care	$2,310	$1,931	35.3	37.7
Physician & clinical services	$1,579	$1,341	27.7	28.2
Other professional services	$232	$179	12.2	13.9
Drugs and other medical nondurables	$800	$757	7.3	7.4
Nursing home care	$480	$392	4.2	5.2
Dental services	$276	$277	2.0	2.3
Home health care	$132	$145	1.1	1.5
Medical durables	$70	$79	10.1	4.0
Other personal health care	$661	$181	--	--

Data Source: Health Expenditure Data, Health Expenditures by State of Residence, Centers for Medicare and Medicaid Services

According to the CMS data, one-third of 2008 health expenditures in the U.S. was spent by private insurance (33.5%), 11.9% was out-of-pocket dental spending, 20.1% was spent by Medicare and 14.7% was spent by Medicaid.[178]

The statewide hotline "2-1-1 Maine" provides callers with information about access to services throughout Maine. Based on call reports between July 2008 to June 2009; of the total 72,587 hotline calls, 2,185 were related to access to health care, 1,302 calls were related to health insurance, and 841 calls were related to financial assistance with prescription medicines. In addition, 2,539 calls were related to substance abuse treatment referrals and 4,843 were related to mental health services.[179]

Utilization

The 2007 NSCH found that most (92.2%) Maine 0-17 year olds had had one or more preventive medical care visits during the prior 12 months. Eight out of 10 Maine children (80.9%) had had one or more preventive dental care visits during this time period. Only three-fourths (75.8%) of Maine children, however, had received both preventive medical and dental care during the prior 12 months. The percentage of 0-17 year old Maine children who had a preventive medical visit in the past year increased from 84.3% in 2003 to 92.2% in 2007.[92]

According to a 2009 report by the USM Muskie School of Public Service on children served by MaineCare, 98% of parents surveyed indicated that their children have a usual place of care for well and sick doctor visits. Also, 95% of 1,403 responding parents indicated that their children received a preventative medical visit in the last 12 months.[110] The NSCH also revealed that nearly all Maine children (96.3%) had a usual place for sick and well care and 95.3% had a personal doctor or nurse. These are two of the components of a "medical home".[92] According to the AAP, receiving consistent care through a medical home, defined as primary care "that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and

culturally effective," is a key indicator of access to high-quality care.[180] Based on data from the NSCH, 34.5% of Maine children did not receive health care from a site that meets the AAP definition of a medical home compared to 42.5% of children nationally.[92] According to the NS-CSHCN, only a little over half of CSHCN received coordinated, ongoing, comprehensive care within a medical home (51.7%), similar to the national rate (47.1%).[6]

Obtaining referrals is another component of a medical home. In the 2007 NSCH, parents reported that 3.5% of Maine children had problems getting needed referrals, 18.5% did not have problems getting referrals when needed, and 78.5% did not need referrals during the past 12 months. Another NSCH finding was that one in five Maine children who saw or needed to see a specialist during the prior 12 months had a problem doing so; 5.3% had a big problem and 15.9% had a small problem. Three-fourths (78.9%) did not have any problems getting specialist care. The NSCH found that 5.8% of Maine children had one or more unmet needs for health care during the past 12 months (i.e., needed health care, but it was delayed or not received); 2.6% had an unmet need for medical care, 3.0% had an unmet need for dental care, and 1.0% had an unmet need for mental health services.[92]

In 2007, not having received both routine preventive medical and dental care in the past 12 months was significantly more common in Maine among:

- 0-5 year olds (44.4%) than 6-11 year olds (14.9%) and 12-17 year olds (15.5%)
- Children with household incomes 100-199% of the FPL (31.0%) than those with household incomes 400% of the FPL or higher (18.2%)
- Children who did not have special health care needs (26.5%) than those who had special health care needs (14.7%)
- Children who were currently uninsured or who had periods without coverage during the prior year (36.3%) than those who were consistently insured (23.0%).[92]

In 2008, the HRSA primary care health center program made the following impact on health care service delivery in Maine. These centers provided 12,466 Mainers with a Pap test, provided contraceptive management to 4,686 patients, and supervised the health of 17,074 children ages 0-11.[168]

Table 4.1.5: Selected Indicators of Primary Care Utilization, HRSA Primary Care Health Center Program, Maine, 2008

	# of encounters	# of patients
Pap test	12,853	12,466
Contraceptive management	8,433	4,686
Health supervision of infant or child (ages 0-11)	42,035	17,074

Data Source: Health Resources and Services Administration, Health Center Data, Uniform Data System, State Summary for Maine for 2008

Mental Health Care Services

Providers

Based on survey data collected in 2008 by ODRVS, there were 155 active allopathic (MD) and osteopathic (DO) physicians practicing in Maine who listed psychiatry (n=142) or child psychiatry (n=13) as their primary specialty; more than one-third (35.5%) of these providers practice in Cumberland County. Statewide, there are 8,483 Maine residents per active psychiatrist (MD/DO). The county specific ratio is lowest in Cumberland County (4,991 residents per active psychiatrist). Two of Maine's counties have no active psychiatrists.[159]

Table 4.1.6: Number of Physicians with Select Mental Health Related Primary Specialties, Maine, 2008

	Allopathic psychiatry [a]	Allopathic psychiatry, child & adolescent [a]	Osteopathic psychiatry [a]	Total MD/DO [a]	% of providers	Population Per Provider
Total	129	13	13	155	100.0	8,483.3
Androscoggin	6	3	2	11	7.1	9,730.1
Aroostook	7	1	0	8	5.2	9,015.3
Cumberland	53	1	1	55	35.5	4,991.3
Franklin	2	0	0	2	1.3	14,943.0
Hancock	3	0	0	3	1.9	17,744.7
Kennebec	16	2	4	22	14.2	5,481.5
Knox	4	1	0	5	3.2	8,172.4
Lincoln	0	0	0	0	0.0	--
Oxford	1	0	0	1	0.6	56,486.0
Penobscot	24	3	0	27	17.4	5,484.5
Piscataquis	1	0	0	1	0.6	17,212.0
Sagadahoc	0	0	0	0	0.0	--
Somerset	1	0	0	1	0.6	51,496.0
Waldo	2	0	0	2	1.3	19,235.5
Washington	1	1	0	2	1.3	16,389.0
York	7	1	6	14	9.0	14,348.1

[a] Licensed, active professionals working in Maine who responded to the Maine Cooperative Health Manpower Resource Inventory survey.

Data Sources: Office of Data, Research, and Vital Statistics; 2008 Population Data from US Census Estimates

In addition, the broad universe for psychologists, that is, the number residing and/or working in the state is 562. Nearly two-thirds (65.7%) responded to the ODRVS survey and indicated they were in active practice. Of these, 87% identified as psychologists and 13% as psychological examiners. More than half (53.9%) indicated their current setting of employment was private practice, 13% in academic settings, 7.0% in hospitals, and 6.8% in community clinics.[159] Based on HRSA information, there are 42 designations of mental health HPSAs in Maine; 9 of these designations refer to services area shortages, 2 to shortages among population groups and 16 to shortages within facilities. The estimated underserved population is 134,912, the number

of additional practitioners needed in all designated HPSAs so that the population is adequately served, that is, to achieve a population-to-practitioner ratio of 10,000:1 for mental health care, is 9. For psychiatrists, the target population-to-psychiatrist ratio is 30,000:1 and 20,000:1 where high needs are indicated. A map of Maine's federally designated mental health HPSAs is included in the Appendix.[181]

Accessibility

According to data reported by the Center for Mental Health Services, 51,068 Mainers were served by mental health programs funded by the Federal Mental Health Block Grant/Medicaid in FY2008. The rate of community mental health service utilization in Maine was 38.8 per 1,000 population compared to 20.7 per 1,000 nationally and 28.9 per 1,000 in the Northeast.[168, 182] Children ages 0-12 comprised 20.2% of the population served in Maine, and adolescents comprised 14.4% of the population served. The rate of service penetration among Maine adolescents was 82.6 per 1,000 compared to 37.6 per 1,000 nationally. Consumer satisfaction among children receiving services was generally lower in Maine than in the U.S. overall. Based on child/family consumer surveys, 76% of families of Maine children were positive about service access vs. 84% nationally, 70% were positive about the quality and appropriateness of services vs. 83% nationally, 47% were positive about service outcomes vs. 64% nationally, 92% were satisfied about participation in treatment planning vs. 87% nationally, and 92% were satisfied with the cultural sensitivity of providers vs. 93% nationally.[182]

Table 4.1.7: Persons Served by State Mental Health Agencies, Maine, the Northeast, and United States, FY2008

Age	Total # served: Maine	Age distribution of total served: Maine	Age distribution of total served: U.S.	Penetration rate (per 1,000 population): Maine	Penetration rate (per 1,000 population): Northeast	Penetration rate (per 1,000 population): U.S.
0 - 12	10,336	20.2	14.2	54.2	21.3	16.9
13 - 17	7,339	14.4	12.8	82.6	48.1	37.6
18 - 20	2,764	5.4	4.7	54.7	32.7	23.5
21 - 64	29,172	57.1	63.5	36.8	31.7	22.4
65 - 74	949	1.9	2.8	9.6	16.4	8.9
75 and over	506	1.0	1.8	5.3	12.5	6.1
Total	51,068	100.0	100.0	38.8	28.9	20.7

Data Source: U.S. Department of Health and Human Services, Center for Mental Health Services, CMHS Uniform Reporting System Measures, 2008

Primary care health center program: In 2008, the HRSA primary care health center program made the following impact on mental health care service delivery in Maine. These centers served 6,214 patients, provided 43,184 encounters and employed the FTE of 40.7 mental health service providers including the FTE of 3.2 psychiatrists and 3.3 licensed clinical psychologists.[168]

Table 4.1.8: Full-time Equivalents, Patient Encounters, and Number of Patients in HRSA Primary Care Health Center Program by Major Service Category, Maine, 2008

Mental health professional category	# of FTEs	# of encounters	# of patients
Total	40.7	43,184	6,214
Psychiatrists	3.2	4,852	--
Licensed clinical psychologists	3.3	2,911	--
Licensed clinical social workers	10.4	11,031	--
Other licensed mental health providers	20.2	22,741	--
Other mental health staff	3.6	1,649	--

Data source: Health Resources and Services Administration, Health Center Data, Uniform Data System, State Summary for Maine for 2008

The ICD-9-CM category of "depression and other mood disorders" was the most frequent mental health-related primary diagnosis in 2008 and resulted in nearly 30,000 encounters among 8,086 patients. Anxiety disorders (including post traumatic stress disorder (PTSD) and Attention Deficit and Disruptive Behavior Disorders were also frequent diagnoses among the mental health service encounters.[168]

Table 4.1.9: Mental Health Services in HRSA Primary Care Health Center Programs by Diagnostic Category, Maine, 2008

Diagnostic category	# of encounters	# of patients	# of encounters per patient
Depression and other mood disorders	29,686	8,086	3.7
Anxiety disorders including PTSD	16,313	5,473	3.0
Attention deficit and disruptive behavior disorders	9,028	2,629	3.2
Other mental disorders (excluding alcohol or drug dependence)	18,337	6,528	2.8

Data Source: Health Resources and Services Administration, Health Center Data, Uniform Data System, State Summary for Maine for 2008

The statewide hotline "2-1-1 Maine" provides callers with information about access to health and social services throughout Maine. Based on call reports between July 2008 to June 2009, 4,843 of the total 72,587 hotline calls were related to mental health.[179]

According to a 2009 research and policy brief by the Maine Rural Health Research Center at the Muskie School of Public Service, mental health issues are proportionally distributed in Maine, among both rural and urban environments. Usage of mental health services, however, is lower among rural children, even when factors that affect access to care have been controlled. This disparity may be the result of stigma and cultural differences as well as a poorly, designed mental health system and weak infrastructure. After controlling for all factors that affect access to care, researchers at the Muskie School found that rural children were 20% less likely to have a mental health visit compared to children living in urban areas. However, services such as

Medicaid or SCHIP increase the likelihood of receiving mental health services. These services can act as a protective factor for rural children who receive public health insurance at higher rates than urban children.[183]

Utilization

Mental disorders impact people of both genders and all age, race, ethnicity, educational, and socioeconomic groups. An estimated 7.2% of Maine children, age 2 to 17 have an ongoing emotional, development or behavioral condition as reported by their parents. This statistic is consistent for both rural and urban environments (7.7% among urban children and 7.0% among rural children).[92] According to a 2008 report by the University of Southern Maine on children served by MaineCare, 29 % of children in the Medicaid eligibility category (ages 1 to 5 with household income < 134% FPL, and ages 6-18 < 125% FPL) were reported to have a current diagnosis of depression, anxiety, or ADD/ADHD, versus 23% of those in the Medicaid Expansion or SCHIP enrollment categories. Among children enrolled in all categories of MaineCare, 13% are currently diagnosed with an anxiety disorder, 12% are currently diagnosed with ADD or ADHD, 8% with depression, and 4% with autism. Among children ages 6 and older enrolled in MaineCare, 23% received treatment or counseling in the past 12 months from a mental health professional.[110]

Based on data from the 2007 NSCH, 71% of Maine children, age 2 to 17 with emotional, developmental, or behavioral problems received mental health care/ counseling during the past 12 months, while nearly 6,500 children needed but did not receive this care.[92] Nationally, only 60% of children received this care. Among Maine CSHCN as a whole, 2.7% had unmet mental health needs.[6, 184] Similarly, 2% of all children enrolled in MaineCare had an unmet need for mental health services in 2008; CSHCN enrolled in MaineCare were more likely to have had unmet mental health care needs than children without special health care needs (9% versus 1%).[110]

Findings from a longitudinal study of children's mental health in rural Maine showed nearly one-fifth (19%) of parents identified barriers to accessing services. A factor analysis based on preliminary findings from the first two waves (1997-1998 and 1999-2000) of the study revealed four factors: access (30.2% of parents who identified barriers included one or more barriers in this factor); availability (28.1%); finance (24.5%), and mixed factor (14.6%). The rank ordering of specific service barriers was as follows (beginning with most common): (1) service costs too much; (2) service too far away; (3) work schedule problems; (4) do not know how to get service; (5) waiting list delays; (6) service does not exist; (7) not enough/no insurance; (8) appointment times are inconvenient; (9) problems of cooperation, communication among providers; (10) transportation problems, and (11) afraid child will be labeled a problem.[185, 186]

According to the 2008 BRFSS, 38.4 % of women living in Maine reported having poor mental health on one or more of the past 30 days.[54, 187] Data from 2007 PRAMS, suggest that 10.9% of Maine women had received a depression diagnosis from a health professional since having their child and 31.4% reported that since their new baby was born, that they "always," "often/almost always" or "sometimes," felt down, depressed or hopeless.[57, 188]

Excluding hospitalizations for childbirth, mental health disorders were the leading cause of hospitalization among 15-44 year old Maine women in 2007, accounting for 30% of hospitalizations. There were 4,081 hospitalizations for a mental health condition among 15-44 year old Maine women in 2007. The most common condition warranting hospitalization was affective psychosis (48%), followed by drug psychoses (13.3%), adjustment reaction (7.5%), alcoholic psychoses (6.7%), and depressive disorder (6.0%).[62, 189]

Oral Health Care

Providers

There are 73 federally designated dental HPSAs in Maine; each Maine county contains at least one dental health HPSA.[190] A map is provided in the Appendix.

A comparison of the geographic distribution of dentists in the workforce nationally and within states is available from the Kaiser Family Foundation's "State Health Data" website.[191] Based on their analysis of 2008 data from the American Dental Association, there were 819 dentists licensed in Maine, including active and inactive providers. With 0.6 dentists per 1,000 population, Maine's dental workforce ratio is significantly lower than the ratio of 0.8 dentists per 1,000 population nationally. The Kaiser Family Foundation also reports that 16.9% of Maine's population is underserved and living in a dental HPSA as compared to 10.4% nationally.[192]

Maine's ODRVS estimates there were 608 licensed active dentists practicing in Maine in 2008 resulting in a statewide ratio of 1 dentist for every 2,493 residents. Maine's dental workforce is not distributed evenly across the state; the range was from 1,633 people per active dentist in Cumberland County to 4,671 people per active dentist in Somerset County. Nearly one-third of all Maine dentists practice in Cumberland County, although this county is home to only 21% of Maine's population.[193] In 2008, ODRVS conducted a survey of dentists practicing in Maine to learn about their backgrounds and dental practices; the survey yielded a response rate of 73.2% among the board universe and 87% among active licensed dentists. More than three-quarters (78.7%) of participating dentists identified as general practitioners; the ratio of general practitioners to specialists ranged between 2.3 to 1 in Cumberland County to 13.0 to 1 in Lincoln County, although in several counties there were no identified specialists. Less than one-quarter (24.0%) of respondents indicated they practice pediatric dentistry at least one hour per week. Based on survey results, 15 dentists indicated they specialize in pediatric dentistry; 7 of these dentists practice in Cumberland County. Thirteen Maine dentists have received a training certificate in this specialty and three are board certified.[193]

Central to state planning efforts is estimating future workforce capacity. Based on the ODRVS survey, 81% of dentists indicated they plan to be working as a dentist in Maine five years from now. Approximately 43% of Maine dentists are age 55 and older. The mean age of dentists has increased; in 1986 the mean age of active dentists was 45.5 years, while in 2006 the mean age had risen to 51.5 years. The majority (63%) of Maine dentists identify as self-employed in solo practices/single owner businesses and an additional 16% are self-employed in partnerships or group-owned practices.[193]

Dental hygienists deliver services throughout the state. Based on the 2004 survey of Maine dental hygienists, there were 739 active licensed dental hygienists working in Maine, for an average of 1,752 people per practicing registered dental hygienist in the state. The county-specific range was from 1,112 people per practicing dental hygienist in Cumberland County to 3,398 people per practicing dental hygienist in Somerset County.[194] (Note: although dental hygienists were again surveyed in 2006, only the response rate has been released at this time).

Table 4.1.10: Measures Related to Oral Health Care Capacity, Maine, 2004-2009

County	# of licensed dentists (2008)	# of licensed active dentists [a] (2008)	% of Maine dentists (2008)	Population per active dentist [a] (2008)	Ratio of general practitioners to specialists (2008)	Population per active registered dental hygienist [b,c] (2004)	# of dental HPSAs [d] (2009)
Androscoggin	53	51	8.3	2,607	3.3:1	2,015	4
Aroostook	23	23	3.7	3,413	2.8:1	2,812	9
Cumberland	210	192	31.2	1,633	2.3:1	1,112	5
Franklin	12	11	1.8	3,317	10.0:1	2,474	4
Hancock	24	19	3.1	3,126	18.0:1	1,454	7
Kennebec	68	63	10.2	2,122	3.5:1	1,598	7
Knox	28	24	3.9	1,769	5.0:1	1,687	3
Lincoln	15	14	2.3	3,148	13.0:1	1,811	4
Oxford	15	14	2.3	4,365	-	3,089	8
Penobscot	76	72	11.7	2,520	3.5:1	1,521	18
Piscataquis	6	6	1.0	3,392	-	2,150	7
Sagadahoc	22	19	3.1	2,271	9.0:1	1,799	1
Somerset	11	11	1.8	4,671		3,398	9
Waldo	10	10	1.6	3,834	5.8:1	2,509	7
Washington	12	11	1.8	3,250	3.0:1	3,340	10
York	74	68	11.0	3,602	3.0:1	2,715	4
Out-of-state	12	4	0.6	--	--	--	--
Unknown	22	4	0.6	--	--	--	--
Total	693	616	--	--	--	--	--
Total Maine	659	608	--	2,493	3.7:1	1,752	73

[a] Licensed, active professionals working in Maine
[b] Licensed, active professionals working in Maine who responded to ORDVS survey.
[c] 2006 dental hygienist data collected but not yet released
[d] Health professional shortage area

Data Sources: Maine Cooperative Health Manpower Resource Inventory, calculations based on data from summary report, "2008 Maine Dentist Manpower Survey" compiled by Stuart Bratesman, USM Muskie; ORDRVS, 2004 Registered Dental Hygienist Manpower Survey; U.S. Census, 2008 Population Data Estimates; Maine Office of Rural Health and Primary Care, Federally Designated Dental Health Professional Shortage Areas.

Capacity of Institutions

Maine does not yet have a dental school. The University of New England is developing a plan to open a dental school on its Portland campus, with the first class offered in 2012.[195] Penobscot

Community Health Center has established a general practice dental residency program. The only other dental residency program in Maine is the Advanced Education in General Dentistry Program at the Togus VA Medical Center in Augusta.[196] The state has two dental hygiene schools; in 2004, 81% of active hygienists had received their education in Maine schools.[194] Maine's oral health infrastructure includes 13 dental clinics housed within FQHCs, 11 private non-profit dental centers, 3 oral health volunteer and voucher programs, 3 state clinics providing services in DHHS clinics for former and current clients, 5 tribal programs (Indian Health Services), and 2 programs based at Maine's dental hygiene school campuses.[197] In 2008, there were 23 community-based dental clinics with sliding-fee scales in Maine.[198]

In 2008, the HRSA primary care health center program made the following impact on dental care service delivery in Maine; these centers served 29,897 patients through 65,273 patient encounters and employed the FTE of 16.3 dentists, 18.2 dental hygienists and 34.2 dental assistance aides or technicians.[168]

Table 4.1.11: Dental Services Provided at HRSA Primary Care Health Centers, Maine, 2008

Dental service	# of encounters	# of patients
Total (unique)	65,273	29,897
Emergency services	316	311
Fluoride treatment	10,246	8,312
Oral exams	24,131	19,562
Oral surgery	6,181	5,036
Prophylaxis	19,053	14,647
Rehabilitation services	4,532	2,806
Restorative services	13,226	7,709
Sealants	3,937	2,887

Data Source: Health Resources and Services Administration, Health Center Data, Uniform Data System, State Summary for Maine for 2008

In 2008, MaineCare paid $28.8 million to 333 providers to provide dental services to 80,763 MaineCare clients. The average cost of services per dental client was $357. In comparison, $13.2 million was paid to 297 providers to provide dental services to 52,813 MaineCare clients in 2002, with an average cost per dental client of $250. Dental providers in Penobscot, Cumberland, and Kennebec Counties served the largest number of MaineCare clients. The average cost per dental client ranged from $157 among providers in Knox County to $463 among providers in York County.[199]

Table 4.1.12: MaineCare Dental Claims Paid to Providers, Maine, 2008

Provider county	# of dental providers with MaineCare dental claim	# of MaineCare dental claims	# of MaineCare dental clients	Total $ paid for dental services	Average $ per dental client	Average $ per dental claim
Androscoggin	16	56,729	9,085	$3,029,291	$333.44	$53.40
Aroostook	37	37,215	5,908	$2,233,026	$377.97	$60.00
Cumberland	45	121,643	16,629	$5,772,739	$347.15	$47.46
Franklin	9	18,502	3,009	$986,687	$327.91	$53.33
Hancock	13	14,482	2,805	$684,088	$243.88	$47.24
Kennebec	33	58,879	10,236	$3,070,475	$299.97	$52.15
Knox	11	7,788	1,293	$530,513	$410.30	$68.12
Lincoln	12	33,503	4,995	$784,853	$157.13	$23.43
Oxford	14	11,966	2,028	$420,879	$207.53	$35.17
Penobscot	48	92,962	18,231	$6,103,417	$334.78	$65.65
Piscataquis	7	5,584	959	$189,406	$197.50	$33.92
Sagadahoc	5	412	119	$14,047	$118.04	$34.09
Somerset	8	836	214	$30,078	$140.55	$35.98
Waldo	12	7,293	1,432	$216,458	$151.16	$29.68
Washington	16	13,255	3,228	$936,484	$290.11	$70.65
York	30	47,591	8,048	$3,723,434	$462.65	$78.24
Out-of-state	17	2,900	576	$104,439	$181.32	$36.01
Total (unique)	333	531,540	80,763	$28,800,313	--	--

Data Source: Department of Health and Human Services, Office of MaineCare Services, 11th Annual Report to the Joint Standing Committee on Health and Human Services, *Improving MaineCare Dental Access for Maine Children.* (2009)

Dental services are also provided in Maine EDs. According to a recent report of ED use in Maine, among MaineCare clients ages 15 through 44 there were 8,379 visits to an Ed for a dental issue in 2006; approximately 44% of these visits were attributable to frequent ED users (those with 4 or more past year ED visits). Among the uninsured, 3,581 visits were attributed to dental issues and approximately one-third of these visits were attributable to frequent ED users.[200]

For over 30 years, Maine's School Oral Health Program (SOHP), a component of the Oral Health Program (OHP), has provided grant funding, training and technical assistance to eligible public elementary schools with activities focused in kindergarten through grade 6. Eligibility is based on a formula that includes the proportion of students eligible for the Free and Reduced Lunch Program and the proportion of the community with fluoridated drinking water. Each program is locally designed; all schools provide oral health education, a majority have offered weekly fluoride rinse programs, and within the limits of funding, schools may provide dental screenings and dental sealant programs for second graders. The mouthrinse is purchased by the state OHP and distributed to participating schools. In 2008, there were 234 school-based dental programs. These state-funded programs provide preventive services only. State budget cuts in SFY10 and 11 will mean that the SOHP will be streamlined and reorganized.[201]

Other preventive hygiene programs available are described in the table below. These programs provide services via contracts and other arrangements with schools, Head Start, WIC agencies, other community agencies such as Boys and Girls Clubs, and others.[202]

Table 4.1.13: Preventive Dental Hygiene Programs for Children, Maine, 2009

Program	Description
Aroostook County Action	Employs a full-time dental hygienist in its WIC program who provides preventive dental services to eligible children (those who do not have a family dentist)
Kennebec Valley Dental Center	Serving the Augusta area; "full-service" clinic, but does have an outreach component that can be characterized as a preventive dental hygiene program
Maine Dental Health Out-Reach	Winthrop based; works with surrounding school systems
Saulter Dental Hygiene Center	Independent dental hygiene center in Waterville
Saving Smiles	Serving central Maine & Waldo County
Tooth Fairies, Inc	A mobile program primarily serving western Maine
Tooth Protectors, Inc	Portable dental clinics statewide
Washington County Children's Program (WCCP)	Operates the "Tooth Ferry", a mobile dental unit that travels to various schools and other agencies that the WCCP's dental program works with, providing screenings, sealants, and dental health education

Data Source: Kids Oral Health Partnership

Accessibility

Most active Maine dentists are currently accepting new patients (87%), while only 136 dentists (26%) indicated they are accepting patients insured through MaineCare. Fewer than half (47%) of active dentists in 2008 reported that they treat Medicaid patients; this has decreased since 2002 when 57% of active dentists reported that they treat Medicaid patients. Among the providers who accept MaineCare, 58% report limiting the proportion of MaineCare insured patients seen in their practice.[193]

Based on the 2008 Maine Cooperative Health Manpower Survey of dentists, among the active dentists who do not accept MaineCare, approximately half would consider accepting MaineCare if reimbursements were increased (52%), administrative paperwork was reduced (53%), or if they were compensated for missed appointments (48%). While nearly 4 out of 10 active Maine dentists treat children insured by MaineCare, only 26% treat adult MaineCare insured patients. MaineCare does not cover preventive services for members past the 21st birthday, and covers only a limited set of adult "urgent care" procedures. Nearly 60% of active Maine dentists treat CSHCN.[193]

According to active dentists, the average waiting time to schedule an emergency appointment ranges from 0 days to 28 days, with approximately one-quarter of active dentists indicating that on average a same day emergency appointment would be available. The average wait time to schedule a non-emergency appointment (e.g., new patient, recall, prophylaxis) ranges from 0 days to 190 days, with approximately 30% of active dentists indicating an average of 7 days or less wait time.[193]

Table 4.1.14: Characteristics of Dentists, Maine, 2008

Characteristic	% of survey respondents (active licensed dentists)
Accepting new patients	87
Accepting new MaineCare patients	26
Treat children with special health care needs	57
Offer sliding fee schedule	8
Treat MaineCare patients	47
Treat MaineCare patients < 21 years old	42
Treat MaineCare patients 21+ years old	26
Among providers accepting MaineCare, % limiting MaineCare caseload	58

Data Sources: Maine Cooperative Health Manpower Resource Inventory, calculations based on data from summary report, "2008 Maine Dentist Survey" compiled by Stuart Bratesman, USM Muskie

The statewide hotline "2-1-1 Maine" provides callers with information about access to services throughout Maine. Based on call reports between July 2008 to June 2009, 1,196 of the total 72,587 (2%) hotline calls were related to dental care.[179]

Based on 2004 health expenditure data from the CMS analyzed by the Kaiser Family Foundation, 4.2% of Maine's health expenditures or $363 million were for dental services. Per capita spending for dental services in Maine ($276) was similar to national spending ($277).[177] The current estimate of per capita spending for dental services is $332, and is projected to be $449 by 2015.[203, 204] According to 2007 CMS data, approximately half of recent dental spending in the U.S. was spent by private insurance (47.2%), 44.4% was out-of-pocket dental spending, and 7.4% was spent by Medicaid.[203]

In Maine, MaineCare covers preventive, routine, and some specialized dental services for children and young adults under age 21. Orthodontic treatment requires prior written approval. MaineCare Member Services helps clients obtain dental services through Prevention and Health Promotion Benefits (known as EPSDT)[205] and assists clients in getting transportation, setting up medical and dental appointments, finding a physician or a dentist, and answering questions about benefits. For adults age 21 and over, MaineCare covers treatments to relieve pain, eliminate acute infection and/or prevent imminent tooth loss for members. Medically necessary treatment for periodontal disease is covered in cases of acute necrotizing ulcerative gingivitis. With prior authorization, other services may be covered if justification of medical necessity and cost effectiveness is recognized.[206]

According to the OMS, an average of 558 member requests for assistance with finding a dentist were received each month in 2007, for a total of 6,702 requests for the year. Also, 866 members received assistance with access to orthodontic care. Nearly 500 MaineCare families with a history of missed appointments were contacted to provide education on the protocol for appointment cancellations, information about transportation services available to MaineCare members who qualify, and additional education relating to dental services.[207]

Utilization

Youth: The 2007 YRBS found that 81.4% of Maine middle school students and 80.9% of Maine high school students reported seeing a dentist for a check-up, exam, teeth cleaning, or other dental work during the past 12 months.[51, 208] The 2007 NSCH found that 80.9% of Maine 1-17 year olds had seen a dentist one or more times in the past 12 months for preventive dental care visits such as check-ups or dental cleanings; this figure is not significantly different from the national figure of 78.4%. The percentage who had had a preventive dental care visit in the past year differed significantly by age, household income, and special health care needs status. Nearly one in four children covered by MaineCare (23.2%) did not have a preventive dental care visit in the past year.[92]

Overall, 79.7% of parents of Maine's 1-17 year olds described their child's teeth as in "excellent/very good" condition, 15.4% in "good" condition, and 5.0% in "fair/poor" condition. Parents of children covered by public insurance were less likely to describe their child's teeth as in "excellent/very good" condition (67.9%) than privately insured children (86.0%). In addition, CSHCN were less likely to have their teeth described as in "excellent/very good" condition (69.7%) than children who did not have special health care needs (82.2%). In 2007, 23.2% of Maine's 1-17 year olds had one or more oral health problems in the previous 6 months; 14.4% of 1-5 year olds, 30.1% of 6-11 year olds, and 23.3% of 12-17 year olds. Of the oral health problems listed in the survey, decayed teeth or cavities was the most frequently mentioned problem. Of Maine's 1-17 year olds, 16.7% had decayed teeth or cavities in the past 6 months; the percentage with decayed teeth or cavities differed significantly by age, household income, type of health insurance, medical home status, and special health care needs status. In addition, of Maine's 1-17 year olds, 8.4% had a toothache, 2.6% had broken teeth and 2.5% had bleeding gums in the past 6 months.[92]

Table 4.1.15: Disparities in Dental Health and Care among 1-17 Year Olds, Maine, 2007

	% with decayed teeth or cavities in past 6 months	% with past year preventive dental visit
Age		
1 - 5 years	7.6	49.3
6 - 11 years	24.4	91.7
12 - 17 years	16.2	49.3
Household income		
0 - 99% FPL	22.6	71.8
100 - 199% FPL	23.9	75.4
200 - 399% FPL	14.7	84.0
400%+ FPL	9.4	86.6
Health insurance type		
Public	26.9	76.8
Private	12.0	83.0
Medical home		
No	23.9	80.6
Yes	12.8	80.9
Special health care need		
No	14.9	79.2
Yes	23.8	87.6

Data Source: 2007 National Survey of Children's Health

Three percent (3.0%) of Maine parents/guardians reported on the 2007 NSCH that there had been a time during the prior 12 months when their 1-17 year old child had needed dental care but had delayed or not received care; this is comparable to the national estimate of 2.8%. The survey did not ask why dental care was delayed or not received.[92] Many CSHCN are having their oral health needs met according to the NS-CSHCN, on which only 6.5% of parents of CSHCN said that their children did not get the preventive dental health care that they needed. This is comparable to the national rate (6.3%). Similarly, only 2.8% of CSHCN were reported to not have their other dental health needs met.[6]

A recent report by the USM found that 25% of 1,401 surveyed parents of low-income children insured through MaineCare indicated that their children did not receive a preventive dental care visit in the last 12 months.[110] As noted by the authors of the MaineCare report, the American Academy of Pediatric Dentistry recommends that a child have their first preventive visit and establish a "dental home" no later than their first birthday.[209] Few young children enrolled in MaineCare have had a recent preventive dental care visit; 48% of children under age 6 have not had a visit in the past year, 16% of children 6 to 12 year olds, and 21% of MaineCare insured teens have not had a past year visit. One in eight parents of a child insured by MaineCare identified an unmet dental care need in the past 12 months; unmet need for dental care among MaineCare insured children varied regionally, with 17% of respondents living in Southern Maine reporting unmet need for dental care, 12% in the Mid-coast and Western parts of Maine, and 9% in the Downeast and Northern Maine regions. Among parents who reported being less than "very satisfied" with MaineCare, a lack of dental providers in their area or lack of dental providers who accept MaineCare members was the most common reason for dissatisfaction.[110]

Parental awareness (or lack thereof) about the need for routine preventive dental care likely plays an important role in whether a child receives such care, especially in the younger age groups. A 2003 survey found that of Maine parents whose children did not receive preventive dental care within the past year, none of the parents of 1-2 year olds, and only 4.1% of the parents of 3-4 year olds, 21.7% of the parents of 5-11 year olds, and 35.3% of the parents of 12-17 year olds thought their child had needed such care.[210]

Adult Women: In 2008, 72.4% of 18-44 year old Maine women reported they had visited a dentist, dental hygienist, or dental clinic in the past year and 68.0% said they had had their teeth cleaned in the past year. The percentage who had had a visit to a dentist, dental hygienist or dental clinic in the past year varied significantly by age, education, household income, and dental insurance status. Having any kind of insurance coverage that paid for some or all of her routine dental care significantly increased the likelihood that a woman had had her teeth cleaned or had had a dental visit in the past year. In 2008, nearly two-thirds (63.6%) of 18-44 year old Maine women reported that they had had at least some dental coverage for routine care. Women with annual household incomes of $50,000 or more were significantly more likely than those with household incomes less than $25,000 or with incomes $25,000-$49,999 to have dental coverage (77.7% vs. 42.9% and 56.6%, respectively). The percentage of Maine reproductive-age women who had not had any teeth removed due to tooth decay or gum disease varied significantly by age, education, and household income.[47]

The 2008 BRFSS asked women who had not visited the dentist or dental clinic in the past year their main reason for not going. Nearly half (45.0%) cited cost. The next two most commonly cited reasons were "no reason to go" (e.g., no problems with teeth, no teeth) (13.6%) and "other priorities" (10.6%). The reasons given varied significantly by dental insurance status; these results should, however, be interpreted with caution due to small sample size and wide confidence intervals. Cost was cited as the main reason by 77.1% of those without dental coverage. There was no dominant leading reason among women with dental coverage; instead, "fear, apprehension, nervousness, pain, dislike going," "no reason to go," "other priorities," "have not thought of it," and "cost" were each cited by 13.3%-16.1% of the women who had dental coverage.[47]

In 2007, over half (53.9%) of new Maine mothers had not had their teeth cleaned either during or after their most recent pregnancy, indicating they most likely had not had their teeth cleaned during the previous year. Less than half (45.3%) of the mothers said that a dental or other health care worker had talked with them during their pregnancy about how to care for their teeth and gums.[51]

Table 4.1.16: Disparities in Dental Health and Care Health among 18-44 Year Old Women, Maine, 2008

	% with no teeth removed due to gum disease or tooth decay	% with any dental visit in past year
Age		
18-24 years	81.9	68.5
25-34 years	77.2	67.9
35-44 years	68.4	78.2
Education		
HS/GED or less	63.5	63.5
Some college	74.6	72.5
College graduate	85.3	80.4
Household Income		
<$25,000	66.4	57.2
$25,000-$49,000	70.1	63.4
$50,000+	82.6	86.2
Dental insurance		
No	73.1	58.9
Yes	77.7	79.1

Data Source: 2008 Behavioral Risk Factor Surveillance System

Substance Abuse Treatment Services

Providers

Maine's professional workforce related to substance abuse treatment includes the broad universe of licensed alcohol and drug counselors. The number residing and/or working in the state is 968; the number of active providers residing and/or working in Maine may be less than this estimate as only 46.0% of the broad universe responded to the Manpower survey in 2006. Additional providers of substance abuse related services include licensed social workers. Based on 2006-2007 ODRVS data, there are 5,265 social workers residing and/or working in the state.[159]

Table 4.1.17: Estimates of Number of Substance Abuse Health Professionals, Maine, 2006-2007

	Data year	Board universe [a] #	Responses to manpower surveys #	Response rate %
Alcohol/drug counselors	2006	968	445	46.0
Social workers	2006-2007	5,265	1,974	37.5
[a] Includes licensees who live and/or work in Maine				

Data Source: Maine Cooperative Health Manpower Resource Inventory; prepared datasets and survey response rates at the Office of Data, Research, and Vital Statistics as of October 2009

Institutional Capacity

Primary care health center program: In 2008, the HRSA primary care health center program made the following impact on substance abuse treatment service delivery in Maine. These centers served 1,320 patients, provided 12,054 encounters and employed the FTE of 10.6 substance abuse treatment staff.[168] In 2005, the total estimated economic burden of substance abuse in Maine was $898.4 million, which translates into $682 for every resident of Maine for the substance abuse-related costs associated with mortality, morbidity, medical care, treatment, and crime. This estimate of the burden of substance use in Maine does not include the additional costs of child welfare and the administration of other social welfare programs, fire protection and the destruction caused by fire, the non-medical costs of motor vehicle accidents, and wages and job productivity losses.[211]

Accessibility

The statewide hotline "2-1-1 Maine" provides callers with information about access to services throughout Maine. Based on call reports between July 2008 to June 2009, 2,539 of the total 72,587 hotline calls were related to substance abuse treatment referrals.[179] According to Maine's Office of Substance Abuse, in 2009, each month an average of 152 clients were waiting for residential substance abuse services including short term residential rehab, extended care, halfway house, extended shelter, and adolescent residential rehab.[124]

Utilization

Many behaviors that are initiated during adolescence may be important determinants of subsequent behaviors in adulthood; most people who become regular cigarette smokers began smoking during adolescence.[212] Cigarettes or smokeless tobacco are "generally the first drug used by young people in a sequence that can include tobacco, alcohol, marijuana, and hard drugs".[213] One out of every five Maine high school students (21.3%) reported current tobacco use (i.e., cigarettes, cigars, or smokeless tobacco) in 2007. [149] Only 66% of Maine middle school youth and 73% of high school youth were confident they could quit smoking if they wanted to.[214]

Based on data from the 2006-2007 National Survey on Drug Use and Health, approximately 5.7% of Maine youth ages 12-17 reported alcohol dependence or abuse in the past year, 5.1% reported illicit drug dependence or abuse, 4.8% reported needing but not receiving treatment for illicit drug use, and 5.6% reported needing but not receiving treatment for alcohol use.[215]

Effective substance abuse prevention incorporates "evidence-based strategies for addressing risk and protective factors across multiple domains – individual, family, community, and environment".[216] Preventive interventions identify early signs of substance abuse and other related behaviors (e.g. truancy, failing academically, depression, suicidal ideation). The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates that if effective school based prevention programs were widely implemented, an estimated: 8.0% fewer youth ages 13–15 would have smoked regularly; 5.6% fewer youth would have engaged in drinking; and 10.2% fewer youth would have used marijuana.[217]

Family Planning Services

Capacity

Based on 2006 data, 155,380 Maine women are in need of contraceptive services and supplies. Of these, 80,180 women need publicly supported contraceptive services because they have incomes below 250% of the FPL (59,260) or are sexually active teenagers (20,930).[218]

Table 4.1.18: Women in Need of Publicly Supported Contraceptive Services and Supplies, Maine, 2006

County	Total #	# < 20 years old	# 20 - 44 years old and < 250% of federal poverty level
Maine	80,180	20,930	59,260
Androscoggin	7,160	1,730	5,430
Aroostook	4,770	1,120	3,640
Cumberland	14,360	4,400	9,960
Franklin	2,650	710	1,940
Hancock	3,340	740	2,600
Kennebec	8,080	1,920	6,160
Knox	2,340	560	1,790
Lincoln	1,980	470	1,510
Oxford	3,720	800	2,920
Penobscot	10,620	2,790	7,830
Piscataquis	1,110	240	880
Sagadahoc	2,090	540	1,550
Somerset	3,450	760	2,690
Waldo	2,330	510	1,820
Washington	2,410	520	1,890
York	9,770	3,120	6,650

Data Source: Guttmacher Institute, 2006

In Maine, 65 publicly funded family planning clinics provide contraceptive care to 49,150 women—including 15,060 sexually active teenagers. Family planning clinics in Maine serve 62% of all women in need of publicly supported contraceptive services and 65% of teenagers in need. All counties in Maine have at least one family planning clinic.[218]

Accessibility

Data on unintended births comes from Maine PRAMS, an annual survey of new mothers in Maine. Based on this survey, each year more than 5,000 Maine births are unintended and 2 in 3 (63%) Maine births are intentional. Similar to the percent of unintended births overall, the percent of unintended births among women less than 24 years old has increased over time since 2004, but remains lower than it was earlier this decade (e.g., 56.8% in 2007 and 61.4% in 2000). One of the largest disparities regarding unintended pregnancy is age. From 2004-2007 the highest percentage of unintended births occurred in women under the age of 20, where 71.3% of births were unintended.[51]

Efforts to decrease unintended pregnancy include finding better methods of contraception, and increasing contraceptive use and adherence. This includes education regarding new types of birth control as well as emergency contraception.[219] Nearly 3 of 4 Maine women between 18 and 44 years old who participated in the 2004 Maine BRFSS reported they were trying to prevent becoming pregnant. Among Maine women who reported they were not using birth control and not currently pregnant, only 35% indicated that they wanted to become pregnant or did not care if they became pregnant.[47]

A large majority (85%) of new mothers in Maine report using some form of birth control after the birth of their last child. Most (85%) discussed birth control methods with their health care provider at a prenatal visit, and 88.6% reported being asked if they were going to use birth control after the birth of their baby. Nearly half (47%) of new mothers in Maine who reported an unintended pregnancy were not using any form of contraception at the time of conception of their (most recent) child.[51, 220]

According to national estimates, 95% of unintended pregnancies occur among the one-third of women at risk who did not use contraceptives at all during the month of conception or who used a method inconsistently or improperly.[221] By working to ensure better and accessible family planning services, preconception care, and prenatal care for women and their partners, some of the risks and consequences associated with unintended pregnancies could be decreased.

Utilization

Efforts to improve reproductive health education and adoption of evidence based strategies among all members of the health care team, including physicians, pharmacists, nurses, educators, counselors and other professionals could result in more effective, efficient, and culturally appropriate reproductive health services. The use of evidenced-based programs, such as community and school based reproductive health clinics and reproductive education targeting adolescents may delay initiation of sexual intercourse, increase contraceptive use, and reduce teen pregnancy.[222] SBHCs provide a safety net for children who might not otherwise seek needed health care services. About 51% of SBHC users were screened for major adolescent risk behaviors including sexual activity, tobacco use, physical inactivity, poor nutrition, substance abuse, depression and behaviors connected to unintentional injury.[165]

Maine family planning clinics served 29,530 clients including 8,099 teens in FY08, a decrease of 4.9% from FY07. According to Maine census data, the decrease is associated with a decline in the teen population in Maine and according to YRBS data, teen delays in sexual activity. In

addition, family planning clinics have been essentially flat funded while costs have been increasing. During FY08, the cost of the oral contraceptive Ortho increased significantly due to a change in federal rules. MaineCare is working on covering Implanon, a 3-year implantable contraceptive. Full reproductive health services continue to be offered at 7 SBHCs.[165] In 2008, the HRSA primary care health center program made the following impact on family planning service delivery in Maine. These centers served 4,686 clients who received contraception management services through 8,433 encounters.[168]

Neonatal Intensive Care and Birth Centers

Capacity of Institutions

Birth facilities can be designated as Level I, II, or III, which correspond to increasing ability to manage high-risk births. Maine has two Level III facilities, which have the staffing and technical capability to manage high-risk obstetric and complex neonatal patients.[168]

Accessibility

In Maine, further work is needed to identify women who are likely to have a high-risk birth and to insure that these women give birth in an appropriate level facility. One marker of a high risk birth is VLBW; these infants are more likely to survive if they are born and cared for in an appropriately staffed and equipped facility.[223, 224] The HP2010 objective is to increase the proportion of VLBW infants born at Level III hospitals or sub-specialty perinatal centers to 90%.[225] In Maine between 1999 and 2008, the five-year moving average of VLBW infants delivered at Level III facilities has ranged between 80.7% and 82.2%.[40]

In an analysis of Maine births, access to the appropriate level of care at birth was associated with maternal residence, age, and education. The geographic distribution of Level III facilities increases the challenge of improving the proportion of VLBW infants born in Level III hospitals. To date, the only two counties in Maine that have achieved the HP2010 goal for VLBW infants born in Level III facilities are the counties that contain Maine's two Level III facilities (Penobscot and Cumberland Counties). Mothers in Knox and Androscoggin Counties have been significantly less likely than Maine mothers overall to deliver their VLBW infants in a Level III facility. A greater proportion of younger mothers (< 25 years old) delivered their VLBW infant at a Level I/II facility (22.2%) than older mothers (12.7%). A greater proportion of mothers with less than a high school education delivered their VLBW infant at a Level I/II facility (27.4%) than mothers with at least a high school education.[40]

Table 4.1.19: Maternal Characteristics among Very Low Birth Weight Infants by Birth Facility Level, Maine, 2004-2008

	Level I or II		Level III	
	#	%	#	%
5-year total	132	16.2	667	82.0
Maternal age				
< 20 years	20	22.0	70	76.9
20 - 24 years	46	22.6	155	76.0
25 - 34 years	59	14.5	330	83.5
35 + years	7	5.6	112	91.1
Maternal education				
< High school	31	27.4	82	72.3
High school	61	21.0	226	77.9
> High school	37	9.3	348	87.9
Unknown	3	--	11	--
Maternal residence				
Androscoggin	29	32.9	59	67.1
Aroostook	10	25.6	29	74.4
Cumberland	8	4.6	167	95.4
Franklin	6	26.1	17	73.9
Hancock	2	8.7	21	91.3
Kennebec	17	24.6	52	75.4
Knox	9	56.3	7	43.8
Lincoln	3	20.0	12	80.0
Oxford	8	29.6	19	70.4
Penobscot	5	5.1	93	94.9
Piscataquis	1	11.1	8	88.9
Sagadahoc	3	11.1	24	88.9
Somerset	9	27.3	24	72.7
Waldo	4	16.0	21	54.0
Washington	5	26.3	14	73.7
York	13	11.3	100	86.9

Data Source: Maine Vital Statistics Data, 2004-2008

Utilization

High-risk patients entering a facility with a lower rating may require transportation to a level III NICU. Most VLBW infants are born in Level III facilities, as it is routine practice to rush women likely to give birth prematurely to Level III facilities. However, in some cases, a woman may give birth before she can be brought to a Level III facility. These infants are typically cared for at Level I and II facilities until they are stable enough to transport to a Level III facility. Maternal geographic distance to a Level III facility, the capabilities of local facilities, and the health status of the mother and infant may impact location of delivery and transfer status. Of the 813 VLBW infants born to Maine mothers between 2004-2008, 63% of VLBW births were born at Level III facilities and required no maternal or infant transfer.[40]

Within Maine, the proportion of infants born at Level III facilities with no maternal or infant transfer ranged from 25% in Knox County to 92% in Penobscot County. A large proportion of VLBW infants in Knox County were transferred to a more skilled facility after birth, while a large proportion of VLBW infants in Androscoggin and Oxford counties were not born at nor transferred to a Level III facility after birth.[40]

Table 4.1.20: Maternal and Infant Transfer Status Among Very Low Birth Weight Infants (VLBW), Maine, 2004-2008

Level of birth facility and transfer status	#	%
Total	813	--
Infant born at level III – No maternal transfer	512	63.0
Infant born at level III – Maternal transfer before birth	155	19.1
Infant not born at level III – Infant transferred to level III after birth	59	7.3
Infant not born at level III – Infant not transferred after birth	73	9.0
[a] Population of very low birth weight infants (n= 813) includes 14 births with no specified birth facility		

Data Source: Maine Vital Statistics Data, 2004-2008

Survival Status

Two hundred of the 814 VLBW infants born to Maine mothers between 2001 and 2005 did not survive one year; among these deaths more than 70% did not survive 24 hours. Among VLBW infants not surviving one year, three of four were born at Level III facilities, 6% were transferred to a level III facility after birth, and nearly 20% were not born at a Level III facility nor were transferred after birth. Of these infants not transferred after birth, nearly 90% did not survive 24 hours.[40]

Section 4.2 Enabling Services

Care Coordination for Children with Special Health Care Needs

CSHCN "are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally."[226] These children likely require a broad range of services and coordination of care plays an important role in the care they receive. Care coordination is defined by the AAP as, "a process that facilitates the linkage of children and their families with appropriate services and resources in a coordinated effort to achieve good health." Care coordination is often complicated due to the fact that there is "no single point of entry into the multiple systems of care, and complex criteria frequently determine the availability of funding and services among public and private payers."[227]

The 2005-2006 NS-CSHCN used the following components to assess receipt of care coordination:[108, 173]

- "satisfaction with communication between child's doctors and other health care providers, if needed"
- "satisfaction with communication between child's health care providers and his/her child care provider, early intervention program, school, or vocational education/rehabilitation program, if needed"
- "frequency of receiving as much help as wanted with arranging or coordinating care, if needed"

Effective care coordination was defined as the parent reporting they usually received help when needed, and they were very satisfied both with the communication among health care providers when needed, and the communication between health care providers and other programs when needed. Based on this definition, half (50.5%) of Maine CSHCN received effective coordinated care and 19.1% did not need care coordination. Nearly one in three Maine CSHCN (30.4%), however did not receive effective care coordination. Looking more closely at how often each of the three components of coordinated care was not met in Maine:[6]

- The parents of 22.3% of CSHCN reported being less than very satisfied with communication between their child's doctor and other health care professionals.
- The parents of 16.8% of CSHCN reported that they were less than very satisfied with communication between their child's doctor and school or other programs.
- The parents of 10.2% of CSHCN reported that they never or only sometimes got the extra help they needed coordinating their child's heath care.

CSHCN likely require a broad range of services including but not limited to: routine preventive care; occupational, physical, and speech therapy; prescribed medications; durable medical equipment; dental care; mental health care; vision and hearing care; and specialty care. Families of CSHCN also may need additional support services, such as family counseling, respite care, or genetic counseling. If the primary care physician is not involved in care coordination for a child with special health care needs, the end result can be "incomplete coordination and episodic, expensive, fragmented care."[227] Despite this, the parents of only one in four Maine CSHCN (26.8%) report that their child's doctor or office staff help the family with care coordination.[6]

The parents of nearly half (45.8%) of Maine CSHCN report that they or other family members spend at least 1 hour per week arranging or coordinating the child's care (including making appointments, making sure providers are sharing information with each other, and following up on the child's care needs). Parents of 14.0% of CSHCN say family members spend 5 or more hours per week on this activity. For one in four Maine CSCHN (24.6%) the child's condition caused family members to stop or cut back working. It is possible that the time needed for coordinating the child's care was partially responsible for this work change in some families.[6, 228]

There are both socio-cultural and economic barriers to care coordination. Lack of effective care coordination in Maine CSHCN was more common among:[6]

- 6-11 year olds (33.4%) than 0-5 year olds (19.4%). [The 31.4% found for 12-17 year olds was not significantly different than the percentage among 0-5 year olds.]
- Mother-only households (39.9%) than two-parent (biological/adoptive) households (23.5%)
- Children with household incomes less than 200% of the FPL (37.5%) than children with household incomes 400% or more of the FPL (22.2%)
- Children with public insurance only (36.9%) or both private and public insurance (44.0%) than those with private insurance only (23.6%)
- Children with functional limitations (47.8%) or whose needs were managed by prescription medications plus above routine need/use of services (41.1%) or above routine need/use of services alone (31.1%) than children whose needs were managed by prescription medications alone (12.7%)

Guidelines for care coordination in primary care settings have been published by the Institute for Community Inclusion and the Center for Medical Home Improvement. Common characteristics of successful care coordination models include: use of standardized criteria to identify children who need care coordination; collaboration between insurers and professionals at both the state and local level; designated care coordinator in each practice who serves as a single point of entry; ongoing assessment of the child's and family's needs; availability of up-to-date standardized educational materials about both the care of CSHCN in general and specific diseases; and inclusion of an outcome focused quality improvement component.

In a review conducted by the AAP, a growing number of studies have found that implementing care coordination models yields significant benefits, including improved patient satisfaction, fewer visits to the ED, fewer hospital admissions, and reduced length of stay and charges, if hospitalized. The AAP has issued a policy statement on care coordination for CSHCN that addresses multiple systems of care; the roles of the primary care medical home, health plans, families, and the community; barriers to effective care coordination, and characteristics of successful models of care coordination.[227]

An on-line database of information maintained by Maine's Department of Professional and Financial Regulation, provides estimates on the number of individuals who were licensed and active in select professions in Maine as of April 2010.[229] It is not possible to estimate the number who work with children or women of childbearing age.

- Occupational therapists: 888
- Occupational therapist assistants: 205
- Physical therapists: 1,578
- Physical therapist assistants: 282
- Speech language pathologists: 641
- Audiologists: 57
- Psychologists and psychological examiners: 590
- Social workers: 5,082

Insurance

Maine has a comprehensive Medicaid and SCHIP program, called MaineCare, which covers children and pregnant women with family incomes up to 200% FPL, parents with incomes up to 150% FPL and some non-disabled, childless adults with incomes up to 100% FPL. Children with incomes up to 150% FPL and infants under 1 with incomes up to 185% FPL are eligible for free MaineCare insurance; children between 150% and 200% FPL are eligible for low-cost MaineCare insurance. In addition, children in higher-income families who have a serious medical condition are served under the Katie Beckett option.[106, 124]

Maine's Office of Health Care Policy and Finance was created in January 2003 with the goal of further expanding health coverage through cost, quality, and access initiatives. The landmark of this reform was the Dirigo Health Reform law which was designed to cover uninsured and underinsured Mainers, improve quality and reduce costs. In 2005, DirigoChoice was released, a new private health insurance program that expanded the state's Medicaid program to low and moderate incomes. By 2006 the DirigoChoice program had enrolled less than 10% of individuals

who were previously uninsured; the goal of the Dirigo Health Reform Act was to ensure that every Maine resident had access to affordable health coverage by 2009.[230]

Health insurance coverage rates are a significant indicator of access to care. Lack of insurance is a primary barrier to receiving preventative and acute health care. An average of 88.4% of women in Maine of child-bearing age (15 to 44 years old) had some form of health insurance coverage, public or private and 11.6% were uninsured between 2006 and 2008.[231] According to Maine PRAMS data, in 2007, 17.1 % of pregnant women were uninsured prior to getting pregnant.[51] Maine's uninsured rates among children are lower than the national average. According to 2007 CPS estimates, 4.9% of Maine children, age 0 to 18, or an estimated 15,000 children do not have health insurance compared to 11.3% children nationally.[231] Gaps in coverage do occur; based on 2007 NSCH data 9.0% of Maine children were currently uninsured or had been uninsured at some point during the prior 12 months.[92]

From 2003 to 2007, health insurance rates among children nationwide have decreased from 91.2% to 90.9% insured. Comparatively, in Maine health insurance rates increased during the same time period from 93.3% to 95%.[231] This rate increased in Maine may be due to changes in the eligibility criteria for MaineCare.

Table 4.2.1: Health Insurance Coverage, Ages 0 – 18, Maine and United States, 2007

Insurance type	Maine		U.S.	
	#	%	#	%
Employer	182,561	61.3	46,637,142	59.3
Individual	13,775	4.6	4,164,909	5.3
Medicaid	103,721	34.8	21,697,590	27.6
Uninsured	14,584	4.9	8,872,087	11.3

Data Source: U.S. Census Bureau's Current Population Survey

According to the U.S. Census Bureau's CPS, between 2006 and 2008 one-third (33.3%) of children under 18 years and 21.6% of women ages 18 to 44 years in Maine reported their current health coverage as Medicaid.[231] An estimated 11,000 of Maine children from low-income households who are currently uninsured are income eligible for Medicaid.[232]

Using data tabulated by the Kaiser Family Foundation, 103,400 Maine children and 158,700 adults were enrolled in MaineCare in June 2009.[233] Looking at point-in-time enrollment among only the category of "families, children, and pregnant women", monthly participation increased by 62% between June 1997 and June 2008 from 99,200 to 160,900. In this same period, enrollment among the "aged and disabled" category increased by 43%. Part of Maine's yearly fluctuation in MaineCare enrollment is due to changes in the state's childless adult Medicaid waiver.[234]

Uninsured children face disparities in screening, treatment, and outcomes, including an increased risk for trauma mortality.[235] Even among the insured, there are worries. The parents of one in five Maine children who had health insurance (21.4%) at the time of the 2007 NSCH reported that their child's current insurance coverage was inadequate, meaning it never or only sometimes

offered benefits or covered services that met the child's needs, never or only sometimes allowed the child to see needed health care providers, and/or out-of-pocket expenses were never or only sometimes reasonable.[6]

Public Health Nursing

Title V partially supports 54 Public Health Nurses (4 supervisors and 50 field nurses) who are based statewide in 14 regional satellite offices. These nurses provide direct services via home visits, school health, immunizations, well child and specialty clinics, and participate in program planning/evaluation.[165]

WIC

The WIC provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.[236] To be eligible on the basis of income, gross income must fall at or below 185 percent of the U.S. Poverty Income Guidelines. Based on estimates of the USDA's Food and Nutrition Service Office, a total of 31,688 Mainers (including 5,253 pregnant, breastfeeding, and non-breastfeeding postpartum women, 5,283 infants and 21,182 children ages 1 to 5) were at or below 185% FPL in 2007.[237]

Based on an analysis of 2008 program data, 24.7% of Maine WIC participants were women, 20.6% were infants, and 54.7% were children ages 1 to 5.[238] The 12-month average participation in the Maine WIC nutrition program was 23,454 in FY2005, 24,693 in FY2007, and 26,663 in FY2009. As of January 2010, an estimated 27,256 eligible Mainers were participating in the Maine WIC nutrition program.[239] Maine PRAMS data indicate that the proportion of Maine women participating in WIC during their pregnancy has increased, ranging from 32.3% in 2001 to 39.1% in 2007.[57, 188]

Early Identification and Intervention

"Developmental screening is a procedure designed to identify children who should receive more intensive assessment or diagnosis for potential developmental delays. It can allow for earlier detection of delays and improve child health and well-being for identified children." Screening can be done in healthcare, school, or community settings. Given the regular contact healthcare professionals have with young children through well-child visits, the AAP and the American Academy of Neurology have recommended that all infants and young children receive periodic screenings for developmental delays in office-based primary care.[240]

Based on data from the 2007 NSCH, parents of one-third (32.1%) of Maine children ages 10 months to 5 years reported that, during the prior 12 months, a doctor or other health care provider had had them fill out a questionnaire about specific concerns or observations they may have had about their child's development, communication, or social behaviors. Parents of only 21.5% of children, though, had completed a standardized, validated screening tool used to identify children who are at risk for developmental, behavioral, or social delays.[92] Among

Maine CSHCN ages 0-17 years, 70.1% were reported by their parents to be "screened early and continuously for special health care needs" in 2005-2006. (NS-CSHCN) ("Screening" was defined here as having received both preventive medical and dental care in the prior year.)[91]

Section 4.3 Population-Based Services

Table 4.3.1 below describes Maine's population-based services available statewide. Following the table is more detailed information on the status of select population-based services in the State.

Population-Based Services

Table 4.3.1 Pregnant Women, Mothers and Infants

Program Name	Program Description and Need for Specific Services	State's Involvement in Direct Management of These Services and Programs	State's Involvement in Coordination with Other Agencies of These Services and Programs	Geographic Availability and Distribution	Funding mechanism
Birth Defects Surveillance	The Maine Birth Defects Program (MBDP), located within the CSHN Program, collects data on the occurrence of birth defects up to age 1; monitors trends of birth defects in Maine, to improve access to services, to assess the full impact of birth defects on the family, to develop prevention strategies to decrease the incidence of birth defects in Maine.	Health care providers who diagnose a reportable birth defect and birth hospitals are mandated to report the occurrence of birth defects in the infant and/or fetus. The MBDP uses multiple sources of data including vital records, hospital discharge data, hospital case reports, newborn hearing and blood spot screening data to identify cases and links this data through our ChildLINK database system. Referrals and information for services are made through the CSHN program.	The MBDP Coordinator works closely with hospitals, health care providers, genetic agencies, and specialty clinics to assure the timely and accurate reporting of birth defects.	Statewide	MCHBG Funds

Pregnant Women, Mothers and Infants Continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Maternal and Infant Mortality Review (MIMR)	The Maine CDC, in conjunction with CSHN, developed a Maternal and Infant Mortality Review Panel. The Panel's purpose is to identify factors contributing to maternal and infant mortality, determine strengths and weaknesses in the existing health systems and make recommendations to the Maine DHHS for systemic improvements.	The MIMR Coordinator is responsible for obtaining medical and other records, data collection, summarizing case information and presenting this information to the MIMR panel. Recommendations from this review process are shared using de-identified information to appropriate service providers and hospitals when applicable.	The MIMR Coordinator works closely with healthcare providers, hospital, and community agencies to assure collaboration between state government, health care professionals and communities to reduce maternal and infant mortality but also helps to improve the health of the entire maternal and infant population of Maine.	Statewide	MCHBG
Breastfeeding Programs	The goal is to ensure that women, families, and clinical providers in Maine have access to current, accurate information and technical assistance to make informed choices regarding breast feeding. Also access to support and clinical assistance if breastfeeding problems arise.	Services are provided by Public Health Nursing/Community Health Nursing (PHN/CHN), hospital staff, WIC, and staff from other programs.	Coordinate with WIC, PHN, CHN, Nutrition, Maine State Breast feeding Coalition.	Statewide Coalition and services.	USDA/Food and Nutrition Services (FNS), MCHBG, State Funds

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Child Traffic Safety	The goal of this program is to prevent serious traffic-related injuries and deaths to Maine's children by increasing the number of children served by the child safety seat loan programs, extending availability of special needs restraints, dissemination of educational material and resources, and provision of technical assistance.	Provide technical assistance, and resources to child safety seat loan programs.	Coordinates with Maine Transportation Safety Coalition and various agencies and programs including safety seat loan programs, law enforcement, fire personnel and medical professionals.	Statewide	MCHBG and Bureau of Highway Safety
Comprehensive Genetic Services	The goal is to ensure that families and individuals in Maine have access to comprehensive genetic services that enable them to reach informed choices and increase their ability to live healthy and productive lives. It is estimated that over 100,000 people in Maine are at risk for adverse health effects of inherited disorders or birth defects. There are limited genetic providers in the state.	Provides oversight and manages a grant to one agency providing comprehensive genetic services in Maine. Outreach is provided to Eastern Maine Medical Center (EMMC) to assure access to Metabolism Clinic. Other clinical genetic services are provided in Portland at Maine Medical Center (MMC) with telemedicine and telephone consults if needed for northern Maine families.	The Genetics Program provides grant funding to one agency that provides comprehensive genetic services, including risk assessment, laboratory and clinical diagnosis, genetic counseling, case management/referral, and education to providers and the public.	Statewide via outreach clinics and education.	Grants are funded by state funds, MCHBG funds are used for coordination and education.

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Newborn Bloodspot Screening Program	Maine screens for 32 disorders and 100% of Maine infants with positive test results receive proper referral within one week of diagnosis.	Birth hospitals have responsibility for specimen collection. The State assures all infants are screened and reports all screening test results to medical providers and hospitals. State is responsible for tracking abnormal results until a diagnosis is confirmed and the child receives appropriate treatment. State is a resource for technical assistance and problem resolution. One metabolic clinic receives partial funding through the state.	Coordinates with genetic specialists, agencies, hospitals, laboratories, health care providers and families.	Statewide	Hospitals/ Providers are charged $110.00 per specimen for newborn screening. This funds all expenses for the program; lab, UPS contracts, salary of program manager, Newborn Screening Coordinator and daily program costs.
Family Planning	Maine youth initiate sexual intercourse at a lower rate than the national average; 45.4% of Maine high school students and 47.8% of US in 2007. Maine's rate decreased from the 1997 rate of 51.6%. [241] Maine is close to meeting the HM2010 goal of increasing to 60% the proportion of 9th-12th graders who have never had sexual intercourse. [242]	Funds are granted to the Family Planning Association (FPA) of Maine. The Maine CDC has sole responsibility for management of this grant.	Coordinates with the FPA who in turn coordinates with direct service providers. Adolescent sexuality issues are also addressed through evidence-based teen pregnancy prevention, and technical assistance and training through the FPA, and HIV prevention education at the Maine DOE.	Family Planning services are available in 30 clinics throughout all of Maine's 16 counties.	Title XX Social Service Block Grant, state funds and a small amount of MCHBG

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Home Visiting	The goal is to ensure that first time families desiring support via home visitation have long-term access to programs such as Healthy Families, Parents as Teachers, Parents Are Teachers Too, and/or PHN/CHN.	Funds are granted to 14 agencies to provide direct services across the state. The DHHS contracts with 1 agency for evaluation of the home visiting initiative. The Maine CDC partners with the OCFS in the development and management of these grants.	Coordinates with funded sites, PHN, CHN, and Maine Children's Trust Early Head Start	Statewide for first time families via Healthy Families (HF), Parents as Teachers (PAT), Parents are Teachers Too (PATT). Statewide for identified health needs via PHN and CHN	State funds and MCHBG.
Multidisciplinary Review on Child Death and Injury due to Abuse/Neglect	A multi-disciplinary team of professionals established by state law in 1993 to review child deaths and serious injuries in Maine with a focus on improving our systems of safety and care for children.	MCH Medical Director, Title V Director, 1 PHN Nurse supervisor, and 1 staff member from MIPP serve as representatives from Maine CDC	Task force membership is multi-disciplinary and includes law enforcement, Medical Examiner, Maine CDC, Child Protective Services, and state forensics.	Statewide	Legislative funds

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Newborn Hearing Screening	Program development began in 2000. Program components include collection and analysis of newborn hearing screening data; monitoring of those screened as refer for follow-up assessment and diagnosis, and connecting families to needed services.	Hospitals and providers must report results to the Newborn Hearing Program. The Program provides technical assistance and is responsible for tracking to ensure hearing impaired infants receive appropriate interventions.	Coordinate with hospitals, audiologists, CDS, families, primary care providers. Stakeholder representation on the Governor appointed Advisory Board include: Audiologist, Physician Speech-Language Pathologist, Nurse Certified Teacher of Deaf BGSD EI Service Provider Culturally deaf person Hard-of-Hearing Person Parent of culturally deaf child Parent of deaf child Parent of hearing child Hospitals, CDS, Health Carriers, and DHHS Representatives	Statewide	CDC, MCHBG.

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Oral Health Program Grants	With a minimal public infrastructure for the delivery of oral health services, there is a need for the provision of consultation and technical assistance to government agencies, non-profit organizations and other groups to facilitate access to and delivery of quality oral health care services in all areas of Maine. Schools and community agencies receive funding as well as consultation and technical assistance to assist them in delivering clinical services and implementing oral health promotion activities and educational programs.	Funds are provided (through grants managed by the OHP) to assist non-profit dental clinics to schools and community agencies for school-based oral health education; community level oral health promotion and education and disease prevention activities provided by community agencies. Federal grants have supported systems and capacity building efforts, including workforce development initiatives.	Provides technical assistance and consultation as needed and participates in a number of workgroups and committees both within and outside of state government that have mutual concern for oral health.	Geographic distribution is statewide with priority given to rural and underserved areas where funding is essential.	MCHBG and state funds, Preventive Health & Health Services Block Grant (PHHSBG) supports staff who coordinate and implement the programs.
Perinatal Outreach	Provide consultation regarding perinatal issues including transport to birth hospitals and providers as requested.	Provides oversight of contract purchasing services.	Serves as liaison to any agency requesting assistance.	Statewide	MCHBG, state funds
Public Health Nursing (PHN) and Community Health Nursing (CHN) Referrals	PHN/CHN goal is to ensure that women and families in Maine have access to pre/post natal care and pediatric care. They also ensure that clients have sufficient information to make informed choices for themselves and their families.	Services are provided directly by PHNs and via contracts with CHN agencies. These contracts are managed by PHN.	Coordinate with CHN and other agencies providing home visitation. Coordinates with other appropriate programs in relation to communicable disease.	Statewide	MCHBG and state funds

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Shaken Baby Education	Head trauma is the leading cause of death for infants and small children. MIPP functions as a resource providing expertise and materials to appropriate parties for increased prevention education.	MIPP provides prevention education and materials upon request to any agency, group or organization in the state. Coordinates a one-day informational conference for individuals who have regular contact with infants and small children. Partners with the AHT task force which implements the Period of Purple Crying, SBS prevention education within Maine hospitals.	Coordinate with interested parties including parents, OCFS, Public Safety, Corrections, Health Centers, Day Care Providers, Hospitals, Public/Community Health Nurses, Physicians, Child Abuse and Neglect Councils, Health Educators, Community Action Programs, Child Development Resource Centers, Community Counseling/Foster Parent Programs, and Acquired Brain Injury Advisory Council.	Statewide	PHHSBG, MCHBG, state funds
SIDS	PHN and CHN accept referrals from the Chief Medical Examiner's (CME) Office to contact families with a child that may have been a SIDS death. Referrals are made within days of the death in order to provide timely support and information to the family via PHN/CHN. On-going support is offered throughout the grieving process. Also coordinate workshops to update the greater provider community regarding SIDS research and prevention initiatives.	The CME office makes referrals to PHN Supervisor who is designated as SIDS contact person for the state. This person is the liaison for information between the CME office and the PHN/CHN working with the family.	Coordinate with CME Office, OCFS, PHNs, CHN, Law Enforcement, Emergency Medical Services staff, and the Child Death and Serious Injury Task Force.	Statewide via PHN/CHN	MCHBG and General Fund

Pregnant Women, Mothers and Infants continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Safe Families Partnership (SFP)	The SFP is a public-private partnership coordinated by the Maine CDC, which takes a public health approach to reducing domestic violence, sexual assault, and dating violence through trainings, data, and tools to assist in communicating more effectively with clients.	Does not provide direct services	Coordinates with public and private partners to develop and administer training, build surveillance systems, and disseminate information.	Statewide	Office of Women's Health, federal CDC
Children and Adolescents					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Maine Injury Prevention Program	Unintentional injury is the leading cause of death and disability among Maine children aged 1-24. This program's goal is to decrease the incidence of unintentional injuries to children and youth.	MIPP staff are the link between public health partners and injury prevention data, resources and training. The MIPP contracts with the Maine Poison Center to provide education and outreach about both intentional and unintentional poisonings. Works with fitting stations to ensure proper installation of car seats in vehicles. Offers free car seats to eligible families.	Coordinates with public health partners to link to public health data, resources and training related to injury prevention. Public health partners include; PHN, CHN, HV programs, Healthy Maine Partnerships (HMP), schools, PAT, and PATT. Approximately 36 child safety seat sites located across the state. Recruits, maintains and manages a network of 32 fitting stations. Provides supplies to ensure proper installation of seats, and educational materials for caregivers.	Statewide	MCHBG, Bureau of Highway Safety, state funds

Children and Adolescents continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Childhood Lead Poisoning Prevention Program (CLPPP)	The CLPPP distributes lead poisoning prevention materials to pregnant women via OB/GYNs, Certified Midwives, and through MaineCare, and HMPs; direct mailing of lead poisoning prevention materials and offer of a free lead dust test kit to all parents of 1 and 2 year olds in the state; funds HMPs to provide education and lead dust testing services to landlords in high risk cities; funds Department of Environmental Protection (DEP) for development of a Lead Safe Housing Registry and lead safe work practice trainings for workers, landlords and homeowners.	State provides direct services for mailings and responses to mailings, and contracts with HMPs for lead dust testing and outreach.	Coordinates with MaineCare, DEP and other state agencies for education, outreach and surveillance. Coordinates with Health and Environmental Testing Laboratory (HETL) for lead dust testing.	Statewide	CDC and state Funds
	Lead surveillance and monitoring throughout the state. Promotes blood lead testing in target populations. Environmental interventions and assistance in medical management of lead poisoned children.	Does not provide direct services.	Coordinates with PHN for case management services for lead poisoned children and their families; coordinates with private lead inspectors for environmental investigations; DEP for regulation abatement activities; MSHA for financing of lead abatement work; and HETL for blood lead analysis. Collaborates with WIC, HeadStart and MaineCare to promote screening.		

Children and Adolescents continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Youth Involvement and Leadership	Effective youth involvement and youth-adult partnerships decrease adolescent risk behaviors by promoting leadership development and aspirations, and by improving programs through youth input. Local programs are supported through a statewide network, regional trainings, and a yearly conference. The Maine Youth Suicide Prevention Program also supports peer mediators in selected schools.	The state supports the Maine Youth Action Network through a contract with Peoples Regional Opportunity Program in Portland.	Grantee provides regional training to local youth leadership groups supported by the Maine CDC Office of Substance Abuse and DOE, and provides all groups with opportunities to interact and cross train each other. Additional supports are provided to Youth Advocacy Projects (YAP) that are part of the HMPs, and address tobacco, physical activity, nutrition, and school health.	Approximately 82 programs statewide, including over 30 YAP groups.	State funds, Federal funds (MCHBG match) and Master Tobacco Settlement Funds for Youth Advocacy Projects
School-Based Health Centers	National data shows that teens are the most under-served age group for both preventive and acute health care. Maine has very few teen health specialists and few health centers with teen walk-in hours. SBHCs are a point of access for comprehensive health care and a safety net for many teens that would otherwise not receive care. In addition, these centers coordinate their activities with the adolescent's medical home.	SBHCs are sponsored by local medical organizations and receive reimbursement from MaineCare, and private insurers. The Maine CDC provides some base funding; the centers operations are also supported by local grants and in-kind contributions.	Coordinates with local medical providers and the OMS (Medicaid). SBHCs coordinate with school personnel, including school nurses and guidance counselors, and work closely with school health coordinators. Some SBHCs provide mental health services, oral health services, and/or reproductive health services, so there is also coordination with state agencies that work in these areas. Full reproductive health services are offered at 8 SBHCs including 1 middle school.	There are 27 SBHCs located throughout the state. 19 are supported by Maine CDC grants, others are provided with technical assistance upon request.	State funds, Federal funds (MCHBG match) and Master Tobacco Settlement Funds

Children and Adolescents continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
School Oral Health Programs	School Oral Health Programs provide classroom-based education, fluoride mouth rinse, and dental sealants (for 2nd grade students) in grades K-6. A major incentive for the program at its inception 30+ years ago was to provide the fluoride component. Schools must have a 30% free and reduced lunch rate to participate, and priority has been given to schools in non-fluoridated communities, based on a formula to determine eligibility and prioritize funding. Schools receive small grants on a per-capita basis to support these programs. Use of the fluoride mouth rinse has decreased. The sealant component is provided in about half of participating schools.	Oral Health Program (OHP) manages small grants to individual schools, school districts and several agencies on behalf of schools. These grants involve about 250 schools. The OHP coordinator provides consultation and technical assistance to local program directors throughout the school year, and provides regional annual training meetings each fall.	The OHP provides consultation, technical assistance and materials to any school in Maine on request. Staff work with the Maine CDC Coordinated School Health Program, the DOE, and other groups to include and integrate oral health education into comprehensive school health education curricula.	Participation in the School Oral Health Program is voluntary. Schools must meet eligibility requirements. Further expansion is limited by available funding. There are participating schools in all of Maine's 16 counties.	State Funds (Tobacco Settlement in SFY 2011)

Children and Adolescents continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Youth Suicide Prevention	The Maine youth suicide rate is higher than the national youth suicide rate. This is a program initiated during the Gov. King Administration through the CC. Goals are to reduce the incidence of suicidal behavior among Maine Youth 10-24 years of age and to improve youth access to appropriate prevention and intervention services.	Commissioners and Senior Staff from Departments of Health and Human Services, Education, Public Safety and Corrections cooperate to strengthen the state-supported infrastructure of service provider agencies and schools with a statewide crisis hotline, a statewide information resource center, training and technical assistance.	Gatekeeper training is offered via a contract with Medical Care Development. Program reaches medical professionals, college communities, clergy and substance abuse counselors.	State wide via gatekeeper training and other agencies directly involved with youth.	State Funds, MCHBG, PHHSBG, and SAMHSA
Youth Violence Prevention	Maine youth do not experience violence at the same level as their urban counterparts, but violence remains a concern. Per the 2007 YRBS 40% of male and 24% of female high school students in Maine reported being in a physical fight within the past 12 months. [243] Data from Maine's Uniform Crime Reporting program shows incidence of hate crimes has risen since 2003. [244]The 61 incidents occurring in 2008 involved 71 victims, perpetrated by 58 offenders; the most frequently reported location of bias crimes in 2008 was schools and colleges. Maine's Youth Violence Prevention Program's goal is to decrease violence among our youth and to monitor youth violence incidents and trends.	Program provides the University of Maine with a grant to provide youth violence prevention training. Provides a grant to the Attorney General's Office to set up a Civil Rights Team. Developed a website for dissemination of youth violence prevention information	MIPP provides funding for annual conference for school personnel to increase their knowledge and ability to integrate violence prevention practices into the educational setting. A cooperative agreement with the University of Maine assists schools to establish school-based peer mediation and/or conflict resolution programs.	State-wide	MCHBG, PHHSBG, state Funds

Children with Special Health Care Needs					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
Traumatic Brain Injury (TBI) Program	Expand and improve State and local capacity to enhance access to comprehensive and coordinated services to individuals with TBI and their families.	Activities at a statewide level to promote and improve access to services are coordinated by the Office of Adults with Cognitive and Physical Disabilities.	Collaborates and builds partnerships through the Acquired Brain Injury Advisory Council. Membership consists of DOE, DOL, Department of Corrections, and programs representing injury control, mental health, providers, elderly, and individuals with TBI and their families. The CSHN Director is a member of the Advisory Council.	Statewide	HRSA, MCHBG, DCSHCN
Early Childhood Initiative	Developed a state Early Childhood Plan that helped secure needed resources, assist parents of young children, balance cognitive development with emotional and physical needs of young children, and guarantee effective service systems for young children.	Does not provide direct services	Coordinates with public and private entities focused on and/or providing services to young children and their families.	Statewide	Federal Funds, (MCHB)
Women's Health Initiative	Integration of comprehensive women's health within the Maine CDC's publicly funded health programs and across state government departments and other private and public entities interested in promoting women's health.	Does not provide direct services	Coordinates with public and private entities focused on and/or providing services to women of reproductive age.	Statewide	Federal Funds (MCHBG), state funds

Children with Special Health Care Needs continued…					
Program Name	**Program Description and Need for Specific Services**	**State's Involvement in Direct Management of These Services and Programs**	**State's Involvement in Coordination with Other Agencies of These Services and Programs**	**Geographic Availability and Distribution**	**Funding mechanism**
EPSDT	In November 2007 the informing and follow-up component of the EPSDT was moved from the Immunization Program within the Maine CDC to the CSHN Program. PHN/CHN receive referrals from EPSDT to assist children needing services following a well child visit to a primary care physician.	PHN provides services to review and triage all Bright Future Periodicity forms (BR19) generated from medical provider practices. Follow-up services to families are provided directly by PHNs and via contract with CHN agencies. The contracts are managed by PHN	PHN works cooperatively with the CSHN Program and the OMS to provide interventions to parents and guardians of children receiving MaineCare benefits.	Statewide	MCHBG and state funds

Status of Select Population-Based Services

Newborn Bloodspot Screening

99.5% of all Maine newborns were screened for 32 disorders in 2009. There were 20 documented refusals for screening based on religious objections. A total of 22 newborns, or 1 in 700 births in 2009 were confirmed to have a condition through screening. All infants were followed to appropriate treatment.

Table 4.3.2: Confirmed Cases of Conditions Tested by Maine's Newborn Screening Program, 2006-2008

Type of screening test	# of Confirmed Cases			
	2009**	2008	2007	2006
Phenylketonuria (PKU)	1	2	0	1
Congenital hypothyroidism (primary)	6	11	8	10
Galactosemia		0	1	0
Sickling Disorders		0	0	2
Maple Sugar Urine Disease		0	0	0
Homocystinuria		1	0	0
Congenial Adrenal Hyperplasia		1	0	0
Biotinidase Deficiency	1	0	1	3
MCAD	1	0	2	1
Toxoplasmosis		0	0	0
"Expanded Metabolics"	2	2	2	3
Cystic Fibrosis*	9	8*	0	--
*population-wide testing for CF did not begin until 2008. **In 2009, there were 2 clinically significant variants				

Data Source: Maine's ChildLINK Data system

The success of newborn screening is tied directly to having an adequate specimen submitted for testing. Reasons for unsatisfactory specimens include poor specimen quality such as poor soak, damaged or contaminated specimens. The statewide rate of unsatisfactory specimens is less than 1%. Individual hospital unsatisfactory rates range from 0.0% to 3.77%. The total number of specimens submitted per hospital, and the experience of staff in obtaining specimens affect this rate. For example, the highest unsatisfactory rate is at a hospital with only 53 births and two unsatisfactory specimens. The Newborn Screening Program (NBSP) works closely with birthing hospitals to improve specimen quality.

There has been a great deal of press recently around retention and use of residual blood spots. The NBSP will work with the Advisory Committee to review current practice of storing residual bloodspots indefinitely and for what purposes, and seek recommendations. The NBSP will continue to monitor national and regional policy discussions, and review and revise policies on retention and use of leftover bloodspots.

Another emerging issue relates to adding new conditions to the screening panel. The National Secretary Advisory Committee on Heritable Disorders in Children has made a recommendation for all states to add severe combined immunodeficiency (SCID) to the screening panels. SCID is tested using a new screening method that is being piloted at the New England Regional Newborn Screening Program and in Wisconsin. There is an opportunity for Maine to benefit from the experience of these two states. The NBSP will discuss this new testing and seek guidance and recommendations for adding SCID to the screening panel.

Newborn Hearing Screening

All birth facilities plus one midwifery practice in Maine conduct newborn hearing screening. The Maine Newborn Hearing Program (MNHP) reports that 98% of the live births in Maine for 2008 were screened for hearing loss. All birth hospitals in Maine conduct newborn hearing screening. Data entry of screening results for 2004 has not yet been completed, but the MNHP estimates that 97% of the live births in the state were screened for hearing loss.

There are 31 Audiology evaluation facilities in Maine that can evaluate infants and young children. Of these, five facilities can complete a full audiological diagnostic evaluation recommended by the MNHP for infants birth to 6 months, the other 26 can provide some of the testing. Audiologists began reporting to the MNHP on a voluntary basis during 2004. Reporting became mandatory in September 2007. During 2008, MNHP received 137 (69%) reports on those referred to an audiologist. Of the 137 reports, 18 were identified with hearing loss. Reports were received on 9 who passed or missed their newborn hearing screen and were identified with hearing loss. Of the 18 babies who referred on their hearing screen and were identified with hearing loss, MNHP received reports that 4 children have Individual Family Service Plans with CDS, our Part C provider in Maine.

Lead Screening

Maine's Lead Poisoning Control Act was amended in 2002 to require that all children insured through MaineCare must have their blood lead levels tested at 1 and 2 years of age. Children who are not insured through MaineCare must have their blood lead levels tested at 1 and 2 years of age unless the child's primary health care provider, based on professional judgment and the lead poisoning risk assessment tool, determines that the child's level of risk does not warrant testing. All children 3-6 years of age should be tested if their risk for lead exposure has changed or their residence has changed since their previous blood lead test. [145] The Maine CLPPP tracks lead poisoning through the collection and analysis of blood lead test results for children under the age of 6 years. An eBLL is a blood lead level greater than or equal to 10 micrograms per deciliter of blood. The proportion of 1 year old Maine children screened for eBLL in 2007 was 48.0%, a significant increase from the proportion in 2001 (39.2%). Over the same time period, the screening rate for Maine 2 year olds also increased significantly, from 15.7% to 23.3%. For 1 year old children, the blood lead screening percent was highest in the Aroostook Public Health District (67.7%) and lowest in the Central Public Health District (28.8%).[146]

More than two-thirds of children (67.1%) born in 2003 were screened for eBLL levels before 3 years of age.[146] Throughout Maine, the proportion of children screened ranged from 57.8% in the Cumberland Public Health District to 80.2% in the Aroostook Public Health District.[146] In addition to Maine CLPPP monitoring roughly 15,000 blood lead tests each year and identifying children with eBLL, the Maine CLPPP provides services to families based on the child's blood

lead level including lead environmental testing of residences for children with venous blood leads 15ug/dl and greater and working with families, their physicians, visiting nurses, and lead inspectors to make sure blood lead levels return to normal. [145]

Breast Screening.

American Cancer Society guidelines for breast cancer screening among 18 - 44 year old women recommend that 20-39 year old women receive a CBE at least every 3 years and women aged 40 and over receive a CBE annually. Annual mammography is recommended beginning at age 40. [66] HP2010 does not have a CBE objective, but does include a goal to increase the proportion of women aged 40 years or older who have had a mammogram in the preceding 2 years to 70%.[49] HM2010 sets a target of 75% for women aged 40-49 having had both a CBE and a mammogram in the past 2 years.[55]

The 2008 BRFSS survey found that 93.4% of 20-39 year old Maine women reported that they had ever had a CBE and 88.9% reported that they had had one within the past 3 years. Nearly all (99.5%) of 40-44 year old Maine women reported ever having had a CBE, but only 74.8% reported having had one in the past year. Eight out of 10 (80.9%) 40-44 year old women reported ever having had a mammogram; 72.5% reported having had one in the past 2 years. Almost three-fourths of 40-44 year old Maine women reported having had both a CBE and a mammogram in the past 2 years. [54] Maine has met the HP2010 goal, but not the HM2010 goal for breast cancer screening among 40-44 year old women. [49],[55] (Note: The number of 40-44 year old women participating in the 2008 BRFSS was too small to allow for analysis of breast cancer screening by demographic subgroups.)

As part of Maine's efforts to reduce breast and cervical cancer morbidity and mortality, the Maine Breast and Cervical Health Program provides breast and cervical cancer screening and diagnosis services to underserved women, provides public and professional education, and supports community partnerships to enhance statewide cancer control activities.

Cervical Screening.

HP2010 cervical cancer screening goals are to increase the percentage of 18+ year old women who have ever had a Pap test to 97% and the percentage of women in this age group who have had a Pap test within the preceding 3 years to 90%.[49] HM 2010 sets a higher target of 92% for 18+ year old women having had a Pap test within the prior 3 years. [55]

The 2008 BRFSS survey found that 92.7% of 18-44 year old Maine women reported ever having had a Pap test and 88.2% reported having had a Pap test in the preceding 3 years. The percentage of women who had had a Pap test in the prior 3 years varied significantly by age, education, and income, and, while Maine has not yet met the HP2010 and HM2010 Pap test goals for 18 - 44 year old women as a whole, some demographic subgroups have met the goals. Women aged 25-34 and 35-44 were significantly more likely than 18-24 year old women to have had a Pap test in the prior 3 years (93.4% and 92.8% vs. 74.3%, respectively). College graduates were significantly more likely to have had the test in the past 3 years than women with a high school education/GED or less (i.e., no post-secondary education) (94.6% vs. 79.3%). Women with a household income of $50,000 or more were significantly more likely to meet the Pap test goals than women with household incomes less than $25,000 or $25,000-$49,999 (96.4% vs.

83.2% and 87.4%, respectively). No significant differences were seen by public health district (data not shown). [54]

As part of Maine's continuing effort to eliminate cervical cancer, several programs within the DHHS and the Maine CDC dedicate time and resources to cervical cancer-related education and intervention including MaineCare, Maine Breast and Cervical Health Program, Maine Comprehensive Cancer Control Program, Maine Cancer Registry, and the Maine Immunization Program. For women in need of financial assistance, the Maine Breast and Cervical Health Program within the Maine CDC provides free breast and cervical cancer screening for eligible women: a woman must be 40 and older; meet certain income guidelines; have no health insurance (including MaineCare and Medicare Part B), or have insurance that does not cover screening services.

Post Partum Depression Screening: Maine is working to build population-based screening for postpartum depression. Several Title V programs are currently screening for post-partum depression: PHN uses the Edinburgh, WIC and HV use PHQ-2 (reporting will be included in the new WIC management information system). The PHQ-2 is also included on the Bright Futures forms.

Based on 2004-2007 Maine PRAMS data, 8.3% of new mothers reported feeling down, depressed, or hopeless "often" or "always" after the birth of their new baby; 7.1% reported that they often or always had little interest or pleasure in doing things after the birth of their baby. Among new mothers, 14% reported that their health care provider had told them that they had depression since giving birth to their baby. Overall, about 1 in every 5 new mothers (19.3%) reported either depressive symptoms or having received a diagnosis of depression. [51]

We will continue to analyze PRAMS data to learn more about women affected by postpartum depression and we are working with WIC, PHN, and HV to develop reports based on their data.

Shaken Baby Syndrome: Abusive head trauma (AHT), which includes Shaken Baby Syndrome, can be caused by direct blows to the head, dropping or throwing a child, or shaking a child. Thirty-nine Maine residents under 2 years of age were hospitalized for AHT between 2000-2008.[62] Four of these children had multiple hospital discharges on which AHT was noted. (Data reported here are limited to initial AHT hospitalizations.) Two-thirds (66.7%) of the children were male. The most common reported perpetrator was the father, stepfather, or boyfriend (28.2%), followed by a non-related caregiver (10.3%); the relationship of the perpetrator to the child was not noted for 53.8% of the children. [62]

In March 2009, Maine implemented the Period of Purple Crying (POPC), an initiative focused on educating parents and caregivers about infant crying and development, communicating the importance of never shaking a baby or child and offer alternative measures to help care for a crying baby. The program is designed for families to receive the same information from multiple sources; first at childbirth education classes and when they give birth; families are given a DVD to watch in the hospital and take home with them so they may share with other caregivers; follow-up conversations occur during a home visit or in the pediatric care provider office. Every

birthing hospital in the state has been trained to provide the POPC Program to all new parents. The program is aimed at reducing incidents of AHT.

Immunization.

Maine's immunization rates were once among the highest in the United States and they have not changed statistically over time, but while immunization rates have increased in the United States overall, Maine's rates have not. Maine now has one of the lowest immunization rates in the country. In 2007, according to the NIS, the percent of Maine's 19-35 month old children who had received the 4:3:1:3:3 was the 10th lowest in the nation. [138]

Last year, the Maine Immunization Coalition was established. The Coalition is comprised of health professionals, health care organizations, and physicians' associations. Their goal is to reinstate universal immunization in Maine, and they have been diligently working with state lawmakers and other key stakeholders in immunization.

On May 10, 2010, LD 1408, "An Act to Establish the Universal Childhood Immunization Program" was passed. This bill creates the Universal Childhood Immunization Program to provide immunizations and cover the costs of recommended vaccines for children in the State not covered by the federal Vaccines for Children Program. The bill creates the Maine Vaccine Board to determine the costs of purchasing and administering the vaccines and directs the board to assess these costs to appropriate health insurers in the State. The funding from this legislation will increase the Maine Immunization Program's (MIP) ability to provide vaccine coverage to children.

In 2009, the MIP requested assistance from the MCH Epi Team to examine the estimates of Maine's Medicaid population provided by the federal government, which help determine levels of funding. Working with state Medicaid data analysts, the MCH Epi Team was able to provide more accurate estimates to the MIP. These data were accepted by the federal CDC and additional funding was provided to the state to meet the vaccination demands.

Birth Defects Registry

Maine has a Birth Defects Program (BDP) to identify and investigate birth defects in children. Maine statute requires the BDP to maintain a central registry of birth defect cases and to collect, analyze and distribute information and undertake necessary research to identify causes, risk factors and strategies for prevention and provision of services. Currently Maine collects data on 21 birth defects. The list of reportable birth defects will be updated in the fall of 2010, following National Birth Defects Prevention Network (NBDPM) recommendations; 3-4 new birth defects will be added and birth defects that are not on the recommended list from NBDPN will be removed. Additional birth defects will be added to the list as resources and funding are available. There are two abstractors working on case abstraction. The BDP coordinator has initiated ongoing meetings with the abstractors to develop quality assurance activities and discuss data collection issues. In 2010, data from the Maine BDP will be submitted for the NBDPN annual report. Other BDP activities include: (a) sending out a letter to all families with a confirmed diagnosis to inform them of available services and resources; (b) developing a mechanism for referral to CDS; and (c) collaborating with the New Hampshire Birth Conditions Program to look at arsenic and birth defects. The New England Birth Defects Consortium of

which Maine is a part has submitted a grant application for further funding to continue the Consortium. One of the projects under consideration is to expand the use of prenatal vitamins by pregnant women by collaborating with the state WIC programs to disperse the vitamins to low income women.

Oral Health

Dental caries is largely preventable through community-based efforts that optimize the use dental sealants and fluoride (which, in combination, are considered to serve as an "immunization" against tooth decay in children). [246] HM2010 includes a goal to increase the proportion of 8 year old children who have received dental sealants on their molar teeth to 50%. The kindergarten/third grade version of the Maine IYHS is comprised of two components: 1) a questionnaire completed by the parent/primary caregiver 2) a dental screen, at which time height and weight measurements of the child were also obtained. Unweighted data from the 2009 IYHS indicate that 49% of parents of kindergarten and third graders reported that their child had at least one sealant (27.4% for kindergarteners and 73% for third graders). In addition, results from the dental screen show that 35.1% of students had at least one sealant on a permanent molar (14.4% of kindergarteners and 58.9% of third graders).Among kindergarteners, 15.9% were observed to have untreated dental caries and 14.3% were identified as needing early or urgent oral health during the oral health screen. Among third graders, 19.5% had untreated dental caries and 17.4% needed early/urgent care for their teeth. [247]

For over 30 years, Maine's SOHP, a component of the OHP, has provided grant funding, training and technical assistance to eligible public elementary schools with activities focused in kindergarten through grade 6. Eligibility is based on a formula that includes the proportion of students eligible for the Free and Reduced Lunch Program and the proportion of the community with fluoridated drinking water. Each program is locally designed; all schools provide oral health education, a majority have offered weekly fluoride rinse programs, and within the limits of funding, schools may provide dental screenings and dental sealant programs for second graders. The mouth rinse is purchased by the state OHP and distributed to participating schools. In 2008, there were 234 school-based dental programs. These state-funded programs provide preventive services only. State budget cuts in SFY10 and 11 will mean that the SOHP will be streamlined and reorganized. [248]

HP2010 seeks to increase the proportion of the U.S. population served by community water systems with optimally fluoridated water to 75%. As of December 31, 2008, 48.0% of Maine's population was on public water supply. Maine had 67 fluoridated community water systems that served 133 communities, including three communities with naturally occurring fluoride. Just over a third (38.3%) of the total Maine population and more than three-quarters (79.6%) of the population on public water supply received fluoridated water.[249],[250]]

Other State Population-Based Services

The following Table describes other population-based services provided by the State for Title V populations.

Table 4.3.3

Pregnant Women, Mothers and Infants				
Program Name	**Program Description**	**Agency/Organization Providing Service**	**Geographic Availability and Distribution**	**Funding Mechanism**
TANF	Provides a wide range of services such as cash assistance, employment, training and education opportunities, and work supports such as childcare to qualified families with children.	DHHS/OIAS	Statewide	Federal and state general funds
Career Center, Employment Resource	The Career Centers offer a range of services to women from assistance with enhancing, through training if necessary, job skills, job searches, and career exploration. The centers also make referrals to local agencies such as WIC, Parents are Teachers Too, Adult Education if a GED is required, housing, and child care to assist women in obtaining employment.	DOL	Statewide	State Funds
Helping Incarcerated Parents	The focus of the program is to strengthen and support good parenting, reduce the losses to children and improve the parent-child relationship by providing time together, helping parents to communicate better with their children, and reduce the cycle of child abuse and neglect.	Department of Corrections	Statewide for State Correctional System (Does not include County Corrections)	State General Fund, Inmate Benefit Fund at Maine Correctional Center

Children & Adolescents				
Program Name	**Program Description**	**Agency/Organization Providing Service**	**Geographic Availability and Distribution**	**Funding Mechanism**
MaineCare	Health insurance for pregnant and postpartum women and infants with income ≤ 200% of FPL.	DHHS/OMS	Statewide	Federal and state funds
Children's Services	Children's Behavioral Health Services provides a range of community based services and supports, via contract with APS Healthcare through the State of Maine, ensuring that services are in place to support children's behavioral and mental health issues.	DHHS/Child Behavioral Health Services (CBHS)	Statewide through 3 Regional sites	State general funds, federal funds
Career Centers Youth Development System	The Maine DOL provides, through a statewide Career Center System a resource for any person seeking work or training, or any employer seeking workers. For youth, services may also include tutoring, paid and unpaid work experiences, internships, job shadowing, leadership development which may include community service to encourage responsibility and other positive social behaviors, and assistance with transition to work.	DOL	Statewide	Wagner-Peyser and Workforce Investment Act
MaineCare	Health insurance for children 1 to 18 years of age with incomes ≤ 200% of FPL.	DHHS/OMS	Statewide	Federal and state funds
Child Care and Head Start	The Maine Office of Child Care and Head Start administers licensed child care environments for children 6 weeks through 15 years. This office funds and contracts with a system of child care resource and referral centers, (Resource Development Centers), which make referrals to parents seeking quality child care, provide information on financial assistance and vouchers, and host professional development sessions for child care providers.	DHHS/OCFS	Statewide	State and federal funds
Special Education Services	The purpose is to ensure that all children with disabilities (ages 3-21) have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for employment and independent living.	DOE	Statewide	State General Funds

Children With Special Health Needs				
Program Name	**Program Description**	**Agency/Organization Providing Service**	**Geographic Availability and Distribution**	**Funding Mechanism**
Special Education Services	The purpose is to ensure that all children with disabilities (3-21) have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for employment and independent living.	DOE	Statewide	Federal and state funds
Child Care and Head Start	Child Care Plus ME offers training and assistance to support child care centers, child care homes, families, preschools, public schools, and community programs so that they may provide quality experiences for all children, including children with challenging behaviors and children with medical, physical, and developmental disabilities.	DHHS/Office of Child Care and Head Start, University of Maine System	Statewide	Federal and state funds
MaineCare	Health insurance for children 1 to 18 years of age with income ≤ 200% FPL.	DHHS/OMS	Statewide	Federal and state funds
Maine Educational Center for the Deaf and Hard of Hearing (MECDHH)	Statewide Educational Services (SES), a division of the Maine Educational Center for the Deaf and Hard of Hearing offers support through its Early Childhood and Family Services (ECFS) program to children, newborn to five years of age, who are deaf, hard of hearing, or have a suspected hearing loss. ECFS is a state-funded, independent agency providing information, support and training to families and professionals throughout Maine. Their services include home visits and are provided without cost to families.	MECDHH	Statewide	State funds
Family to Family Information and Resource Centers	Parent to Parent of Maine is a network of resource centers for families of children with special health care needs and disabilities. These centers provide information to parents on services, resources and support.	Maine Parent Federation	Statewide 6 regional centers	HRSA, MCHB, DCSHCN
Child Development Services (CDS)	The 9 CDS sites have primary responsibility to deliver services for children ages birth to five with disabilities under IDEA Parts C and B	DOE	Statewide 9 sites	State General Funds

Children With Special Health Needs continued…				
Program Name	**Program Description**	**Agency/Organization Providing Service**	**Geographic Availability and Distribution**	**Funding Mechanism**
Children's Services	Children's Behavioral Health Services (CBHS) provides a range of community based services and supports, via contract with APS Healthcare through the State of Maine, ensuring that services are in place to support children's behavioral and mental health issues.	DHHS/CBHS	Statewide through 3 regional sites	State General Funds

Section 4.4 Infrastructure Building Services

Maine State government has a lean state employee-based infrastructure with very minimal local or county health department presence. Historically, provision of services to our residents is via public-private partnerships with the state agencies providing funds and private sector agencies/individuals delivering direct services. (In some instances the private sector does obtain additional funds for augmenting specific services.) Service delivery by community agencies allows for tailoring of services specific to population needs and attention focused toward risk groups.

The coordination of services across funding sources, state departments, and geography is the biggest challenge to achieving an efficient and comprehensive system of services and care. Programs serving the MCH population are housed in various departments including the Department of Health and Human Services (Health, Integrated Access and Support, Integrated Services and Office of Substance Abuse), Department of Public Safety (Emergency Medical Services for Children), Department of Corrections (Adult and Juvenile Corrections), Labor, and Education (Coordinated School Health Program and School Nurse Consultation). The complexity of such a broad delivery system has led to efforts to coordinate service delivery and surveillance activities as well as programs and policy development. Maine is one of 18 States awarded funds from the Division of Adolescent and School Health, Centers for Disease Control and Prevention for coordinated school health. Two positions, one in the Department of Education and one in DHHS, Directors of Coordinated School Health Programs (CSHP) are funded through this grant. The primary responsibilities of this effort have been to promote coordination between departments and to build a statewide infrastructure for school health programs.

The CSHP Directors have established two statewide groups to assist with coordination; the CSHP Interdepartmental Coordinating Committee, composed of State agency program managers that benefit youth in schools, and a Key Advisory Committee consisting of representatives of Non-Government Organizations that advise on and advocate for coordinated and comprehensive school health programs. Both groups include programs and organizations that address many of the national and state performance measures for the MCHBG; suicide prevention, family planning and sexuality education, oral health, injury prevention, nutrition, health services etc.

The Directors and their programs work very closely with each other at the local level as well as through the HMPs. The Directors work with 43 School Health Coordinators within the partnerships to address a variety of health issues using a collaborative approach. School Health Coordinators are responsible for conducting a needs assessment, convening leadership teams, using data to develop action plans and evaluate progress. The primary emphasis is on physical inactivity, poor nutrition and tobacco use as required by funding, however, some coordinators also address other health issues identified as priorities in their area such as teen pregnancy, bullying, suicide, and oral health.

Comprehensive health education is an important component of CSHP and the departments work closely on curriculum development, instruction and assessment. Maine has established a solid reputation as a leader in health education and coordinated school health. The extent to which

departments share resources and collaborate on systems change at the State and local levels has fostered this reputation. An example of the positive collaborative efforts is the multi-year work focused upon surveying. Data for adolescent health are based in large part on reports of healthy and risky behavior, and factors that influence it. Schools are frequently asked to conduct surveys, such as the YRBS. Maine combined the crucial elements of these school-based surveys into the Maine IYHS and administered for the first time in 2009.

Additional collaboration includes the CGC and its critical role in the State ECCS Initiative and its outcomes. In 2003, at the direction of the Governor's Office, the Maine CDC and OMS (Medicaid) initiated a series of discussions to enhance the partnership between the public health and Medicaid systems. Such a partnership is of vital importance to MCH. Initial discussions revolved around tobacco use and diabetes. They have focused on the potential for Medicaid to build prevention and education into its reimbursement system with respect to these two areas of public health. In 2007 the informing and referral responsibilities of EPSDT moved to the DFH, CSHN from the MIP. In addition, the MaineCDC and OMS, collaborated with USM on a successful CHIPRA grant to improve children's health outcomes through clinical practice initiatives and monitoring through HIT.

Coordination efforts which address mental health strive to put into practice comprehensive, inter-disciplinary, and evidence-based systems of care for children with mental health problems. A growing partnership between Title V and Children's Behavioral Health Services in the DHHS has led to the following examples of coordination:

- Integrating mental health services into primary health care for children through two Maine Health Access Foundation Grants, one through the Maine Center for Public Health and the other through Kennebec Valley Mental Health.
- Raising public awareness throughout Maine of the causes and effects of childhood trauma.
- Child Behavioral Health involvement in and support of the Maine Youth Suicide Prevention Program.
- Partnership between Children's Behavioral Health Services, Tri-County Mental Health Services, and the Substance Abuse and Mental Health Services Administration with local provider agencies on a THRIVE System of Care Initiative that helped providers and community organizations in Androscoggin, Franklin and Oxford counties transform the way services are delivered to children, families of children, and to youth who are affected by serious emotional and behavioral challenges. Thrive, provided training, technical assistance and consultation on the effects of trauma and the related trauma-informed service principles of safety, choice, collaboration and trustworthiness. In addition to training providers and agencies, Thrive supported local family- and youth-led advocacy organizations.
- Children's Behavioral Health initiated the gathering of critical partners on a Project LAUNCH Initiative to address unmet child health needs between the ages of prenatal to 8 years of age in Washington County. This is working with pregnant women who are at risk for a preterm birth and/or a prolonged hospitalization due to neonatal abstinence syndrome.

Underlying this coordination is a shared ecological approach to health that eliminates the idea that mental health is distinct from public health. This approach embraces the key role of social connectedness and support in enhancing child, family, and community health. Research consistently shows that a key determinant of health is the extent to which people of all ages, but especially children, feel affirmed, nurtured, respected, and honored.

We also share with our mental health partners, both at the state and local level, an emphasis on evidence-based and preventive practices that achieve positive outcomes; a shared belief that health promotion and prevention efforts must start early in fostering optimal social and emotional development and must involve families in design and implementation from start to finish; and a commitment to systems of care such as home visitation. The Maine HV Program, which is administered by the Early Childhood Coordinator, provides home visits to first-time parents throughout the State. In seeking to promote positive parenting and healthy child growth and development, this program is central to preventing childhood trauma such as abuse and neglect and in supporting children already affected by trauma by connecting them as early as possible with preventive services so that they are poised to achieve optimal health and well being. Maine CDC is working in partnership with the OCFS in responding to the HV Initiative included in the national health care reform legislation.

Title V coordination with mental health further strengthens our efforts to humanize and dignify the ways in which we all work, talk with, and relate to each other. And for us in Title V, such coordination is a timely opportunity to continue to change how we think about the health of children so that it embraces the physical, social, emotional, spiritual, and environmental context of their lives. Our shared long-term goal is to apply what we learn from our partnerships so that Maine has collaborative and synergistic systems to support children, families, and communities in the healing, hope, and resiliency essential for the social and emotional components of healthy child development.

In Maine, the Ryan White HIV/STD Program funds primary healthcare, medical case management and support services for people with AIDS. The Ryan White Program is housed in the DHHS, Maine CDC and managed through the HIV/STD, and Viral Hepatitis Program within the Division of Infectious Diseases. Maine receives funds under Parts B and C of the HIV/AIDS Program from the HRSA. Part B funds are received directly by the Maine CDC and are used for two services: HIV/AIDS medical case management and the AIDS Drug Assistance Program (ADAP). Funds for HIV/AIDS Medical case management are subcontracted to six non-profit organizations across Maine: Frannie Peabody Center (Districts 1 and 2), St. Mary's Regional Medical Center (District 3), The Horizon Program (Districts 4 and 5), Eastern Maine AIDS Network (District 6), Down East AIDS Network (District 7), and Community Health and Counseling Services (District 8). ADAP services are managed centrally through the Maine CDC with the assistance of subcontracts with Medical Care Development to provide Insurance Continuation and Co-pay Assistance Programs, and Goold Health Services, who acts as the Pharmacy Benefits Manager for Maine's ADAP. Part C funding is provided directly to three non-profit organizations that provide comprehensive HIV care: Regional Medical Center at Lubec (serving Northern Maine), The Horizon Clinic/Maine General Health Associates (serving Central Maine), and Portland Public Health (serving Southern Maine).

Maine utilizes the State Systems Development Initiative (SSDI) to enhance the data collection systems and data linkages of the Title V Program. SSDI funds are used to support a portion of the MCH Epi Team to work with the MCH related programs. Projects range from surveillance reports, a report to the Legislature with recommendations on autism surveillance, working with MCH Programs in the development of state performance measures, and working with programs in the enhancement of information systems such as ChildLINK and WIC.

WIC's position within the DFH ensures their investment, commitment and participation in MCH issues. They routinely work closely with the DFH Medical Director, CSHN, PHN, Lead and Genetics programs to help insure access to nutrition education and food benefits which are essential to the nutritional well-being of women and children at risk. They also regularly collaborate with the Immunization and Home Visiting Programs.

During the past two years, the Maine AAP and the State MCH Program in the Maine CDC have coordinated on a number of efforts. This coordination is a vital way to maximize resources for child health advocacy in Maine. These efforts include the following:

1. A collaborative effort, "Physicians and Schools Working Together", to strengthen the leadership role of pediatricians in Maine schools to raise awareness and change the role of physicians in schools so they become engaged to address school health issues that relate to social and emotional development.
2. An AAP grant that aims to strengthen the capacity of medical homes to manage children with asthma and their families, with support from Maine's Asthma Prevention and Control Program.
3. The AAP is very supportive of child abuse prevention and aware of the apparent increase of Shaken Baby Syndrome (SBS) in Maine. The 2009 Maine AAP conference was dedicated to child abuse prevention and led to the development of an AHT Workgroup which included support from the Maine CDC, DFH, the Maine Children's Trust, the Spurwink Children's Treatment Program, the Barbara Bush Children's Hospital, and Eastern Maine Medical and promoted adoption of the Period of Purple Crying (POPC), an AHT/SBS prevention program.
4. A partnership with the DFH and the Maine Children's Trust on a Safe Sleep Project. Maine has had an increase in babies dying of Sudden Infant Death Syndrome. The CDSIRP has found that most cases are a result of unsafe sleep practice. This Initiative developed a "Cribs for Kids" Program to make cribs more affordable for Maine low income families.

CSHN Constructs of a Service System

Collaboration

A working relationship has existed for many years with the DHHS, Disability Determination Services (DDS) and Title V, specifically the CSHN Program. DDS is the State unit that makes disability determinations for the Social Security Administration. Those applications for youth less than 16 years of age are forwarded to the CSHN Program for further review and the provision of supports if appropriate. Additional services may include assisting families with

obtaining medical services and specialty care, obtaining referrals, addressing insurance issues both private and public, assisting with transportation and rehabilitation services.

The coordination between Title V and Special Services to serve children and youth with disabilities and special health needs has a long history in Maine. Efforts to maximize services include:

- CSHNs participation on the Maine Advisory Council for the Education of Children with Disabilities, specifically, serving in an advisory capacity to the Unmet Needs Subcommittee. Other committees that exist are Early Childhood, Legislative and Transition.
- Special Services has served in an advisory capacity to the Acquired Brain Injury Advisory Council providing in-depth knowledge and data on those children with brain injury being served through special education.
- Using the Healthy and Ready to Work grant (MCHB, DCSHN) as a vehicle to partner with special services to create a seamless system of transition for youth and young adults.

The DOE, through CDS, is charged with implementing the IDEA through Part C, infants and toddlers (Birth–2) and Part B Section 619 preschoolers (3–5). Funds for both Part C and Part B are distributed to nine sites across Maine under approval agreements with DOE. Starting July 1, 2010 the CDS system began implementing a significant reorganization. In the fall of 2009 CDS convened a committee comprised of board members and site directors to identify cost savings of 3 million dollars for the year commencing July 1, 2010, a process that had been discussed for several years. The committees work resulted in a reconfiguration of sites to coordinate with School Administrative Units rather than the current structure of county lines. The criteria used to determine new sites were: population density, service centers, highway access, geography, travel time and distance, CDS run programs, private programs, increased equity in site population, current regional offices and satellite locations, and cost of maintaining small regional offices. This process resulted in the reduction of CDS sites from 16 to nine.

The Disability Rights Center (DRC) is Maine's federally funded protection and advocacy agency and has a mandate to advance and enforce the rights of individuals with disabilities in a wide range of areas including institutional and facility treatment and care, housing, employment and education. The DRC is a statewide, nonprofit organization that provides focused advocacy services based upon clearly defined priorities and case selection criteria to individuals with disabilities who meet federal eligibility requirements. The DRC represents individuals with disabilities who have experienced a violation of rights directly related to disability, with the primary focus on abuse and neglect. The DRC has assisted families of CSHN in appealing decisions made by MaineCare. Attorneys and advocates can assist individuals by providing information and technical assistance, referral to appropriate services, direct representation in hearings or court, and training on rights. Title V has developed a collaborative relationship with DRC specifically in the area of brain injury. The Maine DHHS was designated through legislation as the lead state agency for traumatic brain injury (TBI) to study the services and resources available in Maine for individuals with TBI.

The Maine Developmental Disabilities Council (DDC) assures that individuals with disabilities and their families participate in the design of and have access to community services, and individualized supports that promote independence. Title V has been involved with the Council on several issues that concern individuals with disabilities:

- Newborn Hearing Screening Initiative
- Traumatic Brain Injury Initiative
- Design and development of recommendations on individuals with disabilities
- EPSDT medical necessity and treatment services

Maine Title V Programs are committed to collaborating with the many family and parent advocacy organizations throughout the state. We recognize that family, youth, and community involvement is essential when developing services, programs, policies, and systems that directly impact them. The Maine Parent Federation (MPF), Maine's largest parent organization, routinely collaborates with the CSHN Program on numerous initiatives. These efforts include:

- Project REACH, a collaborative effort to train parents and/or guardians on all aspects of parent leadership and advocacy.
- Family to Family Information Centers, the development of 6 regional sites has moved the CSHN Program forward in its efforts to establish community-based programs for children with special health needs. This initiative is currently funded through HRSA, MCHB, and DCSHCN grants with plans to move continued funding to the MCHBG.
- Family Voices is housed at MPF with combined efforts to enhance and improve health/health related services to children with special health needs and their families. Beverly Baker, Family Voices representative, is actively involved in Title V and AAP medical home efforts, specifically the Medical Home Learning Collaborative.
- CSHN contracts with MPF for a family consultant to advise the CSHN Program on family issues.

The CSHN Family Advisory Council (FAC) is a partnership between the CSHN Program and parents of children with special health needs. The FAC strives to enhance, maintain, and improve the functioning and quality of life for all children and their families. Collaborative efforts include:

- Development and distribution statewide of the Health Care Notebook, a record keeping tool for parents.
- Continued participation in all efforts to enhance family-centered care in all aspects of MCH.

Southern Maine Parent Awareness coordinates activities such as working with parents on special education and disabilities, in York and Cumberland counties and the city of Lewiston.

Child Mental Health Services sponsors Gaining Empowerment Allows Results (GEAR), a program of Crisis Counseling and Supports. GEAR empowers parents of children with special health needs to make decisions based on individual strengths and needs. There are 19 groups across Maine. The MPF collaborates with GEAR to provide support and resources.

State Support for Communities

State support to communities is in the form of grants or contracts to community partners and tertiary medical facilities. These include the provision of comprehensive genetic services, perinatal education, Cleft Lip and Palate services at two sites and metabolic disorders.

Coordination of Health Components of Community-Based Systems

As Maine moves forward to foster the conditions that enable the CSHN Program to move from a program with a direct care focus to one with a community-based focus it is critical that we identify and establish collaborative relations with key partners in the design and implementation of a system of care for CYSHN. Many of these collaborative relationships have been established through multiple initiatives involving various state agencies, private organizations, families, youth, and others interested in creating a system of care for CYSHN. Key partners include state agencies, MaineCare (Medicaid), Anthem Blue Cross Blue Shield, the Maine Chapter of the AAP, tertiary medical facilities, early intervention agencies, parent advocacy organizations, Family Voices, University Center for Excellence in Developmental Disabilities, families and youth. Coordination efforts which address state support for communities, coordination of health components of community-based systems, and coordination of health services with other services at the community level include:

- *Healthy and Ready to Work National Resource Center (HRTW)***,** youth with special health care needs (YSHCN) want a full range of opportunities like everyone else and require a coordinated system of care. Although federal mandates exist and more inclusive opportunities are available, outcomes for YSHCN remain poor. The National Survey of CSHCN revealed that only 6.3% of families of YSHCN ages 13-17 perceive that they have received preparation for transition to adulthood. The mission of the HRTW National Resource Center is to create changes in policies, programs, and practice that will help YSHCN transition to adult health care, work and independence. The HRTW National Center was headquartered at the Maine Title V CSHN Program until June 30, 2010.
- *Family to Family Resources Centers,* provides training and leadership skills to parents of children with special health needs. Partners include Family Voices, Maine Parent Federation and the CSHN Family Advisory Council. Funding provides parents the ability to access training.
- *Traumatic Brain Injury Initiative (TBI),* a state systems approach to building a system that is responsive to the needs of individuals with TBI across the life span and their families. Partners include Departments of Education, Correction, Labor, Child and Adult Mental Health Services, Injury Control Programs, Bureau of Elder and Adults Services, Providers of services, hospitals and individuals with TBI and family members.
- *Medical Home Learning Collaborative*, implements medical home improvement activities at both the practice and state level. Partners include Maine Chapter of AAP, private practices, Maine Support Network, Family Voices and MaineCare.
- *National Initiative for Children's Healthcare Quality,* using this model of improving children's health by improving systems that deliver healthcare through adopting best practices and ensuring high quality, the Maine Newborn Hearing Program is working with a northern Maine hospital to focus on newborns admitted to the hospital NICU either from within the hospital or from secondary/tertiary facilities.

Through the CSHN's Partners in Care Coordination (PCC) Program staff provide care coordination to all families of children and youth with special health care needs from birth through the age of 21. PCC is a unique resource for families, health care providers, and communities for information, referral and supports. Public Health and Community Health Nursing provide assessment, preventive education and access to additional resources to CSHN clients via home visitation. Key to the success of any community-based program is the collaboration/cooperation with local primary care providers to assure statewide access to quality services. The CSHN Program continues to strengthen its partnership with the Maine Chapter of the AAP and its members to spread the concept of medical home. Finally, the CSHN Program ensures that families and youth are involved in the development of policies that directly affect them through established advisory councils: the Family Advisory Council and the Youth Advisory Council. Their connections with the community have proven invaluable.

Coordination of Health Services

Pediatricians and Family Care Physicians provide primary and preventive care services for children with special health care needs and their families. Specialty care services are provided through individual specialists, group practices, and hospitals including outpatient clinics. The service delivery mode is dependent on the availability of the service in Maine (for example, we don't have a pediatric rheumatologist), a family's choice to seek services outside of Maine, and a child with a compromised, significant or rare medical condition's need for specialized services in another state.

Payers of specialty services include MaineCare and private insurers. The CSHN and WIC Programs pay for some medically necessary formulas. MaineCare covers primary and most specialty services for children with special health needs with the exception of foods for children with PKU or other metabolic disorders, implants for children with craniofacial disorders and orthognathic surgery for children with clefts. The benefit packages for private payers vary across insurers. For those services not covered, the CSHN Program will assist families whose children qualify for EPSDT services to determine if it meets the definition of "medically necessary"; work with families on the appeals process; and search for alternative methods of payment.

Groups Involved in the Assessment Process

Members of the CSHN Family Advisory Council and the Youth Advisory Council participated in the needs assessment dialogues. The CSHN Family Advisory Council annually completes Form 13 of the MCHBG application.

Preventive and primary care services for pregnant women, mothers, and infants

Services for prenatal and postpartum care are provided through the private provider practices (OB/GYN, family practice, nurse practitioners, and midwives), federally funded health centers, city public health clinics (Portland), and hospital based clinics. Additional preventive and support services are provided in the home via PHN, contracted CHN, and home visitation programs such as HF, PAT, and PATT. Funds from Maine's Tobacco Settlement (Fund for a Healthy Maine, FHM) have been appropriated for the expansion of visitation via the HF, PAT,

and PATT models. As the number of home visit providers has increased, agencies (state and community) have needed to be diligent in identifying and eliminating duplicative services.

Primary and preventive care services for infants are provided through private provider practices (by physicians, nurse practitioners, and physician assistants with specialization in pediatrics and family practice), and hospital based clinics. The Title V Program is promoting the concept of the health home model for all categories of the MCH population. The health home is a modification of the AAP Medical Home model developed for children with special health needs. A health home goes beyond the medical home in that it explicitly integrates mental health and oral health into the Medical Home Concept, encompasses challenges such as how the Medical Home can best interface with education, and includes a deeper level of collaboration as we have described in this CSNA. Like the Medical Home, it is not a building or physical facility, but rather a system that taps into the synergy and synchronicity that provide the foundation for partnerships, as described in the Needs Assessment Partnership Building and Collaboration Section, which unite and integrate into a rainbow like web of humane support for all families.

Preventive and Primary Care Services for Children

As with infants, the provision of preventive and primary care services is provided primarily by private provider practices composed of physicians, nurse practitioners, and physician assistants with specialization in pediatric and family practice.

Planning, Evaluation and Research

Through a collaborative with the USM Muskie School, the Maine CDC and state and local partners conducted an assessment of the state public health system using the tool developed by the National Public Health Performance Standards Program. This tool uses the framework of the 10 EPHS to measure the state's public health system performance in relation to a set of standards. The assessment was held in May 2010 and a follow-up meeting with preliminary results was held in June 2010. Results from this assessment revealed that Maine's public health system's weakest areas were in evaluation and research. There are several likely reasons for this; one of which is the lack of a school of public health in the state. Although there are researchers with a public health focus, research has not been an area where state and local public health resources have been focused. Evaluation also has not been an area where resources have been directed, but this is changing and more emphasis is being placed on ensuring there are adequate resources for evaluation and that evaluation plans are developed in conjunction with program development and implementation.

Maine's MCH Epi Team is employed by USM and works with the Maine CDC through a cooperative agreement. This arrangement helps the Title V program stay connected to an academic setting and researchers, and provides opportunities for students and faculty to work in applied public health. As we build our epidemiology capacity, we encourage our epidemiologists to conduct higher level analyses and we encourage publication of epidemiologic and evaluation findings.

The Title V program has been building its evaluation capacity over the past few years and working to ensure that evaluators and epidemiologists are included in the development of grant applications, and in program planning and monitoring. Current evaluation projects in Title V programs include:

- Evaluation of a culturally-competent training to improve nutrition assessment in WIC.
- Evaluation of the Kids Oral Health Partnership, a project designed to increase the proportion of children age 0-3 who receive oral health assessments in primary care.
- Evaluation of Project LAUNCH, an initiative designed to build systems that support promotion, prevention, and intervention services for families in Washington County.
- Evaluation of Maine Youth Suicide Prevention Program's Comprehensive School-based Suicide Prevention Effort.
- Evaluation of Project Connect, an initiative designed to prevent domestic violence and sexual assault and educate health care providers on how to screen and respond appropriately.

In addition to these efforts, there is ongoing evaluation of Maine's Title V surveillance systems, such as the Newborn Hearing System, Oral Health Surveillance System, outpatient ED database for injury, and Maine IYHS, among others.

Workforce Development

Maine CDC promotes workforce development by training internal staff and by providing opportunities for students, interns and fellows to learn about applied public health.

In 2007, PHN developed and implemented a competency-based orientation for all new staff whether a clerk, field nurse or PHN supervisor. In SFY09, Public Health 101 a three hour session open to current Maine CDC staff, including anyone newly hired began being offered on a quarterly basis. The class is co-taught by faculty at the Muskie School and Maine CDC staff. The class is designed to increase knowledge regarding the 10 EPHS, the determinants of health and Maine's public health system. The DFH will continue to devote resources to the development and implementation of a core orientation curriculum for all new employees. The next area of focus is a Maternal Child Health 101 that is modeled after Public Health 101.

Additional courses available to Maine CDC staff are geared at increasing program capacity to perform data analysis and visualization; current courses include SAS Programming Essentials and introductory courses such as ArcGIS. Tuition support is provided to Maine CDC staff to take courses at a local University.

In addition to this, some staff have the opportunity to attend leadership training courses through several groups in the state. Starting in 1999, the Maine CDC began supporting staff participation in the Northeast Public Health Leadership Institute (NEPHLI), a year long course coordinated by the State University of New York School of Public Health. Between 2000 and 2006 approximately 20 Maine CDC staff attended NEPHLI. Support for this program could no longer be sustained due to travel restrictions that limited out of state travel to required meetings identified in a Notice of Grant Award.

Over the past 5 years, several in state leadership development programs have become available to Maine CDC staff. They include the Institute for Civic Leadership, Leadership Maine and the Hanley Leadership Development Program. Four of the Maine CDC senior management team have participated in the Hanley program, including the Title V Director. Another six mid level managers have participated in one of the other two Maine based programs. The CSHN Director, Toni Wall, is a participant in the inaugural class of the MCH Public Health Leadership Institute coordinated by the University of North Carolina School of Public Health.

Maine's Title V program encourages staff to provide opportunities for students, fellows and interns to work with the programs within the Maine CDC. We feel this provides workforce development opportunities that foster interest in public health, train the next generation of public health leaders, and increase workforce development nationally. Over the past four summers, Maine's Title V program has hosted epidemiology interns through the MCHB Graduate Student Intern Program. We also have provided opportunities for USM students, Colby College, and Bates College students to work with some of our programs. Currently, we are hosting a Public Health Prevention Specialist who is coordinating the Maine SFP. In the past, we have had CSTE fellows and the Maine CDC has had EIS (Epidemic Intelligence Service) fellows. We believe that having fellows, students and interns provides a learning opportunity for the staff as well as to those who come to Maine to experience working in public health.

Standards of Care/Quality Assurance/Research

Planning and executing improvements in the systems that provide services to our State's MCH population is highly valued by the Title V agency. As such, programs are continually seeking ways to improve processes that will achieve improved outcomes for women, children and families.

All HMOs in Maine along with MaineCare have adopted the Bright Futures (BF) Guidelines and physician report cards as part of an on-going monitoring system. The CLPPP has successfully partnered with MaineCare to assess the proportion of children insured through MaineCare who receive a blood test for lead poisoning at 1 and 2 years of age. CLPPP is using this data to design outreach strategies to promote testing in the MaineCare population. Additionally, CLPPP has provided MaineCare with materials to distribute through direct mail and at service centers. CLPPP is partnering with WIC to promote blood lead and hemoglobin screening and to make that data available to providers through the state's immunization registry. CLPPP is evaluating strategies for providing services and promoting screening and primary prevention to the immigrant communities within the state.

Programs such as PHN and HV have set up quality assurance and improvement processes. In January 2003, PHN began using an electronic documentation and information management system based on the Omaha Nursing classification system, called CareFacts. The system requires documentation on the outcomes of clients served through PHN, and the PHN leadership team (Director, Consultants and Supervisors) provides leadership on organization based QI and also support unit level QI activities.

On September 18, 2009 the Maine Public Health Nursing (PHN) Program was granted initial accreditation for quality home and community care by the Community Health Accreditation Program (CHAP). This signifies that Maine PHN has met the "CHAP Standards of Excellence" that are driven by considerations of management, quality, client outcomes, adequate resources and long term viability. All aspects of patient care and care-providing staff management were evaluated. Evaluators looked at the structure of the program and its purpose; quality of the services and products; staff, financial and physical resources; and the ability of the program to be effective for years to come.

The Maine PHN Program chose to voluntarily seek this higher standard of excellence and earned a commendation, a rare occurrence in an initial accreditation, for its administrative and management techniques for team building that provide for a well-informed public health workforce. Approximately 60% of PHN services/activities are directed to the MCH population.

In preparation for accreditation PHN approached QI as a project. The process was initiated by first reviewing the CHAP standards; core and public health with the PHN management team. An accreditation committee made up of the management team and staff from across the state was then formed. The committee reviewed the standards and identified gaps to be addressed. PHN utilized its standing committees, (QI, Documentation, and Safety and Risk) to develop project charters, convene workgroups as needed, develop required policies and procedures, address education requirements and develop communication messages for the program. Progress reports from workgroups/committees were presented at both the accreditation committee and management meetings to monitor the QI efforts.

The PHN Quality Improvement Committee continues to provide oversight, support, and leadership for QI activities. The committee monitors ongoing quality assurance (QA) activities at both the PHN overall program level and the PHN unit level. PHN management and the QI committee are responsible for ensuring that mechanisms to monitor and evaluate the quality and cost effectiveness of care are practices within programs and units. The QI program goal is to utilize a systematic approach to the design, measurement, assessment and improvement of PHN performance and client and population outcomes.

Annually, PHN conducts a Client Satisfaction Survey and uses the results in program planning and policy development. In the event trends of concern are identified, the QI committee charters a QI Team to research the issue and develop plans to improve practice. (Source: 2009 PHN Quality Improvement Plan)

The QI activities related to home visitation are a combination of provider agency initiated and an overall system and program evaluation.

A strategic priority set by the Maine CDC is obtaining national voluntary accreditation. In May 2010 the Maine CDC initiated a state public health system assessment using the National Public Health Performance Standards. This marked the first step in Maine CDC preparations for accreditation. The Title V Director has taken on an active leadership role in this initiative. QI is a significant component of the accreditation preparations and will become more uniform across the Maine CDC.

Maine's Title V Program participates in a number of QI initiatives aimed at improving MCH outcomes.

During the period of the Community Systems Grant, the Developmental Disabilities Council (DDC) of Maine piloted tools (M-Chat and PEDS) in several pediatric practices to develop a universal screening protocol to help screen for developmental disabilities and autism. In addition, the DDC piloted a program to train pediatricians and family practitioners to improve their skills in performing developmental assessments. In 2006, the Maine DHHS and the CSHN Program received a State Implementation Grant for Integrated Community Systems for Children and Youth with Special Health Care Needs**.** The purpose of the grant, which ended in April 2009, was to support statewide implementation of the six core components necessary to create a community-based system of care for children and youth with special health care needs. The 6 components include: 1) family/professional partnerships; 2) comprehensive health care through a medical homes; 3) access to adequate health insurance; 4) early and continuous screening; 5) organization of community services for easy use by families, and; 6) transition to adult health care, work and independence.

In support of developmental assessments, PHN, Head Start providers, and home visitors were trained using the Ages and Stages Questionnaire and referring those children identified as possibly delayed to their primary care provider (PCP). We are exploring using ChildLINK, an electronic data tracking system that links newborn hearing, bloodspot screening and birth defect data with the electronic birth certificate, as the data tracking system. The goal is to make the data available to primary care and pediatric developmental and behavioral specialists, so families don't have to tell their story to every new provider. In addition, all caregivers will know the child's medical and behavioral health needs. Likewise, this data system could help the State of Maine track outcomes of care for children insured through MaineCare.

The MCH Medical Director is working with WIC, CLPP, Headstart, and Immunization Programs, and MaineCare to streamline hemoglobin lead screening in children insured through MaineCare that also participate in the WIC and/or Headstart Programs. The WIC Program is required to screen all clients for iron deficiency annually; Headstart is required to document at least one lead screen before age 3, and PCPs are required by MaineCare, to screen all MaineCare insured children for lead poisoning at one and two years of age. Although 90% of lead poisoned children in Maine are insured through MaineCare, and lead poisoning in Maine peaks at ages 18 and 30 months, only 20% of MaineCare children have lead testing at 2 years of age. Since a majority of children insured through MaineCare also participate in Headstart and WIC, and the timing of these required tests are not coordinated it results in children having multiple tests or none at all.

The Maine CDC, Division of Environmental Health has worked to develop a system where a child will have a single blood test, for both lead and hemoglobin, at ages 9-12, 18-24 and 30-36 months. The Maine State Laboratory will perform both the lead and hemoglobin tests and send the results to the PCP. The results will also be recorded in ImmPACT2 (the Maine Immunization Program database), which is available in WIC offices as well as at schools and Head Start locations across the state. The goal is to have over 90% of MaineCare insured children have a

lead screen by ages 24 and 36 months and for all providers to have access to the data in order to reduce duplication and have data readily available.

In partnership with OCFS, MaineGeneral Medical Center, a central Maine hospital system, developed the Pediatric Rapid Evaluation Program (PREP) project to improve identification, evaluation and treatment of medical, dental and behavioral health needs of children entering foster care. This program integrates behavioral and medical evaluations and improves communication of the child's needs to the foster family, child welfare caseworker and PCP. While the report is entered into a computerized database as a document, it is not available for electronic access by the child's caregivers and there is no current relational database tracking the outcomes of care for these children.

The OCFS currently has a data system called Maine Automated Child Welfare Information System (MACWIS), which requires hand entry of medical and behavioral health information by DHHS caseworkers and their aids. The child's caregivers in the community have no access to this data, though they have a need to know. The CHIPRA quality improvement proposal would allow the PREP evaluations to link with MACWIS and allow MACWIS to be automatically populated by the PREP data. Community providers would need a portal to link into the MACWIS PREP reports, improving meaningful use of the reports. Through the CHIPRA grant, MaineCare will seek to make the PREP reports fully electronic, allowing providers online access to the reports and improving OCFS ability to track the behavioral, oral health, medical and educational outcomes for their children in out of home care.

MaineCare maintains an MOU with CSHN to assure that those members under the age of 21 who receive full MaineCare benefits are informed of and receive the services and assistance available to them under the MaineCare Program. CSHN's MaineCare Members Services responsibilities include; explaining the benefits of preventive health services and those services available under MaineCare including EPSDT, providing periodic screening schedules, assisting in the location of primary care physicians and dentists who accept MaineCare, obtaining transportation services, and scheduling appointments.

PCPs see children at proscribed ages for well child visits, and are asked to send the Bright Futures forms to the OMS. The forms, when received, are reviewed by the Maine CDC PHNs and, in the case of identified child/family need, PHN contacts the families and offers services. The data from the encounter are stored in PHN's database, CareFacts, and the forms are then shredded. Only families that were offered services are recorded in the database. The MCH Medical Director and CSHN Director are working with the Office of MaineCare's EPSDT Program to: improve the quality of the information collected, encourage provider acceptance of the program, and develop a database that will record the BF data of all MaineCare children, not just those who require services.

The primary care providers with information systems in their offices would prefer to transfer the Bright Futures data electronically to MaineCare. Through the recently awarded CHIPRA grant, Maine will implement the BF toolkit which will electronically store the BF data and transfer it to the MaineCare data system. Many practices will need to be trained to use the preventive health tools that are part of the Bright Futures toolkit. Implementation of the tools and their impact on

care outcomes should be tracked. Electronic use of the BF forms would increase the reliability of MaineCare's tracking of their client's use of preventive care services. Those practices without on-line or in office health information systems could complete the EPSDT forms on-line and print a copy of the form for their paper chart.

Maine Medical Center has developed a quality improvement project for their pediatric patients with inflammatory bowel disease and another for their children with epilepsy. These projects are currently being implemented in primary care as well as specialty practices around the state.

Abusive head trauma in children was identified at Maine Medical and Eastern Maine Medical Center at three times the expected rate over the last 2 to 3 years. The Maine CDC, OCFS, Maine Children's Trust, and Maine Children's Alliance joined forces with the Maine AAP to identify a prevention intervention. The group reviewed the literature and researched and selected the Period of Purple Crying (POPC). A team of two physicians and nurses trained hospital and public health nurses in the POPC program. This program was successfully implemented in all 30 birth hospitals in Maine during 2009.

The Maine CDC, OCFS, Children's Trust and many physicians and home visitors are currently working to develop a statewide safe sleep initiative. This quality improvement project aimed at decreasing infant mortality will be implemented over the next year.

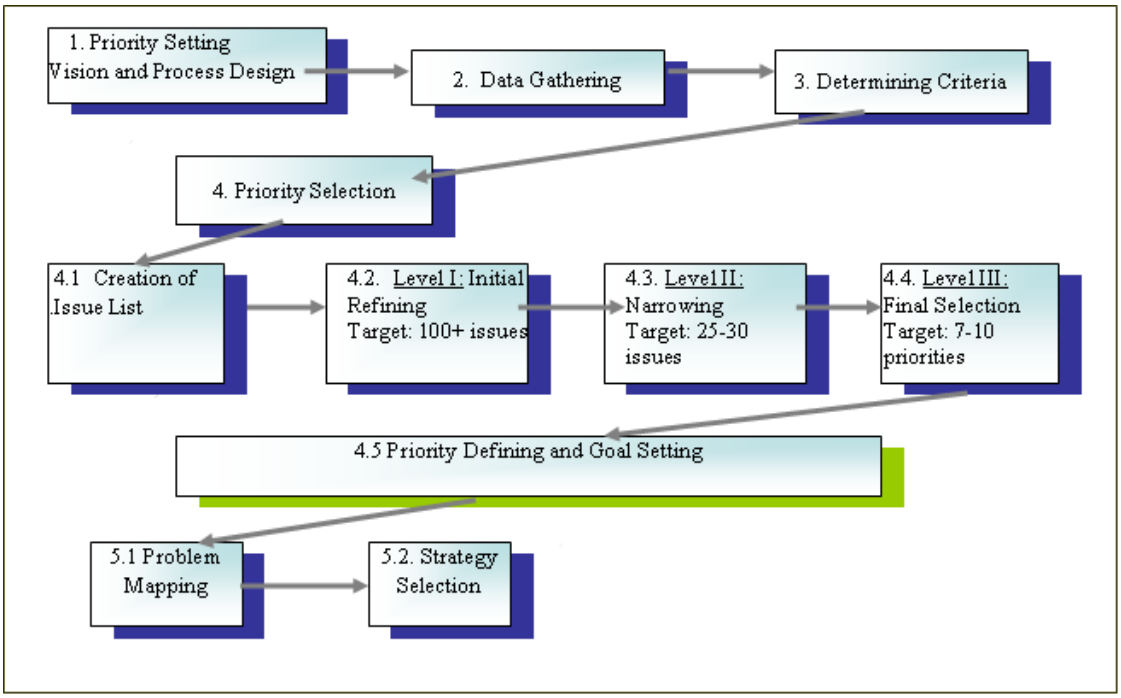
The rate of infants born exposed to narcotics in utero has been increasing in recent years. All infants affected by drugs in utero are required by State law to be referred to PHN for follow-up after discharge from the nursery. The majority of these infants are insured through MaineCare and are at high risk for developmental delay and are at higher risk for child abuse than those covered by private insurance. They are also at higher risk for sudden unexpected infant death syndrome (SIDS). These children are not currently tracked in a formal way except by PHN. This is an area for research and quality improvement.

Alcohol binge use was recently identified as epidemic in young women during the first trimester of their pregnancy. The Maine CDC, DFH is collaborating with the National Organization on Fetal Alcohol Syndrome to promote screening for alcohol use in the context of primary care and to identify children affected by prenatal alcohol exposure. These children are at high risk for developmental delay, hyperactivity, and intellectual deficiency. They are not currently tracked and we do not have data on their health outcomes in Maine.

Section V – SELECTION OF STATE PRIORITY NEEDS

In late 2008 priority setting process discussions began with Maine's DFH senior leadership team and program staff about designing an objective and deliberate process for the selection of the 2010 priorities. The overall goal was to compile a set of priorities, based on strengths, needs and assets to assist in guiding the DFHs work over the next five years. To ensure widespread investment in the chosen priorities, the secondary goal was to have significant staff and stakeholder involvement in the selection of priorities. After a review of methods described in selected States' 2005 needs assessments [251] other MCHB documents [252], and relevant presentations and discussions from MCH-related conferences, a priority setting process responsive to Maine's available resources and capabilities was drafted. Consensus about the proposed process was reached in March 2009 among DFH program managers and stakeholders. (See summary diagram below and detailed Proposal Process in Appendix I).

Figure 5.1: Diagram of Priority Setting Process



Key participants in the priority setting process included the following groups; the CSNA Steering Committee, DFH and other MCH related program managers, a Criteria-Setting subcommittee, and an expanded group of MCH stakeholders and DFH staff.

The process to select priorities was divided into four primary steps:

- the creation of an initial list of issues based on quantitative and qualitative data review
- the refinement of this list to approximately 100 issues (Level I)
- the narrowing of the Level I list to 25 to 30 of the top ranked priorities (Level II)
- the narrowing of the Level II list to 10 of the top ranked priorities (Level III)

A methodology and list of criteria were developed for each level of refinement. Level I involved a subcommittee charged with reviewing the full list of issues, completing a matrix of Level I criteria, both through in-person group meetings and individually, and reporting results and recommendations back to the full program managers group. Level II involved a web-based survey of MCH staff and stakeholders in which participants assigned a score ranging from 1 to 5 to a list of 100+ issues; the resulting top 30 issues (with wording changes and groupings) were presented to and approved by the full program managers group. Level III involved a web-based survey of MCH staff and stakeholders in which participants rated 30 issues on 5 criteria. To facilitate a data driven process, fact sheets were prepared by students at a local college in collaboration with issue "experts" and Maine's MCH Epi Team. These fact sheets summarized information relevant to the criteria for each of the 30 Level III issues. The results of the Level III rating exercise were presented to the full program managers group in February 2010, where consensus was reached to accept the top 10 rated priorities. At this meeting it was confirmed that next steps included defining the priorities and goal setting, problem mapping and strategy selection.

Table 5.1: Criteria for MCH Priority Setting

Level I: Initial Refining Criteria – yes/no questions – issue must satisfy ALL criteria		
Is the issue measurable?	Must be YES	If all five criteria are met, the issue remains in the list and moves to level II, pending review by the Program Committee.
Does the issue affect the MCH population?	Must be YES	
Is this issue an outcome, not a strategy?	Must be YES	
Is there any legislative or federal mandate that disallows us from addressing this issue?	Must be NO	
Is the issue a clear duplicate of another on the list?	Must be NO	If yes, list duplicate issue
Level II: Narrowing Criteria		
The following issues were identified by stakeholders or via our data review as potential priorities for the Maternal and Child Health Block Grant for 2010-2015. Please rank each issue between 1-4 (1="low", 5="high"), based on your understanding of its fit with the following criteria: • Data availability on the issue • Severity – how serious are the consequences of the issue? • Numbers of people affected – including sub-groups • Mandates that require us to address the issue • The potential of public health responses, including prevention and the essential public health services • Stakeholder opinions • Impact that the DFH and Maine CDC may be able to have on the issue. • Resources that will be needed and may be already available from other sources.		Each issue gets a ranking of 1 to 5, the 25 -30 issues with the most points move to level III, pending review by the Program Committee.
Level: III Final Criteria	**weighting**	
How severe are the health, social and/or financial consequences to the MCH population?	3	Each criteria ranked 1-5 (1 is low, 5 is high) and multiplied by the weighting factor, the top 7-10 become the priorities, pending review by the Program Committee.
How high is the incidence or prevalence? (What size population does it affect?)	2	
To what extent are there health disparities, negative trends, or poor comparison to national data?	2	
To what extent is there alignment with state and/or national priorities and/or mandates?	1	
How much impact can we have on the issue through the ten essential public health services?	2	

Level I: An initial set of 236 potential issues were collected from both qualitative and quantitative data. Based on an assessment of 5 criteria, the following 129 items were eliminated because they were either (1) not measurable, (2) not directly affecting the MCH population (3) a strategy and not an outcome (4) disallowed by a state or federal mandate or (5) a duplicate or subsumed under another issue on the list. Due to the length of the initial list, many items were combined into larger groups of issues. Some of the remaining items were edited to be inclusive of the issues eliminated (Table 5.2) below. The table below shows the items that were eliminated from the initial list. Duplicates are not presented in the table below unless there was a second reason for elimination besides duplication.

Table 5.2

Potential Priority	**Reason for elimination**
Lack of understanding around methadone use	"Lack of understanding" is difficult to define, Issue is primarily responsibility of Office of Substance Abuse
Youth connectiveness with schools, parents and community	Beyond the scope of MCH – Shared Youth Vision Council would take the lead
Support network for transitioning from middle to high school and high school to college	Beyond the scope of MCH – Shared Youth Vision Council would take the lead
Increase response rate on K/3 MIYHS	Combined with others under MCH data and evaluation capacity
Safety and security for infants brought to school	DOE would take the lead
High school completion	DOE would take the lead
Higher education attainment	DOE would take the lead
High illiteracy rates of families	DOE would take the lead
High illiteracy rates	DOE would take the lead
Access to confidential health care services for teens	Difficult to measure, combined with other issues (teen pregnancy, adolescent health)
Education on multiple levels about: the medical system, development cycles and nutrition of kids, accessing mental health services	Duplicate, not measurable,
More outreach on parenting skills to adolescent males	Duplicate of teen pregnancy
Hunger in schools	Duplicate, DOE would take the lead
Access to school lunch and healthy school lunch	Duplicate, DOE would take the lead
Home visits to pregnant/new moms needs to be more than once a month	Duplicate, OCFS to take the lead
Respect by the medical community for the Somali religious and cultural beliefs	Duplicate, Office of Minority Health would be the lead
Food choices in schools	Duplicate, primarily the responsibility of the DOE
Temporary safe housing (DV victims and children, homeless youth)	Duplicate, primarily the responsibility of the OCFS
Abortion	Federal mandates limit action, combined with family planning
Learning to take healthy risks	Not measurable as stated
Behavioral health	Not measurable as stated
Provider capacity and education	Not measurable as stated – too broad and undefined
Linkage to community resources	Not measurable as stated – too broad and undefined
Education about both the Somali culture and the U.S. Culture and how to respect both	Not measurable as stated, combined under "disparities"

Potential Priority	Reason for elimination
Culturally appropriate education on drug use and other behaviors for Refugees	Not measurable as stated, combined with other disparities issues
All aspects of medical care for refugee women & children including access to quality care	Not measurable as stated, combined with other disparities issues
Medical and support resources for special needs children within the Somali community	Not measurable as stated, combined with other issues
Fresh fruits and vegetables	Not measurable as stated, duplicate
Ensure infants are raised in a healthy and safe environment (Parenting)	Not measurable as stated, OCFS to take the lead.
Healthy Homes	Not measurable as stated, OCFS to take the lead; and Childhood Lead Poisoning and Prevention Program (CLPPP)/Environmental Health Unit within Division of Environmental Health
Healthy and safe homes	Not measurable as stated, OCFS to take the lead.
LGBTQ difficulties in accessing health care services	Not measurable, combined with "disparities."
Support for military families	Not measurable, combined with "disparities."
Women as Caregivers	Not measurable, combined with "disparities."
Support for grandparents raising grandchildren	Not measurable, out of the MCH scope
Education on environmental toxins in our lives	Not measurable, primary responsibility in the Div. of Environmental Health.
Increased planned teen pregnancy (to fill a void)	Not really measurable, duplicate
Childhood Poverty	Not within the scope of MCH
Homeless youth	Not within the scope of MCH
Poverty among children under age 18	Not within the scope of MCH
Transportation	Not within the scope of MCH
Homeless families	Not within the scope of MCH
Home Heating	Not within the scope of MCH
Transportation (in rural areas) to access services	Not within the scope of MCH
Affordable housing	Not within the scope of MCH
Couch surfing (Homeless teens falling through the cracks)	Not within the scope of MCH
Prescription medication abuse (need to educate on)	Office of Substance Abuse (OSA) would take the lead
Safe recreation activities for youth (rural areas in particular)	Out of the scope of MCH
Play groups for kids to develop appropriate social skills	Out of the scope of MCH
Lack of school capacity to accommodate CSHN	Primarily the responsibility of the DOE
Quality child care	Primarily the responsibility of the OCFS
Access to early childhood education and family support systems, particularly in the first 12-18 months of childhood	Primarily the responsibility of the OCFS
Access to before and after school care	Primarily the responsibility of the OCFS or DOE
Presence of mold in older/less maintained homes	Primary responsibility in the Division of Environmental Health.
Environmental exposure - preconception and pregnant women - lead, mercury, etc	Primary responsibility in the Division of Environmental Health.
Special Education	Responsibility of the DOE
Child care	Responsibility of the OCFS
Injury prevention	Too broad to measure?

Methodologies for Ranking/Selecting Priorities

Level II results: In a second level of narrowing, a panel of 29 stakeholders reviewed the remaining list of 107 items and rated each one on a scale of one to five as either "highest' (5), and "lowest" (1) priority, based on an overall assessment of data availability, severity, numbers of people affected, mandates that require us to address the issue, the potential of public health responses, known stakeholder opinions, the impact that the Title V program may be able to have, and the resources needed and resources already available from other sources. An analysis of the items ranked high by the largest number of stakeholders, as well as the overall scores for each item resulted in the elimination of 77 items. In this process, some additional items were combined. The eliminated items were:

- Male/father involvement in reproductive health and parenting
- Screening for breast and cervical cancer
- Preconception care, inter-conception care, and pregnancy preparation
- Local capacity - public health districts
- Stakeholder involvement in maternal and child health activities
- Neonatal abstinence syndrome
- Cultural competency of maternal and child health agencies
- Medical home
- Women's obesity rates
- Newborn hearing screening and follow-up
- Health literacy
- Fetal alcohol syndrome
- Medical care accessibility for people with disabilities
- Sexually transmitted diseases (e.g., chlamydia, gonorrhea, HIV/AIDS
- Newborn genetic/metabolic screening and follow-up
- Medical complications during pregnancy
- Exposure to second-hand smoke
- Women's nutrition
- Parents' lack of awareness of need for early oral health care
- Breastfeeding initiation and duration
- Access to obstetric care
- Use of developmental screenings
- Home visiting
- WIC outreach and participation
- Family support services for families, including military families
- Basic eye care, including glasses for low income children
- Infant sleep position and location
- Drinking and drug use while driving
- Health of children in foster care
- Access to fluoridated water
- SIDS
- High risk infants born in tertiary care centers
- Surveillance of birth defects
- Infant mental health
- Childhood lead poisoning
- Healthy weight before, during, and after pregnancy
- Homicide and assault
- Heart disease
- Breast cancer
- Childhood cancer
- Injuries related to motor vehicle crashes
- Screening for autism
- Gestational diabetes
- Unintentional poisoning
- Dental visits during pregnancy
- Translator services
- Occupational therapy services
- Maternal mortality
- C-section rates
- Falls
- Home births
- Fire/burn injury
- Induced births
- Drowning
- Infertility and assisted reproductive technology

At the end of Level II twenty-five (25) top-ranked items remained, including:

1. Child and adolescent mental health
2. Women's mental health
3. Obesity and overweight among children and adults
4. Intentional self-harm/suicide
5. Childhood exposure to violence
6. Adolescent violence
7. Adolescent substance use
8. Substance use before, during and after pregnancy
9. Disparities
10. Family Planning
11. Transition to adulthood for CSHN
12. Childhood immunization
13. Access and availability of affordable health care for all children
14. Rural health care
15. Prenatal care
16. Adolescent sexual activity
17. Parent Education
18. Traumatic Brain Injury
19. Oral health care for children
20. Poor birth outcomes
21. MCH data and evaluation capacity
22. Early identification and intervention
23. Infectious disease including H1N1
24. Childhood diabetes
25. Child mortality

In addition, five lower ranked items were added back into the list. They were:

1. Childhood asthma was added back in due to its high prevalence in Maine.
2. Breastfeeding was added back due to the mandate of this issue in the WIC program.
3. Unintentional injury was added back in due to its high burden of hospitalizations and death, especially for children.
4. Care coordination for CSHN was added back in due to its importance to the CSHN Program and the need to ensure that one priority be directly related to CSHN.
5. Domestic violence and sexual assault were inadvertently left off the survey and therefore were added back in under “Violence Against Women” due to increases over several years of domestic violence and substance abuse incidents resulting in increased mortality and morbidity.

Level III: Fact sheets were developed by undergraduate students taking a course in developmental psychology at Bates College, on each of the 30 items. Students were given a draft of the quantitative needs assessment and they were given the names of persons with expertise in the MCH issue they were assigned. The students used these resources to create fact sheets designed to provide information on each of the criteria that stakeholders would be ask to rank. The fact sheets were edited for accuracy and completeness and posted on the Maine CDC

DFH website. (Fact sheets for the final 10 priorities will be made available on the Division of Family Health website at: http://www.maine.gov/dhhs/bohdcfh/FamilyHealth/family.html.) An email invitation was sent to 70 internal and external stakeholders who were asked to use the fact sheets to complete a web-based survey. Of the 70 who received the email, 24 completed the survey. The criteria for this level of prioritization were: (a) the severity of the health, social or financial consequences (weight of 3); (b) the incidence or prevalence (weight of 2); (c) the extent of health disparities, negative trends or poor state comparison to national data (weight of 2); (d) the extent of alignment with state or national priorities or mandates (weight of 1); and (e) the ability to have an impact through public health interventions (weight of 2).

The collective scores from all reviewers for each of the items were:

Issue	Mean weighted score
Intentional self-harm and suicide	4.22
Violence against women	4.17
Obesity and overweight among children and adults	4.10
Family planning	4.07
Child and adolescent mental health	3.97
Adolescent substance use	3.96
Unintentional injury	3.96
Adolescent sexual activity	3.93
Women's mental health	3.92
Childhood exposure to violence	3.92
Oral health	3.86
MCH data and evaluation capacity	3.85
Substance use before, during and after pregnancy	3.81
Child mortality	3.80
Prenatal care	3.78
Childhood asthma	3.76
Poor birth outcomes	3.76
Early identification and intervention	3.73
Parent education	3.70
Traumatic brain injury	3.69
Disparities	3.68
Care coordination for children with special health needs	3.64
Childhood immunization	3.61
Adolescent violence	3.60
Transition to adulthood for children with special health needs	3.56
Access and availability of affordable health care for all children	3.52
Childhood diabetes	3.51
Rural health care	3.43
Infectious disease including H1N1	3.43
Breastfeeding	3.41

The MCH CSNA Steering Committee, MCH Program Managers, and major state agency partners met to discuss the rankings from the Level III selection process. The discussion involved the limitations of the ranking process, some inconsistencies in the scope of each priority and our ability to clearly define objectives and activities for each one, given the wide scope of some. Similarities between some priorities and possible further combinations were discussed but the final consensus was to honor the process that had been used and move forward with the top ten ranked priorities. However, since there was not an item directly related to CSHN in the list of top priorities, the CSNA Steering Committee and MCH program managers decided to remove adolescent substance abuse from the list of priorities and add ASD. Autism was selected based on the outcome of a joint MCHB/Association of University Centers on Disabilities Region 1, Act Early Summit during 2010 that brought together families, providers, and other state agencies. Those in attendance at this very powerful event quickly realized that this was an opportunity to continue moving forward in responding to the needs of Maine residents with ASD. The work that came out of the Summit was utilized in developing Maine's application for a MCHB Autism Grant that had just recently been announced. Since the time of our application, Maine learned it was one of 32 states to apply for the autism funding and was one of four states selected to receive the grant.

The Maine DHHS began focusing upon services for residents with ASD in 2007 by conducting a LEAN management process for ASD services from infancy through adulthood, and outlining the future service system. The Maine DHHS and the Maine Disabilities Council have continued to work in partnership in moving toward that future state, thus selecting a CYSHN state performance measure specific to autism was appropriate. Adolescent substance abuse was selected for removal because this is a priority issue for the Maine Office of Substance Abuse (OSA). The Maine CDC and Division of Family Health staff have collaborated for over a decade with the OSA focusing upon substance use and abuse within the adolescent population. Because of the leadership role of OSA on substance abuse it was determined that this was an area in which Maine's Title V Program did not have primary authority or leadership. Maine Title V Program has shared the results of the CSNA with OSA and will continue to be an active partner in addressing substance use and abuse in the adolescent population.

Maine has become trauma informing in addressing health issues and we know that adverse childhood experiences can impact children and families through exposure to domestic violence and child abuse. Addressing these issues early will lead to improved outcomes for the entire population long-term.

Other very important issues such as immunization and oral health did not make it to the top 10 priorities. Both the Immunization Program within the Division of Infectious Disease and Oral Health Program within the Division of Chronic Disease provide leadership in addressing these needs, thus the Title V Program can focus upon other priorities that do not have a significant voice advocating for attention to the issue. There is also a very active Dental Health Coalition in the state and the Title V program partners with the coalition and programs to remain abreast of activities taking place that impact the MCH population. For more details on the Maine Immunization Program please see National Performance Measure # 7 narrative Pages 69-71 of the Application and Annual Report.

The 10 priorities selected in 2010 are as follows:

1. **Suicide and Self-inflicted Injury:** Reduce suicide and self-inflicted injury in the maternal and child population in Maine.
2. **Violence Against Women:** Reduce the prevalence of domestic violence and sexual assault and associated health disparities.
3. **Obesity and Overweight:** Reduce the prevalence of overweight and obesity among children and adults in Maine.
4. **Family Planning:** Improve reproductive health outcomes for Maine women.
5. **Child and Adolescent Mental Health:** Improve behavioral/mental health and trauma status of infants, children and adolescents by offering responsive support, services and educational information.
6. **Autism:** Ensure early identification and a comprehensive and coordinated family-centered system of care for children with autism spectrum disorder.
7. **Unintentional Injury:** Reduce the incidence of unintentional injuries to Maine's MCH population.
8. **Adolescent Sexuality:** Improve adolescent sexual health**.**
9. **Women's Mental Health:** Improve women's mental health and access to mental health treatment for women suffering from a mental health condition, including postpartum depression.
10. **Childhood Exposure to Violence:** Reduce children's exposure to violence at home, in school and the community.

Priorities Compared with Prior Needs Assessment:

As noted above, the process for selection of the priorities for 2010 changed considerably from 2005. One criterion in 2005 was a desire to be inclusive in the priorities selected, and to capture a wide array of needs within the priorities. By contrast, in 2010, there was consensus among MCH programs and stakeholders that the 2005 priorities were too broad and thus a deliberate attempt was made to be specific with each priority. While some populations and issues were collapsed in each of the first two levels, further collapsing was not done in the last stage as it was determined that this would make problem-mapping and the selection of activities to address the priorities more difficult. There is some overlap between the 2005 and 2010 priorities, as noted below. The 10 priorities in 2005 and the related 2010 priorities are as follows:

1. Improve Birth Outcomes: This was replaced with the more specific priorities of family planning and adolescent sexual activity, as well as violence against women, obesity and overweight are all aspects of this broader priority.
2. Improve the safety of the MCH population, including the reduction of intentional and unintentional injuries: The new priorities of intentional self-harm and suicide, violence against women, unintentional injury and childhood exposure to violence are all aspects of this priority.
3. Improve the respiratory health of the MCH population: this priority was ranked 16th on the 2010 list and replaced by the more specific priorities in other areas.
4. Increase the proportion of the MCH population who are at a healthy weight and physically active: Was replaced with the new priority of obesity and overweight among children and adults.

5. Improve the mental health system of services and supports for the MCH population: Was replaced but reflected in two 2010 priorities: Child and adolescent mental health and women's mental health.
6. Foster conditions to improve oral health services and supports for the MCH population: This priority was ranked 11th on the 2010 list and replaced by the more specific priorities in other areas.
7. Foster the conditions that enable the CSHN Program to move from a direct care focus to a community-based system of care that enables the whole CSHN population to achieve optimal health: This issue did not rank high in the final list, but autism spectrum disorder was selected as the specific CSHN priority. In addition CYSHN will be incorporated into most of the new priorities, specifically: intentional self-harm and suicide, violence against women, family planning, obesity and overweight among children and adults, child and adolescent mental health, women's mental health, unintentional injury, adolescent sexual activity and childhood exposure to violence.
8. Foster conditions to expand the medical home model to a comprehensive health home system for the entire MCH population: Since this issue was difficult to define and thus hard to implement, it did not rise to a top priority in 2010. During problem mapping, we anticipate that this may be a strategy proposed for a number of the new priorities.
9. Improve cultural and linguistic competence within the system of services for the MCH population: A similar priority of addressing diversity did not rank high enough for specific inclusion, but it is an underlying value of the MCH program in Maine to address such issues within all of our work. For each priority selected, disparities and culturally competent approaches will be part of the problem analysis.
10. Integrate existing services and supports for adolescents and young adults into a comprehensive system that draws upon their own strengths and needs: This was replaced and reflected in some priorities specific to this population (adolescent sexual activity and children and adolescent mental health) as well as a part of other priorities that are not specific to the population, including intentional self-harm and suicide, family planning, violence against women, obesity and overweight among children and adults, unintentional injury, and childhood exposure to violence.

Priority Needs and Capacity:

When looking at capacity to address the ten 2015 priorities by levels of the MCH pyramid (Infrastructure Building Services [IB], Population-Based Services [PBS], Enabling Services [ES], and Direct Health Care Services [DHC]) one needs to view it within the context of what the state health agency and external MCH public health partners can each take responsibility for. At the state agency level our attention will focus primarily upon infrastructure and population based services. At the MCH public health partner level attention will be primarily on enabling and direct services.

1. Suicide and self-inflicted injury – (IB): An infrastructure exists within the MYSPP to address suicide prevention specific to youth and young adults; (PBS): Through the MYSPP there are activities and systems in place for identifying and responding to suicidal behaviors in the adolescent and young adult population; (ES): MYSPP works with mental health agencies and schools to improve connections to services for youth identified with suicidal ideation. They have facilitated community-level agreements to ensure services are accessible. MYSPP work with school systems has resulted in increased identification and referral of youth with suicidal behaviors; (DHC): MYSPP staff provide training services such as awareness education, gate keeper and Lifelines teacher training to school and community members that work with youth. Federal CDC and SAMHSA grants have been utilized to provide technical assistance to schools in developing policies and systems to integrate suicide prevention and which connect schools to resources post a suicide event.

2. Violence against women – (IB): The Maine SFP began nearly 5 years ago through an AMCHP, ALL. The SFP is quite active and is currently engaged in conducting needs assessments, program evaluations, grant and program planning and coordination, statewide professional trainings, and surveillance. A US/CDC Public Health Prevention Specialist has come to Maine to coordinate the partnership and its activities; (PBS): Individual organizations within the SFP carry out prevention education efforts, screening/referral, and counseling services focused upon the general population as well as women at risk for violence; (ES): The partnering local and statewide organizations also provide various outreach, education/awareness, and support services to the general population and surrounding communities; (DHC): The Maine CDC does not provide any direct services related to violence against women however many of the partner organizations in the SFP do provide direct services.

3. Obesity and overweight – (IB): The majority of the capacity within the Maine CDC to address obesity and overweight is within the Chronic Disease Division's Physical Activity, Nutrition and Healthy Weight (PAN-HW) Program. Many of the MCH related programs partner with the PAN-HW in addressing obesity reduction and prevention within the pediatric and adult population. Funding to establish this infrastructure began with a PAN grant from the federal CDC; (PBS): There are population based efforts related to media and public education that target the low income through USDA SNAP Education funding; (ES): The promotion of worksite wellness programs by the HMPs enable employees to identify exercise and nutrition options. WIC assists through partnerships with farmer's markets in providing access to local affordable healthy food choices such as fresh fruit and vegetable

options. Outreach to low income residents provides education regarding the availability of low cost healthy foods; (DHC): The PAN-HW program does not provide any direct services. It does provide technical assistance to the Healthy Maine Partnerships (HMP), WIC and other community-based organizations that work at the local level to implement policy and environmental change.

4. Family planning – (IB): there is a solid infrastructure for the delivery of family planning services across Maine. The FPA of Maine is the Title X agency for Maine and those funds are augmented by combined funding from the Maine CDC and the OCFS, which has been in place for close to 30 years; (PBS): FPA provides technical assistance to school teachers in the development of sexual health and reproductive curriculum plans; (ES): The Title X grant and state grant funds subsidize reproductive health services provided by the FPA which enable uninsured clients to obtain services at an affordable cost; (DHC): the FPA delegate agencies provide direct family planning services to Maine residents. Many residents with health insurance receive family planning services through their PCP or gynecological health care provider.

5. Child and adolescent mental health – The state Title V program does not have capacity in this area, however through the Department's Division of Children's Behavioral Health Services and Adult Mental Health Services there is a system of care and services for the MCH populations within Maine. Due to ongoing state budget deficits these systems are being stressed by decreased reimbursement rates through the state Medicaid program and limitations in the number of visits in both public and private health insurance plans. (IB): Much of the infrastructure for this priority area is located in other offices of DHHS. The state Title V program maintains a partnership with the state mental health agency through the MYSPP and TYAH Program. Coordinated School Health Programs have developed some policy level strategies to promote mental health in schools; (PBS): Comprehensive school health education provides age appropriate education to students regarding mental health promotion; (ES): SBHCs, funded through the TYAH Program, screen for depression and provide referrals and subsidize costs for mental health services for uninsured or under-insured students; (DHC): Some SBHCs funded through the TYAH Program provide direct mental health services.

6. Autism – The State Title V program has limited capacity in this area, however, through the Pervasive Developmental Disorders (PDD) Systems Change Initiative and the Region I Summit partners there is a plan in place to begin to meet the needs of children with ASD/DD. (IB): The PDD Systems Change Initiative, underway since January 2008 is a public and private collaboration. The Commissioners of three State agencies (Labor, Education and Health and Human Services) and a representative of the Governor's Office make up the steering committee. Currently interagency funding is provided to the Developmental Disabilities Council to support a PDD Coordinator, the manager of this initiative who organizes and facilitates all work to address the areas of focus. An Advisory Council provides input on the work and recommendations to ensure the work is relevant and likely to achieve desired outcomes. The PDD Initiative's focus has been early identification of ASD/DD in young children and the transition process from school to adult life. To date workgroups have evaluated current services and developed improvement plans. Screening

tools have been selected and piloted across Maine. A biennial report to the Maine Legislature in February, 2009 regarding the status of services for persons with ASDs in Maine indicated that there has been a "dramatic increase in the number of individuals with ASD/DD in Maine" resulting in an increase in demand for services. Many children are not being identified until after entering school, and statistics indicate there will be a significantly larger number of youth with ASDs in need of transition services. (DHC): No direct services are provided.

7. Unintentional injury – (IB): The MIPP is the lead agency for injury prevention statewide and has worked with interested stakeholders to develop channels for disseminating injury prevention information. MIPP provides community based unintentional injury data to the public health districts upon request for use in developing community-based injury prevention interventions. The MIPP is the link to data, resources and training; (PBS): MIPP partners with numerous stakeholders and advocates to develop population based education and interventions; (ES): MIPP recently completed two projects to identify statewide injury and violence prevention activities, programs and initiatives that are occurring, and research all known injury and violence prevention toolkits at the state and national levels. Through a grant from the Bureau of Highway Safety, MIPP trains community partners to properly fit child passenger restraint systems for individuals; (DHC): MIPP provides funding to support the Northern New England Poison Center (NNEPC) in the prevention and treatment of poisonings with the NNEPC providing direct services such as guidance to families and health care providers on the treatment of possible poisonings. MIPP also invests in ongoing injury data and surveillance to monitor trends, direct resources and inform about the injury problem in our state.

8. Adolescent sexuality – Through the Maine CDC and the DOE there is a 25+ year history of collaboration on delaying the initiation of sexual activity among the adolescent population as well as education about reproductive health. Maine has a statutorily mandated comprehensive health education that includes reproductive health from school entry through high school that is age appropriate; (IB): The Title V program supports the salary for 2 Health Education Consultants at the DOE in order to have resources available for school teachers and school boards in the development of reproductive and sexual health curriculum; (PBS): FPA provides population based education regarding adolescent sexuality; (ES): Title X and state grant funds subsidize reproductive health services provided by the FPA which enables adolescent clients who are uninsured or concerned about confidentiality to obtain services at an affordable cost; (DHC): the FPA delegate agencies provide direct family planning services to Maine adolescents as well as some pediatric providers.

9. Women's mental health – Maine has limited capacity to address women's mental health. (IB): The state Title V program does not have capacity in this area, however through the Office of Adult Mental Health Services there is a system of care and services for Maine women. Due to ongoing state budget deficits these systems are being stressed by decreased reimbursement rates through the state Medicaid program and limitations in the number of visits in both public and private health insurance plans; (PBS): The state Title V program does not have capacity in this area; (ES): The state Title V program does not have capacity in this area; (DHC): Mental health services are provided through non-profit health care organizations as well as private mental health providers.

10. Childhood exposure to violence – (IB): Most of the infrastructure for this priority is based in the OCFS, which includes child welfare, early childhood and children's behavioral health (CBH). CBH has a SAMHSA grant for trauma informed systems of care, and both OCFS and MCH are active members of the State Advisory Team for the Washington County-based Project LAUNCH; (PBS): Maine's HV Program is based out of OCFS and serves first time families and pregnant and parenting adolescents within a statewide network; the data from this service continues to be an important contributor to the MCHBG; (EB): MIPP provides Shaken Baby Syndrome prevention education at one of the state's correctional facilities. Maine has also been recognized for its work on prevention of abusive head trauma through implementation of the Period of Purple Crying program used at all Maine birthing hospitals, a direct result of co-leadership from OCFS and Title V; (DS): Support and intervention services are provided through non-profit mental health and social service agencies. MIPP funds the development of safe school climate through a University Cooperative Agreement, monitors trends in data and surveillance and collaborates to include education on this topic through its website and at conferences. OCFS funds a network of Child Abuse and Neglect Prevention Councils in every county, which conduct local needs assessments, provide evidence-based parenting education, and support families involved in the child welfare system by connecting and partnering with other community agencies.

MCH Population Groups

The ten priorities cover the MCH population groups as follows:

<u>Preventive and primary care services for pregnant women, mothers and infants</u>

- Intentional self-harm and suicide
- Violence against women
- Obesity and overweight among children and adults
- Family planning
- Unintentional injury
- Women's mental health
- Childhood exposure to violence

<u>Preventive and primary care services for children</u>

- Intentional self-harm and suicide
- Obesity and overweight among children and adults
- Child and adolescent mental health
- Unintentional injury
- Adolescent sexual activity
- Childhood exposure to violence
- Autism

Services for CSHN

In these priorities we are focusing preventive services for this population, and their disparate needs will be considered in the following priorities:

- Autism
- Intentional self-harm and suicide
- Violence against women
- Obesity and overweight among children and adults
- Family planning
- Child and adolescent mental health
- Unintentional injury
- Adolescent sexual activity
- Childhood exposure to violence
- Women's mental health (covers CSHN through young adulthood)

Priority Needs and State Performance Measures

Suicide and Self-inflicted Injury:

Priority: Reduce suicide and self-inflicted injury in the maternal and child population in Maine.

Suicide is the second leading cause of death among youth and the 4th leading cause of death among women age 15-44 years in Maine. Each year, approximately 1 in 10 adolescents consider taking their own lives. The impact of suicide is devastating to survivors including family, friends, schools and entire communities. Risks for suicide include poor mental health, substance abuse, and trauma.

Progress on this priority will be measured using the following:

National Performance Measure #16: The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

State Performance Measure # 1 (New in 2011): The rate of suicide deaths (per 100,000) among those age 20-44 years.

This measure was chosen because the MIPP is expanding its efforts to address suicide and self-inflicted injury across the lifespan. The number of suicides among males and females in this age group is among the highest of any age group in Maine. When an adult dies by suicide, it can have serious consequences for the families and children who are survivors. Data from this measure are from death certificates maintained by the Maine ODRVS within the Maine CDC.

Other related measures include: **SPM # 2, SPM #6, SPM #7**

Violence Against Women

Priority: Reduce the prevalence of domestic violence and sexual assault and associated health disparities.

Every year over 7,000 Maine women are physically or sexually assaulted by an intimate partner. In 2008, approximately 48% of homicides in Maine were related to domestic conflicts. In the same year 373 rapes were reported to law enforcement, a 19% increase from 2004. Violence against women is linked to poor physical and mental health outcomes for women and children, such as depression, suicide, sexually transmitted infections, unwanted pregnancies, traumatic brain injury, and chronic pain. A public health approach to the problem is essential to preventing violence before it occurs and reducing its harmful effects.

Progress on this priority will be measured using the following:

State Performance Measure # 2 (New in 2011): The percent of adult women reporting sexual assault or intimate partner violence within the previous 12 months

This measure was chosen because by reducing the occurrence of domestic violence and sexual assault, we can reduce the consequences. Data from this measure come from the Maine BRFSS System. Maine's Title V program is committed to maintaining questions on the BRFSS to track this outcome over time.

Other related measures include: **SPM #1, SPM #4, SPM #6, SPM #7**

Obesity and Overweight

Priority: Reduce the prevalence of overweight and obesity among children and adults in Maine.

In Maine, like the rest of the nation, obesity and its associated health consequences are increasing exponentially. Data from 2009 show the problem is pervasive from youth to adulthood. Almost 2 out of 3 Maine adults (64%) are considered either overweight (38%) or obese (26%). The percent of obese adults in Maine has increased 87% since 1995 when 14.1% of Maine adults were obese. In 2009, according to the Maine Integrated Youth Health Survey, about 1 in 4 Maine high school and middle schools students (26.4%, 26.2% respectively), 30.5% of 5th and 6th graders, and 33% of kindergarten and third graders were overweight or obese. Obesity is a risk factor for chronic conditions, such as heart disease, diabetes, cancer, and arthritis, and is associated with premature death. Obesity is the number-two killer, after tobacco, in total number of deaths due to preventable causes. Encouraging state-wide efforts that help people achieve recommended levels of physical activity and proper nutrition is critical to improving the long-term health of Maine's MCH population.

Progress on this priority will be measured using: **NPM #14:** Percentage of children, ages 2 to 5 years, receiving WIC services with a body mass index (BMI) at or above the 85th percentile.

State Performance Measure # 3: Percent of students in grades 5-12 who are overweight or obese.

Additional data will be available from Maine's CHIPRA grant.

This measure was chosen because children who are overweight or obese are at increased risk of becoming overweight adults and developing chronic conditions, such as Type II diabetes, at a young age. Establishing healthy lifestyle habits among children decreases this risk. Data for this measure are from the Maine Integrated Youth Health Survey.

Family Planning

Priority: Improve reproductive health outcomes for Maine women.

By improving women's reproductive health we can improve women's health and infant birth weights. This priority encompasses unintended pregnancy, access to contraception, pre-conception care, as well as birth outcomes. Public health actions can greatly impact women's reproductive health. Education regarding contraception and available and affordable methods of birth control are crucial in reducing the number of unintended pregnancies. Increased awareness of preconception health and family planning may improve the chance of having a healthy baby.

Progress on this priority will be measured using the following:

National Performance Measure #08: The rate of birth (per 1,000) for teenagers aged 15 through 17 years.

National Performance Measure # 15: Percentage of women who smoke in the last three months of pregnancy.

National Performance Measure #18: Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Health System Capacity Indicator #04: The percent of women (15 through 44) with a live birth during the reporting year whose observed to expected prenatal visits are greater than or equal to 80 percent on the Kotelchuck Index.

Health Status Indicator (HSI) #01A: The percent of live births weighing less than 2,500 grams.

HSI #01B: The percent of live singleton births weighing less than 2,500 grams.

HSI #02A: The percent of live births weighing less than 1,500 grams.

HSI #02B: The percent of live singleton births weighing less than 1,500 grams.

HSI # 05A: Percent of low birth weight (< 2,500 grams)

HIS # 05B: Infant deaths per 1,000 live births

State Performance Measure # 4 (continued from 2005): The percentage of births in women less than 24 years of age that are unintended

This measure was selected because unintended births in Maine among young women have steadily increased over time. Unintended pregnancy can be a consequence of preconception factors such as access to contraception, substance use, and intimate partner violence. The consequences of unintended pregnancy include inadequate prenatal care, poor birth outcomes, postpartum depression, and child maltreatment. This SPM was included as part of the 2005 CSNA and we have chosen to maintain it for this priority. The data are from Maine's PRAMS.

Child and Adolescent Mental Health

Priority: Improve behavioral/mental health and trauma status of infants, children and adolescents by offering responsive support, services and educational information.

Historically, the role of trauma was underestimated within the youth population. SAMHSA recently reported that 39% of children have experienced trauma. Research informs us that exposure to trauma even in utero can have profound and lasting implications on children's mental health and well-being. Early responsive intervention is essential and serves as a primary prevention tool for mental health/behavioral and addiction issues. Developing early intervention services and trauma responsive services and supports is the foundation for changing current rates of mental health and behavioral problems in our 18 and under population.

Progress on this priority will be measured using the following:

National Performance Measure #16: The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

Other related measures include: **SPM #2, SPM #7**

A new state performance measure on child and adolescent mental health will be developed in the coming year after we identify the areas of children's mental health where Maine's Title V agency will focus its efforts.

Autism

Priority: Ensure early identification and a comprehensive and coordinated family-centered system of care for children with autism spectrum disorder.

Maine will ensure that all children with ASD/DD are identified as soon as possible in order for the child and family to receive the full benefit of early intervention services and supports. Public and private entities will work together with families to ensure intervention services and supports will be effective, accessible, coordinated, comprehensive, of high quality, and delivered in a culturally competent manner. All services and supports for children with ASD/DD will be

incorporated into a comprehensive family-centered system of care, with continuous quality improvement.

Progress on this priority will be measured using the following:

National Performance Measure #2: The percent of children with special health care needs age 0 to18 years whose families partner in decision making at all levels and are satisfied with the services they receive.

National Performance Measure #3: The percent of children with special health care needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home.

National Performance Measure #5: Percent of children with special health care needs age 0 to 18 whose families report the community-based service systems are organized so they can use them easily.

A new state performance measure on child and adolescent mental health will be developed in the coming year after we identify the areas of children's mental health where Maine's Title V agency will focus its efforts.

Unintentional Injury

Priority: Reduce the incidence of unintentional injuries to Maine's MCH population.

In Maine, during 2002-2006, unintentional injuries were the leading cause of death among 1-44 year old residents. Unintentional motor vehicle traffic crashes were the leading cause of injury deaths for children and youth ages 1-24 and unintentional poisoning was the second leading cause of death among those age 15-24 years. Injuries are a preventable public health problem and reducing injuries and the resulting disabilities and deaths are among the objectives of Healthy Maine 2010 and Healthy People 2010. A solid injury prevention infrastructure in the state health agency is essential to reducing the burden of injury.

Progress on this priority will be measured using the following:

National Performance Measure #10: The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.

Health Status Indicators:

HSI #03A: The death rate per 100,000 due to unintentional injuries among children aged 14 years and younger.

HSI #03B: The death rate per 100,000 for unintentional injuries among children aged 14 years and younger due to motor vehicle crashes.

HSI #03C: The death rate per 100,000 from unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years.

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.

State Performance Measure #5 (New in 2011): The hospitalization rate (per 10,000) of unintentional poisonings among children and youth aged 0-24 years.

This measure was selected because the MIPP, through its CDC Injury Core Capacity grant, has two priorities related to unintentional injury that apply to the MCH population: (1) motor vehicle crashes, and (2) unintentional poisoning. There is a national performance measure and several health status indicators related to motor vehicle crashes and unintentional injury mortality and hospitalization. Unintentional poisoning has been increasing in the state and MIPP has been working with the Northern New England Poison Control Center and the Maine Office of Substance Abuse to examine and address the problem. Data for this measure come from the Maine Hospital Discharge Dataset, which is produced on an annual basis by the Maine Health Data Organization.

Adolescent Sexuality

Priority: Improve adolescent sexual health.

Adolescent sexual activity, including vaginal, anal, and oral intercourse, carries the risk of unintended pregnancy and STD transmission. In 2007, 45% of Maine high school students reported ever having had sexual intercourse, 5% before age 13. Additionally, 41% of teens did not use a condom during their last sexual intercourse and 20% were under the influence of drugs or alcohol before their last sexual intercourse. In Maine teen pregnancy rates declined by 41% from 1991-2006 compared to a 32% decline nationally. However, similar to the U.S., Maine has seen its teen birth rate increase in recent years. Continued initiatives by state sponsored agencies are necessary to reduce pregnancy rates and the incidence of STDs among teens and young adults in order to ensure the best future for all Maine youths.

Progress on this priority will be measured using the following:

National Performance Measure # 08: The rate of birth (per 1,000) for teenagers aged 15-17 years.

HSI #05A: The rate per 1,000 women aged 15 through 19 years with a reported case of Chlamydia.

Women's Mental Health

Priority: Improve women's mental health and access to mental health treatment for women suffering from a mental health condition, including postpartum depression.

More than 1 in 4 women in Maine have ever been diagnosed with depression or have current symptoms of depression. Women are more likely than men to have higher rates of disorders such as major depression, anxiety, posttraumatic stress disorder, and eating disorders. Risks for mental illness can be biological and social. Women are vulnerable to depression around the time of pregnancy and during the postpartum period. In addition, for women, trauma-related experiences during childhood and adulthood can increase their risk for mental illness. There is evidence based on the Adverse Childhood Experience study that early trauma can have life-long effects on physical and mental health. Addressing trauma histories during treatment is recognized as important for improving health outcomes. Recent studies suggest that counseling that integrates trauma, mental health and substance abuse disorders is associated with improved outcomes. However, a challenge for many who are suffering with a mental health disorder in Maine is finding and accessing treatment.

Progress on this priority will be measured using the following:

State Performance Measure # 6 (New in 2011): The percent of women with depressive symptoms receiving medication or treatment for a mental health or emotional condition by a doctor or other healthcare provider.

This measure was selected because the determinants of mental illness can be biological, social, and neurological. They can include experiences with violence as an adult or child, stressful life events, and lack of social support. It is critical that health care providers screen for signs of mental distress and help patients receive needed treatment. Research suggests that primary care providers can play a critical role in detecting and treating depressive symptoms. This measure will help us assess whether women who are struggling with depression are receiving care. Data are from the Maine BRFSS.

Other related measures include: **SPM #1, SPM #2, SPM #4**

Childhood Exposure to Violence

Priority: Reduce children's exposure to violence at home, in school and the community.

Violence experienced during childhood is a major, worldwide public health problem. Children can be exposed to a wide range of traumatic events including injury to self, witnessing serious injury or the death of others, or experiencing the imminent threat of injury or death to self or others. Traumatic events may elicit overwhelming feelings of terror and helplessness. They may be acute, occurring at a particular place and time like a physical assault or disaster or terror event; or they may be events that occur repeatedly over an extended period of time. A history of exposure to violence or experiencing trauma can have a significant negative effect on a child's

behavior, development and can make it more likely that an individual will engage in tobacco use and or substance abuse, criminal activity, teen pregnancy and self-injurious behavior including suicidality.

Progress on this priority will be measured using:

State Performance Measure # 2 and **SPM # 7 (New in 2011):** The rate of substantiated cases of child abuse and neglect assessed by Maine's Office of Child and Family Services.

This measure was selected because, although childhood exposure to violence can occur outside of the home in schools and communities, we have selected to measure childhood exposure to violence in the home. Childhood maltreatment has been linked to poor health outcomes throughout the lifespan including mental illness, chronic disease, substance use, and disability or death. The data for this measure are collected by Maine's Office of Child and Family Services. By reducing children's exposure to violence, we will decrease the number of cases assessed by the state for maltreatment.

Related measures include: **SPM #1, SPM #4, SPM #6**

Section VI – OUTCOME MEASURES – FEDERAL AND STATE

This section discusses the MCH Outcome Measures and their relationship to Maine's Title V program activities and National and State Performance Measures.

National Outcome Measures #1-#5

Maine's infant 5-year average mortality rate has been slowly increasing since it hit a low of 5.0 per 1,000 between 1999-2003. According to the most recent data available, Maine's infant mortality rate for 2004-2008 was 6.1 per 1,000, an 18% increase since 1999-2003. Maine's neonatal mortality rate also increased from 3.8 per 1,000 to 4.3 per 1,000 between 1999-2003 and 2004-2008, and our post-neonatal mortality rate increased from 1.2 per 1,000 to 1.9 per 1,000. Maine's perinatal mortality rate was also higher in 2004-2008 compared to 1999-2003, but has fluctuated over time. Maine has not achieved the Healthy People 2010 mortality objectives related to infant, neonatal and postneonatal or perinatal mortality (HP 2010 = 4.5, 2.9, 1.2, 4.5 per 1,000 births respectively).

Based on the most recent comparable data available for the U.S., in 2006, Maine's infant mortality rate of 6.3 was lower than the U.S. rate of 6.75. However, Maine's infant mortality rate among whites was 6.3, which was higher than the U.S. white infant mortality rate of 5.6. Maine's Black-White infant mortality ratio between 2004-2008 was 1.8. The infant mortality rate among Black in Maine during this time was 10.8 per 1,000 compared to 5.9 per 1,000 Whites. There were 19 infant deaths among mothers whose race is black and 408 infant deaths among mothers whose race was white. This reveals the challenge in Maine in tracking infant mortality deaths.

Maine's Title V program is engaged in several activities related to the National and State Performance Measures to try to reduce Maine's infant mortality rates and improve health physical and mental health:

- Maine's Maternal and Infant Mortality Review Panel examines cases of infant deaths to identify and recommend effective system-level interventions to reduce infant mortality. Recent efforts include analyses of very low birth weight infants born in non-tertiary care facilities (NPM #17), as well as a Perinatal Periods Of Risk analysis, and presentation of data on risks for infant mortality including infant sleep location, drug-affected infants, and abusive head trauma. MIMR will continue to review cases of infant mortality and has recently been given legislative authority to review fetal deaths.

- Maine implemented "The Period of PURPLE Crying" Program, the National Center on Shaken Baby Syndrome's (SBS) evidence-based SBS prevention program, in every birthing hospital in the state. This activity was initiated through a group of providers and state staff concerned with the increasing incidence of abusive head trauma among infants in the state. The group was coordinated by Maine's Title V Director.

- Maine's Child Death and Serious Injury Review Panel conducted a review of home births occurring in Maine over a 2-year period to determine whether home births were a factor

contributing to Maine's infant mortality rates. The results of this analysis are not statistically reliable due to the small number of deaths to infant born at home during this period. However, the panel found a higher rate of infant mortality in home births in Maine than in hospital births and a high rate of refusals of preventive screening services in the home birth setting. The panel will continue to monitor home birth outcomes in the coming years.

- Maine's Newborn Screening Program screens more than 99% of infants for genetic conditions at birth. Based on these screenings, approximately 20 infants per year are identified and 100% of them are receiving treatment (NPM #1).

- Maine's Immunization Program (MIP) works in collaboration with WIC and Home Visiting (HV) to ensure that children are immunized on a timely basis to prevent premature death due to infectious disease (NPM #7). Immunization is embedded in the curriculum of HVs and is a performance measure for the contracted community agencies. Maine's HV program partnered with MIP to develop core messages for public service announcements, an informational activity in an effort to raise immunization rates. Materials were included in the home visiting "Welcome Baby Bags" that promoted immunization. Home visitors talk with parents about their specific concerns and risks and encourage them to talk with their doctor about immunization.

- Maine received 1 of 10 CHIPRA grants from the US DHHS designed to improve the quality of health care for children with a focus on the Medicaid population. This grant will help to increase the percent of children receiving EPSDT services through MaineCare. Early screening and intervention can help improve infant health outcomes.

- In Spring 2009, Maine's Public Health Nurses were trained through Maine's Safe Families Partnership to screen and respond appropriately to domestic violence during their home visits. Home visiting has been shown to be an effective way to reduce child abuse and addressing domestic violence reduces children's exposure to violence in the home. This activity relates to Maine's new SPM #2, new SPM #7, and new SPM #6.

- Maine's Teen and Young Adult Health Program is increasing outreach and clinical efforts to reach young adults, as well as working with young adults in minority communities to help reduce unintended pregnancy (SPM #1).

- The Maine HV Program is available universally to any teen parent and first time family throughout the state. An effort is made to enroll women before they give birth to help assure proper prenatal care and healthy pregnancies (NPM #18). HV programs are collectively developing outreach strategies to engage Family Planning and health care clinics for earlier prenatal referrals.

- The WIC Nutrition Program is collaborating with the PHN staff and other partners to enhance provision of services to pregnant women in their first trimester (NPM #18). WIC enrollments increased during FY09, due in part to the economy.

- Maine's Injury Prevention Program continues to provide car seats to families that met WIC income guidelines (NPM #10).

Due to concerns with the increase in infant mortality, Maine's MCH epidemiologists will be working with the Maine Title V Director, MCH Medical Director and Maine CDC Director to analyze trends in infant mortality and associated risk factors. This analysis will be completed by July 2011.

National Outcome Measure #6:

Between 2004-2008, Maine's mortality rate for children between ages 1-14 years was 17.8 per 100,000; 187 children died within this 5-year period. The leading cause of death for this age group overall was unintentional injury followed by malignant neoplasm (ages 5-14) and congenital anomalies (ages 1-4). The leading cause of unintentional injury death among children aged 5-14 was motor vehicle crashes. Among children aged 1-4 years, the leading cause of unintentional injury death was unintentional drowning. Homicide was the 6th leading cause of death among children age 1-4 and the 7th leading cause of death among children aged 10-14. Suicide is also one of the ten leading causes of death for children age 10-14 years. Other leading causes of death in this age group include heart disease, influenza/pneumonia, and chronic respiratory disease.

Maine's Title V program is working to reduce child mortality through the following initiatives:

- The Maine Injury Prevention Program provides car seats to families (NPM#10), is working with the Northern New England Poison Control Center to reduce unintentional poisonings (new SPM #5), and is a leader in school-based suicide prevention programs (NPM #16).

- The Title V program works with the MIP to promote childhood vaccination (NPM #7). In addition, Maine's Title V program played a critical role through the work of the PHN program to vaccinate school-age children against H1N1. Maine's vaccination penetration rates among school-age children earned national recognition by the federal CDC.

- Maine's Newborn Screening Program identifies genetic conditions early and helps families receive needed treatment to reduce mortality and morbidity (NPM #1).

- Maine's Child Death and Serious Injury Review Panel reviews cases of children's death to improve systems of safety and care for children.

Needs Assessment Summary

Maine's Five Year CSNA was guided by a quantitative and qualitative analyses. For example, quantitative data (e.g. hospital discharge, YRBS, PRAMS) showed that mental health disorders and violence are important issues affecting the MCH population in Maine. Qualitative data from focus groups also identified mental health and the lack of available services, as well as domestic violence as key needs. As such, we have 4 priorities; child and adolescent mental health, women's mental health, violence against women and childhood exposure to violence.

Many of the same concerns are present in both sets of priority needs, but the ways in which the priorities are grouped have changed, indicating a deliberate attempt to be more specific with each priority; a change from 2005 as MCH programs and stakeholders perceived the 2005 priorities to be too broad. There is some overlap between the 2005 and 2010 priorities. The priority needs selected for the 2011-2015 CSNA and those from the 2001-2005 CSNA are outlined below. Improve Birth Outcomes was replaced with the more specific priorities of family planning and adolescent sexual activity, as well as violence against women, obesity and overweight are all aspects of this broader priority.

Improve the safety of the MCH population, including the reduction of intentional and unintentional injuries: The new priorities of intentional self-harm and suicide, violence against women, unintentional injury and childhood exposure to violence are all aspects of this priority. We heard from those working with these populations that factors associated with substance abuse were also seen as leading to an increase in domestic violence and child abuse and neglect.

Improve the respiratory health of the MCH population was ranked 16th on the 2011-2015 list and replaced by the more specific priorities in other areas.

Increase the proportion of the MCH population who are at a healthy weight and physically active was replaced with the new priority of obesity and overweight among children and adults. This issue was most commonly cited by focus group participants resulting from poor diet and physical inactivity.

Improve the mental health system of services and supports for the MCH population was replaced but reflected in two 2011-2015 priorities: Child and adolescent mental health and women's mental health. Again, focus group participants frequently spoke about the increased mental health needs and corresponding lack of services for both children and adults.

Foster conditions to improve oral health services and supports for the MCH population was ranked 11th on the 2011-2015 list and replaced by the more specific priorities in other areas. Foster the conditions that enable the CSHN Program to move from a direct care focus to a community-based system of care that enables the whole CSHN population to achieve optimal health. This priority did not rank high in the final list, but autism spectrum disorder was selected as the specific CSHN priority. In addition CYSHN will be incorporated into most of the new priorities, specifically: intentional self-harm and suicide, violence against women, family planning, obesity and overweight among children and adults, child and adolescent mental health,

women's mental health, unintentional injury, adolescent sexual activity and childhood exposure to violence.

Foster conditions to expand the medical home model to a comprehensive health home system for the entire MCH population. Since this issue was difficult to define and thus hard to implement, it did not rise as a top priority in 2010. During problem mapping, we anticipate that this may be a strategy proposed for a number of the new priorities.

Improve cultural and linguistic competence within the system of services for the MCH population: A similar priority of addressing diversity did not rank high enough for specific inclusion, but it is an underlying value of the MCH program in Maine to address such issues within all of our work. For each priority selected, disparities and culturally competent approaches will be part of the problem analysis.

Integrate existing services and supports for adolescents and young adults into a comprehensive system that draws upon their own strengths and needs was replaced and reflected in some priorities specific to this population (adolescent sexual activity and children and adolescent mental health) as well as a part of other priorities that are not specific to the population, including intentional self-harm and suicide, family planning, violence against women, obesity and overweight among children and adults, unintentional injury, and childhood exposure to violence.

The methodology for determining the 2011-2015 priority needs built upon the experience of the 2005 CSNA. In 2005 we set out to ensure all voices were heard and from this process we gained a wealth of information not only from those working with the MCH population but from the consumers seeking services. To compliment the quantitative data, 17 focus groups were held to hear what participants perceived to be the strengths and needs of women, children, adolescents, and families. In addition issue experts from across the broad range of MCH, families and public health professionals, internal and external to Maine CDC and DHHS, were invited to respond to web-based surveys to provide input on narrowing the list of priorities. Fact sheets were developed for the top 30 priorities and reviewed and finalized by an expert for the specific issue. In 2005, the DFH did not solicit this broad input and as such we did not feel that all voices were represented in the priority setting process and that perhaps we were making decisions without having access to a comprehensive set of data.

While we have made many positive strides during the past five years, we continue to be challenged in our work by ongoing state and federal budget reductions. Therefore, the more specific priorities we developed for 2011-2015 will allow us to more closely align our funding with priorities.

The Maine Title V, Five Year Strengths and Needs Assessment is the first step in a cycle for continuous improvement of maternal, child, and youth health. Beginning in late summer 2010 a strategy mapping process will be initiated to create a road map to address and track the ten priorities so that we can be better informed on our progress toward improving the overall health of our MCH population. The many partnerships we have fostered over the years will be critical to the MCH Title V Program and our work during the next five years.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

A AAP American Academy of Pediatrics
ACIP National Advisory Committee on Immunization Practices
ACS American Community Survey
ADD Attention-Deficit Disorder
ADHD Attention-Deficit Hyperactivity Disorder
AHT Abusive Head Trauma
AIDS Acquired Immune Deficiency Syndrome
ALL Action Learning Lab
AMCHP Association of Maternal and Child Health Programs
ASD Autism Spectrum Disorder
ASPIRE Additional Support for People in Retraining and Employment

B BDP Birth Defects Program
BF Bright Futures
BMI Body Mass Index
BRFSS Behavioral Risk Factor Surveillance System

C CAP Community Action Program
CBE Clinical Breast Exam
CC Children's Cabinet
CCDF Child Care Development Fund
CDS Child Development Services
CDSIRP Child Death and Serious Injury Review Panel
CF Cystic Fibrosis
CHAP Community Health Accreditation Program
CHIPRA Child Health Insurance Program Reauthorization Act
CLD Culturally and Linguistically Diverse
CLPPP Childhood Lead Poisoning Prevention Program
CMH Children's Mental Health
CMS Centers for Medicare and Medicaid Services
CPS Child Protective Services
CPS Current Population Survey
C-Section Cesarean Section
CSHN Children with Special Health Needs
CSHP Coordinated School Health Program
CSNA Comprehensive Strengths and Needs Assessment
CYSHN Children and Youth with Special Health Needs

D DD Developmental Disabilities
DFH Division of Family Health
DHHS Department of Health and Human Services
DOE Department of Education
DOL Department of Labor
DSM-IV Disorders – Diagnostic and Statistical Manual of Mental Disorders
DTP Diptheria, Pertussis and Tetanus
DTP/DTaP/DT
Diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids
DV Domestic Violence

E EBC Electronic Birth Certificate
eBLL Elevated Blood Lead Level
ECCS Early Childhood Comprehensive Systems
ED Emergency Department
EPHS Essential Public Health Services
EPI Team Epidemiology Team
EPSDT Early and Periodic Screening, Diagnosis and Treatment

F FPA Family Planning Association
FPL Federal Poverty Level
FQHC Federally Qualified Health Center
FTE Full Time Equivalent

G GED General Educational Development

H Hep B Hepatitis B
HF Healthy Families
Hib Haemophilus Influenzae type b vaccine
HIT Health Information Technology
HIV Human Immunodeficiency Virus
HM2010 Healthy Maine 2010
HMO Health Maintenance Organization
HMP Healthy Maine Partnerships
HP2010 Healthy People 2010
HPSA Health Professional Shortage Area
HRSA Health Resources and Services Administration
HV Home Visiting

I ICD International Classification of Diseases
IDEA – Individuals with Disabilities Education Act
IEP Individualized Education Plan
IOM Institute of Medicine
IPHIS Integrated Public Health Information System
IYHS Integrated Youth Health Survey

L LAUNCH Linking Actions for Unmet Needs in Children's Health
LEP Limited English Proficiency
LMP Last Menstrual Period

M Maine CDC Maine Center for Disease Control and Prevention
MCGC Maine Children's Growth Council
MCH Maternal and Child Health
MCHB Maternal and Child Health Bureau (Federal Agency)
MCHS Maine Child Health Survey
MIMR Maternal and Infant Mortality Review
MIPP Maine Injury Prevention Program
MMC Maine Medical Center
MMR Measles, Mumps Rubella
MOA Memorandum of Agreement
MOU Memorandum of Understanding
MSHA Maine State Housing Authority
MSM Men Having Sex With Men
MYDAUS Maine Youth Drug and Alcohol Use Survey
MYSPP Maine Youth Suicide Prevention Program

N NCHS National Center for Health Statistics
NEDSS National Electronic Disease Surveillance System
NICU Neonatal Intensive Care Unit
NIS National Immunization Survey
NNEPC Northern New England Poison Center
NSCH National Survey of Children's Health
NS-CSHCN National Survey of Children with Special Health Care Needs
NSFG National Survey of Family Growth
NTD Neural Tube Defect

O OCFS Office of Child and Family Services
ODRVS Office of Data, Research and Vital Statistics
OHP Oral Health Program
OIAS Office of Integrated Access and Support
OLPH Office of Local Public Health
OMS Office of MaineCare Services
OPHI Office of Public Health Informatics
ORHPC Office of Rural Health and Primary Care
OSA Office of Substance Abuse

P PAN-HW Physical Activity, Nutrition and Healthy Weight
Pap Papanicolau
PCP Primary Care Provider
PCV Pneumococcal Conjugate
PDD Pervasive Developmental Disorders
PHN Public Health Nursing
PHQ-8 Patient Health Questionnaire - 8
PKU Phenylketonuria
POPC Period of Purple Crying
PRAMS Pregnancy Risk Assessment Monitoring System
PREP Pediatric Rapid Evaluation Program
PTSD Post Traumatic Stress Disorder

Q QI Quality Improvement

S SAMHSA Substance Abuse and Mental Health Services Administration
SBHC School-Based health Center
SCHIP State Children's Health Insurance Program
SECCS State Early Childhood Comprehensive Systems
SFP Safe Families Partnership
SIDS Sudden Infant Death Syndrome
SNAP Supplemental Nutrition Assistance Program
SOHP School Oral Health Program
SSI Supplemental Security Income
STD Sexually Transmitted Disease

T TANF Temporary Assistance to Needy Families
TYAH Teen and Young Adult Health

U USDA United States Department of Agriculture
USM University of Southern Maine

V Var Varicella
VBAC Vaginal Birth After Cesarean
VENA Value Enhanced Nutrition Assessment
VLBW Very Low Birthweight (<1500 grams)

W WIC Women, Infants, and Children Supplemental Nutrition Program

Y YRBS Youth Risk Behavior Survey
YTS Youth Tobacco Survey

Z ZBB Zero-based Budgeting

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Appendix A

Maternal & Child Health Needs Assessment Focus Group Questions
By Participant Group

Pregnant Women

1. What do you think are the most important health and safety needs of pregnant women in Maine?
2. What are your most important health and safety needs?
3. What do you believe Maine is doing well to address the health and safety needs of pregnant women?
4. What do you believe Maine is **not** doing well to address the health and safety needs of pregnant women?
5. As a pregnant woman, what problems/barriers have you encountered when accessing health services?
6. What programs and activities do you participate in that help you to be healthy and safe?
7. For the next 5 years, what do you think should be the top health and safety priority for pregnant women in Maine?

Youth

1. What are the most important health and safety needs facing teens in Maine?
2. What are your most important health and safety needs?
3. Where do you get your health and safety information?
4. What problems /barriers have you encountered (faced) when trying to get health services?
5. What programs and activities do you take part in that help you to be healthy and safe?
6. For the next 5 years, what do you think should be the top health and safety priority for teens in Maine?

Advocates/Policy Makers/Public Health Leaders/MCH Program Managers

What do you think are the most important health and safety needs facing Maine? If responses are general then prompt by asking about:

1. a. Pregnant Women
   b. Infants
   c. Children and Adolescents
2. What do you believe Maine is doing well to address the health and safety needs of:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents
3. What do you believe Maine is **not** doing well to address the health and safety needs of:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents

4. For the next 5 years, what do you think should be the top health and safety priority for Maine? If responses are general then prompt by asking about:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents

Parents and Consumers of Services

1. What do you think are the most important health and safety needs of Maine:
   a. Women
   b. Younger children
   c. Teens
2. From your experience what health and safety needs are most important for:
   a. Yourself
   b. Your younger children
   c. Your teens
3. What do you believe Maine is doing well to address the health and safety needs of:
   a. Women
   b. Younger children
   c. Teens
4. What do you believe Maine is **not** doing well to address the health and safety needs of:
   a. Women
   b. Younger children
   c. Teens
5. What programs and activities do you take part in that help you and your younger children and/or teens to be healthy and safe?
6. What problems/barriers have you faced when trying to get health services for:
   a. Yourself
   b. Your younger children
   c. Your teens
7. For the next 5 years, what do you think should be the top health and safety priority for Maine? If responses are general then prompt by asking about:
   a. Women
   b. Younger children
   c. Teens

Native American

1. What do you think are the most important wellness needs of your family?
   If responses do not include health and safety then prompt by asking: How do you keep yourself healthy, safe? If responses are general about family then prompt by asking about:
   a. Women
   b. Younger children
   c. Teens

2. What do you think your community is doing well to address the needs of your family? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens
3. What do you think your community could do to improve the needs of your family? Prompt – What is being done statewide that is not being done in your community that you would like to bring to your community? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens
4. What programs and activities do you take part in that help you and your family to be well?
5. Are there any situations you face when trying to get health services for your family that we can help to improve? Prompt if not addressing:
   a. Yourself
   b. Your younger children
   c. Your Teens
6. For the next 5 years, what do you think should be the top wellness priority for Maine that would help your family? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens

Somali and other immigrant Populations

1. What do you think are the most important wellness needs of your family? If responses do not include health and safety then prompt by asking: How do you keep yourself healthy, safe? If responses are general about family then prompt by asking about:
   a. Women
   b. Younger children
   c. Teens
2. What do you think your community is doing well to address the needs of your family? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens
3. What do you think your community could do to improve the needs of your family? Prompt – What is being done statewide that is not being done in your community that you would like to bring to your community? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens
4. What programs and activities do you take part in that help you and your family to be well?

5. Are there any situations you face when trying to get health services for your family that we can help to improve? Prompt if not addressing:
   a. Yourself
   b. Your younger children
   c. Your Teens
6. For the next 5 years, what do you think should be the top wellness priority for Maine that would help your family? Prompt if not addressing:
   a. Women
   b. Younger children
   c. Teens

Children with Special Health Needs

1. What do you think are the most important health and safety needs of children with special needs in Maine?
2. Where do you usually get health care services for your child with special needs?
3. Where do you get your health information?
4. What types of medical and other services do you (or your child with special health needs) need to access?
5. What problems/barriers have you faced when accessing health services for your child with special needs?
6. For the next 5 years, what do you think should be the top health and safety priority for Maine children with special needs?

Health Care Professionals/Local Health Departments/Community Leaders (Key Informant Interviews)

4. What do you think are the most important health and safety needs facing Maine:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents
5. What do you believe Maine is doing well to address the health and safety needs of:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents
6. What do you believe Maine is **not** doing well to address the health and safety needs of:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents
4. For the next 5 years, what do you think should be the top health and safety priority for Maine:
   a. Pregnant Women
   b. Infants
   c. Children and Adolescents

APPENDIX B

Memorandum of Understanding
Between the
Office of MaineCare Services (OMS) and
The Division of Family Health within the
Maine Center for Disease Control and Prevention (MECDCP)

I. Purpose:

The purpose of this Agreement is to outline the responsibilities of the MECDCP and OMS to work in assuring that MaineCare members under the age of 21 who receive full MaineCare benefits are informed of and receive the services and assistance available to them under the MaineCare program. All MaineCare services provided will be delivered in a linguistic and culturally competent manner through the use of interpreters when needed.

II. Responsibilities of Each Party:

A. The MECDC shall:

1. Inform eligible members/caretakers about the benefits for members under 21. All newly eligible MaineCare members under the age of 21 shall be informed through written material by the end of the first week of each month of their eligibility from the Office of MaineCare Services (OMS) to the MECDC. MECDC will design and update education material as appropriate to carry out the informing function. MECDC will seek OMS approval of all educational materials prior to printing and distribution. The informing material must include the following:

    - An explanation of the benefits for members under 21 to the eligible member/caretaker;
    - An explanation of how benefits for members under 21 can be obtained;
    - The Bright Futures periodic screening schedule;
    - An explanation of how MECDC will provide assistance, as requested, with arranging transportation, scheduling appointments and referral assistance for services not covered under MaineCare;
    - An explanation that a member who has the MaineCare managed care benefit, must go through his/her primary care provider (PCP) to obtain services as well as referrals to specialists;
    - An explanation that a member who does not have the MaineCare managed care benefit, has a choice of MaineCare providers, but should try to establish a relationship with a PCP for continuity of care;
    - An explanation that all covered services under MaineCare benefits for members under 21 are available at no cost to eligible members;
    - An explanation that as long as the eligible member continues to be eligible for MaineCare benefits for members under 21 he/she may request services at any time in the future, if the individual is declining assistance at this; and

- An explanation of Optional Treatment Services which are available to eligible members under 21 as described in the prevention, Health Promotion, and Optional Treatment policy.

2. Re-inform annually an eligible member/caretaker if: (these functions will be accomplished when ImmPact2 has the capability to process).

   - No eligible member of the family receives a periodic screening within 12 calendar months after being informed and requesting services; or
   - If an eligible member/caretaker either refuses to be informed, cannot be located or declines to have a screening according to the Bright Futures periodic schedule.

   These functions must be accomplished using written material in the same manner as described in Paragraph A.1. above.

   Note: MECDC shall consider an eligible member who received benefits for members under 21 to be participating whether or not the member/caretaker requested services directly from MECDC.

3. Notify eligible members/caretakers in writing 90 days before their 21st birthday that they will no longer receive benefits for members under 21 through MaineCare. The last informing material must include:

   - An explanation that reminders will no longer be sent for Bright Futures visits or dental exams;
   - An explanation that MaineCare coverage has not ended; and
   - An explanation that MaineCare Member Services is still available to assist with questions on coverage.

4. Ensure that eligible members receive initial, interval, and periodic screening, diagnosis and treatment. MECDC will establish the eligible member's health case status according to the Bright Futures periodic screening schedule. MECDC will make every effort to obtain the goal of 85% participation rate of eligible members. The participation rate indicates the extent which the number of eligible members/caretakers who should be screened during the year receive at least one initial or periodic screening service.

   MECDC will provide notification to the eligible member/caretaker in writing when a periodic visit is due according to the Bright Future schedule. The notice shall be given in advance of the scheduled due date. The notice shall also include an offer of assistance with scheduling transportation and appointment scheduling.

   MECDC will arrange for the following when requested by an eligible member/caretaker:

   - Initial, interval and periodic screenings;
   - Dental examinations and dental preventive services for members under 21;
   - Immunizations according to MIP's immunization guidelines. (guidelines can change as frequently as twice a year, so the most current guidelines must be utilized); and
   - A home visit by a public health nurse when written material is not sufficient to meet the member's needs.

5. Provide outreach to providers by holding provider in-services that include the following:
    - Reinforcement and encouragement to adhere to the requirements of Bright Futures forms;
    - Give assistance to providers on an as needed basis to assure completion and accuracy of the Bright Futures forms;
    - Give assistance to providers on an as needed basis to facilitate and assure that follow-up treatment needed by a member is provided;
    - Explain to providers that when it is discovered that a member should be screened further for possible mental health, mental retardation or other developmental issues, they must indicate on the Bright Futures form the member needs to be referred to the Children's Behavioral Services (CBS) in the Department of Health and Human Services. MaineCare Member Services will assist members with this referral to CBS who will perform a screening to determine if case management or other treatment services are required; and
    - Explain to providers about the work of member Services in following up with abnormal screens, offering assistance with broken appointments for dental and Bright Futures visits, and home visit referrals.
6. Provide follow-up with members and providers by:
    - Inquiring whether initial and periodic screening visits and immunizations have occurred in accordance with Bright Futures guidelines. MECDC will work with OMS to establish a mechanism to determine where to concentrate efforts in encouraging better participation in MaineCare Benefits for members under 21 by providing appropriate education and assistance when visits have not occurred;
    - Inquiring whether dental examinations and preventative services have occurred in accordance with Bright Futures guidelines. Providing appropriate education and assistance where visits have not occurred;
    - Assuring that assistance with receiving follow-up treatment is accomplished when requested to do so by the member/caretaker;
    - Following up with providers who request assistance with families to share results of intervention; and
    - Following up with dentists who request assistance with families to share results of intervention.
7. Offer support services at the time the eligible member/caretaker is informed, at the periodic notification and at any other contacts with the eligible member/caretaker. Support services may include but are not limited to the following, and are based on member/caretaker needs:
    - Assisting an eligible member/caretaker to find a medical provider or dentist who accepts MaineCare;
    - Assisting an eligible member/caretaker to make and keep appointments;
    - Assisting an eligible member/caretaker to follow recommendations for treatment;
    - Providing age appropriate health education materials (submitting to OMS any written material for this purpose, for review and approval);
    - Making referrals to all appropriate providers for follow-up beyond the scope of the Bright Futures visit, which may include a home visit by a public health nurse;

- Assisting an eligible member/caretaker, upon request, to obtain transportation to MaineCare covered services by:
    - Providing an eligible member/caretaker with the names, addresses, and telephone numbers of the transportation provider(s) in their area;
    - Instructing an eligible member/caretaker how to make requests to a transportation provider; and
    - Assisting an eligible member/caretaker to make requests to a transportation provider, when necessary.
- Assisting eligible members approved for orthodontic treatment, meaning:
    - Assisting in scheduling appointments for evaluations or treatment when requested by the eligible member/caretaker;
    - Following up on letters of approval for payment to be sure that the eligible member/caretaker knows how to obtain the treatment;
    - Interpreting letters and instructions for the eligible member/caretaker when requested;
    - Encouraging good dental hygiene and regular dental care; and
    - Assisting in obtaining transportation when requested.
- Assisting members in understanding and interpreting denial notices when requests for prior authorization are denied by OMS as well as service denials received from private duty nursing providers as described in the Kelly Consent Judgment. MECDC must be able to explain to the member/caretaker his or her rights to appeal and refer members to other resources as appropriate. MECDC will attend training sessions conducted by OMS as related to MaineCare benefits for members/caretakers Under 21 as needed.

8. Provide referral assistance to eligible members/caretakers. MECDC shall inform eligible members/caretakers about available services from Maternal and Child Health including the Children with special Health Needs Program, and Women, Infants and Children (WIC) Special Supplemental Food Program. MECDC staff shall also make the appropriate referral to these programs within their agency or other State agencies, for services upon request of the eligible member/caretaker.

   MECDC must provide referral assistance for treatment not covered by MaineCare. (Please note that it has to be explored that services would not be covered under Optional Treatment in the Prevention, Health Promotion, and Optional Treatment Services Policy). The referral must include giving the eligible member/caretaker the names, addresses, and telephone numbers of identified providers who will provide treatment at little or no expense.

9. MECDC will report monthly to OMS on the following items, as they pertain to MECDC and PHN work recorded with the Registry:
    - Number of initial informings;
    - Number of embers/caretakers notified of a periodic medical and dental screenings;
    - Number of last informings sent to members who will be turning 21;
    - Number of postcards received from members/caretakers requesting assistance;
    - Number of members assisted with finding a mental health provider;

- Number of members assisted with finding a dentist;
- Number of members assisted with orthodontia approvals or denials;
- Number of members assisted with durable medical equipment (DME) denials;
- Number of members assisted with finding a medical provider;
- Number of members assisted with scheduling appointments;
- Number of members assisted with finding transportation;
- Number of members assisted with Optional Treatment Services;
- Number of member contacts (telephone calls, Faxes, e-mails, letters);
- Number of provider calls requesting information regarding EPSDT and BF19's;
- Number of providers assisted with broken appointments (medical and dental); and
- Number of home visits referred to Public Health Nursing (PHN) for follow-up.

10. Maintain all records used to administer MaineCare benefits for members under 21 for a period of three years beginning 7/1/07.

11. Provide training to PHN on review and follow-up of Bright Futures forms.

12. MECDC is responsible for identifying and maintaining position lines for EPSDT responsibilities outlines in this MOU.

B. The Office of MaineCare Services, or its Designee shall:

1. Receive and answer calls from MaineCare members/caretakers regarding covered MaineCare services.

2. Transfer to MECDC when more extensive assistance is required.

3. Provide MaineCare eligibility data to the MECDC on eligible members under 21.

4. Provide training to MECDC staff of the requirements of the MaineCare benefits for members under 21.

5. Provide MECDC with current MaineCare computer tracking system and training, i.e. ImmPact2 and MECAPS.

6. Monitor the activity of MECDC staff involved in fulfilling the responsibilities as stated above by receiving reports and doing on-site visits.

7. Audit reports of health care providers for compliance with the Bright Futures periodic schedule and the screening services required for each age-appropriate will child visit. OMS will provide all quality oversight of MaineCare providers. OMS will coordinate with MECDC on the auditing of providers as it relates to immunization records.

8. Review and approve education material printed to be mailed by MECDC to eligible members under 21.

9. Work in conjunction with MECDC expanding the Immunization Registry to encompass the needs of the MaineCare program.

III. Confidentiality

The disclosure of information regarding the protested health information (PHI) of members participating in the MaineCare program is strictly limited to purposes directly connected with the administration of the MaineCare program. MECDC shall maintain the confidentiality of information regarding these individuals in accordance with the federal Medicaid regulations at 42 CFR 431 Subpart F and the Health Insurance Portability Accountability Act (HIPPA) or Public Law 104-191 and other applicable sections of State and Federal law and regulations.

IV. Reimbursement

The following items will be direct paid by OMS via invoicing to the OMS account number and TAMS

A. MECDC shall be reimbursed by OMS for:

1. Postage and printing costs for MaineCare benefits members under 21 informing and periodic mailings.
    - Personnel
        - Provider Relations Specialist – 100% of FTE
        - Medical Care Coordinator – 100% of FTE
2. Completion of duties outlines in the MOU when the following information is provided on an invoice submitted to OMS reflecting actual expenditures for quarter broken down in the following categories.
    - Rent
    - Technical Equipment
    - Telephones
    - Office Supplies

V. Liaison

Each Office, the Office of MaineCare and the Division of Family Health within the Maine Center for Disease Control and Prevention shall designate one staff person to serve in a liaison capacity to identify and resolve concerns and develop specific procedures to insure an orderly, ongoing process.

VI. Duration

The agreement will be effective immediately upon execution and shall remain effective for one year from the latest date noted below when all interested parties will review it. The Agreement will then be renewed for subsequent periods of one year unless amended. The Agreement may be amended at any time at the request of either agency.

_____

Brenda Harvey, Commissioner Date
Department of Health and Human Service

_____

Anthony Marple, Director Date
Officer of MaineCare Services

_____

Dora A. Mills, MD, Director Date
Maine Center for Disease Control and Prevention

_____

Brenda McCormick, Director Date
Division of Health Care Management
Office of MaineCare Services

_____

Valerie J. Ricker, Director Date
Division of Family Health
Maine Center for Disease Control and Prevention

Updated 4/07, 3/09, 3/10

MEMORANDUM OF UNDERSTANDING BETWEEN THE MAINE DEPARTMENT OF EDUCATION AND THE MAINE DEPARTMENT OF HEALTH AND HUMAN SERVICES

THIS MEMORANDUM OF UNDERSTANDING is made and entered into between the Maine Department of Education, hereinafter referred to as "DOE" and the Maine Department of Health and Human Services, hereinafter referred to as "DHHS:"

This collaborative agreement is hereby entered into by and between the Maine Department of Education and the Maine Department of Health and Human Services, reflecting the spirit of collaboration that exists between these agencies to increase the state's capacity to improve the health, development, and education of Maine's children and youth through the implementation of Comprehensive School Health Education as part of a Coordinated School Health Program. Our agencies believe that healthy children and adolescents come to school better prepared to learn and that students learn better in a healthy environment.

This agreement provides a mutual understanding based on a commitment to work cooperatively and collaboratively on school health education curriculum, instruction and student assessment that addresses the Maine health education standards. A DOE comprehensive school health program will provide support, services, technical assistance, and staff development to school personnel and communities in their efforts to develop and implement school health at the local level.

WHEREAS, the DOE and the DHHS are public agencies authorized to enter into a Memoranda of Understanding;

WHEREAS, the parties, in accordance with and pursuant to applicable state and federal laws, desire to jointly exercise their respective powers so as to strengthen comprehensive school health education through Coordinated School Health Programs, in a collaborative manner;

NOW, THEREFORE, the DOE and the DHHS do hereby agree as follows:

I. DEFINITIONS

As used in the Memorandum of Understanding:

A. "**Division of Family Health" (DFH)** – State public health agency within the Maine Center for Disease Control and Prevention, DHHS that is responsible for the administration and coordination of maternal and child health services for the State of Maine.

B. **"Comprehensive School Health Education"** – Includes standards-based health education curriculum, instruction and assessment.

C. "**CSHP**" means Coordinated School Health Programs which includes 8 components Youth, Parent, Family & Community Involvement;

- Comprehensive School Health Education;
- Physical Education & Physical Activity;
- School Counseling, Physical & Behavioral Health Services;
- Nutrition Services;
- Health Promotion & Wellness;
- Physical Environment and
- School Climate.

D. "**Department of Education**" means the Department created within the Executive Branch and established as a single, unified department to administer the laws and exercise the functions relating to Pre K-12 Education.

E. "**Department of Health and Human Services**" means the Department created within the Executive Branch and established to provide health and human services to the people of Maine so that all persons may achieve and maintain their optimal level of health and their full potential for economic independence and personal development.

F. "**Health Education Standards**" – As outlined in Maine's Learning Results.

a. Health Concepts
b. Health Information, Products and Services
c. Health Promotion and Risk Reduction
d. Influences on Health
e. Communication and Advocacy Skills
f. Decision-making and Goal-setting Skills

G. "**Maternal and Child Health Block Grant**" – U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau Block Grant that includes priorities in the areas of injury prevention (including motor vehicle safety), respiratory health, mental health, oral health, teen pregnancy prevention, youth suicide prevention, youth violence prevention, newborn screening (hearing and metabolic disorders), surveillance of birth defects and assurance of systems of service and care for children with special health needs.

H. "**Maine Schoolsite Health Promotion Program**" – Program conducted by the DOE to promote local level health promotion activities for students and staff, to advocate for comprehensive school health education and create a healthy and safe school climate and physical school environment.

I. "**Special Services Team**" – includes Special Education, Child Development Services and the Health Education and Prevention Team. (HEPT)

J. "**State Commissioners**" means the Commissioners of the Departments of Education and Health and Human Services.

II. EFFECTIVE DATE AND TERM

This Memorandum of Understanding shall be effective for a term commencing on July 1, 2008 and shall continue until one or both parties wish to terminate this understanding. The MOU shall be reviewed annually to assure that it continues to meet the needs and priorities of both agencies.

III. ADMINISTRATION OF UNDERSTANDING

A. The Special Services Team of the DOE and of the Family Health Division of DHHS are hereby designated the administrative units for the implementation of this Memorandum of Understanding.

B. The DOE is responsible for:

1. Designating DOE staff to assist in implementing activities set forth in this Memorandum of Understanding.
2. Ensuring all activities set forth in the Memorandum of Understanding are aligned with the missions of the two departments.
3. Utilizing a CSHP philosophical approach to school health components, especially the health education and health promotion components, in order to assist DHHS DFH in addressing the priorities and performance measures established by its funders (Maternal and Child Health Bureau). CSHP functions would include liaison, training and technical assistance for local school health coordinators including those funded by Healthy Maine Partnerships.
4. Planning and implementation of the Maine Schoolsite Health Promotion Program that supports CSHE and CSHP.
5. Providing oversight for the Maine School Health Education Resource Collection.
6. Serving on school health related committees such as the CSHP Interdepartmental Coordinating Committee.
7. Providing space and furniture for the 2 School Health Education Specialists and funds for “All Other” including equipment, materials and supplies, postage, phone, travel costs and program funds.
8. Provide as requested by DDHS/MCDC/DFH
   a. An annual workplan linked to MCH performance measures and priorities, (including the involvement of parents and families) .
   b. Input into the Annual Maternal and Child Health Block Grant report using format/process provided by DFH.

9. Participating in national meetings to promote Maine CSHE and CSHP and be informed on national and federal school health issues and research.
10. Informing and/or advocating for policies at the state and local levels,that can strengthen CSHP including comprehensive school health education programs.

C. The DHHS is responsible for:

1. Including the School Health Education Specialists on school health related initiatives and committees.
2. Providing funds for the Maine School Health Education Resource Center ($8100, FY09).
3. Providing funding for 2 FTE School Health Education Specialists.
4. Providing supporting funds for the Maine Schoolsite Health Promotion Program ($5000, FY09).
5. Serving on DOE committees related to child and adolescent health as requested.
6. Participating in the hiring of the School Health Education Specialists when vacancies occur.

D. Both DOE and DHHS are responsible for:

1. Convening DOE School Health Education Specialists and DHHS MCDC/DFH quarterly staff meetings to discuss progress and implementation of priorities.
2. Planning, implementing, evaluating, and reporting activities associated with CSHE and CSHP.
3. Identifying and advocating for CSHE and CSHP resources at the state and local levels.

IV. EXPENDITURES

A. The DHHS will transfer allotments to DOE for salaries and benefits for 2 FTE School Health Education Specialists.

B. Transfer of funds from DHHS to DOE shall be made on a monthly basis and shall be made upon submission of request by the DHHS in a process approved by the DOE and DHHS.

C. The DOE will allocate ‘All Other” funds annually to the 2 FTE School Health Education Specialists.

V. MAINTENANCE OF RECORDS

The parties agree to keep such records as may be required by the DHHS relative to the subject matter of this Memorandum of Understanding. These records shall be subject to inspection by the DHHS and the State auditor or designee. (Federal requirement for this is 7 years beyond end of the grant period).

VI. FINANCIAL ACCOUNTABLITY

The DOE shall permit authorized representatives of the DHHS, the State auditor, and Department of Finance and Administrative Services (DAFS) to inspect and audit all data and records relating to the performance of this Memorandum of Understanding.

VII. STRICT ACCOUNTABLITY OF FUNDS

The parties shall provide strict accountability of all monies allocated for activities subject to this Memorandum of Understanding.

VIII. EXECUTION OF DOCUMENTS

The DOE and DHHS agree to execute any document(s) necessary to implement the terms of this Memorandum of Understanding.

IX. AMENDMENT

This Memorandum of Understanding shall not be altered, changed, or amended except by an instrument in writing executed by the parties hereto.

X. AVAILABILITY OF MONIES

The terms of this Memorandum of Understanding are contingent upon sufficient appropriations being made by the U.S. Congress and said appropriations being made available to the DHHS. The DHHS determination as to whether sufficient appropriations are available shall be final and binding upon the parties. The DHHS shall notify the DOE within thirty (30) working days of notification that monies are no longer available.

IN WITNESS WHEREOF, the Department of Education and the Department of Health & Human Services have caused this Memorandum of Understanding to be executed.

STATE DEPARTMENT OF EDUCATION

Susan A. Gendron _____ DATE _____
Commissioner
Maine Department of Education

David Stockford, _____DATE_____
Special Services Team Leader
Department of Education

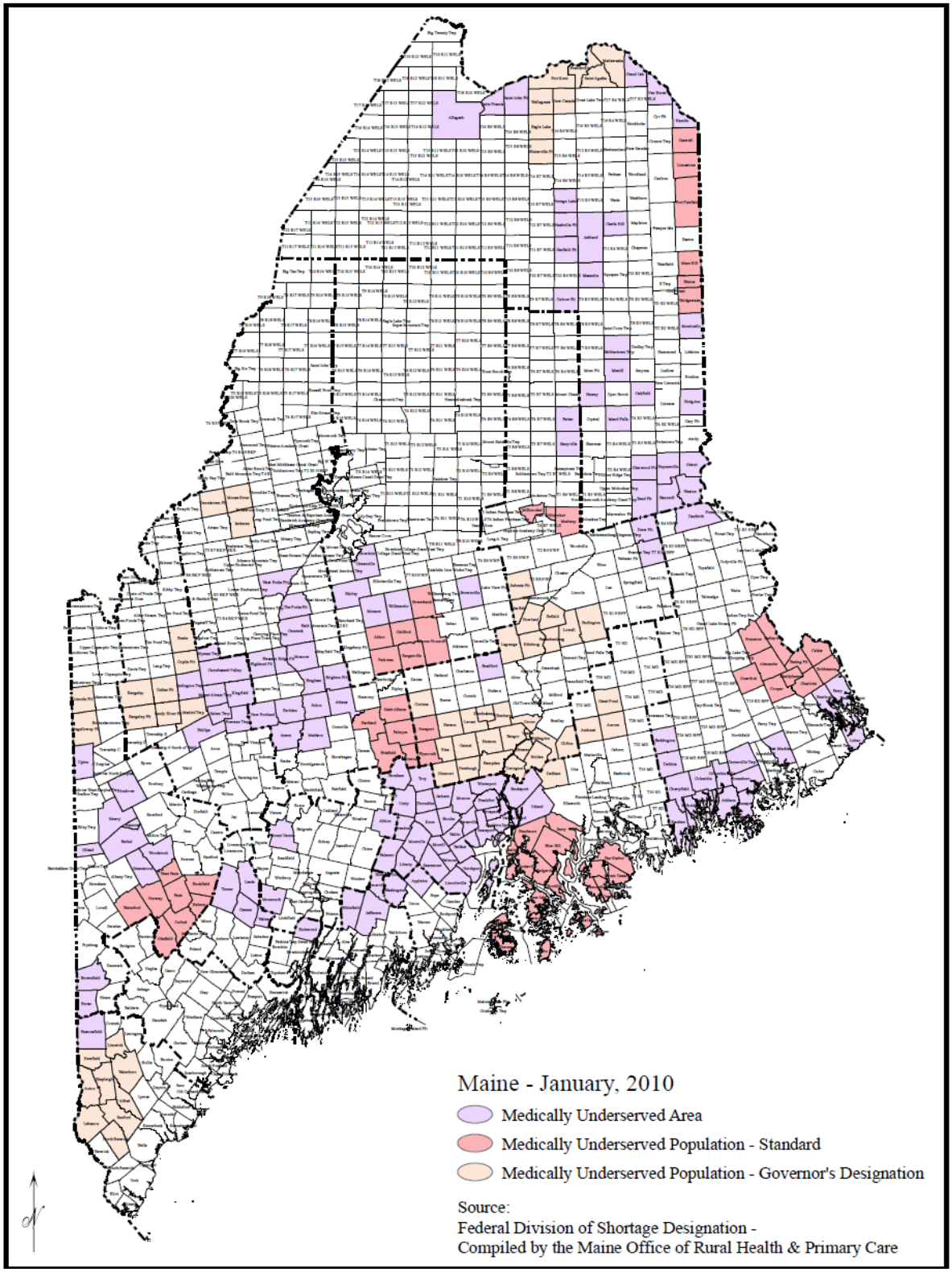
DEPARTMENT OF HEALTH & HUMAN SERVICES
Brenda Harvey_____ DATE _____
Commissioner
Maine Department of Health and Human Services

Valerie Ricker _____ DATE _____
Director
Division of Family Health

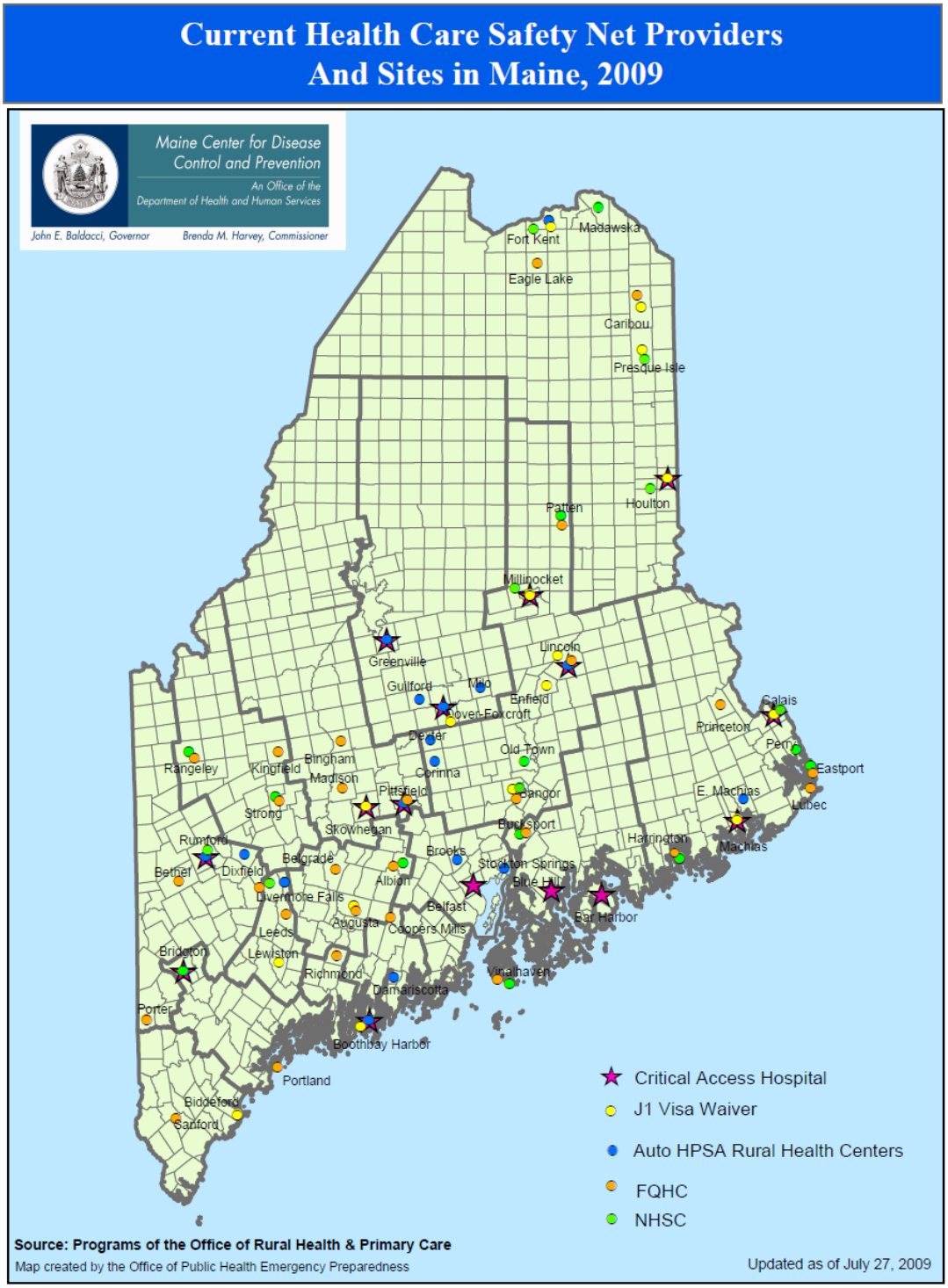
6/13/08

Appendix C

Federally Designated Medically Underserved Areas and Populations

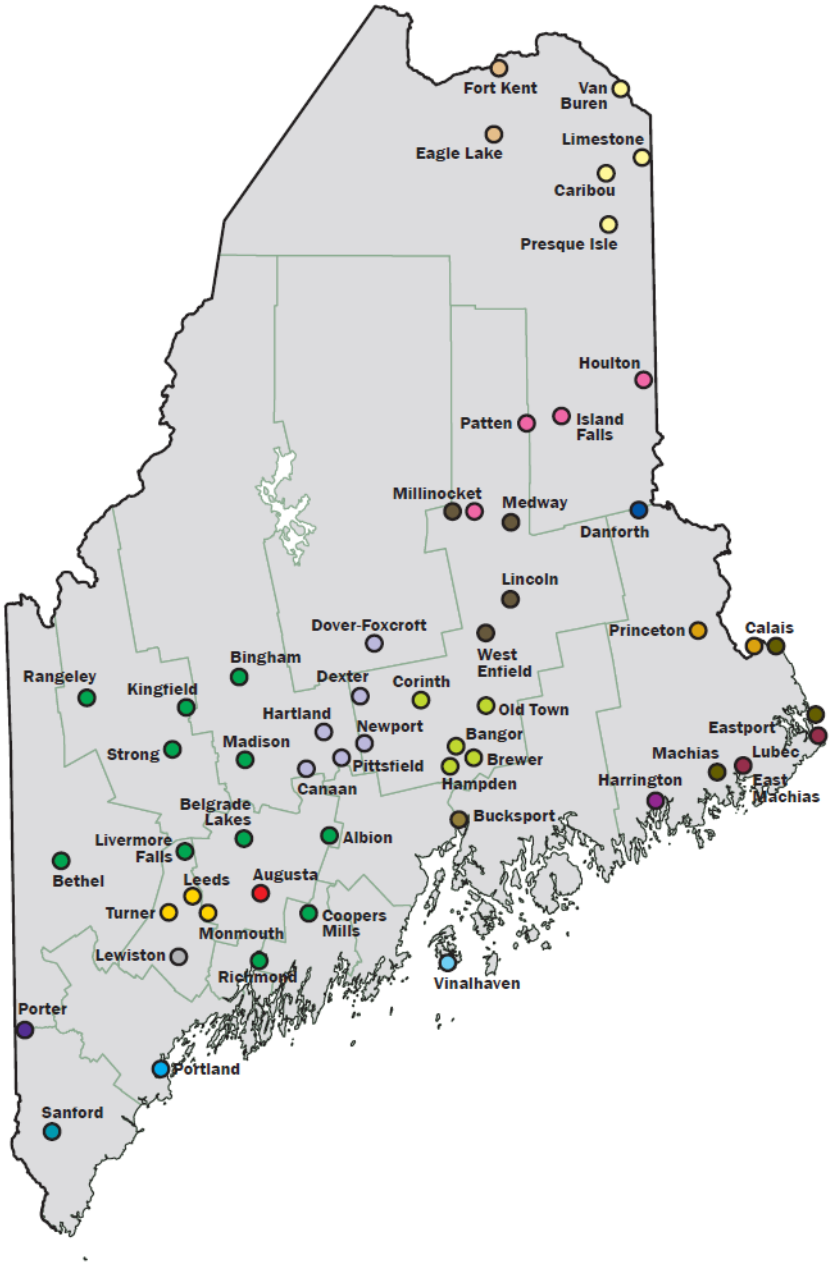


Appendix D


Current Health Care Safety Net Providers
And Sites in Maine, 2009
Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services
John E. Baldacci, Governor
Brenda M. Harvey, Commissioner
Madawska
Fort Kent
Eagle Lake
Caribou
Presque Isle
Houlton
Patten
Millinocket
Greenville
Lincoln
Guilford
Milo
Enfield
Dover-Foxcroft
Dexter
Old Town
Princeton
Calais
Perry
Eastport
Lubec
E. Machias
Machias
Harrington
Rangeley
Kingfield
Bingham
Madison
Corinna
Pittsfield
Bangor
Strong
Skowhegan
Bucksport
Rumford
Bethel
Dixfield
Belgrade
Brooks
Stockton Springs
Albion
Blue Hill
Bar Harbor
Dixmont Falls
Belfast
Augusta
Coopers Mills
Leeds
Lewiston
Bridgton
Richmond
Damariscotta
Vinalhaven
Porter
Boothbay Harbor
Portland
Biddeford
Sanford
Critical Access Hospital
J1 Visa Waiver
Auto HPSA Rural Health Centers
FQHC
NHSC
Source: Programs of the Office of Rural Health & Primary Care
Map created by the Office of Public Health Emergency Preparedness
Updated as of July 27, 2009

Appendix E

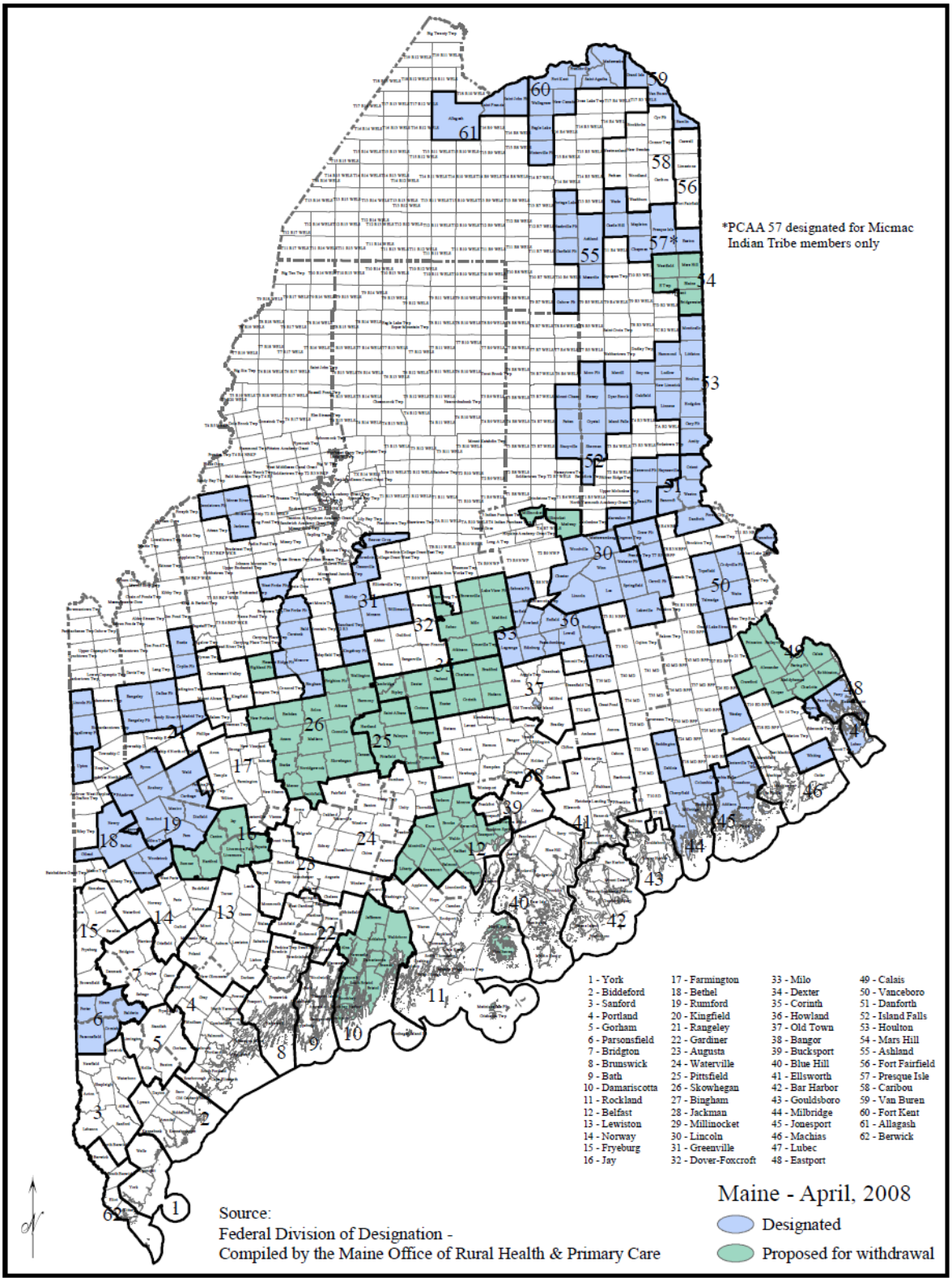
FQHCs In Maine



- **Bucksport Regional Health Center**
- **Community Clinical Services**
- **DFD Russell Medical Center**
  - Leeds
  - Monmouth
  - Turner
- **East Grand Health Center**
- **Eastport Health Care**
  - Calais
  - Eastport
  - Machias
- **Fish River Rural Health**
  - Eagle Lake
  - Fort Kent
- **Harrington Family Health Center**
- **Health Access Network**
  - Lincoln
  - Medway
  - Millinocket
  - West Enfield
- **Healthcare for the Homeless**
- **HealthReach Community Health Centers:**
  - **Belgrade Regional Health Center**
  - **Bethel Family Health Center**
  - **Bingham Area Health Center**
  - **Lovejoy Health Center**
    - Albion
  - **Madison Area Health Center**
  - **Mt. Abram Regional Health Center**
    - Kingfield
  - **Rangeley Region Health Center**
  - **Richmond Area Health Center**
  - **Sheepscot Valley Health Center**
    - Coopers Mills
  - **Strong Area Health Center**
  - **Western Maine Family Health Center**
    - Livermore Falls
- **Islands Community Medical Center**
- **Katahdin Valley Health Center**
  - Houlton
  - Island Falls
  - Millinocket
  - Patten
- **Maine Migrant Health Program**
  - STATEWIDE
- **Penobscot Community Health Care**
  - Bangor
  - Brewer
  - Corinth
  - Hampden
  - Old Town
- **Pines Health Center**
  - Caribou
  - Limestone
  - Presque Isle
  - Van Buren
- **Regional Medical Center at Lubec**
  - East Machias
  - Lubec
- **Sacopee Valley Health Center**
- **Sebasticook Family Doctors**
  - Canaan
  - Dexter
  - Dover-Foxcroft
  - Hartland
  - Newport
  - Pittsfield
- **St. Croix Regional Family Health Center**
  - Calais
  - Princeton
- **York County Community Health Care**

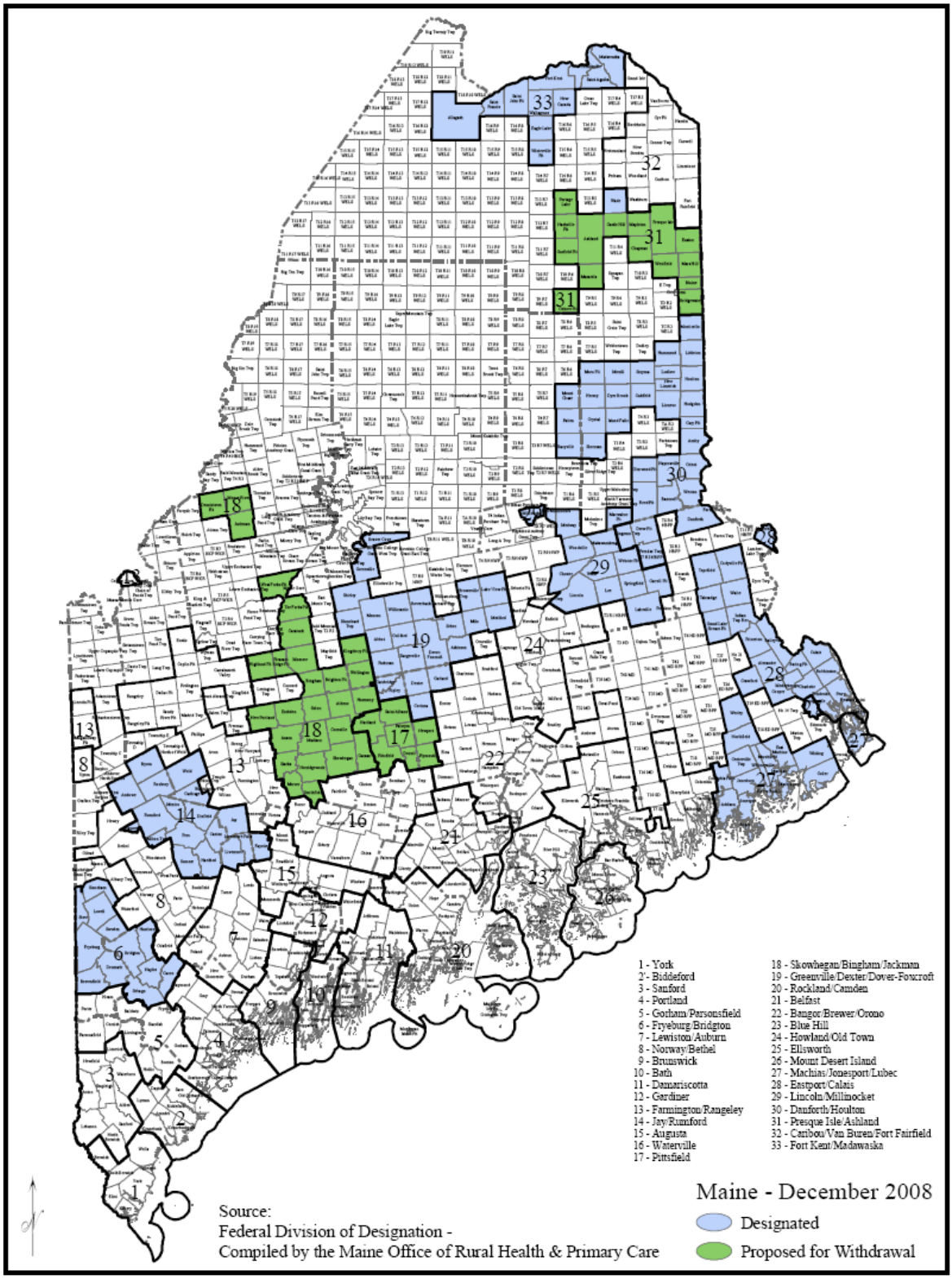
Appendix F

Federally Designated Primary Care Health Professional Shortage Area



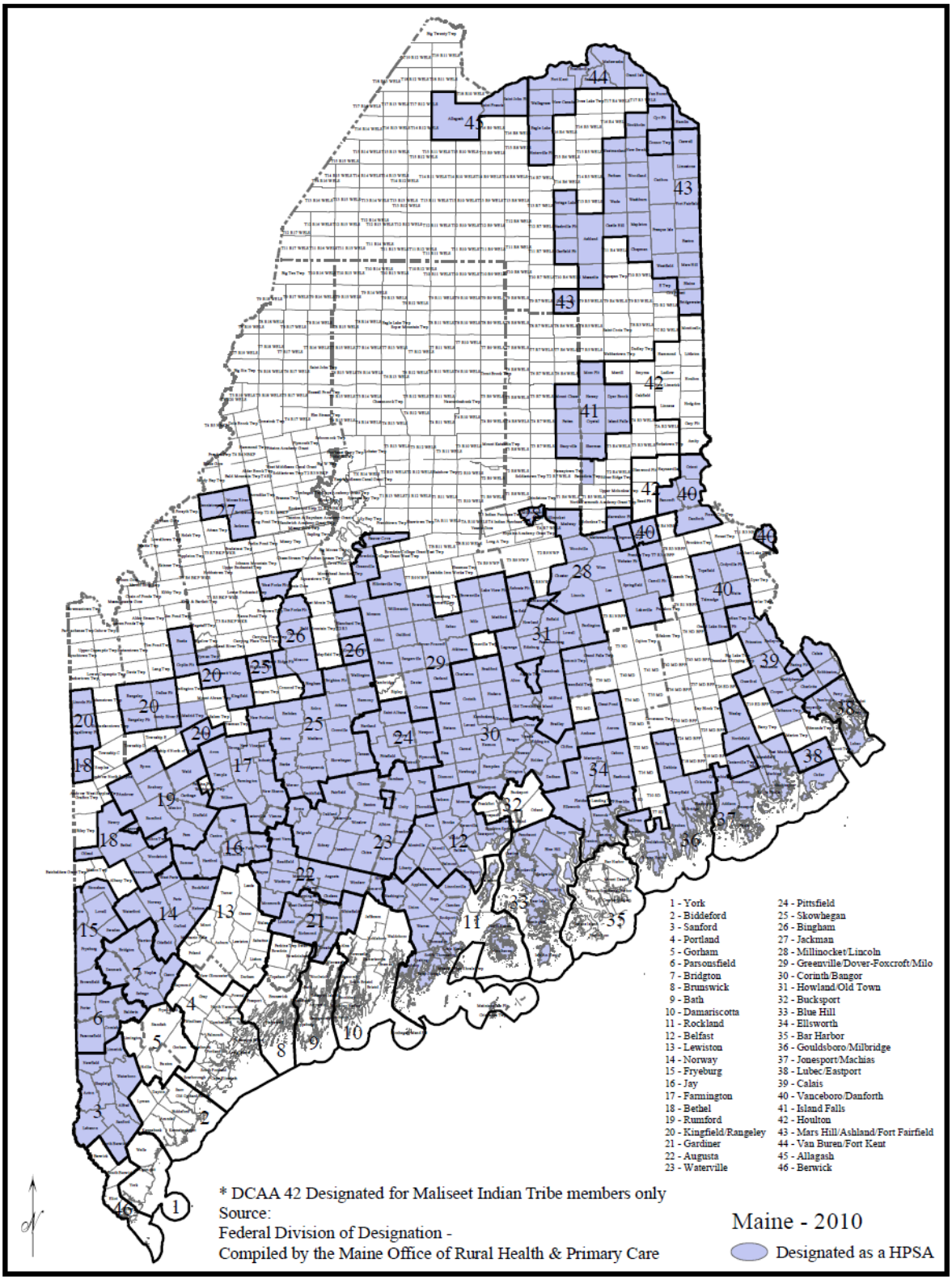
Appendix G

Federally Designated Mental Health Professional Shortage Area



Appendix H

Federally Designated Dental Health Professional Shortage Areas



Appendix I

MCH Priority Setting
for 2010 Comprehensive Strengths and Needs Assessment
Process Proposal
February 9, 2009

1. Setting the stage
   The goal of this part of the process is to ensure that all are on the same page and invested in the priority-setting.

   1.1. Process agreement
   The goal here is to have a clear understanding of the entire process employed to determine the MCH Priorities coming out of the 2010 CSNA. There will be shared agreement on the broad stages and goals, as well as input to who should be involved in the process at different points along the way. ***Note: since the process has been modified since the first meeting, we should re-visit this step.***

   1.2. Broad Vision Agreement
   While the FHD has a vision for the overall Title V Program, the scope of this stage is much narrower: *what is the vision for the MCH Priorities*? The following was agreed upon:
   The MCH Priorities, based on strengths, needs and assets, will assist in guiding the Family health Division's work over the next 5 years.

   1.3. Learning from priority-setting experiences
   This step is designed to share successes and lessons learned from previous experiences, identify which processes can be replicated for the whole division's Priority setting, and what information will be more useful in the process. The outcome of this stage is to develop a shared understanding of the experience and skills we have to use. ***We still need to revisit this to be sure that we use what we shared.***

   1.4. Mapping out the priority-setting process
   This was requested as a step by the senior management team, and is based on Toni's proposal. ***It needs to be further worked on to gain clarity and agreement by the program managers.***

   1.5. Identification of opportunities and challenges
   The agreement that we are looking for at this stage is an agreement that although there may be challenges in this process, they can be addressed and we will be committed to doing so.

2. Data gathering:
   This is the Comprehensive Strengths and Needs Assessment, led by Barbara and Erika.

3. Determining criteria (and how they will be applied)
   This and #4 below are the pieces that are being mapped out in 1.4. This section is how we will determining the criteria, #4 is how it will be applied. Proposed: Based on the tools and criteria sets suggested during the experience sharing, I will pull together the background

materials, and create an initial list of POSSIBLE criteria. This list will serve as a basis for discussion. Because each level of criteria will build on the previous ones, I envision this process could include as initial sort, followed by discussion at each level of criteria to determine the final set. Our current agreement is that Program Managers will create the criteria, and that stakeholders will be given an opportunity to review and comment.

3.1. Identifying initial list of priorities:
No criteria: we want this list to be as inclusive as possible.

3.2. Initial refining (Level I criteria): from the entire list (100+?) to ??
This is the elimination of issues that "don't belong." Suggestions include: eliminating those out of scope of the population, eliminating "true" duplicates, eliminating issues that are strategies rather than outcomes.

3.3. Narrowing (Level II criteria): from the refined list to ~25:
Using the level II to get a manageable number of issues to look at in more detail.

3.4. Final Selection (Level III criteria): from the initial list of priorities to the final list of 7-10
Application of a more detailed set of criteria, with weights.

3.5. Criteria for selecting strategies: To be used in the problem-mapping process (#5, below).
While there may be less need for a strict set of criteria, I have included this in the criteria development section to make people aware that there may be criteria (such as evidence-base, cost effectiveness, and feasibility) that may be more appropriately applied in #5, rather than in #4. Including this item could be simply to create a "parking lot" to capture the ideas and possible criteria for later.

3.6. Stakeholder review and feedback: After criteria are selected, they will be presented as a single list for stakeholder feedback. A small workgroup will review this feedback and incorporate changes into the criteria for final program managers' approval.

4. Applying the criteria to get our priorities
The objective at this stage is to end up with active agreement that the criteria have been used to fairly determine our 5-year Priorities, and that there is shared understanding of what these priorities will mean to the Division and allocation of existing and new resources.

4.1. Identifying initial list of priorities:
Using the CSNA as a basis, Barbara, Erika and Denise will create an initial set of issues, based on the data and the stakeholders' input. Program Managers will then review and ADD to this list, if issues are "missing."

4.2. Initial refining (Level I criteria): from the entire list (100+?) to ??

Suggest using a simple "yes/no" matrix of the Level I criteria, this might be done by the steering committee, with approval from the Program Managers. Issues dropped would be documented.

4.3. Narrowing (Level II criteria): from the refined list to ~25:
I suggest a simple sort, using the Level II criteria as a basis. This suggestion is based on the fact that applying criteria to a big list of issues in a detailed way would be very time-consuming. This process might be done by stakeholders, however, some balance or neutrality of the stakeholders would need to be assured. Issues dropped would be documented.

4.4. Final Selection (Level III criteria): from the initial list of priorities to the final list of 7-10
I suggest weighting the criteria at this stage, and using a scoring matrix. Again, there may be a role here for outside stakeholders. Issues dropped would be documented.

4.5. Defining and refining the priorities:
This would include "word-smithing" the priorities, and identifying measurable goals for each. The steering committee would do this, taking information from those applying the criteria to be sure to capture the intent of the selection. A feedback round to first Program Managers, and then stakeholders would finish the Priority Setting

4.6. Not yet included in this process:
- 4.6.1. To what extent the Priorities will drive MCH resource allocation, current activities and future planning.
- 4.6.2. To what extent activities not included in the Priorities will continue to receive MCHBG-related resources, and how those decisions will be made, as it is NOT expected that ALL these resources and time will shift to the Priorities.

5. Strategy selection through problem-mapping of the Priorities
Once we have the Priorities, we will then identify the top strategies that will be used to address the priority in the coming year (or years), knowing that we need to prioritize the possible strategies for each priority. I would suggest that we develop sub-committees for each priority, with internal and external experts and stakeholders for that priority area, and an internal facilitator who is NOT in that area of expertise. (Or some other combination of "experts" and "outside of the topic perspectives.") Each subcommittee would be charged with the following, and possibly present their work to the Program Manager group:

5.1. Problem-Mapping: using the framework presented by AMCHP.

5.2. Strategy selection: based on criteria selected in 3.5.

Note: Sheryl's diagram from the January 27th meeting fits into the above steps as follows:

Criteria level	**Developing Criteria**	**Applying Criteria**
I	3.2	4.2
II	3.3	4.3
III	3.4	4.4
Strategy Criteria	3.5	5.2

MCH Priority Setting for 2010 Comprehensive Strengths and Needs Assessment
Process Proposal
February 9, 2009

Steps	1.1. Design	1.2. Vision	1.3. Experience sharing	1.4. Mapping the process
Activities	Proposal review, revision and agreement ***Needs to be revisited as part of step 1.4 Approval by steering committee, and then by program managers***	Vision statement review, discussion and agreement by Program Managers ***Completed***	Group brainstorming and consensus of Program Mangers ***Completed – information needs to be disseminated***	Steering Committee agreement, followed by Program Manager Agreement ***It was initially suggested (at the Jan. 27 meeting) that this be done via e-mail, but needs more work***
Timeline	Dec 2008 – Jan 6, 2009	Jan. 6, 2009	Jan. 6 – 27, 2009	Feb. – March 2009
Agreements /Products	Process design	Vision statement	Tool box of skills and lessons learned	More complete process design
Decision by:	Steering committee, then program managers	Program mgrs	No decision	Steering committee, then program managers
Fall back:	Steering Committee	none	Not applicable	Steering committee may need to tweak the process as we go to ensure that deadlines are met

Steps	1.5. Opportunities and Challenges	2. Data Gathering	3. Criteria Setting (3.1-3.5)	3.6 Stakeholder review of criteria
Activities	Brainstorming, prioritizing, and agreements on process to address barriers ***It appears that there is not consensus among the steering committee that this step is necessary***	Stakeholder input process (qualitative data) will be facilitated by Muskie. Quantitative data will be gathered by Erika and Denise. This information will be shared with the Program managers	Determined by consensus ***(If consensus cannot be reached by July 2009, a subcommittee will be assigned to take all input from the Program Mangers and create the final set of criteria.)***	USM Muskie staff will present the proposed criteria to stakeholders for their review. This will be incorporated by a sub-committee who will present it to the Program Managers
Timeline ***Timing may be adjusted as stakeholder groups are scheduled***	March 3, 2009	On-going through 2009, initial data gathered by Sept. 2009, final CSNA document drafted by Dec 2009.	May-July 2009 Criteria list for stakeholder review completed no later than July 2009	August 2009, final criteria approved no later than September 2009
Agreements /Products	Opportunities and Challenges documented with possible solutions	CSNA description, MCH health data, stakeholders input	Criteria for setting priorities: 3 or 4 levels	
Decision by:	Steering committee, then program managers	No decision	Program Managers	Program Managers
Fall back:	Steering Committee	Not applicable	Subcommittee or Steering Committee	Subcommittee or Steering Committee

Steps	4.1 Issue list creation	4.2 Initial refining	4.3. Narrowing	4.4. Final Selection	4.5. Defining and goal setting
Activities	USM staff will create the initial list, Program Managers to review and add as necessary.	A subcommittee will be recruited to review the full list and complete a matrix of Level I criteria, and report back to the full Program Managers group. Eliminations and duplicates will be documented.	A qualitative application of Level II criteria will be done by a group of staff AND stakeholders. Their input will be compiled and considered by the full Program Manager group for a final decision on a list of no more than 25 issues	*Weighted Level II criteria to be applied by ??*	Priorities will be assigned to small subcommittees for this work. The sub-committees will report back to the full Program Manager group.
Timeline	Beginning of September 2009	September 2009	October 2009	November 2009	December 2009
Agreements /Products	Inclusive list of issues	100 + issues, no duplicates	List of 25 potential priorities	7-10 priorities	7-10 priorities with rationale and goals
Decision by:	Program Managers	Subcommittee, then Program Managers	Program Managers	Program Managers	Subcommittees, then Program Managers
Fall back:	Steering Committee	Steering Committee	Subcommittee or Steering Committee	Steering Committee	Steering Committee

Steps	5.1. Problem mapping	5.2. Strategy Selection
Activities	*Specific process to be determined – possibly involve subcommittees, with presentations to the Program Managers*	*Specific process to be determined – using same groups as in 5.1*
Timeline	Spring 2010	Spring 2010
Agreements /Products	Problem maps for each priority	Top strategies within each priority.
Decision by:	No decision	Subcommittees
Fall back:	Not applicable	Program Managers in affected programs + Valerie

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