
Title V Maternal and Child Health Block Grant

2010 MCH Needs Assessment

Maryland

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Table of Contents

	Page
I. Introduction and Background.....	3
II. Needs Assessment Process.....	6
• Leadership.....	6
• Stakeholder Engagement.....	7
• Methods for Assessing the Three MCH Populations.....	9
• Methods for Assessing State Capacity.....	10
• Data Sources and Gaps.....	11
• Dissemination.....	15
• Strengths and Weaknesses of the Process.....	15
III. Partnership Building and Collaboration Efforts.....	16
IV. Population Based MCH Needs Assessment.....	17
• Women of Childbearing Age.....	17
• Pregnant Women and Infants.....	19
• Children and Adolescents.....	24
• Children with Special Health Care Needs.....	31
V. Capacity Assessment.....	33
VI. Selection of Priority Needs.....	49
VII. 2011-2015 MCH Priority Needs.....	58
• Women’s Wellness.....	58
• Healthy Pregnancies, Pregnancy Outcomes and Infants.....	60
• Healthy Children.....	63
• Access to Health Care for Children.....	65
• Reduce Childhood Overweight and Obesity.....	67
• Healthy and Productive Youth and Young Adults – Transition to Adulthood.....	69
• Strategic Partnerships.....	72
• Improve Data Systems and Sharing.....	75

Tables

1. Methods Used to Assess Capacity.....	11
2. Results of Final Ranking Exercise, Stakeholder Meeting.....	52
3. 2011-2015 Priority Needs and Performance Measures by MCH Population Group.....	56

Appendices

- A. Parent Survey
- B. MCH Stakeholder Meeting Agenda and Attendees
- C. 2010 MCH Population Assessment

2010 Title V Maternal and Child Health (MCH) Needs Assessment, Final Report, Maryland

I. INTRODUCTION AND BACKGROUND

The Title V MCH Block Grant Program is the only federal-state program solely devoted to improving the health of women, children, adolescents and families. The mission of Maryland's Title V Program is to protect, promote and improve the health and well-being of women, children, and adolescents, including those with special health care needs. The Title V Program seeks to strengthen the MCH infrastructure and to assure the availability, accessibility, and quality of primary and specialty care services for women, children and adolescents. Every five years, states must complete a comprehensive needs assessment of the maternal and child health population to ascertain priority MCH needs and develop an action plan for addressing federal and state MCH priorities.

Over the past eighteen months, Maryland's Title V Program has worked to complete its 2010 MCH needs assessment. This work has yielded a rich body of information that reveals what the MCH Program believes are the key health issues and needs affecting women, children and families in Maryland. The goals of the 2010 MCH needs assessment were to:

- assess Maryland progress since the last MCH needs assessment in 2005;
- assess the health status and prioritized needs of mothers, infants, children and adolescents including children with special health care needs in Maryland;
- assess both the Title V Program's and the state's capacity to address priority maternal and child health needs; and
- engage stakeholders in the process and strengthen partnerships between Title V and other MCH serving organizations in Maryland.

The Family Health Administration (FHA) within the Maryland Department of Health and Mental Hygiene (DHMH) is the state's recipient of federal Title V MCH Block Grant funds. Funds are jointly administered by two agencies within FHA: the Center for Maternal and Child Health (CMCH) and the Office for Genetics and Children with Special Health Care Needs (OGCSHCN). These two offices comprise the state's Title V Program and were responsible for collaborating to conduct the 2010 MCH needs assessment including development of a preliminary plan for addressing state Title V MCH priority needs through 2015.

Overview

Maryland is one of this nation's wealthiest states as measured by per capita and average family income. It is also one of the most diverse states with 42% of it's population representing

racial and ethnic population groups in 2008. An increasing percentage of births in Maryland are to minorities; rising from 45% in 2000 to 54.5% in 2008. Hispanics, representing 6.7% of the population in 2008, are the fastest growing racial/ethnic group.

Maryland's population increased by nearly 6% between 2000 and 2008 and now stands at 5.6 million. Maryland has 1.2 million women of childbearing age (ages 15-44) and 1.5 million children and adolescents (ages 0-19 and representing 27% of the total population). An estimated 244,000 children in Maryland have special health care needs. There were more than 77,000 births in 2008.

Health disparities continue as a widespread problem across Maryland, exacting a significant toll on the state. The health of minority Marylanders, African Americans in particular, continues to lag far behind outcomes for other non-minority and minority groups. The gap reflects not only a lack of access to health care for some Marylanders, but other factors including the social determinants of health.

Maryland's economy, similar to the rest of the nation, has been impacted by the global recession. The State's unemployment rate rose to a high of 8% in the current recession and currently stands at 7.2%. There is a state hiring freeze and hundreds of permanent state positions have been eliminated since 2007. State fiscal year 2011 will mark the third year in a row of salary cuts and furlough days (up to 10) for most employees. Enrollment in public assistance programs such as Medicaid has increased, while local health departments have experienced substantial cuts in their state core funds over the past three years.

Maryland's national ranking on a number of key indicators varies from among the best (e.g., income) to among the worse (e.g., infant mortality and related factors). For example, here are several Maryland rankings:

- Median household income,
(2008 U.S. Census American Community Survey): 1st (highest)
- Child Poverty Rate,
(2008 U.S. Census American Community Survey): 3rd lowest
- % of people ages 25% with a bachelor's degree,
(2008 U.S. Census American Community Survey): 5th highest
- Infant Mortality: 39th
- Preterm Births: 34th
- Low Birth Weight: 43rd

Since the Last MCH Needs Assessment

Maryland completed its last MCH needs assessment in July 2005. In the 2005 assessment, depression across the life span, other mental health problems, substance abuse, smoking, obesity, health insurance coverage gaps, and lack of access to health care services including oral health care, mental health care, and specialty services were identified as new, emerging or ongoing concerns. Emerging MCH issues of concern included that more Marylanders are losing health insurance coverage even through they are fully employed, rising

STD rates, substance use, depression across the lifespan, and child abuse and neglect. Many of the themes and issues voiced by stakeholders were linked to “families in crisis” due to, for example, poverty, lack of affordable housing, and lack of parent – child connectedness. Similar themes were heard during 2010.

Maryland has made progress in a several key areas since the last assessment (between 2004 and 2008). For example, Maryland data show that:

- More mothers are breastfeeding at six months;
- More infants are being screened for hearing problems at birth;
- More children are insured, entering school ready to learn, being fully immunized, and receiving dental sealants;
- Fewer teens are giving birth (although teen birth rates increased in 2006 and 2007); and
- More early childhood mental health specialists/consultants have been trained to work with children with mental health/behavioral issues (a need identified in the last needs assessment) in child care settings.

However, numerous gaps and challenges remain in that:

- Fewer women are receiving early prenatal care;
- Rates of overweight and obesity are still too high or on the rise;
- Twenty two of Maryland’s 24 jurisdictions have areas of federal medical underservice designations;
- Access to primary, oral health, mental health services, substance abuse and health insurance coverage is limited for many Marylanders; and
- Numerous racial/ethnic MCH disparities continue to persist (e.g., African American babies continue to die at more than twice the rate of White babies in Maryland).

Since the last needs assessment, several new mandates and initiatives have or will impact the Title V Agency including the Governor’s Delivery Unit (GDU) for infant mortality reduction, implementation of new legislation to codify fetal and infant mortality processes, and new federal funding for home visiting and teen pregnancy prevention. In 2009, Maryland Governor Martin O’Malley identified the reduction of infant mortality by 10% by 2012 as one of the state’s top 15 strategic policy goals through an Initiative termed the Governor’s Delivery Unit (GDU) Plan. The GDU Plan for infant mortality reduction aims to result in 60 fewer infant deaths and a state infant mortality rate of 7.2 deaths per 1,000 births, which would be the lowest on record. The GDU Plan promotes a life course approach for reducing infant deaths by intervening at strategic points along the life span of a women: before pregnancy (interventions to ensure healthier women at the time of conception; during pregnancy (interventions focused on ensuring earlier entry into prenatal care); and after delivery (perinatal and neonatal interventions that to ensure comprehensive, high quality follow-up care). These new mandates were considered in determining priority MCH needs for 2011-2015.

The 2010 MCH Needs Assessment

Over the past eighteen months, the Title VMCH offices have completed multiple components of the Title V Needs Assessment. Maryland’s assessment process, thus far, has

included three major phases: (1) a population based assessment of health status and needs; (2) capacity assessment including an update of CAST-V; and (3) identification of priority needs.

As described in greater detail below, Maryland's five year needs assessment process involved many of the steps outlined in the federal guidance, including engagement of stakeholders, analysis of both qualitative and quantitative data for a population based needs assessment, development of performance measures and preliminary development of an action plan. Maryland will be continuing to develop its action plan for 2011-2015 over the coming months. The state will contract with a vendor to assist in facilitating a process for completing the action plan and for dissemination of the needs assessment and action plan to stakeholders through statewide regional meetings in the fall of 2010.

Vital statistics, census, planning documents developed since the last needs assessment, and other data sources were reviewed to help us better understand the problems of mothers and children in Maryland. Parent and stakeholder surveys as well as key informant interviews were used to convey the story of those in need. This work was completed by policy/program and epidemiology staff within the Title V Program and with the assistance of over 1,200 MCH stakeholders throughout the state including parents, health care and other service providers, state and local agency staff and advocacy groups.

The work completed in each phase of the needs assessment is summarized in the following sections of this final report:

- Section II. Needs Assessment Process
- Section III. Partnership Building and Collaboration
- Section IV. Population Based Assessment
- Section V. Capacity Assessment
- Section VI. 2010 Title V MCH Priority Needs Selection Process
- Section VII. 2010 Maryland MCH Priority Needs and Preliminary Action Steps
- Section VIII. Appendices
 - A. Parent Survey
 - B. MCH Stakeholder Meeting Agenda and Attendees
 - C. Population Based Assessment
 - D. Priority Assessment Tool

II. NEEDS ASSESSMENT PROCESS

A. Leadership

Leadership for the 2010 Needs Assessment consisted of a Steering Committee comprised of senior staff from both the Center for Maternal and Child Health and the Office for Genetics and Children with Special Health Care Needs. Overall activities were coordinated by the Chief of Federal-State MCH Partnerships in CMCH – Ms. Yvette McEachern. This position oversees Title V planning and needs assessment activities as well as the SSDI Project. Members of the Steering Committee included the Director of the Center for Maternal and Child Health (CMCH)

– Ms. Bonnie Birkel; the Director of the Office for Genetics and Children with Special Health Care Needs (OGCSHCN) – Dr. Susan Panny; the MCH epidemiologist- Ms. Lee Hurt; the CMCH Medical Director – Dr. S. Lee Woods; Title V medical directors for child, school and adolescent health – Dr. Cheryl DePinto, perinatal health – Dr. Marsha Smith, and women’s health – Dr. Diana Cheng; the Family Planning program director – Ms. Helene O’Keefe; the CMCH Chief of MCH Systems Development – Ms. Pam Putman and the Director of Parent’s Place, Maryland’s Family Voices agency – Ms. Josie Thomas. Staff support was largely provided by the SSDI Project Coordinator in CMCH – Ms. Jessica Carda and a graduate research assistant in the OGCSHCN – Ms. Meredith Pyle.

The Steering Committee or subgroups (e.g., CSHCN staff) met periodically to discuss process and issues. However, the bulk of the work was completed by a Core Needs Assessment Team lead by the Chief, Federal State MCH Partnerships. Other Core Team members included the SSDI coordinator, the MCH epidemiologist, the CSHCN graduate research assistant, the chief of MCH Systems Development and the Parent’s Place director. The Core Team established a timeline and met at least monthly to review progress.

The SSDI Coordinator and the OGCSHCN graduate research assistant were largely responsible for completing the population based assessments. The MCH epidemiologist oversaw all data collection and analysis efforts. Input was sought from various MCH stakeholders including state and local agency staff, advocacy groups, and health care providers on an as needed basis as the work progressed.

All Title V Agency staff were briefed on the 2010 needs assessment and asked for their cooperation and participation. Updates on the needs assessment process and progress were provided at monthly staff meetings.

B. Stakeholder Engagement

The official kick-off of needs assessment activities began with a series of meetings with program directors and staff working MCH issues in some capacity within the Family Health Administration in late Fall 2008. These meetings had multiple purposes: (1) to inform offices about the Title V Program and the needs assessment, (2) to gather input on strategies and recommendations for conducting the assessment and information on relevant existing data sources and reports, and (3) identify existing and emerging MCH needs from the perspective of participants. Over 30 FHA agency staff attended including representatives from Oral Health, Chronic Disease Prevention, WIC, Medicaid, Mental Hygiene, Alcohol and Drug Abuse, Health Promotion and Tobacco Use Prevention as well as data gathering offices including the Vital Statistics Administration and the offices responsible for collecting hospital discharge and BRFSS data.

Local health departments in each of the state’s 24 jurisdictions are a major service delivery arm for Title V and have an understanding of local MCH needs. Key informant interviews for the needs assessment were held with MCH program directors and staff in every local health department. Members of the Core Team also met with nursing directors in the local

health departments to inform them of the needs assessment and to gather input on ongoing and emerging needs.

Two major surveys were conducted, one to solicit input from parents/caregivers and the other to gather input from state agencies, health providers, advocacy and community based groups. There were a total of 146 respondents to the web based MCH survey. In addition, e-mail messages were sent 225 stakeholders representing each jurisdiction in the state inviting them to participate. Respondents were provided an opportunity to identify needs by for each of four MCH population groups: women of childbearing age, pregnant women and infants; children; adolescents; and children with special health care needs. Survey Monkey was used to collect responses. Responses were accepted from December 2009 until the end of February 2010.

A total of 939 parents responded to a survey created by the Title V Agency, Parent's Place and the Johns Hopkins School of Public Health to ascertain health needs and barriers to care for children and parents in Maryland. The survey represented parental responses for 1765 children, 58% of whom were children with special health care needs. Parents reported needing help to address the following needs/concerns for their child(ren): anger/conflict management (21.7%), bullying (19.8%), depression (19.2%), peer pressure (15.6%), and overweight/obesity (10.3%). When asked about needed family support services and programs, parents identified the following: help with finding services for children (43%), parent support groups (24.8%), respite care (22.9%), child care (19.2%), nutrition, diet and exercise programs for children (16.1%), and parenting skills (12.9%). A copy of the survey including the methodology used is contained in Appendix A.

Since the last needs assessment, there have been several opportunities to solicit stakeholder input on challenging MCH issues and needs. Stakeholder discussions and recommendations were used to inform the 2010 MCH needs assessment. First, in October 2008, CMCH convened a Babies Born Healthy Leadership Forum to seek input for addressing the state's infant mortality problem. In 2007, the Center for Maternal and Child Health launched the Babies Born Healthy Initiative with the overarching goal of reducing infant mortality and eliminating racial disparities in Maryland. The Babies Born Healthy Initiative focuses on prevention services and quality improvement, believing that improving infant health requires a comprehensive multifaceted approach that addresses family, community and systems factors associated with poor pregnancy outcomes.

Over 120 attendees representing state agencies, health providers, schools of public health, advocacy and community based groups, had the opportunity to evaluate the Babies Born Healthy Initiative's progress and provide input on the program's future focus and direction. Workgroup participants collaborated to identify gaps within the current public health, commercial and private health care system structures, and then developed possible solutions to address identified gaps. Major suggested areas for strategy development included expanding preconception services to incorporate comprehensive women's health services so that women are healthy throughout their lifespan, and improving access to prenatal, perinatal and postnatal care for women at highest risk for poor birth outcomes by improving interagency collaborations. Interagency collaboration was viewed as essential for improving care for women receiving

mental health or substance abuse services, incarcerated women, and those with the lowest incomes and education levels.

Next, an invitational CSHCN Summit held in early November 2008 kicked off the Maryland Community of Care Consortium for Children with Special Health Care Needs. Over 100 stakeholders from across the state of Maryland, including physicians, families, representatives from advocacy, government and professional organizations, public payers, and policy analysts gathered to discuss the status of Maryland's current system of care. Summit participants worked in small groups focusing on each of the six core components and national outcomes for CSHCN and their families – 1) family-professional partnerships and satisfaction with care; 2) coordinated, ongoing, comprehensive care within a medical home; 3) adequate private and/or public insurance to pay for needed services; 4) early and continuous screening for special health care needs; 5) easy to use community-based service systems; and 6) receipt of services necessary to make transitions to adult life for YSHCN.

Group discussions focused on identifying current objectives in each outcome area, identifying opportunities to improve systems of care, and developing strategies for improving Maryland's performance in each outcome area. Common issues included the critical need for ongoing collaboration among parents, professionals, and government and non-government organizations engaged in caring for CSHCN and the need to identify and educate professionals (including physicians, schools, etc) about best practices relating to CSHCN. The Summit was an exciting start to an ongoing, statewide collaborative effort to improve systems of care for children and families in Maryland. The work continues as the Consortium meets quarterly to identify and implement strategies for improving systems of care for Maryland's CSHCN.

Finally, in October 2009, the Center for Maternal and Child Health sponsored a one day summit to gather input from youth service program for a new statewide teen pregnancy prevention plan. The State's last teen pregnancy prevention plan had been completed 25 years earlier in 1985. There were approximately 175 attendees from across the state. Summit participants represented a variety of organizations including local health departments, state agencies including education and juvenile justice, afterschool programs, colleges/universities, and local teen pregnancy prevention coalitions. Workgroups were convened to develop recommendations for such issues/needs as reducing risky behaviors, promoting community collaboration and involvement, healthy youth development, and increasing parent and adult involvement. A new state teen pregnancy prevention plan is currently being finalized.

C. Methods for Assessing The Three MCH Populations

States are required to assess the needs of the MCH population using Title V indicators, performance measures and other quantitative and qualitative data. At a minimum, states are asked to describe major morbidity, mortality, health problems, gaps and disparities for the MCH population. The anticipated outcome is an identification of specific needs by MCH population group based on analysis of data trends. The needs of special population groups and cross-cutting issues are also to be examined.

The Core Team was designated to complete this phase of the needs assessment. The Team spent several sessions determining data needs and gaps, and reviewing data findings. Specially, the Team:

- Reviewed the 2005 Needs Assessment and interim needs assessment findings and noted trends since the last assessment;
- Reviewed recent state and national reports to determine possible issues/problems to be explored in Maryland;
- Reviewed recommendations made by various state task forces;
- Identified major data/indicators (including trends) of health status, access, health needs and health disparities to be included in the assessment for each population group;
- Incorporated other related MCH needs assessment activities (e.g., local health department, local child and adolescent management board); and
- Determined stakeholder and public input processes.

The Core Team developed a set of MCH indicators to guide this phase of the work. Findings were also used to populate the MCH Stakeholder Survey. A summary of findings from the population based assessment is provided in Section IV and more detailed information can be found in Appendix B.

Quantitative methods used for assessing needs for each of the population groups included a review of various the data sources outlined below. Qualitative methods included surveys (MCH stakeholders and parents), key informant interviews, and a review of state plans and reports prepared since the last needs assessment. Two special briefing reports were completed, one on the health needs of children in foster care and the other on prenatal care in Maryland.

D. Methods for Assessing State Capacity

This section describes the methods used to assess the State's capacity to address core MCH functions outlined in the MCH Pyramid. In 2005, Maryland received technical assistance and funding from the Maternal and Child Health Bureau to participate in the Capacity Assessment for State Title V (CAST-5) process. This year the State reviewed progress on addressing priority capacity concerns identified by the 2005 CAST-5 Team. A cursory review of available MCH services by each level of the MCH pyramid (direct, enabling, population based and infrastructure level services) was also conducted. Capacity was largely assessed by key informant interviews with state agency and local health department MCH staff, and a review of existing plans and reports prepared by MCH serving agencies. This phase of the needs assessment is continuing and the state hopes to complete a more thorough analysis of available resources over the course of the next year.

Maryland plans to complete its strategic planning process this fall following input received during a series of regional meetings. Additional capacity information will be collected for each of the eight priority needs to inform the strategic planning process.

Table 1. Methods Used to Assess Capacity

Level of MCH Pyramid	Methods Used to Assess Capacity
Direct Health Care Services	<ul style="list-style-type: none"> • Key informant interviews with state agency and local health department MCH staff • Review of various state agency and local health department needs assessment and plans • Review of various state health manpower reports and plans • CMCH OB Survey • Review of available resource inventories • Consultation with partners including Parent’s Place and formal advisory groups
Enabling Services	<ul style="list-style-type: none"> • Key informant interviews with state agency and local health department MCH staff • Review of various state agency and local health department needs assessment and plans • Consultation with partners including Parent’s Place and formal advisory groups
Population-Based Services	<ul style="list-style-type: none"> • Key informant interviews with state agency and local health department MCH staff • Review of various state agency and local health department needs assessment and plans • Consultation with partners including Parent’s Place and formal advisory groups
Infrastructure Building Services	<ul style="list-style-type: none"> • Review of Title V Agency programs and activities • Review of 2005 CAST-V findings • Consultation with partners including Parent’s Place and formal advisory groups

E. Data Sources and Gaps

This section describes the data sources used including limitations of the data/source not commonly understood from the literature. The Core Team used various data sources and reports to complete the population based quantitative analysis. A brief overview of selected major data sources follows. More detailed information about data sources and limitations is provided in Appendix B which contains the population based assessment report of health status and health needs.

Quantitative

Vital Statistics Data: Vital statistics reports continue to be a major source of data on the health of pregnant women and infants in Maryland. For the most part, data are available for

multiple years for each jurisdiction and by race/ethnicity and age. This key source also provides mortality data for all population groups, but limited morbidity data for children and adolescents including those with special health care needs.

PRAMS: Maryland began collecting PRAMS data starting with mothers who delivered live births in 2000. Data and reports covering live births in the years 2001-2008 have been published. PRAMS provides an excellent opportunity for Maryland to obtain previously unavailable information on maternal behaviors and experiences that may be associated with adverse pregnancy outcomes. This CDC sponsored survey includes question related to pregnancy intendedness, obstetric history, and prenatal care use and health behaviors during pregnancy. The Maryland-specific section of the survey includes questions on assisted reproduction, contraceptive use, depression, oral health, and seatbelt use.

U.S. Census Data for Maryland: The decennial Census and its updates provide the basis for most socio-demographic data on Maryland's population including population estimates by race/ethnicity. The Maryland Department of Planning is the state's Census data clearinghouse.

Surveillance Systems and Registries: MCH related surveillance system data and reports are available in Maryland for asthma, newborn screening and birth defects. Information is also available from the State's various registries and surveillance systems including the state's Communicable Disease, Tuberculosis, Sexually Transmitted Diseases, Lead and Immunization registries. These reports and data systems were consulted for the needs assessment.

Mortality Reviews: Maryland is mandated to conduct maternal (MMR) and child fatality review (CFR) processes. In addition, every county is funded to provide fetal and infant mortality review (FIMR) processes. Mortality review involves the identification of death cases, review of records, maternal interviews (FIMR only), consultation with experts, and the development of recommendations for preventing deaths. The data and information supplied in the statewide and local annual reports for these review processes is useful for assessing MCH population based and systems needs.

DHMH and other State Agency Data and Reports: Various MCH population serving programs have accessible data available in either annual program or legislative reports or by special request. These agencies include the Medicaid Program that publishes annual legislative reports on its Managed Care and Oral Health programs, the WIC Program, the Maryland Family Planning Program, the AIDS Administration, the Maryland Departments of Education, Human Resources, Juvenile Services, and the Environment. Maryland's two Health Care Commissions provide data on hospital discharges and emergency department use.

Local Health Department Funding Proposals and Needs Assessment: Local health departments prepare MCH funding proposals and conduct periodic needs assessment activities. These reports were consulted for the needs assessment.

Local Management Boards for Children and Youth Needs Assessments: Local Management Boards in every jurisdictions are required to periodically conduct needs assessment of child and family needs. These reports were consulted for the needs assessment.

National and State MCH Reports and Databases: Various state and national MCH reports were reviewed including national and state Kids Count reports.

- Maryland data from the National Survey of Children's Health (NSCH), a module of the State and Local Area Integrated Telephone Survey (SLAITS), was used to estimate prevalence among children under the age of 18 for a variety of physical, emotional, and behavioral child health indicators in combination with information on the child's family context and neighborhood environment. Survey results for both 2003-2004 and 2007-2008 were examined.
- Maryland data from the National Survey of Children with Special Health Care Needs (NS-CSHCN) were analyzed to provide estimates of the health needs and issues confronting Maryland children and youth with special health care needs under 18 years old. The Survey was conducted in both 2000-2001 and 2005-2006. Data is available for the CSHCN population overall and subgroups.
- The National Immunization Survey (NIS) is consulted for Maryland data on immunization status and breastfeeding.

Qualitative Assessment

The qualitative methods employed in the statewide needs assessment included a parent survey, key informant interviews with MCH staff in every local health department, an MCH stakeholder survey and various meetings, summits and planning processes with MCH stakeholders.

2006 Parent Survey. In 2006, the Parents' Place of Maryland (PPMD) conducted a non-randomized survey to obtain information about the impact of caring for CYSHCN. Responses were gathered from 250 parents across Maryland using electronic and other means. The survey was disseminated through PPMD contacts, the PPMD website and electronic newsletter, various listservs and newsletters, and other agency partners. The survey explored a variety of issues related to access to health care for CYSHCN.

2006 Maryland Medical Home Survey. In 2006, families with CSHCN receiving Title V funded respite services were surveyed by the Office for Genetics and Children with Special Health Care Needs to gather information on medical home access.

2010 Parent Survey for the Title V Needs Assessment. This statewide non-randomized survey was designed to determine health needs and health care access barriers for families in Maryland. The survey was developed and conducted by the Parents' Place of Maryland in conjunction with the Title V Agency and the Johns Hopkins University School of Public Health during late 2009 and early 2010. Both on-line and paper surveys were available. Parental responses addressed needs, issues and concerns for both children with and without special health care needs. See Appendix A for more details.

Data Gaps and Needs

Maryland currently faces some substantial gaps in its ability to assess and monitor the health of women and children. Recommendations for additional surveillance by population groups are listed below:

Early Childhood: ages 0 to 5 years:

- Several states conduct early childhood surveys that follow PRAMS births through kindergarten. This is an efficient mechanism because the population selection and initial contact has already been performed through PRAMS. It also has the advantage of being able to track subjects longitudinally from maternal preconception health through kindergarten. Maryland should create such a survey.

School Age Children and Adolescents:

- There is very little information regarding chronic conditions of young children. MSDE currently asks school nurses to voluntarily collect data on chronic diseases among children entering kindergarten. This data is currently collected to help gauge staffing needs, but if made mandatory, could be used for chronic disease surveillance.
- Data on childhood obesity is collected by self-report as part of the Youth Tobacco Survey. This survey is only administered to children in middle and high school. Data on children's BMI for those attending elementary school might be captured in physical education classes, as part of Fitness Gram-type programs. This would need to be made mandatory in all schools. Educational information would also need to be developed to help parents understand overweight and obesity issues, should their child be identified as having an elevated BMI level.
- The Youth Risk Behavior Survey is conducted in Maryland, however all questions related to sexual behaviors are omitted. There is a vital need for better data on adolescent sexual behaviors because of the serious consequences of teen pregnancy and sexually transmitted diseases. Better information will allow for improved interventions in this area.
- One of the major impediments to better surveillance of school age children's health is the federal Family Educational Rights and Privacy Act (FERPA). Several state health departments have been able to improve access to data collected through their state's public school systems by having the data aggregated and analyzed by their state's public universities. Maryland should consider making use of this model.

Cross-cutting: Hospitalization and Emergency Department Data:

- Some states create unique de-identified numbers for their hospital discharge and ED data, so that patients can be tracked across visits. This enables a much more useful analysis of hospitalization data.
- It would be very useful if hospital and ED discharge data were created with values for each patient's census tract of residence. This would allow aggregated data to be used for mapping purposes. This would allow the data to be used for spatial analysis of various conditions and environmental factors, as well as for the identification of hospital catchment areas.

F. Linkages between Assessment, Capacity, and Priorities

This section describes the relationship between chosen priorities, the population based assessment and the capacity assessment. Data from both the population based assessment and the capacity assessment were provided to stakeholders and Title V Agency staff for consideration in determining priority needs. The Core Team gave great consideration to the Agency's capacity to address each of the potential priority needs.

G. Dissemination

This section describes the state's plan for dissemination of the needs assessment document to stakeholders and the public. Once approval from MCHB is received, the Title V Agency plans to post the final needs assessment report on its websites and distribute notices of its availability through listservs, newsletters and meetings. Limited copies of the report will be printed and bound for distribution to senior Title V Agency staff and local health officers in all 24 jurisdictions. A State of the State in Maternal and Child Health Databook will also be produced and disseminated via the website as well as distributed to all key partners. A 15-20 page summary of the needs assessment will be developed for dissemination at regional meeting planned for the fall of 2010.

H. Strengths and Weaknesses of the Process

This section describes the strengths and weaknesses of Maryland's approach to the needs assessment. A major strength of the process was the opportunity provided for the two Title V offices to work more closely together and the CMCH to establish a more collaborative working partnership with the Parent's Place. The MCH Stakeholder Meeting was also a strength. Participants represented a broad cross-section of partners including health providers, state agencies, community based groups and family representatives and were fully engaged in sharing their expertise and experiences in order to help identify the most important MCH issues in Maryland. There was parent and family participation, particularly from families of children with special health care needs, throughout the needs assessment. Feedback on progress was received quarterly from the Consortium for Children with special health care needs.

The use of technology (e.g., websites, listservs) was a key strength in engaging stakeholders. The Title V Agency has recently learned of the Share Point and will be exploring the use of this technology as a future way of engaging stakeholders.

A major weakness was a lack of staff capacity to complete the needs assessment. Due to the state's hiring freeze and the loss of several positions, Maryland lacked adequate staff to thoroughly complete the needs assessment. For example, the OGCSHCN has lost 50% of its staff over the past two years. CMCH has also experienced difficulties in recruiting and retaining staff due to lower salaries than the private sector, and the need to hire people contractually without offering health insurance benefits. The SSDI Coordinator left in May prior to completion of the needs assessment to accept a position with higher pay and health insurance benefits. While staff and stakeholders recognized the importance of the needs assessment process, many found it difficult to devote much time to the needs assessment due to competing

priorities and fewer work days due to furloughs. Capacity assessment was another weakness of the process. Staffing constraints prevented the state from completing as thorough a capacity assessment as the state would have liked. The state could have used additional staff assistance to complete a process similar to CAST-V.

III. PARTNERSHIP BUILDING AND COLLABORATION EFFORTS

For the 2010 needs assessment, Maryland Title V identified opportunities to collaborate with other DHMH and state agencies, health providers, community based groups, parents and families representing diverse issues and needs. A MCH stakeholder list for the needs assessment was developed in the early 2009 (see Appendix B for list of attendees at the March MCH Stakeholder Meeting). Maryland Title V program informed all child serving state agencies – health, education, human resources, juvenile services, etc.; local health departments; local child and family management boards; advocacy, family and community based groups and others of the needs assessment through various venues including a Title V needs assessment listserv, discussions at various interagency group meetings, the Title V website and newsletters. These agencies and groups assisted in identifying and analyzing strengths and needs through the MCH stakeholder survey, participated in key informant interviews where needed, shared data, helped to select priority needs through attendance at the MCH Stakeholder meeting, and provided feedback on the final MCH needs assessment report. Section IV, Capacity Assessment provides more detail about Title V partnerships and interagency collaborative efforts.

Local health departments in Maryland serve as major delivery arms for public health services and often provide gap filling services. Title V funds all 24 local health departments to implement MCH services including family planning services. MCH and family planning consultants monitor more than 30 grants to local health departments providing services across each of the levels of the MCH pyramid. Local MCH and nursing staff participated in the needs assessment process by completing the various surveys, participating in key informant interviews, and reviewing draft needs assessment documents.

Title V partnered very closely with the Parent's Place of Maryland (PPMD), Maryland's Family Voices Chapter, to gather family and consumer input for completing the needs assessment. PPMD was instrumental in developing and disseminating the Parent Survey for the 2010 needs assessment. Parent's Place has formerly partnered with PPMD since 1998 when PPMD was given a grant to support their role in providing the family and community perspectives for policy and planning. Since that time, PPMD has assisted in identifying gaps in services for CYSHCN, compiled information on resources in a database and disseminated this information to parents of CYSHCN (the Family to Family Health Education and Information Center), maintained a network of regional resource parents, assisted parents of CYSHCN to find needed resources on an individual basis and developed parent leaders in the community. These resources were extremely helpful to needs assessment staff in defining and prioritizing needs.

In 2008, PPMD, in partnership with the OGCSHCN, Johns Hopkins Bloomberg School of Public Health, and the Maryland Chapter, American Academy of Pediatrics, applied for and was awarded a State Implementation Grant for Integrated Community Systems for Children and

Youth with Special Health Care Needs (CYSHCN) from HRSA. The major strategy was to form a “Consortium of Care” to engage diverse partners in shared planning, implementation, and evaluation of strategies to achieve all 6 core outcomes for CYSHCN. Consortium partners include families, youth with special health care needs, representatives from advocacy groups, physicians, other providers, health care facilities, academic institutions, government and professional organizations, public payers, MCOs, policy analysts and state governmental agencies. The array of partners working with the OGCSHCN has been dramatically expanded by the COC. Due to recent budget cuts and loss of several key positions, the OGCSHCN has had to rely increasingly on its partners, particularly PPMD and other COC partners in carrying out its programmatic work.

IV. POPULATION BASED MCH NEEDS ASSESSMENT

For women and children, the Title V Agency attempted to analyze major morbidity and mortality indicators by age, race/ethnicity and jurisdiction, major health problems and service system gaps, and major disparities. Where possible, qualitative and quantitative findings are linked. Maryland progress on related Healthy People 2010 objectives are also noted. For children with special health care needs, data on Maryland’s progress on core outcomes for this population were examined.

This section highlights strengths and needs for each population group starting with women of childbearing age. Appendix B provides more comprehensive and detailed information for each population group.

Women of Childbearing Age (WCBA)

In 2008, Maryland’s 1.2 million women of childbearing age, ages 15-44, represented 21% of Maryland’s total population of 5.6 million. By race, the majority (60%) of WCBA were White, followed by African American (34%), Asian (6%), and Native American or Native Hawaiian/Pacific Islander women (<1%). By ethnicity, Hispanic women represented 7.1%. Hispanics are the faster growing racial/ethnic group in Maryland.

Both qualitative and quantitative data collected for the 2010 needs assessment indicate that most Maryland women of childbearing age are “healthy.” For example, two-thirds of women (ages 18-44) in the 2008 Maryland BRFSS survey described their health status as either excellent or very good, but only 8% described their health as fair or poor.

While the majority of Maryland babies are born to healthy mothers who experience healthy pregnancies, many Maryland women are “unhealthy” and/or lack access to needed services to improve their chances of having a healthy baby. Chronic conditions among women of childbearing age such as diabetes, asthma, obesity and depression put them at higher risk for pregnancy complications and poor pregnancy outcomes.

BRFSS and PRAMS data for 2008 support the findings from the qualitative assessment and point to the following risk factors for women of childbearing age in Maryland:

Income and Health Care Access

- Approximately 8.5% had incomes at or below the poverty level (2006-2008 American Community Survey).
- Nearly 18% were uninsured.
- Nearly 12% of Maryland women said that there was a time in the past year when they could not afford to see a doctor.
- Nearly 30% of Maryland women reported that it had been a year or more since their last dental cleaning.

Reproductive Health

- Only slightly more than half of Maryland pregnancies are intended. The Healthy People 2010 goal is 70%.
- Sexually transmitted infection rates in Maryland are higher than the national average. Since 2000, Chlamydia and HIV infection rates have increased, while gonorrhea rates have declined.
- More than 2 in 5 (42%) Maryland births were to single mothers in 2008.

Chronic Health and Related Conditions

- Overweight/obesity rates are increasing, rising from 43.4% in 2000 to 52.3% in 2008 (BRFSS).
- Only half of women were moderately physically active each week (30+ minutes moderate activity per day, 5+ days per week)
- Chronic health conditions affect many – 12% reported being hypertensive, 8.3% reported being diabetic, 12.4% reported having asthma.

Substance Abuse

- Smoking rates overall declined from 22.3% in 2000 to 14.7% in 2008. However, many Maryland counties report increasing smoking rates, particularly among younger women in rural areas of the state.
- Almost 15% WCBA reported binge drinking (5+ drinks in one sitting) in the past month.
- Over 11,000 Maryland women, 15-44 years, were admitted to Maryland Alcohol and Drug Abuse Administration funded treatment centers in 2009. Of those admitted, 46% reported alcohol to be a substance abuse problem, 36% heroin, 33% marijuana, and 31% crack cocaine. Three percent or 368 Maryland women were pregnant at the time they entered treatment in 2009.

Mental Health

- One in five women reported being diagnosed with depression (BRFSS).
- Affective disorders (e.g., depression) are the leading cause of non-obstetric hospitalizations. In 2008, over 5,000 Maryland women, ages 18-44 were hospitalized for affective disorders. (HSCRC hospital discharge dataset)
- There were 91 suicide deaths to Maryland women (of all ages) in 2008.

Domestic Violence

- Nearly 6% of Maryland mothers experienced intimate partner violence in the year prior to pregnancy.

Leading Causes of Death

- In 2008, 941 women of childbearing age died. Death rates varied by race/ethnicity and were highest for African American women (111.6 deaths per 100,000 population) as compared to White, non-Hispanic (61.7) and Hispanic (33.6) women (Maryland Vital Statistics data).
- The leading causes of death for young women, ages 15-24 were injuries - accidents and homicide. The leading causes of death for women ages 25-44 were cancer and heart disease, followed by accidents and HIV/AIDS.

Leading Causes of Hospitalizations

- Complications related to pregnancy and birth were the leading causes of hospitalizations followed by affective disorder in 2008.

Similar to findings from the 2005 needs assessment, many stakeholders through surveys and key informant interviews pointed to the following continuing unmet needs:

- Lack of programs and services focused on the wellness of women prior to pregnancy – need for improved access to preventive, primary, oral and preconception health services;
- Lack of health insurance coverage for many women of childbearing age resulting in difficulties accessing needed health care services;
- Increasing need for mental health services including screening and treatment services, particularly for depression;
- Increasing need for substance abuse treatment services, particularly for prescription drug addiction;
- More male involvement initiatives; and
- Expanded access to family planning and reproductive health services.

Pregnant Women and Infants

Infant mortality, the death of an infant within the first year of life, is a major indicator of the health and social condition of a nation, state or community. Reducing infant mortality and related risk factors is a public health priority in Maryland. Significant progress toward reducing infant mortality and improving birth outcomes in Maryland that had been achieved during the 1990's has now stalled, with little improvement made for nearly a decade. Governor O'Malley has identified a 10% reduction in infant mortality in Maryland by 2012 as one of his top 15 policy goals.

Healthy pregnancies and pregnancy outcomes are more likely to occur when mothers are healthy at conception; receive adequate, quality prenatal care; have adequate social and emotional supports; and avoid risky behaviors such as alcohol and drug use and smoking. Maryland data, both qualitative and quantitative, gathered for the 2010 needs assessment indicate that most of the 75,000+ babies born each year in Maryland arrive at home at healthy and safe.

However, the data also paint a picture of unmet needs and troubling trends for many mothers and infants:

Births in Maryland

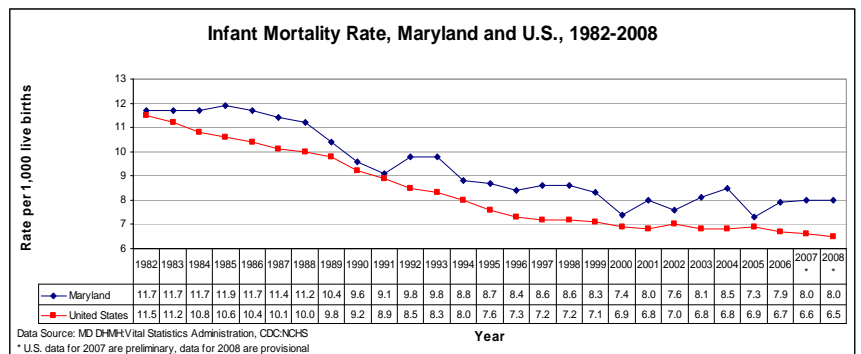
- There were 77,268 live births to Maryland residents in 2008, a 1.0% decline over the number of births in 2007.
- The majority (54.2%) of births were to racial/ethnic minorities.
- The overall birth rate was 13.7 births per 1,000 population. The birth rate among Hispanic women was 28.0 per 1,000 population, over twice the state average.
- Births to teen mothers accounted for 8.6% of all births. Nearly three percent (2.8%) of all births were to mothers under the age of 18.
- The percentage of births to unmarried women continues to rise. In 2008 the figure was 42.3% overall, 33.4% for white women, 64.1% for black women, and 57.1% for Hispanic women.

Medicaid Births

- In 2009, Medicaid paid for approximately one in three (36%) births; a total of 28,219.
- Approximately 17% of Medicaid births were to undocumented women in 2008. This number has been increasing.
- Medicaid has a high percentage of women whose births are paid for by Medicaid, but who were not eligible or did not enroll until giving birth; 59% were to women who are not eligible until they became pregnant. Only one in four women were enrolled or eligible to enroll prior to pregnancy.

Infant Mortality

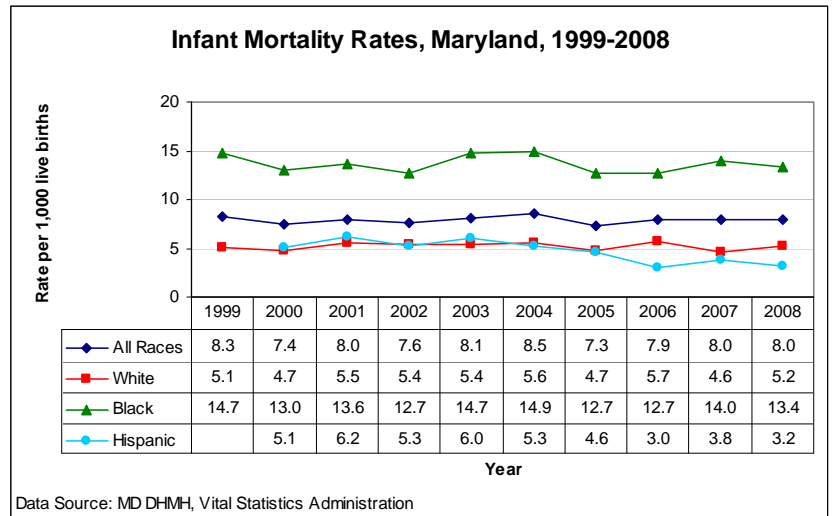
- Infant mortality is a major public health problem in Maryland with a rate of 8 infant deaths per 1,000 live births in 2008, far exceeding the Healthy People 2010 goal of 4.5. Although Maryland is one of the wealthiest states, it has consistently ranked among the worse for infant mortality.



- The majority (73%) of infant deaths occur the neonatal period. The leading causes of infant deaths are prematurity/low birth weight, congenital anomalies and sudden infant death syndrome (SIDS).

Racial/Ethnic Disparities

- Major racial/ethnic disparities in infant mortality persist with African American babies dying at almost three times the rate of White, Asian and Hispanic babies. The complexity of infant mortality is reflected in the fact that racial disparities in infant mortality cannot be fully explained by socio-economic factors alone. For example, college educated African American women in Maryland, on average, have worse pregnancy outcomes than women of other races (e.g., White) with less than an 8th grade education.
- A Black infant is 1 ½ times as likely to be born prematurely, almost twice as likely to be born at low birth weight, almost 2 ½ times as likely to die of SIDS/SUID as a white infant.



Low Birth Weight

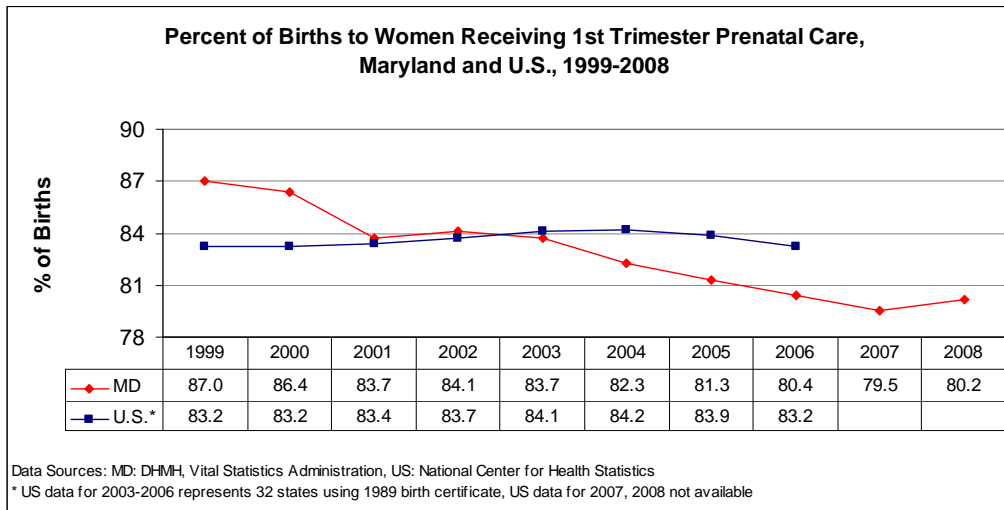
- Low birth weight (LBW) is a major indicator of infant morbidity. Over 7,000 (9.3%) infants were born at low birth weights in 2008. Maryland's LBW rate has consistently been higher than the national average. Eleven percent of babies were born prematurely (before 37 weeks gestation) in 2008. Like infant mortality, both prematurity and LBW rates in Maryland have not improved over the past decade. Premature and LBW infants are at higher risk of infant death and have higher risks of long term developmental and health problems.

Risk Factors for Poor Birth Outcomes

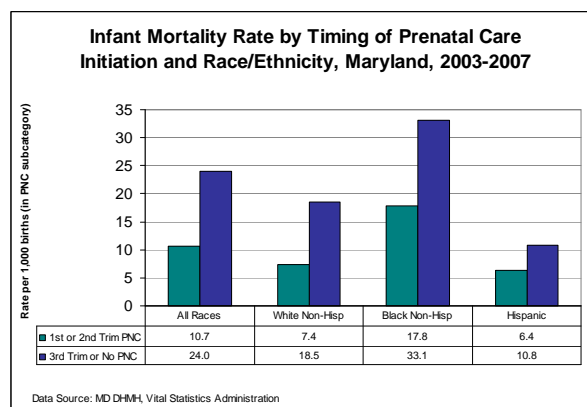
Various risk factors for poor birth outcomes (e.g., infant mortality, low birth weight) are discussed below. They include behavioral risks (e.g., drug, alcohol, cigarette use; unintended pregnancy), health and healthcare risks (e.g., chronic conditions – obesity, diabetes, hypertension; access to care/prenatal care) and socio-demographic risks (e.g., race, socio-economic status and maternal age).

Prenatal Care

- Access to early prenatal care remains as problem for many Maryland women. Early prenatal care rates in Maryland, once among the best in the nation, at nearly 90% during the 1990's, fell to 80.2% in 2008.



- However, in 2008, two jurisdictions (Carroll and Howard) have met or surpassed the Healthy People 2010 goal of 90% of women receiving early prenatal care.
- More Maryland women are receiving late or no prenatal care; more than 3,000 in 2008. Women who receive late or no prenatal care in Maryland are more likely to have a baby die within the first year of life.



Maternal Smoking

- Maryland PRAMS data indicate that one in ten Maryland smoked during the last three months of pregnancy. The Healthy People 2010 goal is 2%.
- Many Maryland counties, particularly on the Eastern Shore, anecdotally report seeing an increase in the number of women smoking during pregnancy.
- According to Vital Statistics reports, smoking during pregnancy has been declining, falling from a reported 9.2% in 2000 to 6.6% in 2008.

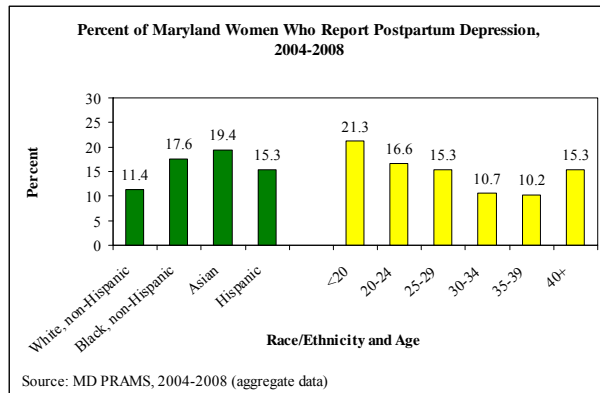
Maternal Drinking and Drug Use

- Maryland PRAMS data indicate that nearly 8% of Maryland women reported drinking during the last three months of pregnancy. Of those who consumed alcohol during pregnancy, the vast majority (80%) reported that they had less than one drink per week. The remaining 20% consumed one or more drinks per week. Less than 1% of those surveyed reported one or more episodes of binge drinking, define as one or more drinks on one occasion.

- State law requires the Department of Human Resources to identify newborns exposed to heroin, cocaine, and crack cocaine; to refer the mothers to drug treatment; and to provide supportive services to the families. The program serves up to 300 women who deliver newborns exposed or addicted to heroin, cocaine, or crack cocaine in seven jurisdictions.

Mental Health – Postpartum Depression

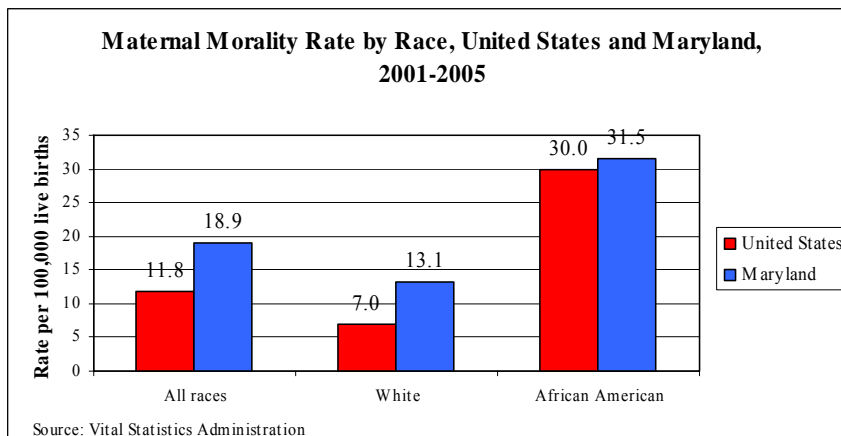
- Postpartum depression is defined as major depression that begins within a year after delivery and lasts two or more weeks. According to data collected by the Pregnancy Risk Assessment Monitoring System, during the time period 2004-2008, 14.2 percent of Maryland women suffered from postpartum depression.



- Postpartum depression percentages were significantly higher for Black, non-Hispanic, Asian women and adolescent women when compared to their counterparts.

Maternal Mortality

- For 2001-2005, Maryland’s average maternal mortality rate or MMR (the number of maternal deaths per 100,000 live births in the same time period) was 18.9. This is substantially higher than the Health People 2010 goal of 3.3 maternal deaths per 100,000 live births.
- African American women have a maternal mortality rate that is 4 times greater than that for White women (30.0 and 7.0 respectively).



- Domestic violence is a leading cause of maternal mortality in Maryland. PRAMS data for 2004-2008 indicate that 4.3% of women reported being physically abused by a partner or ex-partner during pregnancy.

SIDS and Infant Sleep Position

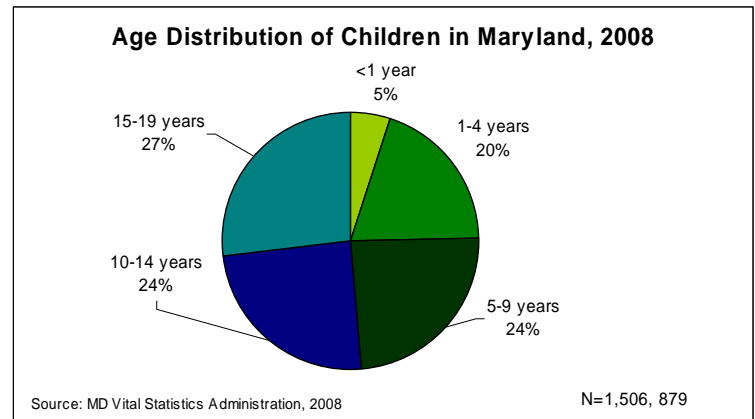
- Sudden infant death syndrome is the third leading cause of infant death. Infant deaths due to SIDS declined significantly between 1999 and 2008.
- African American babies have higher rates of SIDS and are almost three more likely to be placed on their stomachs to sleep.

Breastfeeding

- Breast milk is the most optimal form of nutrition for infants.
- PRAMS data from 2008 indicate that the majority (81%) of Maryland mothers initiate breastfeeding. The Healthy People 2010 goal is 90%.
- However, 2005 data from the National Immunization Survey indicate that 43% of moms continue breastfeeding up to six months. The Healthy People 2010 objective is 50% .
- Breastfeeding rates are highest for Hispanic and Asian women, and lowest for African American women.

Children and Adolescents

In 2008, there were 1.5 million children, ages 0-19, living in Maryland and representing 26.8% of the state’s total population. The majority (78 %) of children live in one of the two major metropolitan areas – Baltimore and Washington, D.C.



Race/Ethnicity

By race, White, non-Hispanic children represented 51.4% of the state’s child and adolescent population, followed by non-Hispanic African Americans (32%) in 2008. Hispanic children represented 9.1% of the child and adolescent population. In 2008, minority infants represented the majority (54.5%) of births.

Poverty Status

- An estimated one in ten Maryland children ages 0-18 lived in households with incomes below the poverty level in 2008.

- Maryland has one of the lowest poverty rates in the nation.

Family Structure, Living Arrangements and Family/Social Connectedness

- One third (nearly 500,000) of Maryland children under 18 live in a single parent home. ¹More than half of African American children lived in single family homes, one third of Hispanic children lived in single family homes and one in four White children lived in single family homes. The majority of children in single family homes lived with their mothers in families with potentially little or no father involvement.
- In 2009, 4,968 youth were admitted to secure detention facilities.
- In December 2009, 8,429 children were in out-of-home placement through the MD Department of Human Resources.
 - 11.8% were in group homes
 - 76.9% were in family foster homes

Health Insurance Coverage

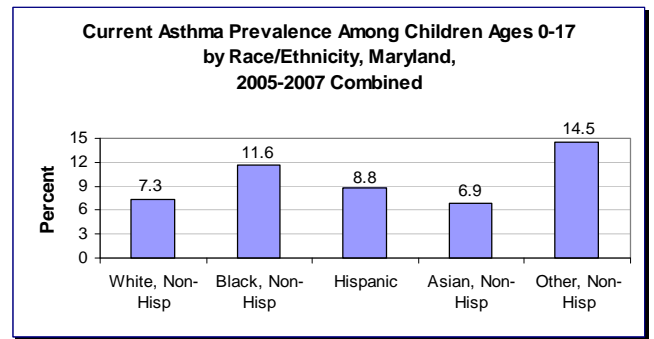
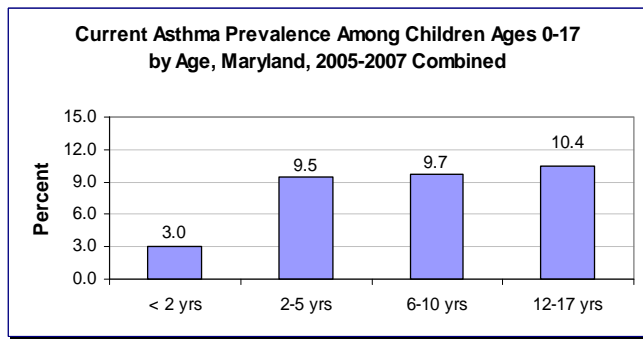
- One in ten Maryland children and adolescents, (0-18) were uninsured in 2005-2006.²
- More than one in five (30% or 456,181 children) Maryland children ages 0-19 were enrolled in the Medicaid Program at some point in FY 2009, and another 9.7% (or 145,311 children) were enrolled in the SCHIP Program which is also administered by Medicaid.
- More than half (59.7%) of African American children were enrolled in either Medicaid or SCHIP in FY 2009.

Medical Home and Access to Primary Care

- The American Academy of Pediatrics’s description of a “medical home” lists seven defining components: accessible, continuous, comprehensive, family-centered, coordinated, compassionate and culturally effective.
- According to this definition, only 41.4% of Maryland children have met the criteria for having access to a medical home (2007 National Survey of Children’s Health). However, 93.9% of Maryland children have a usual place for sick and well care.
- A lack of access to health care, especially primary care, lessens opportunities to preventive health education messages, and increases the risk of delayed disease diagnosis and treatment.

Chronic Health Conditions including Asthma

- In the 2006-2007 school year, 16.5% of children enrolled in Maryland public schools had a chronic health problem (e.g., asthma -64,441, ADHD -34,319, seizure disorder -3,713, heart condition- 3060, and diabetes-1,793)
- The 2007 asthma prevalence for children under 18 was estimated to be 8.9% (123,400). Asthma prevalence increases with age and varies by race/ethnicity.
- According to the Asthma Call Back Survey, 60% of children reported that their asthma as poorly controlled.



Oral Health Status

- In the 2007 NCHS, the majority (77%) of parents/caregivers described their child's (ages 1-17) teeth as excellent or in very good condition. Slightly more than 5% rated their teeth as fair or poor.
- The 2005 - 2006 Survey of Oral Health Status of Maryland School Children, conducted by the University of Maryland Dental School, found that 31% of children in kindergarten and third grade had untreated tooth decay. Children residing on the Eastern Shore and in Southern Maryland had the highest rates of untreated tooth decay. Low-income, African-American and Hispanic children suffer even higher rates of tooth decay than white and upper-income children.

Mental Health

- Nationally, it is estimated that 1 in 5 children have a diagnosable mental health disorder that requires intervention or monitoring. However, it is estimated that only 20-25% receive treatment.³
- In 2007, the Maryland Mental Hygiene Administration estimated that between 5-11% of children and adolescents ages 0-17, had serious emotional disorders. This translates to 68,000 to 149,900 children and adolescents.⁴
- In FY 2009, 26,460 children ages 0-12 received services through Maryland's Public Mental Health System (PMHS). That same year, 17,593 teens between the ages of 13-17 received PMHS services.
- In 2007, 60% of children ages 2-17 were reported by a parent to have received required counseling for mental health care. (2007 National Children's Health Survey)

Violence and Injury

- Injury is the leading cause of childhood deaths. The majority of injuries are unintentional.
- In 2005- 2007, the leading causes of injury deaths were motor vehicle accidents (37%), homicide by firearms or other means (25%), drowning (7%) and fire (7%).
- Homicide rates for African males are more than 20 times the rate for white males.
- YRBS data for Maryland indicate that violence is prevalent among Maryland youth. More than one in ten of high school students reported being involved in a physical fight and 21% reported being bullied in 2009.

Child Abuse and Neglect

- In 2009, there were 53,796 reports and 27,956 new investigations of child abuse and neglect by the Maryland Department of Human Resources, Child Protective Services
 - 4,647 more reports than 2008
 - 1,406 more investigations than in 2008
- Neglect, followed by physical abuse, were the leading types of reports and investigations.

Overweight and Obesity

- Obesity, a leading cause of premature death in America, has been describe as an epidemic.
- WIC Program data for 2008 show that 16% of enrolled children, ages 2-5, were overweight and 17% of children were obese.
- Self-report data from the 2006 Maryland Youth Tobacco Survey estimate that 15% of children between the ages of 13-18 are overweight and 11% are obese.
- Self-report data from the 2009 YRBS estimate that 15.6% of high school students are overweight and 12.2% are obese.
- An analysis of 2004-2006 Medicaid data by the Title V Agency found estimated overweight/obesity prevalence among enrolled children by age groupings: ages 12-19: 18.2% were overweight and 24.6% were obese; ages 6-11: 16.9% were overweight and 22.4% were obese; and ages 2-5: 16.1% were overweight and 15.6% were obese.

Child and Adolescent Mortality

- In 2007, there were 366 deaths to children ages 1-17 in Maryland and the child death rate was 28.6 deaths per 100,000 population. Highest child death rates (2005-2007):
 - Black, non-Hispanic youth: 33.4 per 100,000
 - Older youth (15-17 years): 51.1 per 100,000

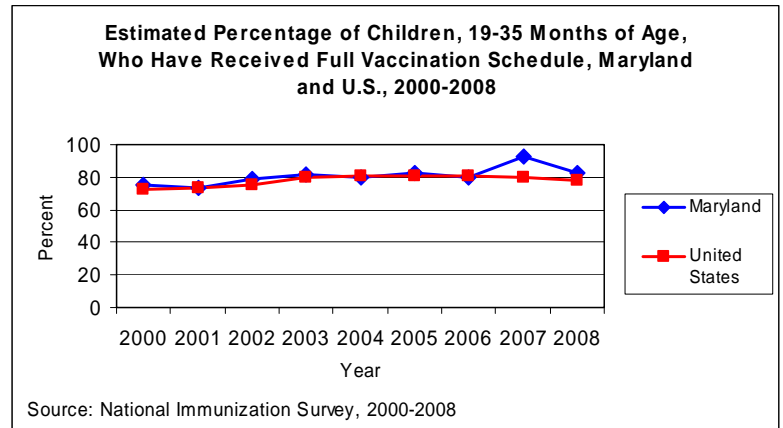
Early and Middle Childhood Health (ages 1-9)

There are approximately 300,000 children between the ages of 1-4 in Maryland and another 361,155 between the ages of 5-9. Major health issues and needs affecting this group include immunizations, injuries, environmentally linked health issues such as asthma and lead poisoning, and access to primary and other health care services.

- In 2005-2007, the leading cause of death for children ages 1-4 years was unintentional intentional injury, followed by congenital anomalies and homicide. The leading cause of death for children ages 5-9 years was unintentional injuries, followed by cancer and congenital anomalies.
- The leading causes of hospitalization in 2007 were asthma, common childhood infections and injuries.

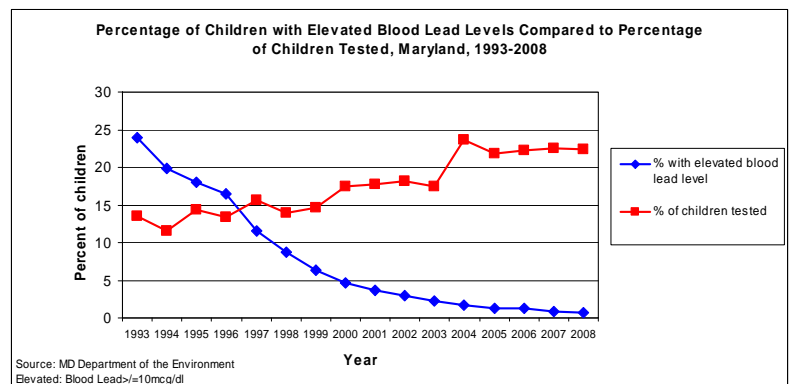
Immunizations

- From 2000 to 2008, the percentage of Maryland children 19-35 months of age receiving the full vaccination schedule increased by 9.5%, from 75.4 to 82.6% coverage.
- Maryland's immunization rate in 2008 was slightly higher than the national average.
- The Center for Immunizations is largely responsible for administering Maryland programs to promote immunizations.



Lead Poisoning

- Since 1993, the percentage of Maryland children tested with elevated blood lead levels has decreased by 97% (from 23.9% in 1993 to 0.7% in 2008).
- There were 13,833 fewer cases of elevated blood levels in children in 2008 than in 1993 (from 14,546 to 713).



Early Childhood Mental Health

- Mental health and behavioral problems are a major concern for child care providers in Maryland. One recent survey found that more than 45% of Maryland child care providers have expelled a child due to behavior problems. Child care staff report working with increasing numbers of young children with behavioral problems, many of them thought to be related to problems with parent and child bonding or attachment.
- Since 2005, more than 30 mental health consultants have been trained to provide services in children, parents and staff in child care settings (child care centers, family child care homes, Head Start centers, preschools, etc.) More than 1,000 (3.6%) children, ages 0-5 years have been identified as having a mental health concern. Of these, 414 children with more serious mental health concerns have been referred to other services. (Source: MSDE, Early Childhood Mental Health Project)

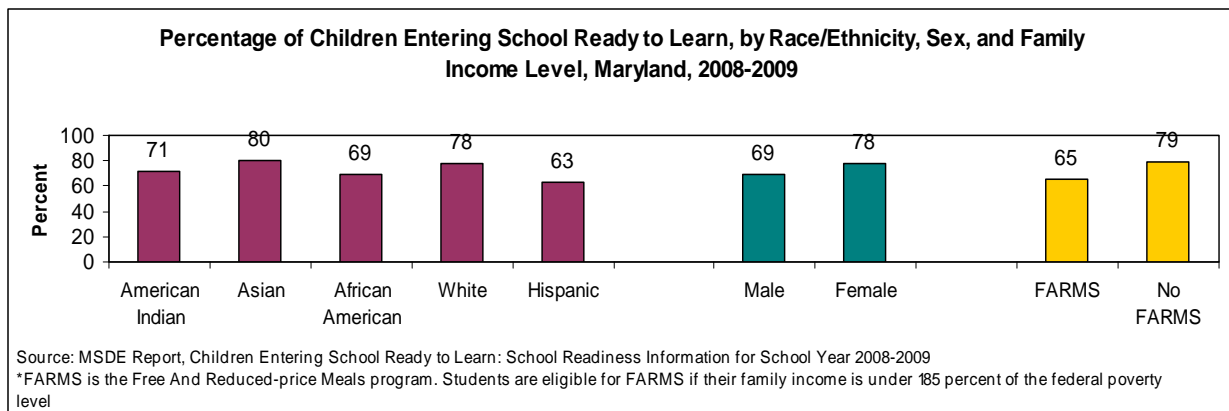
Oral Health Status

- Almost one third (31%) of children in the Kindergarten and third grade had at least one tooth with dental caries in 2005-2006.⁵
- More than one in four (27%) of school children in Kindergarten and third grade had at least one tooth with a dental sealant.

- Black, non-Hispanic, uninsured and low income children as well as those living on the Eastern Shore were more likely to have dental caries or to lack dental sealants.
- Improved access to oral health care was identified as priority health need in the 2009-2010 needs assessment conducted by the Maryland Head Start Collaboration Office.⁶

School Readiness and Academic Success

- Lower educational attainment is linked with lower salaries, less access to health care, and poorer health status. Disparities in educational achievement and outcomes exist in Maryland by race/ethnicity, jurisdiction and income.
- Maryland has a system for measuring school readiness along seven domains including physical, personal and social development. In the 2008-2009 school year, 73% of the entering kindergarten students were evaluated by their teachers as “fully” ready for kindergarten, a 5% increase over the previous year and a 24% increase over 2001-2002.
- School readiness rates varied by race/ethnicity and were lowest for Hispanic children (63%) followed by African American children (69%).



Pre- Adolescents and Adolescents

There were 773,937 children and adolescents living in Maryland in 2008. Major health issues, needs and concerns identified for this population included mental health problems including access to mental health and substance abuse services, both inpatient and outpatient, undiagnosed depression and mental health problems among adolescents. Adolescents were described as having too much unstructured, free time and a lack of quality adult supervision. Quality after-school and recreational programs as well as parenting education programs were mentioned as remedies for these problems. Teen pregnancy, obesity and a lack of physical activity were mentioned by MCH stakeholders as issues.

Mortality and Hospitalizations

- Affective disorders were the leading cause of hospitalization in acute general hospitals for Maryland teens ages 15-19 (including both genders) in 2008.
- There were 1,207 discharges for affective disorders and they represented 12% of non-obstetric discharges.
- In 2007, there were 366 deaths to children ages 1-17 and the child death rate
- Injuries (accidents, homicide and suicide) were leading causes of adolescent deaths in 2008.

Teen Pregnancy and Reproductive Health

- The 2008 Maryland birth rate for adolescents, ages 15-19, was 32.7 births per 1,000 teens.
- This was a slight decrease from the 2007 rate of 34.4 births per 1,000 teens in Maryland, yet still higher than the lowest Maryland teen birth rate of 31.8, which occurred in 2005.
- In 2008, Maryland's Chlamydia infection rate in females, 15-19, was 4,008.11 cases per 100,000 and the U.S. infection rate for this same group was 3,257.67 cases per 100,000.
- From 2000 through 2008, Maryland females, ages 15-19, have had higher rates of Chlamydia than females in the same age group nationwide.
- Almost half of youth who ever lived in foster care are under age 16 when they have sex for the first time compared to one-third of all other youth.⁷
- Young adults who lived in foster care are 1.9 times more likely to have ever experienced forced sex when compared to all other youth

Substance Abuse

- According to the 2009 Youth Risk Behavior Survey for Maryland:⁸
 - 43% of high schoolers had tried cigarettes and 4.4% had smoked more than 10 cigarettes per day within the past 30 days.
 - 67.2% of high schoolers had drunk alcohol at least once in their life and 19.4% had drunk 5 or more drinks in a row within a couple of hours on at least one day within the past 30 days
 - 35.9% had tried marijuana at least once and 21.9% had used marijuana one or more times within the past 30 days.

Mental Health

- Depression is a leading risk factor for suicide.
- One in four felt sad or hopeless for 2 or more weeks in a row so that they stopped doing some usual activities as compared to 23.2% in 2007 and 29.7% in 2005. Females (30% in 2008) were more likely than males (20%) to feel sad or hopeless for prolonged periods.
- 14.5% seriously considered attempting suicide, 11.6% made a plan about how they would attempt suicide, and one in ten attempted suicide one or more times. Males were slightly more likely than females to report attempting suicide.
- A little more than 3% reported that their suicide attempt reported in treatment by a nurse or physician.

CHILDREN WITH SPECIAL HEALTH CARE NEEDS

Maryland has a higher prevalence of CYSHCN than does the nation as a whole, and the population of CYSHCN in Maryland has grown from approximately 217,000 in 2005 to approximately 244,000 in 2010. In 2010, more families of CYSHCN in Maryland are living in poverty than in the five previous years. Racial and socioeconomic disparities continue to be an issue for successful achievement of core outcomes among the state’s CYSHCN population, with Hispanic families and families living below 200% FPL having the most difficulties. Functional limitations and the presence of one or more behavioral, emotional, or developmental issue are also associated with non-achievement of core outcomes for CYSHCN in Maryland. The table below summarizes Maryland’s performance, associated issues, strengths, and barriers to progress on core outcomes for CYSHCN.

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Families partner in decision-making	Percent of children with special health care needs (CSHCN) age 0 to 18 years whose families partner in decision-making at all levels and are satisfied with the services they receive	68.1 (57.5) Maryland ranked 2 nd in the nation	54.8 (57.4) Maryland ranked 42 nd in the nation	Families with CSHCN in one or more of the following subgroups were the least likely to report feeling like partners or to be satisfied with care: Hispanic; family income less than 200% FPL; whose conditions have a greater impact on the child’s daily functioning; rural; and those with mental health issues.	Willingness of stakeholders to work together; Existing models of partnerships; Strong families; availability of data.	Inadequacies in: professional and family training opportunities; support for culturally and linguistically competent supports and services; family and professional supports including time, reimbursement, and financial support; County and regional variances; lack of value for family wisdom, experiences, expertise and knowledge; and existing partnerships are not consistently implemented across systems statewide.

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Medical Home	Percent of CSHCN age 0 to 18 years who receive coordinated, ongoing, comprehensive care within a medical home	56.3 (52.6) Maryland ranked 10 th in the nation	45.6 (47.1) Maryland ranked 38 th in the nation (2005-06 data cannot be compared to 2001 data due to significant changes in how this indicator is derived.)	Families with CSHCN in one or more of the following subgroups were less likely to report care consistent with a medical home: Hispanic and African American-non-Hispanic; family income less than 200% FPL; age 12-17 years; with public insurance only; with one or more periods of being uninsured in a year; or with one or more emotional, behavioral, and developmental issues.	Ongoing partnerships and relationships among stakeholders; strong interest among stakeholders in promoting the Medical Home model; current project in Baltimore City that is building medical home capacity in pilot practices.	Provider characteristics including communication, empathy, paternalism, competence, and cultural sensitivity; lack of knowledge, skills and resources to implement the Medical Home; parent characteristics including lack of information, not prepared to effectively coordinate child’s care, isolation and lack of platform for education in Medical Home requirements and expectations, and care coordination; Care coordination agency fragmentation and lack of standards; lack of compensation for care coordination, non face-to-face care, and non-physician care; and seeming lack of interest in Medical Home on a statewide level

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Adequate Insurance	Percent of CSHCN age 0 to 18 years whose families have adequate private and/or public insurance to pay for the services they need	67.5 (59.6) Maryland ranked 5 th in the nation	65.5 (62.0) Maryland ranked 14 th in the nation	Families with CSHCN in one or more of the following subgroups were less likely to report having adequate insurance: Hispanic; family income less than 200% FPL; with both private and public insurance; or with above routine need/use of services.	MCHIP expansion; Medicaid waiver for children with autism; Medicaid buy-in for employed individuals with disabilities; Kids First Act.	No comprehensive plan to address the needs of how services for CYSHCN are paid for; state budget cuts; long waiting lists for waiver programs; large disparity in the availability of needed providers in rural vs. urban areas; limits on scope of benefits; difficult to navigate health plans; erosion of employer-based benefits; lack of care coordination; lack of clarity about eligibility for services; and insurance not keeping pace with technological advances in therapies or Durable Medical Equipment
Community-Based, Easy-to-use Systems	Percent CSHCN age 0 to 18 years whose families report the community-based service systems are organized so they can use them easily	70.6 (74.3) Maryland ranked 42 nd in the nation	89.3 (89.1) Maryland ranked 26 th in the nation (cannot be compared to 2001 data)	Families with CSHCN in one or more of the following subgroups were less likely to report ease of use: Hispanic; those with functional limitations; or with one or more emotional, behavioral, and developmental issues.	There are many resources and services for families as well as good potential for infrastructure to improve these services.	Redundancy (ex: multiple entities offer case management); fragmentation; lack of acknowledgement of disparities; lack of knowledge among care providers of resources and services; turf issues among agencies.
Youth Transition To Adulthood	Percent of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence	5.8 (these data deemed unreliable due to sample size and other concerns)	37.4 (41.2) Maryland ranked 42 nd in the nation (cannot be compared to 2001 data)	Families with CSHCN in one or more of the following subgroups were less likely to report receiving transition services: family income less than 200% FPL or those with public insurance only.	Maryland currently has many government and parent-led activities focused on improving transition.	The current status of Transition to Adult Services in Maryland is characterized by fractured activities with no common end. Despite the activities focused on Transition in Maryland (see below), the state continues to lack a clearly defined, comprehensive, coordinated, community based, culturally competent, collaborative, youth/family centered system of care to facilitate success in transition from pediatric-to adult-based health care. This issue is compounded by the problem of this age group accessing their own health insurance.

V. 2010 CAPACITY ASSESSMENT

This section assesses the State's capacity to meet MCH population needs by each level of the pyramid: direct, enabling, population based and infrastructure building services.

Direct Services

As part of the capacity assessment, states are asked to describe strengths and unmet needs as well as priority areas of concern related to the availability of direct services including preventive, primary and specialty care. In addition, states are to assess and describe any shortages of primary care physicians, dentists, nutritionists, public health nurses, medical social workers, specialty physicians, OT, PT, speech and audiology, mental health and identify areas of medically underserved areas. To complete this section of the capacity assessment, Title V staff met with key informants and reviewed available health manpower reports and plans.

In 2006, the Maryland Legislature created the Maryland Statewide Commission on the Shortage in the Healthcare Workforce. The Commission found that there are critical shortages in Maryland's current and future (through 2014) supply of 18 types of health care workers including physicians, registered and licensed practical nurses, mental health counselors, physical therapists, occupational therapists, nursing instructors, and pharmacists. No shortages were predicted for dentists, nutritionists or speech pathologists. Rural and underserved areas were thought to be at increased risk due to these shortages.

In 2008, the state's medical society (MedChi) and the Maryland Hospital Association (MHA) joined forces to complete a comprehensive examination of the state's physician workforce. A major goal was to create a baseline picture of the current supply of clinical physicians along with projections for future supply by region and key specialist through 2015. Key findings included the following:

Overall Physician Workforce

- Maryland has more than 3,200 physicians in clinical practice. Maryland is comparable to U.S. levels in the number of active physicians per 100,000 residents: U.S. 269/100,000 vs. MD 259/100,000. However, when adjustments are made for the percent of time Maryland physicians participate in clinical practice, Maryland is 15% below national levels.
- The three rural regions in the state (i.e., Eastern Shore, Southern and Western MD) fall significantly below national levels in active practicing physicians per 100,000 residents.
- The Central Region is the only region that is above the U.S. average in active physicians per 100,000 residents.
- Statewide, shortages are found in several specialties including primary care, psychiatry and emergency medicine. The Eastern, Southern, and Western regions have the greatest physician shortages.

Primary Care

Primary care services in Maryland are provided by office based private physicians (family and general practitioners, internists, and pediatricians), as well as federally and state qualified community health centers, among others. Key informant interviews were held with staff in Maryland's Office of Health Policy and Planning's Primary Care Office (PCO) to identify areas of medical underservice for primary care. The PCO receives federal funding from the Bureau of Health Professions to coordinate primary care efforts in Maryland, including collection and submission of information to determine shortage areas.

As of June 30, 2010, all but two of Maryland's 24 jurisdictions (Carroll and Howard County) had at least one federally designated medically underserved area/population. Maryland currently has 49 federal medically underserved designations, 39 of which are MUAs and 10 of which are MUPs. Concentrated areas of medical service are found in Baltimore City, on the Eastern Shore and in Western Maryland.

Primary Care Physician Workforce

- Maryland has 3,274 physicians in clinical practice, which translates to 57 clinical FTE physicians per 100,000 residents.
- There is a current shortage of primary care physicians at state and regional levels. Supply in the Central region is the only region in which supply just meets requirements based on the demand levels. However, data from qualitative surveys indicate that shortages exist in the inner city areas of Baltimore due to low reimbursement for physicians treating Medicaid patients.
- By 2015, shortages are projected in three out of five regions. Both the Capital and Central Regions have adequate supplies, principally because of their lower retirement rates and ability to attract residents.
- There are projected shortages for all pediatric specialties except neonatology.

Medically Underserved Areas

Medically Underserved Areas/Populations (MUA/Ps) are areas or populations designated by Health Resources and Services Administration (HRSA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population. In order to establish a Federally Qualified Health Center (FQHC) or FQHC Look-Alike, a site must be located in an MUA/P or providing services to residents who reside in an MUA/P. The Maryland Primary Care Office (PCO) is charged with analyzing areas in Maryland for eligibility for recommendation for designation to HRSA's Office of Shortage Designation.

As of June 30, 2010, Maryland has 40 MUAs with 873,023 people living in them and 12 MUPs with 93,202 people living in them. There are 43 primary care health manpower shortage areas (HPSAs) with 375,146 people living in them. Per federal guidelines, it would take 239 providers working full time (40 hours per week) to meet their need for primary care providers (a population to practitioner ratio of 2,000:1).

Federally Qualified Health Centers (FQHCs)

A federal designation of medical underservice qualifies an area or population to apply for and if approved, to receive federal funding for a FQHC. As of June 30, 2010, Maryland had 16 FQHCs offering services through 66 main and satellite sites. Of the MUA/Ps in Maryland, 62.5% have an FQHC site within their boundaries. FQHC sites are currently located in 18 of the state's 24 jurisdictions. These centers offer a broad range of primary care health services including prenatal, preventive primary and care.

In 2008, the Maryland Legislature requested that the Department of Health and Mental Hygiene provide a plan for ensuring that all medically underserved areas/populations have an FQHC. The PCO prepared a report noting current challenges to providing a FQHC in every area of the MUA/P including limited amounts of funding available nationally and Maryland's lack of a competitive edge since the program targets poor communities and Maryland is one of the wealthiest states.

Primary Care and CSHCN

The OGCSHCN's Children's Medical Services (CMS) program serves as payer of last resort for specialty medical care for low income uninsured or under-insured CSHCN, who are not eligible for other programs; however CMS cannot cover primary care. There are significant problems with facilitating primary care for CSHCN in medical homes. The populations most affected are CSHCN not eligible for medical assistance or other programs, especially undocumented CSHCN, and YSHCN transitioning to the adult medical care delivery system. Some counties in partnership with some insurers (Kaiser and Blue Cross/ Shield), have initiated Primary Care Coalitions, such as "Care for Kids" in Montgomery County to address this problem. The OGCSHCN funds a bilingual outreach worker to assist the CYSHCN in these areas to access primary care through these programs as well as specialty care through CMS. The CoC, formed under the HRSA grant for the Integration of Systems of Care for CSHCN, Parent's Place of Maryland (PPMD), the OGCSHCN and the Maryland AAP are working to assist primary care pediatric practices to become medical homes but this is a slow process. The lack of family practice and internal medicine practices willing to provide medical homes for young adults with special health care needs is a national problem.

Specialty Medical Services for CSHCN

Maryland is relatively well situated in terms of capacity to provide specialty and subspecialty pediatric medical care for CSHCN. The Mid-Atlantic region has a relatively high population density compared to other areas of the U.S. and the area has a concentration of world class tertiary care facilities. Maryland CYSHCN primarily access services at the Johns Hopkins Medical Institutions (JHMI), the University of Maryland Medical Center (UMMC) and Children's National Medical Center (CNMC). (Although not in Maryland, CNMC is funded by the OGCSHCN as part of the Maryland network.) The OGCSHCN provides a partial subsidy to these institutions to support specialty care clinics, outreach specialty clinics, complex care management clinics, wrap around and enabling services.

Maryland CYSHCN also have access to facilities in the surrounding states, such as AI DuPont in Delaware, Georgetown University Hospital and Howard University Hospital in Washington, D.C., the University of West Virginia in WV, Children's Hospital of Philadelphia, St Christopher's and the Shriner's Hospital for Children in PA, and less frequently Anova Fairfax Hospital and the University of Virginia system in VA. The OGCSHCN and the Maryland Medical Assistance Program have made an effort to work with these institutions and the Medicaid programs in other states.

The problems in providing direct specialty care are primarily the problems of serving CYSHCN in the rural lower population density areas (southern and western Maryland and the eastern shore) where there are shortages of pediatric subspecialists. The OGCSHCN attempts to address this through a series of outreach specialty clinics subsidized by grants and hosted at local health departments and local community hospitals and hopes to make more use of telemedicine. Medical assistance will provide transportation to medical appointments for eligible families.

Oral Health Care

As of June 30, 2010, there are 41 Dental HPSAs with a designated population of 631,520 people living in them. Per federal guidelines, it would take 211 providers working full time (40 hours per week) to meet their need for dental providers (a population to practitioner ratio of 3,000:1). Access to oral health care is a critical problem for underserved and minority populations in Maryland. Medicaid has been successful in recruiting additional participating dentists in recent years, yet only 19.1% (748 of 4,082) Maryland dentists are actively serving and billing Medicaid recipients.

The DHMH Office of Oral Health and the Dental Action Committee are addressing the shortage of dentists available to medical assistance and other low income families and training/ utilizing general pediatricians in providing preliminary dental assessments and sealants. Unfortunately, efforts to develop dental services specifically for CSHCN have been delayed by lack of resources.

Mental Health Care

As of June 30, 2010, there are 40 Mental Health HPSAs with 738,547 people living in them. Per federal guidelines, it would take 81 providers working full time (40 hours per week) to meet their need for mental health providers (a population to practitioner ratio of 10,000:1). The Mental Hygiene Administration reports that the recruitment and retention of qualified mental health professionals and direct care workers within many programs of the child and adolescent system remains challenging. Particularly challenging is the recruitment of persons of diverse ethnic and racial groups to treat the increasingly diverse needs of consumers. There is an uneven geographic distribution of qualified providers and provider types in the various jurisdictions of the state. For example, the availability of qualified child psychiatrists, particularly in rural areas, has been a long standing, intractable problem.

Other Health Manpower Issues

There are overall shortages of certain types of specialists. The growing shortage of metabolic geneticists to care for the increasing number of babies identified through newborn screening is a national problem, although Maryland, with its strong genetics network, is managing relatively well. There is a national shortage of metabolic nutritionists to manage the diets for these children. There is also a shortage of audiologists experienced in the diagnostic evaluation of infants with hearing loss. The local health departments have suffered a series of large budget cuts and this exacerbates the ever increasing shortage of public health nurses. Despite the partial subsidies from the OGSSCHN, the availability of social workers at the tertiary care centers continues to decline.

Priority Concerns

Priority concerns include provision of primary care in medical homes for all children including those with special health care needs; increasing the number of mental health and dental providers particularly those serving low income and special needs children; making primary, specialty, oral and mental health care more accessible in rural, low population density areas; the shortage audiologists experienced in evaluating infants and the looming shortage of metabolic geneticists and expert metabolic nutritionists.

Enabling Services

The ability of the health care delivery system in general to provide enabling services is declining. The financial constraints on all sectors of the system have weakened its ability to provide enabling services. As noted, tertiary care centers are no longer able to provide the previous level of social work services and local health departments have had to reduce the number of public health nurses. Insurers and managed care organizations provide much more in the way of cost management than they do care management. The MCH programs have fewer resources to assume a larger share of this work.

The OGCSHCN attempts to provide or facilitate enabling services through its newborn screening program, its long term follow-up program for children with metabolic disorders (about 250 children) and sickle cell disease (about 1,400 children), its birth defects program (about 500 children), its subsidies to the tertiary care centers for genetic services, complex care management clinics, specialty clinics, outreach clinics and a resource liaison position at each center. Care management/ resource coordination is provided for approximately 5,000 children yearly (including children in early intervention programs as well as other CYSCHN) through grants to the local health departments and for approximately 1,100 children through grants to Parent's Place. Respite care is provided to approximately 750 children through OGCSHCN sponsored specialty camps and respite hours through grants to local health departments and the Kennedy-Krieger Institute (KKI).

Medical day care is provided to about 100 severely involved children through grants to community partners. Grants to PPMD, the KKI and to the transition clinics at JHH provide some assistance with transition to about 1,000 YSHCN each year. The KKI website also provides

transition assistance and gets about 32,000 hits/ year. If it were not for the subsidies provided to the tertiary care centers, less in the way of services, especially wrap around and enabling services, could be provided to the approximately 70,000 CYSCHN who use these clinics. The OGCSHCN also subsidizes a number of disease specific support groups.

The Center for Maternal and Child Health supports such enabling services as care coordination and case management, translation services, information and referral through the MCH Hotline and resource inventories, and SIDS and other grief counseling services provided by the Center for Infant and Child Loss. Maryland is a diverse state that grows more racially and ethnically diverse each year. This has resulted in increased demand for translator services. With the increased levels of budget cuts over the past several years, local health departments and other health departments have had to find new and innovative ways to provide translation services. Many reporting using Language Link or similar services to assist clients. There is currently not enough capacity to fully meet existing needs.

The Maryland MCH Hotline (1-800-456-8900) is administered by the Maryland Medicaid Program in conjunction with the Title V Agency. Callers are referred to resources for determining Medicaid eligibility as well as health care services for pregnant women, children and women of childbearing age (e.g., family planning services). The OGCSHCN also staffs a hot/warm line, the Children's Resource Line at 1-800-638-8864 for questions about resources for CSHCN and their families.

The Department of Health and Mental Hygiene works closely with the Maryland Department of the Environment and other agencies to reduce lead poisoning among children. With the exception of Baltimore City, part-time local health department staff, mainly a nurse or health educator, provide outreach, education and referral services. Case management services are provided for children with elevated blood lead levels. Many jurisdictions focus on promoting testing at ages 12 and 24 months. Staff also provide follow-up for school referrals of cases where families have not complied with Maryland law to have students tested prior to school entry.

Health insurance is another important enabling service. Medicaid is a joint federal and state program which serves as the primary source of health care coverage for many low-income families, pregnant women and children. Maryland has one of the most “generous” Medicaid programs in the nation. Pregnant women with incomes up to 250% of the federal poverty level (e.g., up to \$36,400 for a pregnant woman and her unborn baby in 2009) are covered. Only four other states have higher qualifying incomes than Maryland. Medicaid paid for approximately one in three births in 2009. The majority of women qualified for Medicaid only after they became pregnant. Medicaid covers the full scope of services for pregnant women – such as prenatal visits, lab tests, prescriptions, dental, mental health, substance abuse, hospital, delivery, and postpartum care. Some higher income women lose full coverage two months after delivery yet may retain coverage for all family planning services, including surgical procedures, for up to five years after delivery. Nearly 18% of women of childbearing age are uninsured, many of them at beginning of their pregnancies.

Medicaid also provides health care coverage for Maryland’s poorest and most vulnerable children. Maryland has generous eligibility standards; children in families with incomes up to

300% of the federal poverty level (FPL) are eligible for full Medicaid benefits. During FY 2009, more than 601,492 eligible children and teens ages 0-19 were enrolled in Medicaid. This included 145,311 children enrolled in the State's CHIP program, which is also administered by the Maryland Medicaid Program. Children up to age 19 in families with incomes between 200-300% FPL must pay a monthly premium (~2% of income). The premium is per family per month, regardless of the number of children covered.

The majority of Medicaid and CHIP enrolled children are required to participate in HealthChoice, Maryland's statewide mandatory managed care program. Recipients enroll in a managed care organization (MCO) of their choice and select a primary care provider to oversee their medical care. All children under age 21 are entitled to comprehensive services including EPSDT and dental services. The majority of services are part of the MCO benefit package. Some specialty services such as OT, PT, and speech therapies are paid directly to the provider by the Medicaid program. As of 7/1/2009, dental services are no longer paid by the MCO. Medicaid now contracts with an ASO to administer the Maryland Healthy Smiles Program. Despite the number of Medicaid expansions in recent years, still more than one in ten Maryland children are uninsured, many of them living in households with working parents.

Priority Concerns – Enabling Services

Priority needs under enabling services include respite care, providing assistance with transition, providing assistance in navigating the system and locating resources and translation services. These needs were clearly identified by the 2010 Parent Survey and other focus groups.

Population Based Services

Title V population based services include screening for metabolic diseases, newborn hearing problems, lead poisoning, and vision and hearing in the school population. Outreach and education are also key population based services.

Lead exposure remains a significant environmental health hazard for Maryland children living in at risk areas. The Center for Maternal and Child Health administers the Maryland Lead Poisoning Screening Prevention Program with the goal of increasing lead screening rates statewide. In 2008, a total of 106,452 (22%) children 0-72 months were tested for lead exposure statewide. Out of 106,452 children 0-72 months tested for lead statewide in 2008, 713 (0.7%) were found to have blood lead level ≥ 10 $\mu\text{g}/\text{dL}$ (prevalent cases) of whom 489 had their very first EBL test (incident cases) in 2008. This number of prevalent cases in 2008 was significantly lower than the number of cases found in 1993 (14,546). Title V funding to the Baltimore City Health Department supports a team of staff who administer the City's Childhood Lead Poisoning Prevention Program. The majority of known cases of lead poisoning occurred in Baltimore City in 2008. The Coalition to End Childhood Lead Poisoning (CECLP) uses Title V funds to provides outreach and education to families, health care providers and community groups regarding screening, treatment and corrective property procedures. CECLP targets Baltimore City; Prince George's County as well as Eastern Shore and Western MD counties.

Maryland schools are mandated to provide vision and hearing screening in the schools on entry into school, first, third and 9th grades. They only track from the time of screening to the

time of reported follow-up. They do not do case management and there is a limit to how far they go to assure the student gets follow up. Parents are responsible for the follow-up and may not return the form. Title V funding to local health departments supports provision of these services in about ten jurisdictions.

Outreach and education activities within CMCH include public education campaigns designed to raise public awareness of such issues as fetal alcohol spectrum disorders (FASD) and asthma. Legislation passed in 2004 requires the Secretary of Health and Mental Hygiene to establish and promote a statewide campaign on fetal alcohol syndrome and other effects of prenatal alcohol exposure. This activity was administratively placed in the Center for Maternal and Child Health as unfunded mandate. A educational campaign has been developed with support from an appointed State FASD Coordinator who is a member of the National Association of FASD State Coordinators (NAFSC). NAFSC recently persuaded a national airline to promote airline warning of the dangers of alcohol use while pregnant.

The Newborn Screening Program in Maryland functions well. Maryland screens for all the disorders recommended, except for SCID. A new database and electronic reporting system has been very helpful to the program. Although Maryland participated in developing the assay for SCID, implementation of screening for SCID must await the construction of a DNA lab. This will be built in the new lab building, currently in the final planning stages. The very aggressive follow up of babies with abnormal results continues with assistance from the Division of Human Genetics at UMMC.

The screening of infants for hearing loss has improved significantly and the EHDI program has been functioning well. The EHDI program benefited greatly from a new enhanced database, screened over 99% of babies, decreased the number of babies who missed screening, and is improving the follow up of babies with risk factors. The Birth Defects Program obtained legislative authority to expand to collect data on all significant defects and to review medical records and succeeded in recruiting a data manager but then lost the birth defects nurse and that position is currently still vacant.

Maryland does a relatively good job of population based screening in the newborn period, but developmental screening after infancy is still not universally implemented in all pediatric primary care practices. With funding from the State Integration Grant through Parent's Place, Dr. Tracy King, from Johns Hopkins Hospital, has been working with a number of practices to integrate developmental screening and referral (to the Infants' and Toddlers' Program as well as to specialty providers) into their work flow and has recruited not only the JHH Harriet Lane Clinic, but also school based health centers and practices in a number of large health care provider organizations including Baltimore Medical Systems (6 practices), Total Health Care (6 practices), Johns Hopkins Community Physicians (18 practices). Although additional practices from Total Health Care statewide are expected to join, this is still only a small fraction of the approximately 600 pediatric practices in the state.

Priority Concerns – Population Based Services

The priority is to maintain the performance of the various population based screening programs for infants in the face of dwindling resources and to promote early and continuous screening in the medical home for all children.

Infrastructure Building Services

The 2005 CAST-V Team identified several priority capacity concerns including the need to strengthen the MCH data infrastructure and the supportive environment for data sharing at both the intra- and inter-agency levels. This remains as a priority need for 2010, particularly for the OGCSHCN, which currently lacks an epidemiologist and has very limited data capacity. Related to this is the need to improve data systems and sharing. It has been difficult to obtain and maintain key data sharing agreements among Title V and other state and local government agencies that would allow for better tracking of progress on core outcomes for CYSHCN in Maryland, in particular. Greater data sharing among Maryland's Title V CSHCN program, the Center for Maternal and Child Health, and other state and local government and non-government agencies and organizations would result in a more comprehensive assessment of Maryland's achievement and progress for each of the six core outcomes for CYSHCN. This could lead to a more efficient use of state and partner resources, resulting in better health outcomes for CSHCN in Maryland.

A related issue was the need to improve communication and data translation capabilities to inform MCH stakeholders of MCH needs and policy issues. Title V reviewed the 2005 CAST-V report and determined that improvements have been in data translation and communication capabilities. Each year, the Agency produces more than 30 issue/data briefs, presentations, journal articles, etc. to inform MCH stakeholders of progress and challenges.

Workforce capacity concerns were identified including the loss of highly skilled and trained public health staff due to retirement and the attraction of better paying positions outside of state government in 2005. Another concern voiced was the difficulties involved in recruiting and hiring new staff due to the state's hiring freeze and the state's cumbersome personnel management system. These remain as issues in 2010. Finally, participants chose the need for more staff skilled in specific areas such as working with communities (e.g., outreach and education) and managing inter-agency collaborations and initiatives, as a priority. Progress has been made in each of these areas, but more remains to be done.

The capacity for infrastructure building through the state Title V CSHCN program has greatly diminished over the past several years, as the staff in the OGCSHCN has dwindled; however a partner organization has been able to build capacity through a statewide Consortium. In 2008, The Parents' Place of Maryland (PPMD), a non-profit, family-directed and staffed center serving parents of children with disabilities and special health care needs, was awarded, in partnership with OGCSHCN, a State Implementation Grant by MCHB. PPMD and OGCSHCN have developed a statewide Community of Care (CoC) Consortium for CYSHCN in Maryland, and many of the infrastructure building activities for CYSHCN in the state are coordinated and led by the CoC. The staff from OGCSHCN that was supposed to support the CoC all resigned from their positions in late 2008, so PPMD has had to staff the CoC largely on its own, though a

part-time research assistant from OGCSHCN serves as coordinator at DHMH for the project, writing reports and facilitating CoC meetings.

Despite falling short of its obligation to the CoC Consortium, the Maryland Title V CSHCN program recognizes the value of PPMD and the CoC in providing leadership around infrastructure building. Strong, ongoing partnerships and collaborations in the design and implementation of services for CYSHCN and their families, as well as leadership at the state level, has become critical in Maryland. The Consortium has been a leader in building and sustaining partnerships among members while successfully advancing the goals of Title V programs in Maryland since its inception in 2008. The role of the Consortium is essential to the health of Maryland's Title V program, as the state's CSHCN program office has suffered unprecedented personnel erosion and is so understaffed as to make fulfilling Title V obligations to Maryland CYSHCN unfeasible without the support and leadership of the Maryland Community of Care Consortium for CSHCN. If the Consortium is adequately supported and staffed by Title V, state capacity for infrastructure building will grow. A priority concern is the maintenance of the existing infrastructure in the face of dwindling resources.

State Agency Partnerships and Coordination

To accomplish its goals and objectives, Maryland Title V coordinates and collaborates with numerous stakeholders including other DHMH programs, other state agencies, local health departments, various health providers, health provider associations, advocacy groups, and community based organizations. Collaboration and coordination occur through sharing of information, data and resources; inter-agency workgroups; coalition building; and development of memoranda of agreement. For example, the relationships between the Family Health Administration including MCH Title V programs, Medicaid and WIC are set out in an Cooperative Agreement that was updated in July 2010.

Title V considered it critical to involve families and consumers in the needs assessment process. These important stakeholders were involved through the Parent Survey and in meetings of the CoC. The stakeholders described in the sections above were considered key partners in the MCH needs assessment process. The needs and strengths of the MCH population were determined, and the capacity to address these needs were examined with input from representatives of these groups. The stakeholders will be reengaged this fall for participation in the strategic planning process for developing the state's MCH Plan through 2015.

Family Health Administration Programs

The CMCH and the OGCSHCN, both within the Family Health Administration, work together to administer the MCH Block Grant, and on issues related to prenatal genetic consultation, screening and diagnosis as well as providing complementary services to newborns and children with asthma.

The Maryland WIC Program provide nutrition and food services to eligible low income women, infants, and children. The OGCSHCN works with the WIC program on appropriate

food packages for CSHCN, such as children with metabolic disorders and children with sickle cell disease, who have much higher energy requirements than typical children. The CMCH collaborates with WIC on improving access to maternal and child health services within the WIC population.

The Office of Oral Health (OOH) works to improve the oral health status of Maryland residents through a variety of public oral health initiatives and interventions, characterized by a focus on health promotion and disease prevention. The OOH develops, promotes, and advocates statewide cost-effective preventive and educational activities and policies that demonstrate and define the role of oral health as part of one's overall systemic health and quality of life. The OOH partners with other State agencies, local health departments, schools, community agencies, and private providers in developing policies, programs, and activities to address oral health education and literacy, increase access to dental care for all Marylanders, and to prevent and treat oral diseases and injuries. Title V works with the OOH to improve dental access and is represented on the Dental Action Coalition, a statewide group formed to improve access to oral health service for children.

The Office of Chronic Disease Prevention (OCDP)'s programs focus on prevention and/or control of chronic health conditions including diabetes, heart disease, stroke, and obesity. While OCDP has lead responsibility for addressing overweight/obesity in Maryland, OCDP partners with Title V MCH to address childhood obesity. Dr. Cheryl DePinto leads childhood obesity prevention activities for CMCH and serves on the American Academy of Pediatrics, Maryland Chapter, Childhood Obesity Committee, which partners with CMCH and the OCDP on obesity prevention strategies, outreach, and education. Additionally, she serves as the liaison to OCDP in implementing the Maryland Nutrition and Physical Activity Plan. OGCSHCN works with the Office of Chronic Disease Prevention on data collection issues.

The Office of Health Policy and of Partnerships with Office of Health Policy and Planning (OHPP) manages several HRSA grants concerned with health manpower and rural health issues. This Office also oversees the Behavioral Risk Factor Reporting System (BRFSS). Title V collaborates with OHPP on data collection and sharing, and is a member of the Primary Care Office Advisory Board.

The Office of Health Promotion, Education and Tobacco Use Prevention conducts activities to promote healthy behaviors that reduce the risk of injury and premature death, and prevent chronic illness. Programs focus on injury prevention (e.g., Kids in Safety Seats Program), child abuse and neglect, bullying, sexual assault, smoking cessation, and health education. This Office also houses the state's violent death reporting system. Title V collaborates on promoting smoking cessation during pregnancy, reducing childhood injuries, developing health education materials, especially for low literacy populations.

Local Health Departments

Maryland's 24 local health departments are a major service delivery arm for DHMH programs. Each local health department administers and enforces State, county and municipal health laws, regulations, and programs. Public health programs are tailored to community needs

and include preventive care; immunizations; health education; drug and alcohol abuse counseling; communicable disease prevention; and “gap filling” services. Following the early Medicaid expansions in the 1990’s, local health departments began to offer fewer direct services for children and pregnant women (e.g., well child and prenatal care clinics). The OGCSHCN works extensively with the local health departments in the provision of care management and respite care and the development of regional resources for CSHCN. CMCH partners closely with local health departments and fund grants for improved pregnancy outcomes including fetal and infant mortality review in every jurisdiction, family planning services in every jurisdiction, and selected maternal and child health services in high need areas. Local health departments are consulted for all Title planning and needs assessment activities.

Other DHMH Programs

The Maryland Medical Assistance Program (Medicaid) is located in the Deputy Secretariat for Health Care Financing within the DHMH. The Maryland Medicaid Programs provides health insurance coverage for eligible children and adults and partners extensively with both CMCH and OGCSHCN. The OGCSHCN works with Medicaid on issues of health care coverage and financing and with the Maryland Insurance Administration on issues of insurance discrimination. The OGCSHCN’s CMS program is the payer of last resort for specialty care for low income CSHCN who are not eligible for other programs. When families apply for CMS, the CMS eligibility coordinator checks to see if they are eligible for MA (or any other program), and makes the appropriate referrals. OGCSHCN also works with Medicaid to support two medical day care centers where medically fragile technology dependent CSHCN six weeks through five years of age, who cannot be accommodated in traditional day care, receive both daily medical care and developmentally appropriate child care. Medicaid pays for the medical services provided and OGCSHCN grants subsidize the other services. CMCH works closely with Medicaid on family planning and perinatal health issues as well as child and adolescent health needs. Monthly MCH-Medicaid meetings are held to share information and resources and to identify and discuss areas requiring coordination.

The Mental Hygiene Administration (MHA) is responsible for the delivery of public mental health services in Maryland. MHA operates seven inpatient psychiatric facilities, three residential treatment centers for children and adolescents, and funds community mental health services for Medicaid eligible individuals. In Maryland, funding for mental health services (i.e., any services not performed as part of a primary practitioner's office visit) under the Medicaid Program are carved out into a separate managed fee-for-service system. MHA’s Office of Child and Adolescent Health (OCAH) is responsible for mental health services for children and adolescents within the Public Mental Health System through monitoring for program compliance and partnerships to enhance early identification and prevention efforts. Title V works closely with MHA’s OCAH on several projects.

The Early Childhood Health Administrator represents Title V MCH on the state’s Early Childhood Mental Health Steering Committee. This Committee oversees development and implementation of strategies that integrate mental health services into existing early childhood programs and supports the provision of mental health services in child care programs. Title V is represented on the Maryland Blueprint Advisory Committee, a group that develops that state’s

child and adolescent health service delivery plan. Finally, the child fatality review coordinator is CMCH's representative to the State's Commission on Suicide Prevention. MHA is input is sought for numerous planning efforts within CMCH, including the Title V needs assessment and the Early Childhood Health Plan (ECCS grant).

The Maryland Alcohol and Drug Abuse Administration (ADAA) is charged with providing access to a quality and effective substance abuse prevention, intervention and treatment service system for the citizens of Maryland. ADAA is a member of the FASD Coalition and is collaborating with CMCH on the Governor's Delivery Unit Initiative to reduce infant mortality. ADAA will also be working closely with CMCH as the needs assessment for new federal home visiting funding is prepared. CMCH is required to assess the state's capacity for providing substance abuse treatment services.

The Infectious Disease and Environmental Health Administration (IDEHA) is responsible for overseeing infectious disease prevention, HIV care services, infectious disease reporting, outbreak response and the environmental health program. It houses the Center for Immunizations, a partner with Title V in improving immunization rates in the state. OGCSHCN works with the IDEHA on birth defects issues. The OGCSHCN is one of the partners in the CDC grant supported Environmental Public Health Tracking Program in IDEHA. Birth defects data from BDRIS and "environmental health tips" relating to birth defects are displayed on the Maryland Public Health Tracking Network and thus on the National Public Health tracking Network. The OGCSHCN frequently works on projects with the Children's Environmental Health and Protection Advisory Council.

Both CMCH and the OGCSHCN work with the Vital Statistics Administration on data collection issues. The OGCSHCN obtains the vital statistics data it requires to operate and evaluate its programs through a partnership with the Vital Statistics Administration. The birth defects program ascertains cases from birth death and fetal death certificates. The recent realization of the long planned truly electronic birth certificate will allow an almost real time comparison of birth certificates and metabolic newborn screening records and infant hearing screening records. OGCSHCN also provides vital statistics with data gleaned from its birth defects and newborn screening databases.

The OGCSHCN works with the Developmental Disabilities Administration on the provision of services for developmentally disabled children and youth, mostly on low intensity services to allow the individual to remain in the home. The OGCSHCN has had a close collaboration with the Laboratories Administration (Labs) from the early 1960s and the development of newborn screening. The Labs did the lab analysis and the old Hereditary Disorders unit in the old Division of Community Services for Mental Retardation (later the OGCSHCN) did the follow up in collaboration with the genetics units at Johns Hopkins and the University of Maryland hospitals. Children's National Medical Center joined the NBS follow up partnership in 1983. This arrangement continued until 2009 when the NBS short term follow up unit merged with the NBS lab. The long term NBS follow up unit remains with OGCSHCN. The labs also provide the lab analysis and the OGCSHCN provides the follow up for the SCD carrier screening and maternal PKU screening programs. The Labs, the metabolic geneticists from the academic centers and the OGCSHCN form the NBS Advisory Subcommittee of the Advisory

Council on Hereditary and Congenital Disorders, which has set the principles and standards for all genetic programs in Maryland since 1973. The OGCSHCN and the Labs have worked together on the development of many newborn screening tests, most notably the isoelectric focusing technique for SCD screening.

Other State Agencies

The Children's Cabinet coordinates Maryland's child and family focused service delivery system by emphasizing prevention, early intervention, and community based services for all children and families. The Children's Cabinet includes the Secretaries of major child and family serving departments including Health and Mental Hygiene, Education, Human Resources, Juvenile Services, Disabilities as well as Budget and Management. Quarterly meetings are held. *The Cabinet's vision is that: All Maryland's children are successful in life.* The Governor's Office on Children (GOC) provides support to the Children's Cabinet and its Executive Director chairs the Children's Cabinet. The GOC leads the development of a Three Year Children's Plan establishing goals and strategies for delivery of integrated services to children and families.

GOC works to promote the well-being of children by collaborating with and administering funds to Local Management Boards (LMBs) located in every jurisdiction. LMBs serve as local coordinators of collaboration for child and family services in Maryland. They bring together local child-serving agencies, local child providers, clients of services, families, and other community representatives to empower local stakeholders in addressing the needs of and setting priorities for their communities. The work of the Children's Cabinet and the GOC is guided by eight child well-being results that were established over 12 years ago. GOC publishes an annual "report card" – Maryland's Results for Child Well-Being and provides jurisdictional data for each indicator. The Title V MCH epidemiologist is a member of the workgroup tasked with making recommendations regarding future child health metrics. Title V will also be working closely with the Children's Cabinet and the GOC in administering new federal funding available for home visiting services.

The Maryland State Department of Education (MSDE) oversees the delivery of educational services to students in the state's 24 school districts. MSDE is the lead state agency for early childhood activities. CMCH has a longstanding partnership with MSDE. Activities are all aimed at improving the health and wellbeing of students so they are healthy and ready to learn. Program populations from early childhood development and education to adult school staff wellness. Specific program areas include school health, early childhood education, and child care. School health activities are based on the CDC coordinated school health model and include partnerships including: school health services guidelines development, implementation and monitoring, obesity and heart disease prevention through health education and physical education, nutrition services, and staff wellness programs, school psychological services for suicide and violence prevention, and optimizing asthma management through environmental controls. Child care and early childhood health and education partnerships include development and implementation of child care health consultation training, child care health and wellness training for child care providers on issues related to asthma, nutrition and obesity prevention, communicable disease prevention, and child care quality.

The OGCSHCN works with the Maryland Department of Education on the Infant's and Toddler's Program (ITP), on the Interagency Coordinating Council for ITP, on the Care Giver's Support Council, on care management for children with IFSPs or IEPs, on education for children with hearing loss identified through infant hearing screening, on the health needs of children in special education, on data collection and exchange issues and on health, science and genetics curricula. The OGCSHCN works with the Department of Human Resources (DHR) around issues of medical day care and SSI/SSDI.

The Maryland Department of Human Resources (DHR) is the state's social services provider. Programs include foster care/adoption, food assistance, child support, medical assistance and purchase of care for child care. Title V partners with DHR on issues such as teen pregnancy prevention, and prevention of child abuse and neglect. The Maryland Department of Juvenile Justice (DJS) provides individualized care and treatment to youth who have violated the law, or who are a danger to themselves or others. Programs focus on prevention and early intervention services for at risk youth (e.g., family counseling, drug abuse education), non-residential, community based programs (e.g., special day programs), and residential programs for serious or chronic offenders (e.g., secure detention centers). Title V collaborates with DJS on data sharing and adolescent health issues including teen pregnancy prevention.

The mission of the Maryland Department of the Environment (MDE) is to protect and restore the quality of Maryland's air, water, and land resources. The OGCSHCN works with the Maryland Department of the Environment (MDE) around birth defects issues. CMCH works with MDE on lead poisoning prevention and children's environmental health issues.

Families, Advocacy, Voluntary and Community Based Groups

The main non-state agency partner of the OGCSHCN is the Parent's Place of Maryland (PPMD), the family voices chapter for Maryland. Beginning in 1998, the OGCSHCN provided a grant to support PPMD's role in providing the family and community perspectives for policy and planning, to assist in identifying gaps in services for CYSHCN, to compile information on resources in a database and disseminate this information to parents of CYSHCN (the Family to Family Health Education and Information Center), to maintain a network of regional resource parents, to assist parents of CYSHCN to find needed resources on an individual basis and to develop parent leaders in the community.

In 2008 PPMD, in partnership with the OGCSHCN, Johns Hopkins Bloomberg School of Public Health, and the Maryland Chapter, American Academy of Pediatrics, applied for and was awarded a State Implementation Grant for Integrated Community Systems for Children and Youth with Special Health Care Needs (CYSHCN) from HRSA. The major strategy was to form a "Consortium of Care"(CoC) to engage diverse partners in shared planning, implementation, and evaluation of strategies to achieve all 6 core outcomes for CYSHCN. Consortium partners include families, youth with special health care needs, representatives from advocacy groups, physicians, other providers, health care facilities, academic institutions, government and professional organizations, public payers, MCOs, policy analysts and state governmental agencies.

Title V works very closely with the Maryland chapter of the American Academy of Pediatrics (MD AAP). The MD AAP is one of the partners in the State Implementation Grant for Integrated Community Systems for Children and Youth with Special Health Care Needs from HRSA. The OGCSHCN has a looser but still significant partnership with the Maryland OB-Gyn Society and the MD chapter of the American Academy of Family Physicians. The AAP also works with CMCH on obesity prevention and early childhood health initiatives under the ECCS grant. Title V also partners with the Maryland Chapter of the March of Dimes to prevent prematurity and birth defects. The Title V Women's Health Director chairs the March of Dimes' community grants committee that annually reviews and awards grants to organizations that work towards decreasing prematurity.

The OGCSHCN has long had close partnerships with voluntary organizations, both "umbrella organizations" and disorder specific voluntary groups. These include the Maryland Alliance of PKU Families (MAPKUF), the Maryland Sickle Cell Disease Association, local chapters of national organizations, such as the Chesapeake- Potomac Spina Bifida Association, various Down syndrome groups, the Maryland Society for Cleft lip and Palate Children, the Maryland Hemophilia Foundation, the Cooley's Anemia Association, the Maryland Society for Sight, the Maryland Association of the Deaf, FACES (craniofacial disorders), the MSUD Family Support Group, Parents of Galactosemic Children, the Fatty Acid Oxidation Disorders Family Support Group (FOD), the Organic Acidemia Association (OAA), the Cystic Fibrosis Foundation, the CARES Foundation (congenital adrenal hyperplasia), and many more.

The OGCSHCN participates in many educational programs with voluntary groups. The OGCSHCN sponsors specialty summer camps in partnership with MAPKUF (PKU), NF Inc-Mid-Atlantic (NF), Diagnosis Despite Destiny (for SCD) and sometimes the Chesapeake Potomac Spina Bifida Association as a way of providing respite care and disorder specific health education. The OGCSHCN sponsors pre-school vision screening in partnership with the Maryland Society for Sight.

The Advisory Council on Hereditary and Congenital Disorders, which has set the principles and standards for all genetic programs in Maryland since 1973, promotes partnership between the DHMH, the academic tertiary care centers, professional organizations, consumers and the legislature around issues in genetics. Membership includes two representatives of academic medical centers, two legislators (a Delegate and a Senator), two representatives of professional organizations (the State medical society- "the Medical and Chirurgical Faculty of Maryland" and the historically black medical society- "the Monumental City Medical Society" and 5 consumers, as well as ex-officio members from the DHMH.

VI. SELECTION OF STATE PRIORITY NEEDS

National MCH priorities and 18 corresponding national performance measures, determined by the federal Maternal and Child Health Bureau, guide the process of improving outcomes for MCH populations. The Federal priorities will not change and in effect, are also current state priorities for 2011-2015. In addition, each state must also select 7 to 10 state MCH priorities and corresponding performance measures to guide state efforts over a five year funding cycle. This process of selecting state priorities and related performance measures occurs every five years as part of a comprehensive needs assessment process. The priorities identified during this process will be used to guide work carried out under the Block Grant through 2015 in Maryland. This section outlines Maryland's process for determining its priority needs and discusses the eight priority measures chosen for 2011-2015.

The MCH needs assessment process began with population based assessments for each of the three main MCH populations: (1) women and infants, (2) children and adolescents, and (3) children with special health care needs. These assessment included a review of available quantitative data (e.g., vital statistics, hospital discharge and census data) for each population group by age, race/ethnicity and jurisdiction. Leading causes of death and hospitalizations were noted for each group. Findings from the population based assessment are summarized in "State of the State" MCH presentations available on the CMCH website at fha.maryland.gov/mch/titlev.cfm. In addition, several sources of qualitative data were used for the 2010 needs assessment including a parent survey, a web-based MCH stakeholder survey, key informant interviews with MCH staff in every local health department and comments from PRAMS respondents.

MCH Stakeholder Survey. Findings from the population based assessments were used to identify potential priority needs for a MCH Stakeholder Survey. MCH stakeholders were invited to complete the web-based Survey Monkey questionnaire between December 2009 and the end of February 2010. There were a total of 146 respondents including state and local agency staff, local health department staff, advocacy groups, and community based groups and parents. By population group, the top five priority needs identified by the Stakeholder survey were:

Women and Infants

1. Home visiting programs for high risk women and infants
2. Prenatal Care
3. Health insurance access and coverage, Substance use during pregnancy (tied)
4. Social determinants of health
5. Women's wellness, including preconception and interconception care

Children and Adolescents

1. Mental health, access to screening and treatment
2. Lack of family support and connectedness (need for parenting programs)
3. Nutrition and physical activity (overweight and obesity), Social determinants of health (tied)
4. Child abuse and neglect
5. Access to dental care

Adolescents Only

1. Teen pregnancy and teen parenting, Alcohol, drug and tobacco use (tied)
2. Mental health, access to screening and treatment (depression, suicide, eating disorders)
3. High school graduation
4. Violence (e.g., gangs, bullying, dating violence, homicide)
5. Sexually transmitted diseases and HIV/AIDS

Parent Survey. A total of 939 parents responded to a survey created by the Title V Agency, Parent's Place and the Johns Hopkins School of Public Health to ascertain health needs and barriers to care for children and parents in Maryland. The survey represented parental responses for 1765 children, 58% of whom were children with special health care needs. Parents reported needing help to address the following needs/concerns for their child(ren): anger/conflict management (21.7%), bullying (19.8%), depression (19.2%), peer pressure (15.6%), and overweight/obesity (10.3%). When asked about needed family support services and programs, parents identified the following: help with finding services for children (43%), parent support groups (24.8%), respite care (22.9%), child care (19.2%), nutrition, diet and exercise programs for children (16.1%), and parenting skills (12.9%).

March 23, 2010 Stakeholder Prioritization Meeting

Data from the both the quantitative assessment and the two surveys were used to identify a list of 27 potential priority needs. More than 100 MCH stakeholders were invited to attend a March 23, 2010 MCH Stakeholder meeting to review this list and to help determine MCH priority needs for 2011-2015. The 80 attendees included representatives from state and local government agencies, local health departments, advocacy groups, health provider groups, and community-based organizations. See Appendix B for a list of attendees.

Invitees were informed that the meeting's purpose was to present information about the Title V MCH Block Grant and Needs Assessment, review "State of the State" data presentations on the health of women and children in Maryland, receive input from stakeholders on health issues and needs for the MCH population, and determine priority areas of focus for Block Grant funds for 2011-2015. Meeting participants were told that the final determination of priority needs would rest with Title V Agency staff who would consider the following criteria: stakeholder input and guidance, the magnitude of the problem, and Title V agency capacity to address the need.

Meeting participants were assigned to one of nine groups and provided two opportunities to rank MCH needs. First, a list of 10 potential priorities for each MCH population group: (1) pregnant women, mothers and infants, (2) children and adolescents, and (3) children with special health care needs, was included in every participant's folder. After listening to a presentation of the most recent data and data trends for each population group, each participant was asked to prioritize the 10 needs (1-10, which 1 being the most important). Each table was then asked to reach consensus on the top three priority needs for each population group. Results from each of the nine tables were compiled, and the top three priority needs for each population group were determined. The top needs identified through this exercise were:

Pregnant Women, Mothers and Infants

1. Women's wellness—Access to primary, preconception, and inter-conception care
2. Health insurance coverage for women of childbearing age and pregnant women
3. Unintended pregnancy and need for family planning/reproductive health services

Children and Adolescents

1. Medical home and access to primary care
2. Obesity, healthy nutrition and physical fitness
3. Teen pregnancy and reproductive health

Children with Special Health Care Needs (CSHCN)

1. Families receive needed services (respite, medical and specialty care, child care, families partner in decision-making about health care)
2. Medical home (primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally competent)
3. Health insurance and health care financing

Next, a list of 27 potential MCH priorities was included in the folder of every participant. These 27 potential MCH priorities were also written on large sheets of paper, which were then posted on the walls of the conference room. Each participant was given 5 small dot stickers. Participants were asked to place their dot stickers next to the five priorities that they believe to currently be the most pressing MCH issues. The results are found below in Table 2:

**Table 2. Results of Final Ranking Exercise,
March 23rd Stakeholder Meeting
Potential MCH Priority Needs**

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Women’s wellness, preconception and inter-conception health 2. Unintended pregnancy, reproductive health and family planning (women and adolescents) 3. Social determinants of health/health disparities/health inequities 4. Medical home (all population groups) 5. Community-based systems of care that are easy for families to use (CSHCN) 6. Lack of family support and connectedness 7. Health insurance and health care financing (all population groups) 8. Male involvement and fatherhood initiatives 9. Access to mental health services (all population groups) 10. Substance use/abuse (smoking, alcohol use, and drug use among women, pregnant women and adolescents) 11. Access to oral health care (all population groups) 12. Obesity, healthy nutrition, and physical fitness (all population groups) 13. Access to specialty care (CSHCN) 14. Families receive needed services (CSHCN) | <ol style="list-style-type: none"> 15. Infant mortality and related factors (e.g., prematurity, low birth weight) 16. Teen pregnancy prevention 17. Violence and injuries (all population groups) 18. Child abuse and neglect 19. Access to primary care 20. Early intervention services (CSHCN) 21. Access to prenatal care 22. Early identification of pregnant women and infants at risk 23. Asthma (all population groups) 24. Breastfeeding 25. School readiness and academic success 26. Developmental screening 27. Lead poisoning prevention (children) |
|---|--|

Determination of State Priority Needs

Following ranking exercises 2 and 3, Title V staff met to determine the final priority needs based on input from stakeholders and after considering the following criteria:

MCH Responsibility: Does responsibility for this need rest primarily with Title V MCH? Should we partner with others who have greater responsibility?

Availability of evidence based practices/strategies to address: Are there known evidence based or promising strategies to address this need?

Available Resources: Are funding, staffing resources available to adequately address the need?

Magnitude, Seriousness or Severity: How many are affected; What are the trends; How do we compare with HP 2010 and other benchmarks?

Data: Is there data available to track and monitor?

National priorities/performance measures: Is it a current national priority?

The final determination of the state's priority needs rested with the Title V Agency senior management and staff during a facilitated meeting called to finalize the priority needs and to determine the state negotiated performance measures. Title V staff considered the list of 27 priority needs identified through the population based and capacity assessments along with stakeholder comments. The 27 potential priority needs are listed here along with a summary determination of their final status.

1. Women's Wellness, Preconception and Interconception Health (Selected)
2. Unintended Pregnancy, Reproductive Health & Family Planning for women and adolescents (Selected and combined with Women's Wellness)
Unintended pregnancy was also identified as a priority need for the 2005 needs assessment and will continue to be included in 2010.
3. Social Determinants of Health/Health Disparities/Health Inequities (Selected but requires further assessment)
4. Medical Home – All Population Groups (Selected and combined with Access to primary, mental health, specialty, and oral health care; and health insurance for all children)
5. Community based systems of care that are easy for families to use – CSHCN (Not selected)
A system has already been put in place to address this need and there is a national performance measure.
6. Lack of Family Support and Connectedness (Selected and combined with the home visiting priority)
7. Male Involvement and Fatherhood Initiatives (Not selected, but will be examined further as a part of the social determinants of health)

8. Health Insurance and health care financing – all population groups (**Selected and combined with Access to primary, mental health, specialty, and oral health care for all children**)
9. Access to Mental Health Services – all population groups (**Selected for children and combined with other access issues**)
10. Substance Use/Abuse – smoking, alcohol use and drug use among women, pregnant women and adolescents (**Selected for pregnant women**)
This is a continuing priority from 2005.
11. Obesity, Healthy Nutrition, Physical Fitness – all population groups (**Selected**)
This is a continuing priority from 2005.
12. Access to Oral Health Care – all population groups – (**Selected and combined with access to primary, mental health, specialty care for all children**)
13. Access to Specialty Care – CSHCN (**Selected and combined with access to primary, mental health, oral health care for all children**)
14. Infant Mortality and related Factors (e.g., prematurity and low birth weight) – (**Selected - related to Healthy Pregnancy Outcomes, etc.**)
15. Families received needed services – CSHCN – (**Not Selected**)
This is a current national priority and there is a performance measure.
16. Teen Pregnancy Prevention – (**Not Selected but will be considered as part of the Youth Transition priority**)
This is currently a national priority and there is a national performance measure.
17. Violence and Injuries – (**Not Selected**)
Injuries is a national priority and there are several performance measures.
18. Child Abuse and Neglect - (**Not Selected**)
19. Access to Primary Care – all population groups - (**Selected and combined with access to specialty, primary, mental health, oral health care for all children**)
20. Early Intervention Services (**Not Selected**)
21. Access to prenatal care (**Selected and included with the the priority focused on healthy pregnancy outcomes**)

22. Asthma (**Selected as a performance measure and combined with access to specialty, primary, mental health, oral health care for all children**)
23. Home Visiting Programs for high risk pregnant women and children (**Selected**)
24. Breastfeeding (**Not Selected**)
This is a national priority and there is a performance measure.
25. Developmental Screening (**Not Selected**)
26. School Readiness and Academic Success (**Not Selected**)
This was a priority for 2005.
27. Childhood Lead Exposure (**Not Selected**)

MCH Priority Needs for 2011-2015

Eight broad priority needs and eight state performance measures were identified. In determining the priority needs, consideration was given to a multitude of factors including the analyses of MCH data and trends; surveys and key informant interviews; input from meetings with local health department MCH and nursing staff; prioritization exercises described above and finally, input from Title V Program and other MCH serving agency staff in DHMH.

The eight MCH priority areas selected for 2011-2015 are summarized in Table 3 followed by summary statements for each priority need. For each priority need, a brief rationale for why the priority need was selected is provided. A brief description of how state priority relates to the four levels of the pyramid including how MCH capacity is available to address the priority need and any areas of inadequate capacity is also provided. The need statements describe how the state will measure success in meeting the priority need (e.g., multiple national and state performance measures) and a brief action plan is provided.

The eight priority need statements are written broadly and recognize that there are a wide range of risk factors linked to each need. Each of the performance measures represents the risk factors/issues/strategies that the Title V Program will focus on during 2011-2015 to address the priority need. In some instances, the Title V Agency will have lead responsibility for activities to address the need (e.g., priority # 2: healthy pregnancies) while in other instances, another agency may have lead responsibility for the priority need along with close collaboration from Title V (e.g., priority # 6, obesity).

The chosen priority needs address each of the MCH groups:

Table 3. Priority Needs by MCH Population Groups

Proposed State Priority Needs, 2011-2015	Performance Measures	Population Group
1. Women’s Wellness: Improve the health and wellness of women during the childbearing years to ensure that women are healthy at the time of conception	Percent of pregnancies that are intended (Data Source: PRAMS Survey)	Women and Infants
2. Healthy Pregnancies, Pregnancy Outcomes and Infants: Promote healthy pregnancies, pregnancy outcomes and infants by reducing risky behaviors during pregnancy (e.g., substance abuse) and improving access to prenatal care	Percent of women using alcohol during the last three pregnancy months of pregnancy (Data Source: PRAMS Survey)	Women and Infants
3. Healthy Children: Promote early and middle childhood health, healthy child development and parent-child connectedness by increasing access to evidence based home visiting programs	Number of children enrolled in evidence based home visiting programs in Maryland (Data Source: Maryland Title V Program Data)	Children
4. Access to Health Care for Children: Improve access to preventive, primary, specialty, mental health and oral health care as well as health insurance coverage for all children including those with asthma and other special health care needs	Rate of emergency department visits for asthma per 10,000 children, ages 0-4 (Data Source: Maryland Health Care Commission Hospital Database)	Children, Adolescents, CSHCN
7. Reduce Childhood Overweight and Obesity: Promote needed actions to reduce overweight and obesity among children and adolescents	Percent of Maryland Medicaid recipients ages 2-19 years that are obese. (Data Source: Maryland Healthy Kids Obesity Database)	Children and Adolescents
6. Healthy and Productive Youth and Young Adults (Transition to Adulthood): Improve supports for the successful transition of all youth to adulthood	Percent of YSCHCN families who participate in transitioning planning (Data Source: Maryland Parent Survey)	Adolescents Youth with Special Health Care Needs
7. Strategic Partnerships: Sustain, strengthen and maximize strategic partnerships through the Community of Care Consortium to address CSHCN core outcomes in Maryland	Percent of Community of Care members who report 5 or more collaborative activities in the previous 12 months (Data Source: Maryland Community of Care Partnership Profile)	CSHCN Cross- Cutting
8. Improve Data Systems and Sharing: Improve state and local capacity to collect, analyze, share, translate and disseminate MCH data and evaluate programs	Percent of performance measure benchmarks Maryland has reached toward implementing a data sharing plan (Data Source: Maryland Title V Program)	CSHCN Cross- Cutting

Several additional priority areas will also be considered during the project year as additional data becomes available and more discussions are held with knowledgeable key informants to determine evidence based approaches for addressing these needs. The additional focus areas are listed here along with selected comments from stakeholders:

- Social determinants of health/health disparities/health inequities
 - “I need to find a way to buy us a home. I'm sick of renting from slumlords that take all my money and make us live like dogs! It's really getting old. I'm sick and tired of living in poverty. I'm trying to help myself. If I could get help with those few things, I would be very satisfied.” Parent comment, Maryland Parent Survey

- Lack of family support and connectedness
 - “I see so many children who are totally detached. Their parents have no clue how to parent. I have been told that the bulk of classroom time is now spent on behavior issues. There seems to be two to three generations of detached, non-parented children. Many of these young ones need behavioral health intervention and I don't think there is a task force large enough to provide this.” Respondent, MCH Needs Assessment Survey

- Male involvement and fatherhood initiatives
 - I think that many of the past policies have excluded fathers and serve to diminish their important role in the lives of their partners and children and we have a lot of work to do to help fathers understand their importance as other than financial supporters.” Respondent, MCH Needs Assessment Survey

- Violence, gangs and bullying
 - “Gangs are increasingly becoming a problem in this county.” Respondent, MCH Needs Assessment Survey
 - Reduce indicators of violence affecting the MCH population with focus on reducing the number of children witnessing violence, the rate of substantiated child abuse and on reducing the percent of women who report physical abuse before and during pregnancy.

VI. 2010 Maryland MCH Priority Needs for 2011-2015 and Preliminary Action Plan

PRIORITY ONE - WOMEN'S WELLNESS

Improve the health and wellness of women during the childbearing years (ages 15-44) to ensure that women are healthy at the time of conception.

"I feel that comprehensive women's health care from infancy, childhood, adolescence, and adulthood, regardless of pregnancy intention or status, will ultimately optimize health in future pregnancies and afterwards. Women's health is therefore a critical component to preconception, inter-conception and prenatal health."

-Dr. Diana Cheng, Medical Director, Women's Health, Maryland Title V Program

Maryland's Title V Program envisions a future in which all women of childbearing age reach an optimal level of health and well-being prior to pregnancy and all pregnancies are planned. There are approximately 2.9 million women in Maryland and 1.2 million are of childbearing age, approximately 15-44 years. Both qualitative and quantitative data collected for the 2010 needs assessment indicate that most Maryland women of childbearing age are "healthy." For example, two-thirds of women (ages 18-44) in the 2008 Maryland BRFSS survey described their health status as either excellent or very good, but only 8% described their health as fair or poor. While the majority of Maryland babies are born to healthy mothers who experience healthy pregnancies, many Maryland women are "unhealthy" and/or lack access to needed services (e.g., family planning, preventive, primary and oral health care) to improve their chances of having a healthy baby. Untreated chronic health conditions (diabetes, hypertension, asthma), lack of access to medical care and/or health insurance coverage, problems with mental health or substance abuse, obesity, unintended pregnancy and domestic violence put many Maryland women of childbearing age at higher risk for pregnancy complications and poor pregnancy outcomes if and when they become pregnant.

Women's wellness or the health of women prior to conception was recognized as an important MCH need by respondents to the MCH Stakeholder Survey and during both rankings at the March Stakeholder meeting. Women's wellness is a broadly focused issue and Title V staff agreed to narrow the focus for purposes of the needs assessment to address reducing unintended pregnancy through provision of family planning services. Maryland is also moving toward enhancing family planning clinical services to include a comprehensive set of women's wellness services not specifically related to or required for contraception or contraceptive management. These include screening and/or services related to chronic disease, nutrition, overweight/obesity, smoking cessation, mental health, substance abuse, domestic violence, preconception planning, or assisting with access to health insurance or primary care. The provision of family planning services also serve as primary prevention strategy for reducing poor birth outcomes.

MCH Stakeholder Comments:

“There are difficulties in finding services for uninsured women with chronic health conditions that affect pregnancy outcomes.” Respondent, MCH Needs Assessment Survey

“There is a need for more preconception counseling, and planning for future pregnancies. Prenatal care is often too little too late.” Respondent, MCH Needs Assessment Survey

Proposed State Negotiated Performance Measure

- Percentage of Maryland mothers with intended pregnancies: 56.6% in 2008 (PRAMS) (also chosen as a priority measure in 2005)

There is currently no national performance measure that addresses the selected performance for this priority – unintended pregnancy. This priority is continued from the last needs assessment. Over 40% of pregnancies in Maryland that end in a live birth are unintended—mistimed or unwanted. Unwanted pregnancies are more likely to be associated with risk factors or behaviors that may be harmful to the mother and infant. Maryland PRAMS data indicate that mothers with mistimed and unwanted pregnancies are less likely to take a multivitamin, receive early prenatal care, stop smoking, breastfeed, and place their infants on their backs to sleep. They are more likely to experience postpartum depression, be victims of intimate partner violence, and deliver low birth weight infants than mothers with intended pregnancies. Women with unintended pregnancies, particularly those that are unwanted, may need extra support or referral during pregnancy and postpartum than mistimed or intended pregnancies.

2011-2015 Plan

The Title V Program plans to continue to work with the Title X Family Planning and Reproductive Health Program to support access to subsidized family planning services to women and men in every jurisdiction of the state. The Program serves approximately 70,000 clients annually at 80 sites. However, there are still an estimated 100,000 additional women of children bearing age currently in need of subsidized family planning services. PRAMS data will continue to be used to monitor the need for and use of family planning services. CMCH plans to continue to partner with the Medicaid Program to improve access to health care for women of childbearing age, and the Office of Chronic Disease Prevention to reduce obesity and chronic health conditions among women.

PRIORITY TWO: HEALTHY PREGNANCIES, PREGNANCY OUTCOMES AND INFANTS

Promote healthy pregnancies, pregnancy outcomes and infants by reducing risky behaviors (e.g., substance abuse) and improving access to prenatal care

Maryland's Title V Program envisions a future in which all pregnancies are planned, no woman dies or is harmed as a result of being pregnant, and all babies are born healthy.

Infant mortality, the death of an infant within the first year of life, is a major indicator of the health and social condition of a nation, state, or community. Reducing infant mortality and related risk factors is a public health priority in Maryland. Significant progress toward reducing infant mortality and improving birth outcomes in Maryland that had been achieved during the 1990's has now stalled, with little improvement made for nearly a decade. Governor O'Malley has identified a 10% reduction in infant mortality in Maryland by 2012 as one of his top policy goals.

Healthy pregnancies and pregnancy outcomes are more likely to occur when mothers are healthy at conception; receive adequate, quality prenatal care; have adequate social and emotional supports; and avoid risky behaviors such as smoking and alcohol and drug use. Maryland data, both qualitative and quantitative, gathered for the 2010 needs assessment indicate that most of the 75,000+ babies born each year in Maryland arrive home healthy and safe. However, the data also paint a picture of unmet needs and troubling trends for many mothers and infants:

- Infant mortality is a major public health problem in Maryland with a rate of 8 infant deaths per 1,000 live births in 2008, far exceeding the Healthy People 2010 goal of 4.5. Although Maryland is one of the wealthiest states, it has consistently ranked among the worst states for infant mortality.
- Major racial/ethnic disparities in infant mortality persist with African American babies dying at almost three times the rate of White, Asian, and Hispanic babies. The complexity of infant mortality is reflected in the fact that racial disparities in infant mortality cannot be fully explained by socio-economic factors alone. For example, college educated African American women in Maryland, on average, have worse pregnancy outcomes than women of other races (e.g., White) with less than an 8th grade education.
- Low birth weight (LBW) is a major indicator of infant morbidity. Over 7,000 infants (9.3%) were born at low birth weights in 2008. Maryland's LBW rate has consistently been higher than the national average. Eleven percent of babies were born prematurely (before 37 weeks gestation) in 2008. Like infant mortality, both prematurity and LBW rates in Maryland have not improved over the past decade. Premature and LBW infants are at higher risk of infant death and have higher risks of long term developmental and health problems.
- Access to early prenatal care remains a problem for many Maryland women. Early prenatal care rates in Maryland, once among the best in the nation, at nearly 90% during the 1990s, fell to 80.2% in 2008. More than 3,000 Maryland women received late or no prenatal care in 2008.

- Maryland PRAMS results indicate that smoking before, during, and after pregnancy remains as a serious problem. Over 9% of women surveyed reported smoking during the last three months of pregnancy. Smoking was most prevalent among White non-Hispanic and younger mothers. Smoking prevalence was higher among women with a delivery paid for by Medicaid (14%) as compared to women with private insurance (7%).
- Maryland PRAMS data indicate that nearly 8% of Maryland women reported drinking during the last three months of pregnancy. Of those who consumed alcohol during pregnancy, the vast majority (80%) reported that they had less than one drink per week. The remaining 20% consumed one or more drinks per week. Less than 1% of those surveyed reported one or more episodes of binge drinking, defined as one or more drinks on one occasion.
- Domestic violence is a leading cause of maternal mortality in Maryland. PRAMS data for 2004-2008 indicate that 4.3% of women reported being physically abused by a partner or ex-partner during pregnancy.

Healthy people, healthy families, healthy schools, and healthy communities begin with healthy babies. Because of this, Title V staff and MCH stakeholders once again recognized the importance of continuing to identify “healthy pregnancies and healthy pregnancy outcomes” as a Title V priority need. In 2009, Maryland Governor Martin O’Malley identified the reduction of infant mortality by 10% by 2012 as one of the state’s top 15 strategic policy goals through an initiative termed the Governor’s Delivery Unit (GDU) Plan. The GDU Plan for infant mortality reduction aims to result in 60 fewer infant deaths and a state infant mortality rate of 7.2 deaths per 1,000 births, which would be the lowest on record. The GDU Plan promotes a life course approach for reducing infant deaths by intervening at strategic points along the life span of a woman: before pregnancy (interventions to ensure healthier women at the time of conception, during pregnancy (interventions focused on ensuring earlier entry into prenatal care); and after delivery (perinatal and neonatal interventions that ensure comprehensive, high quality follow-up care).

Proposed State Negotiated Performance Measure

- Percentage of women using alcohol during pregnancy: 8% in 2001-2008 (MD PRAMS, 2001-2008)

Several performance measures will be used to measure Maryland’s progress in improving pregnancy and infant health outcomes. The State performance measure chosen for this priority need will focus on reducing substance abuse, particularly alcohol use during pregnancy. There is currently no focus area for alcohol use during pregnancy among the national indicators. Maryland began using this as a state Title V measure in 2005 and will continue to monitor alcohol use during pregnancy using available data from PRAMS.

Alcohol use during pregnancy may cause a wide range of harmful effects on the developing fetus. It is the leading preventable cause of mental retardation in the United States and is also associated with many other physical, cognitive, and behavioral disabilities known collectively as Fetal Alcohol Spectrum Disorders (FASD). Adverse outcomes caused by FASD include those of Fetal Alcohol Syndrome (FAS), a disorder marked by growth deficiency, abnormal facial

features, and central nervous system abnormalities. In addition to FAS, disabilities associated with FASD include mild to severe deficits in attention, intellect, impulse control, judgment, and memory. Approximately 40,000 babies are born in the U.S. every year with FASD, with the cost for their care estimated to be \$4 billion. No known level of alcohol use during pregnancy is considered safe. For this reason, the Surgeon General Advisory on Alcohol Use in Pregnancy urges “women who are pregnant or who may become pregnant to abstain from alcohol.”

In 2008, nearly 8% of Maryland mothers reported alcohol consumption during pregnancy. Although a substantial number of women continued to drink during pregnancy, 30% of Maryland mothers reported that they were not counseled about alcohol during their prenatal visits and 19% reported that they were not asked how much they drank. Maryland PRAMS data showed that regular drinking (one or more drinks a week) during pregnancy was significantly associated with prenatal smoking, postpartum depression, and infant low birth weight.

2011-2015 PLAN

Between 2011-2015, the Title V Program plans to work with the Maryland Fetal Alcohol Spectrum Coalition to implement the FASD State Plan with the overall goal of reducing the number of babies born with Fetal Alcohol Spectrum Disorders (FASD). Two major objectives are to: (1) increase public awareness of FASD and the risks of drinking during pregnancy, and (2) to expand the availability of alcohol abuse and FASD treatment services.

Other National Title V Performance Measures and Indicators that address Priority #2

- The number of live births by age of mother and race/ethnicity
- Percentage of women who smoke in the last three months of pregnancy
- Percentage of very low birth weight infants delivered at facilities for high-risk deliveries and neonates
- Percentage of infants born to pregnant women receiving prenatal care beginning in the first trimester
- Percent of women (ages 15-44) with a live birth during the reporting period whose observed to expected prenatal visits are greater than or equal to 80 percent on the Kotelchuck index (a measure of prenatal care adequacy)
- Infant mortality rate per 1,000 live births
- Ratio of the black infant mortality rate to the white infant mortality rate
- Neonatal mortality, postneonatal, and perinatal mortality rates per 1,000 live births
- The number of pregnant women and infants enrolled in Medicaid by race/ethnicity
- Percent of live births weighing less than 2,500 grams (LBW) or 1,500 grams (very LBW)
- Percent of mothers breastfeeding at six months
- Percentage of newborns who have been screened for hearing before hospital discharge

PRIORITY THREE: HEALTHY CHILDREN

Promote early and middle childhood health, healthy child development and parent-child connectedness by increasing access to evidence based home visiting programs

Healthy children require healthy families and/or family support systems, quality early education, safe and nurturing home and learning environments, and access to quality preventive and primary health care. For many Maryland children and families, these requirements have been fully or at least partially met. For others, many challenges exist.

- An estimated one in ten Maryland children ages 0-18 lived in households with incomes below the poverty level in 2008. This represents approximately 130,000 children. Child poverty is a risk factor for poor physical health, lower intellectual attainment and poor school performance, and increased likelihood of social, emotional, and behavioral problems.⁹
- More than 8,000 Maryland children lived in foster care homes at some point in 2009.
- In 2009, there were 31,206 investigations of child abuse and neglect conducted in Maryland. In 20% of the cases (6,312), the findings were substantiated.
- Each year, between 500-600 Maryland babies die before reaching their first birthday, many from preventable causes.
- One in five pregnant women do not receive prenatal care within the first trimester in 2008.
- According to the 2007 National Survey of Children's Health, 41.4% of Maryland children ages 0-17 do not meet the AAP criteria for having a medical home and 6% do not have a usual place for sick and well care.
- Approximately 244,000 Maryland children have special health care needs.

Similar to findings from the 2005 needs assessment, Title V heard about the need to support and strengthen families to assure that children remain healthy and thrive. This need for support is cross-cutting and required for all Maryland families, especially socio-economically disadvantaged families. However, the Title V Program also recognizes that families with young children are especially vulnerable and in need of services that enhance their ability to address their health needs, meet their developmental needs, and support school readiness.

Many Maryland families were anecdotally described as "in crisis or in peril." We heard that families are disconnected; parents are stressed and overwhelmed with the process of parenting as well as accomplishing the tasks of daily living; parents are placing demands on their children to be "successful;" children are being abused and neglected; and parental substance use is a growing problem. The current recession has led to higher unemployment and many parents are struggling to make ends meet on a daily, weekly or monthly basis. Additional family support is needed.

Family support can take many forms including parenting classes; affordable quality child care; mental health counseling programs; and substance abuse treatment programs. Over the next five years, the Title V Program will promote healthy children by improving access to home visiting programs in areas of greatest risk. The availability of new federal funding provides the state with an opportunity to do this.

Evidence based home visiting programs are a primary prevention strategy for poor birth and child health outcomes, reducing child abuse and neglect prevention, and improving family/parent functioning. Improving access to these home visiting programs was identified by stakeholders as a priority primary prevention strategy for poor birth and child health outcomes. Maryland's Title V Agency is currently completing a needs assessment and will soon develop a State Plan for increasing the numbers of evidence based home visiting programs in the State.

MCH Stakeholder Comments:

"I feel that if social determinants are addressed, many of the poor outcomes could be ameliorated. Home visiting programs can assist in bringing attention to addressing and providing advocacy for solutions for non-medical determinants of health. Respondent, MCH Needs Assessment Survey

"Family support/connection is the larger issue at hand. Most of the other problems fall under this area." Participant comment, March 23rd meeting

"Lack of education and case management support will eventually lead to more poorer pregnancy outcomes and child abuse and neglect, which will cost tax payers more money in the long run." Respondent, MCH Needs Assessment Survey

"Children and adolescents need increased parental involvement and support." Respondent, MCH Needs Assessment Survey

State Performance Measure

- Number of children enrolled in evidence based home visiting programs in Maryland (Data Source: Maryland Title V Program Data)

A new state performance measure has been developed to focus on the number of children served in evidence based home visiting programs in Maryland. This is a developmental performance measure. As the state completes its required State Home Visiting Plan, then another more meaningful performance measure may be identified.

Existing Title V Performance Measures/Indicators and Other Measures

- Percent of children immunized
- Child death rate
- Rate of child deaths due to motor vehicle accidents
- Percent of children in single parent households
- Percent of children enrolled in TANF, food stamp program, Medicaid, MCHP
- Number enrolled in WIC
- Number of children in foster care
- Deaths and hospitalizations due to injuries
- Percent of children entering school ready to learn
- Child abuse and neglect rates

PRIORITY FOUR: ACCESS TO HEALTH CARE FOR CHILDREN

Improve access to preventive, primary, specialty, mental health and oral health care as well as health insurance coverage for all children including those with asthma and other special health care needs

Both data examined for the 2010 population based assessment and comments made by MCH stakeholders through surveys and key informant interviews continually spoke of the need to improve access to health care – preventive, primary, specialty, mental health, oral health – for children and adolescents, particularly those that are low-income and/or uninsured children. Major issues identified include the following:

- Some areas of the state, particularly rural areas in Eastern Shore, lack sufficient numbers of pediatric providers.
- Local health department staff, particularly in rural areas of the state, noted that transportation remains as barrier.
- Language difficulties present as a barrier to care for many undocumented children and families.
- Other barriers mentioned included long waits for appointments, and provider unwillingness to accept Medical Assistance.
- Only 19.1% (748 of 4,082) Maryland dentists are actively serving and billing Medicaid recipients.
- As of June 30, 2010, there are 40 federally designated mental health manpower shortage areas in Maryland.
- Maryland rate of emergency department use for asthma control among children ages 0-4 is more than twice the healthy people 2010 goal.

These data also continued to reveal unacceptable levels of morbidity and mortality among children in the early and middle childhood periods. Areas of continuing concern included asthma, overweight and obesity, dental caries, and mental health/behavioral problems. This priority was selected to ensure continued focus on improving the health of children in the early and middle years. For example, asthma currently affects approximately 123,000 Maryland children ages 0-17 and is the leading cause of hospitalization for children in the elementary and middle school years as well as leading reason for school absenteeism.¹⁰ Asthma is a controllable disease when properly managed. The use of hospital emergency departments for routine asthma management can be an indicator of poor asthma management. The Maryland Asthma Control Program which is administratively housed in the Center for Maternal and Child Health is implementing a statewide plan to reduce mortality and morbidity from asthma by promoting educational and other to improve asthma management. The use of the hospital emergency department for asthma control will continue to be used as the state performance measure for this priority.

MCH Stakeholder Comments:

“I think that strengthening the capacity of primary care providers to provide a medical home would help many of our problems, including care coordination.” Respondent, MCH Needs Assessment Survey

“We need a clear path for services. I feel like we have to find out what services are available all on my own and then find out if they will be covered by insurance or out of pocket.” Parent comment, Maryland Parent Survey

“Better mental health services for my child and more support groups on anger management for teens.” Parent comment, Maryland Parent Survey

“Access to oral health care for CSHCN is very limited in many areas of the state.” Participant comment,
March 23rd Meeting

Proposed State Negotiated Performance Measure

- Rate of emergency department visits for asthma per 10,000 children, ages 0-4: 184 in 2007. This compares unfavorably to the Healthy People 2010 goal of 80.

Asthma is considered an ambulatory care sensitive condition. Ambulatory care sensitive conditions are hospitalization conditions where timely and effective ambulatory care can decrease hospitalizations by preventing the onset of an illness or condition, controlling an acute episode of an illness or managing a chronic disease or condition. High rates of ambulatory care sensitive hospitalizations in a community may be an indicator of a lack of or failure of prevention efforts, a primary care resource shortage, poor performance of primary health care delivery systems, or other factors that create barriers to obtaining timely and effective care. This year, asthma emergency department visit will be used as a proxy measure for primary care access for children in Maryland.

Related Title V/Other Performance Measures/Indicators

- Percent of children uninsured
- Percent of CSHCN with adequate health insurance
- Percent of infants enrolled in Medicaid receiving developmental screening
- Percent of third graders who have received dental sealants (oral health)
- Percent of children enrolled in Medicaid receiving oral health care
- Percent of children with a medical home

2011-2015 Plan

Between 2011-2015, the Title V Program will continue to implement the state’s Asthma Control Plan for 2010-2014. In addition, Title V will partner with the Office of Oral Health and the Dental Access Coalition to monitor access to oral health services for children. Title V staff will also continue to work with the Mental Hygiene Administration, through various inter-agency groups to improve access to mental health services for children and adolescents.

PRIORITY FIVE: REDUCE CHILDHOOD OVERWEIGHT AND OBESITY

Promote needed actions to reduce overweight and obesity among children and adolescents

Childhood overweight/obesity was identified as a priority issue both in the 2005 and 2010 MCH needs assessment. Since the 2005 needs assessment when reducing overweight and obesity across all age groups was identified as a priority, adult and early childhood obesity rates have continued to rise in Maryland. The White House Task Force on Childhood Obesity, in its May 2010 report to President Obama, called the childhood obesity epidemic in America a national health crisis. Nationally, almost one in every three children (31.7%) ages 2-19 is overweight or obese. The 2007 National Survey of Children's Health estimates that more than one in four Maryland children ages 10-17 are overweight or obese.

Rising rates of childhood overweight and obesity were repeatedly identified as a concern in stakeholder surveys and discussions. Because obesity is continuing to increase, is a leading cause of premature death, and remains a significant risk factor for several chronic conditions including type 2 diabetes, heart disease, cancer and asthma, Title V staff strongly believed that this issue should remain a priority focus area. The Title V Program reviewed available data on obesity in Maryland and found the following:

- WIC Program data for 2008 show that 16% of enrolled children, ages 2-5, were overweight and 17% of children were obese.
- Self-report data from the 2006 Maryland Youth Tobacco Survey estimate that 15% of children between the ages of 13-18 are overweight and 11% are obese.
- Self-report data from the 2009 YRBS estimate that 15.6% of high school students are overweight and 12.2% are obese.
- An analysis of 2004-2006 Medicaid data by the Title V Agency found estimated overweight/obesity prevalence among enrolled children by age groupings: ages 12-19: 18.2% were overweight and 24.6% were obese; ages 6-11: 16.9% were overweight and 22.4% were obese; and ages 2-5: 16.1% were overweight and 15.6% were obese.
- Obese children are at risk of becoming obese adults. Maryland currently ranks 25th in obesity in the U.S. Data from the 2008 BRFSS indicates that 63.4% of Maryland adults were either overweight or obese. Adult obesity prevalence increased by over 50% between 1995 and 2008 (i.e., rising from 16.3% to 26.7%, respectively).
- Obesity has continued to increase in all Maryland jurisdictions within the past decade resulting in 22 of 24 jurisdictions with an obesity prevalence of 20% or more.
- The White House Task Force notes that “a mother's preconception weight and weight gain during pregnancy are two of the most important prenatal determinants of childhood obesity.” Over half of women of childbearing age were either overweight or obese according to the 2008 BRFSS.

MCH Stakeholder Comments

“I think childhood obesity needs to become a higher priority...even if we start with mandating healthier school meals, or a return to daily physical education, or mandate a 20 minute recess every day to allow for more physical movement and activity every day.” Parent comment, Maryland Parent Survey

“The childhood obesity epidemic in America a national health crisis. “ The White House Task Force on Childhood Obesity, May 2010

Proposed State Negotiated Performance Measure

Percent of Maryland Medicaid recipients ages 2-19 years that are obese.

- (Data Source: Maryland Healthy Kids Obesity Database)

Related National Title V Performance Measures and Indicators

- Percentage of mothers who breastfeed their infants at 6 months of age.
- Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile.

2011 – 2015 Plan

Title V will work with the Office of Chronic Disease Prevention to implement 12 recommendations from the 2009 Maryland Committee on Childhood Obesity to reduce childhood obesity. This will include improving surveillance, promoting healthier environments for preschool age children, strengthening child care licensing standards related to nutrition, physical activity, and screen time, and working with physicians to improve BMI screening.

PRIORITY SIX: HEALTHY AND PRODUCTIVE YOUTH AND YOUNG ADULTS – TRANSITION TO ADULTHOOD

Improve supports for the successful transition of all youth to adulthood.

“Transition to adulthood services. When think I have located some kind of provider/s, they appear to this overwhelmed parent as one big mass of confused, overlapping, underfunded, understaffed, inefficient, and invisible not for profits with no clear instructions on how to get my very disabled child safely on her own somehow. I have been told to expect nothing unless I can afford a lawyer - I am dreading this process and just hope MY health remains well enough to fight this system and obtain a liveable result for my disabled child.. My greatest fear is that these services will disappear, or never arrive and she will end up on the street or in jail - and the costs to the State will be even higher in the long run.” Parent Respondent, 2010 Maryland Parent Survey for Title V Needs Assessment

Youth transition to adulthood is one of the six core outcomes identified by the federal Maternal and Child Health Bureau for children and youth with special health care needs (CYSHCN). Both quantitative and qualitative data collected for Maryland’s 2010 needs assessment indicate that Maryland is struggling to ensure that all YSHCN receive the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence. According to the 2005-06 National Survey of Children with Special Health Care Needs (NS-CSHCN), Maryland ranked 42nd in the nation on achieving this core outcome; less than 38% of Maryland families of YSHCN ages 12-17 reported that their child received the services necessary to make appropriate transitions to adult life. Maryland scored below the national average on many other of the 2005-06 NS-CSHCN transition indicators, including:

Indicator	Maryland %	Nation %
CYSHCN ages 12-17 whose doctors and other health care providers have discussed eventually seeing providers who treat adults	10.8	11.9
CYSHCN ages 12-17 whose doctors and other health care providers have discussed youth’s health care needs as he/she becomes an adult	46.5	46.2
CYSHCN ages 12-17 who have had someone discuss how to obtain or keep health insurance as he/she becomes an adult	18.9	21.3
CYSHCN ages 12-17 whose doctors and other health care providers usually or always encourage development of self-management skills and knowledge	75.4	78.0

Participation in transition planning is an important step for families and YSHCN, and increasing the proportion of parents of YSHCN who report engaging in transition planning from pediatric to adult health care has been identified as a Healthy People 2020 objective. The following data illustrates the low rate of reported participation in transition planning among parents of YSHCN:

- Only 27% of respondents on the 2006 Maryland Medical Home Survey reported that a plan for addressing their child’s changing needs has been developed with the child’s primary care doctor.
- The 2010 Maryland Parent Survey indicates that, among respondents who have a YSHCN ages 14-21 with an IEP, approximately 48% have participated in the development of a transition plan for their child; 31% felt that their child’s transition plan

was specific to his/her needs and preferences; and 28% were satisfied with their child's transition plan.

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Youth Transition Workgroup, Maryland has multiple activities in the state focused on improving this core outcome, but these attempts seem fractured and do not appear to have a common end goal. The state lacks a clearly defined, comprehensive, coordinated system of care to facilitate success in transitioning YSHCN from pediatric to adult-based health care. The issue is compounded by the problem of youth in this age group accessing their own health insurance. Barriers to progress on this core outcome include youths not participating in the transition process, a lack of transition training among families and providers, a lack of capacity as well as uneven geographic distribution of adult health care providers who treat YSHCN, and a lack of data. Maryland plans to address these barriers by focusing on training families on the transition process as well as by identifying opportunities for collaboration among agencies and organizations working on youth transition issues in the state.

Proposed State Negotiated Performance Measure

The percent of YSHCN families who participate in transition planning for their child: 48% in 2009 (Source: Maryland Parent Survey.)

It is the goal of the state that YSHCN will receive the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence. The performance measure that Maryland will use to track progress towards this goal is the percent of YSHCN families who participate in transition planning for their child. This is in accordance with Healthy People 2020 Objective DSC HP2020-15: Increase the proportion of parents or other caregivers of youth with disabilities aged 12 to 17 years who report engaging in transition planning from pediatric to adult health care.

Baseline data for this performance measure will come from the 2010 Maryland Parent Survey for the 2010 Title V Needs Assessment. Yearly data will come from annual surveys of Maryland parents about transition issues, to be conducted through the Parents' Place of Maryland with assistance from Maryland Title V program for CYSHCN. Based on the 2010 Maryland Parent Survey, approximately 48% of parents of YSHCN between the ages of 14-21 years and with an IEP participated in the development of a transition plan for their child. Increased knowledge about specific transition services would better enable families to assist their YSHCN with accessing appropriate services and plan for adult life. This measure should help determine whether or not state activities around transition, specifically those provided through Parents' Place of Maryland and the Maryland Community of Care Consortium for CSHCN with assistance from Maryland's Title V program, are positively impacting parent participation in transition planning for their YSHCN.

2011-2015 Plan

In order to gather data about youth transition to adulthood in Maryland, a parent survey about transition will be developed by a partnership between state Title V program staff and The Parents' Place of Maryland (PPMD), with solicited input from the Transition Coordinator at the Maryland State Department of Education and the Transition Specialist

at Kennedy Krieger Institute. PPMD will disseminate the survey each year using their extensive network of parents of YSHCN and survey results will be used to guide program activities. PPMD has plans to conduct parent trainings about transition in FY 2011. Maryland's Community of Care (CoC) Consortium for CYSHCN will hold quarterly meetings in FY 2011 that focus on transition issues, and will expand its transition program activities for YSHCN and their families in Baltimore City. The CoC is also exploring other opportunities to provide support and technical assistance to existing programs to enhance their capacity to provide transition information and skill building for YSHCN. Through these activities in FY 2011, a specific action plan will be developed and implemented over the next five years.

National Performance Measures

- The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life. 37.4% in 2005-06 (Source: 2005-06 NS-CSHCN.)

Ready by 21 – Successful transitioning of all youth to adulthood

A second focus area under this priority need will be improving transitioning to adulthood for all youth, particularly low income and other vulnerable youth at risk for poor adult outcomes. In October 2007, Maryland completed a five year Action Agenda for improving youth readiness for adulthood. Dr. Cheryl DePinto, Medical Director for School, Child and Adolescent Health in the Center for Maternal and Child Health represented the Title V Agency on the Ready by 21 Action Planning Team that developed both documents. The Team was charged to develop a comprehensive agenda to increase Maryland youth readiness for college, work and life by age 21. Special emphasis was given to the needs of youth transitioning out of public systems.

The Team found that estimated 65,000 young adults in Maryland are having difficulty transitioning successfully to adulthood (i.e., 18 – 24 year olds not attending school, not working and with no degree beyond high school). Barriers to successful adulthood included low educational attainment, a lack of competent and caring adults, substance abuse, HIV/AIDS, lack of pathways to legitimate employment, lack of access to health insurance and health care, sexual pressures, risky behaviors (e.g., substance abuse) resulting in homicide, suicide and accidents, unjust criminalization of youth, limited availability and use of prevention, intervention and treatment for adolescents, especially mental health services and poverty.

Seven major goal areas were identified: (1) make the case for investing in transition aged youth, (2) support caring, competent adults, (3) provide safe, stable housing for transitioning youth, (4) provide accessible, affordable health care, (5) improve pathways to education and employment, (6) promote equal treatment in the social service and juvenile justice systems, and (7) ensure accountability. Although, transition services for youth with special health care needs will be of priority focus, related performance measures pertaining to all youth will also receive focus. These will include:

PRIORITY SEVEN: STRATEGIC PARTNERSHIPS

Sustain, Strengthen and Maximize Strategic Partnerships through the Community of Care Consortium to address CSHCN core outcomes in Maryland

Everything is so scattered that I feel like I am having to try to figure out what resources might be available for my daughter. Everyone I talk to tells me I have to talk to someone else. Why isn't there one place where I can call and find out what my daughter might be eligible for and help for me to try to get that assistance for her. When I called my county office, they told me I had to work with the state as they could not help me find services/assistance for my now adult (18 yr old) daughter who will graduate from high school in June 2010. Please make it easier for us to make sure we are accessing the proper resources and services to help our adult children with special needs (autism) know all possible options, whether Federal, state, or local to help them succeed as best they can in the adult world.” Parent Respondent, 2010 Maryland Parent Survey for Title V Needs Assessment

Supporting the development and implementation of comprehensive, culturally competent, coordinated systems of care for CSHCN has been identified as a critical objective for states by the federal Maternal and Child Health Bureau. State Title V programs have been asked to work with family advocates, providers, and other partners to achieve success on the six core outcomes for CSHCN. In 2008, the Parents’ Place of Maryland (PPMD) was awarded a federal “State Implementation Grant for Integrated Community Systems for Children and Youth with Special Health Care Needs” in partnership with the State’s Title V program for CSHCN (the Office for Genetics and Children with Special Health Care Needs, or OGCSHCN), the Maryland Chapter of the American Academy of Pediatrics, and the Women’s and Children’s Health Policy Center at the Johns Hopkins Bloomberg School of Public Health. Through the grant and partnerships, PPMD developed the Maryland Community of Care Consortium for CSHCN (or CoC). Since its inception in the fall of 2008, the CoC Consortium has created a broad alliance of diverse stakeholders in collaborative efforts to improve systems of care for Maryland CSHCN and their families. They oversee and spread the use of evidence-based and best practice strategies both at the state and local levels, using mini-grants to support implementation. Much of the Consortium’s work is aligned with the Healthy People 2020 objective to increase the proportion of CSHCN who receive their care in family-centered, comprehensive, coordinated systems (MICH HP2020-14).

At a needs assessment stakeholder meeting in March, key Title V CSHCN staff and parent advocates, working together as a group, identified ongoing stakeholder partnerships as the primary method through which several core outcomes for CSHCN in Maryland should be addressed. Earlier in the meeting, a broad collection of stakeholders from across Maryland had selected those core outcomes as top priority needs for the CSHCN population in the state, including medical home, that families receive needed services through easy-to-use, community-based systems of care, and adequate health insurance and financing. Stakeholders agreed that the improvement of CYSHCN outcomes requires a system-oriented, partnership-based approach that incorporates infrastructure, population-based services, enabling services, and direct services. There was further agreement that strong, ongoing partnerships and collaborations in the design and implementation of services for CYSHCN and their families, as well as leadership at the state level have become critical in Maryland. The Consortium has been a leader in building and sustaining partnerships among members while successfully advancing the goals of Title V

programs in Maryland since its inception in 2008. Stakeholders also concurred that the role of the Consortium is essential to the health of Maryland's Title V program, as the state's CSHCN program office has suffered unprecedented personnel erosion and remains understaffed to the point where fulfilling Title V obligations to Maryland's CYSHCN is virtually impossible without the support and leadership of the Consortium.

The CoC Consortium conducted research at the 2008 Summit to determine the extent of collaboration among CSHCN stakeholders in Maryland. A survey of Consortium participants, "Maryland Community of Care Partnership Profile," regarding the intensity of interaction of agencies/programs on behalf of CYSHCN was designed to document how and to what degree the consortium activities are influencing meaningful working relations among the partners -- parents, providers, advocates, administrators, consumers, and professionals from public, private, and nonprofit sectors at both the state and community levels. Summit participants were asked to complete a chart indicating whether or not their organization interacted with listed agencies/programs specifically on behalf of CYSHCN in the past 2 years (baseline) and if so, which activities they engaged in.

Responses were requested for a list of 23 governmental (Maryland Department of Disabilities; Maryland State Department of Education; Department of Human Resources; Department of Health & Mental Hygiene; Governor's Office for Children & Youth; Developmental Disabilities Council; Local Health Departments and Local Management Boards) and non-governmental (advocacy organizations, parent organizations, academic medical centers, insurance or health plans, professional practice associations, and others) organizational entities. Results showed that overall, collaboration in the state on behalf of CYSHCN is relatively robust, particularly among governmental agencies (94.6% state, 58.9%), but also among those external to government (71.4%). Among governmental entities, collaboration was reported as particularly strong among the Department of Education, and in relation to the Department of Health and Mental Hygiene. Less prominent in governmental collaboration on behalf of CYSHCN were the Department of Human Resources, the Governor's Office for Children and Youth, and the Developmental Disabilities Council, where collaboration was reported by fewer than 40% of respondents. Collaboration at about 50% for local health departments, local management boards, advocacy organizations, and parent organizations.

Composite scores for collaboration in the last two years were assigned to participants' agencies by awarding one point for collaboration with each of 13 agencies or organizations, including state and local government, parent groups, advocacy organizations, health insurance providers, etc. Approximately 57% of COC participants at the initial consortium meeting reported between four and eight specific collaborative activities. Eighteen percent reported even more collaboration (two-thirds therefore reported substantial joint work).

Proposed State Negotiated Performance Measure

% of CoC members who report five or more collaborative activities in the previous 12 months; 51.8% in 2008 (Source: Maryland Community of Care Partnership Profile)

The performance measure for this priority is the percent of Maryland Community of Care Consortium for CSHCN (CoC) members who report five or more collaborative activities with

Consortium partners in the previous 12 months. The CoC meets quarterly, and the Partnership Profile is completed by CoC members once per year during one of the meetings. The baseline data for this measure will come from the aforementioned “Maryland Community of Care Partnership Profile” – 51.8% of respondents in 2008 reported five or more collaborative activities. The goal for 2011-2015 will be to see a steady increase in this percentage.

2011-2015 Plan

The Consortium will continue to operate during FY 2011 as outlined in the State Implementation Grant awarded by MCHB. FY 2011 marks the third and last year of funding from the State Implementation Grant; in FY 2012 and after, the state Title V CSHCN program will assume responsibility for funding the Consortium. A work plan for FY 2012-FY 2015 will be developed by the Consortium Leadership Team, including staff from Title V, The Parents’ Place of Maryland, the Maryland Chapter of the American Academy of Pediatrics, Johns Hopkins School of Public Health, and other partners.

PRIORITY EIGHT: Improve Data Systems and Sharing

Improve state and local capacity to collect, analyze, share, translate and disseminate MCH data and evaluate programs

Consistent state level data that indicate the well-being of Maryland's CYSHCN population are crucial to measuring the state's progress on the six core outcomes for this population. However, availability of these data are limited due to agency silo issues and fragmentation among government and non-government agencies and organizations serving the CYSHCN population in Maryland. The data most commonly used to measure Maryland's performance around the six core outcomes are national data from two surveys, the National Survey of Children's Health (NSCH) and the National Survey of Children with Special Health Care Needs (NS-CSHCN). While these surveys provide valuable information every five years and allow state-to-state and state-to-nation comparisons of critical data points and outcomes, they do not provide yearly, statewide, or jurisdiction level data that would help Maryland target resources within the state to improve outcomes for CYSHCN. At a needs assessment stakeholder meeting in March, key Title V CSHCN staff and parent advocates, working together as a group, identified the lack of data sharing among agencies as one of the most significant barriers in planning and implementing strategies to improve core outcomes for CYSHCN in Maryland.

Maryland collects state and jurisdiction level data that would be useful to analyze and evaluate on behalf of CYSHCN and other maternal and child health populations, however in many instances this information is either not made available to or easily accessed by the state's Title V CSHCN program. Examples from the aforementioned stakeholder meeting include:

- Infants and Toddlers program data (through Maryland State Department of Education)
- Maryland Head Start program data
- Medicaid/Managed Care Organizations
- SSDI
- EPSDT

When the data are available or easily accessible, it is not always integrated in such a way as to make analysis or evaluation feasible in a timely manner. Examples include:

- Infant Hearing Screening program data
- Birth Defects (BDRIS)
- Long-term follow-up for metabolic disorders and sickle-cell disease
- Maryland Assessment Tool for Community Health (MATCH)
- Maryland Pregnancy Risk Assessment Monitoring System (PRAMS)
- Children's Medical Services (CMS) for CYSHCN

The need for data sharing and integration in support of MCH populations is recognized in the Healthy People 2010 developmental objective HP2010 23-2: Increase the proportion of Federal, Tribal, State, and local health agencies that have made information available for internal and external public use in the past year based on health indicators related to Healthy People 2010 objectives.

Greater data sharing, systems development, and integration of current databases would enable state agencies to improve state and local capacity to collect, analyze, share, translate and disseminate MCH data and evaluate programs. This will result in a more comprehensive assessment of Maryland's achievement and progress for each of the six core outcomes for CYSHCN. This may lead to a more efficient use of state and partner resources, resulting in better health outcomes for CSHCN in Maryland.

To this end, a primary focus of Title V in Maryland for the next five years will be to enhance data sharing among Maryland's Title V CSHCN program, the Center for Maternal and Child Health, and other state and local government and non-government agencies and organizations in order to better target state efforts to improve systems of care for CYSHCN and to provide timely information to stakeholders.

Proposed State Negotiated Performance Measure

% of performance measure benchmarks Maryland has reached toward implementing a Data Sharing plan.

The performance measure for this priority will be the percent of performance measure benchmarks (see below) Maryland has reached toward implementing a Data Sharing plan among Maryland's Title V CSHCN program, the Center for Maternal and Child Health, and other state and local government and non-government agencies and organizations. Performance measure benchmarks toward implementing an effective data sharing plan for increased data integration are as follows: (1) Assess data sharing needs; (2) Identify barriers to data sharing and propose recommendations to overcome them; (3) Develop an implementation plan; (4) Obtain feedback from stakeholders on the implementation plan and make necessary adjustments; (5) Pilot test the implementation plan; and (6) Implement the plan. Data sources will be determined and finalized during completion of performance measure benchmark 1 (Assess data sharing needs). Data sources will include Maryland CSHCN program data, CMCH program data such as PRAMS, Labs Administration Newborn Screening data, and MATCH. Additional data sources most likely to be sought will include the Maryland Infants and Toddlers Program, SSDI, EPSDT, Medicaid, Managed Care Organizations, Local Health Departments, and Vital Statistics.

2011-2015 Plan

In FY 2011, Maryland's Title V program will assess data sharing needs for medical home and other CSHCN core outcomes. Next, barriers to data sharing among Title V programs and other government and non-government agencies and organizations will be identified and recommendations for overcoming them will be proposed. An implementation plan will be developed, feedback from stakeholders will be solicited, and necessary adjustments will be made to the plan. The implementation plan will be piloted, adjusted again if necessary, and will then be fully implemented. This will be done in collaboration with the state's State Systems Development Initiative (SSDI) grant.

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- ¹ U.S. Census Bureau, American Community Survey for Maryland, 2008.
- ² Maryland Health Care Commission, Health Insurance Coverage in Maryland through 2007.
- ³ U.S. Department of Health and Human Services. Mental Health: A Report of the Surgeon General. Washington, D.C., 2000.
- ⁴ Maryland Mental Hygiene Administration. Mental Health Block Grant Application, FY 2010.
- ⁵ Maryland Office of Oral Health. Survey of the Oral Health Status of Maryland School Children, 2005-2006.
- ⁶ Maryland State Department of Education. Maryland Head Start State Collaboration Office Needs Assessment Report and Strategic Plan, 2009-2010.
- ⁷ Child Trends Inc. (2009). *Analysis of the National Longitudinal Study of Adolescent Health*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy
- ⁸ Centers for Disease Control. Youth Risk Behavior Surveillance – United States, 2009, June 4, 2010 MMWR Report..
- ⁹ National Center for Children in Poverty. <http://nccp.org/topics/childpoverty.html>
- ¹⁰ Maryland Asthma Control Program. Asthma in Maryland 2008.

Appendix A

2010 Maryland MCH Needs Assessment Parent Survey, Survey of Parents/Caregivers, Children with Special Health Care Needs

As part of the 2010 Title V Needs Assessment, The Parents' Place conducted a statewide survey of parents of children with special health care needs in Maryland. Although it is important to learn about maternal and child health needs from the viewpoint and experiences of health care policymakers and providers, it is essential to go directly to the consumers of health services to learn their views and perceptions of needs and their experiences using the service delivery system. This source of data offers insights that simply cannot be gained through other means.

The parent survey team (staff from the Center for Maternal and Child Health, OGCSHCN, the Parents' Place, Johns Hopkins University School of Public Health, and parents) developed the priority areas for the survey. Questions were drafted based on the priorities areas, the MCHB six core outcomes for children with special health care needs, the National Survey of Children with Special Health Care Needs 2005-06, and other areas of concern for Maryland families such as dental care. The survey contained questions on the major health issues for the MCH populations, the most needed health services that were not received, degree of satisfaction with existing care and suggestions for how the state health department may improve the health status of women, infants, and children. In addition to requesting that parents answer questions about their child with special health care needs, the survey was designed to solicit responses about all their children including those who may not have special needs and about their own health care needs as an adult. This survey provides a snapshot of the needs and issues confronting families today and gives families an opportunity to provide structured input into the Title V Needs Assessment process.

The parent survey team solicited feedback from several groups on the survey questions, then reviewed and revised the survey for clarity and understanding. The Maryland Consortium for Children with Special Health Care Needs (CoC), a stakeholder group (providers, state and local health department personnel, educators, physicians, nurses, advocates, parents, and university personnel) which met during October provided feedback on the survey questions and process. The survey was piloted twice to test the effectiveness of the questions, once on paper at a parent workshop and once online to a selected group of parents. These pilot surveys revealed unanticipated problems with question wording, instructions to skip questions, etc., and helped to determine if the interviewees understood the questions and gave useful answers. The survey was

revised a second time based on the two pilot surveys and feedback from the CoC members.

In order to assure the broadest possible participation, the survey is available in two formats, a paper survey (attached) and an online survey. Families have multiple opportunities to access the parent survey:

- The paper version was made available at several parent conferences, trainings, and meetings throughout the state. These included 3 large parent conferences in Baltimore, Allegany, and Prince George's counties and many meetings and parent trainings in Baltimore city, Harford, Cecil, and several counties on the Eastern Shore. Additional surveys were collected from parents at the Developmental Clinics in Prince George's county. At these conferences and meetings, Parents' Place staff introduced the 5 Year Needs Assessment and the parent survey to families and discussed the need for parent input in the process.
- Parents who contact the Parent' Place staff for help are provided the opportunity to participate in the survey either on paper or online.
- To reach parents in areas where Parents' Place was not conducting events, several parents were trained and hired to conduct the paper survey. These parents are from the tri-county area in southern Maryland, Prince George's county, Baltimore city, and the lower Eastern Shore. Target locations for these parents to conduct surveys included churches, Head Start, mental health clinics, parent support groups, holiday events, and in one-on-one parent encounters.
- Several providers disseminated the paper survey to their client populations, for example at a Head Start program in western MD, mental health clinic in southern MD, and social service provider on the lower shore.
- To alert families and providers about the online survey, E-mails were sent to an extensive list of potential respondents. The correspondence requested that the recipients also forward the email to others who may have an interest in the health of children with special health care needs. Recipients included parents and providers listed in Parents' Place existing database, subscribers to PPMD's email newsletter and parent participants in a variety of local and statewide listservs (about 8750 persons).
- CoC participants (over 120 individuals) were also asked to alert families to the website and the survey. In order to ensure that parents did not complete more than one online questionnaire, the survey software program recognizes those who have previously completed the survey and prevents people from completing more than one questionnaire.

In determining how many families to survey, we used the estimated number of children with special health care needs (217,000) in Maryland identified by National Survey of Children with Special Health Care Needs (2005-06). While formulas exist to determine sample size for random surveys, no formula exists to determine the recommended sample size for a non-random survey such as this one. However, we decided to use a random sample size as a guide for this survey to provide a target number. We used an online Sample Size Calculator (<http://www.surveysystem.com/sscalc.htm>) to determine the base number of surveys we needed to collect (383) and set our target at 400.

The results of the survey are limited to self-selected participants. We were not able to capture the needs of families who were not connected to services as access to the survey required a family to have connections to the health and social systems in Maryland. An Access database was developed to enter the survey information and to summarize the data collected. The Parents' Place worked with the Johns Hopkins School of Public Health to conduct the analysis and prepare the summary report.

Parent Survey

Dear Parents:

The Parents' Place of Maryland is working with Maryland's Department of Health and Mental Hygiene (DHMH) to conduct this survey to find out about you and your children's health care needs.

About this survey

Every 5 years, states are required to conduct a statewide needs assessment. The purpose of the needs assessment is to identify and establish Maryland's priorities for the work to be carried out over the next 5 years under the federal Title V Block Grant. The Block Grant provides funds for the state to provide services to:

- **Pregnant women, mothers and infants** birth to age 1
- **Children and adolescents** age 1 to 21
- **Children and youth with special health care needs** (CYSHCN 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).

As part of this assessment, we want to know about services for children and youth with special needs in your community and about key issues that affect their health. This needs assessment will help DHMH identify priorities for the next 5 years.

What You as a Parent Can Contribute to the 5-Yr Needs Assessment

- Ideas about what works and doesn't work for your children and family
- Information about services you receive and gaps in those services your family might need
- Insights about what services are like for families who use those services

Your input is critical to improving health and services for children and youth with special needs in Maryland!

If you have any questions or concerns about this survey, PLEASE call Josie Thomas at the Parents' Place of Maryland at 410-768-9100 or email josie@ppmd.org.

Thank you for your help!

Please start the survey here:

Please tell us about where you live

1. What is the zip code and county in which you live? _____ Zip code _____ County _____

About Your Children

2. Please answer the following questions for each of your children ages birth through 21.

Child	Age (years)	Sex of Child	Race/Ethnicity (check all that apply)	Special Needs of Child	Type of special Need	Child's Health Insurance (check all that apply)
1	_____	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White (Non- Hispanic) <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Latino/Hispanic <input type="checkbox"/> Asian/Pacific Islander Other: _____	Does this child have a special need? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type of special need?	<input type="checkbox"/> Private (for example: through a parent's employer or self pay) <input type="checkbox"/> Medical Assistance/Medicaid <input type="checkbox"/> Maryland Children's Health Program (MCHP) <input type="checkbox"/> Medicare <input type="checkbox"/> Military <input type="checkbox"/> No Insurance Other: _____
2	_____	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White (Non- Hispanic) <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Latino/Hispanic <input type="checkbox"/> Asian/Pacific Islander Other: _____	Does this child have a special need? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type of special need?	<input type="checkbox"/> Private (for example: through a parent's employer or self pay) <input type="checkbox"/> Medical Assistance/Medicaid <input type="checkbox"/> Maryland Children's Health Program (MCHP) <input type="checkbox"/> Medicare <input type="checkbox"/> Military <input type="checkbox"/> No Insurance Other: _____
3	_____	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White (Non- Hispanic) <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Latino/Hispanic <input type="checkbox"/> Asian/Pacific Islander Other: _____	Does this child have a special need? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type of special need?	<input type="checkbox"/> Private (for example: through a parent's employer or self pay) <input type="checkbox"/> Medical Assistance/Medicaid <input type="checkbox"/> Maryland Children's Health Program (MCHP) <input type="checkbox"/> Medicare <input type="checkbox"/> Military <input type="checkbox"/> No Insurance Other: _____
4	_____	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White (Non- Hispanic) <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Latino/Hispanic <input type="checkbox"/> Asian/Pacific Islander Other: _____	Does this child have a special need? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type of special need?	<input type="checkbox"/> Private (for example: through a parent's employer or self pay) <input type="checkbox"/> Medical Assistance/Medicaid <input type="checkbox"/> Maryland Children's Health Program (MCHP) <input type="checkbox"/> Medicare <input type="checkbox"/> Military <input type="checkbox"/> No Insurance Other: _____
5	_____	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White (Non- Hispanic) <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Latino/Hispanic <input type="checkbox"/> Asian/Pacific Islander Other: _____	Does this child have a special need? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type of special need?	<input type="checkbox"/> Private (for example: through a parent's employer or self pay) <input type="checkbox"/> Medical Assistance/Medicaid <input type="checkbox"/> Maryland Children's Health Program (MCHP) <input type="checkbox"/> Medicare <input type="checkbox"/> Military <input type="checkbox"/> No Insurance Other: _____

About Your Family's Needs

3. Do any of your children receive any of the following? Please check all that apply.

- Free Lunch
- Reduced lunch
- WIC
- Food Stamps
- None of the above

4. At the present time, are you having difficulty paying for any of the following for you and your family?

	Yes	No
Clothing		
Food		
Housing		
Utilities (for example: electricity)		
Transportation		
Phone		
School Supplies		
Medical Prescriptions		

About Support for Your Family

5. In the past 12 months, have you needed assistance with any of the following? CHECK ALL THAT APPLY.

		If YES, check below	If YES: Did you seek help for this?	If you were satisfied with the help you received for this, check below
a.	Nutrition for your children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Diet/Exercise for your children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Information about parent support groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Finding services for your children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Child care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Respite Care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	GED Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	Budgeting for household needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i.	Parenting Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j.	Job Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k.	Literacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have any questions or concerns about this survey, please call Josie Thomas at the Parents' Place of Maryland at 410-768-9100 or email josie@ppmd.org.

Training			
I. Domestic Violence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

About Your Child's Behavior

6. In the past 12 months have any of your children engaged in or experienced the following? CHECK ALL THAT APPLY.

	If YES, check below	If YES, did you/your child seek help for this?	If you were satisfied with the help you received for this, check below
a. Gangs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Bullying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Drugs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Peer Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Abusive Relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Anger/Conflict Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Suicidal behaviors/ suicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Risky sexual behavior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Delinquency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Eating disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p. Overweight/obesity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

About Your Child's Education

7. In the past 12 months, did any of your children need any of the following? CHECK ALL THAT APPLY.

	If YES, check below	Did you seek this service?	If YES, are you satisfied with the services you received?
An evaluation from his/her school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tutoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech/OT/PT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Counseling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assistive Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Do any of your children currently have an IEP or IFSP?

(Circle your answer) Yes No Don't Know

If YES, are you satisfied with the services your child is receiving from the IEP or IFSP?

(Circle your answer) Yes No Don't Know

9. Do any of your children currently have a 504 plan?

(Circle your answer) Yes No Don't Know

If YES, are you satisfied with the services your child is receiving from the 504 plan?

(Circle your answer) Yes No Don't Know

10. At your child's last annual IEP meeting :

Was there a discussion about your child attending your neighborhood school?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
Did the school nurse attend your child's IEP?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
Are your child's health care needs addressed in his/her IEP?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know

About Your Child's Transition to Adulthood

Please answer questions 11 through 15 ONLY if you have a child age 13 or older with special needs. If you don't have a child age 13 or older with special needs, skip to question 16

11. Have any of your child's health care providers discussed having your child see a doctor who treats adults?

(Circle your answer) Yes No Don't Know

12. Eligibility for health insurance often changes as children reach adulthood. Have you considered how to obtain or keep some type of insurance coverage for your child as he/she becomes an adult?

(Circle your answer) Yes No Don't Know

13. Beginning at age 14, a transition plan must be included in your child's IEP. Have you participated in the development of a transition plan for your child?

(Circle your answer) Yes No Don't Know

Please answer questions 14 and 15 ONLY if you answered YES to Question 13. If you did not answer YES to Question 13, skip to question 16

14. Do you feel that your child's transition plan is specific to his/her needs and preferences?

(Circle your answer) Yes No Don't Know

15. Are you satisfied with the transition services provided?

(Circle your answer) Yes No Don't Know

About Your Sources of Information

16. Where or from whom do you get health advice?

	Check All That Apply	Which ONE most often?
Internet	<input type="checkbox"/>	<input type="checkbox"/>
Other Parents	<input type="checkbox"/>	<input type="checkbox"/>
Doctors	<input type="checkbox"/>	<input type="checkbox"/>
Family or Friends	<input type="checkbox"/>	<input type="checkbox"/>
Parent Organizations	<input type="checkbox"/>	<input type="checkbox"/>
Library	<input type="checkbox"/>	<input type="checkbox"/>
Television/Radio/Newspapers	<input type="checkbox"/>	<input type="checkbox"/>
School	<input type="checkbox"/>	<input type="checkbox"/>
Church	<input type="checkbox"/>	<input type="checkbox"/>
Alternative Providers (i.e. acupuncture)	<input type="checkbox"/>	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>	<input type="checkbox"/>
Other (please indicate where)	<input type="checkbox"/>	<input type="checkbox"/>

About Your Health Care Costs and Financing

17. During the past 12 months, how much would you say your family has paid for your child/children with special health care needs' medical care? Please **do not include** health insurance premiums or costs that were or will be reimbursed by insurance or another source. Please **do include** out-of-pocket payments for all types of health-related needs such as co-payments, dental or vision care, medications, special foods, adaptive clothing, durable equipment, home modifications, any kind of therapy, or other care or supplies needed.

	Check ONE
\$0 (Nothing)	<input type="checkbox"/>
Less than \$250	<input type="checkbox"/>
\$250 - \$499	<input type="checkbox"/>
\$500 - \$999	<input type="checkbox"/>
\$1000 - \$5000	<input type="checkbox"/>
More than \$5000	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>

18. During the past 12 months, was there any time when any of your children were not covered by ANY health insurance?

(Circle your answer) Yes No Don't Know

19. In the last 12 months, have you or other family members cut down on the hours you work, or stopped working, because of your child/children's health conditions?

(Circle your answer) Yes No Don't Know

Please answer questions 20 and 21 ONLY if you have PRIVATE HEALTH INSURANCE. If you don't have private health insurance, skip to question 22

20. Did you have any problems getting any of your children insured?

- Yes --- What problems did you have? _____
 No

21. Other than the cost for co-pays and deductibles, does it pay for all of the health care services needed by your child/children?

- Yes
 No --- What doesn't it pay for? _____

About Your Family's Health Care

22. What kind of place do you and your children go when you are sick? Please check the place where you go MOST OFTEN. Check only ONE for You and one for Your Children.

	YOU	Your Children
Doctor's Office		
Hospital Emergency Room (ER)		
Hospital Outpatient Department		
Clinic or Health Center		
School (Nurses Office, School-Based Health Center, Athletic Trainer's Office, Etc.)		
Alternative or Complementary Care (Acupuncturist, Herbalist, Massage Therapist, Etc.)		
Friend or Relative		
Some other place If yes, please indicate where:		
Do not go to one place most often		
Do not have a place to go		

23. During the past 12 months, was there any time when your family needed health care but it was delayed or not received? Check the box if care was needed but delayed or not received. CHECK ALL THAT APPLY.

	Yes	No
Medical Care	<input type="checkbox"/>	<input type="checkbox"/>
Dental Care	<input type="checkbox"/>	<input type="checkbox"/>
Mental Health Services	<input type="checkbox"/>	<input type="checkbox"/>
Counseling	<input type="checkbox"/>	<input type="checkbox"/>
Transportation to appointments	<input type="checkbox"/>	<input type="checkbox"/>
Medical Prescriptions/Medications	<input type="checkbox"/>	<input type="checkbox"/>
Something Else (Please indicate below)		

24. For the categories in Question 22 (above), was care delayed or not received due to a lack of availability of needed interpretation services (for example, Spanish or other language translation, or sign language interpretive services)?
 (Circle your answer) Yes No Don't Know

25. About how long has it been since you or your children last went to a dentist for a check-up?

	You (Check ONE)	Your Children (Check ONE)
Never		
6 months or less		
More than 6 months but not more than 1 year ago		
More than 1 year but not more than 2 years ago		
More than 2 years ago but not more than 5 years ago		
More than 5 years ago		
Don't know		

26. Do your children's teeth get brushed AT LEAST once per day?
 (Circle your answer) Yes No Don't Know

27. During the past 12 months, did any of your children see a specialist? Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and others who specialize in one area of health care.
 (Circle your answer) Yes No Don't Know

27a. If you answered YES to the question above about seeing a specialist, how far did you and your child/children travel to see the specialist?

- Check ONE
- 0 – 5 miles
 - 5 – 10 miles
 - 10 – 20 miles
 - 20 – 50 miles
 - 50 – 100 miles
 - More than 100 miles
 - Don't Know

About the Quality of Your Family's Health Care

28. Overall during the past 12 months, what is your level of satisfaction with medical care that you and your children have received? Please check only ONE for YOU AND one for YOUR CHILDREN

	YOU	YOUR CHILDREN
Very Satisfied	<input type="checkbox"/>	<input type="checkbox"/>
Somewhat Satisfied	<input type="checkbox"/>	<input type="checkbox"/>
Somewhat Dissatisfied	<input type="checkbox"/>	<input type="checkbox"/>
Very Dissatisfied	<input type="checkbox"/>	<input type="checkbox"/>
Have not Received Medical Care in the past 12 months	<input type="checkbox"/>	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>	<input type="checkbox"/>

29. If there was one thing that the state of Maryland could do for you and your children's health, what would that be?

30. Are there any other needs that you and your children have that weren't identified on this survey?

*Thank you for your participation in the Maryland Needs Assessment Parent Survey.
Your contribution is very valuable and we appreciate your time!*

Appendix B

**Maryland Maternal and Child Health (MCH) Stakeholder Meeting
2010 Title V MCH Needs Assessment
UMBC Technology Center South
March 23, 2010
Agenda**

*Vander Spruill, Division of Training Services, DHMH
Meeting Facilitator*

- 8:15 -8:45 a.m.
Registration and Continental Breakfast
- 8:45 – 9:15 a.m.
Welcome and Introductions
*Pamela Putman, R.N., M.P.H., Chief, MCH Systems Development, CMCH
Susan Panny, M.D., Director, OGCSHCN*
- 9:15 – 9:30
Overview and Background: The Title V Maternal and Child Health Program
Yvette McEachern, M.A., Chief, Federal-State Partnerships, CMCH
- 9:30 – 10:15 a.m.
 - **State of the State: Women’s and Perinatal Health in Maryland**
*S. Lee Woods, M.D., Ph.D., Medical Director, CMCH
Diana Cheng, M.D., Medical Director for Women’s Health, CMCH*
 - **Roundtable Discussions and Rankings**
Jessica Carda, Health Policy Analyst, CMCH
- 10:15- 11:00 a.m.
 - **State of the State: Child and Adolescent Health in Maryland**
*Cheryl DePinto, M.D., M.P.H., Medical Director for Child, Adolescent, and School Health, CMCH
Marsha Smith, M.D., M.P.H., Medical Director for Reproductive and Perinatal Health, CMCH*
 - **Roundtable Discussions and Rankings**
Jessica Carda, Health Policy Analyst, CMCH
- 11:00 – 11:45 a.m.
 - **State of the State: Children with Special Health Care Needs in Maryland**
*Meredith Pyle, Graduate Research Assistant, OGCSHCN
Ally Burlison-Gibson, M.S., Community Systems Develop. Coord., OGCSHCN
Josie Thomas, Executive Director, The Parents' Place of Maryland*
 - **Roundtable discussions and rankings**
Meredith Pyle, Graduate Research Assistant, OGCSHCN

- 11:45 – noon
Roundtable reports
Vander Spruill, Facilitator

- Noon – 12:30 p.m.
Lunch

- 12:30 – 1:00 p.m.
 - **Final Priority Ranking of Overall Needs**
Vander Spruill, Facilitator

 - **Closing Remarks**
Bonnie S. Birkel, C.R.N.P., M.P.H.

**Title V MCH Needs Assessment Stakeholder Meeting
March 23, 2010 – UMBC Technology Center**

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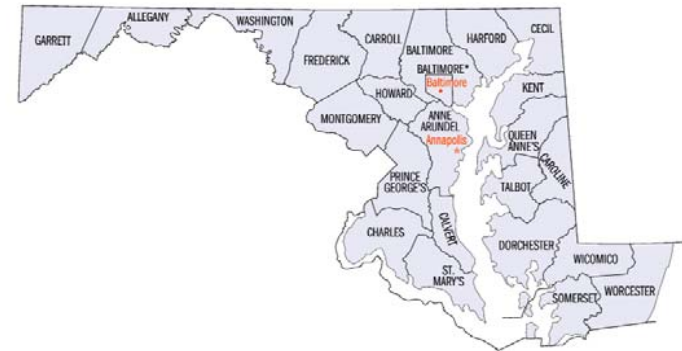
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Appendix C



Maryland Title V MCH Population Based Assessment Report for the 2010 Needs Assessment

Prepared by the
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Center for Maternal and Child Health
Office for Genetics and Children with Special Health Care Needs
Maryland Department of Health and Mental Hygiene
July 2010



2010 Population Based Assessment

Introduction

Appendix C documents the health status and needs of Maryland’s women of childbearing age, pregnant women, children and adolescents and children with special health care needs derived from various primary and secondary data sources. Data was gathered from both quantitative and qualitative sources in an attempt to create a comprehensive picture of the needs of the MCH population in Maryland. In most cases, the identified health indicators summarize Maryland’s progress on Title V performance measures and health status and capacity indicators. Because health disparities are a priority concern of the state, they are discussed throughout this report.

Each of the three maternal and child health workgroups examined population based needs according to several broad domains. For the Women of Childbearing Age, Pregnant Women and Infant Workgroup, the domains included preconception and reproductive health, maternal and pregnancy characteristics, pregnancy outcomes, mental health/substance abuse and behaviors and practices, access to care and infant health. The child and adolescent group examined mortality, morbidity and health conditions; education; access to care and mental health, behaviors and practices and reproductive health. Broad domains for assessing the health needs of children and youth with special health care needs need were chosen. They were based upon the existing national performance measures for CYSHCN as well as the content areas utilized on the National Survey of CSHCN.

Table of Contents

Introduction.....	Page 1
Women of Childbearing Age.....	Page 2
Preconception Factors.....	Page 19
Prenatal Care.....	Page 34
Substance Abuse During Pregnancy.....	Page 44
Pregnancy Outcomes.....	Page 52
Children and Adolescents.....	Page 87
Mortality and Hospitalizations.....	Page 96
Physical Activity, Nutrition and Obesity.....	Page 114
Access to Care.....	Page 140
Reproductive Health.....	Page 160
Children with Special Health Care Needs.....	Page 177

MCH Population Group: Women of Childbearing Age

I. Demographics

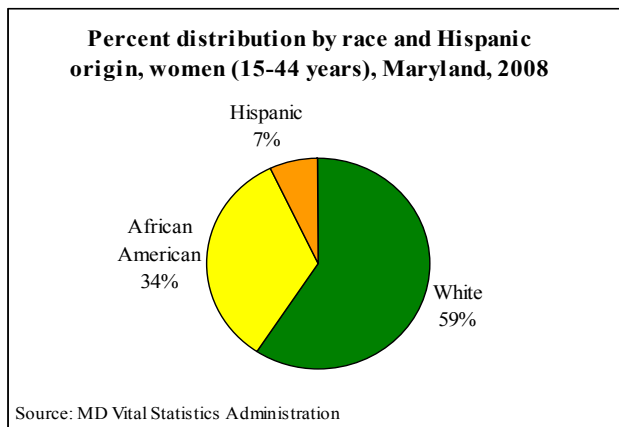
Source: Maryland Vital Statistics Administration

Approximately 1.2 million women of traditional childbearing age (15-44 years) were living in Maryland in 2008. Women of childbearing age represented 21 percent of Maryland’s total population of 5.6 million.

Table 1

	All Races	White, non-Hispanic	African American	Hispanic
Ages 15-44	1,181,193	622,717	400,564	83,412
15-19	199,714	119,817	70,205	12,229
20-24	186,727	111,971	64,338	12,359
25-29	189,779	112,947	64,489	15,136
30-34	179,440	103,805	60,515	15,632
35-39	201,972	117,921	68,300	14,884
40-44	223,561	136,553	72,717	13,172

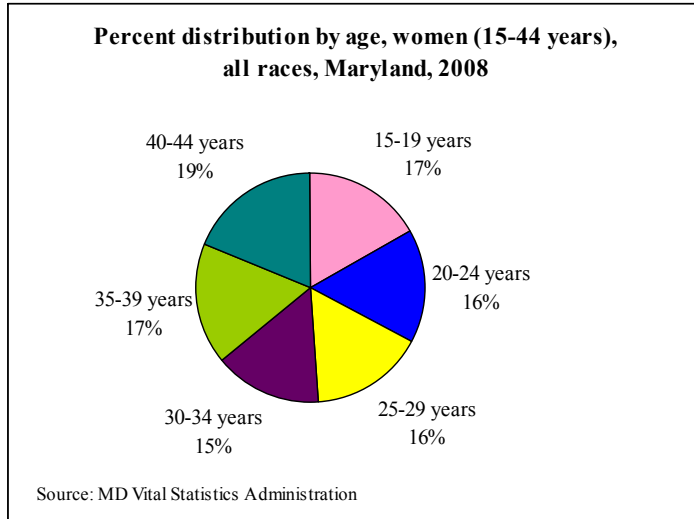
Figure 1



As displayed in Figure 1.1, the majority of the women of childbearing age in Maryland are White (59%), 34 percent are African American and 7 percent are Hispanic.

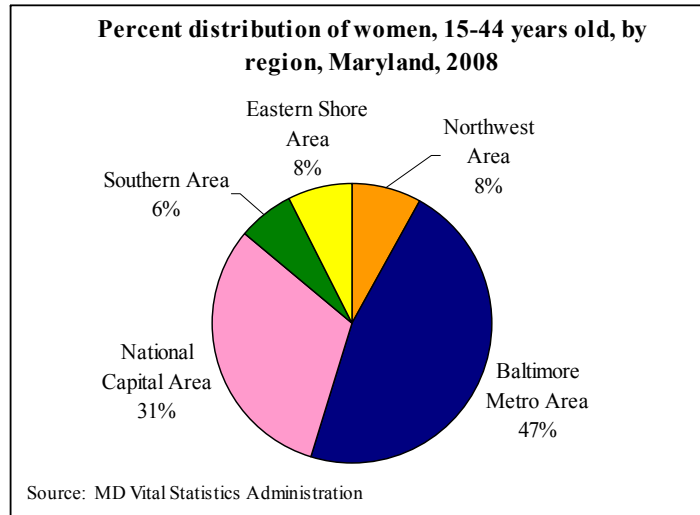
While Hispanic women make up a relatively small part of the population, this is a population group that is growing and that presents significant challenges for Maryland’s maternal and child health service delivery system, due to cultural and language differences. In just one year, the Maryland population of Hispanic women of childbearing age has grown by 5 percent. And, since 2000, the total Hispanic population of Maryland has grown by 65 percent.

Figure 2



As shown in Figure 1.2, there is a relatively even age distribution among women of childbearing age in Maryland. In 2008, a slightly higher percentage of these women were older, with 19 percent in the 40-44 year-old age group. The smallest age group was women 30-34 years old, representing 15% of the population of women of childbearing age.

Figure 3



As is true for the rest of the population, the majority of the women of childbearing age reside in the two metropolitan areas surrounding Baltimore City and Washington, D.C.

Table 2

Maryland Female Population by Age Group and Region, 2008				
	15-19	20-24	25-34	35-44
Maryland	199,714	186,727	369,219	425,533
Northwest Area	15,848	14,447	32,126	33,704
Baltimore Metro Area	94,652	88,902	171,587	194,764
National Capital Area	62,153	58,217	110,007	141,307
Southern Area	12,279	10,655	24,697	26,479
Eastern Shore Area	14,782	14,506	30,802	29,279

II. Income and Poverty Rate

Sources: U.S. Census Bureau, American Community Survey, 2007 and 2008; Maryland Department of Planning, 2007 ACS

Income

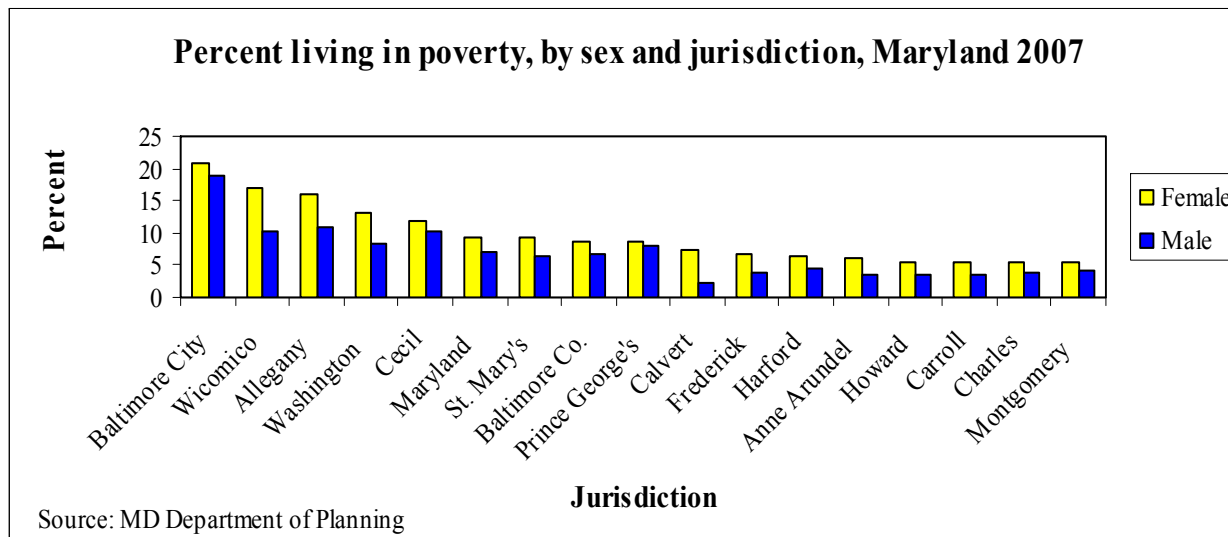
In each of the 50 states and the District of Columbia in 2008, women’s median earnings were less than men’s median earnings. However, the extent of this difference varies from state to state. Nationally, women earned an estimated 77.9 percent of men’s earnings.

Maryland is one of nine states, in addition to the District of Columbia, where the women’s-to-men’s earnings ratio was higher than the national ratio. In Maryland in 2008, women earned an estimated 83.0 percent of what men earned, with median earnings for men at \$53,189 and for women at \$44,188.

Poverty Rate

In a 2007 assessment of the poverty rate in 16 of the state’s jurisdictions (those with populations of 65,000 or more), 9.4 percent of women were living below the poverty level. In comparison, 7.1 percent of men were below the poverty level in 2007.

Figure 4



The percent of the population living in poverty varies by jurisdiction in Maryland. The jurisdiction with the highest percent of females and males in poverty is Baltimore City, with 20.9 and 18.9 percent respectively. Other jurisdictions with high percentages of impoverished women are Wicomico, Allegany and Washington Counties, with 17.0, 16.0 and 13.2 percent of women impoverished, respectively. Jurisdictions with the lowest percentages of women in poverty are Howard, Carroll, Charles and Montgomery Counties, with 5.6, 5.5, 5.4, and 5.3 percent of women living below the poverty line, respectively.

III. Insurance Coverage

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2007-2009; Maryland Health Care Commission, Health Insurance Coverage in Maryland Through 2007

In 2006-2008, 17.7 percent of Maryland women, ages 15-44, were uninsured. To some extent, the percent of women who are uninsured varies by age, race and Hispanic origin. The following tables provide more detailed information on these differences.

Table 3

Health Insurance Coverage of Maryland Females by Age Group, 2006-2008				
	Insured		Uninsured	
	Number	Percentage	Number	Percentage
15 to 24 years	342,716	81.6%	77,269	18.4%
25-34 years	271,341	79.7%	68,966	20.3%
35-44 years	360,482	85.1%	63,169	14.9%

Table 4

Health Insurance Coverage of Maryland Females, 15-44 years, by Race, 2006-2008				
	Insured		Uninsured	
	Number	Percentage	Number	Percentage
White Alone	591,094	83.8%	114,049	16.2%
Black Alone	311,558	79.2%	81,727	20.8%
Asian Alone	55,953	82.9%	11,501	17.1%

Table 5

Health Insurance Coverage of Maryland Females, 15-44 years, by Hispanic Origin, 2006-2008				
	Insured		Uninsured	
	Number	Percentage	Number	Percentage
Hispanic	55,621	56.2%	43,418	43.8%
Non-Hispanic	918,918	84.7%	165,986	15.3%

Single women were about twice as likely to be uninsured as married women (Table 6).

Table 6

Source: Maryland Health Care Commission, Health Insurance Coverage in Maryland Through 2007

Insurance Coverage for Maryland Women, 2006-2007			
	Private Insurance	Medicaid and Other Public	Uninsured
Married 19-44	83%	4%	13%
Single 19-44	65%	10%	25%

IV. Mortality

Source: Maryland Vital Statistics Administration

In Maryland in 2008, there were a total of 941 deaths among women, ages 15-44. While the number of deaths among white and African American women was similar, the death rates per 100,000 population in these two racial groups differed significantly. Death rates by race and Hispanic origin, and age are available in Tables 4.1 and 4.2.

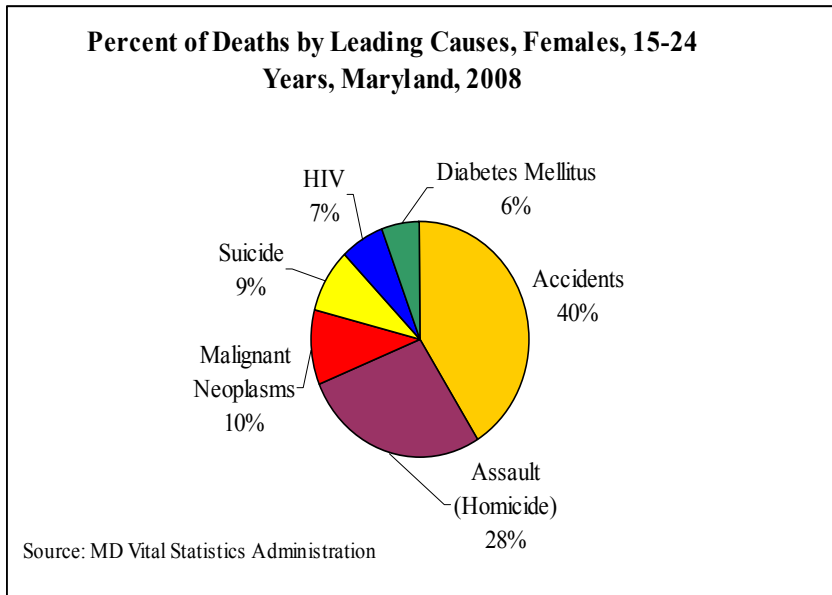
Table 7

Mortality by race and Hispanic origin, women, ages 15-44, Maryland, 2008		
	Number of deaths	Death rate per 100,000
All females, 15-44 years	941	79.7
White, non-Hispanic	434	61.7
African American	447	111.59
Hispanic	28	33.6

Table 8

Death rates per 100,000 by age, race and Hispanic origin, Maryland, 2008			
	15-24 years	25-34 years	35-44 years
Female—all deaths	37.3	60.9	134.4
White, non-Hispanic	30.9	54.9	115.3
Black	45.3	80.8	202.1
Asian/Pacific Islander	43.4	30.9	49.6
Hispanic	40.7	32.5	28.5

Figure 5

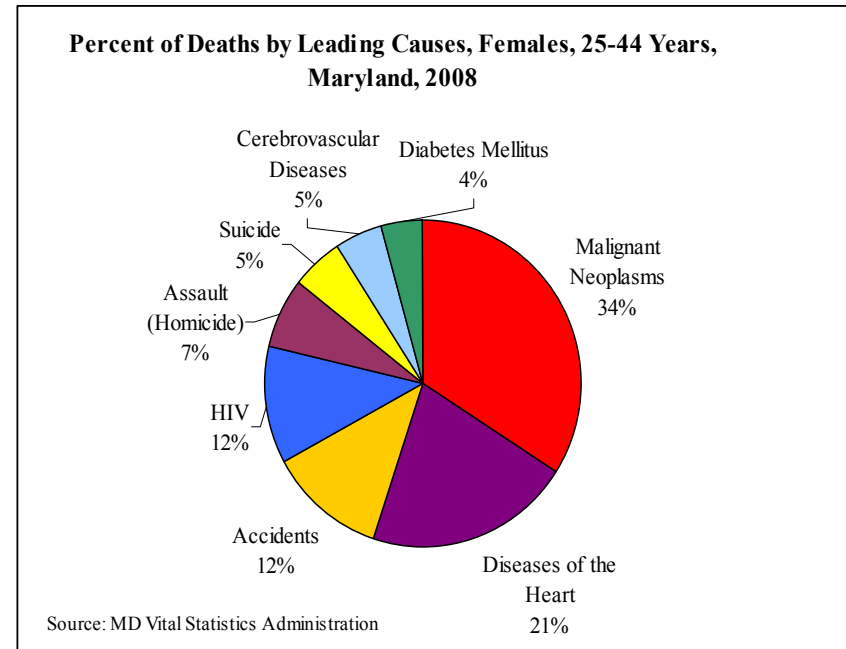


In 2008, the leading causes of death for young women, ages 15-24, were accidents and homicide.

A total of 37 women, ages 15-24, died as the result of an accident, and 25 died by homicide.

An additional 9 females, 15-24 years, died as the result of malignant neoplasms (cancer), 8 by suicide, 6 by HIV, and 6 as the result of diabetes.

Figure 6



In 2008, the leading causes of death for women, ages 25-44 years, were malignant neoplasms (cancer) and heart disease, followed by accidents and HIV.

A total of 179 women, ages 25-44 years, died from malignant neoplasms, 108 died from heart disease, 63 by accidents, and 61 from HIV.

An additional 36 died by homicide, 27 by suicide, 26 from cerebrovascular diseases and 22 as the result of diabetes.

Causes of death to women of childbearing age differ by race

The leading cause of death for white females, 15-24 years of age, is accidents, whereas the leading cause of death for African Americans in the same age group is homicide.

The leading cause of death for both white and African American females, 25-44 years, is malignant neoplasms, or cancer.

However, for African American females, 25-44 years of age, HIV is the second leading cause of death, while HIV is not even one of the top 8 causes of death for white females in this age group. Likewise, suicide is the 4th leading cause of death for white females, 25-44 years, while suicide is not even one of the top 8 causes of death for African American females in this age group.

Table 9

Death rates per 100,000 population for the leading causes* of death among females by race and age, Maryland 2008				
	White females, 15-24	White females, 25-44	African American females, 15-24	African American females, 25-44
Accidents	10.8 (1)	7.9 (3)	6.7 (2)	9.4
Homicide	3.5 (2)	2.8	12.6 (1)	8.6
Suicide	2.6 (3)	4.2		
HIV			3.7 (3)	21.1 (2)
Malignant neoplasms		19.5 (1)		28.9 (1)
Diseases of the heart		12.1 (2)		18.0 (3)
Diabetes Mellitus		2.5		3.8
Septicemia		1.7		3.0
Cerebrovascular diseases		1.7		6.4

*Leading causes are shown only if there were five or more deaths in a given category.

V. General Health and Chronic Conditions

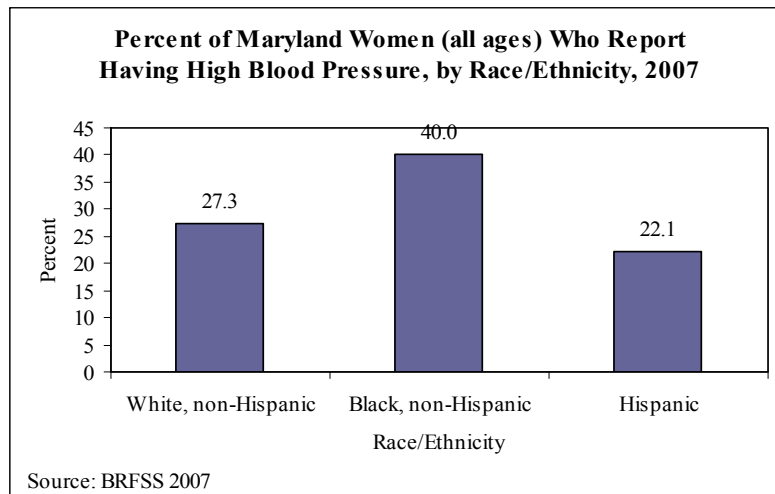
Source: Maryland Behavior Risk Factor Surveillance System, 2000-2008

When asked, “How is your health in general?” 67 percent of Maryland women, ages 18-44, said that their health was either “excellent” or “very good”. Twenty six percent said that they were in “good health,” and 8 percent declared their health to be either “fair” or “poor”.

Table 10

Percent of women, ages 18-44, with chronic health conditions, Maryland, 2008	
Activities are limited due to physical, mental or emotional problems	15.3%
Diagnosed with a depressive disorder	21.0%
Diagnosed with an anxiety disorder	15.4%
Currently have asthma	12.4%

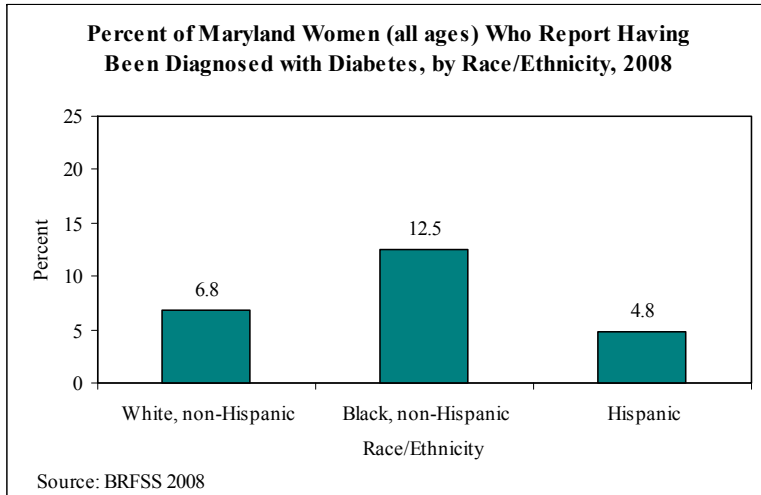
Figure 7



40 percent of Black, non-Hispanic women in Maryland have reportedly been diagnosed as having high blood pressure.

This is 13 percent greater than the number of White, non-Hispanic women with high blood pressure, and 18 percent greater than the number of Hispanic women with high blood pressure. Both of these differences are statistically significant.

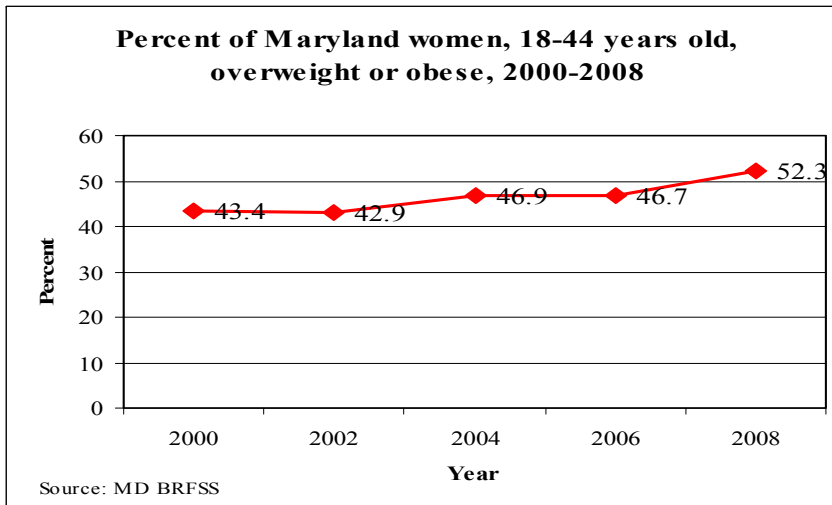
Figure 8



12.5 percent of Black, non-Hispanic women in Maryland have reportedly been diagnosed with diabetes (excluding diabetes during pregnancy).

This is statistically significantly greater than the percentage of White, non-Hispanic women and Hispanic women with diabetes in Maryland.

Figure 9



In 2008, 52.3 percent of women, ages 18-44, in Maryland reported that they were overweight (26.6%) or obese (25.7%). The percent of Maryland women who report that they are overweight or obese has increased by 21% (from 43.4% to 52.3%) from 2000 to 2008.

Note: Overweight is defined as a BMI of 25.0-29.9, and obese is defined as a BMI of 30.0 and above.

Top 10 Reasons for Hospitalization (excluding obstetrically-related hospitalizations), 2008

Source: HSCRC Hospital Inpatient Data, 2008

In 2008, there were a total of 24,825 hospital discharges among Maryland women, ages 15-24 years. The leading cause of hospitalization was affective disorders, which accounted for nearly 12 percent of all hospitalizations in this age group of women.

Top Ten Non-Obstetric Hospitalizations, Women, 15-24 Years		
1	Affective disorders	11.9%
2	Appendicitis and other appendiceal conditions	4.8%
3	Skin and subcutaneous tissue infections	3.2%
4	Intracranial injury	2.9%
5	Schizophrenia and related disorders	2.8%
6	Sickle Cell Anemia	2.7%
7	Other mental conditions	2.6%
8	Diabetes Mellitus with complications	2.6%
9	Crushing injury or internal injury	2.4%
10	Biliary Tract Disease	2.1%

In 2008, there were a total of 94,476 hospital discharges among Maryland women, ages 25-44 years. The leading cause of hospitalizations was affective disorders, which accounted for 8 percent of all hospitalizations in this age group of women.

Top Ten Non-Obstetric Hospitalizations, Women, 25-44 years		
1	Affective disorders	8.0%
2	Nonspecific chest pain	4.1%
3	Skin and subcutaneous tissue infections	3.3%
4	Schizophrenia and related disorders	2.8%
5	Spondylosis; intervertebral disc disorders; other back problems	2.6%
6	Benign neoplasm of uterus	2.4%
7	Diabetes Mellitus with complications	2.3%
8	Substance-related mental disorders	2.3%
9	Biliary Tract Disease	2.1%
10	Complications of surgical procedures or medical care	2.0%

VI. Preventive Health

Source: Maryland Behavior Risk Factor Surveillance System, 2008; Monitoring Changing Tobacco-use Behaviors in Maryland: A Report on the 2000-2006 Maryland Tobacco Studies, Maryland Department of Health and Mental Hygiene, Cigarette Restitution Fund's Tobacco Use Prevention and Cessation Program, November 2007.

In 2008, for nearly 15 percent of women, 18-44 years, it had been more than 2 years since they had last visited a doctor for a routine checkup.

Table 11

Reproductive health care, women, 18-44, Maryland, 2008	
Ever had a pap smear	89.4%
Had a pap smear within the past two years	79.7%
Ever had a mammogram and breast exam (women 40+)	76.0%
Ever been tested for HIV (excluding tests for blood donations)	62.7%

Table 12

Oral health care, women, 18-44, Maryland 2008					
	Never	< 1 year	1 to < 2 years	2 to < 5 years	≥ 5 years
Length of time since last teeth cleaning	0.3%	68.7%	15.2%	10.2%	5.5%

Table 13

Healthy eating among women, 18-44, Maryland, 2008				
	5 or more times per day	3 but less than 5 times per day	1 but less than 3 times per day	Less than once per day or never
Frequency of fruit and vegetable consumption	29.3%	37.7%	28.2%	4.8%

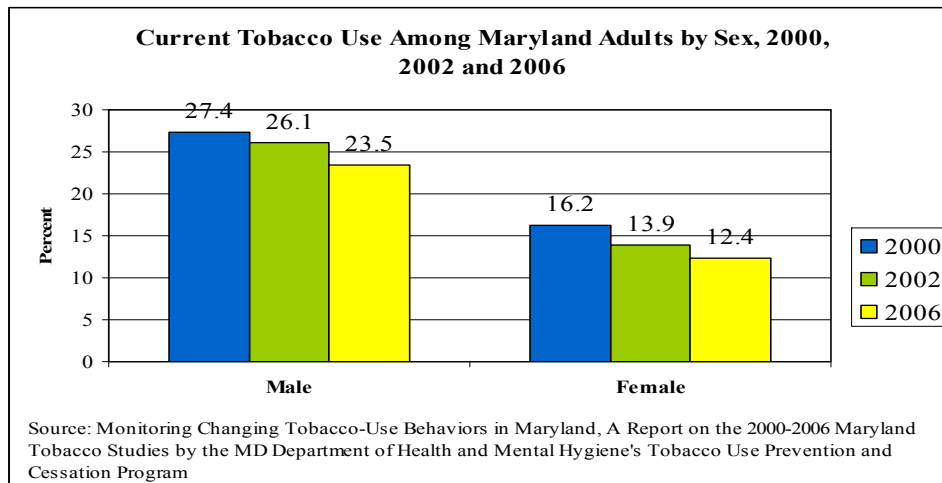
Table 14

Progress on Healthy People 2010 Objectives for Physical Activity, women, 18-44 years, Maryland 2008			
	Meet objective	Insufficient activity	No activity
Vigorous activity for 20 minutes or more per day, 3+ days per week	29.3%	20.6%	50.0%
Moderate physical activity for 30 minutes or more per day, 5+ days per week	38.1%	50.3%	11.6%

Table 15

Substance Use among women, 18-44 years, Maryland 2008	
Percent who are current smokers-defined as having smoked at least 100 cigarettes in their lifetime and currently smoking	14.7%
Percent who are chronic drinkers-defined as consuming more than 1 drink per day	4.9%
Percent who are binge drinkers-defined as having 5 or more drinks on at least one occasion in the past month	14.9%

Figure 10



Among male adults, there was a significant decline in current tobacco use between 2000 and 2006 (27.4% and 23.5%, respectively), representing a 14% decline in tobacco use.

Between 2000 and 2006, there was also a significant decline in tobacco use among female adults (16.2% and 12.4%, respectively), representing a decline of 23%.

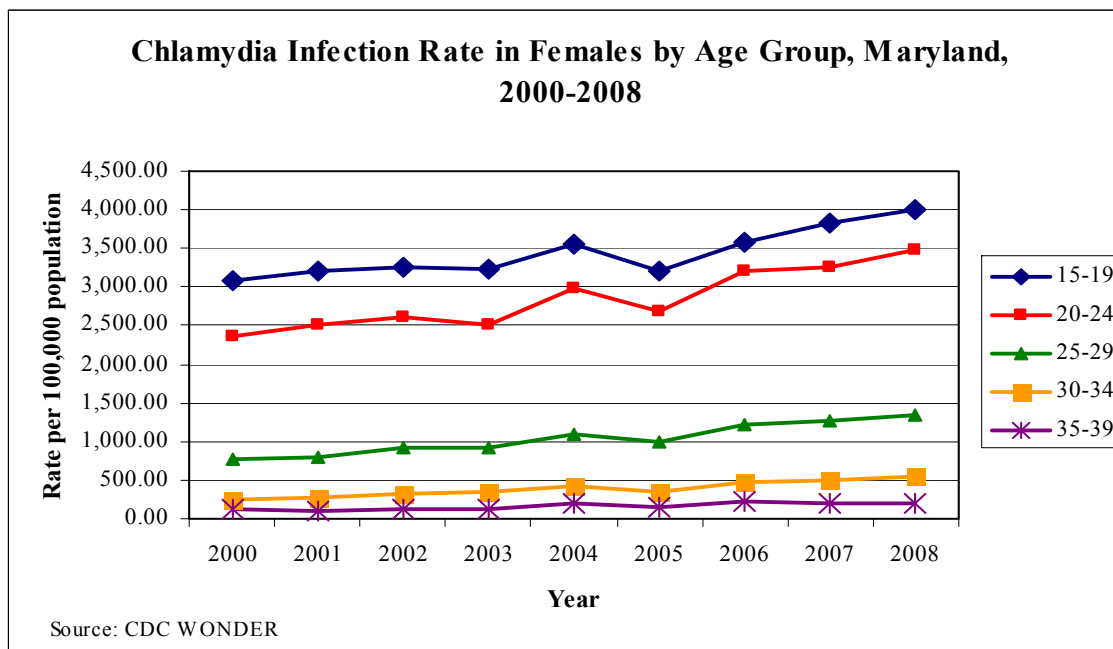
VII. Sexually Transmitted Infections

Source: Centers for Disease Control and Prevention, Sexually Transmitted Disease Surveillance and WONDER

A. Chlamydia

Trends by Age Group

Figure 11

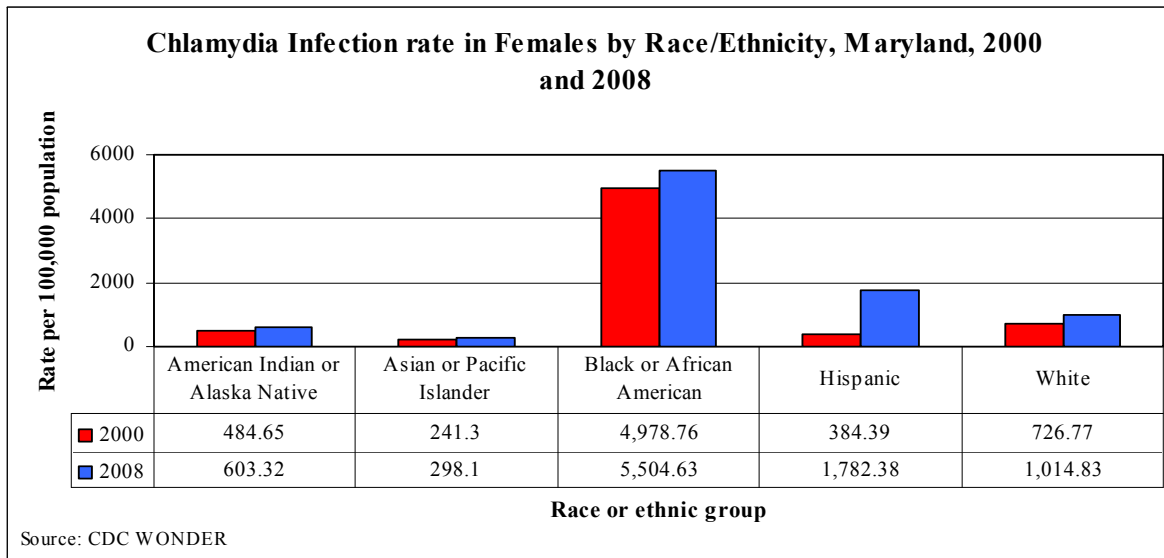


Since 2000, Chlamydia infection rates have increased among Maryland females of childbearing age. Females ages 15-24 have consistently had the highest rate of Chlamydia infections in the past decade, but women ages 30-34 have experienced the greatest rate of increase in the same time period.

The infection rate among females 15-19 years has increased by 30 percent (from 3,084 to 4,008 cases per 100,000), in females 20-24 years by 47 percent (from 2,363 to 3,473 cases per 100,000), in females 25-29 years by 73 percent (from 772 to 1,333 cases per 100,000), in females 30-34 years by 93 percent (from 259 to 542 cases per 100,000), and 35-39 by 67 percent (from 121 to 209 cases per 100,000).

Stratification by Race/Ethnicity

Figure 12

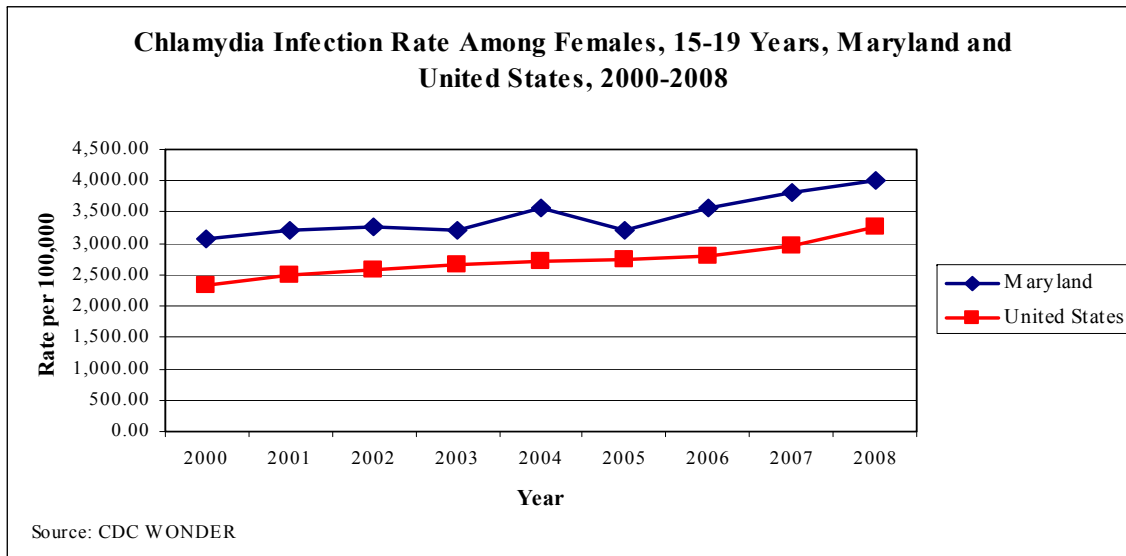


Since 2000, Black or African American females have had the highest rate of Chlamydia infection among all race/ethnic groups in Maryland.

However, Hispanic females have experienced the greatest increase in Chlamydia infection rates between 2000 and 2008, with a 360 percent increase.

Comparison to U.S.

Figure 13



From 2000 through 2008, Maryland females, ages 15-19, have had higher rates of Chlamydia than females in the same age group nationwide.

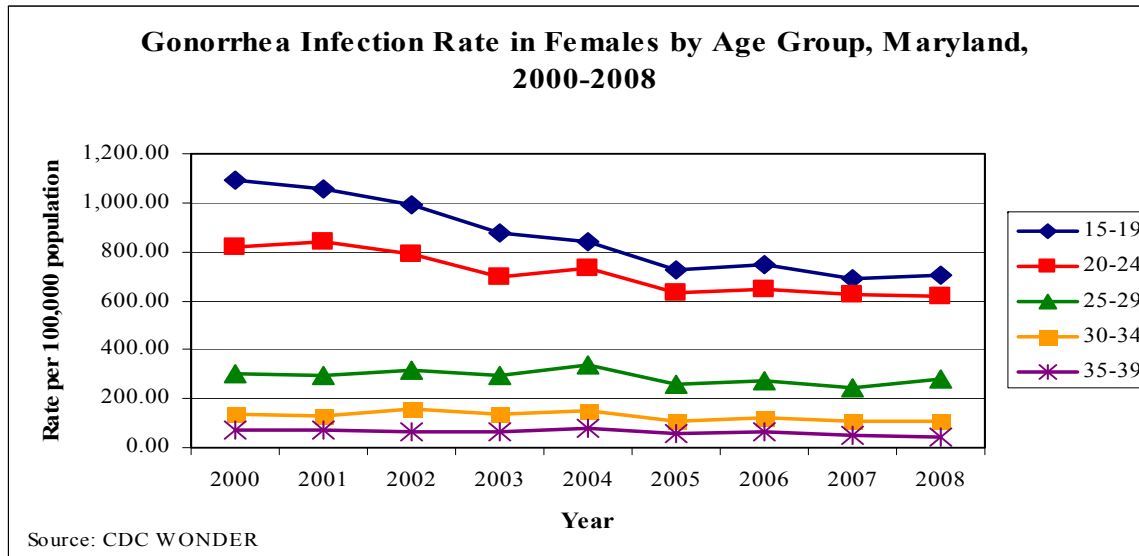
In 2008, Maryland's Chlamydia infection rate in females, 15-19, was 4,008.11 cases per 100,000 and the U.S. infection rate for this same group was 3,257.67 cases per 100,000.

B. Gonorrhea

Healthy People 2010 Goals: Reduce gonorrhea infection rate to 19 new cases per 100,000 population

In 2008, Maryland had 6,666 reported cases of gonorrhea and a rate of 118.6 per 100,000 population. The state was ranked 19th among the 50 states and had a rate higher than the national rate of 111.6 and much higher than the Healthy People 2010 Goal of 19.0.

Trends by Age Group
Figure 14



Females in the youngest age groups, 15-19 and 20-24 year olds, have consistently had the highest Gonorrhea infection rates in Maryland over the past decade.

However, the rate of Gonorrhea infection among women of all age groups in Maryland has decreased from 2000 to 2008.

The infection rate has decreased among females ages 15-19 by 36 percent (from 1,092 to 701 cases per 100,000), decreased in females ages 20-24 by 25 percent (from 822 to 618 cases per 100,000), decreased in females ages 25-29 by 6 percent (from 301 to 283 cases per 100,000), decreased in females ages 30-34 by 21 percent (from 138 to 109 cases per 100,000), and decreased in females ages 35-39 by 40 percent (from 75 to 45 cases per 100,000).

C. Syphilis

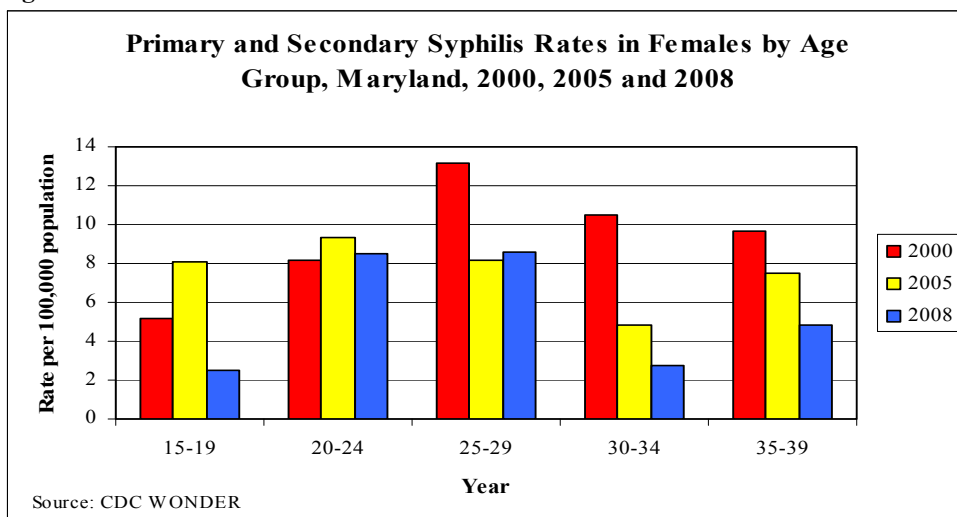
Healthy People 2010 Goal: Reduce cases of primary and secondary syphilis to 1.0 per 100,000 population

In 2008, Maryland reported 378 cases of primary and secondary syphilis. The state ranked six among the 50 states, Washington, D.C., and 3 territories, with 6.7 cases per 100,000. Maryland's 2008 primary and secondary syphilis rate was also higher than the U.S. rate of 4.5 cases per 100,000.

In Maryland, the rate among males was 11.1 per 100,000 population compared to the U.S. male rate of 7.6 per 100,000. The rate among females was 2.7 per 100,000 compared to the U.S. female rate of 1.5 per 100,000.

In Maryland, the race/ethnicity adjusted rates per 100,000 population were 2.3 among whites, 17.1 among African Americans, 2.8 among Hispanics, 3.1 among Asian/Pacific Islanders, and 5.9 among American Indians/Alaska Natives. The rate among African Americans was 7.4 times that of whites. The rate among Hispanics was 1.2 times that of whites. The rate among Asian/Pacific Islanders was 1.3 times that of whites. The rate among American Indians/Alaska Natives was 2.6 times that of whites.

Trends by Age Group
Figure 15



D. HIV/AIDS

Source: MD Department of Health and Mental Hygiene, Infectious Disease and Environmental Health Administration, Center for HIV Surveillance and Epidemiology; Maryland AIDS Administration

In 2007, 2,866 new cases of HIV and 1,211 new cases of AIDS were diagnosed in the state of Maryland. The rate of reported AIDS cases in Maryland, 24.8 per 100,000 population, ranks fourth among states and territories in the U.S., and the estimated number of persons living with AIDS as of December 31, 2007, 15,682, ranks ninth among states and territories in the U.S.

In 2007, the majority (79 percent) of HIV diagnoses occurred among non-Hispanic African American individuals. Fifteen percent occurred among non-Hispanic whites, one percent among Hispanics, and five percent among individuals of other race or ethnicity.

In the same year, the majority (31 percent) of HIV diagnoses occurred among individuals aged 40-49. Twenty-three percent of HIV diagnoses were in 30-39 year olds, 19 percent in 20-29 year olds, and 17 percent in 50-59 year olds. Only five percent of HIV diagnoses in 2007 were in individuals younger than 20 and five percent in individuals older than 60.

Thirty-eight percent of Maryland HIV diagnoses in 2007 occurred in Baltimore City (38.3 percent), 23.2 percent in Prince George's County, and 14.1 percent in Montgomery County. Seven point five percent of diagnoses were in Baltimore County and 3.7 percent in Anne Arundel County. The remaining 13 percent of HIV diagnoses in 2007 occurred in the other 19 jurisdictions.

HIV in Maryland Females

The percentage of female HIV and AIDS cases has been increasing over time in Maryland. The proportion of HIV diagnoses in Maryland that were female has more than doubled from 15.3 percent in 1985 to 37.1 percent in 2007. Of all AIDS cases diagnosed in 1985, 10 percent were female. This proportion has steadily increased to 38 percent (458) of AIDS cases in 2007.

And, of the 28,270 total living HIV cases (with or without AIDS) on 12/31/2007 in Maryland, 10,137 (35.9%) were female. This was a rate of 349.6 cases per 100,000 women. Or in other words, 1 in every 286 women in Maryland was reported to be living with HIV.

Total living HIV case rates in Maryland women were 8 to 20 times higher among non-Hispanic blacks (1,003.5 cases per 100,000 on 12/31/2007) as compared to Hispanics (124.9), non-Hispanic whites (68.7), and other races (51.2).

Total living HIV case rates in Maryland were highest among women in their 40's (834.1 cases per 100,000 on 12/31/2007) followed by women in their 30's (696.2) and their 50's (477.8).

The following chart provides data on female reported living HIV cases (with or without an AIDS diagnosis), as reported through December 31, 2008:

Table 16

Reported Living HIV Cases (with or without AIDS diagnosis), Maryland, Through 12/31/08						
Age		Race/Ethnicity				Total
		Non-Hispanic White	Non-Hispanic Black	Hispanic	Other	
13-19	Number of cases	17	176	1	3	197
	Rate	11.5	192.8	5.9	16.9	71.9
20-29	Number of cases	115	726	38	8	887
	Rate	58.6	592.6	139.3	29.7	237.8
30-39	Number of cases	343	2,241	64	35	2,691
	Rate	172.8	1,777.7	217.7	107.6	696.2
40-49	Number of cases	424	3,350	79	33	3,892
	Rate	156.7	2,339.6	342.3	111.1	834.1

VIII. Preconception Factors

Source: Maryland PRAMS Report, 2003-2008

Note: PRAMS data includes only information on pregnancies that end in live birth

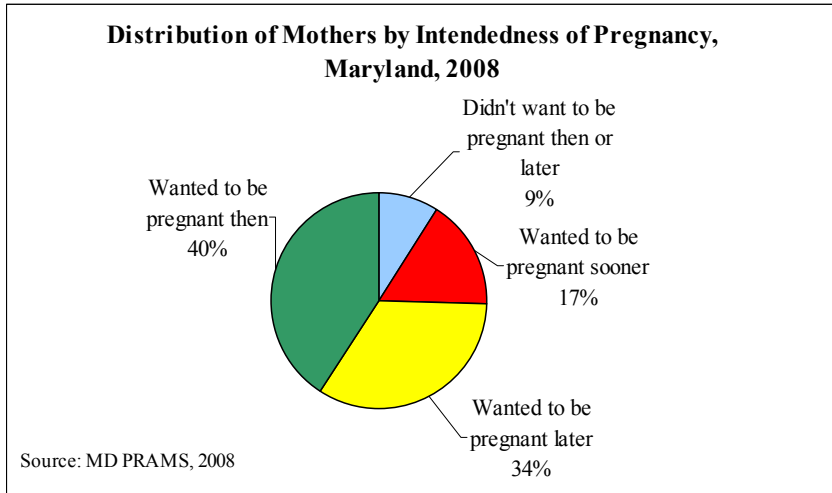
A. Unintended Pregnancies

Maryland State Priority: Promoting healthy pregnancies and healthy pregnancy outcomes.

Performance Measure: Percent of pregnancies that are intended.

Healthy People 2010 Goal: Increase the proportion of pregnancies that are intended to 70%.

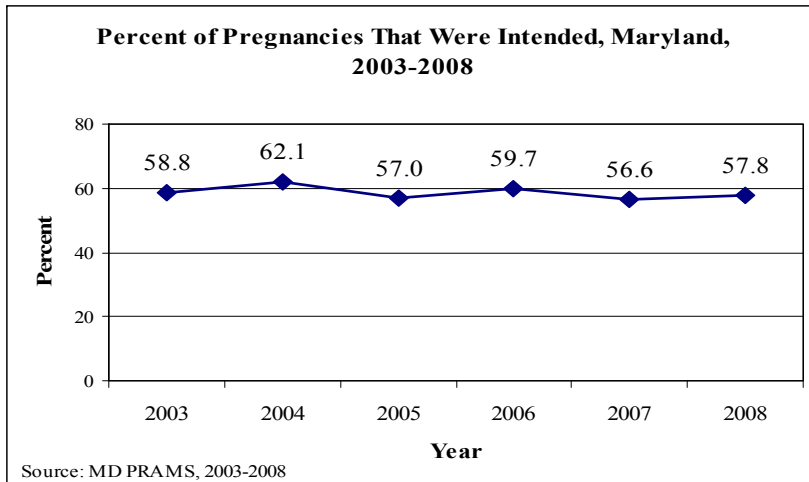
Figure 16



When asked the question, “Thinking back to just before you got pregnant, how did you feel about becoming pregnant?” 56 percent of Maryland women in 2008 reported that the pregnancy was intended (that she had either wanted to become pregnant at that time or earlier).

33 percent of women reported mistimed pregnancies, and 11 percent unintended pregnancies.

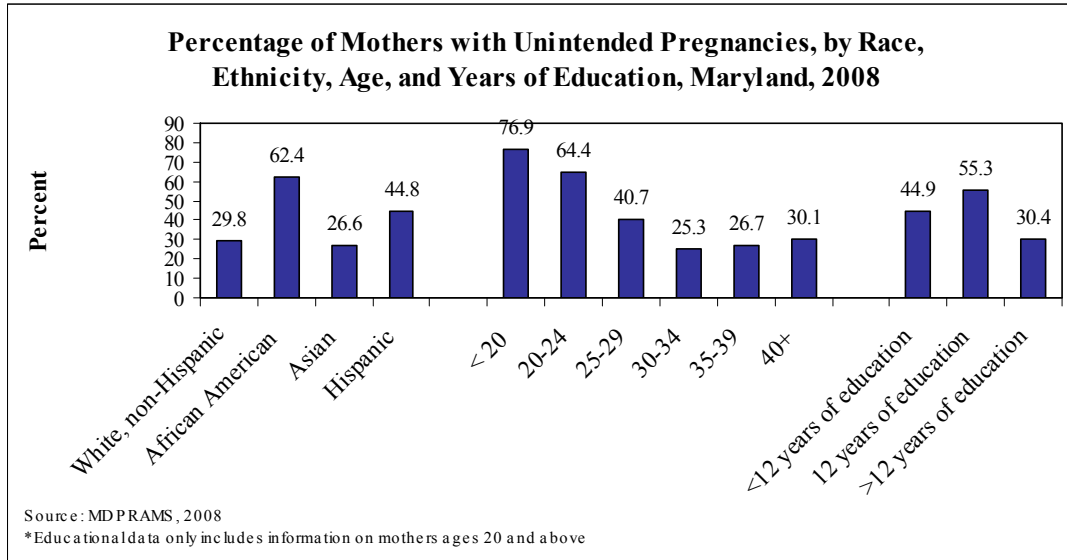
Figure 17



The percent of Maryland pregnancies that are intended has decreased by 2 percent since 2003, from 58.8 to 57.8 percent.

Maryland still has more work to do in preventing unintended pregnancies, in order to meet the Healthy People 2010 Goal of 70 percent of pregnancies being intended.

Figure 18

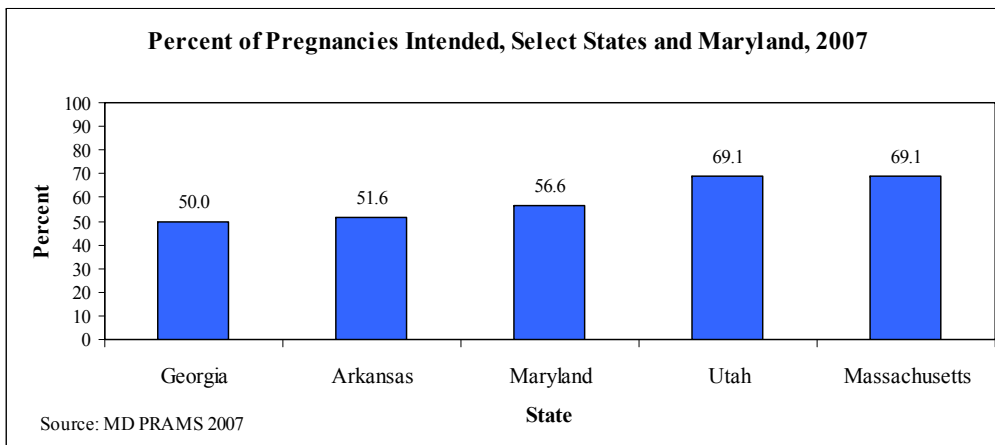


The percent of pregnancies that were intended varied by race and ethnicity, age, and years of education.

As displayed in Figure 1.3, African American women have the highest percent and Asian women have the lowest percent of unintended pregnancies in Maryland.

Women under the age of 24 have higher percentages of unintended pregnancies than women in other age groups, and women with more than 12 years of education have a lower percent of unintended pregnancies.

Figure 19

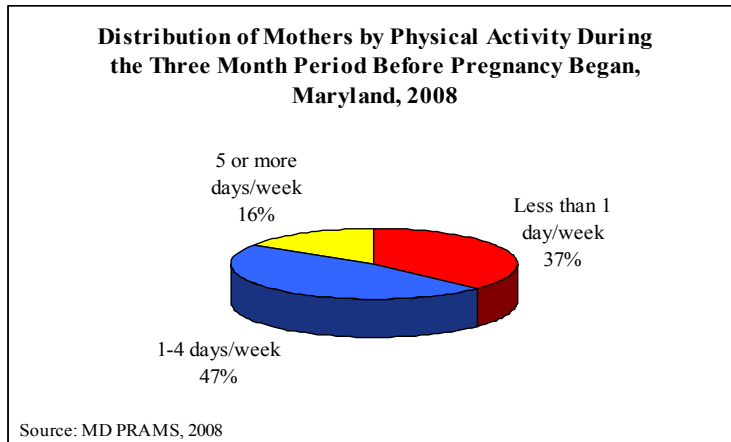


Of the 29 states and jurisdictions that participated in the 2007 Pregnancy Risk Assessment Monitoring System, Georgia and Arkansas had the lowest percentage of intended pregnancies (50.0 % and 51.6 % intended, respectively).

The two states with the highest percentage of intended pregnancies were Utah and Massachusetts, both with 69.1 percent of pregnancies intended. Maryland falls in the lower end of this range with 56.6 percent of pregnancies intended in 2007.

B. Physical Activity

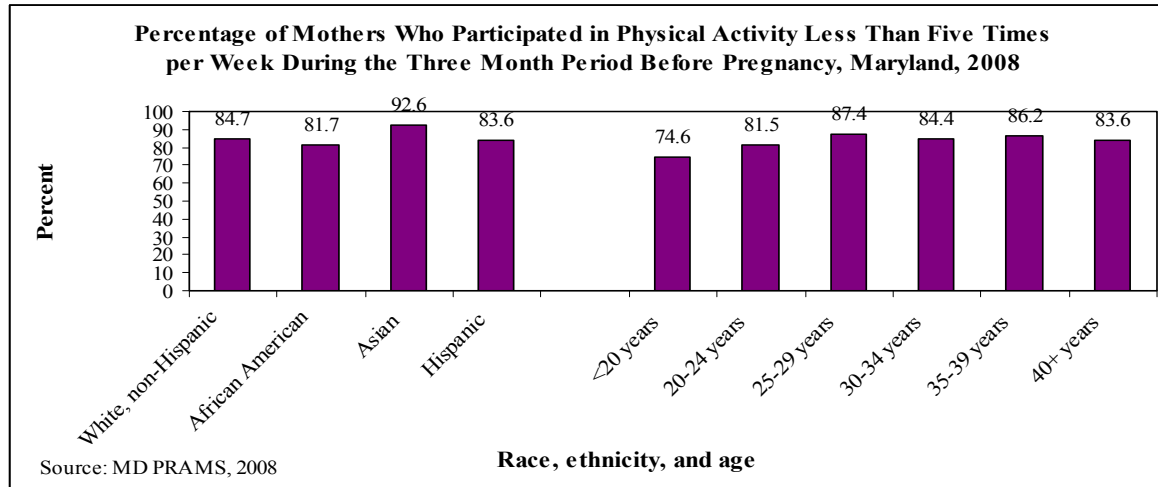
Figure 20



According to the 2008 Pregnancy Risk Assessment Monitoring System, 37 percent of women reported exercising less than 1 day per week in the three months prior to pregnancy.

The majority of women reported exercising 1-4 days per week prior to pregnancy (47%), and 16 percent reported exercising 5 or more days per week in the three months before they their pregnancy began.

Figure 21



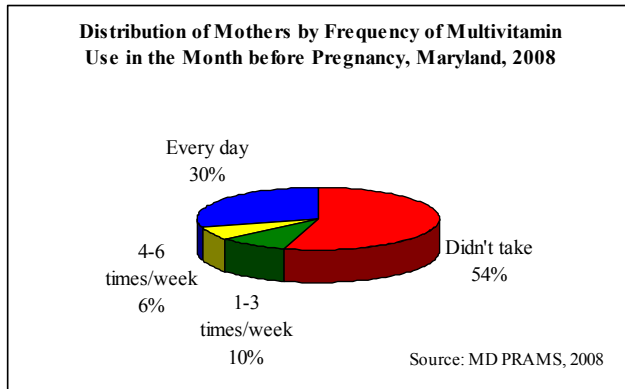
The majority of Maryland mothers reported that they had not participated in physical activity at least 5 times per week, prior to pregnancy.

However, women under age 20 and African American women were more likely to have participated in physical activity at least 5 days per week than other age and racial/ethnic groups.

C. Multivitamin Use

Healthy People 2010 Goal: Consumption of at least 400 micrograms of folic acid each day from fortified foods or dietary supplements by 80 percent of non-pregnant women aged 15 to 44 years.

Figure 22

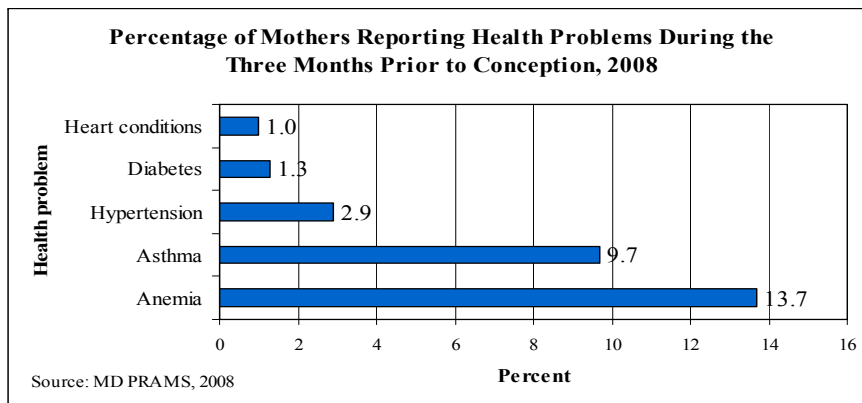


Folic acid has been demonstrated to prevent neural tube defects and, for this reason, one Healthy People 2010 Goal is to increase the percent of women of childbearing age who consume at least 400 micrograms daily to 80 percent. Multivitamins are a good source of folic acid.

In 2008 in Maryland, only 30 percent of women reported taking a daily multivitamin in the month before pregnancy.

D. Health Problems

Figure 23



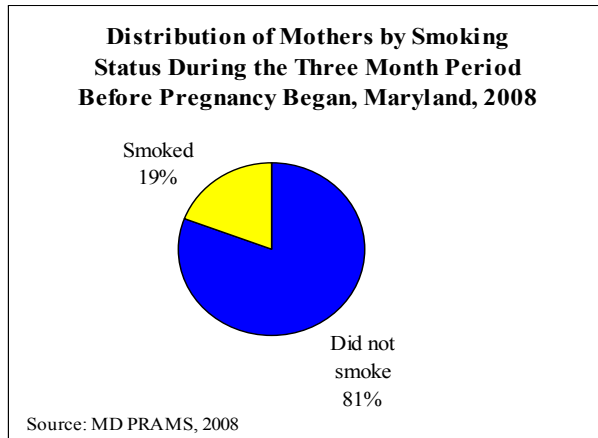
Health problems of a mother can negatively affect her pregnancy in a number of ways. As nearly half of all pregnancies in Maryland are unintended or unplanned, many women are not aware that they are pregnant until weeks or even months have passed.

If a woman does not know that she is pregnant, then any health problems that she has may not be addressed or treated during the vulnerable early period of the pregnancy. For their health and the health of potential pregnancies, women of childbearing age need the education and resources that will enable them to have health problems like asthma, anemia, hypertension, diabetes and heart conditions diagnosed and treated.

E. Substance Use

Smoking

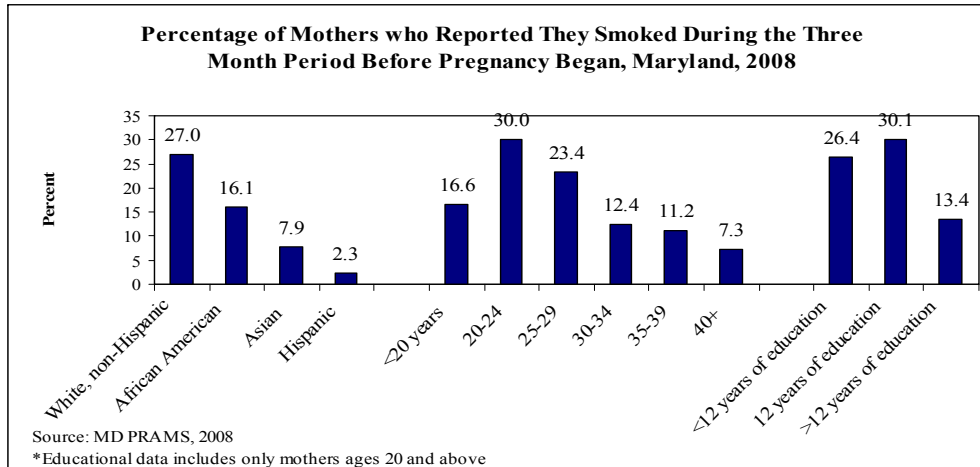
Figure 24



Cigarette use before, during, and after pregnancy has been found to be responsible for a wide variety of serious health effects for both the mother and infant.

Women who smoke prior to conception increase their risk of hypertension, heart disease, and lung disease, all of which can complicate pregnancy. Smoking during pregnancy is linked to increased chance of preterm and low birth weight births. Those who smoke after an infant is born may expose their child to second-hand smoke, which is associated with increased risk of upper respiratory infections and asthma in children.

Figure 25



Among Maryland women, a higher percentage of White, non-Hispanic women smoked prior to pregnancy than African American women, Asian women or Hispanic women (27.0% compared to 16.1, 7.9, and 2.3%, respectively).

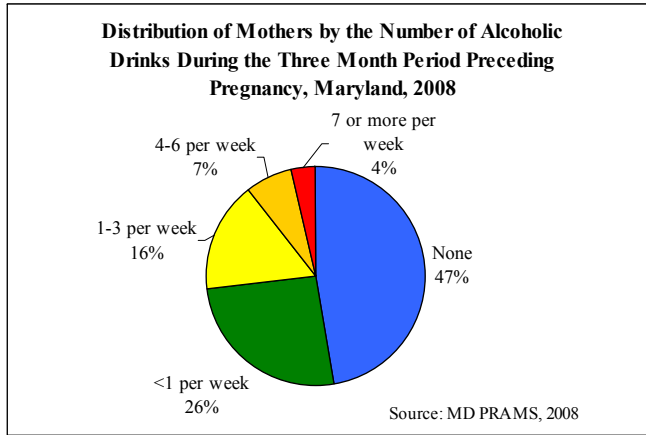
A higher percentage of young adults, ages 20-29, smoked prior to pregnancy than women of other age groups.

A higher percentage of women who had completed 12 years of education or less reported smoking prior to pregnancy than women who completed more than 12 years of education.

Alcohol Consumption

Healthy People 2010 Goal: 94 percent of non-pregnant females, aged 15-44, reporting not drinking alcohol at all in the past month.

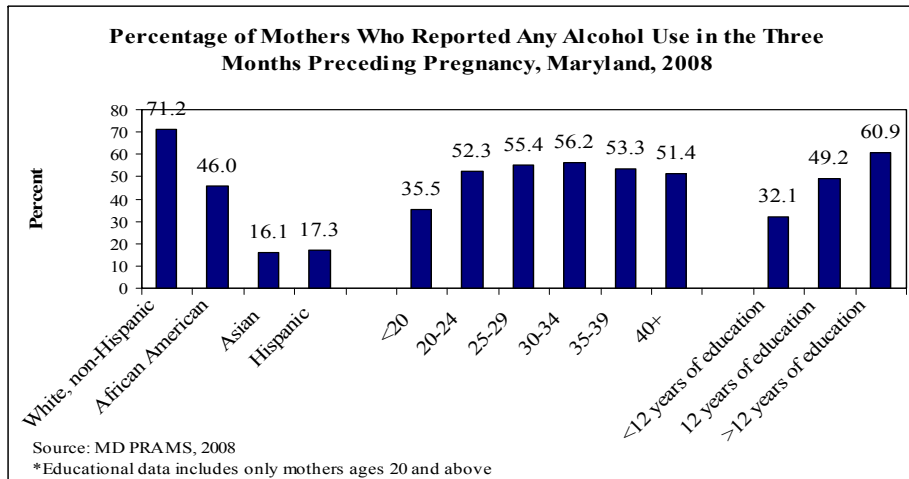
Figure 26



Alcohol use during pregnancy may cause a wide range of harmful effects on the developing fetus. It is the leading preventable cause of mental retardation in the United States and is also associated with many other physical, cognitive, and behavioral disabilities known collectively as Fetal Alcohol Spectrum Disorder (FASD).

As nearly 50 percent of pregnancies in Maryland are unintended, many women may not know that they are pregnant until weeks or even months pass. Thus, alcohol consumption may continue into the early period of the pregnancy without a woman realizing that she is potentially causing harm to the fetus. For this reason, it is important to consider the amount of alcohol consumed in the months leading up to pregnancy, and to educate and provide resources that decrease alcohol consumption when there is a risk of pregnancy.

Figure 27



A higher percentage of White, non-Hispanic women reported alcohol consumption during the three months prior to pregnancy than African American, Asian or Hispanic women.

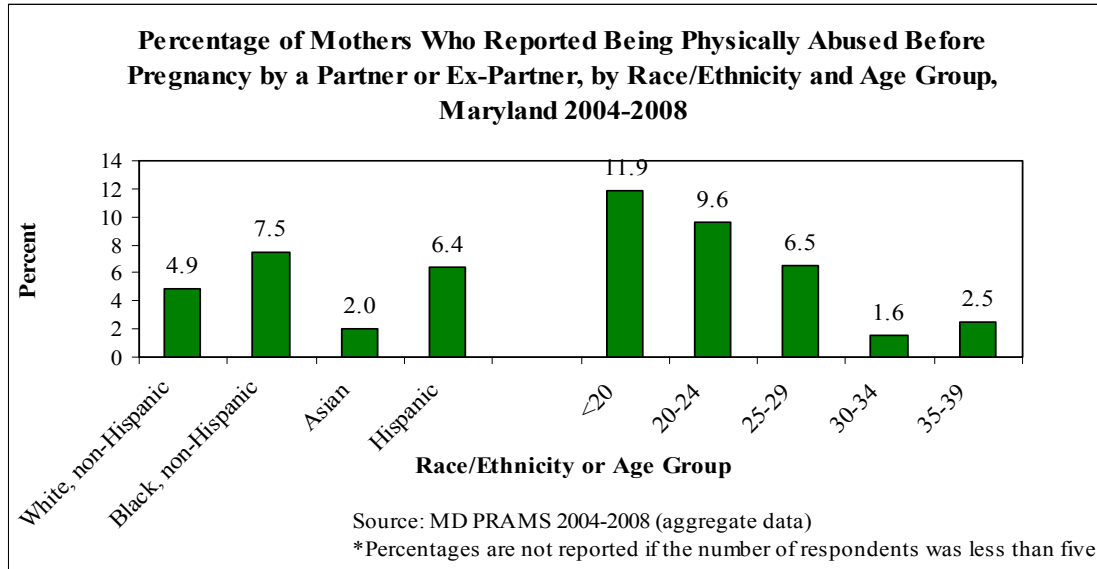
Alcohol consumption prior to pregnancy did not vary significantly by age. A lower percentage of women under age 20 reported drinking, but this is likely due to the fact that they are under the legal drinking age.

A higher percentage of women with more than 12 years of education reported consuming alcohol in the three months prior to pregnancy than women with fewer years of education.

F. Intimate Partner Violence

Source: MD PRAMS, 2004-2008 aggregate data

Figure 1.13



According to the Maryland Pregnancy Risk Assessment Monitoring System (PRAMS), in 2004-2008, 5.7 percent of mothers reported being physically abused by a partner or ex-partner before pregnancy.

The percentage of physical abuse before pregnancy by a partner or ex-partner was highest among Black, non-Hispanic women. The percentage of physical abuse before pregnancy by a partner or ex-partner was statistically significantly higher among Black, non-Hispanic than the percentage of physical abuse among Asian women.

Likewise, a higher percentage of younger women (age 29 and under) were physically abused by a partner or ex-partner before pregnancy than women over the age of 30 years, a difference that is statistically significant.

MCH Population Group: Pregnant Women, Mothers and Infants

I. Preconception Factors

Source: Maryland PRAMS Report, 2003-2008

Note: PRAMS data includes only information on pregnancies that end in live birth

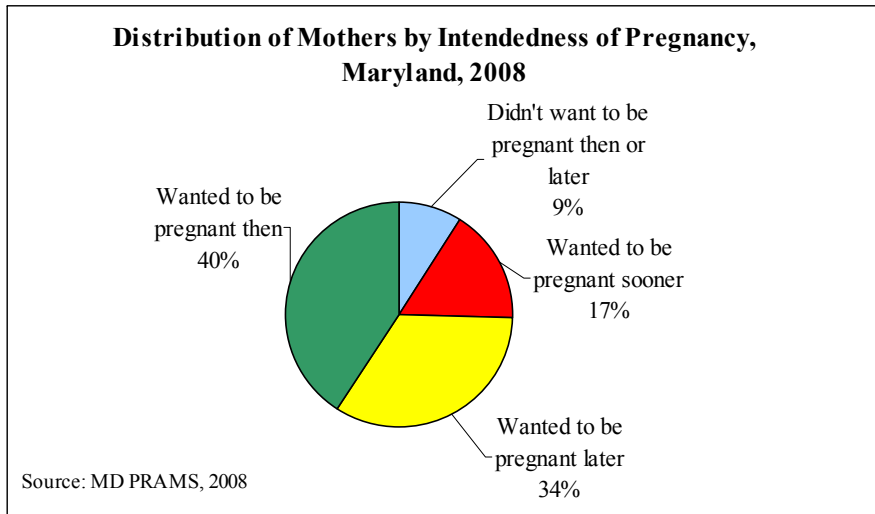
a. Unintended Pregnancies

Maryland State Priority: Promoting healthy pregnancies and healthy pregnancy outcomes.

Performance Measure: Percent of pregnancies that are intended.

Healthy People 2010 Goal: Increase the proportion of pregnancies that are intended to 70%.

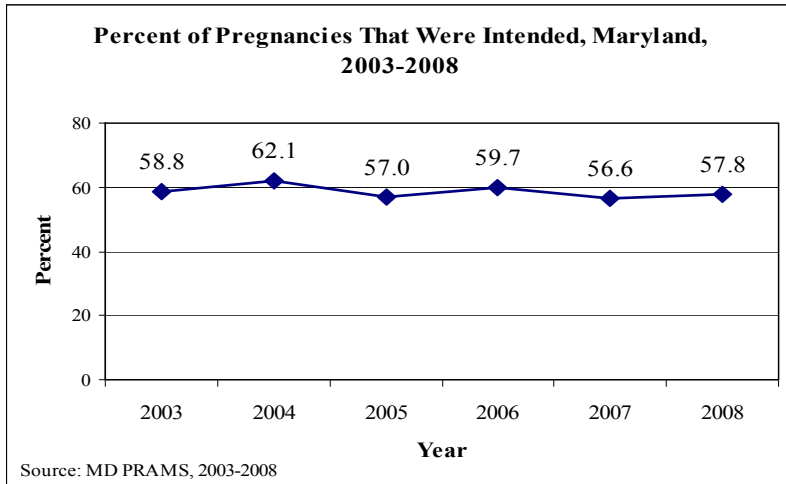
Figure 1.1



When asked the question, “Thinking back to just before you got pregnant, how did you feel about becoming pregnant?” 56 percent of Maryland women in 2008 reported that the pregnancy was intended (that she had either wanted to become pregnant at that time or earlier).

33 percent of women reported mistimed pregnancies, and 11 percent unintended pregnancies.

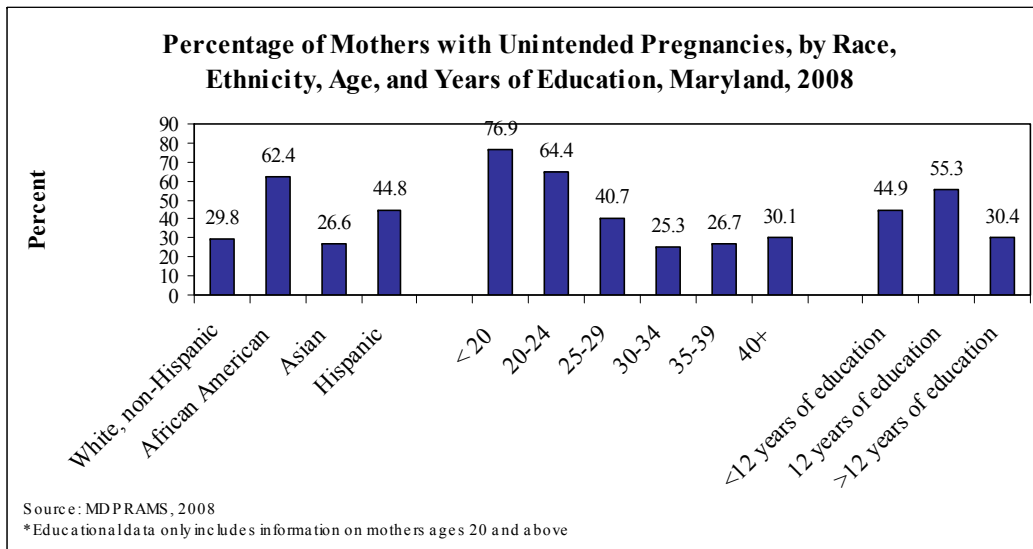
Figure 1.2



The percent of Maryland pregnancies that are intended has decreased by 2 percent since 2003, from 58.8 to 57.8 percent.

Maryland still has more work to do in preventing unintended pregnancies, in order to meet the Healthy People 2010 Goal of 70 percent of pregnancies being intended.

Figure 1.3

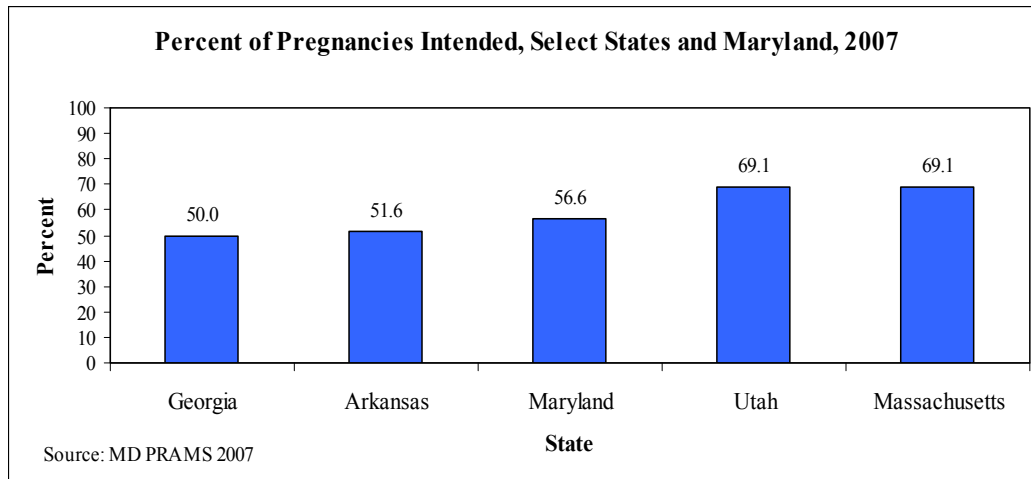


The percent of pregnancies that were intended varied by race and ethnicity, age, and years of education.

As displayed in Figure 1.3, African American women have the highest percent and Asian women have the lowest percent of unintended pregnancies in Maryland.

Women under the age of 24 have higher percentages of unintended pregnancies than women in other age groups, and women with more than 12 years of education have a lower percent of unintended pregnancies.

Figure 1.4

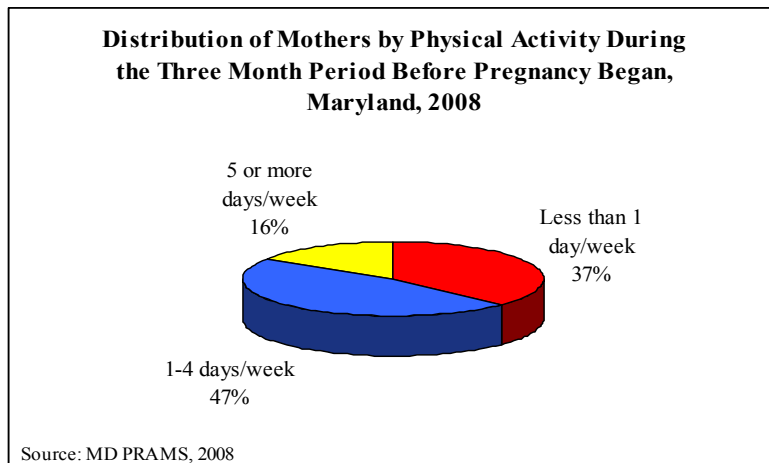


Of the 29 states and jurisdictions that participated in the 2007 Pregnancy Risk Assessment Monitoring System, Georgia and Arkansas had the lowest percentage of intended pregnancies (50.0 % and 51.6 % intended, respectively).

The two states with the highest percentage of intended pregnancies were Utah and Massachusetts, both with 69.1 percent of pregnancies intended. Maryland falls in the lower end of this range with 56.6 percent of pregnancies intended in 2007.

b. Physical Activity

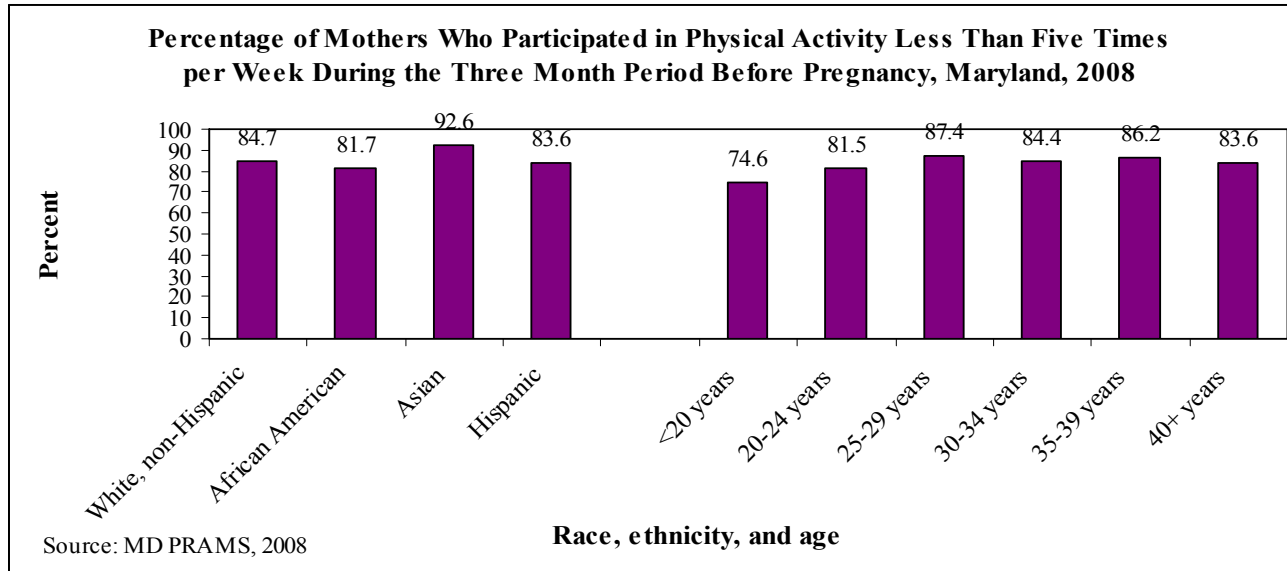
Figure 1.5



According to the 2008 Pregnancy Risk Assessment Monitoring System, 37 percent of women reported exercising less than 1 day per week in the three months prior to pregnancy.

The majority of women reported exercising 1-4 days per week prior to pregnancy (47%), and 16 percent reported exercising 5 or more days per week in the three months before they their pregnancy began.

Figure 1.6



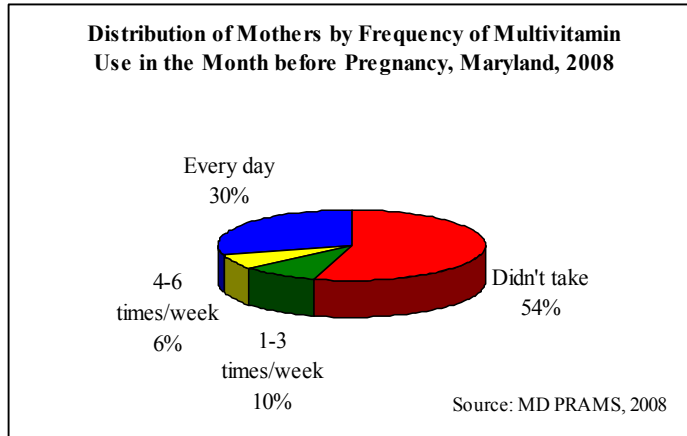
The majority of Maryland mothers reported that they had not participated in physical activity at least 5 times per week, prior to pregnancy.

However, women under age 20 and African American women were more likely to have participated in physical activity at least 5 days per week than other age and racial/ethnic groups.

c. Multivitamin Use

Healthy People 2010 Goal: Consumption of at least 400 micrograms of folic acid each day from fortified foods or dietary supplements by 80 percent of non-pregnant women aged 15 to 44 years.

Figure 1.7

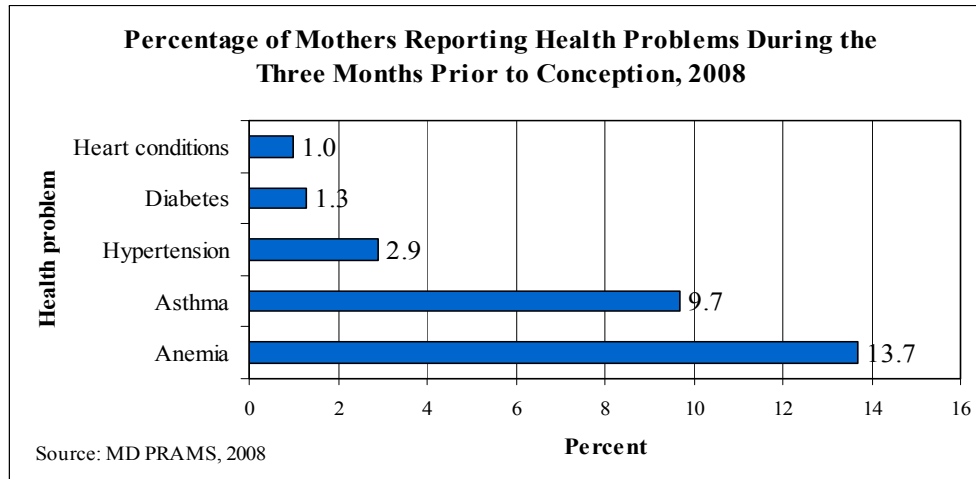


Folic acid has been demonstrated to prevent neural tube defects and, for this reason, one Healthy People 2010 Goal is to increase the percent of women of childbearing age who consume at least 400 micrograms daily to 80 percent. Multivitamins are a good source of folic acid.

In 2008 in Maryland, only 30 percent of women reported taking a daily multivitamin in the month before pregnancy.

d. Health Problems

Figure 1.8



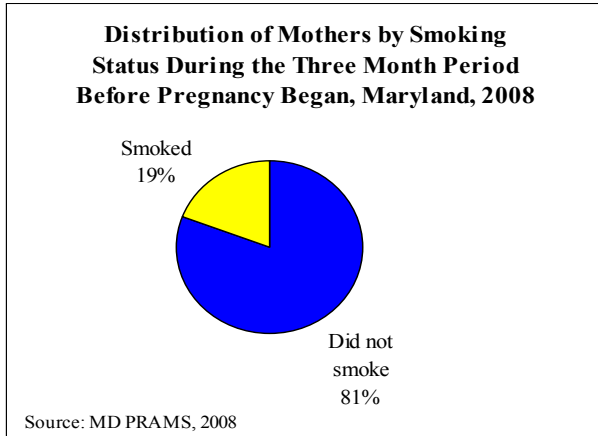
Health problems of a mother can negatively affect her pregnancy in a number of ways. As nearly half of all pregnancies in Maryland are unintended or unplanned, many women are not aware that they are pregnant until weeks or even months have passed.

If a woman does not know that she is pregnant, then any health problems that she has may not be addressed or treated during the vulnerable early period of the pregnancy. For their health and the health of potential pregnancies, women of childbearing age need the education and resources that will enable them to have health problems like asthma, anemia, hypertension, diabetes and heart conditions diagnosed and treated.

e. Substance Use

Smoking

Figure 1.9



Cigarette use before, during, and after pregnancy has been found to be responsible for a wide variety of serious health effects for both the mother and infant.

Women who smoke prior to conception increase their risk of hypertension, heart disease, and lung disease, all of which can complicate pregnancy. Smoking during pregnancy is linked to increased chance of preterm and low birth weight births. Those who smoke after an infant is born may expose their child to second-hand smoke, which is associated with increased risk of upper respiratory infections and asthma in children.

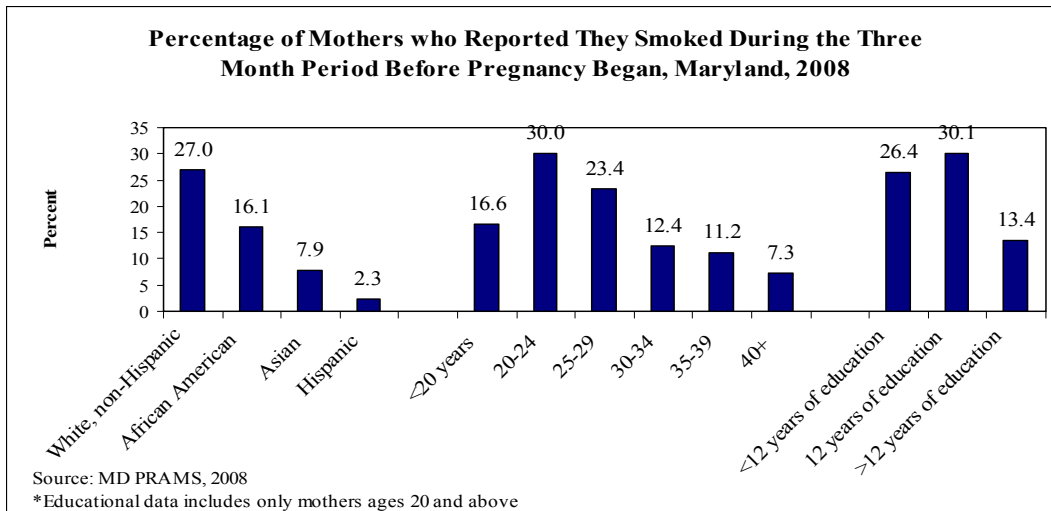


Figure 1.10

Among Maryland women, a higher percentage of White, non-Hispanic women smoked prior to pregnancy than African American women, Asian women or Hispanic women (27.0% compared to 16.1, 7.9, and 2.3%, respectively).

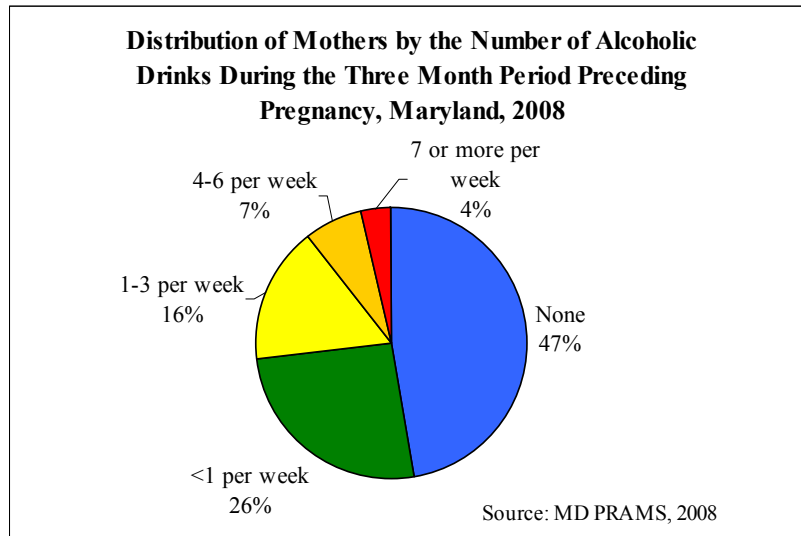
A higher percentage of young adults, ages 20-29, smoked prior to pregnancy than women of other age groups.

A higher percentage of women who had completed 12 years of education or less reported smoking prior to pregnancy than women who completed more than 12 years of education.

f. Alcohol Consumption

Healthy People 2010 Goal: 94 percent of non-pregnant females, aged 15-44, reporting not drinking alcohol at all in the past month.

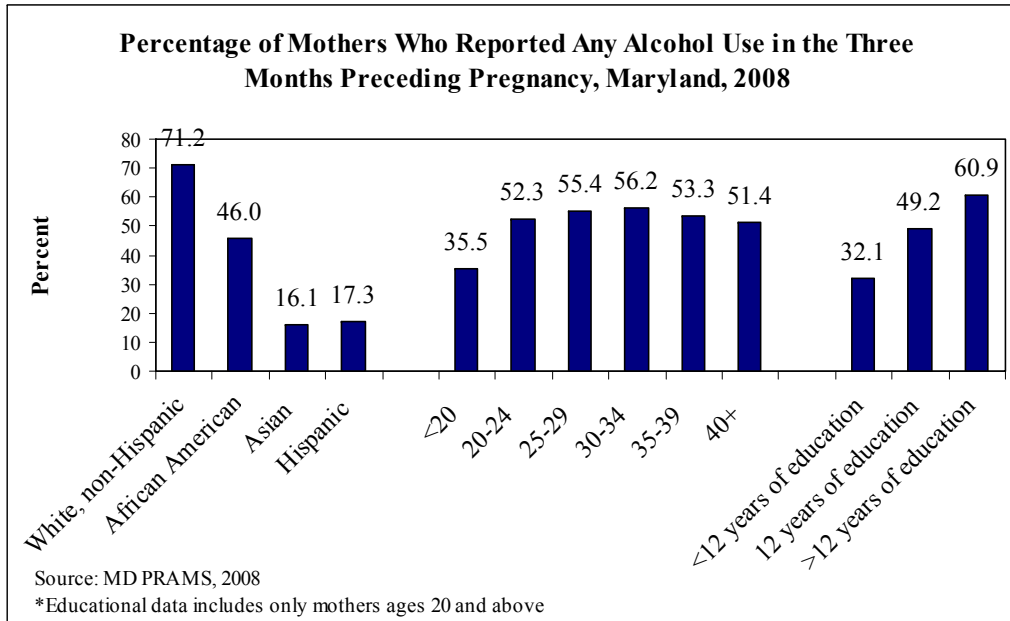
Figure 1.11



Alcohol use during pregnancy may cause a wide range of harmful effects on the developing fetus. It is the leading preventable cause of mental retardation in the United States and is also associated with many other physical, cognitive, and behavioral disabilities known collectively as Fetal Alcohol Spectrum Disorder (FASD).

As nearly 50 percent of pregnancies in Maryland are unintended, many women may not know that they are pregnant until weeks or even months pass. Thus, alcohol consumption may continue into the early period of the pregnancy without a woman realizing that she is potentially causing harm to the fetus. For this reason, it is important to consider the amount of alcohol consumed in the months leading up to pregnancy, and to educate and provide resources that decrease alcohol consumption when there is a risk of pregnancy.

Figure 1.12



A higher percentage of White, non-Hispanic women reported alcohol consumption during the three months prior to pregnancy than African American, Asian or Hispanic women.

Alcohol consumption prior to pregnancy did not vary significantly by age. A lower percentage of women under age 20 reported drinking, but this is likely due to the fact that they are under the legal drinking age.

A higher percentage of women with more than 12 years of education reported consuming alcohol in the three months prior to pregnancy than women with fewer years of education

A. Prenatal Care

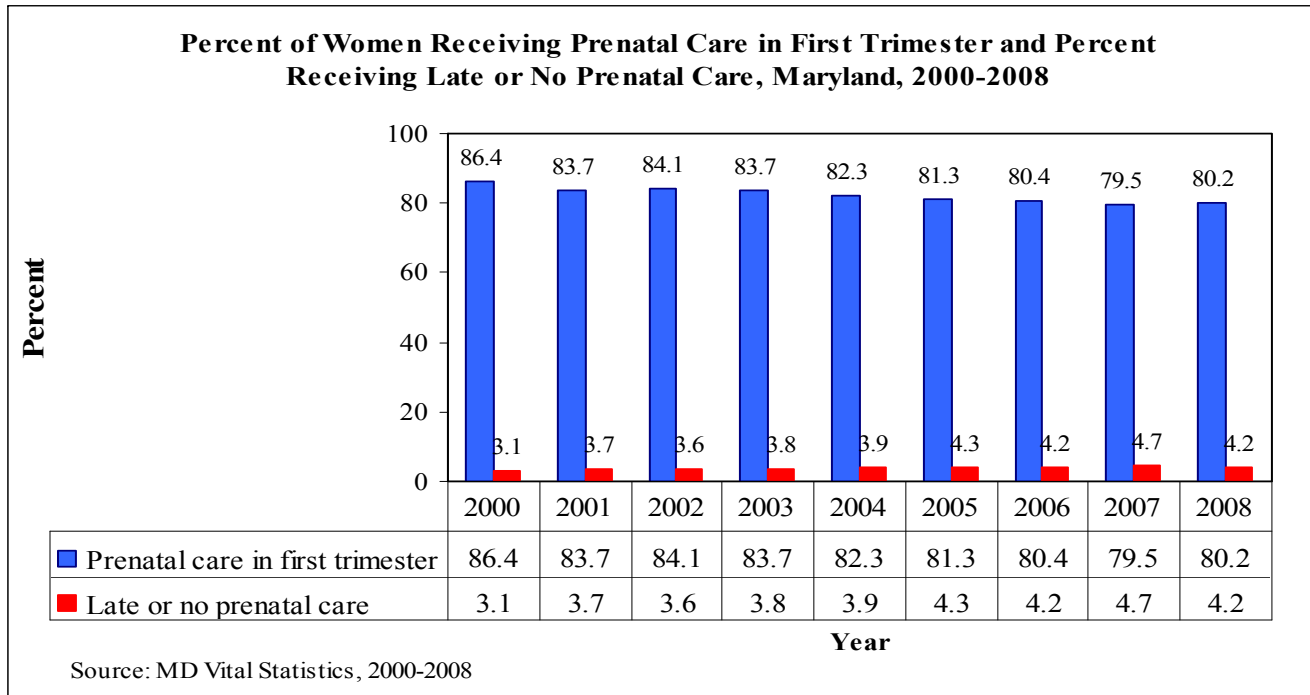
Sources: Maryland Vital Statistics, 2000-2008, Maryland PRAMS Report 2008, Healthy People 2010: Understanding and Improving Health, Second Edition

National Title V Performance Measure: Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Healthy People 2010 Goals: 90% of infants born to mothers receiving care in the first trimester and 90% receiving “early and adequate prenatal care” (by Adequacy of Prenatal Care Utilization Index).

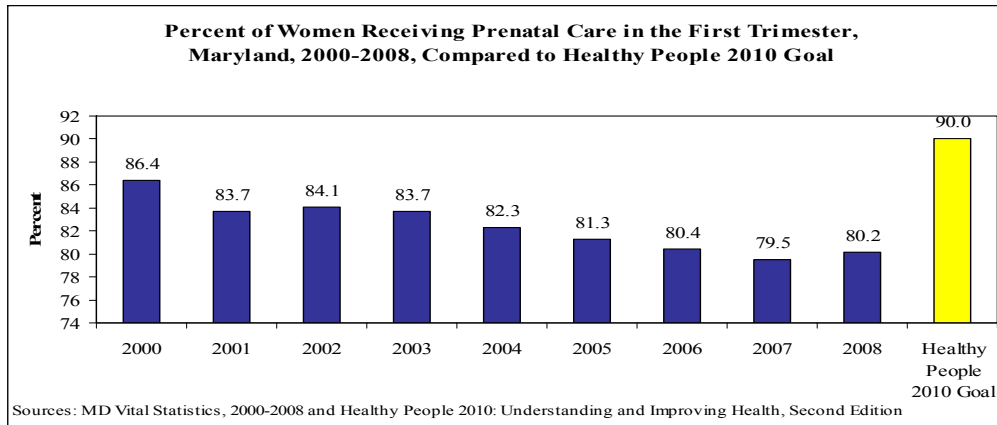
Trends

Figure 1.13



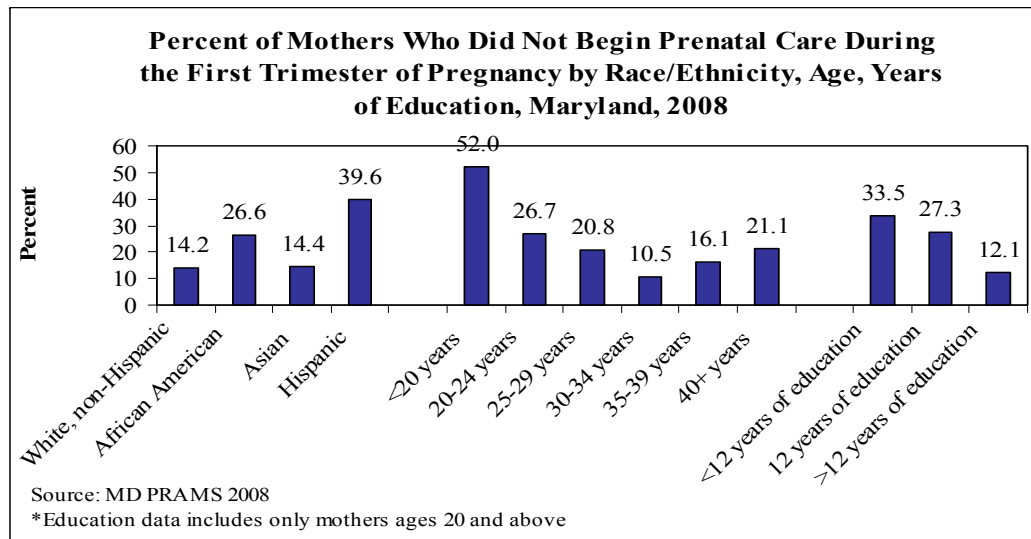
Since 2000, the percent of Maryland women receiving prenatal care in the first trimester has decreased by 7 percent (from 86.4 to 80.2 percent). During the same time period, the percent of women receiving late or no prenatal care increased by 35 percent (from 3.1 to 4.2 percent).

Trends and Comparison to Healthy People 2010 Goal
Figure 1.14



The steady decline in the percent of Maryland women receiving prenatal care in the first trimester means that the state is moving in the wrong direction and farther away from the Healthy People 2010 Goal of having 90 percent of mothers receiving care in the first trimester.

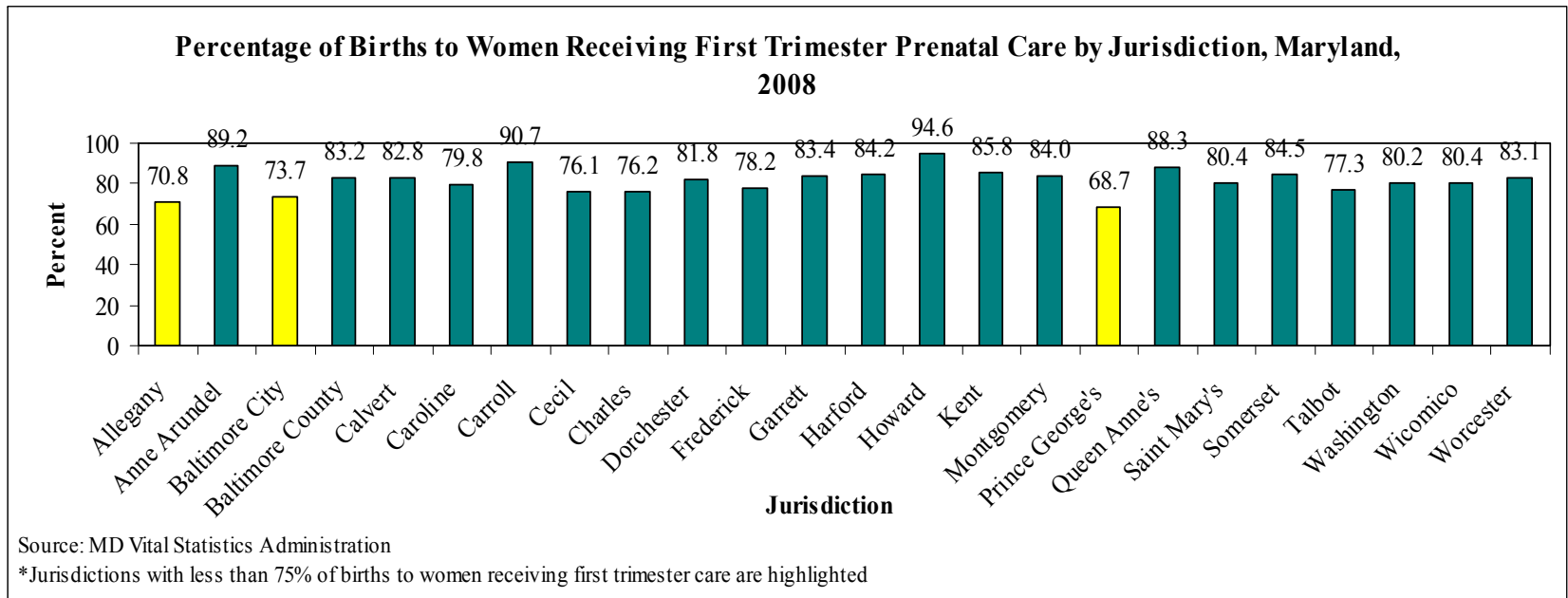
Stratification by Race/Ethnicity, Age, and Years of Education
Figure 1.15



A greater percentage of Hispanic and African American women, younger women (age 24 and younger), and women who completed 12 years of education or less, did not receive first trimester prenatal care than White, non-Hispanic and Asian women, older women, and women who completed more than 12 years of education.

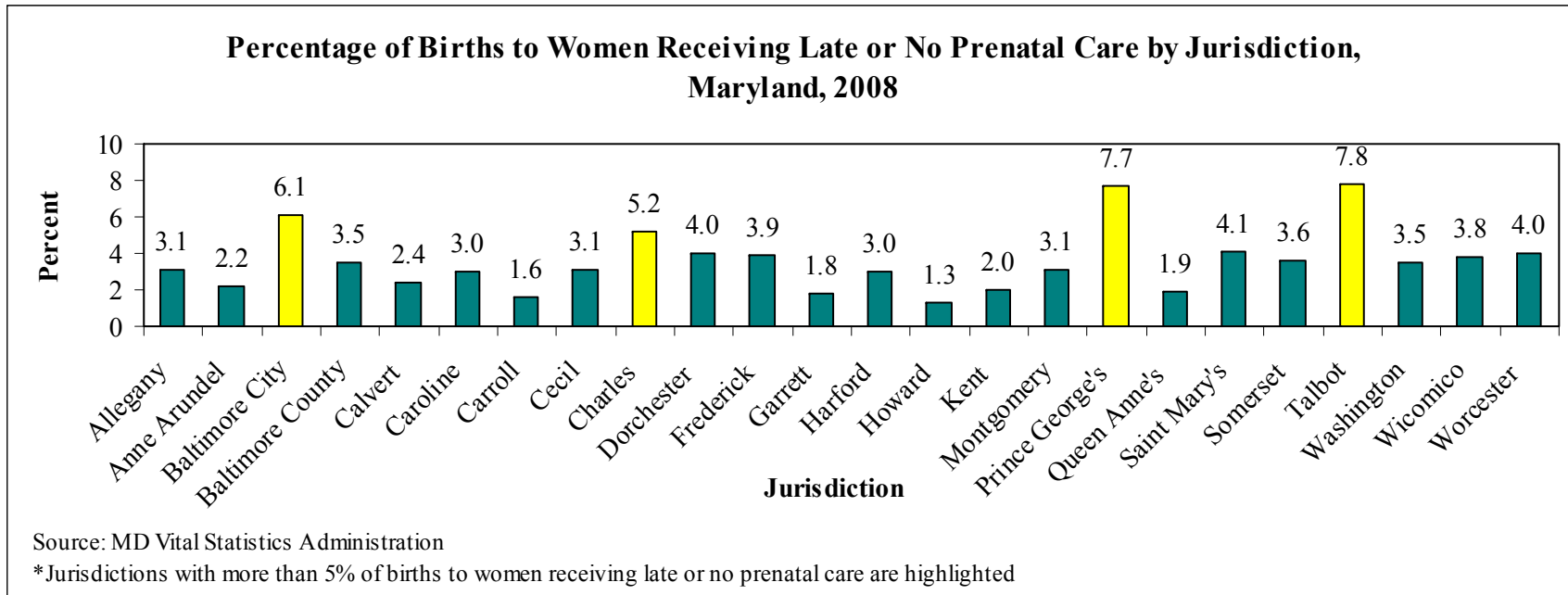
Forty percent of Hispanic women, 27 percent of African American women, 52 percent of women under the age of 20, 27 percent of women ages 20-24, and 34 percent of women who received less than 12 years of education did not receive prenatal care during the first trimester of pregnancy in Maryland in 2008.

Stratification by Jurisdiction: First Trimester Prenatal Care
Figure 1.16



The percentage of births to women receiving first trimester prenatal care was different in each Maryland jurisdiction. The jurisdiction with the highest percentage of births to women receiving first trimester care in 2008 was Howard County (95 percent). In three jurisdictions, less than 75 percent of births were to women receiving care in the first trimester: Allegany County, Baltimore City and Prince George’s County (70.8, 73.7, and 68.7 percent, respectively).

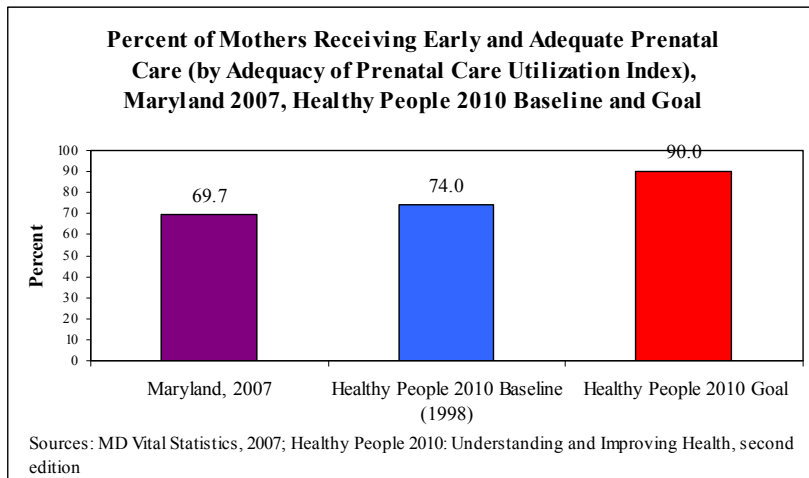
Stratification by Jurisdiction: Late or No Prenatal Care
Figure 1.17



Many women across the state of Maryland are still not receiving prenatal care or are waiting to receive care until late in the pregnancy. In four jurisdictions, over five percent of births were to women who received either late or no prenatal care: Baltimore City, Charles County, Prince George’s County and Talbot County (6.1, 5.2, 7.7, and 7.8 percent, respectively).

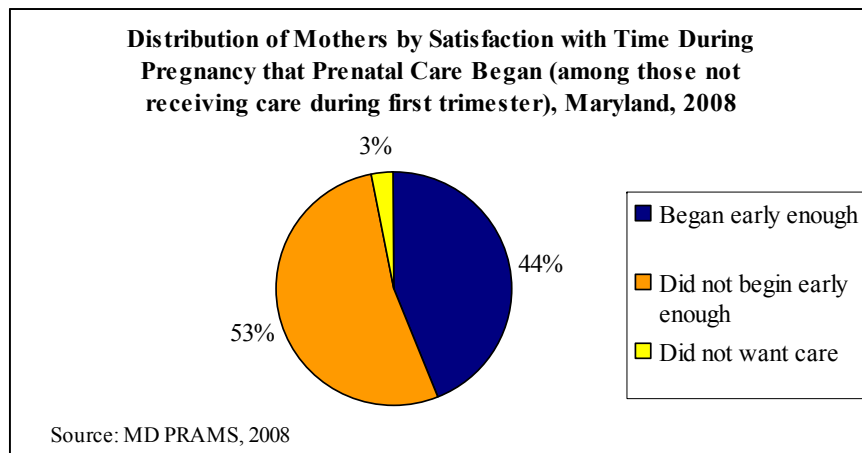
Comparison to Healthy People 2010 Goal for Early and Adequate Prenatal Care

Figure 1.18



Early and adequate prenatal care is determined using the Adequacy of Prenatal Care Utilization Index (APNCU), which is a measure of prenatal care utilization that combines the month of pregnancy in which prenatal care was initiated with the number of prenatal visits. Using this index, in 2007, nearly 70 percent of Maryland women were considered to have received early and adequate prenatal care. This is lower than the national baseline measurement from 1998 (74 percent) and much lower than the Healthy People 2010 Goal of 90 percent.

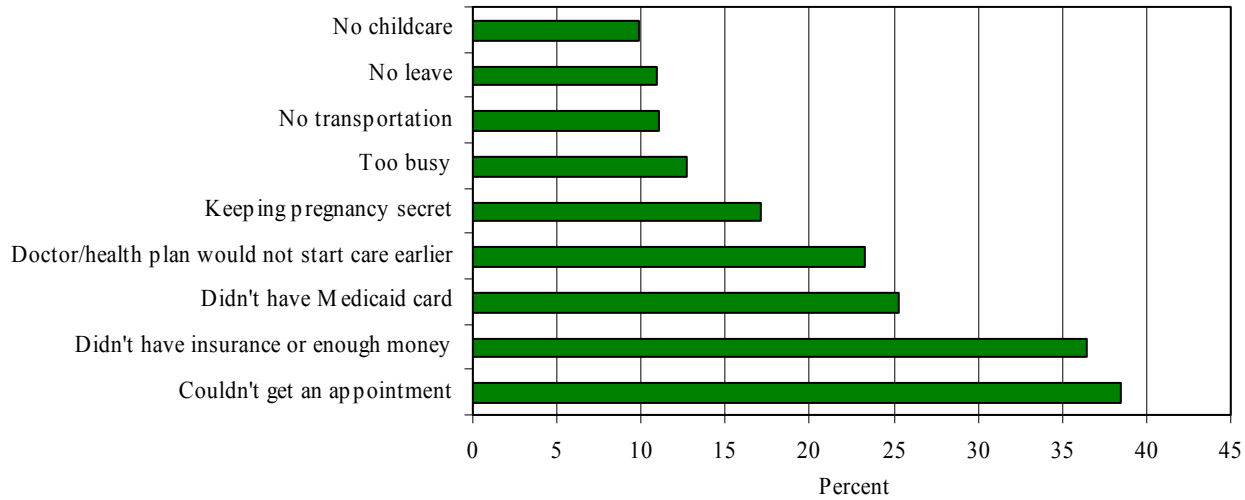
Figure 1.19



Most Maryland women who did not receive first trimester prenatal care believed that they had not begun care early enough. This could indicate that they did not recognize, until after the pregnancy, that they should have received care in the first trimester, or that there were reasons beyond their control for waiting to receive care.

Figure 1.20

Reasons Given for Not Beginning Prenatal Care as Early in Pregnancy as Desired (among women who did not receive prenatal care as early as wanted), Maryland, 2008



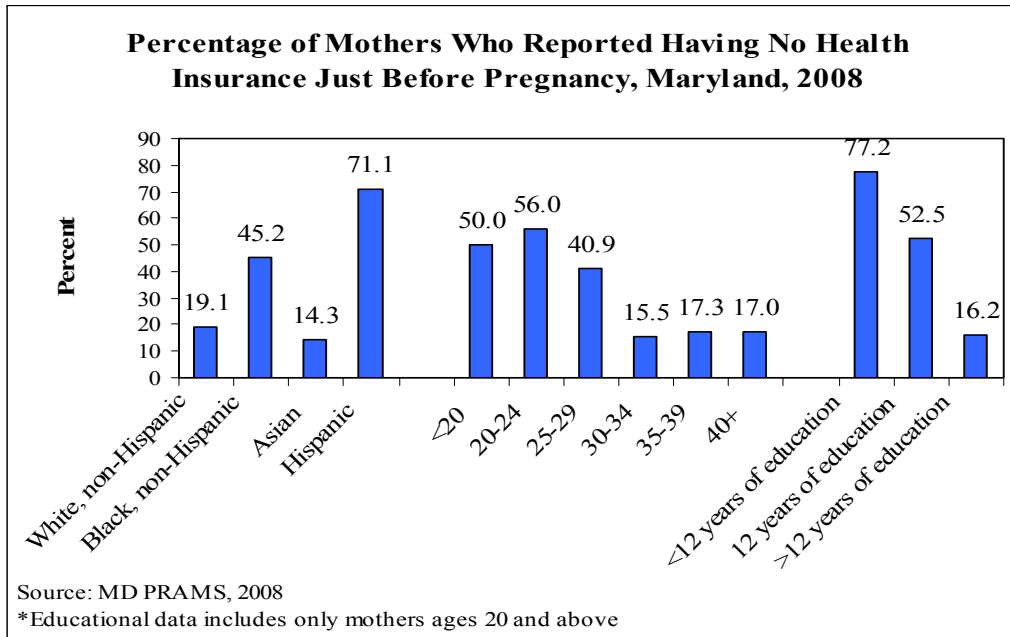
Source: MD PRAMS, 2008

There were many different reasons that women did not receive care as early in pregnancy as desired. The most common reason was the inability to get an appointment (38.5%), followed by the fact that they did not have insurance or enough money (36.5%), did not have a Medicaid card (25.3%), or that their doctor or health plan would not start care earlier.

B. Sources of Payment for Pregnancy Services

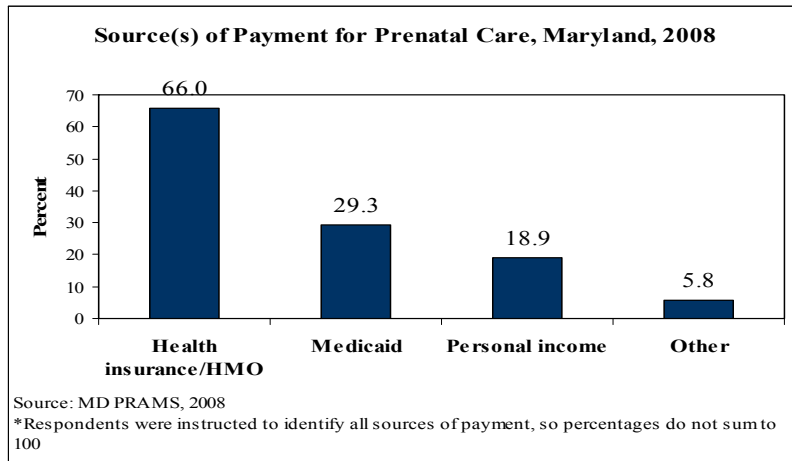
Sources: Maryland PRAMS, 2008

Figure 1.21



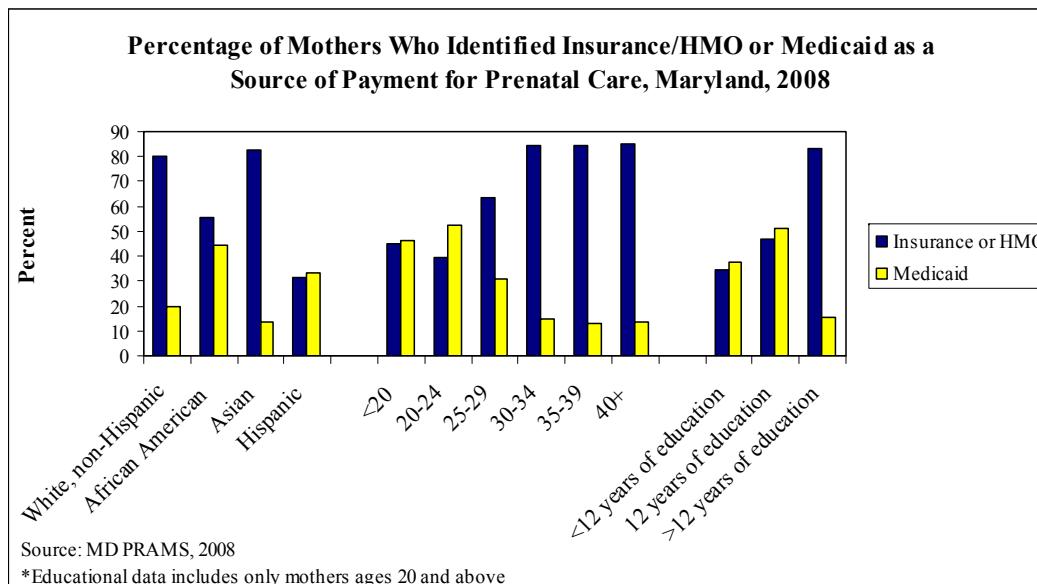
Lack of health insurance coverage remains a major problem for many Maryland women. Thirty-four percent of women reported being uninsured just prior to their pregnancy (PRAMS 2008). Those who were uninsured varied by race/ethnicity, age and years of education, with Hispanic women, younger women, and those who attained less than 12 years of education being more likely to not have health insurance prior to pregnancy.

Figure 1.22



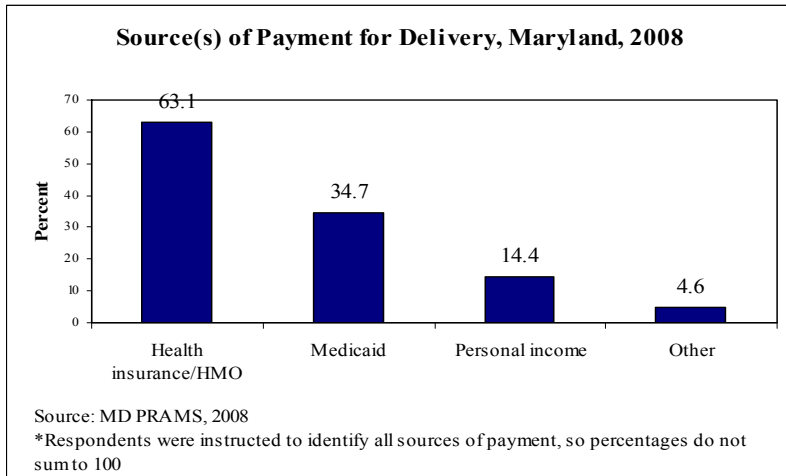
Maryland women have different sources of payment for their prenatal care, but the overwhelming majority of women pay for this care with private health insurance and/or Medicaid (66% and 29%, respectively).

Figure 1.23



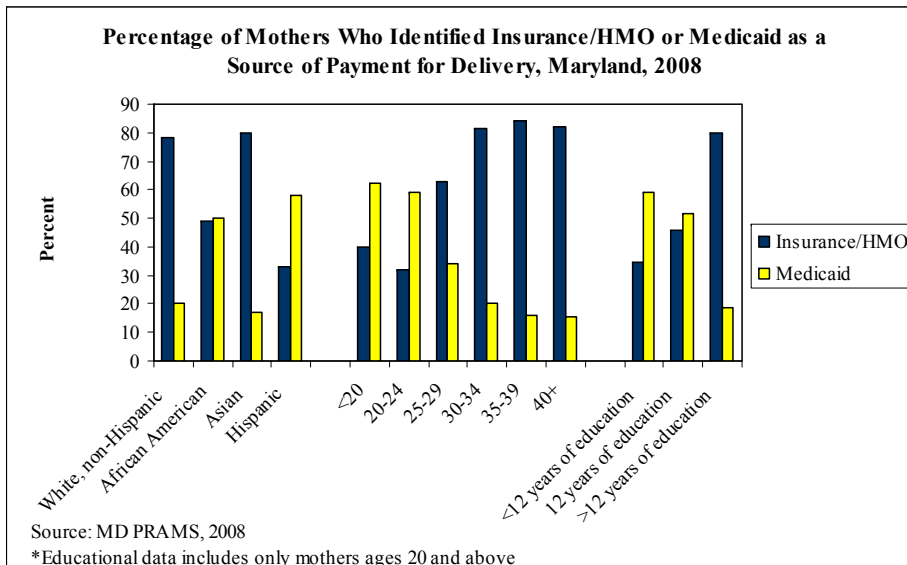
A larger percentage of White and Asian women identified health insurance or HMO as a source of payment for prenatal care than African American or Hispanic women (80.1 and 82.8 percent vs. 55.3 and 31.6 percent, respectively). And, a larger percentage of African American women identified Medicaid as a source of payment for prenatal care than women of other racial/ethnic groups (44.3 percent). A slightly larger percentage of women under 24 years of age used Medicaid than private insurance, and a much larger percentage of older women used private insurance than Medicaid. More than 12 years of education was associated with the use of private insurance rather than Medicaid.

Figure 1.24



The most frequently identified payment source for deliveries was health insurance or HMO, with 63% of women indicating that this source at least partially paid for their delivery. The next most frequently identified payment source was Medicaid.

Figure 1.25



A greater percentage of White and Asian women identified health insurance or HMO as a source of payment for delivery than African American or Hispanic women (78.3 and 79.8 percent vs. 49.2 and 32.9 percent, respectively). A greater percentage of African American and Hispanic women identified Medicaid as a source of payment for delivery than White and Asian women (50.2 and 57.9 percent vs. 20.4 and 16.8 percent, respectively). A large percent of women under age 24 also relied on Medicaid as a payment source for delivery, as did women with 12 years of education or less.

C. Substance Use

Smoking

Sources: MD PRAMS 2008; MD Vital Statistics Administration

National Performance Measure: Percentage of women who smoke in the last three months of pregnancy.

Healthy People 2010 Goal: Reduce the percent of women having live births reporting abstaining from cigarette smoking during pregnancy to 99 percent.

In 2008 in Maryland, 11 percent of mothers reported smoking during the last three months of pregnancy. The percentage of mothers who reported smoking during pregnancy varies by socio-demographic factors. As the following graph indicates, a higher percentage of White, non-Hispanic mothers smoked during the last three months of pregnancy than mothers of other race/ethnic groups, a higher percentage of younger mothers smoked than older mothers and a higher percentage of mothers with less than 12 years of education smoked than those with more than 12 years of education.

Figure 1.26 Smoking During the Last Three Months of Pregnancy (PRAMS)

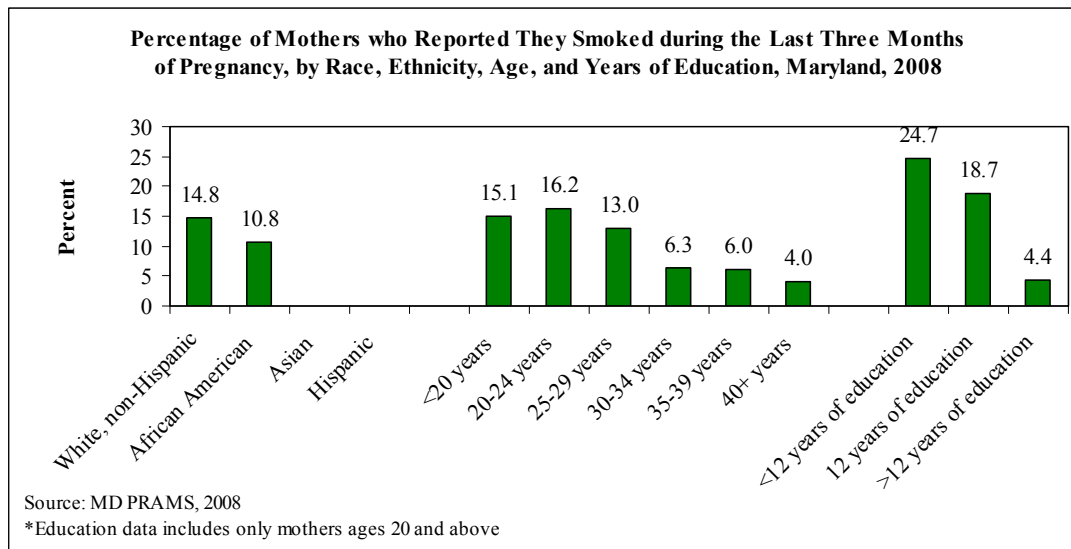
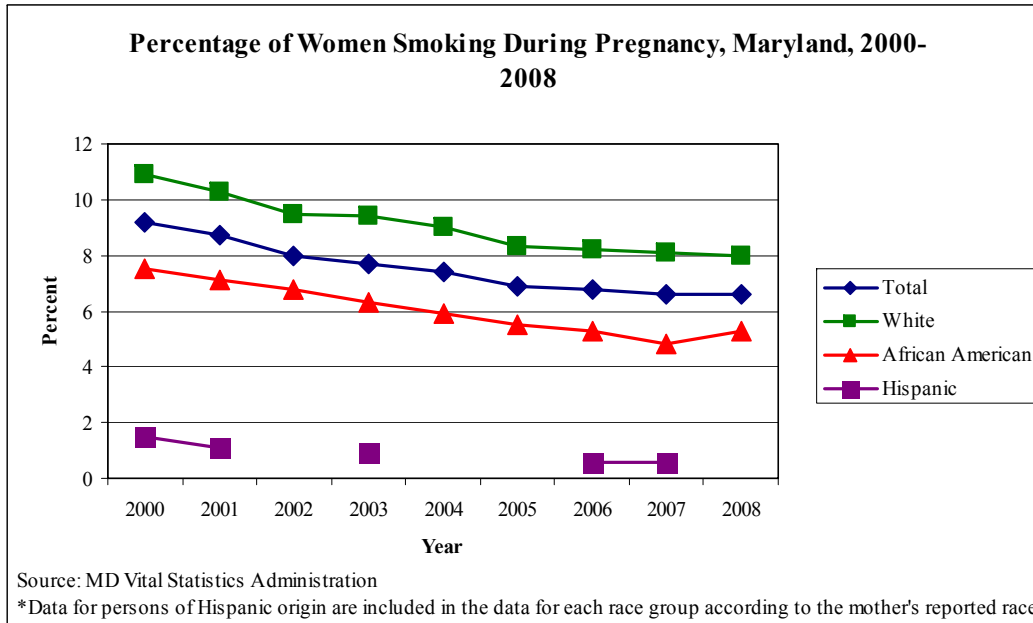


Figure 1.27 Smoking During Pregnancy (Vital Statistics Administration)



According to the Maryland Vital Statistics Administration, 6.6 percent of Maryland women smoked during pregnancy in 2008, and this is a 28 percent decrease from the 9.2 percent of Maryland women that smoked during pregnancy in 2000. Since 2000, smoking during pregnancy has decreased amongst White women by 27 percent, African American women by 29 percent and Hispanic women by 60 percent.

Despite these improvements, Maryland still needs to decrease the percentage of women who smoke during pregnancy if the state wants to reach the Healthy People 2010 Goal of 99 percent of pregnant women abstaining from tobacco.

Discussion of smoking at prenatal care visits

According to PRAMS, in 2008 69 percent of mothers reported that a doctor, nurse or other health care worker discussed with them the effects of smoking on pregnancy. Five years earlier, in 2003, 88 percent of mothers reported having this discussion during a prenatal care visit. Increasing the percentage of women that are well-educated about the implications of smoking during pregnancy is one step that Maryland can take to decrease the percentage of women who smoke during this time.

Alcohol Consumption

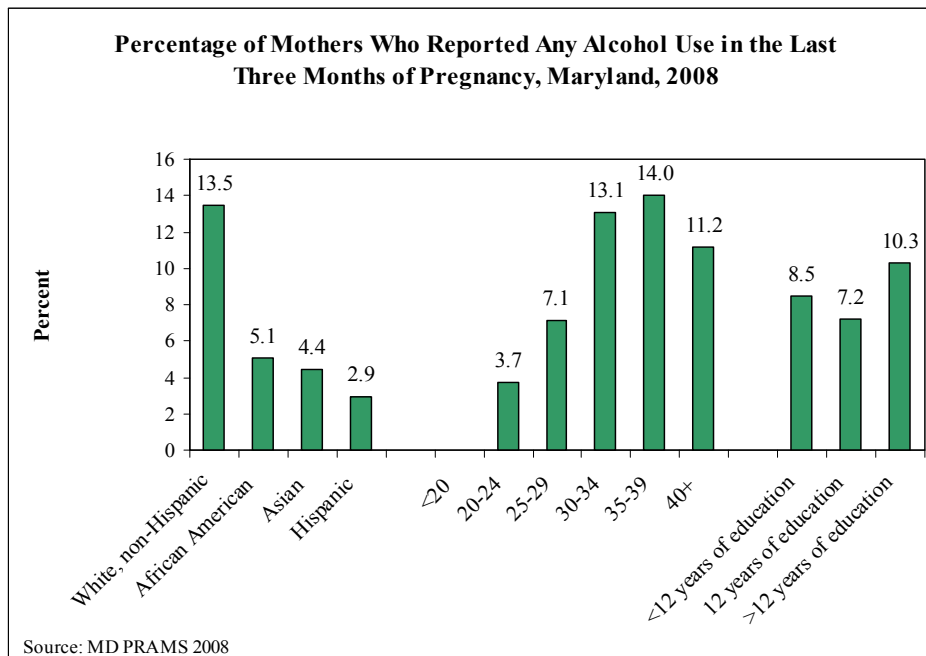
Sources: MD PRAMS 2008; MD Vital Statistics Administration

State Performance Measure: Percent of women reporting alcohol use in the last three months of pregnancy.

Healthy People 2010 Goals: Increase the percentage of pregnant females, ages 15-44, who abstain from alcohol during the past month to 94 percent, and the percentage of pregnant females, ages 15-44, who abstain from binge drinking during the past month to 99 percent.

Alcohol Use during Last Three Months of Pregnancy (PRAMS)

Figure 1.28



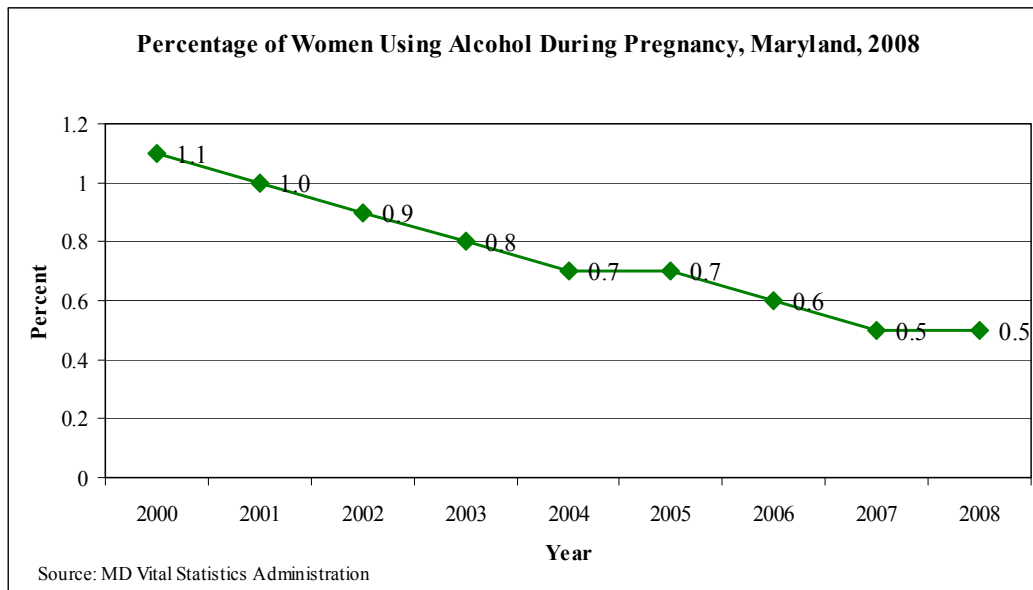
According to PRAMS, in Maryland in 2008, 1.8 percent of mothers reporting consuming one or more drinks per week and 7 percent reported consuming alcohol, but less than 1 drink per week, during the last three months of pregnancy. Ninety-one percent of mothers reported that they abstained from alcohol completely during the last three months of pregnancy.

As Figure 1.15 indicates, a higher percentage of White non-Hispanic women, women between the ages of 30 and 39, and women with more than 12 years of education reported alcohol use during the last three months of pregnancy than women from other racial or ethnic groups, women of other ages, and women with less education.

While nearly 20 percent of Maryland mothers reported binge drinking (consuming five or more drinks in one sitting) during the three month period preceding pregnancy, only one percent of mothers reported alcohol binges during the last three months of pregnancy (data not included in this figure).

Alcohol Use during Pregnancy (Vital Statistics Administration)

Figure 1.29



According to the Maryland Vital Statistics Administration, from 2000 to 2008, the use of alcohol during pregnancy decreased by 55 percent. While the percent of women consuming alcohol during pregnancy only decreased from 1.1 percent to 0.5 percent, this actually represents a large reduction in the actual number of women drinking while pregnant. In 2000, 802 women were reported to have consumed alcohol during pregnancy, and this number dropped to 362 in 2008. That means that there were 440 fewer Maryland women who consumed alcohol in 2008 than in 2000.

Illicit Drug Use

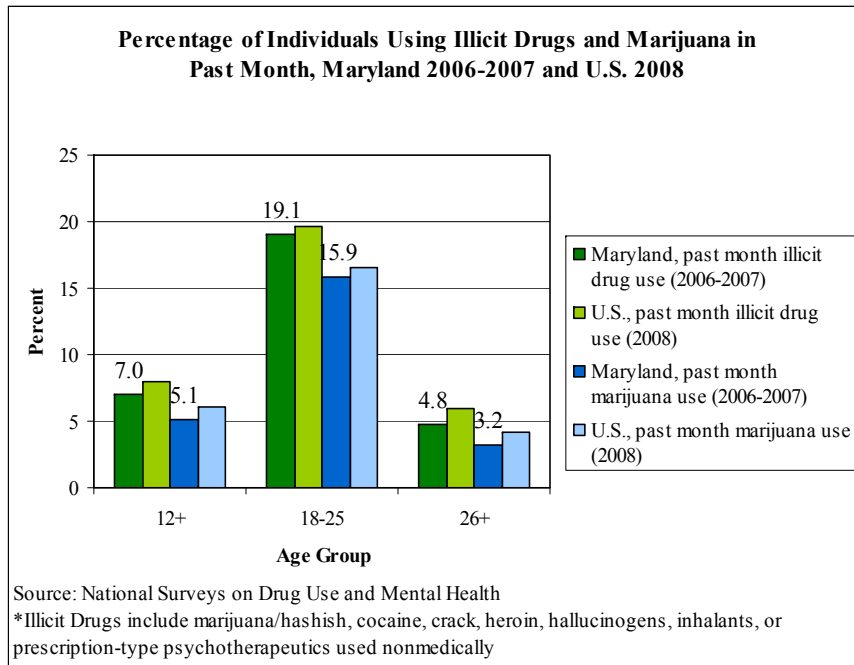
Source: National Surveys on Drug Use and Mental Health; MD Drug and Alcohol Abuse Administration

Healthy People 2010 Goal: Increase the percentage of pregnant women, ages 15-44, reporting abstinence from illicit drugs in the last month to 100 percent.

There is not currently a source of data for illicit drug use during pregnancy in Maryland. The National Survey on Drug Use and Health, however, collects national-level data on illicit drug use during pregnancy. In 2007-2008, 5.1 percent of pregnant women nationally used illicit drugs, which includes marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.

While data on substance abuse among pregnant women in Maryland is not available, The National Survey of Substance Use and Mental Health provides state-level data on illicit drug use among the general population. Figure 5 provides a comparison between Maryland and national-level data on illicit drug use in the general population.

Drug Use Among General Population
Figure 1.30

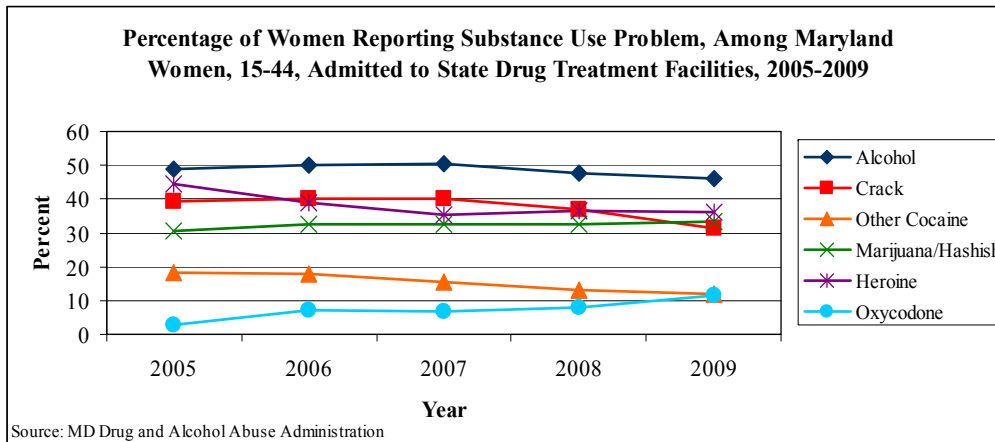


According to the National Survey on Drug Use and Mental Health, a smaller percentage of Marylanders used illicit drugs or marijuana in the month prior to the survey than United States citizens, as a whole. This was true for individuals in various age groups.

Information is also available from the Maryland Drug and Alcohol Abuse Administration on women of childbearing age, 15-45 years, who were admitted to state-funded drug and alcohol abuse treatment facilities. This data includes the number of women in this age group that were admitted each year and the substance abuse problem(s) for which they were admitted (each patient is allowed to select the top three at admission).

In 2009, 5338, or 46.2 percent of women admitted to Maryland drug and alcohol abuse treatment facilities, identified alcohol use as a primary substance abuse problem. crack was identified by 3624, or 31.3 percent of admitted women, Other cocaine was identified by 1399, or 12.1 percent of admitted women, marijuana/hashish by 3867, or 33.4 percent, heroin by 4167, or 36.0 percent, non-Rx Methadone by 213, or 1.8 percent, Oxycodone by 1349, or 11.7 percent, Other opiates by 944, or 8.2 percent, PCP by 284, or 2.5 percent, and benzodiazepines by 845, or 7.3 percent, of admitted women in 2009.

Trends in Type of Drug Abuse Among Women Admitted for Treatment
Figure 1.31

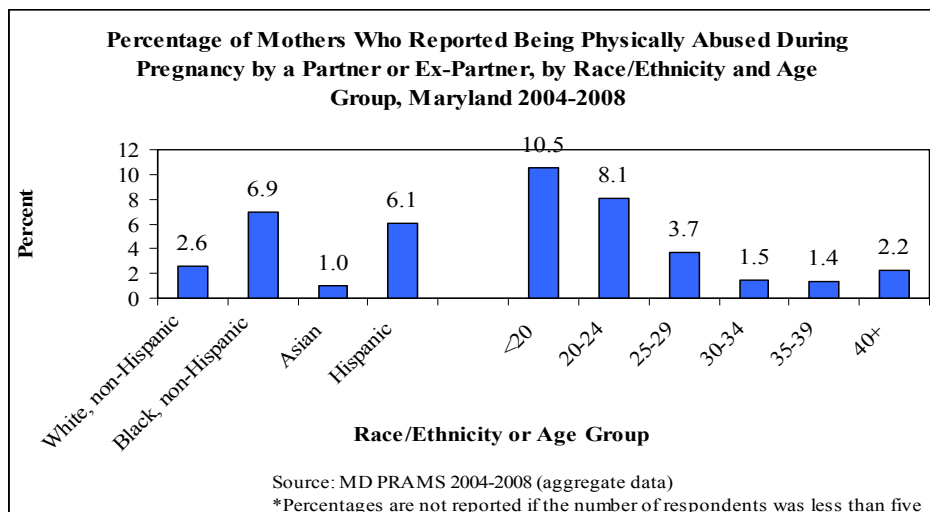


Among women, 15-44 years, who were admitted to a Maryland drug and alcohol abuse treatment facility, the percentage of women who reported alcohol, crack, other cocaine, and heroin abuse declined from 2005 to 2009. The percentage of women who reported marijuana/hashish or Oxycodone abuse increased, by 9 percent and 300 percent, respectively.

D. Intimate Partner Violence

Source: MD PRAMS, 2004-2008 aggregate data

Figure 1.32



In 2004-2008, 4.3 percent of mothers reported being physically abused by a partner or ex-partner during pregnancy. During this time period, the percentage of physical abuse during pregnancy by a partner or ex-partner was highest among Black, non-Hispanic women and women under the age of 20.

Black, non-Hispanic women were 2.5 times more likely than White, non-Hispanic women and 6.8 times more likely than Asian women to have experienced physical abuse by a partner or ex-partner during pregnancy. Hispanic women were 2.3 times more likely than White, non-Hispanic women and 6.0 times more likely than Asian women to have experienced physical abuse by a partner or ex-partner during pregnancy.

A higher percentage of younger women (age 24 and under) were physically abused by a partner or ex-partner during pregnancy than women age 25 and older, a difference that is statistically significant.

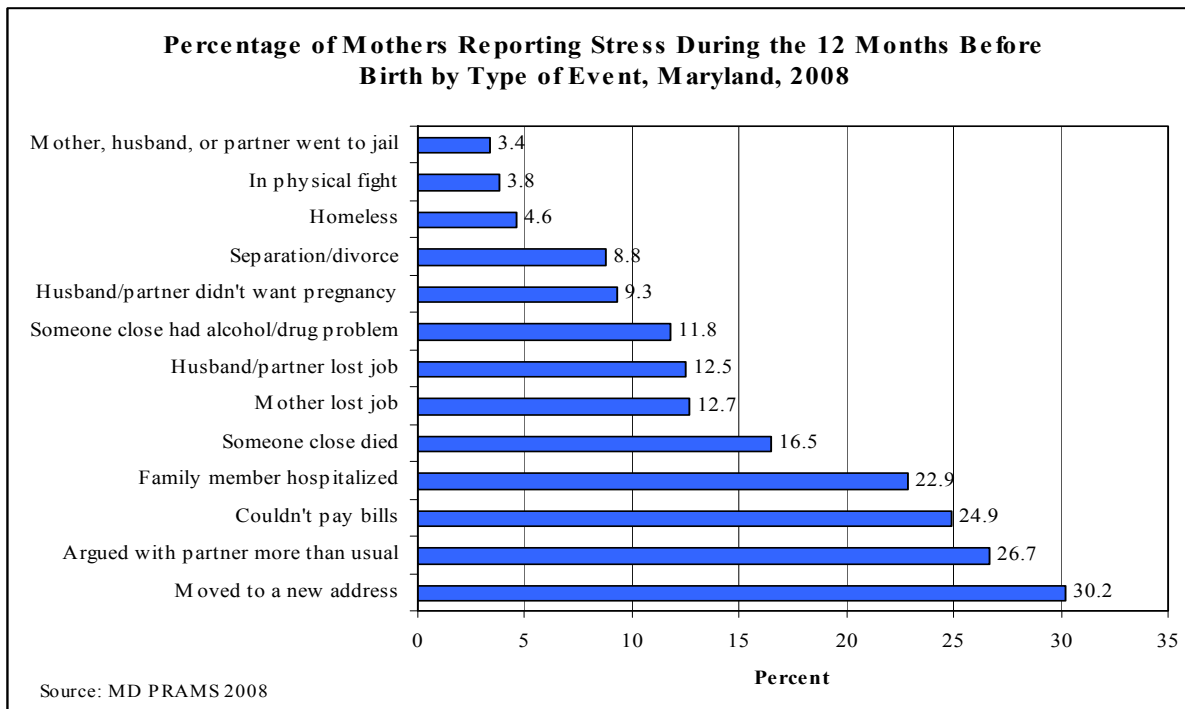
E. Stress and Pregnancy Complications

Source: MD PRAMS 2008

According to the Maryland Pregnancy Risk Assessment Monitoring System, in 2008 66.7 percent of Maryland mothers reported experiencing one or more stressors in the 12 months prior to the birth of their child. The following graph illustrates the different types of stressors experienced by women during pregnancy and the percentages of women experiencing them.

Stress during Pregnancy

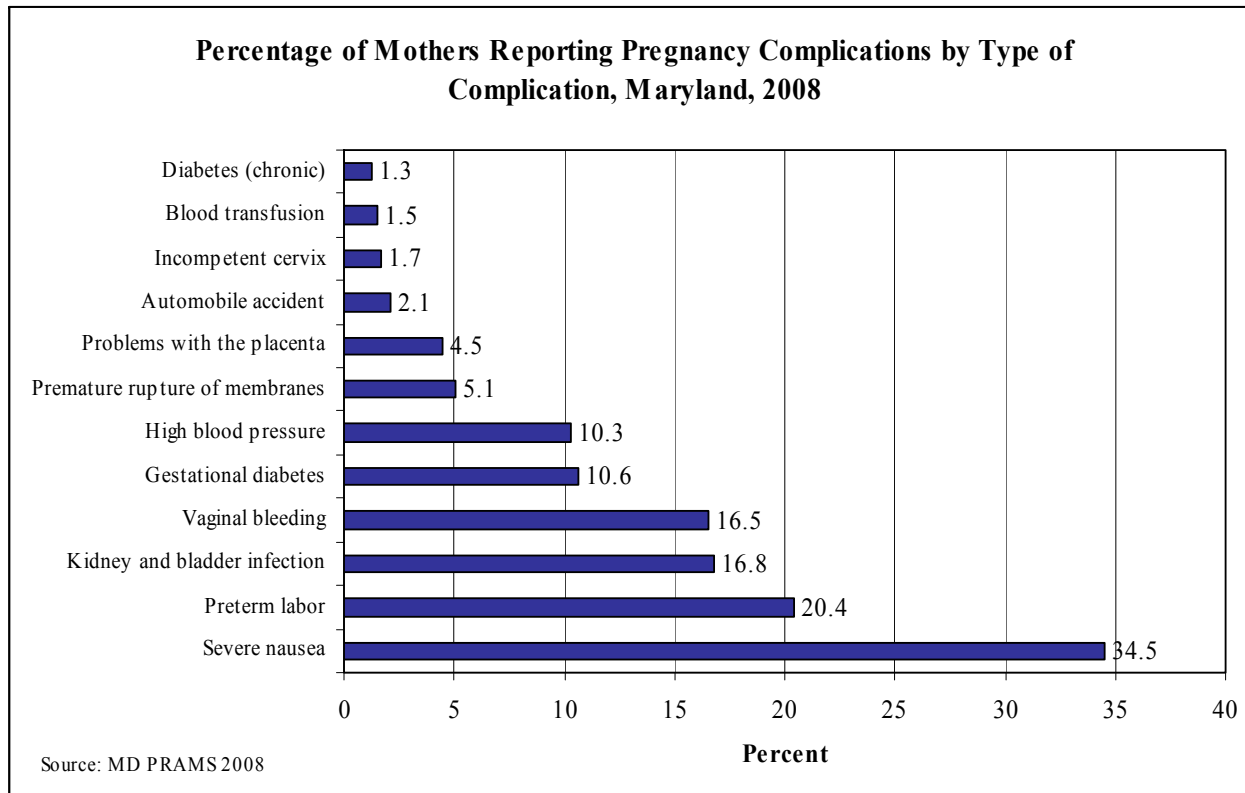
Figure 1.33



In 2008, sixty-six percent of Maryland women reported having experienced complications during pregnancy. The most common of these was severe nausea (34.5%), followed by preterm labor (20.4%), kidney or bladder infection (16.8%), and vaginal bleeding (16.5%).

Pregnancy Complications

Figure 1.21



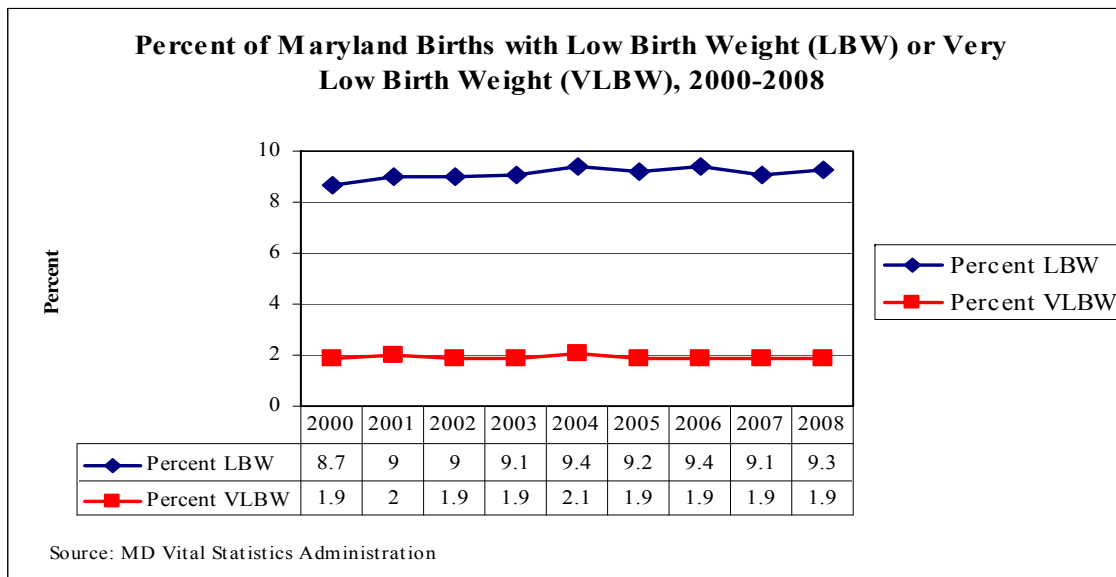
II. Pregnancy Outcomes

A. Low birth weight

Source: MD Vital Statistics Administration; Healthy People 2010: Understanding and Improving Health, Second Edition

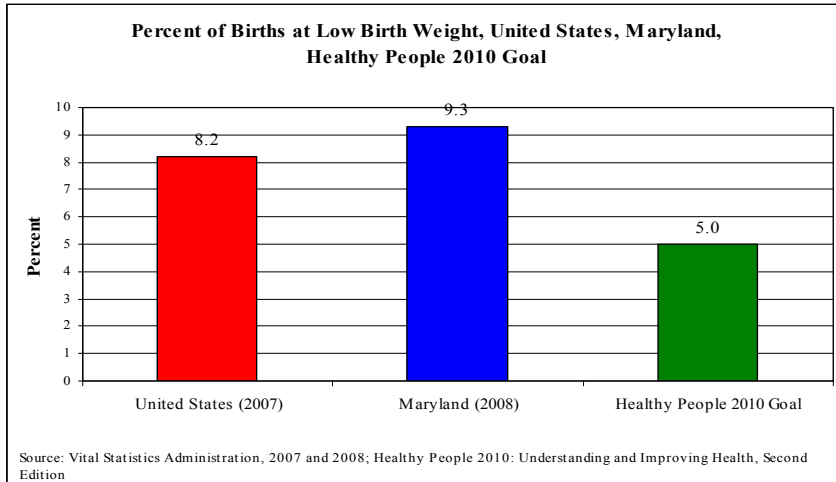
Healthy People 2010 Goals: Reduce the percent of low birth weight births to 5.0% and very low birth weight births to 0.9%.

Trends
Figure 2.1



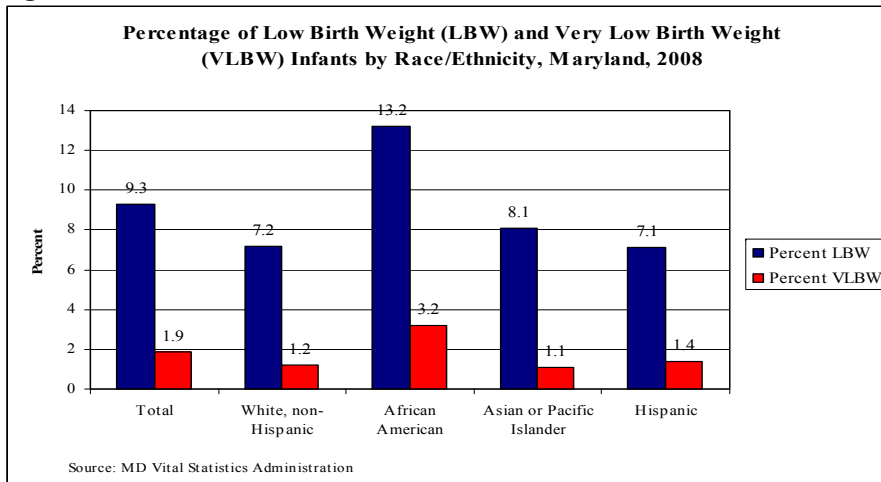
In 2008, 7,163 Maryland babies (9.3%) were born at low birth weight (less than 2,500 grams). The same year, 1,462 Maryland babies (1.9%) were born at very low birth weight (less than 1,499 grams). The overall percent of Maryland births that are at low and very low birth weights has only fluctuated slightly since 2000.

Comparison to U.S. and Healthy People 2010 Goal
Figure 2.2



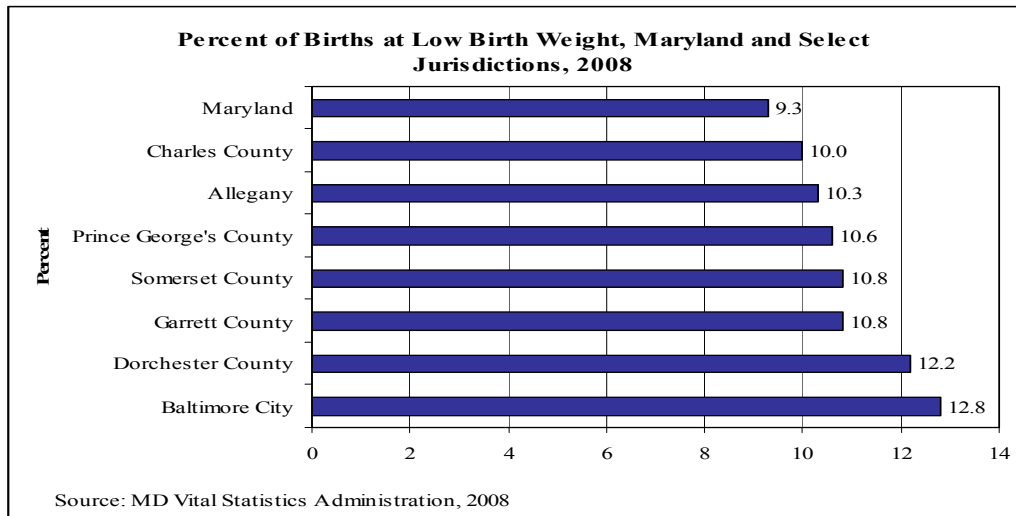
The percent of births that are at low birth weight in Maryland (9.3%) exceeds the percent of LBW births nationally (8.2%). The state is also still far from reaching the Healthy People 2010 Goals for low birth weight (5.0%) and very low birth weight (0.9%) births.

Stratification by Race/Ethnicity
Figure 2.3



The percentage of low birth weight (LBW) and very low birth weight (VLBW) births in Maryland in 2008 varied by race and ethnicity, with a higher percentage of African American babies born at low and very low birth weight than other race and ethnic groups (13.2% and 3.2% respectively).

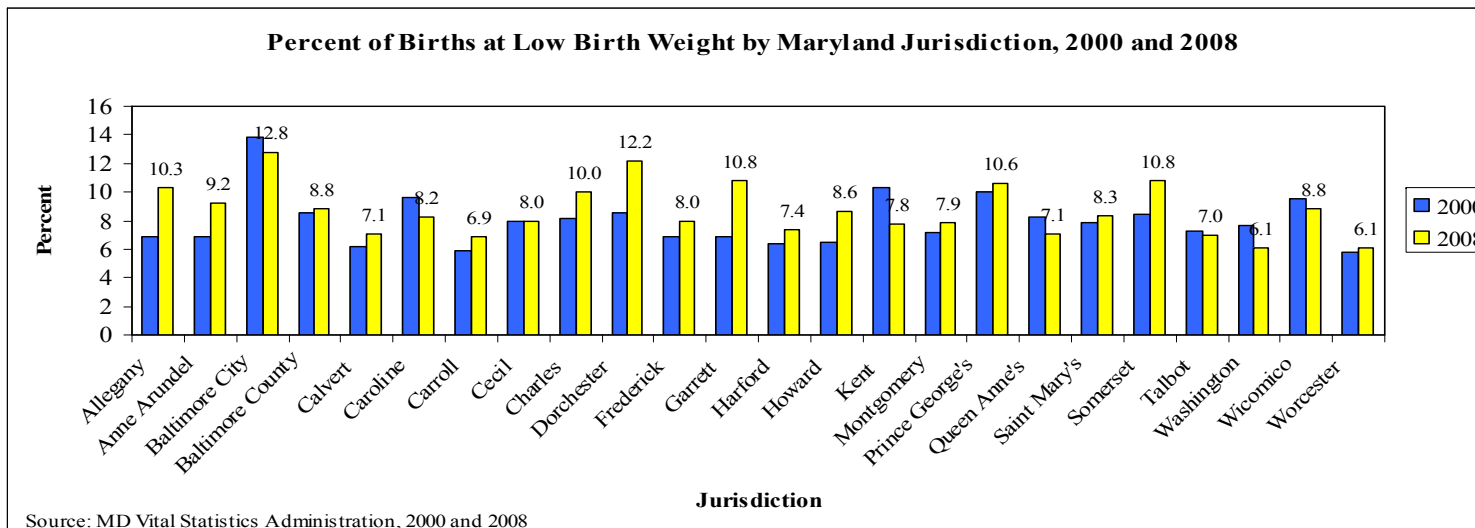
Stratification by Jurisdiction
Figure 2.4



In 2008, six jurisdictions in Maryland had a higher percentage of low birth weight births than the state of Maryland overall. The jurisdiction with the highest percentage of low birth weight births was Baltimore City with 12.8% of births at low birth weight.

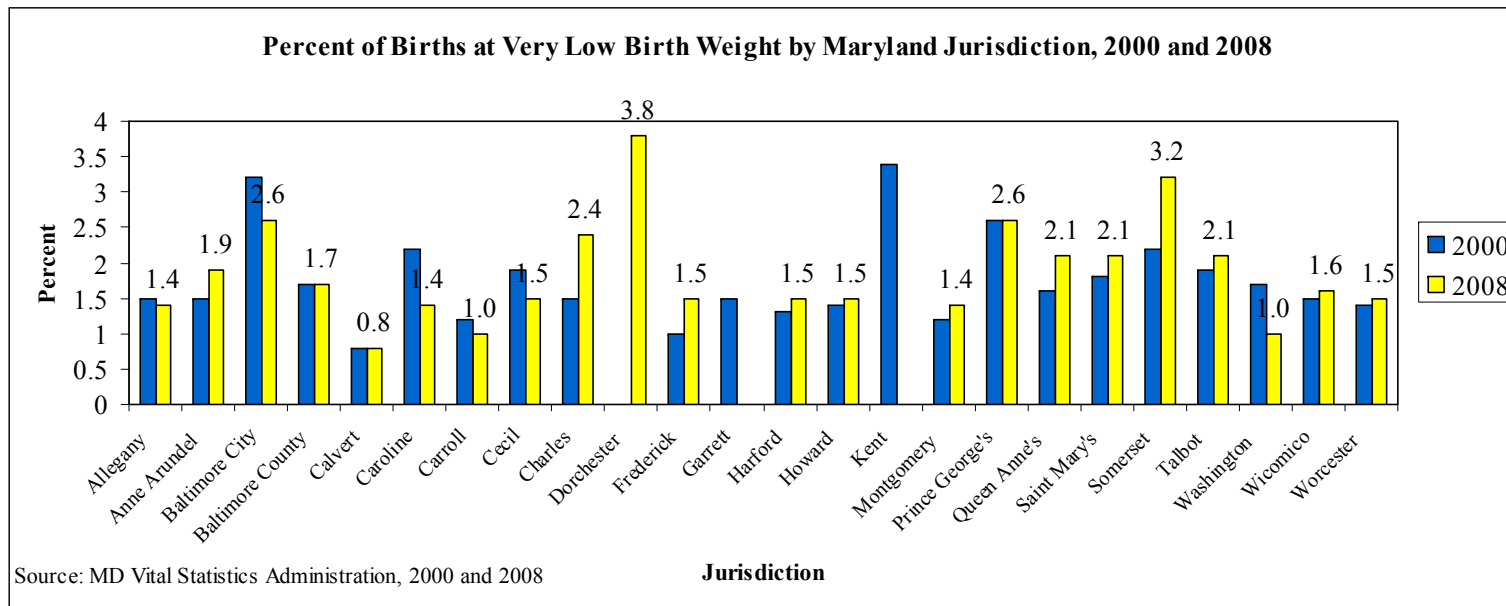
Washington and Worcester Counties had the lowest percentage of low birth weight births in 2008 (6.1%).

Trends by Jurisdiction
Figure 2.5



Since 2000, the percentage of low birth weight (LBW) births has decreased in some Maryland jurisdictions and increased in others. For example, while Baltimore City still has the highest percentage of LBW births, there has been a 7 percent decrease in this number of the past 8 years. Similarly, Kent County has experienced a 24 percent decrease and Washington County a 21 percent decrease in the percentage of LBW births. On the other hand, Allegany, Anne Arundel, Dorchester, and Garrett Counties have all seen large increases in the percentage of LBW births (49%, 33%, 44%, and 57%, respectively).

Trends by Jurisdiction
Figure 2.6



Since 2000, the percentage of very low birth weight (VLBW) births has decreased in some Maryland jurisdictions and increased in others. For example, Baltimore City and Caroline County have experienced 19 percent and 36 percent reductions, respectively, in the percentage of VLBW births. Impressively, Kent County had the highest percentage of VLBW births in 2000 (3.4%) and in 2008 it had so few VLBW births (<5) that the percentage was not presented in the Vital Statistics report. On the other hand, Charles, Queen Anne's, and Somerset Counties experienced large increases in the percentage of VLBW births (60%, 31%, and 45%, respectively). Dorchester County experienced the greatest increase in percentage of VLBW births from 2000 to 2008. In 2000, it had fewer than 5 cases, so the percentage was not presented, yet in 2008, they have the highest percentage of VLBW births: 3.8% (17 cases).

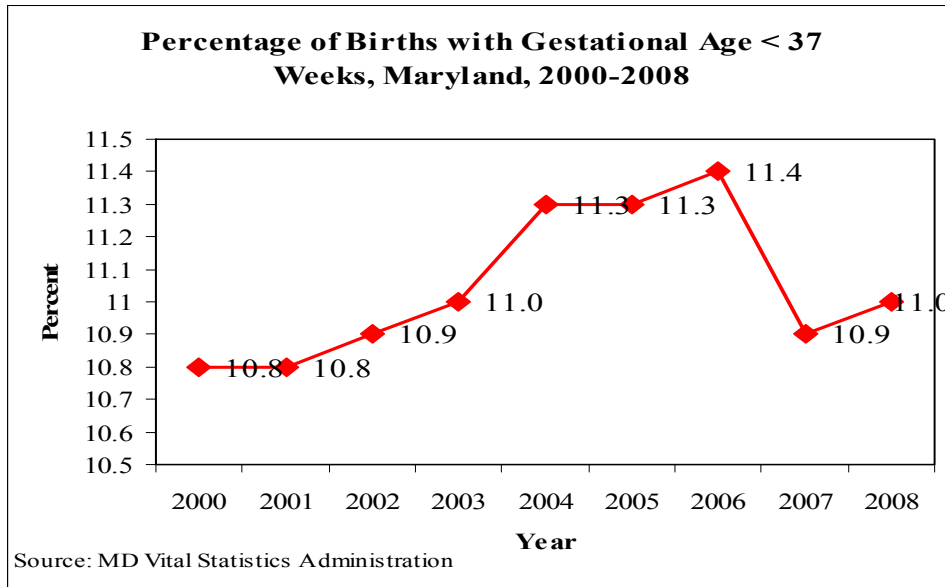
B. Preterm Births

Source: Maryland Vital Statistics Administration

Healthy People 2010 Goal: Decrease the percentage of preterm births (infants born prior to 37 completed weeks of gestation) to 7.6 percent.

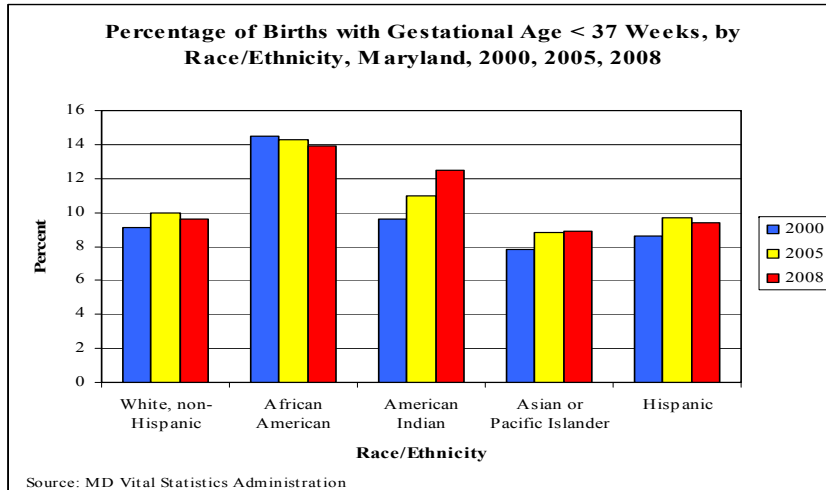
Trends

Figure 2.7



Since 2000, the percentage of Maryland births occurring at less than 37 weeks of gestation has fluctuated from a low in 2000 of 10.8 to a high of 11.4 percent in 2006. In 2008, 11 percent of births occurred before 37 weeks gestation. Significant reductions in the percentage of preterm births need to occur if Maryland is going to reach the Healthy People 2010 Goal of 7.6 percent.

Stratification by Race/Ethnicity and Trends
Figure 2.8

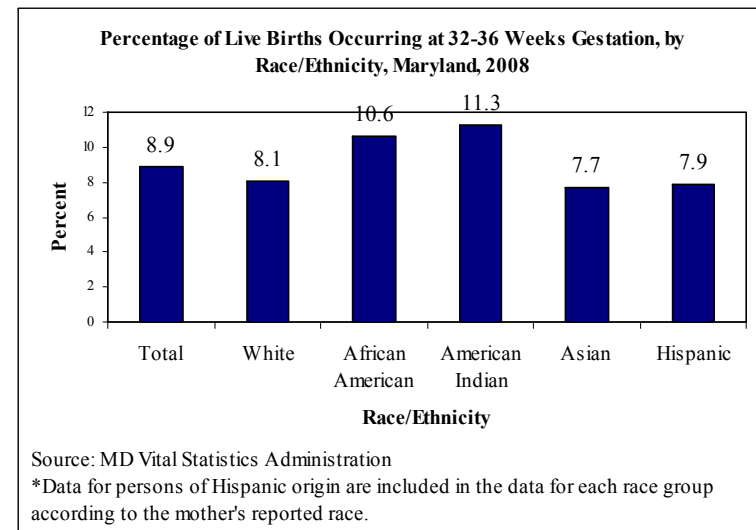


The percentage of births occurring before 37 weeks of gestation varies by race/ethnicity in Maryland. In the past 8 years, African Americans have experienced the highest percentage of preterm births, although this figure has decreased by 4 percent in the same time period. Since 2000, American Indians have experienced the second highest percentage of births occurring before 37 weeks, and this figure has increased by 30 percent. The percentages of preterm births occurring in other racial/ethnic groups in Maryland are lower, but still remain above the Healthy People 2010 Goal of 7.6 percent.

Healthy People 2010 Goal: Reduce the percentage of live births at 32-36 weeks of gestation to 6.4 percent.

In 2008, 8.9 percent of Maryland live births occurred between 32 and 36 weeks of gestation. This exceeds the Healthy People 2010 Goal of 6.4 percent of births at 32-36 weeks. The percentage of births taking place during this gestational period varies by race and ethnicity. A higher percentage of African American and American Indian births occur during this period than those of other racial or ethnic groups (10.6 and 11.3 %, respectively).

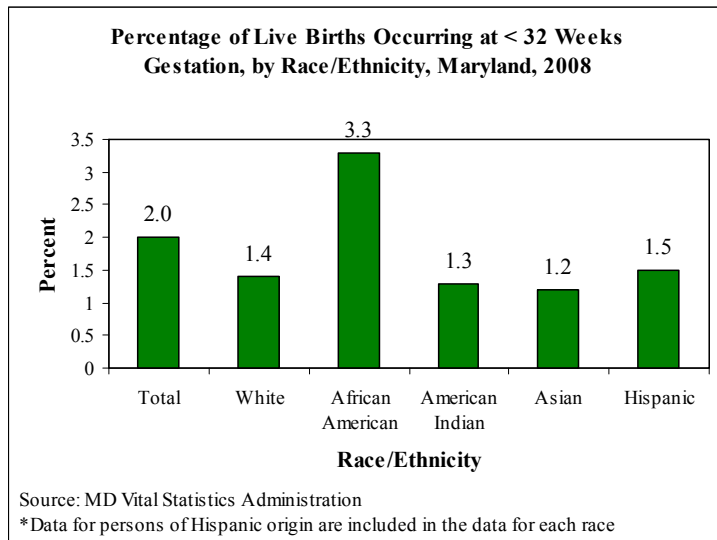
Stratification by Race/Ethnicity, Figure 2.9



Healthy People 2010 Goal: Reduce the percentage of live births at less than 32 weeks of gestation to 1.1 percent.

Stratification by Race/Ethnicity

Figure 2.10



In 2008, 2.0 percent of Maryland live births occurred prior to 32 weeks of gestation. This exceeds the Healthy People 2010 Goal of only 1.1 percent. The percentage of births occurring before 32 weeks gestation varied by race and ethnicity. The highest percentage of births before 32 weeks occurred in African American births (3.3%) and the lowest in Asian births (1.2%).

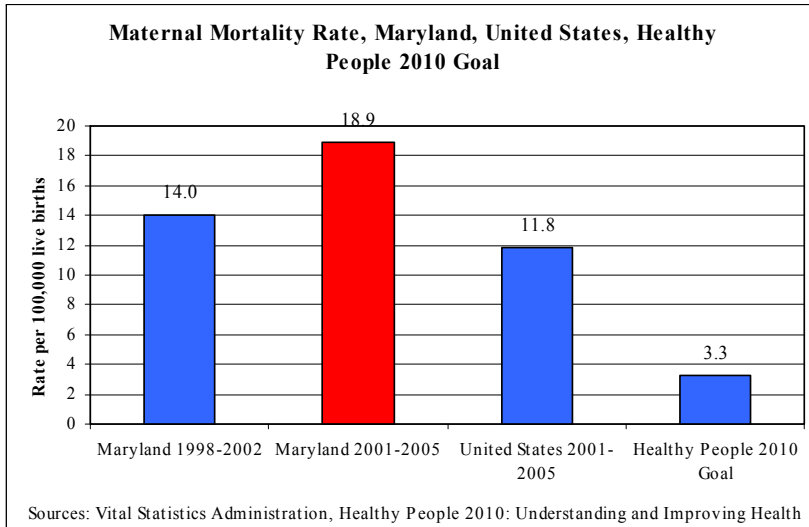
3. Maternal mortality

Source: Vital Statistics Administration; Healthy People 2010: Understanding and Improving Health, Second Edition

Healthy People 2010 Goal: Reduce maternal deaths to 3.3 per 100,000 live births.

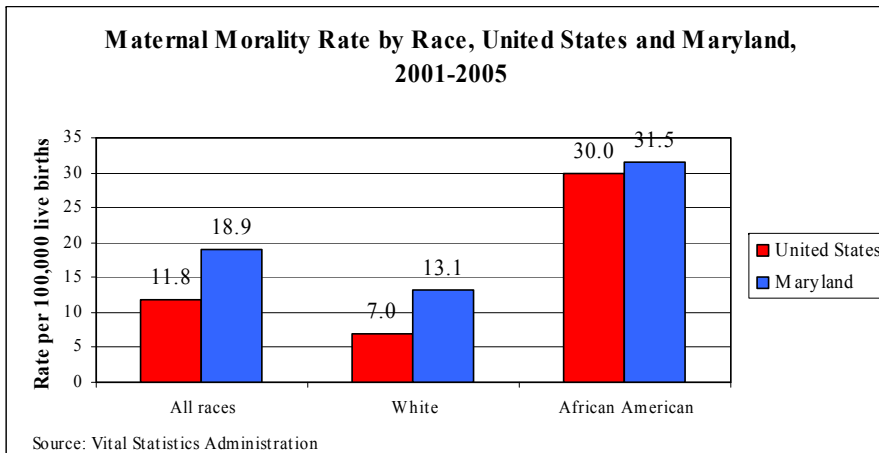
A **maternal death** is defined by the World Health Organization’s (WHO) International Classification of Diseases Ninth Revision (ICD-9) and Tenth Revision (ICD-10) to be “the death of a woman while pregnant or within 42 days of conclusion of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by pregnancy or its management but not from accidental or incidental causes.”

Figure 2.11. Comparison with Previous Years, National Rate and Healthy People 2010 Goal



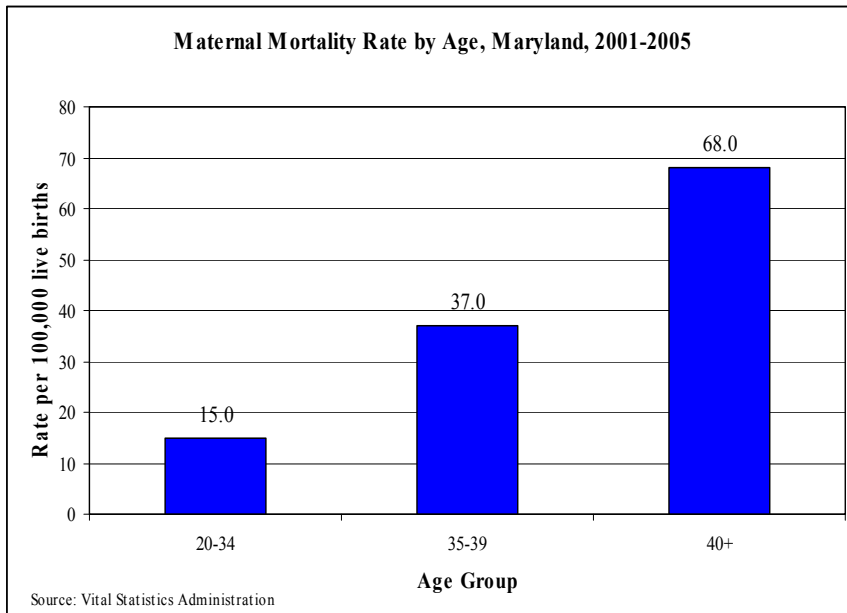
For 2001-2005, Maryland’s average maternal mortality rate or MMR (the number of maternal deaths per 100,000 live births in the same time period) was 18.9. This is higher than Maryland’s 1998-2002 rate of 14.0, higher than the national rate of 11.8, and substantially higher than the Health People 2010 goal of 3.3 maternal deaths per 100,000 live births.

Figure 2.12 Stratification by Race/Ethnicity



In Maryland, African American women have a maternal mortality rate that is 4 times greater than that for White women (30.0 and 7.0 respectively).

Figure 2.13. Stratification by Age



The 2001-2005 maternal mortality rate (MMR) in Maryland varied greatly by age. Women over the age of forty had the highest MMR of all age groups and women in the youngest age group, comprised of those ages 20-34, had the lowest maternal mortality rate.

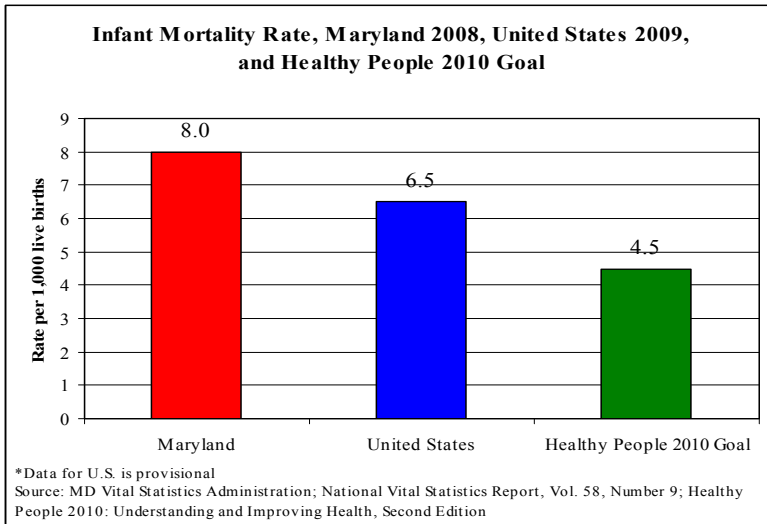
4. Infant mortality

Source: MD Vital Statistics Administration

Healthy People 2010 Goal: Decrease infant death rate to 4.5 per 1,000 live births.

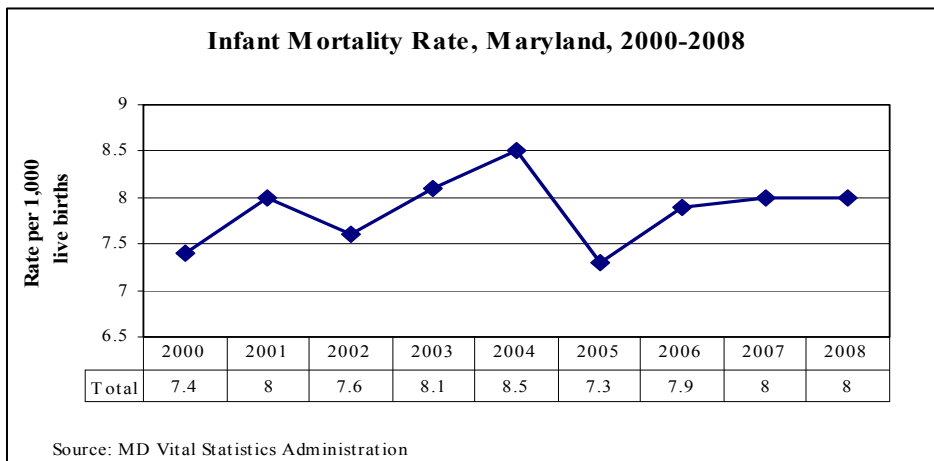
Infant mortality is death within the first year after birth. Infant mortality rate is the number of infant deaths per 1,000 live births within a specified period of time. In 2008, a total of 617 deaths occurred to infants in Maryland, yielding an infant mortality rate of 8.0 per 1,000 live births.

Figure 2.14 Comparison with National Rate and Healthy People 2010 Goal



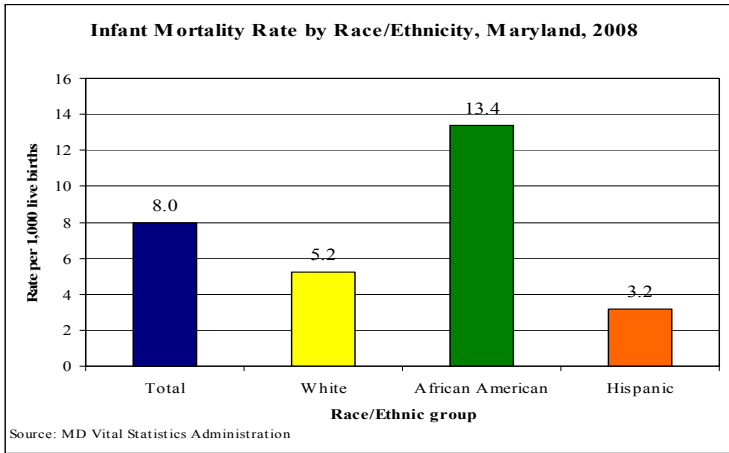
Maryland's infant mortality rate is higher than the national infant mortality rate of 6.5 and higher than the Healthy People 2010 Goal of 4.5.

Figure 2.15 Trends



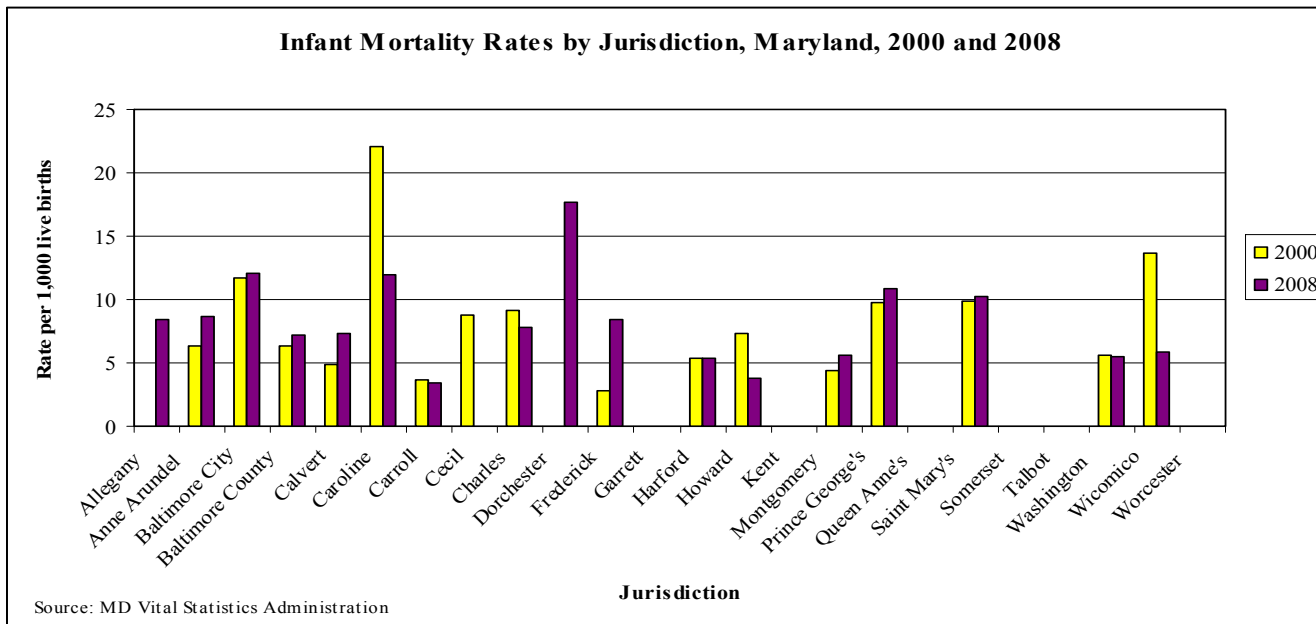
Maryland's infant mortality rate has fluctuated between 7.3 and 8.5 deaths per 1,000 live births since 2000. It reached a low in 2005 of 7.3 but, since then, has increased by nearly 10 percent, to 8.0 per 1,000 live births.

Figure 2.16 Stratification by Race/Ethnicity



Infant mortality rates vary significantly by race and ethnicity in Maryland. Lowest infant mortality rates occur in Hispanic births, followed by White births. Infant mortality rates are highest among African American births.

Figure 2.17 Stratification by Jurisdiction



Since 2000, the infant mortality rate has decreased in

some Maryland jurisdictions and increased in others. Caroline, Cecil and Wicomico Counties have all experienced large decreases in infant mortality rates (46% decrease in Caroline, 57% decrease in Wicomico and Cecil County went from having an infant death rate of 8.8 in 2000 to having too few cases to report a rate in 2008). On the other hand, Allegany and Dorchester Counties both had less than five cases of infant death in 2000, and in 2008 had infant death rates of 8.4 and 17.7 respectively. Frederick County also saw a large increase in infant mortality from 2000 to 2008 (200% increase, from an infant mortality rate of 2.8 to 8.4).

Table 2.1

Top Five Leading Causes of Infant Death by Race, Maryland, 2008			
	All Infants	White	African American
1	Disorders relating to short gestation and unspecified low birth weight	Congenital abnormalities	Disorders relating to short gestation and unspecified low birth weight
2	Congenital abnormalities	Disorders relating to short gestation and unspecified low birth weight	Sudden infant death syndrome (SIDS)
3	Sudden infant death syndrome (SIDS)	Sudden infant death syndrome (SIDS)	Congenital abnormalities
4	Newborn affected by maternal complications of pregnancy	Newborn affected by maternal complications of pregnancy	Newborn affected by maternal complications of pregnancy
5	Newborn affected by complications of placenta, cord and membranes	Bacterial sepsis of newborn	Newborn affected by complications of placenta, cord and membranes

The leading causes of infant deaths in 2008 were prematurity/low birth weight, congenital malformations and sudden infant death syndrome (SIDS). Twenty-six percent of infant deaths were attributable to prematurity/low birth weight, 16 percent to congenital abnormalities and 12 percent to SIDS. Leading causes of infant death varied by race, with the majority of African American infant deaths due to prematurity/low birth weight (31%) and the majority of White infant deaths due to congenital abnormalities (21%).

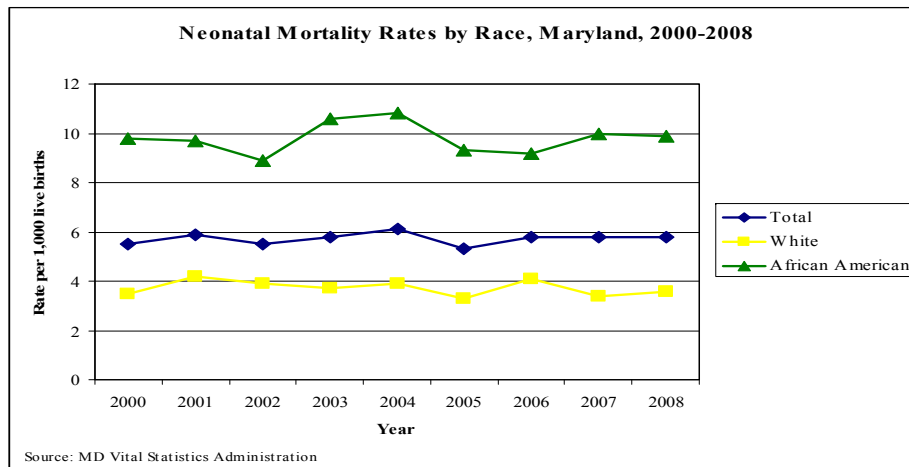
Neonatal mortality

Healthy People 2010 Goal: Decrease neonatal mortality rate to 2.9 per 1,000 live births.

Neonatal mortality is defined as the death of a live born infant in the first 28 days of life. The majority (73%) of the 617 infant deaths in Maryland in 2008 occurred in the neonatal period. Maryland's neonatal mortality rate of 5.8 was higher than the Healthy People 2010 Goal of 2.9 per 1,000 live births.

In 2008, the leading causes of neonatal deaths were prematurity/low birth weight, congenital abnormalities and maternal complications during pregnancy. This was true for both White and African American neonatal deaths.

Figure 2.18 Stratification by Race



Since 2000, the neonatal mortality rate in Maryland has fluctuated from a low of 5.3 in 2005 to a high of 6.1 in 2004. The neonatal mortality rate among African American births is consistently higher than that of White births.

Over one in five neonatal deaths in Maryland in 2008 occurred in Prince George's County. Seven Maryland jurisdictions had neonatal mortality rates that were higher than the state average of 5.8 per 1,000 live births: Dorchester (13.3), Baltimore City (8.8), Prince George's (8.3), Saint Mary's (8.3), Anne Arundel (6.8), Calvert (6.3), and Charles (6.3).

Post-neonatal mortality

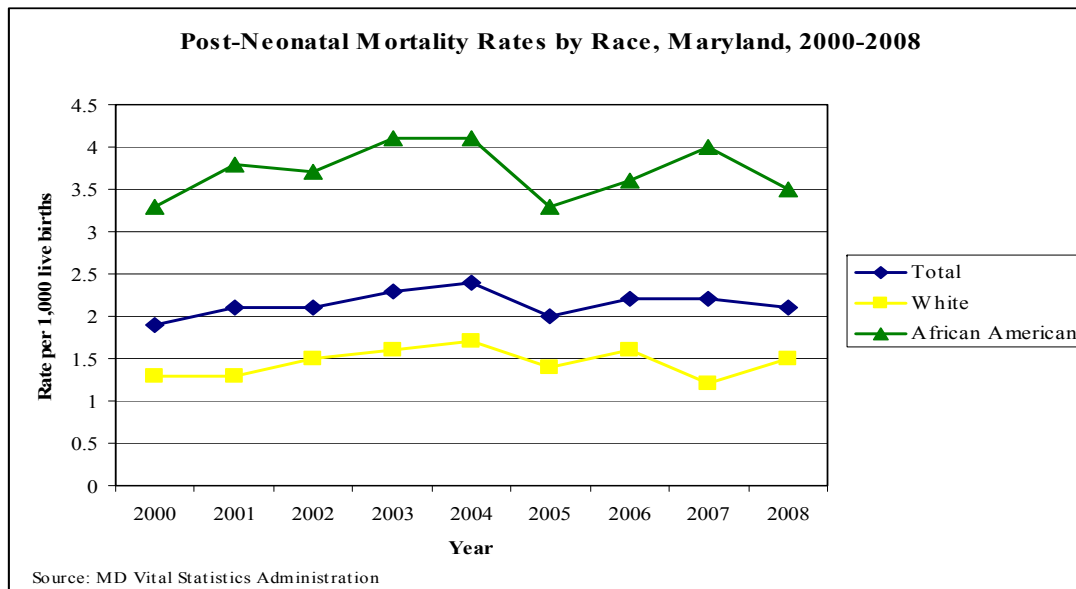
Healthy People 2010 Goal: Reduce post-neonatal mortality rate to 1.2 per 1,000 live births.

Post-neonatal mortality is defined as the death of a live born infant from 29 days through 11 months of life. Twenty-seven percent (165) of Maryland's 617 infant deaths occurred in the post-neonatal period in 2008. Maryland's post-neonatal death rate of 2.1 was higher than the Healthy People 2010 Goal of 1.1 deaths per 1,000 live births.

Sudden infant death syndrome (SIDS) and congenital abnormalities were the leading causes of post-neonatal death in Maryland in 2008.

Six Maryland jurisdictions had post-neonatal mortality rates higher than the state average of 2.1 deaths per 1,000 live births: Wicomico (3.7), Frederick (3.4), Washington (3.3), Baltimore City (3.3), Prince George's (2.6) and Baltimore County (2.2).

Figure 2.19



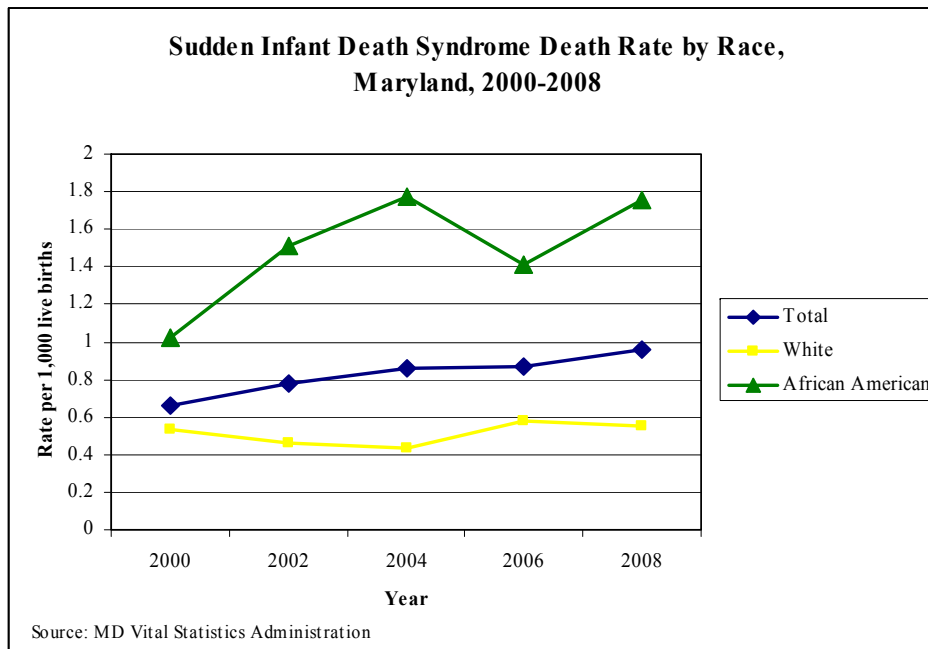
Since 2000, the post-neonatal mortality rate in Maryland has fluctuated with a low of 1.9 in 2000 to a high of 2.4 in 2004. Post-neonatal mortality rates have consistently been higher among African American births, but this rate decreased by 13 percent from 2007 to 2008.

Sudden Infant Death Syndrome (SIDS)

Healthy People 2010 Goal: Reduce SIDS death rate to 0.25 per 1,000 live births and increase percentage of infants put to sleep on their backs to 70 percent.

In 2008, SIDS was the third leading cause of infant death in Maryland, and the leading cause of infant death during the post-neonatal period. Seventy-four infants died as a result of SIDS in 2008.

Figure 2.20



In 2008, the overall SIDS death rate in Maryland was 0.96 per 1,000 live births, and the SIDS death rate among White infants was 0.55 and among African American infants, 1.76. The overall SIDS death rate has been increasing since 2000, and is now 45% higher than it was in 2000. The SIDS death rate among White infants has remained relatively steady since 2000 while the African American SIDS death rate has fluctuated greatly in the same time period. Most recently, it increased by 25%, from 2006 to 2008.

Infant sleep position is related to risk for Sudden Infant Death Syndrome, and infants who are not placed on their backs to sleep are at increased risk for SIDS. Maryland 2008 Pregnancy Risk Assessment Monitoring System Report indicated that 69 percent of infants were most often placed on their back to sleep, while 16% were usually placed on their side and 12% on their stomach. Maryland is approaching the Healthy People 2010 Goal for sleep safety, which is to have 70 percent of infants put to sleep on their backs.

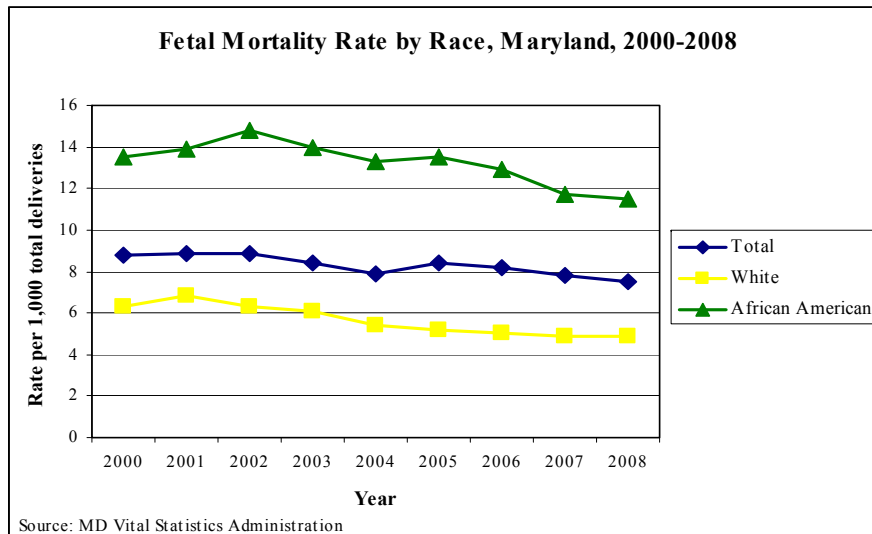
5. Fetal mortality

Source: MD Vital Statistics Administration

Healthy People 2010 Goal: Reduce fetal mortality rate to 4.1 per 1,000 total deliveries.

A fetal death is the death that occurs at 20 or more weeks gestation of a product of human conception (before extraction or expulsion from the mother). The fetal death rate is the number of fetal deaths per 1,000 total deliveries (live births plus fetal deaths). There were 583 fetal deaths in Maryland in 2008 and the fetal death rate was 7.5 per 1,000 total deliveries. This was higher than the Healthy People 2010 Goal of 4.1 deaths per 1,000 total deliveries. However, as the following graph indicates, fetal mortality rates have been declining in both White and African American pregnancies.

Figure 2.21



In Maryland, African Americans have consistently experienced higher rates of fetal mortality than Whites. However, the fetal mortality rate has decreased in both racial groups. In African Americans, it has decreased by 15 percent since 2000 (from 13.5 to 11.5), and among Whites, it has decreased by 22 percent (from 6.3 to 4.9).

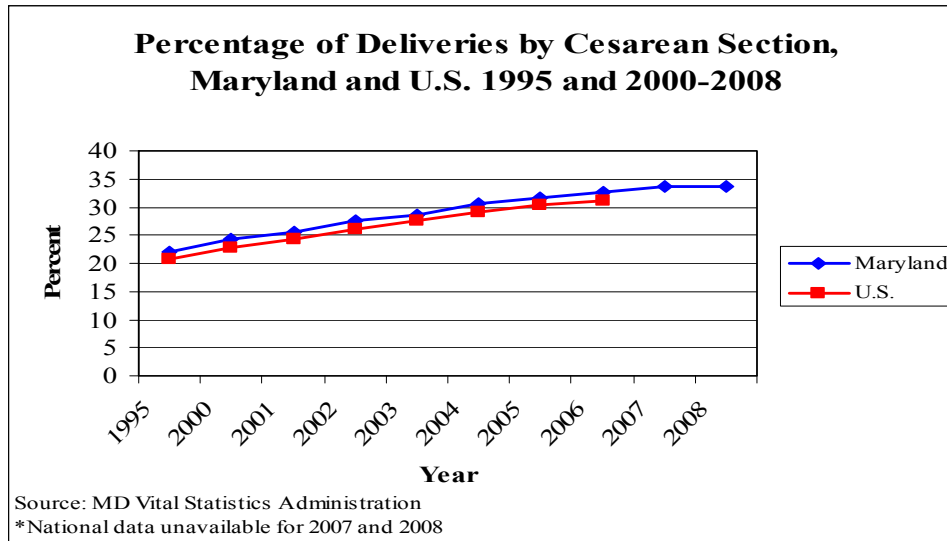
In 2008, 11 Maryland jurisdictions had fetal mortality rates that were higher than the state average of 7.5 deaths per 1,000 total deliveries. The two jurisdictions with the highest fetal death rates were Somerset County (17.7) and Worcester County (16.4). Both of these counties are in the Eastern Shore region of the state, along with four other jurisdictions with fetal death rates surpassing the state average: Dorchester (13.1), Caroline (11.9), Queen Anne's (11.2), and Wicomico (10.2). Other Maryland jurisdictions with high fetal mortality rates in 2008 were Baltimore City (10.3), Prince George's (8.8), Charles (8.3), Saint Mary's (8.2), and Harford (8.0).

6. Cesarean Deliveries

Source: MD Vital Statistics Administration

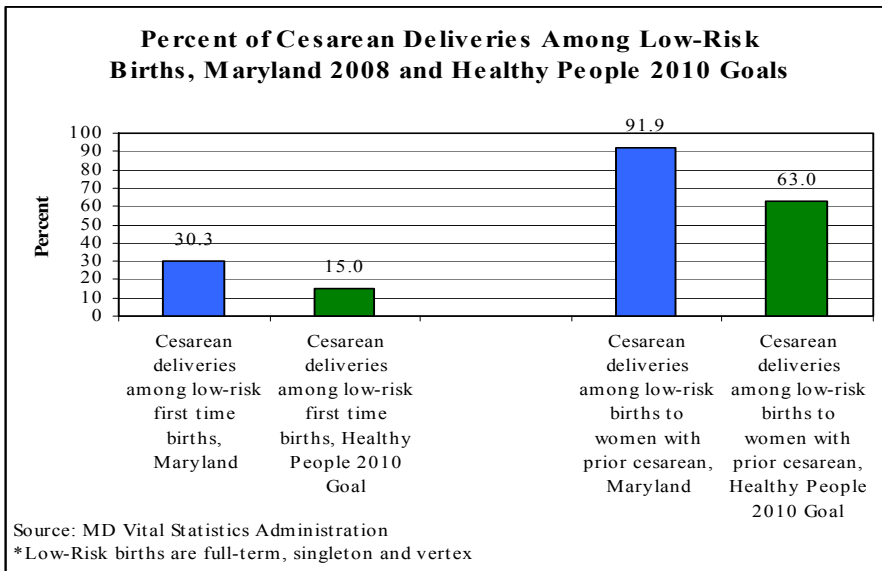
Healthy People 2010 Goals: Reduce percentage of cesarean births among low-risk (full-term, singleton, vertex) first-time births to 15 percent, and reduce percentage of cesarean births among low-risk women with prior cesarean deliveries to 63 percent.

Figure 2.22 Trends in Cesarean Deliveries



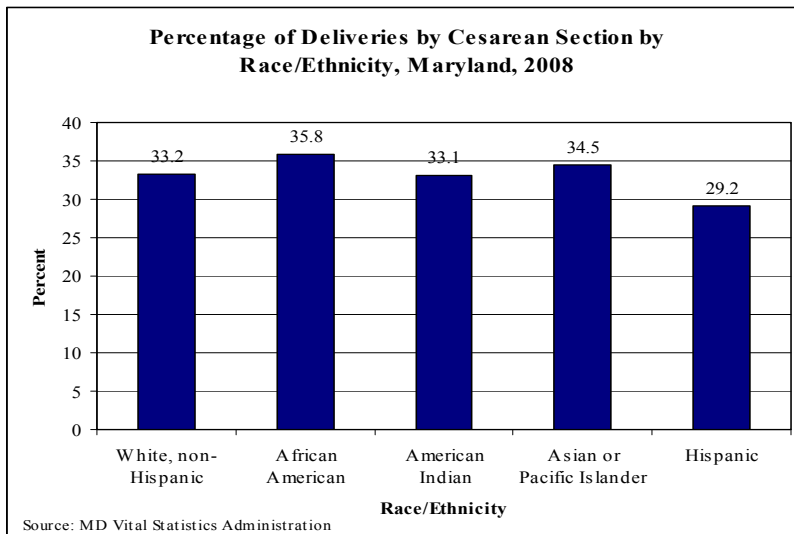
In 2008, 33.6 percent of Maryland deliveries were by cesarean section. From 1995 to 2008, Maryland experienced an increase of 52 percent (from 22.1 to 33.6%). However, while there was a steady increase since 1995, the percent of births by cesarean section remained the same from 2007 to 2008. In the past decade, Maryland has consistently had a higher percentage of births by cesarean delivery than the U.S. as a whole. In 2006, 31.1 percent of births nationally were by c-section, which was the highest level ever reported in the U.S. The same year, 32.6 percent of Maryland births were by c-section.

Figure 2.23 Healthy People 2010 Goals



The Healthy People 2010 Goals are more specific and address cesarean deliveries only for low-risk births. This includes only births that are full-term (at least 37 weeks), singleton (not a multiple pregnancy), and vertex presentation (head facing in a downward position in the birth canal). In 2008, 30.3 percent of Maryland low-risk first time births were by delivered by cesarean section and 91.9 percent of low-risk births to women with prior cesarean were by delivered by cesarean section. Both of these figures are still much higher than the Healthy People 2010 Goals of 15 and 63 percent.

Figure 2.24 Stratification by Race/Ethnicity



The percentage of deliveries by cesarean section in Maryland varied by race/ethnicity in 2008. The percentage was highest among African American deliveries (35.8 percent) and lowest among Hispanic deliveries (29.2).

Stratification by Jurisdiction

Anne Arundel, Carroll, and Somerset Counties had the highest percentages of deliveries by cesarean section, with 36.1, 36.3 and 37.5 percent, respectively. Jurisdictions with the lowest percentage of births by cesarean section were Garrett, Kent, Carolina, and Talbot Counties, with 26.4, 26.9, 24.8, and 24.3 percent, respectively.

7. Obstetrical Care for High-Risk Deliveries

Source: MD Vital Statistics Administration

Healthy People 2010 Goal: Increase the proportion of very low birth weight (VLBW) infants born at level III hospitals or subspecialty perinatal centers to 90 percent.

Due to the fact that research has demonstrated the benefits of delivering high-risk infants in settings that have the technological capacity to care for them, the above stated goal was established for Healthy People 2010. Most recent data for Maryland indicates that Maryland meets this Healthy People 2010 Goal. According to the 2005-2007 Maryland Vital Statistics Administration, 90 percent of VLBW infants in Maryland are born at level III hospitals or subspecialty perinatal centers.

8. Congenital Syphilis

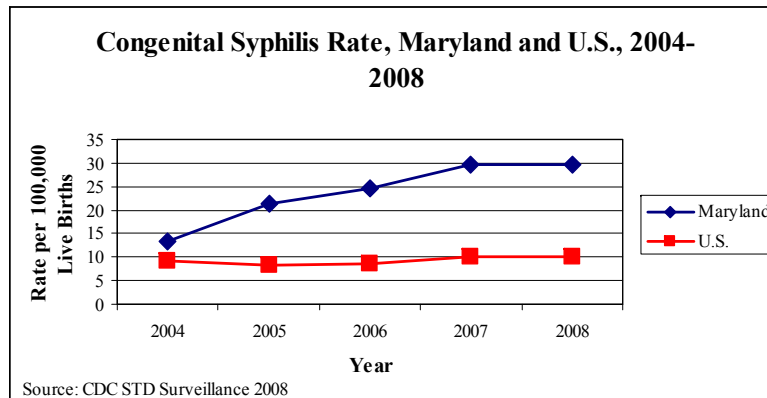
Source: CDC STD Surveillance 2008

Healthy People 2010 Goal: Reduce the rate of new congenital syphilis cases to 1.0 per 100,000 live births.

In 2008, Maryland had 23 new cases of congenital syphilis, yielding a rate of 29.7 cases per 100,000 live births. The state had the third highest congenital syphilis rate in the country and is far from reaching the Healthy People 2010 Goal of 1.0 case per 100,000 live births.

The congenital syphilis rate in Maryland increased by 122 percent from 2004 to 2008. During the same time period, the national congenital syphilis rate also increased, but only by 10 percent.

Figure 2.25

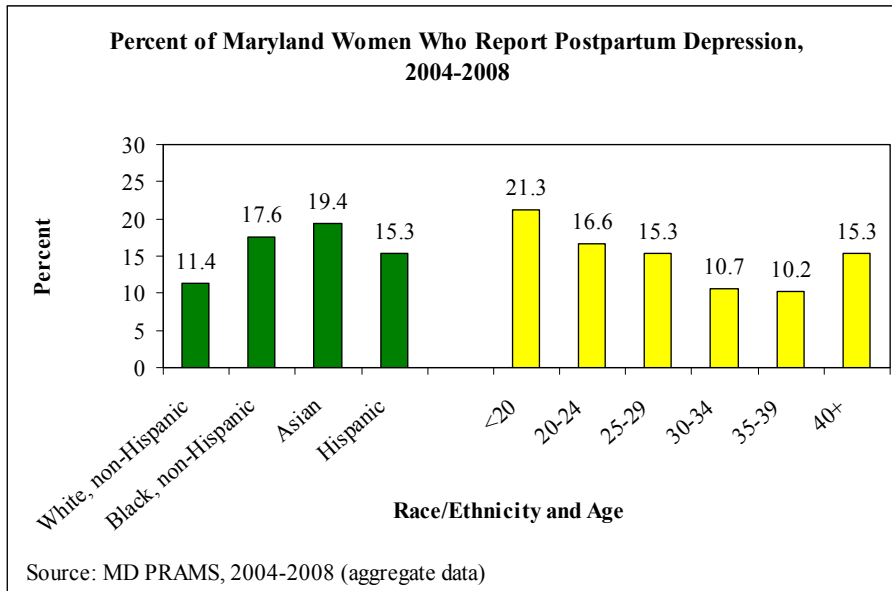


9. Postpartum Depression

Source: Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2008

Postpartum depression is defined as major depression that begins within a year after delivery and lasts two or more weeks. According to data collected by the Pregnancy Risk Assessment Monitoring System, during the time period 2004-2008, 14.2 percent of Maryland women suffered from postpartum depression.

Figure 2.26



As indicated in the above graph, a larger percentage of Black, non-Hispanic and Asian women were found to experience postpartum depression than White, non-Hispanic women, a difference that was statistically significant.

Likewise, a larger percentage of younger women, age 24 and under, were found to experience postpartum depression than older women, age 30 and above, a difference that was statistically significant.

III. Infants

A. Maryland Births

Source: Maryland Vital Statistics Annual Reports, 2000-2008

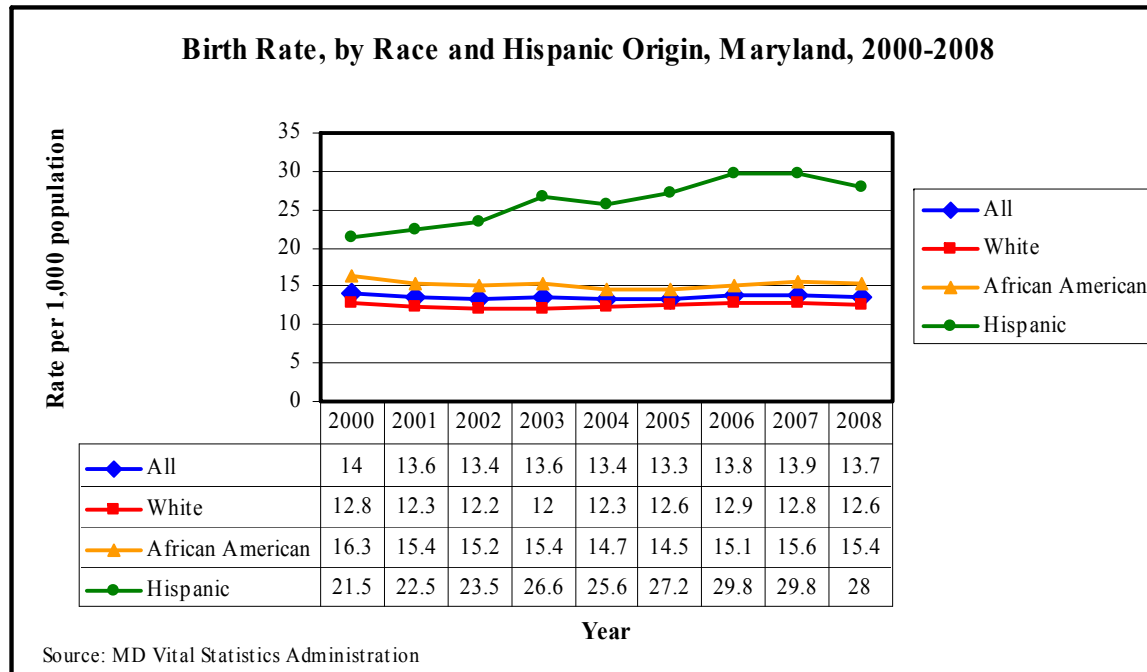
General Birth Data

Table 3.1

Number of Births, Maryland, 2008	
Race and Hispanic Origin	Number of births in 2008
Total (Includes races categorized as “other”)	77,268
White, non-Hispanic	35,398
Black	26,102
American Indian	160
Asian or Pacific Islander	4,994
Hispanic	10,533

In 2008, there were a total of 77,268 births in the state of Maryland. The majority of these births were white, non-Hispanic (35,398), with the next largest group being Black births (26,102).

Figure 3.1



After increasing over the past decade, birth rates for all races and ethnic groups declined in Maryland in 2008. Birth rates continue to be highest for Hispanic women, with a 2008 Hispanic birth rate of 28.0 per 1,000 population.

Table 3.2

Birth Rates* by Race and Hispanic Origin, and Jurisdiction, Maryland, 2008				
Jurisdiction	All Races**	White	African American	Hispanic***
Maryland	13.7	12.6	15.4	28.0
Allegany	9.9	10.2	3.9	7.8
Anne Arundel	14.0	13.3	15.6	33.6
Baltimore City	15.6	13.7	16.4	37.3
Baltimore County	13.0	11.3	16.1	28.8
Calvert	10.8	10.5	11.9	17.0
Caroline	15.1	15.2	15.3	40.6
Carroll	10.3	10.4	7.8	18.5
Cecil	12.8	12.8	13.9	10.6
Charles	13.6	12.4	14.9	25.3
Dorchester	14.1	11.8	19.8	46.3
Frederick	13.2	12.4	16.9	28.4
Garrett	9.3	9.4	****	****
Harford	12.4	11.6	16.9	18.2
Howard	12.4	10.7	14.5	25.2
Kent	10.9	10.1	14.2	24.9
Montgomery	14.4	13.6	17.2	26.6
Prince George's	15.3	17.9	14.2	28.4
Queen Anne's	11.3	11.2	12.3	41.0
Saint Mary's	14.3	14.0	14.4	24.2
Somerset	10.6	11.5	9.7	38.4
Talbot	10.7	10.5	11.1	53.7
Washington	12.6	12.4	12.7	20.1
Wicomico	14.5	12.9	18.8	41.6
Worcester	9.7	8.5	15.5	35.9

*Per 1,000 population

**Includes race categorized as "other"

***Includes all births to mothers of Hispanic origin of any race

****Rates based on fewer than five events in the numerator are not presented since such rates are subject to instability

The 2008 Maryland birth rates varied by region and jurisdiction. Garrett County, in northwest Maryland, had the lowest overall birth rate at 9.3 per 1,000 population, and Baltimore City had the highest overall birth rate at 15.6 per 1,000 population.

Large differences also existed between different races and by Hispanic origin of the mother. For example, in Talbot County, the white birth rate was only 10.5 per 1,000, while the Hispanic rate was 53.7 per 1,000 population.

Birth Characteristics

Table 3.3

Maternal Characteristics by Maternal Race and Hispanic Origin, Maryland, 2008						
Maternal Characteristic	All Races*	White, non-Hispanic	Black	American Indian	Asian or Pacific Islander	Hispanic***
Percentage of births to mothers <18 years of age	2.8	1.5	4.5	1.3	0.4	4.0
Percentage of births to mothers <20 years of age	8.6	5.5	13.6	6.3	1.2	10.0
Percentage of births to women with <12 years of education	15.0	7.9	14.2	8.8	3.9	46.1
Percentage of births to unmarried women	42.3	26.5	64.1	46.3	9.1	57.1
Percentage of 4th and higher order births	10.3	8.3	13.0	12.5	4.8	13.4

Births to Unmarried Women

In the past decade, the percentage of births to unmarried women in Maryland has increased by 23 percent (from 34.6 to 42.4%). The percentage of births to unmarried white women has increased by 31 percent (from 20.3 to 26.5%); the percentage of births to unmarried African American women has increased by 5 percent (from 61.1 to 64.1%); the percentage of births to unmarried Asian or Pacific Islander women has increased by 28 percent (from 7.1 to 9.1%); and the percentage of births to unmarried Hispanic women has increased by 35 percent (from 42.3 to 57.1%).

The percent of births to unmarried women also varies by jurisdiction and age of the mother. The Maryland jurisdiction with the highest percentage of births to unmarried women in 2008 was Baltimore City, with 69.6 percent of babies born to unmarried women. The jurisdiction with the lowest percentage of births to unmarried women in 2008 was Howard County, with 22.2 percent of babies born to unmarried women. As indicated in the following table, the age groups with the highest percentages of births to unmarried women are the youngest, with 98 percent of births to teens under age 15, 96.7 percent of births to teens ages 15-17, and 92.2 percent of births to teens ages 18-19 being outside of marriage.

Figure 3.2

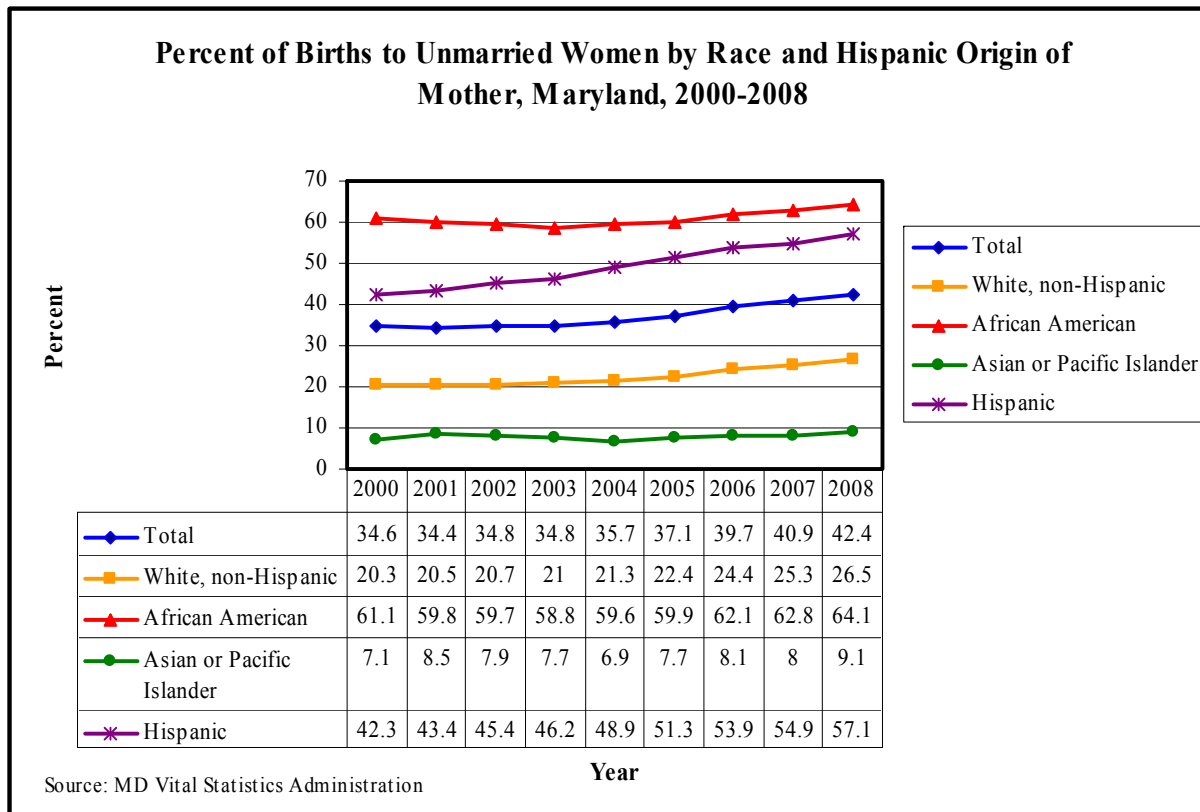


Table 3.4

Percentage of Births to Unmarried Women by Age, 2008	
Age of Mother	Percent of births to unmarried women
All ages	42.4
Under 15	98.0
15-17	96.7
18-19	92.2
20-24	71.2
25-29	38.7
30-34	21.5
35-39	18.9
40-44	20.8
45 and over	17.0

2. Breastfeeding

Source: National Immunization Survey; PRAMS; Pediatric Nutrition Surveillance System

State and National Performance Measure: Percentage of mothers breastfeeding their infants at 6 months.

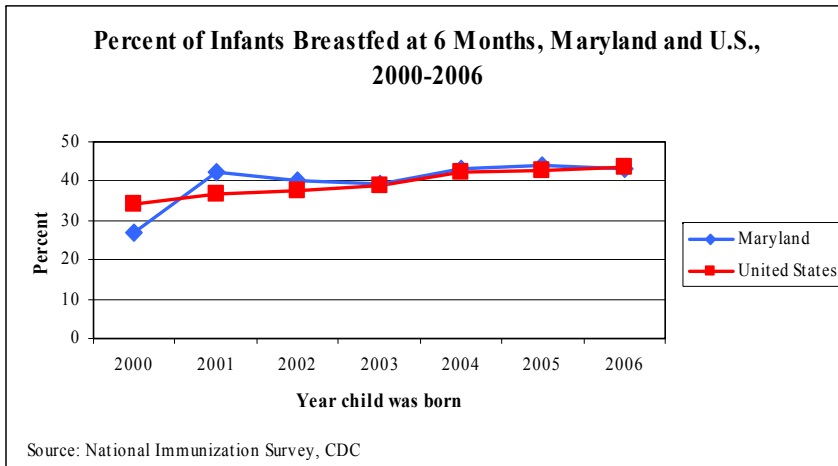
Healthy People 2010 Goal: Increase the proportion of mothers who breastfeed their babies

- I.** Increase the percentage of mothers who breastfeed their babies in the early postpartum period to 75 percent.
- II.** Increase the percentage of mothers who breastfeed their babies at 6 months to 50 percent.
- III.** Increase the percentage of mothers who breastfeed their babies at 12 months to 25 percent.
- IV.** Increase the percentage of mothers who *exclusively* breastfeed through 3 months to 40 percent.
- V.** Increase the percentage of mothers who *exclusively* breastfeed through 6 months to 17 percent.

According to the National Immunization Survey:

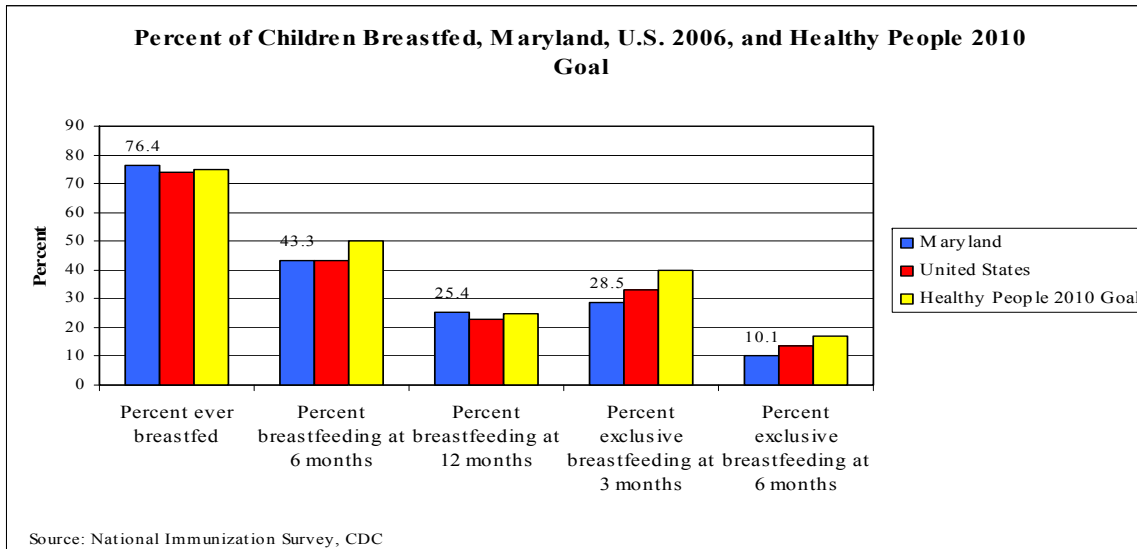
- 76.4 percent of Maryland infants born in 2006 breastfed during the early postpartum period,
- 43.3 percent breastfed at 6 months of age and,
- 25.4 percent breastfed at 12 months of age.

Figure 3.3 Trends



As of 2006, Maryland had not reached the Healthy People 2010 Goal of having 50 percent of infants breastfed at 6 months. However, the percentage of Maryland children breastfed at 6 months has increased by 62 percent (from 26.8 to 43.3 percent) since 2000.

Figure 3.4 Comparison with U.S. and Healthy People 2010 Goals



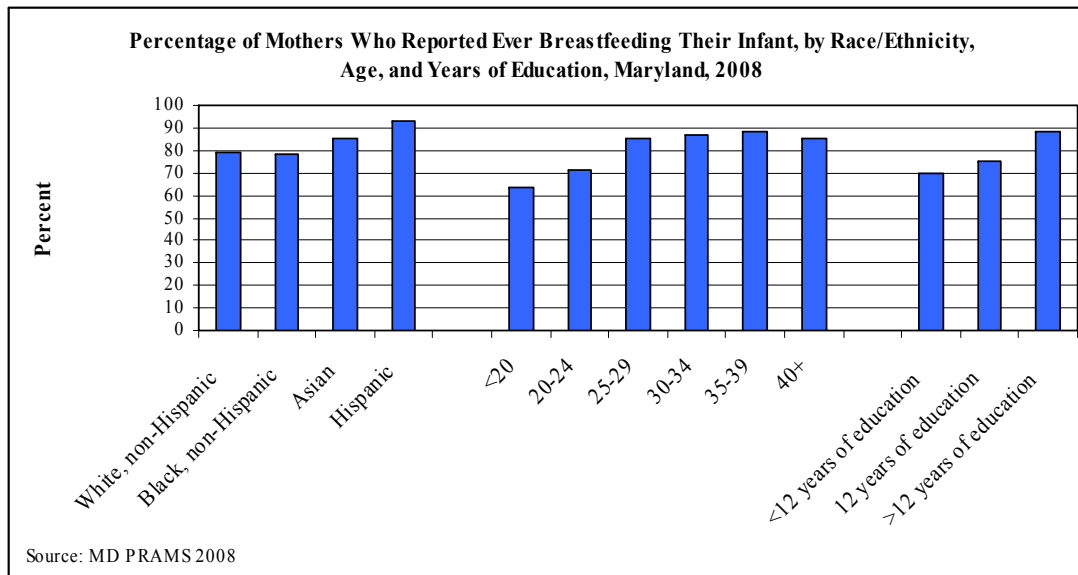
With 76.4 percent of Maryland children having ever been breastfed and 25.4 percent still breastfeeding at 12 months, Maryland is doing well on two of the five Healthy People 2010 breastfeeding goals. However, with only 43.3 percent of children being breastfed at six months, Maryland is still below the Healthy People 2010 goal of 50 percent. Likewise, Maryland is still under the Healthy People 2010 goals and under the national rates for exclusive breastfeeding at three and six months. The Healthy People goal for exclusive breastfeeding at three months is 40 percent and only 28.5 percent of Maryland children are being exclusively breastfed at three months. The Healthy People goal for exclusive breastfeeding at six months is 17 percent, yet only 10.1 percent of Maryland children are being exclusively breastfed at 6 months.

Stratification by Race/Ethnicity, Age, and Years of Education

According to the Maryland Pregnancy Risk Assessment Monitoring System (PRAMS), the percentage of mothers who reported ever breastfeeding their infant and the length of time that mothers reported breastfeeding their infants, varied by race/ethnicity, age, and years of education.

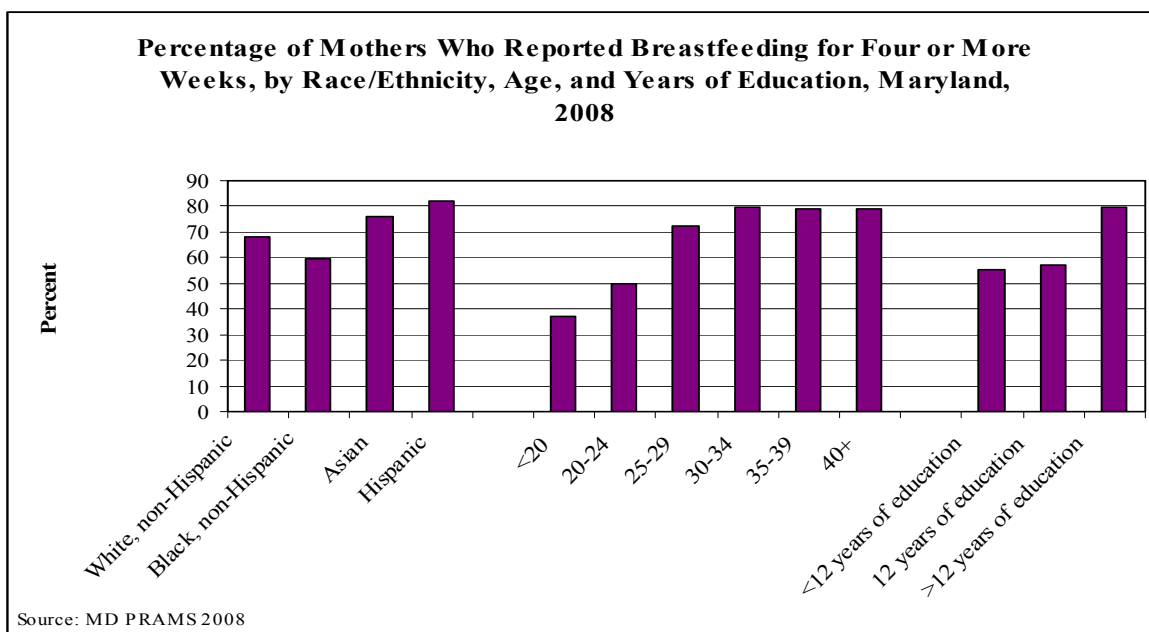
As detailed in Figure 3, a higher percentage of Hispanic women reported breastfeeding (93.0 percent) than women from other racial or ethnic groups. A higher percentage of women over 25 years of age reported breastfeeding than women in younger age groups. For example, only 63.5 percent of women under 20 years reported breastfeeding their infant, while 88.3 percent of women ages 35-39 reported breastfeeding. Breastfeeding was also associated with years of education. While only 70.0 percent of women with less than 12 years of education reported breastfeeding, 88.5 percent of women with more than 12 years of education reported breastfeeding.

Figure 3.5 Socio-demographic Stratification



As detailed in Figure 3.5, the length of time that women continued to breastfeed also varied by socio-demographic factors. While only 59.7 percent of Black, non-Hispanic women reported breastfeeding for four or more weeks, 82.1 percent of Hispanic women reported having breastfed for this length of time. Only 37.1 percent of women under the age of 20 reported breastfeeding for four or more weeks, while 79.4 percent of women ages 30-34 reported breastfeeding for this length of time. Nearly 80 percent of women with more than 12 years of education reported breastfeeding for four or more weeks, while only 55.6 percent of women with less than 12 years of education reported breastfeeding for this length of time.

Figure 3.6 Socio-demographic Stratification



Process Indicators Related to Breastfeeding

The CDC’s National Immunization Survey also collects data on a number of process indicators related to breastfeeding.

1. One of these process indicators is the percent of live births occurring at facilities designated as Baby Friendly. The Baby-Friendly Hospital Initiative (BFHI) is a global program sponsored by the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) to

encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding. The BFHI assists hospitals in giving mothers the information, confidence, and skills needed to successfully initiate and continue breastfeeding their babies or feeding formula safely, and gives special recognition to hospitals that have done so.

- As of October 2009, nationally, the percent of live births occurring at facilities designated as Baby Friendly was only 2.87 percent and zero percent of Maryland births were at such facilities. While many other states are lacking such facilities, in others, such as Alaska, Connecticut, Maine, Nebraska, Rhode Island, and Wisconsin, over 10 percent of live births occur at facilities designated as Baby Friendly.

2. Another process indicator is the percent of breastfed infants receiving formula before 2 days of age.

- Nationally and in Maryland, 25.6 percent of breastfed infants receive formula before 2 days of age.

3. A third process indicator is the number of International Board Certified Lactation Consultants per 1,000 live births. An International Board Certified Lactation Consultant (IBCLC) is a health care professional who specializes in the clinical management of breastfeeding. They work in a wide variety of health care settings, including hospitals, pediatric offices, public health clinics, and private practice.

- As of October 2009, in Maryland, there were 3.06 IBCLCs per 1,000 live births. While this is greater than the national rate of 2.20, it is lower than that of many other states. Vermont has the highest number of IBCLCs per 1,000 live births (9.98), followed by Alaska (9.28), New Hampshire (6.14) and Maine (5.74).

4. A fourth process indicator is the number of La Leche League groups per 1,000 live births. La Leche League is an international, nonprofit, nonsectarian organization dedicated to providing education, information, mother-to-mother support, and encouragement to women who want to breastfeed. Accredited by La Leche League International, volunteer Leaders are experienced breastfeeding mothers who are familiar with research and current findings dealing with all aspects of nursing. They offer practical information and support to nursing mothers through telephone help, monthly meetings, and lending libraries of books on childbirth, breastfeeding, and related parenting topics.

- As of October 2009, there were 0.46 La Leche League groups per 1,000 live births in Maryland. This is higher than the number of groups nationally (0.34 per 1,000 live births). Across the country, the number of La Leche League groups ranges from 1.54 per 1,000 live births in Vermont to 0.08 per 1,000 live births in South Dakota.

Legislation Related to Breastfeeding

According to the CDC's Breastfeeding Report Card, as of October 2009, there was state legislation about breastfeeding in public places in 48 states. Fifteen states had legislation mandating employer lactation support (generally requiring employers to provide space and time for lactation). Maryland does not have this type of legislation.

3. Immunizations

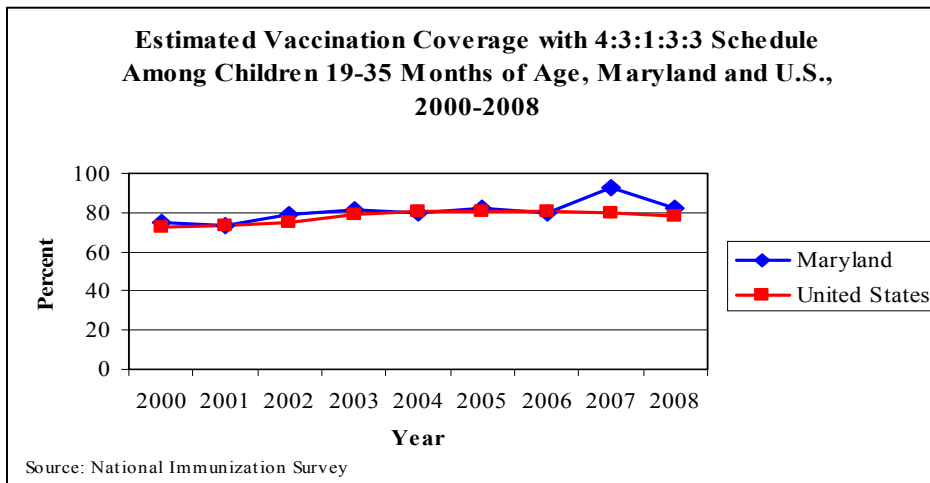
Source: National Immunization Survey (NIS)

National Performance Measure: Percentage of 19 to 35 month olds who have received a full schedule of age appropriate immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus, Influenza, and Hepatitis B. This is also known as the 4:3:1:3:3 vaccine series.

Healthy People 2010 Goal: Increase in and maintenance of vaccination coverage levels among children aged 19 to 35 months.

- Increase the percentage of children aged 19 to 35 months who receive the recommended vaccine series, 4:3:1:3:3 (4DTaP, 3 polio, 1 MMR, 3 Hib, 3 hep B), to 80 percent.
- Increase the percentage of 19 to 35 month olds who have received each of the individual recommended vaccines to 90 percent.
- Increase the percentage of 19 to 35 month olds who have received 1 dose of the varicella vaccine to 90 percent.

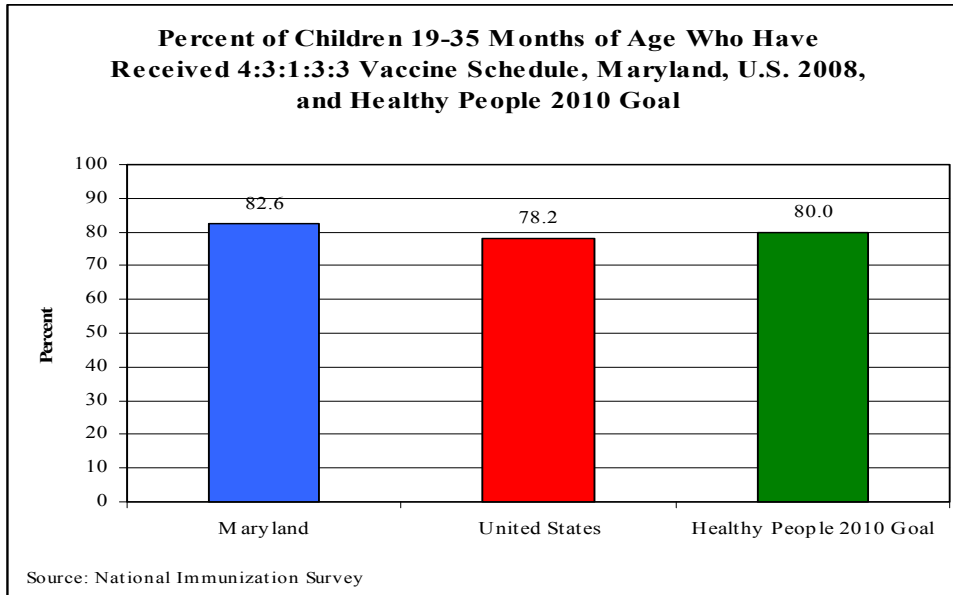
Figure 3.7



From 2000 to 2008, the percentage of Maryland children 19-35 months of age receiving the full 4:3:1:3:3 vaccination schedule increased by 9.5 percent. During the same time period, the percentage of children 19-35 months, nationally, receiving the same schedule also increased, but only by 7.4 percent.

There was a large increase in the percentage of Maryland children 19-35 month of age receiving this vaccine schedule in 2007 (16 percent increase, from 79.9 to 92.4 percent). This decreased by 11 percent (from 92.4 to 82.6 percent) in 2008, but remains above the Healthy People 2010 Goal of 80 percent immunized.

Figure 3.8



In 2008, 82.6 percent of Maryland children, 19-35 months of age, received the full 4:3:1:3:3 vaccine schedule. This meets the Healthy People 2010 Goal of having 80 percent of children in this age group with this vaccine schedule, and exceeds the percentage of children that received the vaccine schedule nationwide (78.2 percent).

According to the National Immunization Survey, in 2008, Maryland reached the Healthy People 2010 Goal for the majority of individual immunizations among children 19-35 months of age. The only vaccine that did not meet the goal was DTaP, which is 4 or more doses of any diphtheria and tetanus toxoids and pertussis vaccines. In 2008, 89.1 percent of Maryland children, ages 19-35 months, received this vaccine series, which just falls short of the Healthy People 2010 Goal of 90 percent immunization.

The remainder of the individual vaccines met the Healthy People 2010 Goal of 90 percent immunization. In 2008, 95.6 percent of Maryland children were immunized against polio by age 19-35 months, 94.5 were immunized against measles, mumps and rubella, 93.9 were immunized against Haemophilus influenzae type b, 93.5 against hepatitis B, and 92.2 percent against varicella.

4. Hospitalizations

Source: HSCRC Hospital Inpatient Data, 2007

In 2007, there were a total of 7,726 hospital discharges for children under 1 year in Maryland. The largest percentage of hospitalizations, 16.6 percent, was attributable to Acute Bronchitis, followed by Other Perinatal Conditions (11.9 percent), and Hemolytic Jaundice and Perinatal Jaundice (10.0 percent).

Table 3.5

Top 10 Conditions of Hospitalization, 2007 Children < 1yr		
1	Acute Bronchitis	16.6%
2	Other Perinatal Conditions	11.9%
3	Hemolytic Jaundice and Perinatal Jaundice	10.0%
4	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	5.0%
5	Urinary Tract Infections	3.2%
6	Viral Infections	2.9%
7	Fever of Unknown Origin	2.8%
8	Fluid and Electrolyte Disorders	2.8%
9	Asthma	2.6%
10	Other Upper Respiratory Infections	2.5%

A few differences exist between the top 10 reasons for infant hospitalization among Black infants and White infants (Figure 3.6). Acute Bronchitis, Other Perinatal Conditions, Pneumonia and Hemolytic and Perinatal Jaundice are the top 4 reasons for hospitalization among both Black and White infants, but there are variations in the remaining six hospitalization causes.

Table 3.6

Top 10 Conditions of Hospitalization, 2007 Black Children < 1 yr		
1	Acute Bronchitis	15.9%
2	Other Perinatal Conditions	11.5%
3	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	5.7%
4	Hemolytic Jaundice and Perinatal Jaundice	5.1%
5	Skin and Subcutaneous Tissue Infections	3.4%
6	Viral Infections	3.4%
7	Esophageal Disorders	3.1%
8	Asthma	3.0%
9	Fever of Unknown Origin	2.8%
10	Fluid and Electrolyte Disorders	2.8%

Table 3.7

Top 10 Conditions of Hospitalization, 2007 White Children < 1 yr		
1	Acute Bronchitis	18.1%
2	Other Perinatal Conditions	11.9%
3	Hemolytic Jaundice and Perinatal Jaundice	10.8%
4	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	4.5%
5	Fluid and Electrolyte Disorders	3.0%
6	Fever of Unknown Origin	3.0%
7	Urinary Tract Infections	2.9%
8	GI Congenital Abnormalities	2.7%
9	Viral Infection	2.6%
10	Other Upper Respiratory Infections	2.6%

5. HIV Exposure

Source: Center for HIV Surveillance and Epidemiology, Infectious Disease and Environmental Health Administration, DHMH: MD HIV/AIDS Epidemiological Profile, Fourth Quarter 2008; Fact Sheet-HIV/AIDS and Women in Maryland, November 2009

Surveillance

By law, all children born to HIV infected mothers throughout the state are reported to the Center for HIV Surveillance and Epidemiology (of the Infectious Disease and Environmental Health Administration within the Maryland Department of Health and Mental Hygiene). There is an active surveillance system set up with the major HIV pediatric providers to ensure that these perinatal exposure cases are reported.

Additionally, the Center participates in a project funded by the CDC called Enhanced Perinatal Surveillance (EPS), for which it performs extensive medical record reviews of the prenatal, natal, and post-natal medical records to identify factors associated with perinatal HIV transmission. As part of this project, the Center also performs an annual match of the HIV registry with the birth registry (from Vital Statistics) to identify any HIV positive women who gave birth, where either the provider was unaware of their HIV status, or the provider did not report it to the health department.

Exposed Infants

An HIV exposed infant is defined as an infant that is born to an HIV positive mother. The average number of HIV exposed infants from 2005-2008 in Maryland is approximately 184 per year. In 2008, there were 217 exposed infants, which translates to 14.6 HIV exposed births per 100,000 women of childbearing age (13-49 years).

The number of exposed infants translates roughly to the number of HIV positive women who give birth, although there is some variation due to multiple births. The following table shows trends in the number of exposed infants, number of infants in which HIV transmission has occurred (HIV+ babies), and the percentage of exposed infants where transmission has occurred.

Table 3.8

Preliminary Data from 2005-2008 for Exposed Infants and Transmissions by Birth Year, Maryland			
Birth Year	Number of Exposed Infants	Number of HIV+ Babies	% of Exposed Infants that are HIV+
2005	153	3	2.0%
2006	190	3	1.6%
2007	175	6	3.4%
2008	217	5	2.3%

*This data has not yet been made available for general public distribution

Recent Legislation Regarding Testing and Treatment for Pregnant Women

During the 2008 legislative session, the Maryland General Assembly passed legislation entitled "HIV Testing - Informed Consent and Treatment." This legislation makes key changes in the way counseling and consent are done throughout the State, and specific changes were made to the HIV testing process for pregnant women. The changes affect sections 18-336 and 18-338.2 of the Health General Article of the Annotated Code of Maryland and became effective on July 1, 2008.

All Maryland women are now offered an HIV test as part of the routine prenatal blood tests, and it is to be administered unless the patient declines the test. An HIV test is offered again during the third trimester for those women who are not tested earlier in pregnancy, and clinicians are advised to offer repeat HIV tests in the third trimester at health care facilities in areas of high rates of HIV prevalence and for all pregnant women who are at high risk of acquiring HIV. Health care providers who offer labor and delivery services to pregnant women must also offer a rapid HIV test to pregnant women with unknown or undocumented HIV status during labor and delivery, and antiretroviral prophylaxis is to be administered prior to receiving the results of the confirmatory test if a rapid HIV test during labor and delivery is positive.

MCH Population Group: Children and Adolescents (0-19 years of age)

I. Demography

A. Population

Source: Vital Statistics Administration, MD Department of Planning analysis of Census Bureau data

1. General

In 2008, there were 1,506,879 children, ages 0-19, living in Maryland, representing 26.8 percent of the state's total population. This is approximately 23,000 less than the number of children that were reportedly living in the state in 2003. Of Maryland children, 27.0 percent (407,227) are ages 15-19, 24.3 percent (366,710) are ages 10-14, 24.0 percent (361,155) are ages 5-9, 19.7 percent (296,425) are ages 1-4, and 5.0 percent (75,362) are under 1 year old.

2. Geographic Distribution

The majority of Maryland children, 46 percent, live in the Baltimore Metropolitan Area, which includes Baltimore City, Baltimore, Anne Arundel, Howard, Carroll and Harford Counties. Thirty-two percent live in the National Capital Area, which includes Montgomery and Prince George's Counties. Eight percent live in the Northwest Region of the state, seven percent in the Eastern Shore Area, and six percent in the Southern Area.

3. Racial and Ethnic Distribution

In 2008, White, non-Hispanic children represented 51.4 percent of the state's total child and adolescent population, ages 0-19. African-American, non-Hispanic children represented 31.6 percent of the population, Asian, non-Hispanic children represented 4.6 percent, American Indians/Alaskan Natives under 1 percent, and Native Hawaiian/Other Pacific Islander under 1 percent. Children with two or more races represented 3.3 percent of the child and adolescent population, and 9.1 percent of children had mothers of Hispanic origin (although they may also identify as being either White or Black).

In 2008, there were an estimated 737,300 racial and ethnic minority children and adolescents living in Maryland. African American, non-Hispanic children and adolescents comprised the largest racial/ethnic minority group, representing 64.6 percent of the minority population. Hispanic children and adolescents were the second largest racial/ethnic minority group, representing 18.7 percent, Asian, non-Hispanic children followed at 9.4 percent, while American Indian/Alaskan Native and Native Hawaiian/Other Pacific Islander children and adolescents represented under one percent each.

Table 1.

Child and Adolescent Minority Population in Maryland			
	2003 Population	2008 Population	Percent Change
Total Minority	677,108	737,322	8.9% ↑
African American, non-Hispanic	483,756	476,239	1.6% ↓
Hispanic	89,502	137,625	54.0% ↑
Asian, non-Hispanic	62,048	69,423	11.9% ↑
American Indian/Alaskan native, non-Hispanic	3,698	3,928	6.2% ↑
Hawaiian/Pacific Islander, non-Hispanic	267	863	223.2% ↑
Two or More Races	37,837	49,244	30.1% ↑

B. Family Structure and Living Arrangements

Source: Kids Count Data Center

According to the Kids Count Program Data Center, 33 percent of Maryland children under 18 live in a single parent home. This includes children who live with their own single parent either in a family or subfamily. In this definition, single-parent families may include cohabiting couples and do not include children living with married stepparents.

Sixty-seven percent of children live in a married-couple household, 6 percent in a father-only household and 26 percent in a mother-only household. Five percent, or 64,000, Maryland children live under the care of grandparents. Six percent of children live with cohabitating domestic partners and five percent live with neither parent.

Seven percent of Maryland children in 2008 were reported to be living in crowded housing, which is defined as a housing unit with more than one person per room. This is lower than the percentage of children living in crowded housing nationally, 13 percent, and at the lower end of the state range, 4-27 percent.

C. Poverty and Income

Source: Kids Count Data Center; US Department of Agriculture-Economic Research Service

According to the Kids Count Program Data Center, in the year 2008, 137,831 Maryland children under 18, or 10.4 percent of Maryland children, were living in poverty. Across the nation, the percentage of children in poverty in each state ranges from 9-30 percent, making the child poverty rate in Maryland one of the lowest in the country. Nineteen percent of Maryland children in single parent families are living in poverty.

Five percent of Maryland children in 2008 were reported to be living in extreme poverty, which means they are in families with incomes less than 50 percent of the federal poverty level, as defined by the U.S. Office of Management and Budget. Across the nation, the percentage of children living in extreme poverty in each state ranges from 4-14 percent, making the child extreme poverty rate in Maryland one of the lowest in the country.

In Maryland, the percentage of children in poverty varies by race and ethnicity. The highest percentage of children in poverty is among Black or African American children, with 17 percent living in poverty in 2008. Thirteen percent of Hispanic or Latino children were living in poverty, seven percent of Asian children, and six percent of non-Hispanic white children were living in poverty in 2008.

In 2008, 59 percent of Maryland children were utilizing food stamps. This is a 28 percent increase from the percentage of Maryland children using food stamps in 2002.

As displayed in Table 2, the percentage of children living in poverty is different for each Maryland jurisdiction. The two jurisdictions with the highest percentage of children in poverty are Somerset and Baltimore City, with 27.9 and 24.5 percent, respectively. The two jurisdictions with the lowest percentage of children in poverty are Howard and Carroll Counties, with 4.9 and 6.4 percent, respectively.

Table 2.

Percentage of Children, 0-17, Living in Poverty, Maryland, 2008		
Jurisdiction	Percent	Confidence Interval
Maryland	10.4	9.8-11.0
Allegany County	19.0	15.0-23.0
Anne Arundel County	7.0	5.6-8.4
Baltimore City	24.5	21.3-27.6
Baltimore County	9.7	8.2-11.1
Calvert County	6.6	5.2-8.0
Caroline County	14.9	11.7-18.1
Carroll County	6.4	5.1-7.6
Cecil County	10.8	8.5-13.0
Charles County	8.2	6.5-9.8
Dorchester County	22.1	17.3-26.9
Frederick County	6.5	5.1-7.9
Garrett County	20.9	16.6-25.3

Jurisdiction	Percent	Confidence Interval
Harford County	7.3	5.8-8.8
Howard County	4.9	3.9-6.0
Kent County	16.5	12.7-20.2
Montgomery County	7.3	6.1-8.5
Prince George's County	8.4	7.0-9.8
Queen Anne's County	7.8	6.1-9.5
St. Mary's County	10.0	7.8-12.2
Somerset County	27.9	21.8-34.0
Talbot County	12.5	9.8-15.2
Washington County	12.9	10.3-15.5
Wicomico County	17.1	13.7-20.5
Worcester County	17.7	13.8-21.5

Source: US Department of Agriculture-Economic Data Service

D. Children of Immigrant Families

Source: Kids Count Data Center

In 2008, 285,000, or 21 percent, of Maryland children were of immigrant families. Four percent of these children were foreign-born, while 96 percent were born in the United States. For thirty-five percent of children in immigrant families, their parents were not U.S. citizens. Forty-three percent of children in immigrant families (121,000) had at least one parent from Latin America.

Eighteen percent of children in immigrant families were of a low-income working family, compared to 11 percent of children in U.S.-born families. Twenty-two percent of children in immigrant families were living in a family without secure parental employment, compared to 29 percent of children in U.S.-born families. The median household income for households of children in immigrant families was \$80,200 in 2008, compared to \$82,700 for households of children with U.S.-born families.

II. Mortality

Source: MD Vital Statistics Administration

National Performance Measures:

- The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.
- The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

Healthy People 2010 Goals: Reduce the rate of child deaths

- Children aged 1 to 4 years: 18.6 per 100,000
- Children aged 5-9 years: 12.3 per 100,000
- Adolescents aged 10 to 14 years: 16.8 per 100,000
- Adolescents aged 15 to 19 years: 39.8 per 100,000

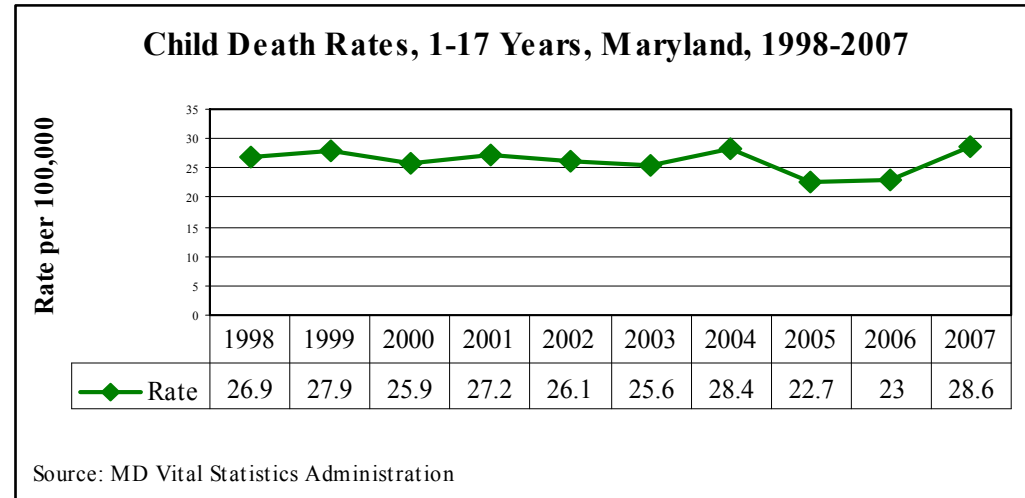
A. Child Death Demographics

In 2007, there were 366 deaths to children ages 1-17 in Maryland and the child death rate was 28.6 deaths per 100,000 population. Over the past 10 years, the child death rate in Maryland has been fluctuating, starting at 26.9 in 1998, reaching a low of 22.7 in 2005, and increasing again to 28.6 in 2007. Table 3 and Figure 1 further illustrate trends in the state's overall child mortality rate.

Table 3.

Child Deaths (1-17 years): Number and Rate, Maryland, 1998-2007		
	Number of deaths	Rate per 100,000 population
1998	327	26.9
1999	346	27.9
2000	333	25.9
2001	351	27.2
2002	340	26.1
2003	334	25.6
2004	374	28.4
2005	301	22.7
2006	296	23.0
2007	366	28.6

Figure 1.



In Maryland, the number of child deaths and the child death rate varies by race or ethnicity, and by age group. In 2002-2004 and 2005-2007, the racial/ethnic group with the highest child death rate was Black, non-Hispanic youth, while the age group with the highest death rate was children 15-17. Table 4 illustrates this further, while also providing a comparison between these two time periods: 2002-2004 and 2005-2007.

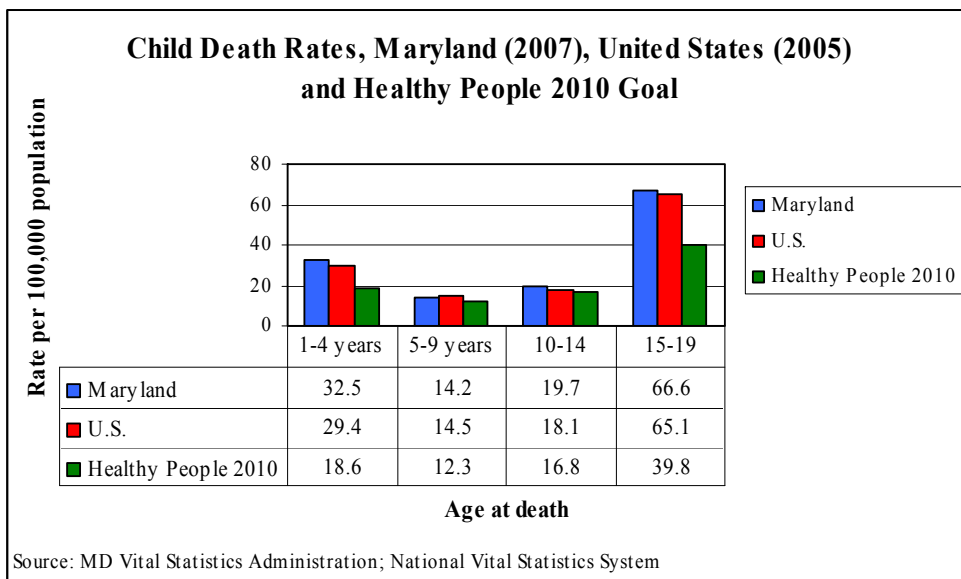
Table 4.

Number of Child Deaths by Race/Ethnicity and Age, Mortality Rates and Percent Change in Rates from 2002-2004 to 2005-2007, Maryland						
	Number of Deaths		Mortality Rates*		% Change**	Rates Differ Significantly***
	2002-2004	2005-2007	2002-2004	2005-2007		
1-17 years						
All Races/Ethnicities	1048	963	26.9	24.9	-7.2	no
White, non-Hispanic	453	441	21.3	21.1	-1.4	no
Black, non-Hispanic	516	425	40.6	33.4	-17.9	yes
Asian, non-Hispanic	27	29	17.1	16.9	-1.0	no
Hispanic	43	65	17.7	22.0	24.3	no
Age Group						
1-4 years	255	242	29.4	27.3	-7.2	no
5-9 years	165	141	14.9	13.1	-12.1	no
10-14 years	227	202	18.6	17.5	-6.0	no
15-17 years	401	378	57.3	51.1	-10.8	no
Source: MD Vital Statistics Administration *Rate per 100,000 population in specified group **Percent change is based on the exact rates and not the rounded rates presented here ***Z Test, p<0.05						

Overall, for children ages 1 through 17 years, the mortality rate fell by 7.2 percent from 2002-2004 to 2005-2007, but this was not statistically significant. There was a statistically significant decrease of 17.9 percent in the mortality rate among Black, non-Hispanic children between the two periods.

As of 2007, Maryland had not met any of the Healthy People 2010 child mortality goals, and for most age groups, had child mortality rates higher than the national rates (Figure 2).

Figure 2.



Of the 988 child deaths in 2007, 63.0 percent occurred in the first year of life (Table 5). Although mortality rates fall after infancy, they rise again during adolescence. Teens have approximately 1.5 times the number of fatalities as seen in younger children.

In 2007, of the 366 deaths among 1 to 17 year old children in Maryland, 64.2 percent occurred in boys. In each child age group, the number of male deaths exceeded the number of female deaths (Table 6).

Table 5.

Child Deaths (<18 years), Maryland 2007		
Age Group	Number of Deaths	Percent of Total Child Deaths
<1 year	622	63.0
1-4 years	97	9.8
5-9 years	51	5.2
10-14 years	74	7.5
15-17 years	144	14.6

Source: MD DHMH, Vital Statistics Administration

Figure 3.

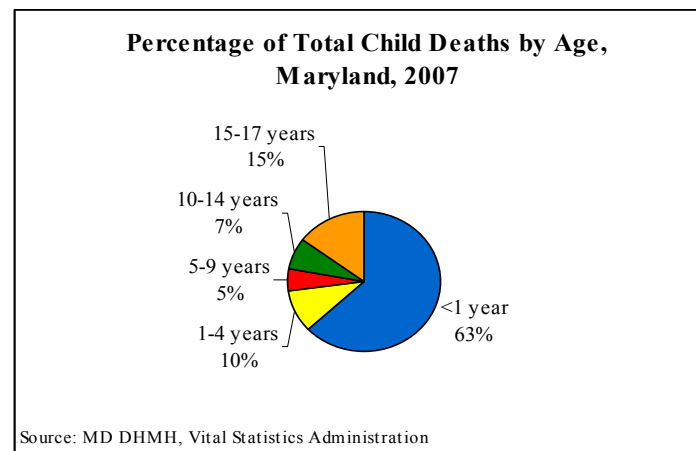


Table 6.

Child (1-17 years) Deaths by Sex and Age Group, Maryland, 2007						
	# of Deaths by Age Group					
Sex	1-4	5-9	10-14	15-17	Total 1-17	% of Total
Male	59	29	39	108	235	64.2
Female	38	22	35	36	131	35.8

Source: MD DHMH, Vital Statistics Administration

Since 2000, the child death rates in Maryland have varied by race and ethnicity (Figure 4). Black, non-Hispanic youth have had the highest death rate every year since 2000, and the death rate in this racial group has increased by 17.7 percent in this same time period. In 2000, the death rate among Hispanic youth was much lower than either that of White, non-Hispanic, or Black, non-Hispanic youth. However, in the past seven years, the Hispanic child death rate has increased by 242 percent, from 7.4 to 25.3 per 100,000 population.

Figure 4.

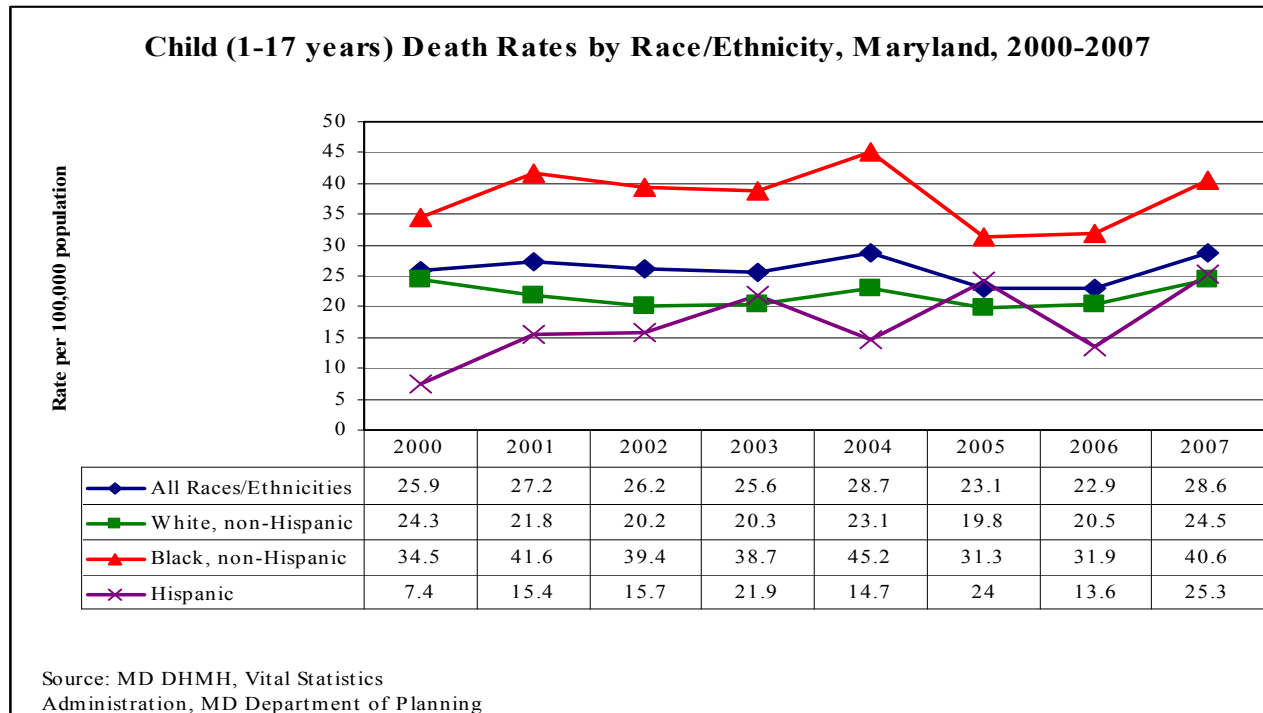


Table 7.

Child (1-17 years) Deaths by Jurisdiction, Maryland, 1998-2002 and 2003-2007							
Region	Jurisdiction	# of Deaths 1998-2002	# of Deaths 2003-2007	Death Rate* 1998-2002	Death Rate* 2003-2007	Rate % Change**	Rates Differ Significantly?***
Northwest Area	Allegany	25	17	39.2	25.3	-35.4	No
	Frederick	51	62	19.8	22.8	15.2	No
	Garrett	10	12	27.3	37.1	35.6	No
	Washington	37	49	25.3	32.3	27.8	No
Baltimore Metro Area	Anne Arundel	125	121	21.2	20.5	-3.4	No
	Baltimore	187	181	22.7	21.3	-6.0	No
	Carroll	46	45	22.9	22.6	-1.6	No
	Harford	69	65	23.7	22.3	-6.2	No
	Howard	61	66	18.8	19.5	3.5	No
	Baltimore City	384	339	49.6	45.6	-8.0	No
National Capital Area	Montgomery	156	180	15.1	16.6	9.9	No
	Prince George's	306	297	30.4	28.7	-5.6	No
Southern Area	Calvert	24	41	22.8	38.1	67.3	Yes
	Charles	46	49	26.8	27.8	3.7	No
	St. Mary's	31	29	25.8	24.3	-5.9	No
Eastern Shore	Caroline	9	8	23.3	21.4	-8.4	No
	Cecil	40	34	35.0	29.3	-16.4	No
	Dorchester	13	10	38.3	30.7	-19.8	No
	Kent	2	2				
	Queen Anne's	13	16	26.2	30.6	16.5	No
	Somerset	6	4	25.9			
	Talbot	4	6		17.7		
	Wicomico	34	24	34.1	23.9	-29.9	No
Worcester	18	14	38.7	31.2	-19.5	No	
Maryland-Total		1697	1671	26.5	25.6	-3.2	No
Source: MD DHMH, Vital Statistics Administration *Rate per 100,000 population; Rates with <5 events in numerator are not displayed **Percent change is based on the exact rates and not the rounded rates presented here ***Z Test, p<0.05							

B. Causes of Death

1. General

Unintentional injuries were the leading cause of death in children aged 1-17 years in 2005-2007. They accounted for around 30 percent of deaths in each child age group. The second leading cause of death for younger children, 1-4 years, was congenital malformations, and the second leading cause of death for children 5-9 years and 10-14 years was malignant neoplasms. The second leading cause of death among older children, 15-17 years, was homicide.

Table 8.

Leading Causes of Death among Children by Age Group, Maryland, 2005-2007					
Rank		Age Group			
		1-4 years	5-9 years	10-14 years	15-19 years
1	Cause of Death	Unintentional Injury	Unintentional Injury	Unintentional Injury	Unintentional Injury
	Number of Deaths	60	44	64	139
	% of Deaths in Age Group	24.8%	31.2%	31.7%	36.8%
2	Cause of Death	Congenital Malformations	Malignant Neoplasms	Malignant Neoplasms	Homicide
	Number of Deaths	33	26	27	90
	% of Deaths in Age Group	13.6%	18.4%	13.4%	23.8%
3	Cause of Death	Homicide	Congenital Malformations	Diseases of the Circulatory System	Suicide
	Number of Deaths	21	11	16	35
	% of Deaths in Age Group	8.7%	7.8%	7.9%	9.3%
4	Cause of Death	Malignant Neoplasms	Diseases of the Nervous System	Diseases of the Nervous System	Malignant Neoplasms
	Number of Deaths	21	11	15	22
	% of Deaths in Age Group	8.7%	7.8%	7.4%	5.8%
5	Cause of Death	Diseases of the Circulatory System	Infectious Diseases	Homicide	Undetermined Intent
	Number of Deaths	17	10	13	20
	% of Deaths in Age Group	7.0%	7.1%	6.4%	5.3%

Source: MD DHMH, Vital Statistics Administration

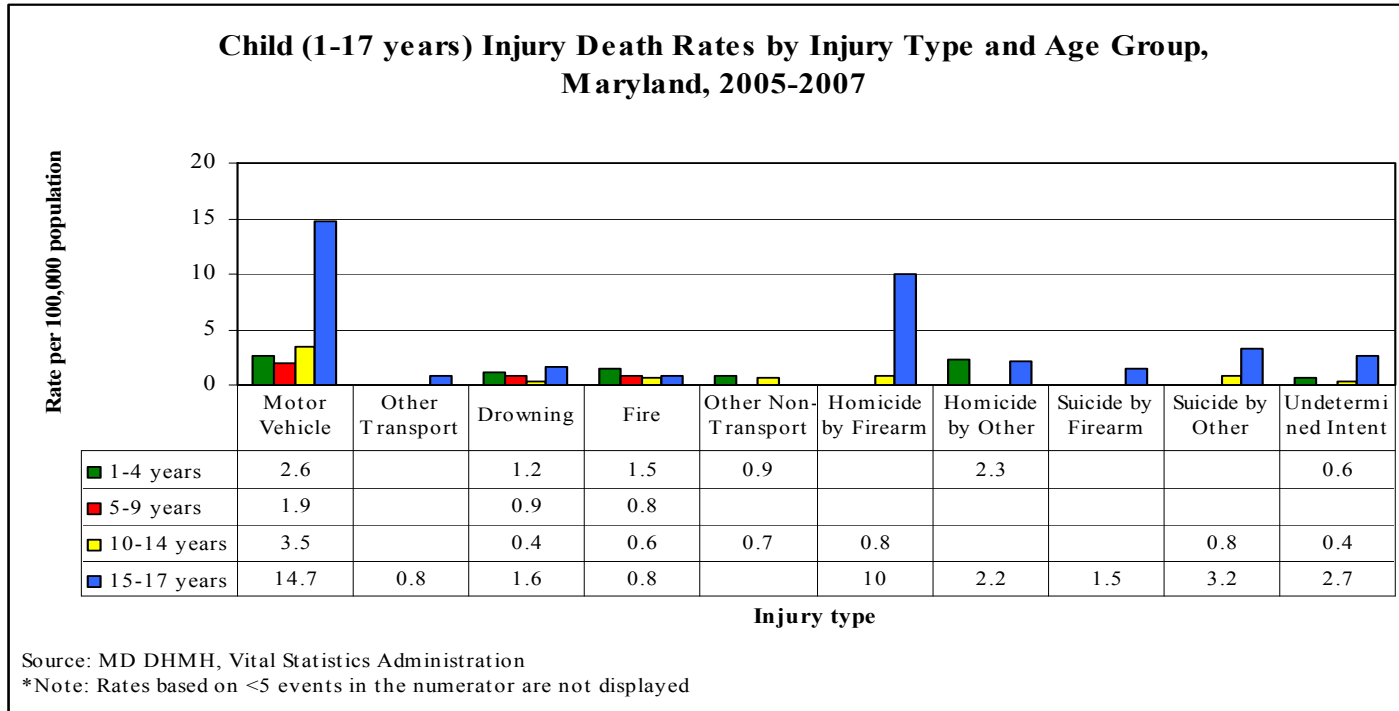
2. Injury-Related Deaths

Between 2005 and 2007, unintentional injuries constituted the leading cause of injury deaths (59.5 percent). Homicide and suicide (intentional injuries) represented 25.0 percent and 8.9 percent, respectively, of all fatal injuries. Undetermined intent refers to cases where information is insufficient to enable a medical or legal authority to make a distinction between an accident, self-harm, and assault.

Table 9.

Child (1-17 years) Injury Related Deaths by Type of Injury and Sex, Maryland, 2005-2007				
Type of Injury	Male	Female	Total Deaths	% of Total Injury Deaths
Motor Vehicle Collision	118	75	193	37.4%
Homicide by Firearm	76	9	85	16.5%
Homicide by Other Means	25	19	44	8.5%
Drowning	29	9	38	7.4%
Fire	28	7	35	6.8%
Suicide by Other Means	22	11	33	6.4%
Undetermined Intent	26	6	32	6.2%
Other Non-Transport Injury	12	1	13	2.5%
Suicide by Firearm	12	1	13	2.5%
Other Transport Injury	6	3	9	1.7%
Falls	4	4	8	1.6%
Poisoning	1	2	3	0.6%
Legal Intervention	2	0	2	0.4%
Total	361	155	516	
Source: MD DHMH, Vital Statistics Administration				

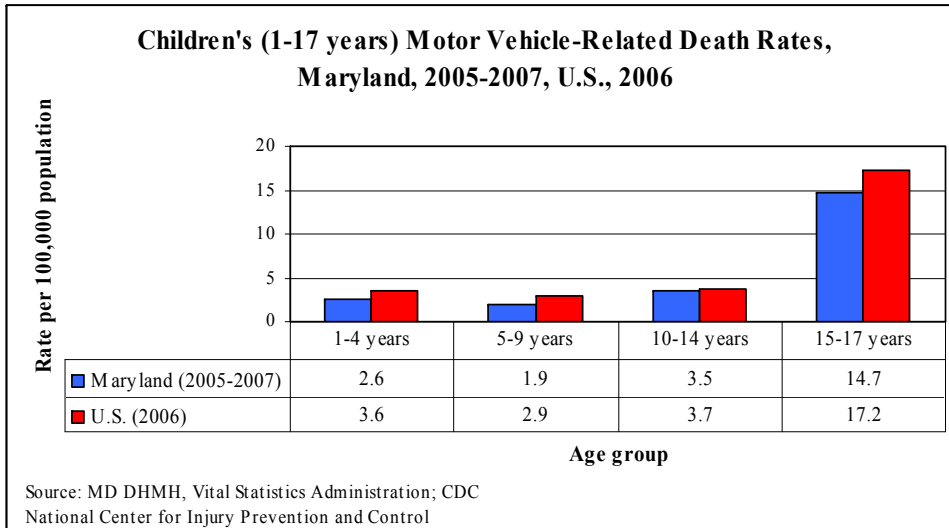
Figure 5.



3. Transportation-Related Deaths

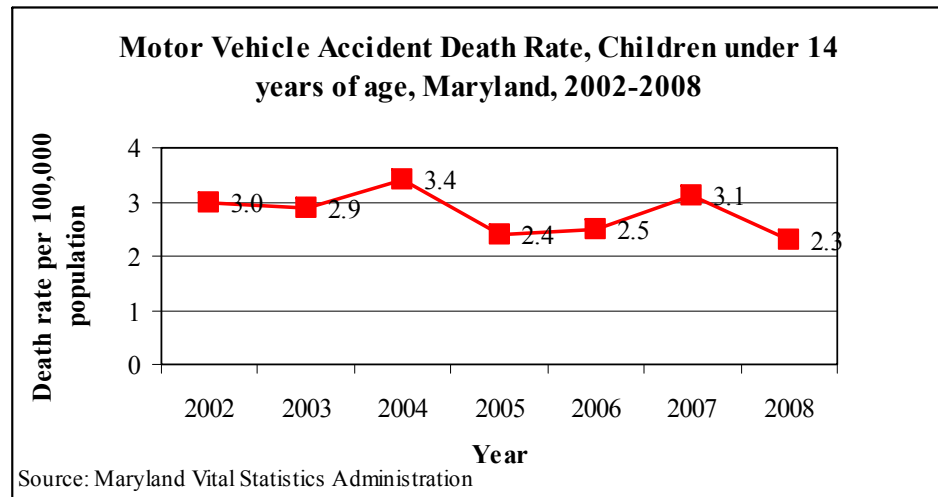
Of the 193 motor vehicle-related deaths in 2005-2007, 118 (61.1 percent) occurred among boys and 75 (38.9 percent) occurred among girls. One hundred and five White non-Hispanic youths died in motor vehicle crashes, a rate of 5.1 per 100,000 population. Among Black children, there were 71 motor vehicle-related deaths, representing a rate of 5.8 per 100,000 population. Children ages 15-17 years had over 4 times the motor vehicle-related death rate of younger children, dying at the rate of 14.7 per 100,000 population (Figure 6).

Figure 6.



One of the current national priorities is to reduce child and adolescent deaths due to motor vehicle accidents. The corresponding national performance measure is the rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children. In 2008, this rate was 2.3 deaths by motor vehicle accident per 100,000 Maryland children. Since 2002, this rate has declined by 23 percent.

Figure 7.



4. Homicides

In 2005-2007, there were 145 homicides among infants and children ages 0 to 17 years. The numbers of homicide deaths among Black and White, non-Hispanic children were 101 and 27, respectively, representing rates of 7.8 per 100,000 for Black children and 1.3 per 100,000 for White children (Table 10).

Table 10.

Child (0-17 years) Deaths Due to Homicide by Race/Ethnicity, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Race/Ethnicity	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
White, non-Hispanic	10	0.5	17	0.8	27	1.3
Black, non-Hispanic	71	5.5	30	2.3	101	7.8
Hispanic	5	1.5	12	3.5	17	5.0
All Races/Ethnicities	86	2.2	59	1.5	145	3.8

Source: MD DHMH, Vital Statistics Administration

Of the 86 firearm-related deaths, 76 (87.4 percent) were among males and 10 (12.6 percent) among females (Table 11).

Table 11.

Child (0-17 years) Deaths Due to Homicide, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Sex	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
Male	76	3.6	35	1.7	111	5.3
Female	10	0.5	24	1.2	34	1.7

Source: MD DHMH, Vital Statistics Administration

The greatest number of homicides occurred in the oldest children and most often involved the use of firearms; 86 percent of the firearm-related deaths were in adolescents aged 15-17 years, representing a rate of 10.0 per 100,000 in this age group (Table 12). The homicide rate for infants (under one year of age) was higher than for any age group up until age 15-17 years. Sixteen infants were victims of homicide in 2005-2007, representing a rate of 7.1 per 100,000.

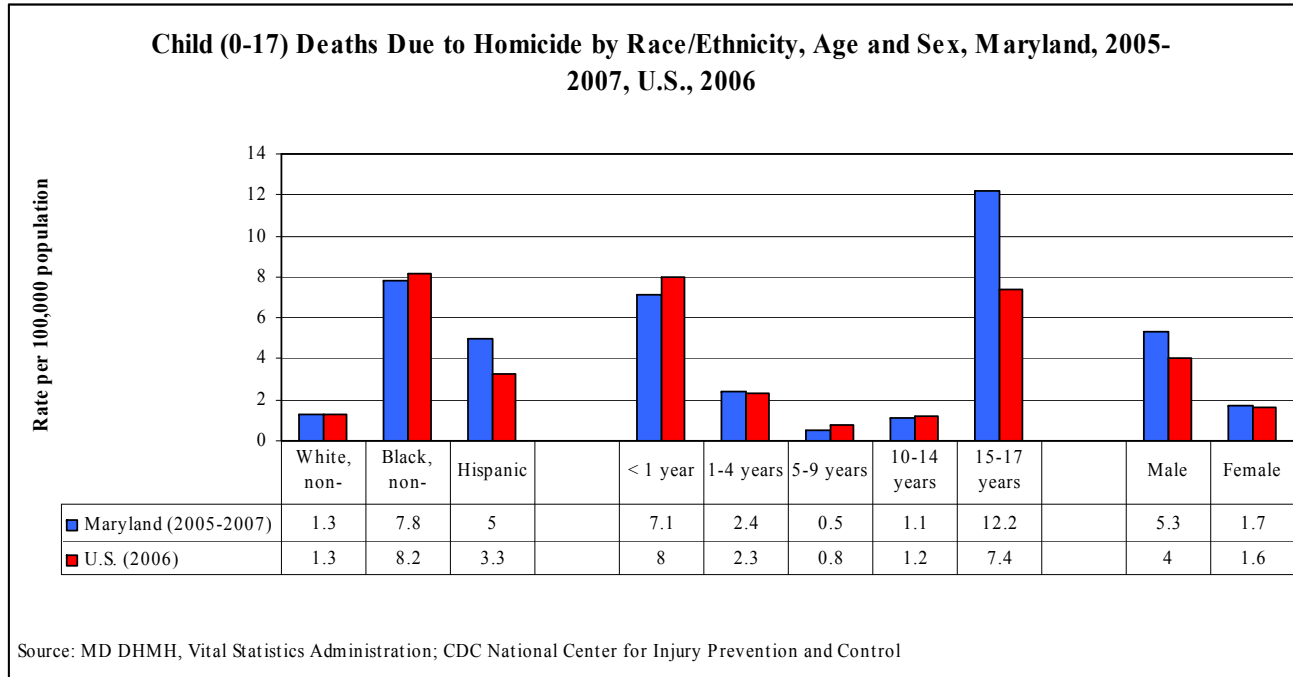
Table 12.

Child (0-17 years) Deaths Due to Homicide by Age Group, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Age Group	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
< 1 year	1		15	6.7	16	7.1
1-4 years	1		20	2.3	21	2.4
5-9 years	1		4		5	0.5
10-14 years	9	0.8	4		13	1.1
15-17 years	74	10.0	16	2.2	90	12.2

Source: MD DHMH, Vital Statistics Administration

Child deaths due to homicide are not distributed evenly throughout the state. For the period 2005-2007, 75 percent of the homicides among children aged 0-17 years were for residents of three jurisdictions: Baltimore City (46.9 percent), Prince George’s County (19.3 percent) and Baltimore County (8.3 percent).

Figure 8.



While Maryland’s homicide rates in 2005-2007 for children under 15 years were comparable or slightly lower than the 2006 national rate, the rate for older children, 15-17 years, was substantially higher than the national rate (Figure 8).

5. Suicides

Of the 46 children aged 10-17 years who committed suicide between 2005 and 2007, 34 were males and 12 were females, representing rates of 3.5 and 1.3 per 100,000 population, respectively (Table 13).

Table 13.

Child (10-17 years) Deaths Due to Suicide by Sex, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Sex	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
Male	12	1.2	22	2.3	34	3.5
Female	1		11	1.2	12	1.3
Total	13	0.7	33	1.7	46	2.4

Source: MD DHMH, Vital Statistics Administration

Asian children had the highest rate of suicide, 6.5 per 100,000 population, which was over twice as high as the rate among White, non-Hispanics (although this rate is based on a small number of events). Black and White, non-Hispanic children committed suicide at similar rates (Table 14).

Table 14.

Child (10-17 years) Deaths Due to Suicide by Race/Ethnicity, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Race/Ethnicity	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
White, non-Hispanic	9	0.9	18	1.7	27	2.6
Black, non-Hispanic	2		12	1.9	14	2.2
Asian, non-Hispanic	2		3		5	6.5
Hispanic	0		0		0	

Source: MD DHMH, Vital Statistics Administration

Older children (15-17 years) committed suicide at a much higher rate (4.7 per 100,000) than younger children (Table 15).

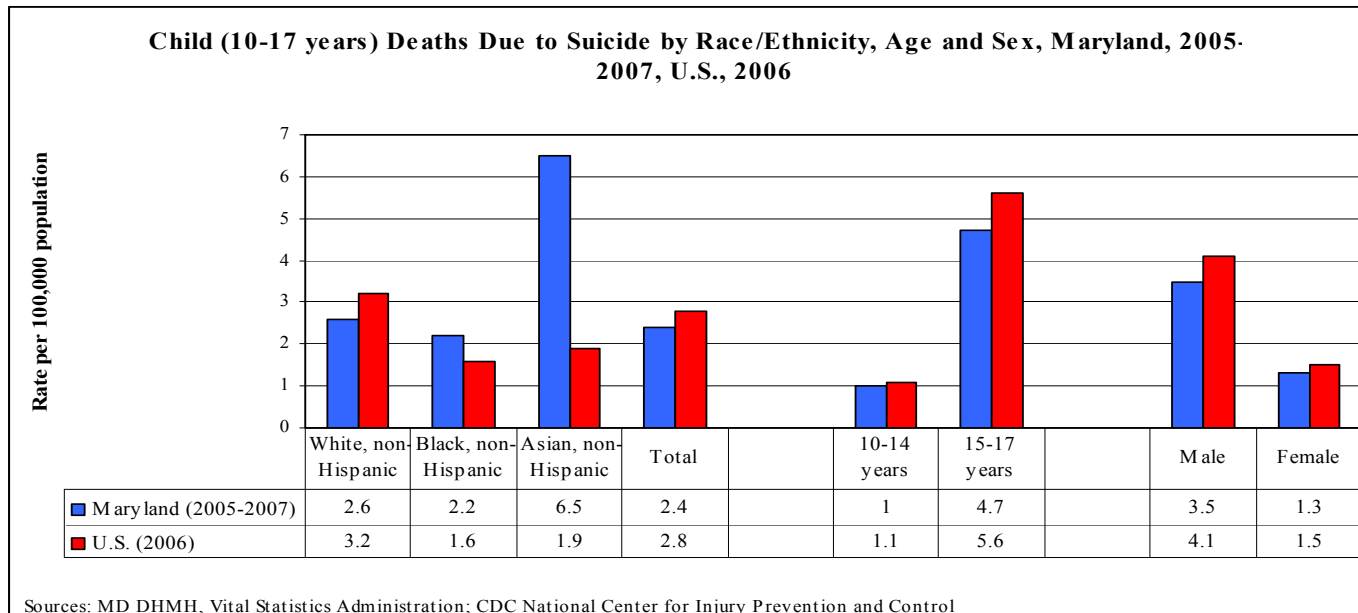
Table 15.

Child (10-17 years) Deaths Due to Suicide by Age Group, Maryland, 2005-2007						
Age Group	By Firearm		By Other Means		Total	
	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
10-14 years	2		9	0.8	11	1.0
15-17 years	11	1.5	24	3.2	35	4.7

Source: MD DHMH, Vital Statistics Administration
 Note: Rates based on <5 events in the numerator are not displayed

For the period 2005-2007, Maryland’s suicide rates among children were lower than the national rates for 2006. However, the rates of suicides among Blacks and Asians were higher than corresponding national rates in these racial groups (Figure 9).

Figure 9.



III. Hospitalizations

Source: HSCRC Hospital Inpatient Data, 2007

In 2007, there were a total of 42,579 hospitalizations for children and adolescents aged 0-19 in Maryland. The rate of hospitalization varied by age, race/ethnicity, and jurisdictions, as detailed in the following tables.

Table 16. Hospitalization by Age Group

Age	Crude Rate of Hospitalization per 10,000 Population
0-4 years (excluding hospitalization at birth)	40.4
5-9 years	12.9
10-14 years	13.5
15-17 years	30.9
18 years	53.8
19 years	71.6

Table 17. Hospitalization by Race/Ethnicity

Racial or Ethnic Group	Crude Rate of Hospitalization per 10,000 Population
White, non-Hispanic	245.1
Black, non-Hispanic	324.4
Asian/Pacific Islander, non-Hispanic	100.9
American Indian/Alaskan Native, non-Hispanic	231.7
Hispanic	237.3

Table 18. Hospitalization by Jurisdiction

Jurisdiction	Crude Rate of Hospitalization per 10,000 Population	Jurisdiction	Crude Rate of Hospitalization per 10,000 Population
Allegany	344.5	Howard	198.6
Anne Arundel	267.7	Kent	424.7
Baltimore	341.9	Montgomery	191.3
Calvert	239.9	Prince George's	114.4
Caroline	405.5	Queen Anne's	296.2
Carroll	336.6	St. Mary's	236.6
Cecil	301.9	Somerset	300.5
Charles	163.5	Talbot	379.7
Dorchester	452.3	Washington	324.9
Frederick	208.0	Wicomico	329.4
Garrett	254.5	Worcester	314.5
Harford	362.7	Baltimore City	515.7

Hospitalization of Children Ages 1-4 Years

In 2007, there were a total of 7335 hospital discharges in Maryland for children ages 1-4. The number one reason for hospitalization among children 1-4 years of age in 2007 was asthma. Nearly 17 percent of hospitalizations in this age group were due to asthma. The second most common reason for hospitalization among children 1-4 years old was pneumonia, with 13.3 percent of hospital visits attributable to this condition.

Table 19.

Top 10 Conditions of Hospitalization, Children 1-4 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Asthma	1210	16.5%
2	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	978	13.3%
3	Fluid and electrolyte disorders	498	6.8%
4	Skin and subcutaneous tissue infections	434	5.9%
5	Acute bronchitis	375	5.1%
6	Intestinal infection	303	4.1%
7	Other upper respiratory infections	266	3.6%
8	Epilepsy/Convulsions	216	2.9%
9	Non-infectious gastroenteritis	174	2.4%
10	Viral infections	130	1.8%

Source: HSCRC Hospital Inpatient Data, 2007

Hospitalization of Children 5-9 Years

In 2007, there were a total of 4553 hospital discharges in Maryland among children 5-9 years of age. The number one reason for hospitalization among children in this age group was asthma, with 17.5 percent of hospitalizations in this age group attributable to this condition. The second most common reason for hospitalization among children 5-9 years of age was pneumonia, with 9.5 percent of hospitalizations attributable to this condition.

Table 20.

Top 10 Conditions of Hospitalization, Children 5-9 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Asthma	798	17.5%
2	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	431	9.5%
3	Appendicitis and other appendiceal conditions	225	4.9%
4	Skin and subcutaneous tissue infections	175	3.8%
5	Affective disorders	150	3.3%
6	Maintenance chemotherapy; radiotherapy	127	2.8%
7	Fluid and electrolyte disorders	126	2.8%
8	Epilepsy; convulsions	117	2.6%
9	Fracture of upper limb	114	2.5%
10	Sickle Cell Anemia	84	1.8%

Source: HSCRC Hospital Inpatient Data, 2007

Hospitalization of Children 10-14 Years

In 2007, there were a total of 4993 hospitalizations among Maryland children, ages 10-14 years. The leading cause of hospitalization in this age group was asthma, with 9.3 percent of hospitalizations attributable to this condition. The second most common reason for hospitalization was appendicitis, with 8.5 percent of hospitalizations in this age group attributable to this condition.

Table 21.

Top 10 Conditions of Hospitalization, Children 10-14 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Asthma	462	9.3%
2	Appendicitis and other appendiceal conditions	422	8.5%
3	Affective disorders	414	8.3%
4	Skin and subcutaneous tissue infections	193	3.9%
5	Pneumonia (except that caused by tuberculosis or sexually transmitted disease)	192	3.8%
6	Other mental conditions	146	2.9%
7	Diabetes mellitus with complications	134	2.7%
8	Sickle Cell Anemia	127	2.5%
9	Other bone disease and musculoskeletal deformities	126	2.5%
10	Fracture of lower limb	109	2.2%

Source: HSCRC Hospital Inpatient Data, 2007

Hospitalization of Youth 15-19 Years

In 2007, there were a total of 10,183 non-obstetric hospitalizations among Maryland youth, ages 15-19 years. The leading non-obstetric cause of hospitalization in this age group was affective disorders, with 10.3 percent of hospitalizations (1,051) attributable to this condition. The second most common reason for hospitalization was appendicitis and other appendiceal conditions, with 5.9 percent of hospitalizations (600) in this age group attributable to these conditions.

Table 22.

Top 10 Conditions of Hospitalization, Youth 15-19 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Affective disorders	1,051	10.3%
2	Appendicitis and other appendiceal conditions	600	5.9%
3	Intracranial injury	409	4.0%
4	Skin and subcutaneous tissue infections	339	3.3%
5	Crushing injury or internal injury	334	3.3%
6	Fracture of lower limb	292	2.9%
7	Asthma	284	2.8%
8	Other mental conditions	275	2.7%
9	Diabetes mellitus with complications	245	2.4%
10	Sickle cell anemia	225	2.2%

Source: HSCRC Hospital Inpatient Data, 2007

In 2007, there were a total of 4,748 non-obstetric hospitalizations of Maryland females, 15-19 years. The leading non-obstetric cause of hospitalization for females, 15-19 years, was affective disorders, with 11.7 percent of hospitalizations (555) attributable to this condition. The second most common reason for hospitalization of 15-19 year-old females was appendicitis and other appendiceal conditions, with 4.8 percent of hospitalizations (230) in this demographic group attributable to these conditions.

Table 23.

Top 10 Conditions of Hospitalization, Females 15-19 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Affective disorders	555	11.7%
2	Appendicitis and other appendiceal conditions	230	4.8%
3	Urinary tract infections	177	3.7%
4	Other mental conditions	146	3.1%
5	Skin and subcutaneous tissue infections	145	3.1%
5	Sickle cell anemia	145	3.1%
7	Asthma	142	3.0%
8	Diabetes mellitus with complications	133	2.8%
9	Biliary tract disease	123	2.6%
10	Poisoning by other medications and drugs	117	2.5%
Source: HSCRC Hospital Inpatient Data, 2007			

There were a total of 5,434 hospitalizations of young males, 15-19 years, in 2007. The leading cause of hospitalization for young males was affective disorders, with 9.1% of hospitalizations (496) attributable to this condition. The second most common reason for hospitalization was appendicitis and other appendiceal conditions, with 6.8% of hospitalizations (370) attributable to these conditions.

Table 24.

Top 10 Conditions of Hospitalization, Males 15-19 Years, 2007			
Rank	Condition	# of Hospital Discharges	% of Total Hospital Discharges
1	Affective disorders	496	9.1%
2	Appendicitis and other appendiceal conditions	370	6.8%
3	Intracranial injury	297	5.5%
4	Crushing injury or internal injury	286	5.3%
5	Fracture of lower limb	219	4.0%
6	Skin and subcutaneous tissue infections	194	3.6%
7	Asthma	142	2.6%
8	Skull and face fractures	134	2.5%
9	Fracture of upper limb	134	2.5%
10	Other mental conditions	129	2.4%
Source: HSCRC Hospital Inpatient Data, 2007			

IV. Injuries

Source: MD DHMH report, “Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths,” September 2009.

The “*Injuries in Maryland – 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations and Deaths*” report provides detailed statistics on all injuries to Maryland residents which required Emergency Department (ED) visits, hospitalization at Maryland hospitals, or caused the death of Maryland residents during 2007.

A. Injury-related Emergency Department (ED) Visits

In 2007, there were 35,703 injury-related ED visits for children 0-4 years in Maryland, and the rate of ED visits for children 0-4 years was 9,477 per 100,000 population. The same year, there were a total of 68,769 injury-related ED visits for children and youth, ages 5-14 years, and the rate of ED visits for children in this age group was 9,357 per 100,000 population.

Of the 35,703 injury-related ED visits for children 0-4 years, 35,351 were classified as being unintentional. However, 223 were identified as assault and 123 were of undetermined intent. For children 5-14, of the 68,769 injury-related ED visits, 66,075 were unintentional, 2,223 were the result of assault, 268 were self-inflicted, and the remainder were of undetermined intent or classified as “other” manner of injury.

The number one cause for injury-related ED visits for children 0-4 and children and youth 5-14 was “falls” and the number two cause was “struck by/against”. The following two charts provide further details regarding the top 10 causes of injury-related ED visits for these age groups.

Table 25.

Top 10 Causes of Injury-related ED Visits for Children 0-4 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related ED visits
1	Fall	14,182
2	Struck by/against	5,794
3	Natural environment	2,044
4	Motor vehicle traffic	1,979
5	Cut/pierce	1,623
6	Overexertion	1,316
7	Poisoning	1,264
8	Fire/burn	964
9	Pedal cyclist	278
10	Suffocation	134

Source: MD DHMH report, “Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths,” September 2009.

Table 26.

Top 10 Causes of Injury-related ED Visits for Children 5-14 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related ED visits
1	Fall	19,900
2	Struck by/against	18,512
3	Overexertion	5,177
4	Cut/pierce	4,713
5	Motor vehicle traffic	4,677
6	Natural environment	2,869
7	Pedal cyclist	2,151
8	Poisoning	743
9	Transport, other	734
10	Fire/burn	643

Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009

B. Injury-related Hospitalizations

In 2007, there were 962 injury-related hospitalizations among children 0-4 years, and the rate of injury-related hospitalizations for this age group was 255 per 100,000 population. There were 1,297 injury-related hospitalizations among children and youth 5-14 years, and the injury-related hospitalization rate for this age group was 176 per 100,000 population.

Of the 962 injury-related hospitalizations for children 0-4 years, 904 were due to unintentional injury, 43 were by assault and 14 were of undetermined intent. Of the 1,297 injury-related hospitalizations among children and youth 5-14 years, 1,181 were due to unintentional injury, 56 were due to assault, and 55 were self-inflicted.

The number one cause for injury-related hospitalizations for children 0-4 years and children and youth 5-14 years was "falls". The number two cause for children 0-4 years was poisoning and for children 5-14 years was motor vehicle traffic. The following two charts provide further details regarding the top 10 causes of injury-related hospitalizations for these age groups.

Table 27.

Top 10 Causes of Injury-related Hospitalizations for Children 0-4 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related hospitalizations
1	Fall	240
2	Poisoning	170
3	Fire/burn	84
4	Natural environment	82
5	Motor vehicle traffic	52
6	Suffocation	28
7	Struck by/against	27
8	Drowning	13
9	Cut/pierce	10
10	*	

Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009
 *All other causes of injury were associated with less than 6 hospitalization events, so these are unreported to protect patient confidentiality

Table 28.

Top 10 Causes of Injury-related Hospitalizations for Children 5-14 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related hospitalizations
1	Fall	374
2	Motor vehicle traffic	192
3	Struck by/against	146
4	Poisoning	104
5	Natural environment	73
6	Transport, other	53
7	Pedal cyclist	50
8	Cut/pierce	47
9	Fire/burn	32
10	Overexertion	22

Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009

C. Injury-related Deaths

In 2007, there were 52 injury-related deaths among children 0-4 years in Maryland, and the injury-related death rate for this age group was 14 per 100,000 population. The same year, there were 50 injury-related deaths among children 5-14 years in Maryland, and the injury-related death rate for this age group was 7 per 100,000 population.

Of the 52 injury-related deaths among children 0-4 years, 34 were unintentional, 15 were homicides and three were of undetermined nature. Of the 50 injury-related deaths among children 5-14, 40 were unintentional, two were suicides, seven were homicides, and one was of undetermined nature.

The leading cause of injury-related death in 2007 among children 0-4 years was suffocation, followed by fire/flame. The leading cause of injury-related death in 2007 among children 5-14 years was motor vehicle accident, followed by fire/flame. The following two charts provide further details regarding the top causes of injury-related deaths for these age groups.

Table 29.

Top Causes of Fatal Injury for Children 0-4 years, Maryland, 2007		
Rank	Cause of fatal injury	Number of deaths due to injury
1	Suffocation	14
2	Fire/flame	10
3	Motor vehicle	7
4	Drowning	4
5	Struck by/against	3
6	Fall	2

Source: Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009
 Note: Causes of death with a count of less than two were not included

Table 30.

Top Causes of Fatal Injury for Children 5-14 years, Maryland, 2007		
Rank	Cause of fatal injury	Number of deaths due to injury
1	Motor vehicle	23
2	Fire/flame	9
3	Drowning	6
4	Firearm	4
5	Transport, other	2
6	Suffocation	2

Source: Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009
Note: Causes of death with a count of less than two were not included

V. Physical Activity, Nutrition and Obesity

Sources: Maryland WIC Program; Youth Risk Behavior Surveillance Survey; Medicaid Healthy Kids Program; National Survey of Children's Health

National Performance Measure: Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile.

Healthy People 2010 Goals:

1. Reduce the proportion of children aged 6-11 years, adolescents aged 12-19 years, and children and adolescents aged 6-19 years who are obese (gender- and age-specific 95th percentile of BMI) to five percent.
2. Increase the proportion of adolescents (students in grades 9-12) who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days to 35 percent.
3. Increase the proportion of adolescents (students in grades 9-12) who engage in vigorous physical activity 3 or more days per week for 20 or more minutes per occasion to 85 percent.
4. Increase the proportion of adolescents who participate in daily school physical education to 50 percent.

Data on physical activity, nutrition habits and obesity prevalence among Maryland youth is limited, but improving. Currently, there is one data source that provides information on nutrition and physical activity among Maryland youth and five data sources available that provide information on the prevalence of overweight and obesity in Maryland youth.

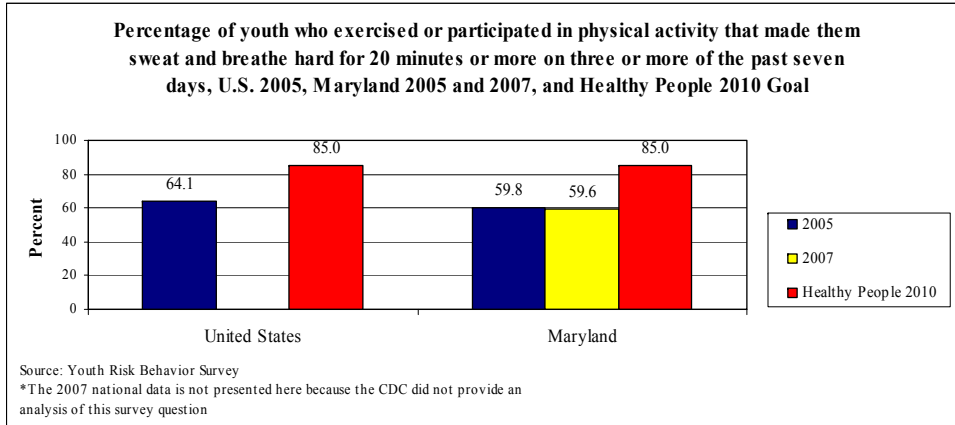
However, the data source on physical activity and nutrition, the Youth Risk Behavior Survey (YRBS), only collects information from high school-age youth. And, only two of the data sources for obesity/overweight involve the collection of BMI (Body Mass Index) by medical professionals, and these two provide data only on select groups of children: those enrolled in Medicaid or WIC. Two of the other sources collect information on children's height and weight from parents through telephone surveys—Behavior Risk Factor Surveillance System (BRFSS) and National Survey of Children's Health (NSCH). These two have small sample sizes, only contact families that have land phone lines, and rely on parental reporting of a child's height and weight, which has the potential to be inaccurate. The final data source for obesity/overweight prevalence data is the aforementioned source for information on nutrition and physical activity, YRBS. This source only collects information from high school youth, and relies on self-reporting of height and weight.

A. Physical Activity

The 2007 YRBS results indicated that levels of physical activity among Maryland youth are equivalent to those reported in the 2005 YRBS on several measurements. These included participation in physical activity, including vigorous physical activity, on at least three of the past seven days; and, participation in a physical education class at least one day a week.

In 2007, 59.6 percent of Maryland youth participated in a physical activity that made them sweat and breathe hard for 20 minutes or more on three or more of the past seven days, a rate similar to the one in 2005 (59.8 percent) and lower than the national rate (64.1 percent). Maryland is far behind the Healthy People 2010 Goal of having 85.0 percent of youth participating in vigorous physical activity.

Figure 10.



Maryland males (65.7 percent) are significantly more likely than females (53.9 percent) to engage in vigorous physical activity. However, while the percentage of males engaging in vigorous physical activity decreased since 2005 (from 72.5 to 65.7 percent), the percentage of females engaging in vigorous physical activity increased in the same time period (from 47.1 to 53.9 percent).

Figure 11.

There is a significant reduction in the frequency and intensity of exercise across the high-school grades from 67.0 percent in the 9th grade to 49.1 percent in the 12th grade, a pattern also observed in 2005.

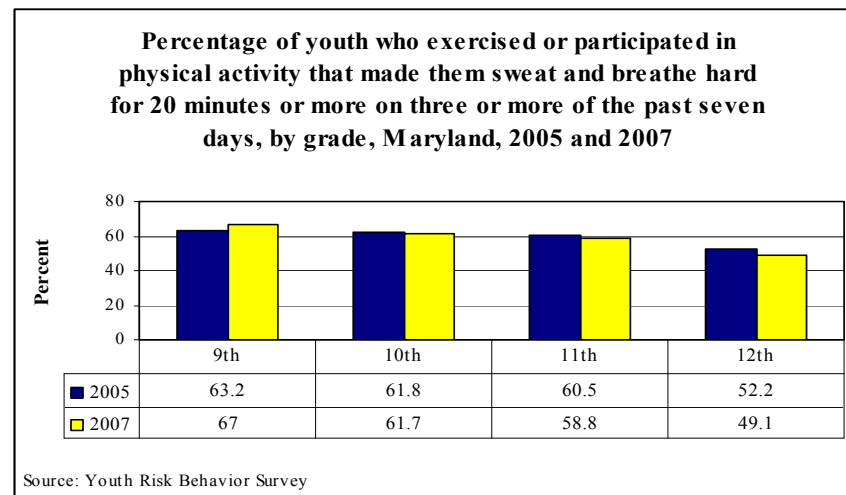
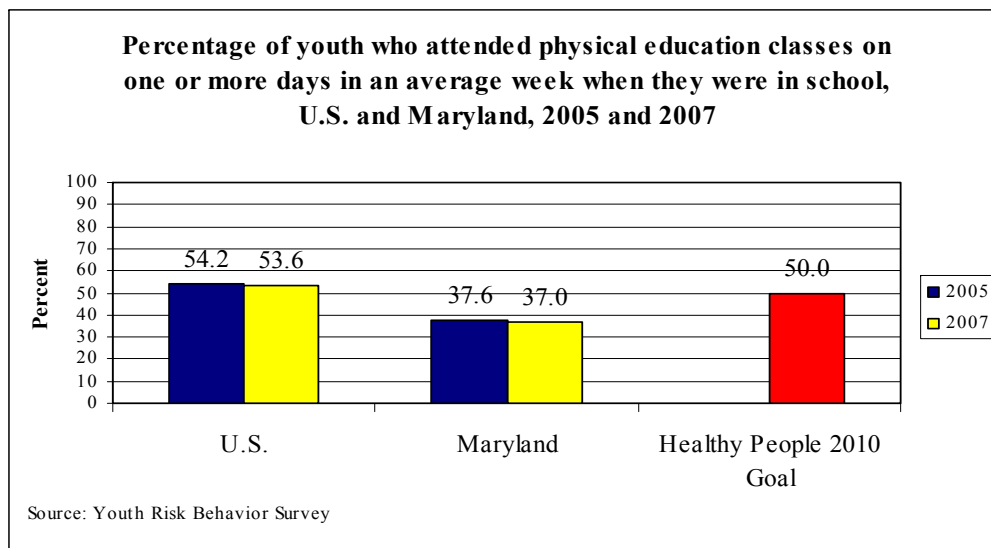


Figure 12.



The 2007 YRBS results indicate that 37.0 percent of Maryland youth attend physical education classes on one or more days in the average week when they are in school, a rate nearly identical to 2005 (37.6 percent). Maryland youth are significantly less likely to attend physical education classes than are youth nationwide (53.6 percent), and remains under the Healthy People 2010 Goal of 50%.

In 2007, males (44.4 percent) participated in physical education classes at a higher rate than did females (29.8 percent). These rates were similar to rates for males and females in 2005 (44.9 and 30.2 percent, respectively). The percentage of Maryland youth who attend physical education classes decreased significantly between 9th (61.6 percent) and 10th (29.0) grades, and continues to lower in the 11th (28.0 percent) and 12th (24.8 percent) grades.

B. Nutrition

Overall, the consumption of healthful food on a daily basis by Maryland youth in 2007 was lower than in 2005. Nearly one third of Maryland youth consumed at least one serving a day of milk (32.8 percent), down from 35.4 percent in 2005. More than one fourth consumed fruit juices (26.9 percent) in 2007, down from 29.4 percent in 2005. Fruit consumption also declined from 26.0 percent in 2005 to 23.9 percent in 2007.

Table 31.

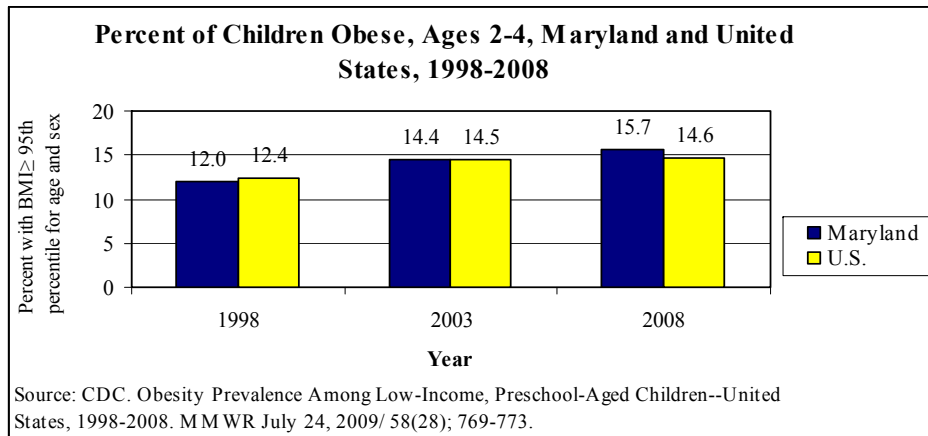
In the last 7 days, percent of high school youth who:							
Food	Consumed at least one serving				Consumed at least one serving per day*		
	U.S.		Maryland		U.S.	Maryland	
	2005	2007	2005	2007	2005	2005	2007
Glass of milk*	83.5	-	76.3	77.8	44.4	35.4	32.8
100% fruit juice	81.5	80.3	82.8	80.8	28.3	29.4	26.9
Fruit	85.1	85.3	84.4	81.5	26.1	26.0	23.9
Green salad	65.6	64.1	63.6	62.3	11.8	10.6	9.4
Potatoes	68.6	69.1	65.9	64.6	7.9	6.4	7.1
Carrots	46.9	46.3	41.3	43.1	5.8	5.3	5.9
Other vegetables	82.1	82.4	85.5	83.7	19.8	23.2	20.8

Source: Youth Risk Behavior Survey
 *The 2007 national data is not presented here because the CDC analyzed data in a different manner than the authors of the Maryland YRBS report

C. Overweight and Obesity

1. Preschool-aged Children Enrolled in WIC

Figure 13.



According to data from the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), as of 2008, Maryland’s childhood obesity rate for children ages 2-4 is 15.7 percent, which is higher than it was in 1998 and 2003 (12.0 and 14.4 percent, respectively), and higher than the national rate (14.6 percent).

The National Performance Measure for the reduction of childhood obesity is the percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile. In Maryland in 2008, 33.1 percent of children, 2-5 years, receiving WIC services had a BMI at or above the 85th percentile.

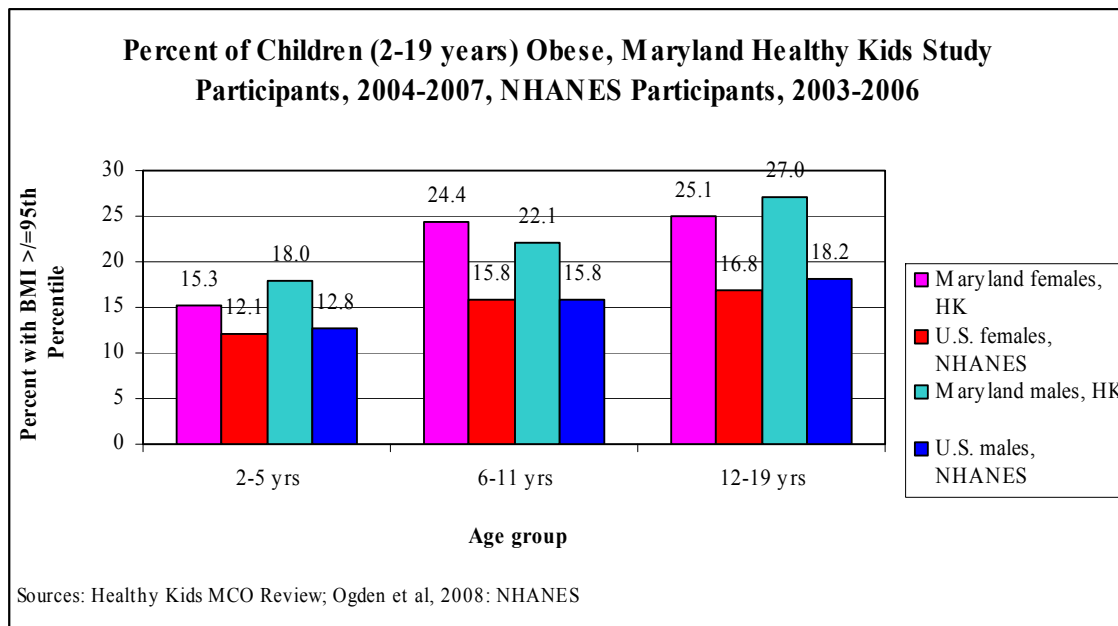
Table 32.

Overweight and Obesity Among Maryland Children Enrolled in WIC Program, Age 2-5, 2008		
Jurisdiction	% Overweight (85th-95th percentile)	% Obese (≥percentile)
Allegany County	20	13
Anne Arundel County	17	16
Baltimore City	15	13
Baltimore County	14	15
Calvert County	16	13
Caroline County	16	19
Carroll County	17	15
Cecil County	19	17
Charles County	15	12
Dorchester County	18	19
Frederick County	19	20
Garrett County	16	14
Harford County	17	16
Howard County	17	16
Kent County	13	16
Montgomery County	18	22
Prince George's County	16	18
Queen Anne's County	17	17
Somerset County	18	19
St. Mary's County	16	16
Talbot County	17	15
Washington County	14	14
Wicomico County	16	16
Worcester County	18	22
Maryland State Total	16	17

2. Children 2-19 Years, Enrolled in Medicaid Healthy Kids Study

According to an analysis of data from the Maryland Health Kids Study (children enrolled in Medicaid) and the National Health and Nutrition Examination Survey (NHANES; children enrolled in both public and private insurance programs), both male and female Maryland children in every age group have higher obesity rates than children across the nation.

Figure 14.



The Healthy People 2010 Goal is to reduce obesity in children, ages 6-11, 12-19, and 6-19 years, to 5 percent. While data from the Maryland Healthy Kids Study only includes children enrolled in Medicaid, it is one of the best sources of data on childhood obesity in the state. According to this study, over 20 percent of Maryland children, 6-11 and 12-19 years, are obese. This is significantly higher than the Healthy People 2010 Goal of 5 percent.

Figure 15.

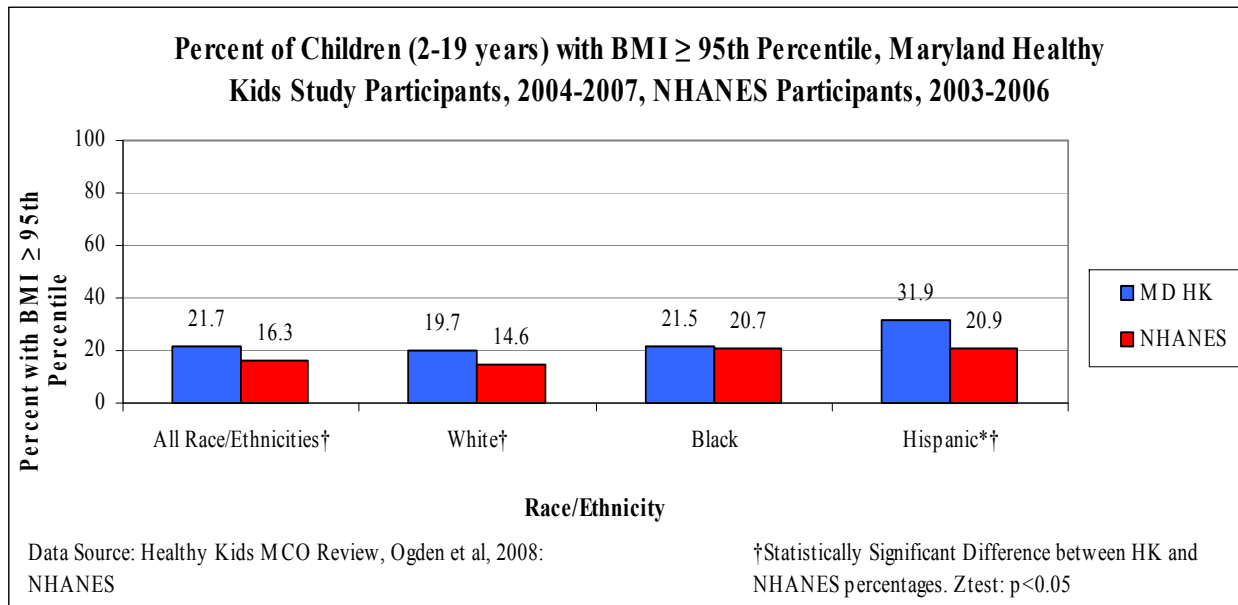
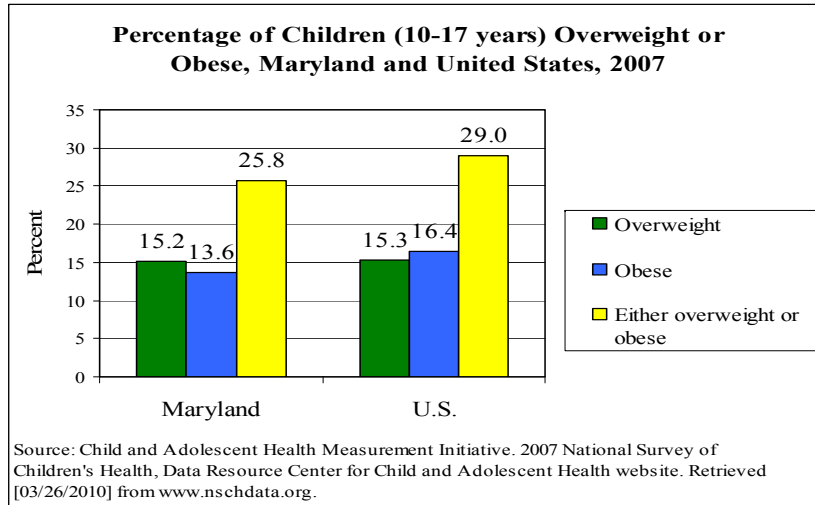


Figure 16.



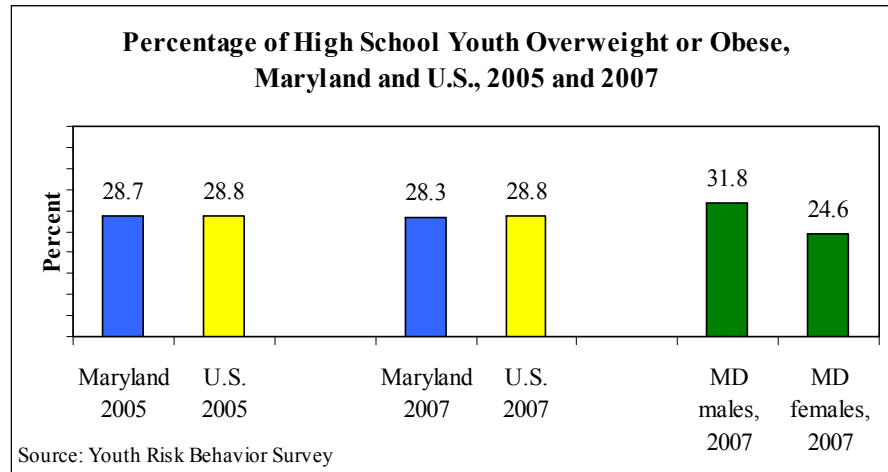
3. Children, 10-17 years, National Survey of Children's Health

According to the National Survey of Children's Health, in 2007, 15.2 percent of Maryland children, ages 10-17 years, were overweight (BMI 85th to 94th percentile for age and sex of child), and 13.6 percent of Maryland children, 10-17 years, were obese (BMI \geq 95th percentile) (Figure 16).

Figure 17.

4. Youth, grades 9-12, Youth Risk Behavior Survey

The 2007 YRBS indicates that 27.5 percent of Maryland youth describe themselves as slightly or very overweight, a rate nearly identical to 2005 (27.4 percent), and slightly lower than youth nationwide (29.3 percent). Body Mass Index (BMI) was calculated for youth who reported their height and weight, and confirmed youth perceptions of their weight. Using the calculated BMI, 28.3 percent of Maryland youth are either overweight or obese, and this rate is about the same as the percentage of youth who self-reported being slightly or very overweight (27.5 percent).



VI. Asthma

Source: Maryland Behavior Risk Factor Surveillance System; MD Health Services Cost Review Commission (HSCRC)

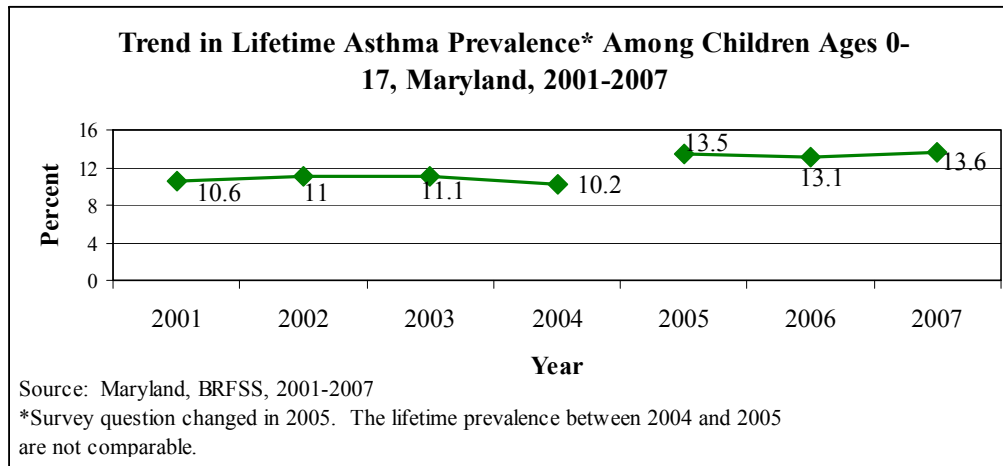
State Performance Measure: The rate of emergency department visits for asthma per 10,000 children, ages 0-4 years.

Healthy People 2010 Goals: Reduce emergency department visits for asthma for children under age 5 years to 80 per 10,000; reduce hospitalizations for asthma for children under age 5 years to 25 per 10,000.

A. Prevalence

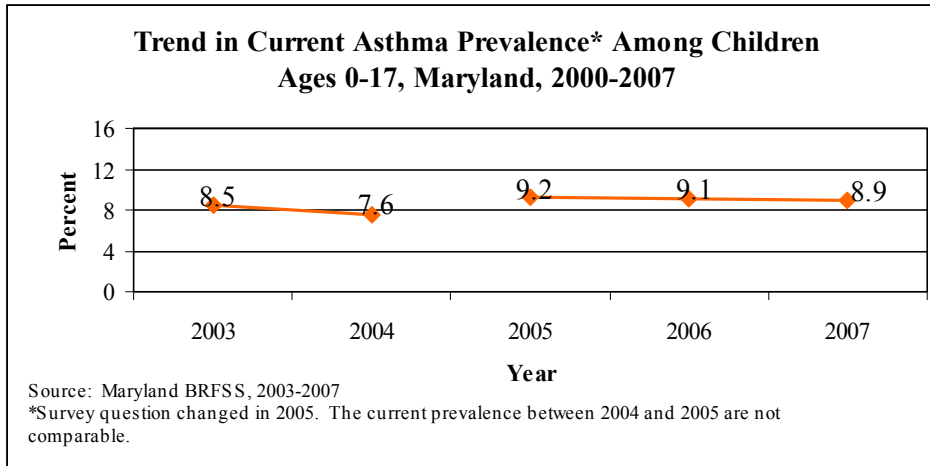
Source: MD BRFSS

Figure 18.



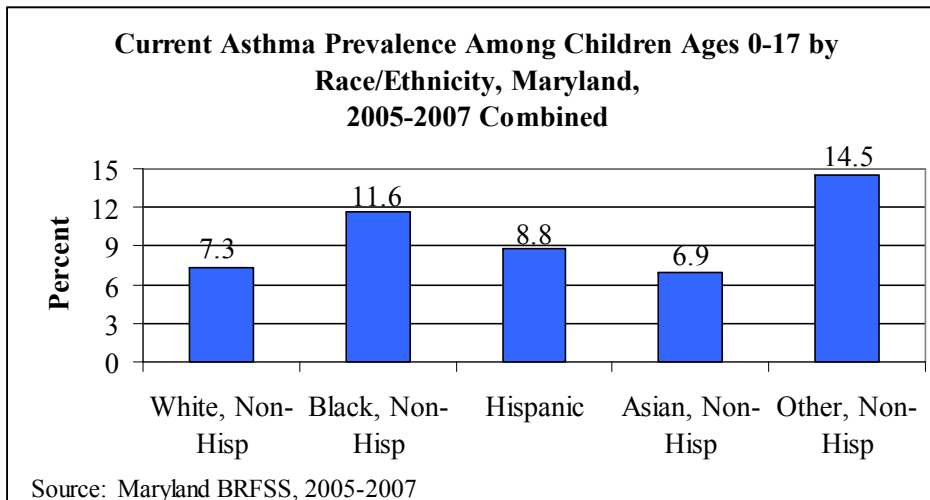
Lifetime prevalence is the proportion of individuals who have **ever** been diagnosed with asthma. Among Maryland children less than 18 years of age, the lifetime asthma prevalence was an estimated 190,000 (13.6 percent) in 2007.

Figure 19.



Current prevalence refers to the proportion of individuals who **still have a diagnosis** of asthma at the time of the survey. Among Maryland children less than 18 years of age, the current asthma prevalence was an estimated 123,400 (8.9 percent) in 2007.

Figure 20.

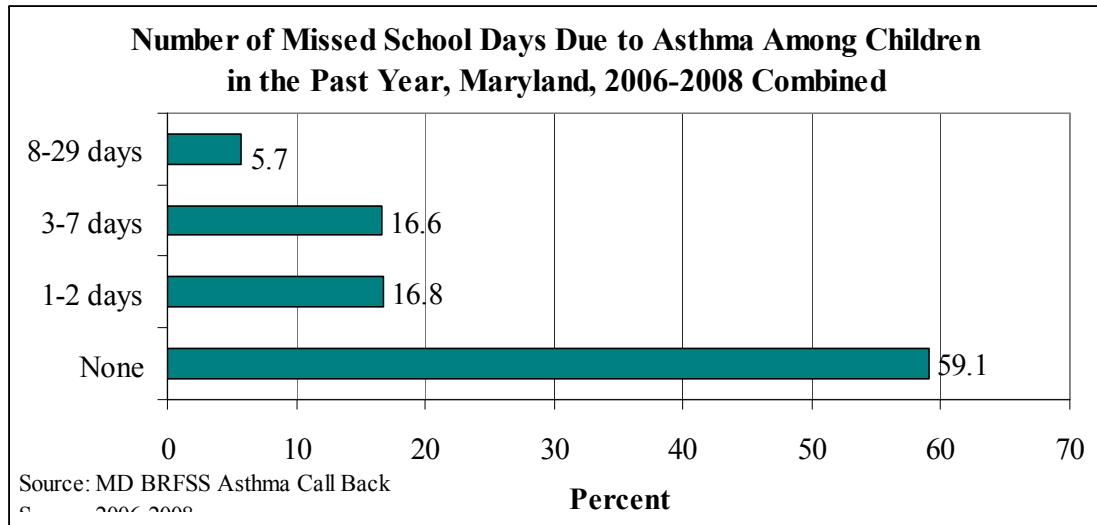


Between 2005 and 2007, the current asthma prevalence among black children was 60 percent higher than the prevalence among white children.

B. Asthma Among School-Aged Children

Source: MD BRFSS Asthma Call Back Survey

Figure 21.

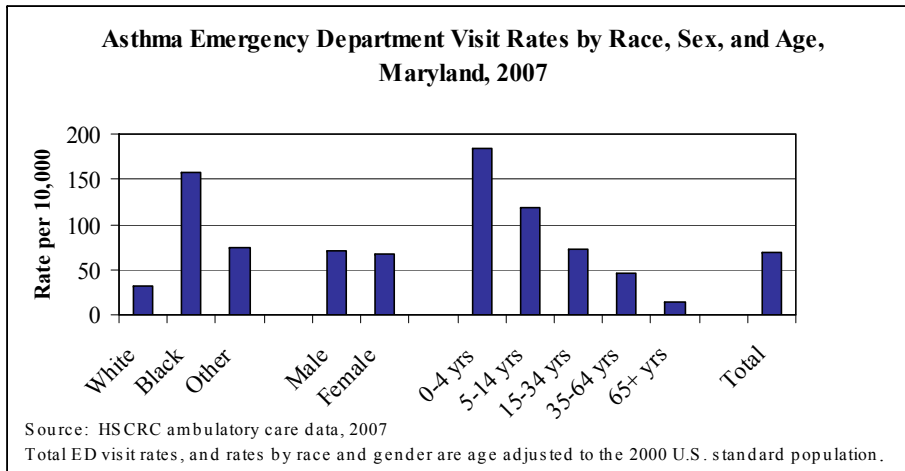


Nationally, asthma is a leading cause of school absenteeism. Data showed that in Maryland asthma contributes to school absenteeism. Among parents of school-aged children with asthma, 16.8 percent reported that their child missed 1-2 days of school because of asthma during the past 12 months, and 5.7 percent said their child missed 8-29 days due to asthma. Three-fifths of parents (59.1%) reported that their child missed no days of school due to asthma.

C. Emergency Department Visits Due to Asthma

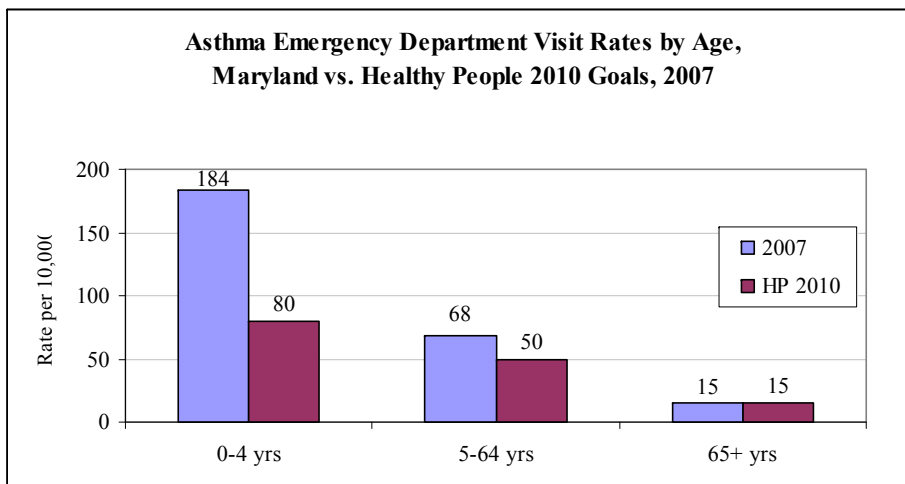
Source: HSCRC ambulatory care data

Figure 22..



Blacks in Maryland visit the ED for asthma at four times the rate of Whites (157.2 vs. 31.5 per 10,000). Young children are brought to the ED for asthma more often than adults.

Figure 23.



Emergency department visit rates exceed the Healthy People 2010 goals for all age groups. This difference remains most dramatic for children under 5 years of age. While the Healthy People 2010 goal is 80 visits per 10,000 population, Maryland's youngest children (age 0-4) had 184 visits per 10,000 population in 2007.

Certain Maryland jurisdictions have higher rates of asthma-related emergency department visits for children than others. Rates range from a low of 42.4 per 10,000 in Caroline County to 468.8 per 10,000 in Baltimore City. Other jurisdictions with rates of asthma-related emergency department visits for children that are higher than the statewide rate (184 per 10,000) are: Baltimore County (273.3), Dorchester County (211.8), and Howard County (239.5).

Table 33.

Rate of Emergency Department Visits for Asthma per 10,000 Children, Ages 0-4, by Maryland Jurisdiction, 2007	
Allegany	120.5
Anne Arundel	151.4
Baltimore County	273.3
Calvert	118.5
Caroline	42.4
Carroll	108.1
Cecil	62.9
Charles	113.3
Dorchester	211.8
Frederick	67.1
Garrett	141.1
Harford	120.0
Howard	239.5
Kent	83.6
Montgomery	92.0
Prince George's	135.6

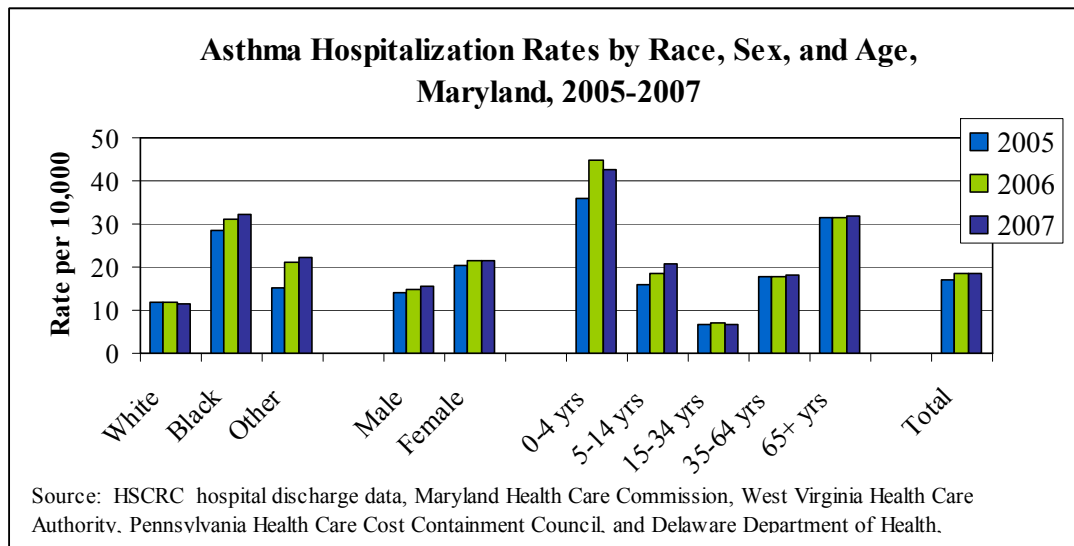
Queen Anne's	69.3
St. Mary's	146.8
Somerset	72.6
Talbot	93.7
Washington	96.4
Wicomico	99.4
Worcester	82.1
Baltimore City	468.8
Source: HSCRC Inpatient Data	

D. Hospitalizations Due to Asthma

Source: MD HSCRC; Maryland Health Care Commission, West Virginia Health Care Authority, Pennsylvania Health Care Cost Containment Council, Delaware Department of Health

*Since some Maryland residents are hospitalized in neighboring states, data on hospitalization of Maryland residents from the District of Columbia, West Virginia, Pennsylvania, and Delaware, are included when possible.

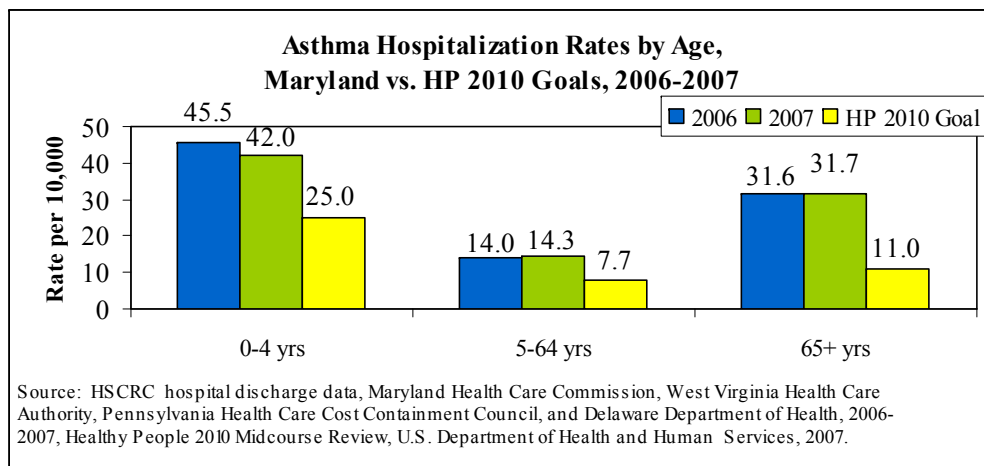
Figure 24.



*Hospitalizations of Maryland residents in West Virginia are included in all data except rates by race, because West Virginia does not collect data on race. Hospitalizations of Maryland residents in the District of Columbia, Pennsylvania, and Delaware are included in all data. Total hospitalization rate, and rates by race and gender are age adjusted to the 2000 U.S. standard population.

In 2007, hospitalization rates for Blacks continued to be nearly three times that of Whites. Females continued to have higher hospitalization rates than males. Children under the age of 5 years of age continued to have the highest hospitalization rates when compared to other age groups; a rate of 42.7 hospitalizations per 10,000 population.

Figure 25.



Hospitalization rates for asthma exceed the Healthy People 2010 goals for all age groups. This difference remains most dramatic for children under 5 years of age. While the Healthy People 2010 goal is 25 hospitalizations per 10,000 population, Maryland's youngest children (age 0-4) had 45.5 hospitalizations per 10,000 population in 2007.

* Hospitalizations of Maryland residents in D.C., West Virginia, Pennsylvania, and Delaware are included in 2005 & 2007 data. Rates are age adjusted to the 2000 U.S. standard population.

VII. Oral Health

Source: Survey of the Oral Health Status of Maryland School Children 2005-2006, University of MD Dental School

National Performance Measure: Percent of third grade children who have received protective sealants on at least one permanent molar tooth.

Healthy People 2010 Goals: Reduce the proportion of children, ages 6 to 8 years, with dental caries in their primary teeth to 42 percent; Increase the proportion of children, aged 8 years, who have received dental sealants on their molar teeth to 50 percent.

The most comprehensive source of data on the oral health status of Maryland children is the Survey of the Oral Health Status of Maryland School Children, conducted by the University of Maryland Dental School. The Survey is a dental evaluation of the State's public school children in kindergarten and 3rd grade. It consists of a simple oral screening to assess dental caries, existing restoration and dental sealants, and a brief oral health questionnaire, completed by a parent or guardian, designed to collect demographic characteristics. The last time this survey was conducted was during the 2005-2006 school year. 2,322 students were included in the full sample.

A. Dental Care and Coverage

According to the Survey of the Oral Health Status of Maryland School Children, in 2005-2006, 81.2 percent of Maryland kindergarteners and 79.8 percent of Maryland 3rd graders had had a dental visit in the past 12 months.

Nearly 90 percent of kindergarteners and 3rd graders were reported to have dental service availability.

The majority of children examined for the survey had private dental coverage (59.6 percent), while 28.4 percent had Medicaid dental coverage, and 11.1 percent had no dental coverage.

B. Dental Caries

According to the survey, approximately 31 percent of school children in Kindergarten and Grade 3 had at least one tooth with dental caries.

School children with **increased** likelihood of having at least one tooth with dental caries include:

- Those residing on the Eastern Shore compared to similar children in Southern or Western Maryland.
- Non-Hispanic Black children compared to Non-Hispanic White children.
- Those eligible for free or reduced meals compared to those children ineligible for free or reduced meals.
- Those with a parent/caregiver who did not graduate from college compared to those with a parent/caregiver who did graduate from college.
- Those with Medicaid or no dental coverage compared to children with private dental coverage.

C. Dental Sealants

According to the survey, approximately 27 percent of school children in Kindergarten and Grade 3 had at least one tooth with a dental sealant.

School children with **decreased** likelihood of having at least one tooth with a dental sealant include:

- Those residing on the Eastern Shore and in Central Baltimore compared to similar children residing in Western Maryland or Central Maryland/D.C. Metropolitan Area.
- Non-Hispanic Black children compared to Non-Hispanic White children.
- Those eligible for free or reduced meals compared to those children ineligible for free or reduced meals.
- Those with Medicaid coverage compared to those with private dental coverage.

VIII. Lead

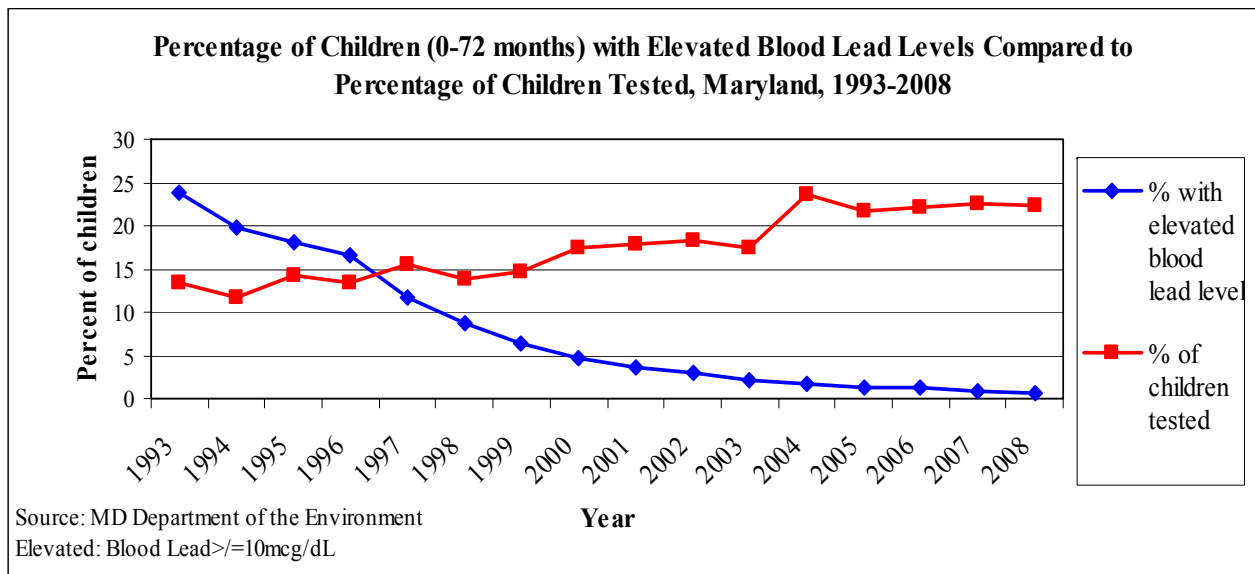
Source: Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Blood Lead Surveillance in Maryland, Annual Report 2008.

Healthy People 2010 Goal: Eliminate elevated blood lead levels in children.

Exposure to lead is still the most significant and widespread environmental hazard for children in Maryland. Over the past couple decades, Maryland has substantially increased the number of children tested for elevated blood lead levels (BLL), and substantially decreased the number of children with elevated blood lead levels (BLL \geq 10mcg/dL).

As visible in the following graph, the percentage of children, ages 0-72 months, that are tested has increased by 57 percent (from 14 to 22 percent tested) from 1993 to 2008. During this same time period, the percentage of children with elevated blood lead levels (out of those tested), has decreased by 97 percent (from 23.9 to 0.7 percent).

Figure 26.



A. Blood Lead Testing

In 2008, 118,895 children 0-18 years old were tested for blood lead in Maryland. 106,452 of these children were between 0 and 72 months old. The highest testing rates for children 0-72 months were found in Wicomico County (34.6%); followed by Caroline County (34.3%), Somerset County (34.1%), and Baltimore County (33.3%).

Important note about testing: Maryland requires that children ages one and two years and children living in “at-risk areas” be tested. The State has a targeted testing plan that identifies “at-risk areas.” Universal blood lead testing applies to Baltimore City children and children on Medical Assistance programs.

B. Prevalence and Incidence of Elevated Blood Lead Levels

Out of the 106,452 children 0-72 months tested for lead statewide in 2008, 713 (0.7%) were found to have a blood lead level ≥ 10 mcg/dL (prevalent cases), of whom 489 had their very first elevated blood lead level (EBL) test (incident cases) in 2008. Prevalence reflects the existing load of children with EBL who may be new to the surveillance system or may have been carried-over from previous years (continuously or after some remission). Incidence reflects the load of the children with EBL who may have never been tested for lead before or the result of all their previous blood lead tests were all below 10 mcg/dL.

In addition to the 713 children who were found to have a blood lead level ≥ 10 mcg/dL in 2008, 5,078 children 0-72 months were found to have a blood lead level of 5-9 mcg/dL.

The following table details the number of children tested, prevalent cases and incident cases by Maryland jurisdiction.

Table 34.

Blood Lead Testing of Children 0-72 Months by Maryland Jurisdiction in 2008							
County	Population of Children*	Children Tested		Prevalent Cases**		Incident Cases***	
		Number	Percent	Number	Percent	Number	Percent
Allegany	4,966	1,323	26.6	11	0.8	8	0.6
Anne Arundel	44,090	6,817	15.5	7	0.1	6	0.1
Baltimore	60,547	15,837	26.2	36	0.2	31	0.2
Baltimore City	55,959	18,622	33.3	468	2.5	302	1.6
Calvert	6,864	768	11.2	0	0.0	0	0.0
Caroline	2,497	852	34.1	7	0.8	3	0.4
Carroll	13,872	1,343	9.7	8	0.6	7	0.5
Cecil	7,965	1,265	15.9	6	0.5	4	0.3
Charles	12,001	2,032	16.9	1	0.0	1	0.0
Dorchester	2,266	680	30.0	9	1.3	5	0.7
Frederick	19,184	3,376	17.6	16	0.5	13	0.4
Garrett	2,468	479	19.4	2	0.4	1	0.2
Harford	21,005	3,258	15.5	5	0.2	5	0.2
Howard	24,777	2,493	10.1	5	0.2	4	0.2
Kent	1,242	303	24.4	5	1.7	3	1.0
Montgomery	80,262	18,587	23.2	36	0.2	25	0.1
Prince George's	77,625	18,732	24.1	41	0.2	33	0.2
Queen Anne's	3,583	594	16.6	1	0.2	1	0.2
St. Mary's	8,548	1,517	17.7	4	0.3	3	0.2
Somerset	1,521	522	34.3	2	0.4	2	0.4
Talbot	2,399	612	25.5	5	0.8	5	0.8
Washington	11,113	3,041	27.4	13	0.4	11	0.4
Wicomico	6,998	2,420	34.6	20	0.8	13	0.5
Worcester	3,148	910	28.9	5	0.5	3	0.3
County Unknown		69		0		0	
Statewide	474,900	106,452	22.4	713	0.7	489	0.5

Source: Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Blood Lead Surveillance in Maryland, Annual Report 2008.
 *Adapted from the Census Bureau: "State Interim Population Projections by Age and Sex: 2000-2030" <http://www.census.gov/population/www/projections/projectionsagesex.html>
 **All children with at least one blood lead test \geq 10mcg/dL in 2008.
 ***Children with the very first blood lead level test \geq 10mcg/dL in 2008. These children were either not tested in the past or their blood lead levels were below 10mcg/dL.

IX. Mental Health

Sources: National Survey of Children's Health; Maryland State Department of Education; Maryland Mental Hygiene Administration; Health Services Cost Review Commission (HSCRC) Hospital Inpatient Data

Parental Perceptions of Their Child's Development and Mental Health

According to the 2007 National Survey of Children's Health, 40.3 percent of Maryland parents had one or more concerns about their child's physical, behavioral or social development (children age 4 months-5 years only). Ninety-two percent of Maryland parents reported that their child, age 6-17, consistently exhibits positive social skills, while nearly 8 percent reported that their child does not. Nearly 7 percent of Maryland parents of children, 6-17 years, reported that their child consistently exhibits problematic social behaviors. Seven percent of Maryland children, 2-17 years, are currently taking medication for ADHD, emotions, concentration or behavior.

Mental Health Disorders in School-Aged Children

According to the Maryland Public Schools Annual School Health Services Survey for School Year 2006-2007, attention deficit hyperactivity disorder (ADHD) was reported as the second most prominent chronic health condition among children in the public school system. In 2006-2007, 34,319 Maryland public school children were reported to have ADHD. After ADHD, mental health disorders most frequently reported were depression, bipolar disorder, and anxiety.

Children Served by the Public Mental Health System

According to the Annual Report, Partners in Recovery and Resilience, by the Maryland Mental Hygiene Administration, in FY 2008, 43,125 children and adolescents, 0-17 years of age, were served in the Maryland fee-for-service public mental health system, representing 43 percent of the total number served. The three most common diagnostic groupings for children and adolescents are attention deficit disorders, adjustment disorders, and major depression.

Mental Health Problems as Reason for Hospitalization

Hospital inpatient data from the Health Services Cost Review Commission reveals that mental health problems are a leading cause of hospitalization for children and adolescents in Maryland. Among children 5-9 years old, 3.3 percent of hospitalizations in 2007 (150) were due to affective disorders, making affective disorders the 5th leading cause of hospitalization for this age group.

Among youth 10-14 years, 8.3 percent of hospitalizations (412) were due to affective disorders, making affective disorders the 3rd leading cause of hospitalization for this age group. Roughly 3 percent of hospitalizations of youth 10-14 years (145) were due to other mental conditions, making other mental disorders the 6th leading cause of hospitalization for this age group.

Among adolescents 15-19 years, the leading non-obstetric cause of hospitalization in 2007 was affective disorders. Ten percent (1,051) of hospitalizations in this age group were due to affective disorders. The 8th leading cause of hospitalization for adolescents was other mental conditions, representing 2.7 percent (275) of hospitalizations.

X. HIV/AIDS

Source: Center for HIV Surveillance and Epidemiology, Infectious Disease and Environmental Health Administration, DHMH: Fact Sheet-HIV/AIDS and Pediatrics (<13 Years of Age) in Maryland, November 2009

A. Pediatric (<13 Years of Age) HIV/AIDS

Of the 2,855 reported HIV diagnoses during 2007 in Maryland, 10 (0.3%) were pediatric cases (<13 years of age). Of the 1,211 reported AIDS diagnoses during 2007 in Maryland, there were no reported AIDS diagnoses among pediatric cases.

Of the 28,270 total living HIV cases (with or without AIDS) on 12/31/2007 in Maryland, 108 (0.4%) were pediatric cases. This was a rate of 11.3 cases per 100,000 children (<13 years of age).

Of the 108 total living pediatric HIV cases (with or without AIDS) on 12/31/07 in Maryland, 55.6 percent were female and 44.4 percent were male. Of the 108 total living pediatric HIV cases (with or without AIDS) during 2007 in Maryland, 89.6 percent were non-Hispanic black, 6.6 percent were non-Hispanic white, 1.9 percent were Hispanic, and 1.9 percent were other races.

B. Adolescent (13-19 Years of Age) HIV/AIDS

Of the 2,855 reported HIV diagnoses during 2007 in Maryland, 122 (4.3%) were adolescent cases (13-19 years of age). Of the 1,211 reported AIDS diagnoses during 2007 in Maryland, 22 (1.8%) were adolescent cases.

Of the 28,270 total living HIV cases (with or without AIDS) on 12/31/2007 in Maryland, 399 (1.4%) were adolescent cases. This was a rate of 71.3 cases per 100,000 adolescents (13-19 years of age).

Of the 399 total living adolescent HIV cases (with or without AIDS) on 12/31/07 in Maryland, 49.4 percent were female and 50.6 percent were male. Of the 399 total living adolescent HIV cases (with or without AIDS) during 2007 in Maryland, 90.0 percent were non-Hispanic black and 8.6 percent were non-Hispanic white. There were fewer than five cases in other ethnic groups, so percentages are not reported here.

XI. Education

Source: Maryland State Department of Education

A. School Readiness

State Performance Measure: Percent of Maryland kindergartners entering school ready to learn.

In Maryland, school readiness is assessed on seven domains of learning: language and literacy, mathematical thinking, scientific thinking, social studies, the arts, physical development, and social and personal development. A composite score is created by combining the results on these seven domains and is used as a general measurement of school readiness among kindergartners in the state.

78 percent of Maryland kindergartners were assessed as “fully ready to learn” in the 2009-2010 school year, which is a increase of 5 percent from the 2008-2009 school year. Since the baseline measurement was taken in 2001-2002, there has been a statistically significant increase of 29 percent, from 49 percent entering school fully ready to learn in 2001-2002 to 78 percent entering school fully ready to learn in 2009-2010.

Table 35.

Percent of Maryland Children Rated as Fully Ready for Kindergarten in the Domains of “Language and Literacy” and “Mathematical Thinking,” 2009	
Jurisdiction	Percent
Maryland, Statewide	65
Allegany	69
Anne Arundel	59
Baltimore City	58
Baltimore County	72
Calvert	75
Caroline	51
Carroll	59
Cecil	54
Charles	65
Dorchester	67

Frederick	68
Garrett	64
Harford	76
Howard	70
Kent	71
Montgomery	66
Prince George’s	61
Queen Anne’s	75
Saint Mary’s	66
Somerset	79
Talbot	58
Washington	65
Wicomico	60
Worcester	66

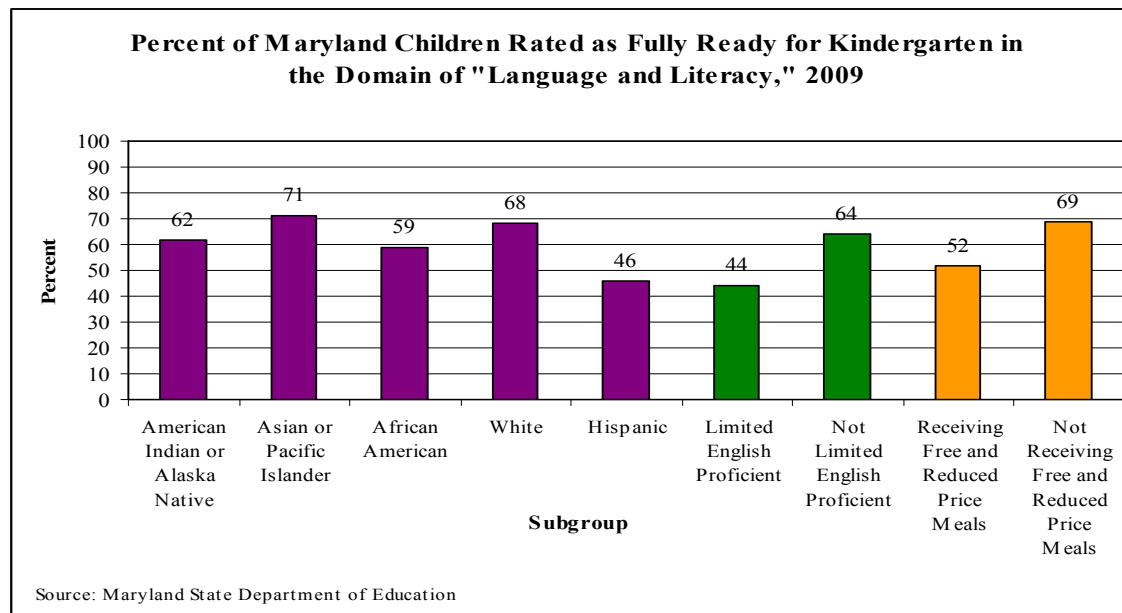
In 2009, 65 percent of Maryland children were rated as fully ready for kindergarten in the domains of “language and literacy” and “mathematical thinking” (average of both) on the Maryland Model for School Readiness kindergarten assessment. As detailed in the following table, individual jurisdictions had different percentages of kindergartners rated as being fully ready to learn. These varied from a low of 51 percent in Caroline County to a high of 79 percent in Somerset County.

Table 36.

Ready for Kindergarten-Average of Language and Literacy and Mathematical Thinking (Percent), Maryland				
2005	2006	2007	2008	2009
51%	53%	60%	61%	65%

The percentage of Maryland children entering kindergarten ready to learn in the domains of “language and literacy” and “mathematical thinking” varies by race/ethnicity, English proficiency, and whether or not the child is receiving free and reduced school meals.

Figure 27.

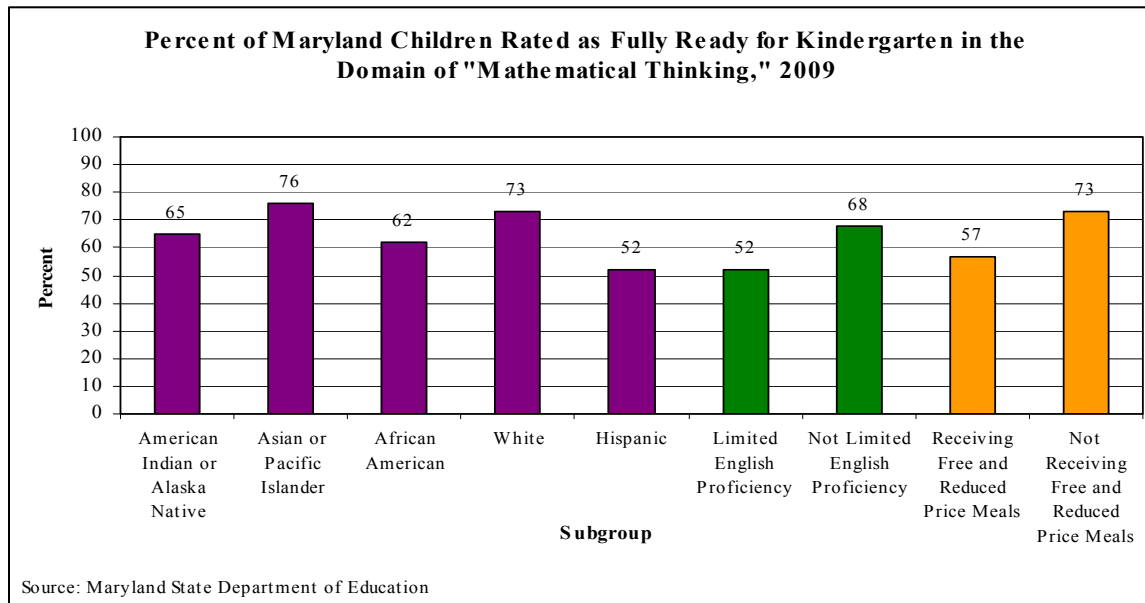


In 2009, Hispanic children, children with limited English proficiency (LEP), and children receiving free and reduced price school meals (FARMS) were least likely to enter kindergarten ready to learn in the domain of “language and literacy”.

Table 37.

Ready for Kindergarten-Language and Literacy-by Subgroup (Percent), Maryland					
Category	2005	2006	2007	2008	2009
American Indian/Alaska Native	41%	49%	56%	60%	62%
Asian/Pacific Islander	48%	57%	63%	66%	71%
African American	42%	44%	51%	52%	59%
White	55%	58%	64%	65%	68%
Hispanic	31%	33%	39%	41%	46%
LEP	26%	31%	33%	38%	44%
Not LEP	49%	52%	60%	60%	64%
FARMS	37%	38%	45%	47%	52%
Not FARMS	53%	57%	63%	65%	69%

Figure 28.



In 2009, Hispanic children, children with limited English proficiency (LEP), and children receiving free and reduced price school meals (FARMS) were least likely to enter kindergarten ready to learn in the domain of “mathematical thinking”.

Table 38.

Ready for Kindergarten-Mathematical Thinking-by Subgroup (Percent), Maryland					
Category	2005	2006	2007	2008	2009
American Indian/Alaska Native	53%	53%	59%	63%	65%
Asian/Pacific Islander	60%	66%	72%	72%	76%
African American	44%	46%	56%	55%	62%
White	63%	65%	71%	71%	73%
Hispanic	37%	41%	47%	48%	52%
LEP	34%	40%	44%	46%	52%
Not LEP	55%	57%	66%	65%	68%
FARMS	41%	42%	52%	52%	57%
Not FARMS	60%	64%	70%	70%	73%

Although the same subgroups that had the lowest percentage of children entering school ready to learn (in the area of mathematical thinking) in 2005 still have the lowest percentage of children entering school ready to learn in 2009, each of these groups has experienced an increase. There has been a 40 percent increase in the percentage of Hispanic children entering school ready to learn in the area of mathematical thinking since 2005, a 53 percent increase in the percentage of LEP children, and a 39 percent increase in the percentage of children who receive free or reduced meals who enter school ready to learn in the area of mathematical thinking.

XII. Access to Care

A. Health Care Access and Quality

Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health website. Retrieved 04/19/2010 from www.nschdata.org

According to the 2007 National Survey of Children's Health, 93.5 percent of Maryland children, ages 0-17 years, have had a preventive medical care visit in the past year, and 75.8 percent have received both a preventive medical care visit and a preventive dental care visit in the past 12 months. However, 5.3 percent of Maryland children, 0-17 years, have had one or more unmet needs for care (medical, dental or mental) during the past 12 months.

Medical Home

58.6 percent of Maryland children, 0-17 years, have care that meets the American Academy of Pediatrics criteria for having a medical home, and 41.4 percent have medical care that does not meet the criteria for a medical home.

92.6 percent of children, 0-17 years, have one or more health professionals considered by parents to be their child's personal doctor or nurse. "Personal doctor or nurse" is defined as a health professional who knows the child well and is familiar with the child's health history. This can be a general doctor, a pediatrician, a specialist doctor, a nurse practitioner, or a physician's assistant.

93.9 percent of children have a usual source for medical care.

Care Coordination

14.2 percent of children, 0-17 years, did not receive all care coordination on at least one element. Possible elements of care coordination include: communication between doctors when needed, communication between doctors and schools when needed, and getting help coordinating care when needed. 31 percent of children received all needed components of care coordination, whereas 54.8 percent of children did not need coordinated care, or had less than 2 services during the past 12 months.

Specialist Care

23.3 percent of children, 0-17 years, received or needed specialist care and did not have a problem getting this care, whereas 7.7 percent of children received or needed specialist care and had some problem getting this care. 69.0 percent of children did not need or receive care from a specialist.

Quality of Care

45.7 percent of parents of children, 0-5 years, had a visit with a health professional during the past 12 months, but did not get asked about concerns regarding their child's learning, development, or behavior.

B. Health Insurance

Uninsured Children

Sources: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2007-2009; Maryland Health Care Commission report: Insurance Coverage in Maryland 2007-2008, released January 2010; Small Area Health Insurance Estimates (SAHIE), U.S. Census (data presented in Kids Count Data Center)

According to the Annual Social and Economic Supplement of the U.S. Census Bureau's Current Population Survey, from 2006-2008, 8.8 percent of Maryland children, 0-17 years, were uninsured.

According to the Maryland Health Care Commission, the majority of uninsured children in Maryland are in low-income families, and children in low-income families (up to 200% of the federal poverty level) represent 10 percent of the total number of uninsured in the state of Maryland. Children in lower- moderate income families (200-<400% of the federal poverty level) represent 5 percent of the total uninsured and children in higher-moderate income families (400%+ of the federal poverty level) represent 3 percent.

Table 39.

Health Insurance Coverage by Race, Children 0-17 Years, 2006-2008				
	Insured		Uninsured	
	Sum	Percentage	Sum	Percentage
White	734,759	92.3%	61,068	7.7%
Black	408,197	88.5%	53,132	11.5%

Table 40.

Health Insurance Coverage by Hispanic Origin, Children 0-17 Years, 2006-2008				
	Insured		Uninsured	
	Sum	Percentage	Sum	Percentage
Hispanic	85,863	73.5%	31,000	26.5%
Non-Hispanic	1,162,902	92.8%	90,164	7.2%

The most recent jurisdiction-level data for Maryland is from the 2006 Small Area Health Insurance Estimates (SAHIE). This data is only available for children under 19 years of age.

Table 41.

Percentage of Children (under 19 years old) Uninsured, Maryland, 2006	
Maryland, statewide	10.5
Allegany	7.4
Anne Arundel	10.0
Baltimore City	7.0
Baltimore County	10.1
Calvert	8.7
Caroline	10.5
Carroll	8.2
Cecil	8.0
Charles	8.1
Dorchester	9.3
Frederick	8.5
Garrett	12.0
Harford	8.2
Howard	9.9
Kent	13.2
Montgomery	12.4
Prince George's	14.8
Queen Anne's	10.4
St. Mary's	9.9
Somerset	8.7
Talbot	12.1
Washington	8.3
Wicomico	10.7
Worcester	11.3

Health Insurance Coverage and Adequacy

Source: Child and Adolescent Health Measurement Initiative. *2007 National Survey of Children's Health*, Data Resource Center for Child and Adolescent Health website. Retrieved 04/19/2010 from www.nschdata.org

In 2007, 22.7 percent of Maryland children, 0-17 years, had public insurance coverage, 71.5 percent had private insurance coverage, and 5.8 percent were uninsured at the time of the survey.

20.5 percent of Maryland parents report that their child's insurance coverage is not adequate to meet his or her medical needs.

Of the children, 0-17 years, who are insured, 21% have health insurance that does not always offer benefits or cover services that meet the child's needs; 15 percent have health insurance that does not always allow him or her to see the health care providers he or she needs.

50 percent of parents of children, 0-17 years, who are insured report that out-of-pocket costs for their child's health care are always or usually reasonable. 16.7 percent report that out-of-pocket costs are never or sometimes reasonable, and 32.8 percent report no out-of-pocket expenses.

XIII. Out-of-Home Youth

A. Out-of-Home Placements

Source: MD Department of Human Resources-Social Services Administration, *Child Welfare Results Report: Place Matters*, December 2009 (Released February 2010)

At the end of 2009, 8,840 Maryland children were in out-of-home placement through Maryland's child welfare services. 52 percent of children in out-of-home placements are male and 48 percent female. 68 percent of these children were Black/African-American, 7 percent White/Caucasian, 5 percent Native Hawaiian/Pacific Islander, 0.3 percent Asian, and 0.1 percent American Indian (20 percent of the current out-of-home population do not have race/ethnicity identified).

Figure 29.

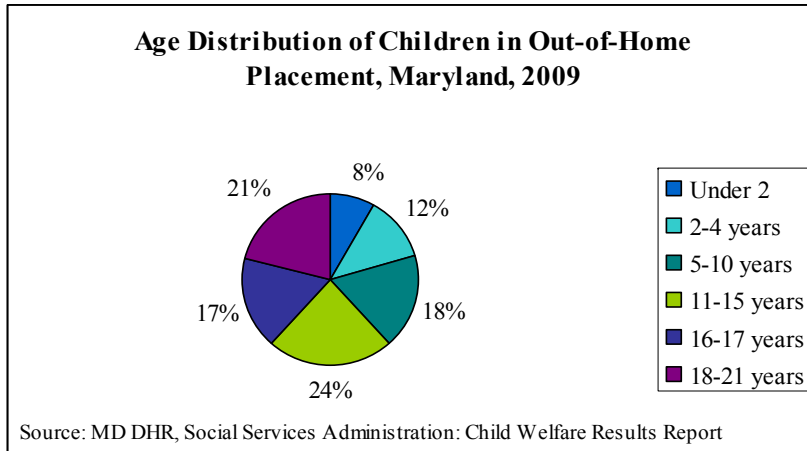


Figure 30.

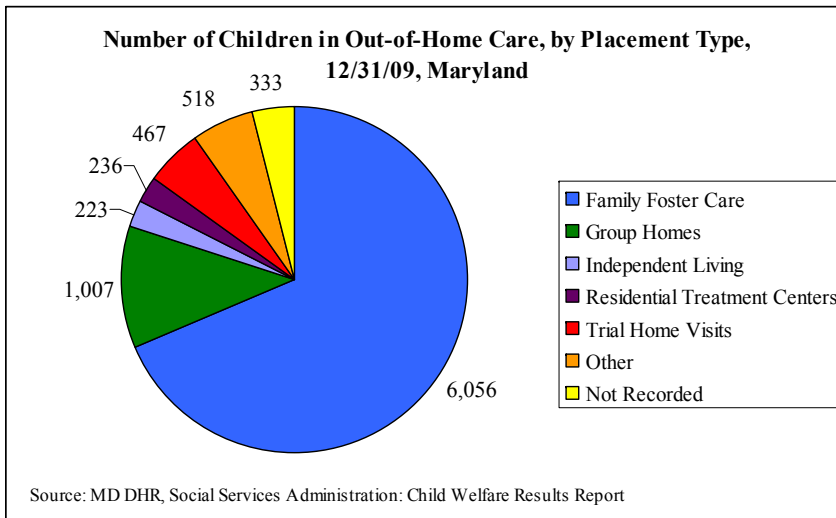


Table 42.

Out-of-Home Placement Category	Number of children in placement category on 12/31/2009 by age
Family Foster Homes, including: formal kinship care, relative home, restricted (relative) foster care, emergency foster home care, regular foster care, intermediate foster care, pre-finalized adoptive home, treatment foster care	Total: 6,056 Under 2: 638 2-4 years: 921 5-10 years: 1,325 11-15 years: 1,410 16-17 years: 890 18-21 years: 872
Group Homes, including: alternative living units, emergency group shelter care, residential group homes, therapeutic group homes, teen mother programs	Total: 1,007 Under 2: 0 2-4 years: 3 5-10 years: 54 11-15 years: 289 16-17 years: 316 18-21 years: 345
Independent Living Residential Programs	Total: 223 Under 2: 0 2-4 years: 0 5-10 years: 0 11-15 years: 0 16-17 years: 8 18-21 years: 215
Residential Treatment Centers	Total: 236 Under 2: 0 2-4 years: 0 5-10 years: 11 11-15 years: 111 16-17 years: 94 18-21 years: 20

Out-of-Home Placement Category	Number of children in placement category on 12/31/2009 by age
Trial Home Visits, including: Home of parent(s) or stepparent(s), trial visit home	Total: 467 Under 2: 54 2-4 years: 68 5-10 years: 128 11-15 years: 110 16-17 years: 57 18-21 years: 50
Other, including: college, correctional institution, halfway house, own home/apartment, inpatient medical care, inpatient psychiatric care, Job Corps, runaway, respite care, secure detention facility	Total: 518 Under 2: 7 2-4 years: 16 5-10 years: 17 11-15 years: 71 16-17 years: 115 18-21 years: 292
Not recorded (data not entered)	Total: 333 Under 2: 38 2-4 years: 33 5-10 years: 46 11-15 years: 71 16-17 years: 61 18-21 years: 84

B. Homeless Youth

Source: Maryland State Department of Education

In 2009, 10,485 children enrolled in Maryland schools were reported to be homeless. Jurisdictions with the highest numbers of homeless school children were Prince George's County, Wicomico County, Baltimore County and Baltimore City, with nearly 7,000 homeless school children in these four jurisdictions.

Table 43.

Homeless Program Enrollment by Jurisdiction, 2005-2009 (pre-k through grade 12)					
	2005	2006	2007	2008	2009
Allegany County	30	25	52	18	25
Anne Arundel County	281	455	506	651	947
Baltimore City	1360	1307	1666	717	1411
Baltimore County	800	967	1230	1388	1442
Calvert County	92	113	49	106	125
Caroline County	23	11	29	83	73
Carroll County	108	128	111	135	49
Cecil County	87	105	88	106	142
Charles County	218	325	339	326	403
Dorchester County	13	13	9	12	32
Frederick County	145	209	193	290	336
Garrett County	26	23	21	16	17
Harford County	148	244	157	176	228
Howard County	227	307	326	363	365
Kent County	0	5	35	26	33
Montgomery County	475	740	552	618	409
Prince George's County	1992	2003	1830	2162	2418
Queen Anne's County	0	0	1	1	48
St. Mary's County	19	8	10	105	75
Somerset County	44	33	30	24	36
Talbot County	36	30	38	48	61
Washington County	85	118	116	148	209
Wicomico County	499	555	1080	1268	1566
Worcester County	13	13	5	26	35
Total	6,721	7,737	8,473	8,813	10,485

C. Youth in Juvenile Justice System

Source: Maryland Department of Juvenile Services, FY 2009 Annual Statistical Report

Intake Cases

In FY 2009, there were a total of 48,506 intake cases in the Maryland Department of Juvenile Services. Twenty-five percent of these cases were in the Central Region, which includes Baltimore County, Carroll County, Harford County and Howard County. Twenty-three percent were in the D.C. Metropolitan Area, which includes Montgomery and Prince George’s Counties. Sixteen percent were in Baltimore City, 16 percent in the Southern Region (Anne Arundel, Calvert, Charles and St. Mary’s), and the remainder in the Western and Eastern regions of the state.

Table 44.

Number and Percent of Juvenile Services Intake Cases by Jurisdiction, FY 2009		
Jurisdiction	2009 Cases	Percent of Cases
Allegany	841	1.7
Anne Arundel	4414	9.1
Baltimore City	7887	16.3
Baltimore County	7660	15.8
Calvert	733	1.5
Caroline	386	0.8
Carroll	1176	2.4
Cecil	825	1.7
Charles	1842	3.8
Dorchester	377	0.8
Frederick	1696	3.5
Garrett	364	0.8
Harford	1673	3.4
Howard	1504	3.1
Kent	260	0.5
Montgomery	3962	8.2
Prince George’s	7259	15.0
Queen Anne’s	427	0.9

St. Mary’s	822	1.7
Somerset	304	0.6
Talbot	336	0.7
Washington	1176	2.4
Wicomico	1497	3.1
Worcester	1085	2.2
State Total	48,506	100.0

The majority of intake cases, 76 percent, involved older youth (ages 15-18 years), but over 600 cases involved children ages 10 and under.

Table 45.

Number of Intake Cases by Age, FY 2009											
Under 10	10	11	12	13	14	15	16	17	18	Over 18	Age Unknown
318	336	673	1,490	2,932	5,927	9,355	11,785	14,221	1,397	45	27

The number and percentage of intake cases into the juvenile justice system varies by race and sex. Sixty percent (29,116) of Maryland’s intake cases in 2009 involved African American youth, 34 percent (16,441) involved Caucasian youth, and 6 percent (2,949) other races. Seventy-four percent (35,706) of 2009 intake cases involved males and 26 percent (12,800) females.

Out-of-Home Placement

In FY 2009, there were a total of 5,647 out-of-home placements by the Department of Juvenile Services. This includes youth in committed residential programs, those pending placement, youth in detention, and youth in shelter care. Thirty-seven percent of youth with out-of-home juvenile services placements were from Baltimore City, and 20 percent were from the D.C. Metropolitan Region, which includes Montgomery and Prince George’s Counties.

Table 46.

Number and Percent of Juvenile Services Out-of-Home Placements by Jurisdiction, FY 2009		
Jurisdiction	2009 Placements	Percent of Placements
Allegany	54	1.0
Anne Arundel	295	5.2
Baltimore City	2101	37.2
Baltimore County	530	9.4
Calvert	88	1.6
Caroline	25	0.4
Carroll	87	1.5
Cecil	72	1.3
Charles	137	2.4
Dorchester	35	0.6
Frederick	108	1.9
Garrett	15	0.3

Harford	106	1.9
Howard	61	1.1
Kent	21	0.4
Montgomery	376	6.7
Prince George’s	751	13.3
Queen Anne’s	32	0.6
St. Mary’s	75	1.3
Somerset	35	0.6
Talbot	22	0.4
Washington	119	2.1
Wicomico	165	2.9
Worcester	59	1.0
State Total	5,647	100.0

The majority, 82.8 percent, of out-of-home placements in 2009 involved older youth (ages 15-18 years).

Table 47.

Number of Out-of-Home Placements by Age, FY 2009												
Age	Under 10	10	11	12	13	14	15	16	17	18	Over 18	Age Unknown
Placements	0	2	7	71	210	581	1,106	1,374	1,682	514	96	4

The number and percent of out-of-home placements by the Department of Juvenile Services varies by race and sex. Nearly 75 percent (4,220) of placements in 2009 involved African American youth, 20.7 percent (1,167) involved Caucasian youth, and 4.6 percent (260) involved youth of other races. Eighty-five percent of out-of-home placements involved males and 15 percent females.

MCH Population Group: Adolescents

I. Demography

A. Population

Source: Vital Statistics Administration

1. General

In 2008, there were 773,937 adolescents, ages 10-19, living in Maryland, representing 13.7 percent of the state's total population. This is approximately 28,000 more adolescents than were reportedly living in the state in the year 2000. Younger adolescents, ages 10-14, represented approximately 47 percent (366,710) of the total adolescent population, and older adolescents, ages 15-19, represented 53 percent (407,227) of the total adolescent population.

2. Geographic Distribution

The majority of Maryland adolescents, 47 percent, live in the Baltimore Metropolitan Area, which includes Baltimore City, Baltimore, Anne Arundel, Howard, Carroll and Harford Counties. Thirty-two percent live in the National Capital Area, which includes Montgomery and Prince George's Counties. Eight percent live in the Northwest Region of the state, seven percent in the Eastern Shore Area, and six percent in the Southern Area.

3. Racial and Ethnic Distribution

In 2008, White, non-Hispanic adolescents represented 53.7 percent of the state's total adolescent population. African-American, non-Hispanic adolescents represented 31.7 percent of the population, Asian, non-Hispanic adolescents represented 4.3 percent, American Indians/Alaskan Natives under 1 percent, and Native Hawaiian/Other Pacific Islander under 1 percent. Adolescents with two or more races represented 2.4 percent of the adolescent population, and 6.9 percent of adolescents had mothers of Hispanic origin (although they may also identify as being either Black or White).

II. Mortality

Source: MD DHMH, Vital Statistics Administration; MD Youth Risk Behavior Survey

Note: Mortality data for children and adolescents (ages 0-19) is presented in the Child and Adolescent Health section. The information presented here is intended to highlight the age disparity in youth mortality, and particular causes of death that more frequently affect adolescents.

National Performance Measures:

- The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

Healthy People 2010 Goals: Reduce the rate of child deaths

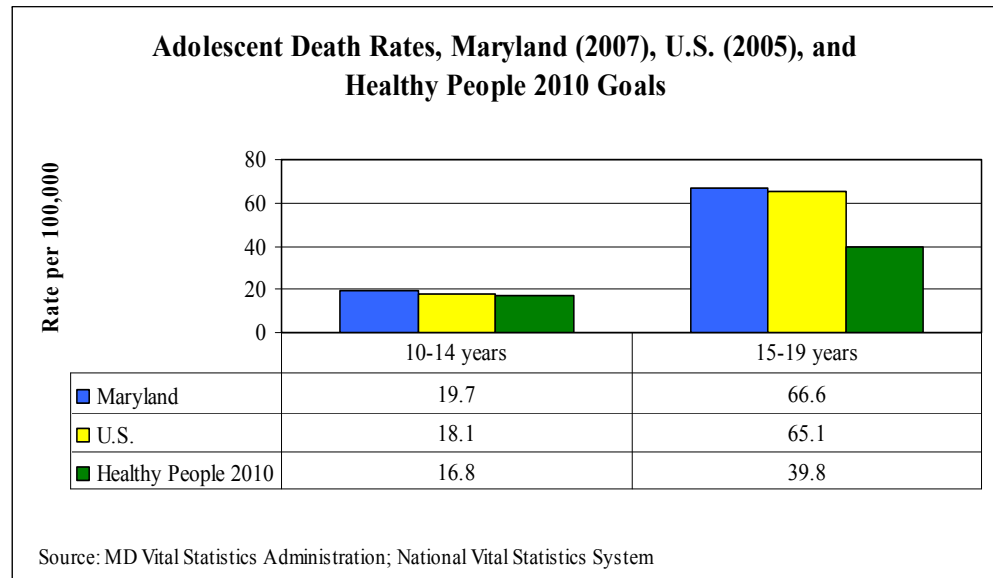
- Adolescents aged 10 to 14 years: 16.8 per 100,000
- Adolescents aged 15 to 19 years: 39.8 per 100,000

Of the 988 child deaths in 2007, 63.0 percent occurred in the first year of life. Although mortality rates fall after infancy, they rise again during adolescence. Teens have approximately 1.5 times the number of fatalities as seen in younger children.

Table 1.

Child Deaths (<18 years), Maryland 2007		
Age Group	Number of Deaths	Percent of Total Child Deaths
<1 year	622	63.0
1-4 years	97	9.8
5-9 years	51	5.2
10-14 years	74	7.5
15-17 years	144	14.6
Source: MD DHMH, Vital Statistics Administration		

Figure 1.



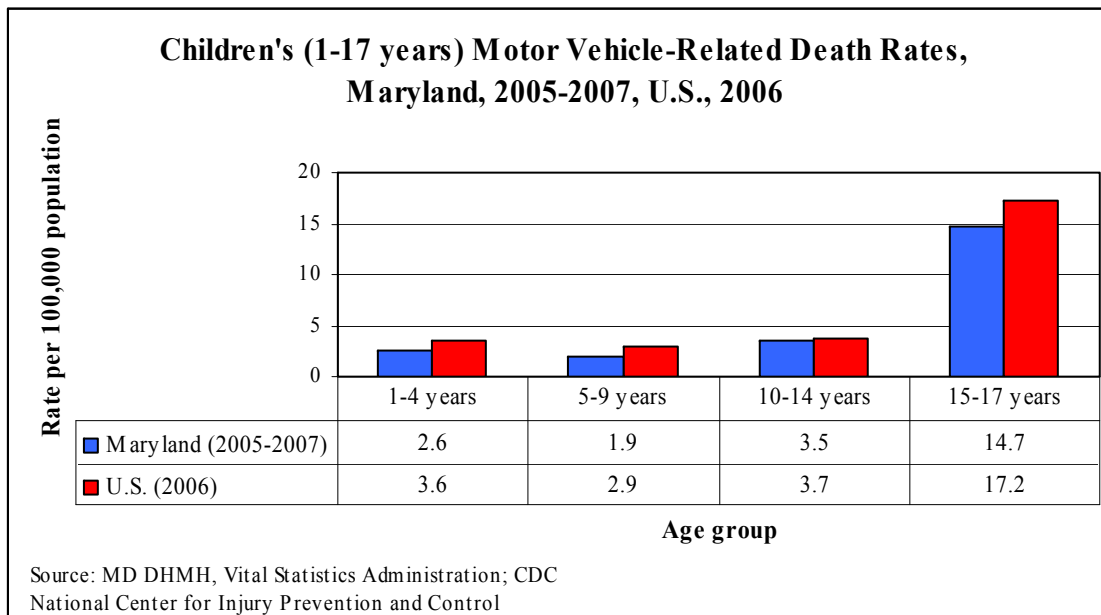
As of 2007, Maryland had not met any of the Healthy People 2010 adolescent mortality goals, and the state had child mortality rates higher than the national rates.

Causes of Death

A. Motor Vehicle Accidents

Adolescents ages 15-17 years had over 4 times the motor vehicle-related death rate of younger children, dying at the rate of 14.7 per 100,000 population.

Figure 2.



B. Homicide

In 2005-2007, the greatest number of homicides occurred in the oldest children and most often involved the use of firearms; 86 percent of the firearm-related deaths were in adolescents aged 15-17 years, representing a rate of 10.0 per 100,000 in this age group.

Table 2.

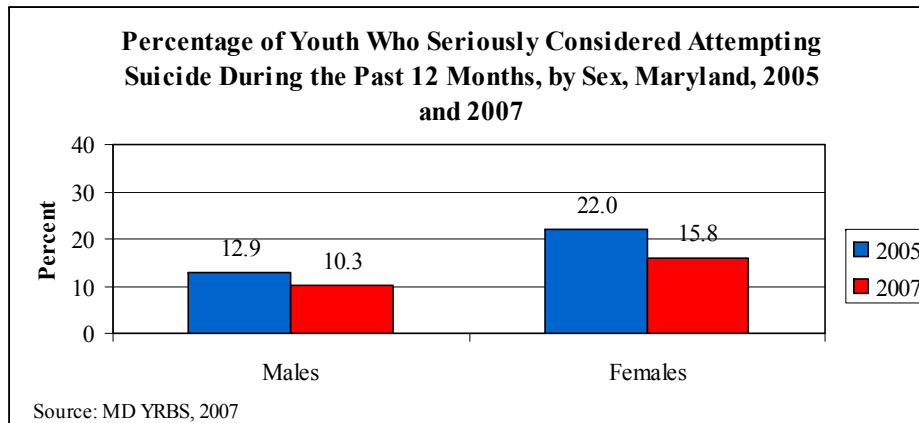
Child (0-17 years) Deaths Due to Homicide by Age Group, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Age Group	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
< 1 year	1		15	6.7	16	7.1
1-4 years	1		20	2.3	21	2.4
5-9 years	1		4		5	0.5
10-14 years	9	0.8	4		13	1.1
15-17 years	74	10.0	16	2.2	90	12.2

Source: MD DHMH, Vital Statistics Administration

C. Suicidal Ideation and Attempts

In 2007, 13.2 percent of Maryland youth (grades 9-12) seriously considered ending their lives during the past 12 months, a statistically significant decrease from 2005 (17.4 percent).

Figure 3.



Females (15.8 percent) are more likely than males (10.3 percent) to seriously consider suicide, and females are significantly less likely in 2007 (15.8 percent) to have seriously considered suicide than in 2005 (22.0 percent).

In 2007, 10.2 percent of Maryland youth had a plan about how they would attempt suicide in the past 12 months, a rate lower than in 2005 (12.2 percent). Males (9.7 percent) and females (10.8 percent) are about equally likely to have had a plan for committing suicide; however, females are significantly less likely to have had a plan in 2007 than in 2005 (10.8 versus 15.6 percent, respectively).

In 2007, 7.5 percent of Maryland youth made a suicide attempt within the past 12 months, a rate lower than in 2005 (9.3 percent), and a rate comparable to youth nationwide (6.9 percent). The following table provides details regarding the percentage of youth who have attempted suicide in Maryland and the U.S.

Table 3.

Percentage of Youth Who Attempted Suicide, and Whose Suicide Attempt Required Medical Attention, During the Past 12 Months, Maryland (Males and Females) and U.S.								
	U.S.		Maryland		Males		Females	
	2005	2007	2005	2007	2005	2007	2005	2007
Attempted Suicide	8.4	6.9	9.3	7.5	6.1	6.5	12.4	8.1
Required Medical Attention Due to Suicide Attempt	2.3	2.0	2.7	2.3	2.2	2.1	3.3	2.3

D. Suicide

Of the 46 children aged 10-17 years who committed suicide between 2005 and 2007, 34 were males and 12 were females, representing rates of 3.5 and 1.3 per 100,000 population, respectively (Table 4).

Table 4.

Adolescent (10-17 years) Deaths Due to Suicide by Sex, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Sex	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
Male	12	1.2	22	2.3	34	3.5
Female	1		11	1.2	12	1.3
Total	13	0.7	33	1.7	46	2.4

Source: MD DHMH, Vital Statistics Administration

Asian adolescents had the highest rate of suicide, 6.5 per 100,000 population, which was over twice as high as the rate among White, non-Hispanics (although this rate is based on a small number of events). Black and White, non-Hispanic adolescents committed suicide at similar rates (Table 5).

Table 5.

Adolescent (10-17 years) Deaths Due to Suicide by Race/Ethnicity, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Race/Ethnicity	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
White, non-Hispanic	9	0.9	18	1.7	27	2.6
Black, non-Hispanic	2		12	1.9	14	2.2
Asian, non-Hispanic	2		3		5	6.5
Hispanic	0		0		0	

Source: MD DHMH, Vital Statistics Administration

Older adolescents (15-17 years) committed suicide at a much higher rate (4.7 per 100,000) than younger adolescents (Table 6).

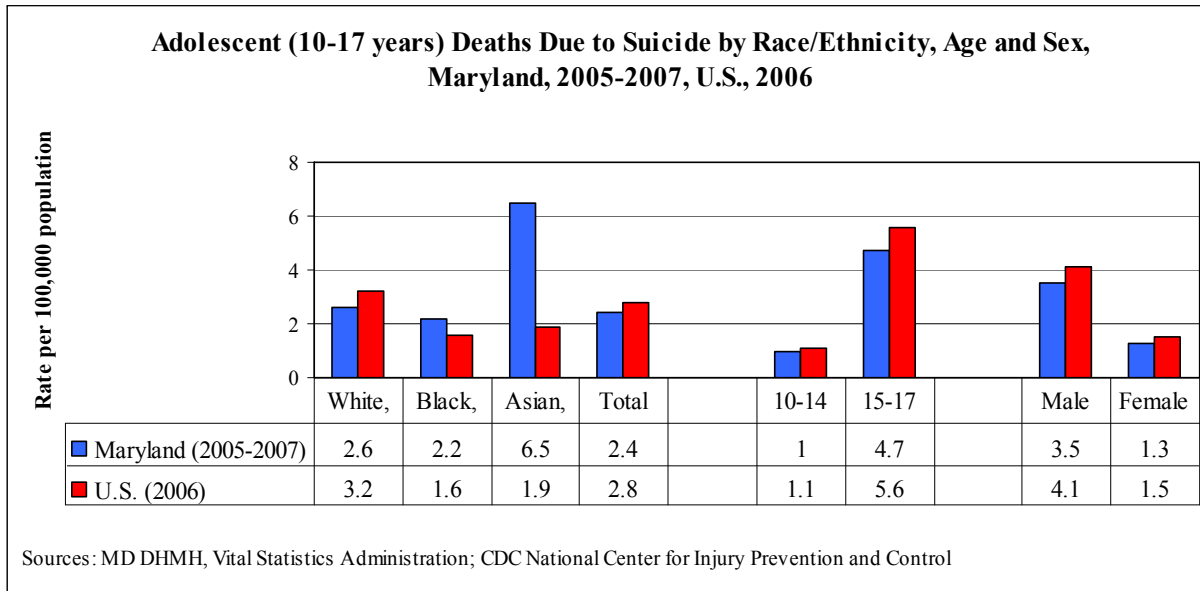
Table 6.

Adolescent (10-17 years) Deaths Due to Suicide by Age Group, Maryland, 2005-2007						
	By Firearm		By Other Means		Total	
Age Group	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000	# of Deaths	Rate per 100,000
10-14 years	2		9	0.8	11	1.0
15-17 years	11	1.5	24	3.2	35	4.7

Source: MD DHMH, Vital Statistics Administration
 Note: Rates based on <5 events in the numerator are not displayed

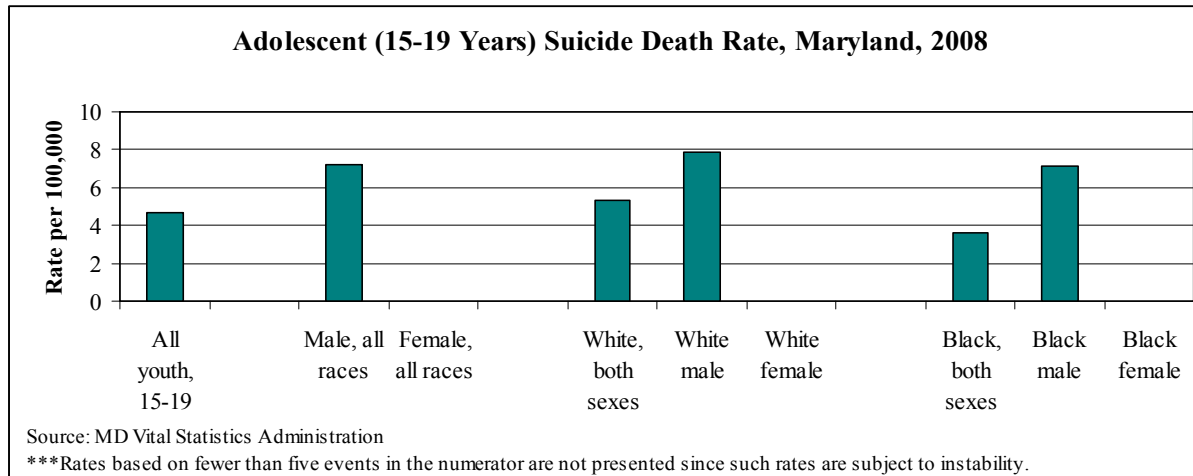
For the period 2005-2007, Maryland’s suicide rates among adolescents were lower than the national rates for 2006. However, the rates of suicides among Blacks and Asians were higher than corresponding national rates in these racial groups (Figure 4).

Figure 4.



As noted above, the National Performance Measure for adolescent suicide is the rate (per 100,000) of suicide deaths among youths aged 15 through 19. In 2008, the suicide death rate for adolescents, 15-19 years, in Maryland was 4.7 per 100,000 population. The following graph provides more details regarding the differences by sex and race for this performance measure.

Figure 5.



As seen in the above graph, the suicide death rate for adolescent males in 2008 was much higher than that of females. There were a total of 19 deaths due to suicide among adolescents, 15-19 years, in 2008, 15 of which were male and 4 female.

III. Injuries

*for the purpose of presenting Maryland injury data, adolescents will be defined as 15-24 years of age

Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009.

The "Injuries in Maryland – 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations and Deaths" report provides detailed statistics on all injuries to Maryland residents which required Emergency Department (ED) visits, hospitalization at Maryland hospitals, or caused the death of Maryland residents during 2007.

A. Injury-related Emergency Department (ED) Visits

In 2007, there were 100,602 injury-related ED visits for adolescents 15-24 years in Maryland, and the rate of ED visits for adolescents 15-24 years was 12,783 per 100,000 population.

Of the 100,602 injury-related ED visits for adolescents 15-24 years, 88,638 were classified as being unintentional. However, 9,466 were identified as assault, 1,462 were self-inflicted, 573 were of undetermined intent, and 463 were classified as "other" manner of injury.

The number one cause for injury-related ED visits for adolescents 15-24 years was “struck by/against” and the number two cause was “motor vehicle traffic”. The following chart provides further details regarding the top 10 causes of injury-related ED visits for this age group.

Table 7.

Top 10 Causes of Injury-related ED Visits for Adolescents 15-24 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related ED visits
1	Struck by/against	21,998
2	Motor vehicle traffic	19,144
3	Fall	15,152
4	Overexertion	11,093
5	Cut/pierce	9,279
6	Natural environment	2,748
7	Poisoning	2,207
8	Fire/burn	1,281
9	Transport, other	1,131
10	Pedal cyclist	777

Source: MD DHMH report, “Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths,” September 2009.

B. Injury-related Hospitalizations

In 2007, there were 6,390 injury-related hospitalizations among adolescents 15-24 years old, and the rate of injury-related hospitalizations for this age group was 812 per 100,000 population.

Of the 6,390 injury-related hospitalizations for adolescents 15-24 years, 4,011 were due to unintentional injury, 1,234 were by assault, 990 were self-inflicted, 140 were of undetermined intent, and 15 were classified as “other” manner of injury.

The number one cause for injury-related hospitalizations for adolescents 15-24 years was “motor vehicle traffic” and the number two cause was “poisoning”. The following chart provides further details regarding the top 10 causes of injury-related hospitalizations for this age group.

Table 8.

Top 10 Causes of Injury-related Hospitalizations for Adolescents 15-24 Years, Maryland, 2007		
Rank	Cause of injury	Number of injury-related hospitalizations
1	Motor vehicle traffic	1,751
2	Poisoning	1,044
3	Cut/pierce	679
4	Fall	648
5	Struck by/against	572
6	Firearm	436
7	Transport, other	130
8	Natural environment	104
9	Fire/burn	77
10	Overexertion	60

Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009

C. Injury-related Deaths

In 2007, there were 557 injury-related deaths among adolescents 15-24 years in Maryland, and the injury-related death rate for this age group was 71 per 100,000 population.

Of the 557 injury-related deaths among adolescents 15-24, 208 were unintentional, 66 were suicides, 209 were homicides, 68 were of undetermined nature, and 6 were classified as "other".

The leading cause of injury-related death in 2007 among adolescents 15-24 was "firearm", followed by "motor vehicle". The following chart provides further details regarding the top causes of injury-related deaths for this age group.

Table 9.

Top Causes of Fatal Injury for Adolescents 15-24 years, Maryland, 2007		
Rank	Cause of fatal injury	Number of deaths due to injury
1	Firearm	212
2	Motor vehicle	171
3	Poisoning	73
4	Suffocation	38
5	Cut/pierce	11
6	Drowning	9
7	Pedestrian, other	7
8	Fall	6
9	Fire/flame	6
10	Struck by/against	3

Source: Source: MD DHMH report, "Injuries in Maryland: 2007 Statistics on Injury-related Emergency Department Visits, Hospitalizations, and Deaths," September 2009

IV. Reproductive Health

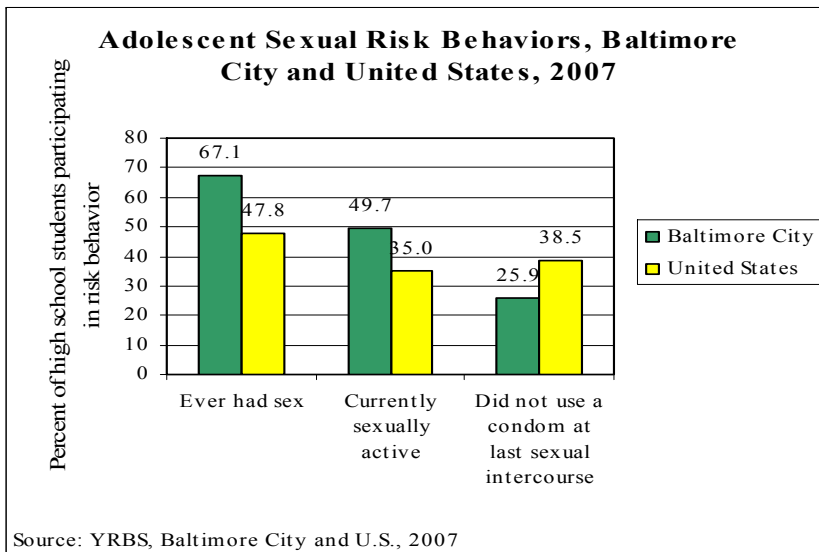
National Performance Measure: The rate of birth (per 1,000) for teenagers ages 15-17 years

1. Sexual activity

Source: Youth Risk Behavior Survey, 2007

According to the Youth Risk Behavior Survey (YRBS) of the Centers for Disease Control and Prevention (CDC), around 50 percent of high school students in the country have had sexual intercourse and 35 percent are currently sexually active. The Maryland YRBS only collects information on teen sexual activity from Baltimore City, so a statewide estimate is currently unavailable.

Figure 6.



In Baltimore City, 67.1 percent of high school students have had sex, and nearly 50 percent are currently sexually active. Of those students that are currently sexually active in Baltimore City, nearly 26 percent did not use a condom the last time they had sex.

Figure 7.

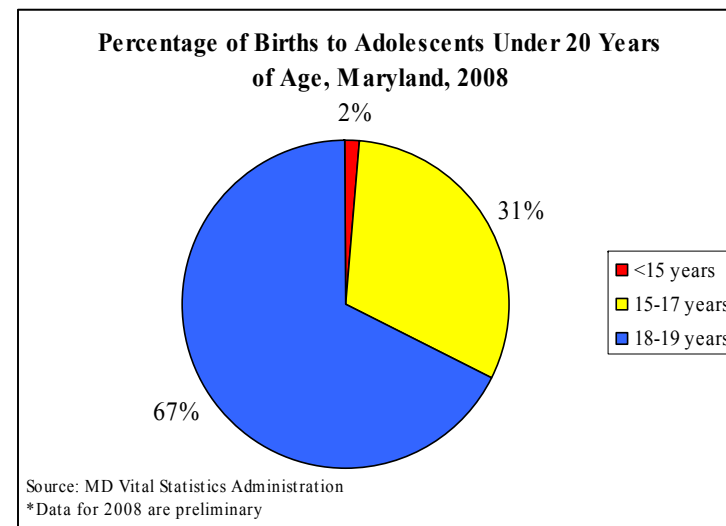
2. Teen births

Source: MD Vital Statistics Administration

In 2008, there were 6,630 babies born to young Maryland mothers under the age of 20, and teen births accounted for nearly nine percent of all 2008 births in the state. Nearly half of these births were to teens under the age of 18, including 100 births to teens ages 14 and younger.

Of the 2008 Maryland births to teens under the age of 20, the majority (67 percent) were to adolescents, ages 18-19 years. Thirty-one percent were births to adolescents, ages 15-17 years, and two percent were births to adolescents younger than age 15.

The 2008 Maryland birth rate for adolescents, ages 15-19, was 32.7 per 1,000 teens. This was a slight decrease from the 2007 rate of 34.4



births
births

per 1,000 teens in Maryland, yet still higher than the lowest Maryland teen birth rate of 31.8, which occurred in 2005. The following graphs provide more detailed information on trends in Maryland teen birth rates.

Figure 8.

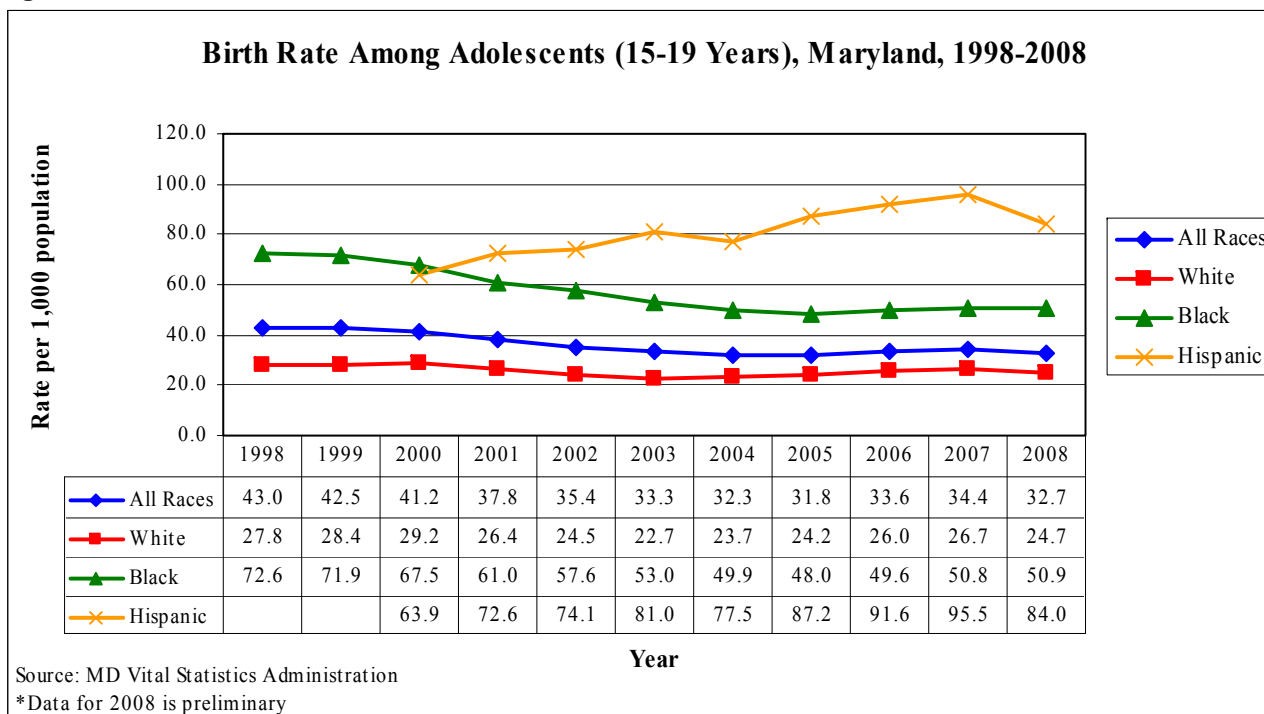
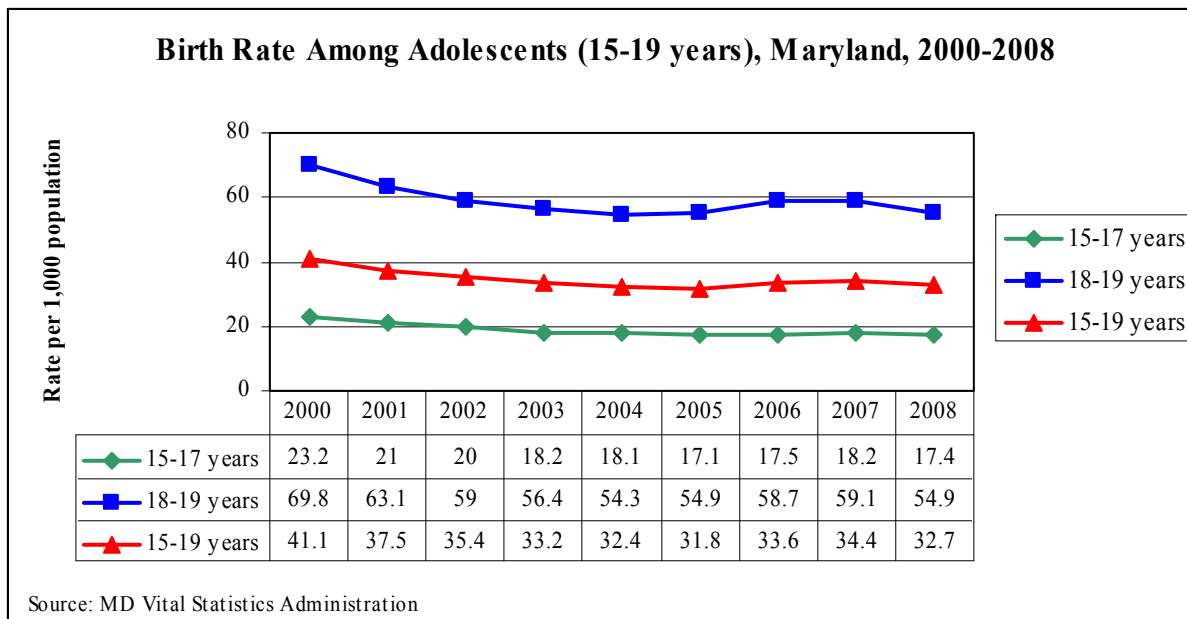


Figure 9.

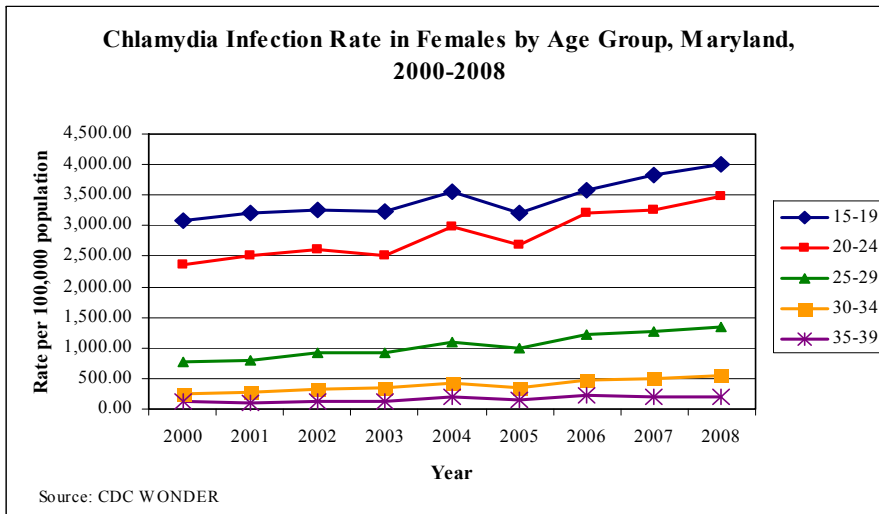


3. Sexually Transmitted Infections

Source: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for HIV, STD and TB Prevention (NCHSTP), Division of STD/HIV Prevention, Sexually Transmitted Disease Morbidity for selected STDs by age, race/ethnicity and gender 1996-2008, CDC WONDER On-line Database, November 2009. Accessed at <http://wonder.cdc.gov/std-v2008-race-age.html> on Apr 16, 2010

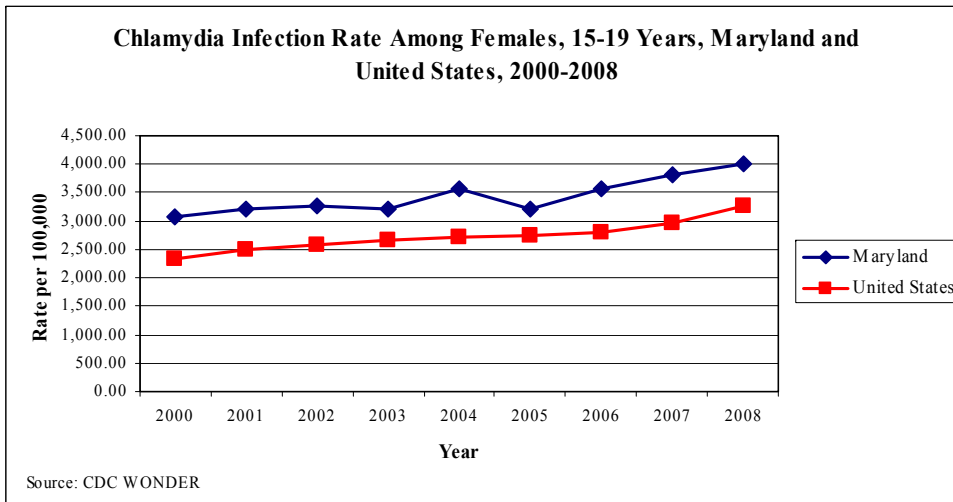
Since 2000, Chlamydia infection rates have increased among Maryland females of childbearing age. Females ages 15-24 have consistently had the highest rate of Chlamydia infections in the past decade, and this rate has been increasing.

Figure 10.



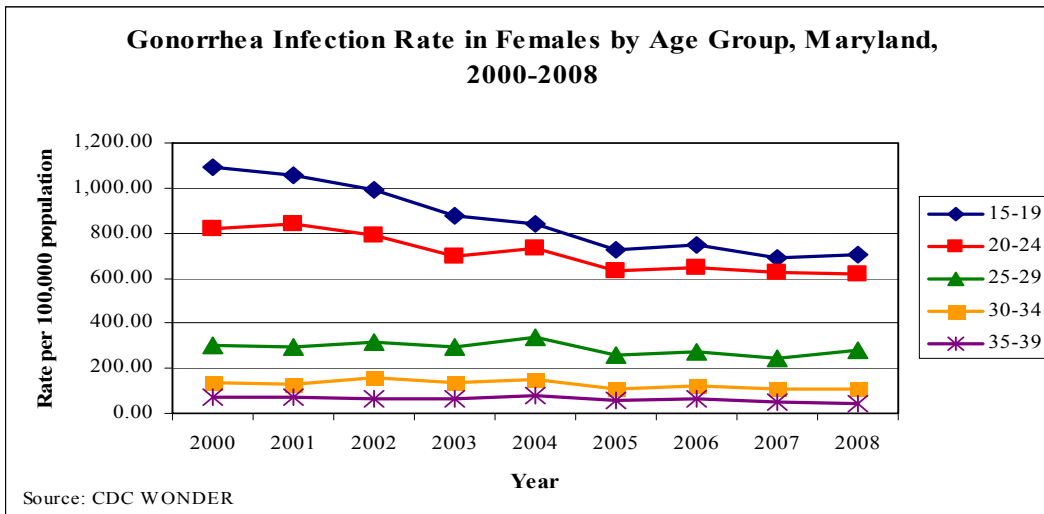
The infection rate among females 15-19 years has increased by 30 percent (from 3,084 to 4,008 cases per 100,000) since the year 2000, and in females 20-24 years by 47 percent (from 2,363 to 3,473 cases per 100,000) since the year 2000.

Figure 11.



From 2000 through 2008, Maryland females, ages 15-19, have had higher rates of Chlamydia than females in the same age group nationwide. In 2008, Maryland's Chlamydia infection rate in females, 15-19, was 4,008.11 cases per 100,000 and the U.S. infection rate for this same group was 3,257.67 cases per 100,000.

Figure 12.



Females in the youngest age groups, 15-19 and 20-24 year olds, have consistently had the highest Gonorrhea infection rates in Maryland over the past decade. However, the rate of Gonorrhea infection among women of all age groups in Maryland has decreased from 2000 to 2008.

Since 2000, the Gonorrhea infection rate has decreased among females ages 15-19 by 36 percent (from 1,092 to 701 cases per 100,000), and decreased in females ages 20-24 by 25 percent (from 822 to 618 cases per 100,000).

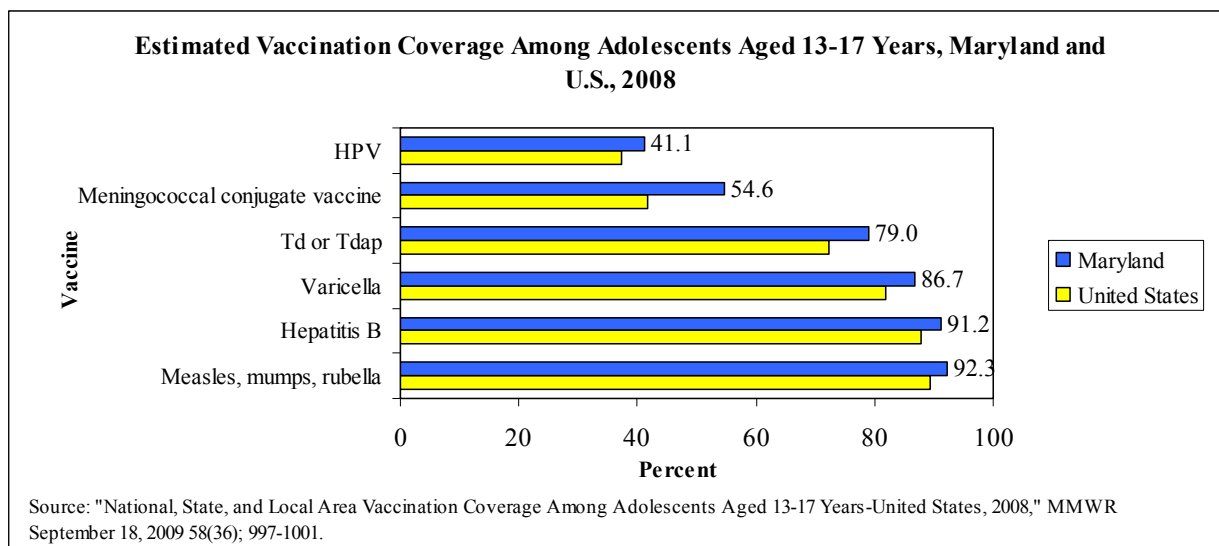
V. Immunizations

Source: CDC MMWR September 18, 2009: National, State, and Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years—United States, 2008 (Data in report from National Immunization Survey—Teen)

The Advisory Committee on Immunization Practices (ACIP) recommends that adolescents get three newly licensed vaccines, in addition to receiving the recommended vaccinations that were missed during childhood. The newly licensed vaccines include: meningococcal conjugate vaccine (MCV4; 1 dose); tetanus, diphtheria, acellular pertussis vaccine (Tdap; 1 dose); and (for girls) quadrivalent human papillomavirus vaccine (HPV4; 3 doses).

The following graph presents estimated vaccination coverage for adolescents in Maryland compared to adolescents across the United States. For most of the newly licensed vaccines and those recommended in childhood, vaccination coverage for Maryland adolescents is similar to that of adolescents across the U.S. The only statistically significant difference in vaccination coverage between Maryland adolescents and adolescents across the U.S. is seen in coverage for the meningococcal conjugate vaccine (MCV4). 54.6 percent of Maryland adolescents have received this vaccine compared to 41.8 percent of U.S. adolescents.

Figure 13.



VI. Mental Health

Source: Youth Risk Behavior Survey 2007

National Performance Measure: The rate (per 100,000) of suicide deaths among youths aged 15-19.

Healthy People 2010 Goal: Reduce the rate of suicide attempts by high school-aged youth (grades 9 through 12) to a 12-month average of 1 percent.

Youth Risk Behaviors Related to Mental Health Concerns

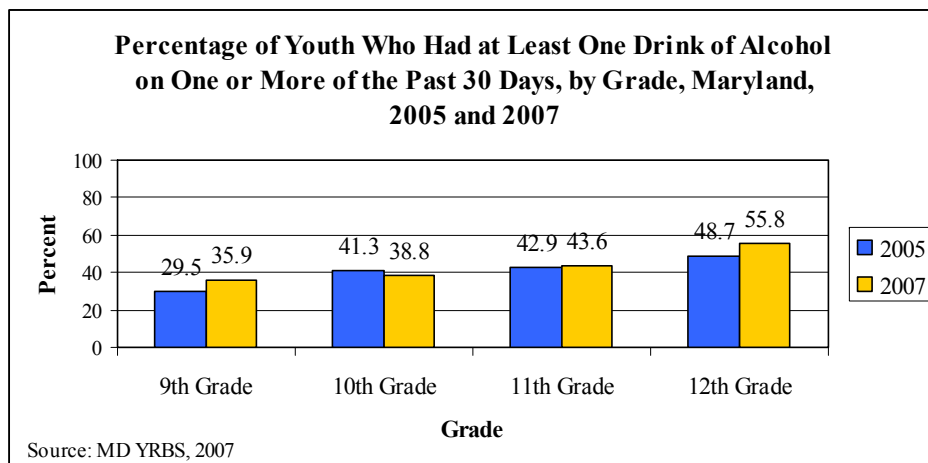
A. Alcohol Consumption

According to the 2007 Maryland Youth Risk Behavior Survey (YRBS), nearly 73 percent of Maryland youth (grades 9-12) have tried alcohol at least once in their life. Females (75.3 percent) are more likely than males (70.7 percent) to have tried alcohol at least once, a finding also reported in 2005. And, the percentage of Maryland youth who have tried alcohol at least once increases from 65.9 percent in the 9th grade to 81.2 percent in the 12th grade, a statistically significant difference also found in 2005.

In 2007, 23.5 percent of Maryland youth had their first drink of alcohol before age 13, which is comparable to 2005 (24.8 percent) and also comparable to youth nationwide (23.8 percent). Males (26.3 percent) report a higher level of early alcohol experimentation than females (20.3 percent), a pattern that differs from the 2005 YRBS, in which males (25.4 percent) and females (24.1 percent) reported similar levels of early experimentation.

In 2007, 42.9 percent of Maryland youth are current drinkers (having at least one or more drinks of alcohol over the past 30 days), a rate similar to the one in 2005 (39.8 percent), and slightly lower compared to youth nationwide (44.7 percent). The percentage of current drinkers increases from 35.9 percent in 9th grade to 55.8 percent in 12th grade, a statistically significant increase also found in 2005, and illustrated in the following graph.

Figure 14.

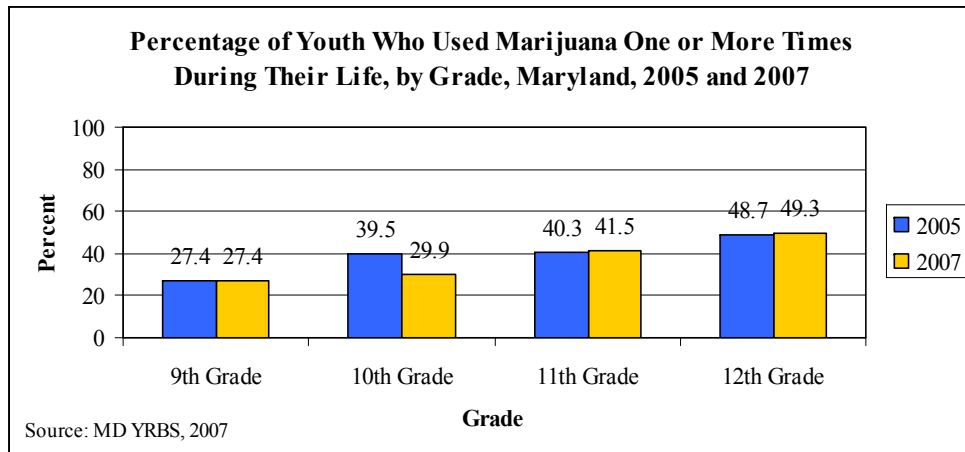


In 2007, 23.9 percent of Maryland youth are binge drinkers, defined as having had five or more drinks of alcohol in a row, on one or more of the past 30 days. Maryland youth in 2007 are less likely than youth nationwide to be binge drinkers (26.0 percent). Males (25.3 percent) and females (22.1) are slightly more likely to binge drink than in 2005 (22.1 and 19.5 percent, respectively). Binge drinking doubles between 9th (18.0 percent) and 12th grade in 2007 (36.0 percent), representing a statistically significant difference, a finding also reported in 2005.

B. Marijuana and Other Drug Use

In 2007, 36.5 percent of Maryland youth used marijuana at least once during their life, a rate comparable to 2005 (38.2 percent) and slightly lower compared to youth nationwide (38.1 percent). In 2007, marijuana use doubles between 9th (27.4 percent) and 12th (49.3 percent) grades, representing a statistically significant difference.

Figure 15.



The 2007 YRBS results reveal that 8.6 percent of Maryland youth have tried marijuana for the first time before age 13. Males (11.6 percent) are more likely than females (5.3 percent) to try marijuana for the first time before age 13, a statistically significant difference, and a finding also observed in 2005.

In 2007, 19.4 percent of Maryland youth currently used marijuana, defined as using marijuana one or more times during the past 30 days. Current marijuana use among males (23.0 percent) is higher than for females (15.9 percent), a pattern that differs from the 2005 YRBS, in which males (18.5 percent) and females (18.4 percent) reported similar levels of current marijuana use.

In addition to marijuana, the 2005 and 2007 YRBS examined the use of several other illegal drugs, including cocaine, inhalants, methamphetamines, heroin, ecstasy, and steroids. The following table details the Maryland and national results.

Table 10.

Other Drug Use: Percentage of Youth Who Used Specified Drugs One or More Times During Their Life

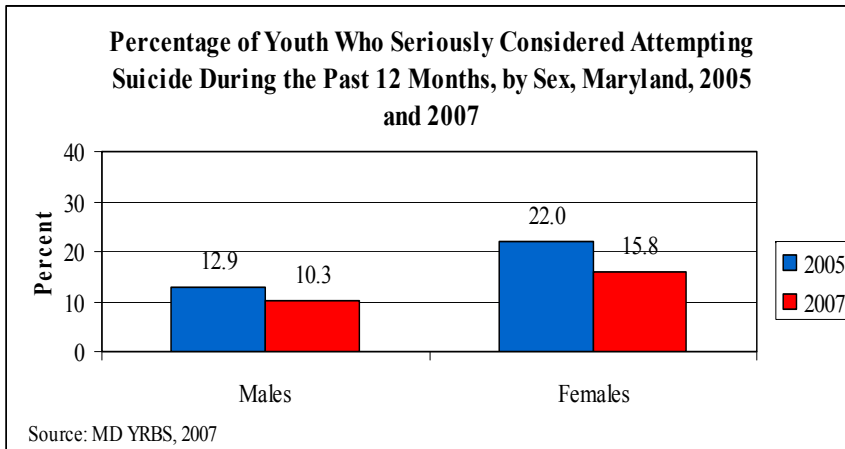
Type of Drug	U.S.		Maryland		Males		Females	
	2005	2007	2005	2007	2005	2007	2005	2007
Cocaine (including powder, crack or freebase)	7.6	7.2	6.9	5.5	8.5	7.0	5.3	3.6
Methamphetamines	6.2	4.4	4.0	3.0	5.8	3.9	2.2	1.6
Heroin	2.4	2.3	2.6	2.4	2.8	3.7	2.3	0.8
Ecstasy	6.3	5.8	5.0	6.3	4.8	7.1	5.1	5.2
Steroids (pills or shots without prescription)	4.0	3.9	3.6	2.5	4.9	2.2	2.2	2.3
Inhalants (glue, aerosol cans, paint)	12.4	13.3	12.5	12.9	11.4	13.8	13.6	11.8

C. Depression and Potential Suicidal Behaviors

The 2007 YRBS shows that the percentage of Maryland youth who experienced sustained periods of sadness or hopelessness almost every day for two weeks or more has decreased significantly from 29.7 percent in 2005 to 23.2 percent in 2007. Maryland youth are significantly less likely to report sustained periods of sadness or hopelessness than youth nationwide (28.5 percent). Maryland females (30.7 percent) are nearly twice as likely as males (15.5 percent) to experience extended periods of sadness or hopelessness, a statistically significant difference, and a finding also revealed in 2005.

In 2007, 13.2 percent of Maryland youth seriously considered ending their lives during the past 12 months, a statistically significant decrease from 2005 (17.4 percent). There was no statistically significant difference by grade level in the percentage of Maryland youth seriously considering suicide.

Figure 16.



Females (15.8 percent) are more likely than males (10.3 percent) to seriously consider suicide, and females are significantly less likely in 2007 (15.8 percent) to have seriously considered suicide than in 2005 (22.0 percent).

In 2007, 10.2 percent of Maryland youth had a plan about how they would attempt suicide in the past 12 months, a rate lower than in 2005 (12.2 percent). Males (9.7 percent) and females (10.8 percent) are about equally likely to have had a plan for committing suicide; however, females are significantly less likely to have had a plan in 2007 than in 2005 (10.8 versus 15.6 percent, respectively). None of the differences by grade level were statistically significant.

In 2007, 7.5 percent of Maryland youth made a suicide attempt within the past 12 months, a rate lower than in 2005 (9.3 percent), and a rate comparable to youth nationwide (6.9 percent). The following table provides details regarding the percentage of youth who have attempted suicide in Maryland and the U.S.

Table 11.

Percentage of Youth Who Attempted Suicide, and Whose Suicide Attempt Required Medical Attention, During the Past 12 Months, Maryland (Males and Females) and U.S.									
	U.S.		Maryland		Males		Females		
	2005	2007	2005	2007	2005	2007	2005	2007	
Attempted Suicide	8.4	6.9	9.3	7.5	6.1	6.5	12.4	8.1	
Required Medical Attention Due to Suicide Attempt	2.3	2.0	2.7	2.3	2.2	2.1	3.3	2.3	

VII. Health Insurance Coverage

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2007-2009

In 2006-2008, 9.5 percent of Maryland adolescents, ages 11-18 years, were uninsured. When this population is divided up into 2-year age groups, it becomes evident that a greater number of the older adolescents are uninsured than the younger ones. Nearly 8 percent of 11-12 year olds in Maryland are uninsured, compared to 11 percent of 17-18 year olds.

Table 12.

Health Insurance Coverage by Age, Maryland, 2006-2008				
	Insured		Uninsured	
	Sum	Percent	Sum	Percent
Totals	576,315	90.5%	60,488	9.5%
11-12 years	134,037	92.1%	11,493	7.9%
13-14 years	138,394	91.0%	13,771	9.0%
15-16 years	160,367	90.2%	17,508	9.8%
17-18 years	143,516	89.0%	17,716	11.0%

The majority of adolescents in Maryland are covered by private and/or employer-based health insurance. Sixteen percent of adolescents are covered by Medicaid.

Table 13.

Health Insurance Coverage for Adolescents Ages 11-18 by Type of Insurance, Maryland, 2006-2008				
	Covered		Not Covered	
	Sum	Percent	Sum	Percent
Private	491,270	77.1%	145,532	22.9%
Employer-based	451,178	70.9%	185,625	29.1%
Medicaid	102,404	16.1%	534,398	83.9%
Military Care	24,555	3.9%	612,247	96.1%

Health insurance coverage for adolescents varies by race/ethnicity in Maryland.

Table 14.

Health Insurance Coverage for Adolescents Ages 11-18 by Race, Maryland, 2006-2008				
	Insured		Uninsured	
	Sum	Percentage	Sum	Percentage
White Alone	347,183	91.6%	31,975	8.4%
Black Alone	191,036	88.1%	25,802	11.9%

There is a large difference in insurance coverage of Hispanic adolescents and non-Hispanic adolescents, with a much greater percentage of Hispanic adolescents being uninsured than non-Hispanics.

Table 15.

Health Insurance Coverage by Hispanic Origin, Maryland, 2006-2008				
	Insured		Uninsured	
	Sum	Percentage	Sum	Percentage
Hispanic	29,612	61.7%	18,377	38.3%
Non-Hispanic	546,702	92.8%	42,111	7.2%

X. Education

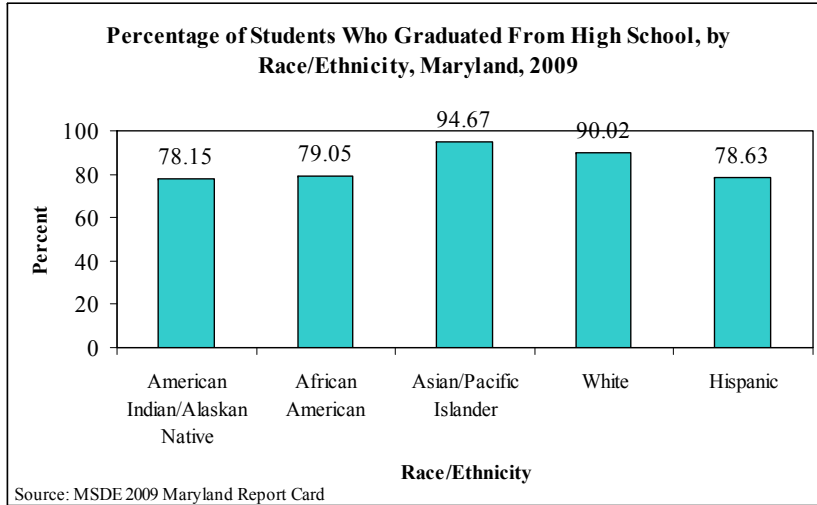
Source: Maryland State Department of Education (MSDE) 2009 Maryland Report Card

State Performance Measure: Percent of Maryland 12th graders who graduate from high school.

A. High School Graduation

In 2009, 85.24 percent of Maryland 12-graders (58,304 students) received a Maryland High School Diploma. 88.27 percent of females and 82.22 percent of males graduated.

Figure 17.



Carroll, Worcester, Frederick, and Howard Counties have the highest percentage of students who graduated in 2009 (95.47, 94.81, 94.08, and 93.64 percent, respectively). Jurisdictions with the lowest percentage of students graduating in 2009 include Baltimore City, Somerset, Dorchester, and Kent Counties (62.69, 77.17, 80.26, and 80.50 percent, respectively).

Table 16.

Jurisdiction	Graduation Rate (%)	Jurisdiction	Graduation Rate (%)
Allegany	85.77	Harford	86.73
Anne Arundel	90.60	Howard	93.64
Baltimore City	62.69	Kent	80.50
Baltimore	83.56	Montgomery	87.38
Calvert	91.99	Prince George's	84.56
Caroline	84.60	Queen Anne's	90.58
Carroll	95.47	Saint Mary's	86.27
Cecil	84.05	Somerset	77.17
Charles	88.26	Talbot	84.73
Dorchester	80.26	Washington	91.53
Frederick	94.08	Wicomico	82.08
Garrett	89.53	Worcester	94.81

Grade 12 Documented Decisions

The Maryland State Department of Education collects pre-graduation plans data using the High School Graduate Follow-up Questionnaire. All graduating seniors indicate their post-graduation decisions within 30 days of anticipated graduation.

The majority of graduating Maryland 12-graders (64.7 percent) were planning on attending either a four-year or a two-year college after graduation from high school.

Table 17.

Grade 12 Documented Decisions, Maryland High School Students, 2009		
Documented Decision	Number	Percent
Attend a four-year college	24,029	47.6
Attend a two-year college	8,651	17.1
Attend a specialized school or specialized training	1,187	2.4
Enter employment (related to high school program)	986	2.0
Enter employment (unrelated to high school program)	2,323	4.6
Enter the military	1,346	2.7
Enter full-time employment and school	4,059	8.0
Enter part-time employment and/or school	5,725	11.3
Other and No Response	2,184	4.3

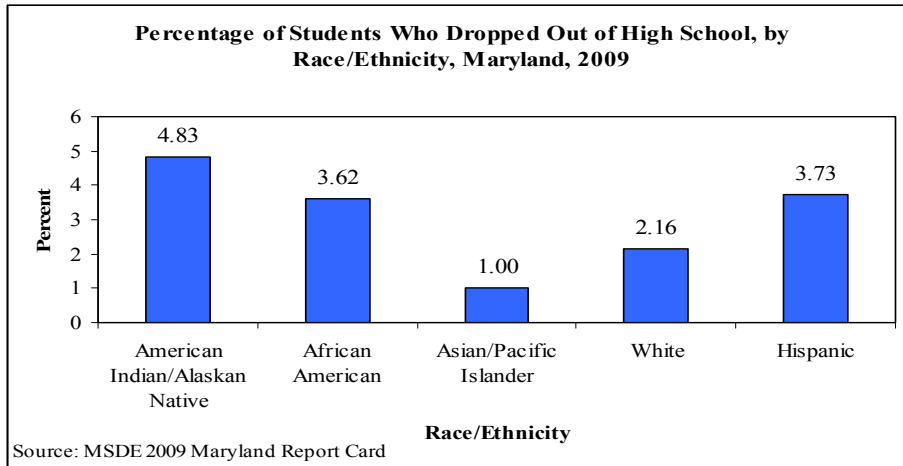
B. High School Drop-Out

A student is determined to have dropped out of school if they leave school for any reason, except death, before graduation or completion of a Maryland approved educational program and are not known to enroll in another school or state-approved program during the current school year.

The year is defined as July through June and includes students dropping out over the summer and students dropping out of evening high school and other alternative programs. Students who re-enter school during the same year in which they dropped out of school are not counted as dropouts. The dropout rate is computed by dividing the number of dropouts by the total number of students in grades 9-12 served by the school.

In 2009, 2.8 percent of Maryland students, grades 9-12, dropped out of school. 2.25 percent of female high school students and 3.34 percent of male high school students dropped out in 2009.

Figure 18.



Baltimore City, Wicomico, Somerset, and Caroline Counties had the highest drop-out rates in 2009 (6.20, 5.55, 4.44, and 3.90 percent, respectively). Worcester, Carroll, Prince George’s, and Howard Counties had the lowest drop-out rates (0.97, 1.07, 1.34, and 1.39 percent, respectively).

Table 18.

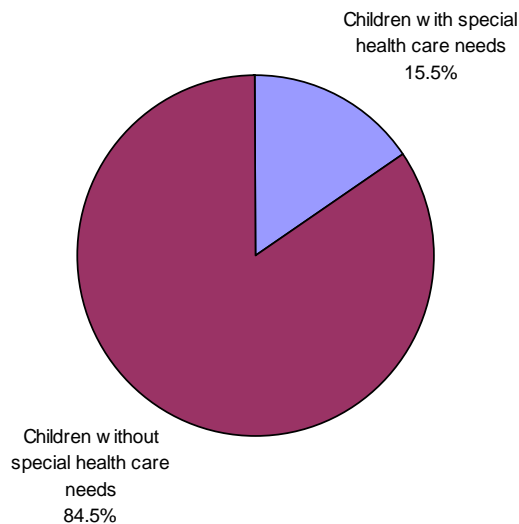
Jurisdiction	Drop-Out Rate (%)	Jurisdiction	Drop-Out Rate (%)
Allegany	2.89	Harford	2.32
Anne Arundel	2.83	Howard	1.39
Baltimore City	6.20	Kent	2.99
Baltimore	3.74	Montgomery	2.72
Calvert	1.60	Prince George’s	1.34
Caroline	3.90	Queen Anne’s	2.07
Carroll	1.07	Saint Mary’s	2.13
Cecil	3.49	Somerset	4.44
Charles	2.60	Talbot	2.56
Dorchester	3.52	Washington	1.56
Frederick	1.65	Wicomico	5.15
Garrett	2.15	Worcester	0.97

I. Children and Youth with Special Health Care Needs in Maryland

A. Prevalence of Children and Youth with Special Health Care Needs (Percentage of all Maryland children and youth aged 0-17 years that have special health care needs by selected socio-demographic characteristics)

Maryland's population estimate for 2009 is 5,699,478, representing a 2.1% increase from 2005.ⁱ Children less than 20 years of age are projected to comprise approximately 27.2% of the population in 2010.ⁱⁱ

Figure 1. Prevalence of Maryland children with special health care needs ages 0 -17 years

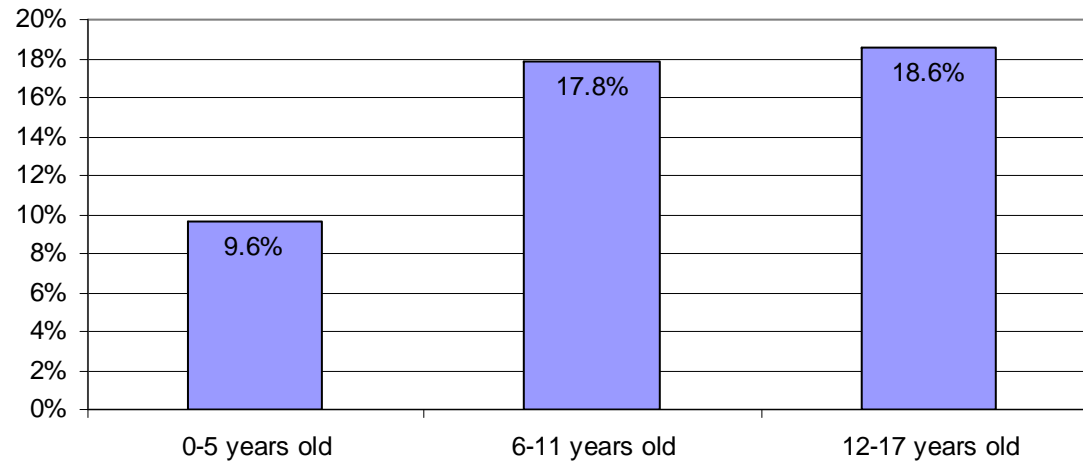


Source: 2005-06 NS-CSHCN

According to the 2005-06 National Survey of Children with Special Health Care Needs (NS-CSHCN),ⁱⁱⁱ the prevalence of CYSHCN in Maryland aged 0-17 years is 15.5%, corresponding to approximately 244,000 children and youth in 2010.^{iv} This is significantly higher than the national prevalence of 13.9%. Almost one quarter of all Maryland households with children report having one or more CYSHCN, compared to 21.8%

nationally. Newer data from the 2007 National Survey of Children’s Health estimate the prevalence of CYSHCN in Maryland at 20.1%, compared with 19.2% nationally.

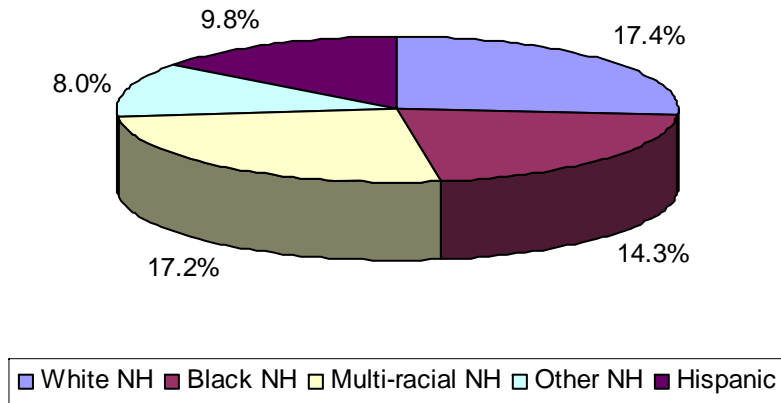
Figure 2. Prevalence of special health care needs by age group in Maryland



Source: 2005-06 NS-CSHCN

As expected, the prevalence of special needs is greatest in Maryland’s children and youth over the age of 5 years, reaching a high of 18.6% of children and youth between the ages of 12 to 17 years based on data from the 2005-06 NS-CSHCN (see Figure 2). In Maryland, mirroring the nation as a whole, special needs are present more frequently in males than in females; it is estimated that in Maryland 18.4% of male children aged 0 to 17 years have special health care needs, compared to 12.4% of female children.

Figure 3. Prevalence of Maryland children age 0-17 years within each race group diagnosed with special health care needs



Source: 2005-06 NS-CSHCN

Special health care needs seem to be diagnosed more commonly in multi-racial children and youth as well as in non-Hispanic whites (see Figure 3). The highest prevalence of special health care needs by Hispanic origin and race estimated in Maryland was 17.4% for non-Hispanic whites. Hispanic children in Maryland are more commonly diagnosed with a special health care need (9.8%) than are Hispanic children nationally (8.3%).

Table 1. Children with Special Health Care Needs Prevalence by Poverty Level

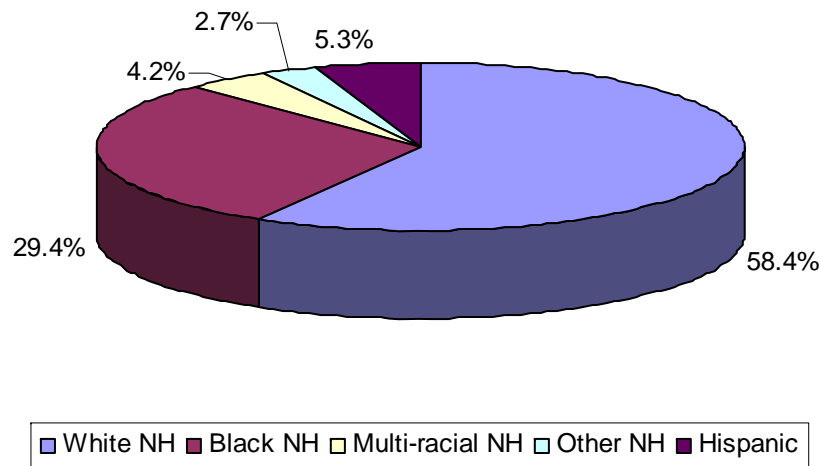
	Maryland	Nationwide
0-99% FPL	17.6%	14.0%
100-199% FPL	13.2%	14.0%
200-399% FPL	14.4%	13.5%
400% FPL or more	16.4%	14.0%

Source: 2005-06 NS-CSHCN

Maryland data suggest that there may be a disparity in prevalence of special health needs by income level (see Table 1). The 2005-06 NS-CSHCN estimates that Maryland children at 0-99% FPL are more likely to have special health care needs than children at higher incomes; this is in contrast with the nation as a whole where there is virtually no disparity in the prevalence of special health care needs by income.

B. Socioeconomic Characteristics of Maryland’s Children and Youth with Special Health Care Needs (characteristics *within* Maryland’s CYSHCN population)

Figure 4. Race/ethnicity of Maryland children with special health care needs

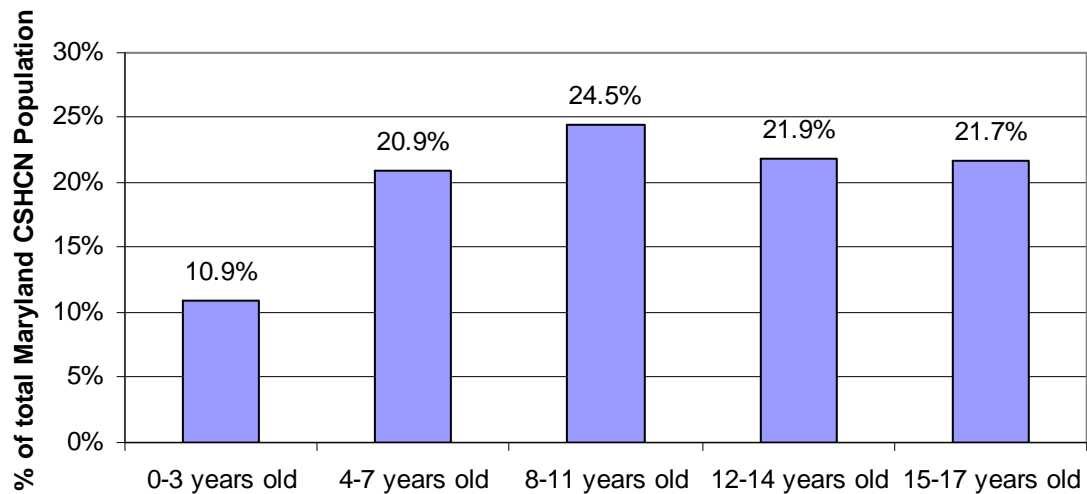


Source: 2005-06 NS-CSHCN

The majority of Maryland’s CSHCN are white non-Hispanic; almost a third are African American non-Hispanic; and over 5% are Hispanic (see Figure 4).

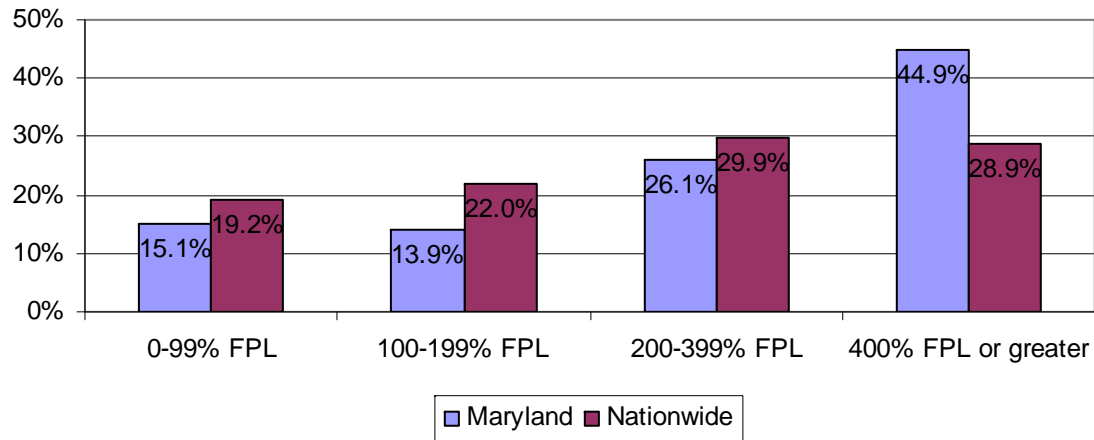
In the population of CYSHCN in Maryland, the majority fall between the ages of 8-11 years of age according to the 2005-06 NS-CSHCN National Survey of CSHCN (see Figure 5). Almost 61% are male and approximately 58% are non-Hispanic whites.

Figure 5. Age Distribution of Maryland children with special health care needs



Source: 2005-06 NS-CSHCN

Figure 6. Children with special health care needs living above/below the Federal Poverty Level: Maryland vs. Nationwide

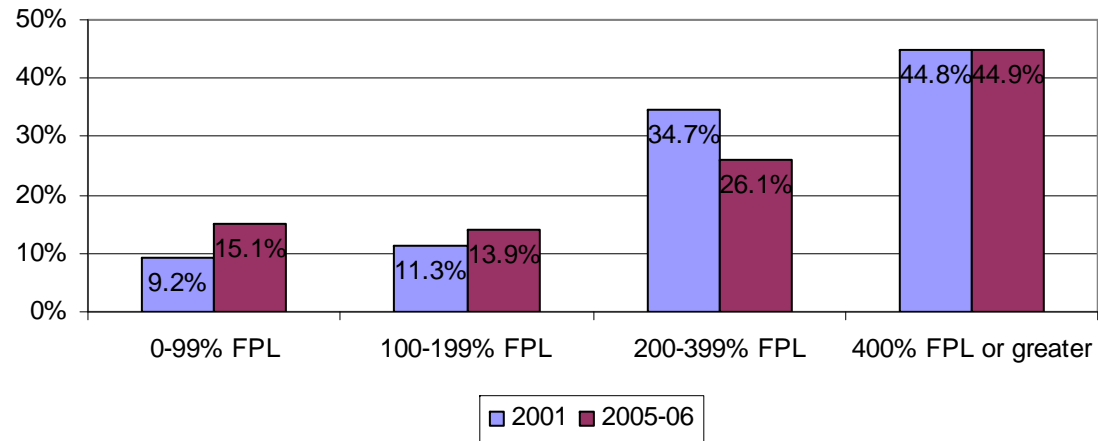


Source: 2005-06 NS-CSHCN

Slightly over 15% of CYSHCN in Maryland live in households at 0-99% FPL while almost 45% live in households at 400% FPL or greater (see Figure 6.) This is quite different from the nation as a whole where more CYSHCN live at 0-99% FPL(19.2%) and many fewer live in the highest income category (about 29%) as estimated by the 2005-06 NS-CSHCN. These data likely reflect Maryland’s status as one of the wealthier states in the nation; however the proportion of CYSHCN in Maryland who live in poverty has increased significantly.

“Address autism. It hits low-classes the hardest. The only ones getting cured or recovering are the ones who have the cash to pay professionals or have money to pay the lawyers to sue schools. Not us everyday common folk.” Parent respondent, 2010 Maryland Parent Survey, when asked what the State can do for her and her child.

Figure 7. Changes in Maryland's children with special health care needs living above/below the Federal Poverty Level



Source: 2005-06 NS-CSHCN

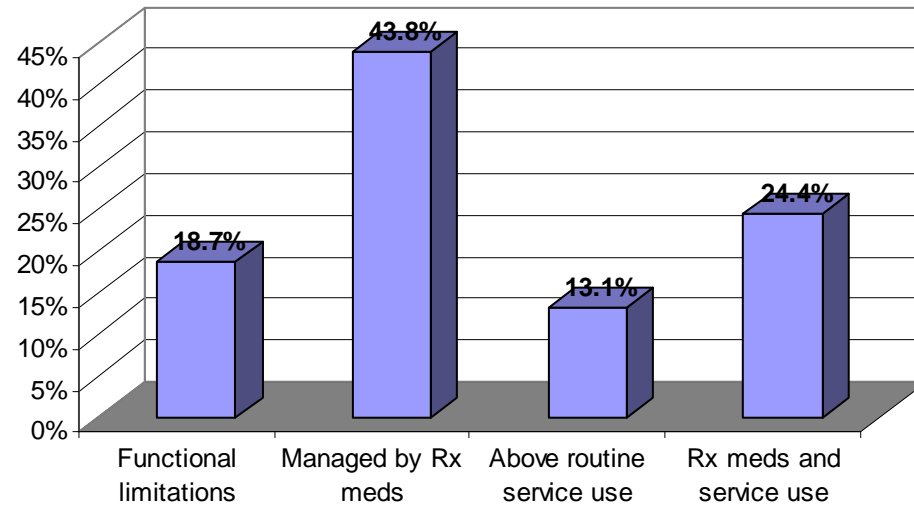
The 2001 NS-CSHCN data show that at that time, only 9% of CYSHCN in Maryland were living at 0-99% FPL yet in 2005-06 that number increased significantly, as did the number of CYSHCN living at 100-199% FPL (see Figure 7). This differs from the nationwide pattern of CYSHCN living above or below the federal poverty level; there was virtually no change between 2001 and 2005-06.

The 2010 Maryland Needs Assessment Parent Survey (Maryland Parent Survey) found that, of the responding families with at least one CYSHCN, over 20% were receiving some form of assistance through the Free and Reduced Meal program, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), or Food Stamps.

C. Characterizing the Special Health Care Needs Population

The 2005-06 NS-CSHCN classified CYSHCN in a non-categorical fashion by the consequences of their chronic condition including elevated service use, need for prescription medications, and functional limitations.

Figure 8. Percentage of CYSHCN with specific needs



Source: 2005-06 NS-CSHCN

In Maryland, 18.7% of CYSHCN are reported to have functional limitations due to their conditions on the 2005-06 NS-CSHCN (see Figure 8). Almost 44% are reported to use prescription medications alone to manage their condition, and approximately one-quarter are reported to use prescription medications and have above routine use of services related to their special health care need (see Figure 3). About 17% of Maryland CYSHCN require specialized therapies.

Mental health and developmental problems are particularly prevalent in CYSHCN, and may be increasing. According to the 2005-06 NS-CSHCN, more than 32% of CYSHCN in Maryland have ongoing emotional, behavioral, or developmental problems; in 2001, only 28% of CYSHCN in Maryland did. These children and youth are more likely than other CYSHCN to live in the poorest families. More recently on the 2007 National Survey of Children’s Health, CYSHCN ages 6-17 were reported to be almost three times more likely to consistently exhibit problematic behaviors than children and youth without special health needs, and CYSHCN ages 2-17 years are also more likely to have problems with anxiety and depression. The 2010 Maryland Parent Survey asked respondents if their children engaged in or experienced specific problematic behaviors. Among families of CYSHCN, 23% reported that their child had problems with anger/conflict management, one-fifth reported experience with bullying, and almost 20% reported that their child had experience with depression (see Table 2).

Table 2. Experience with Problematic Behaviors among CYSHCN

	% CYSHCN families reporting their child engaging in or experiencing specific behaviors
Anger/conflict management	23.0%
Bullying	20.0%
Depression	19.8%
Peer pressure	16.0%
Overweight/obesity	10.1%
Suicidal behaviors/suicide	4.8%
Eating disorders	4.0%
Drugs	3.3%
Risky sexual behavior	3.2%
Alcohol	2.5%
Abusive relationships	2.4%
Gangs	2.0%
Delinquency	0.9%
Pregnancy	0.3%

Source: 2010 Maryland Parent Survey

The 2007 National Survey of Children’s Health reported state-specific data on 2 chronic conditions, asthma and ADHD. In Maryland, 14.3% of respondents reported that their children had asthma, with 9.6% reporting that their child had experienced health effects from their asthma in the past year. Of children 2-17, 8.1% were reported to have ADHD, with 5.4% taking medication at the time of the survey.

Data from a number of programs serving CYSHCN in Maryland can also help characterize this population. In Maryland as of December 2008, there were 16,163 children and youth ages 0-17 years receiving SSI disability.^v Data from the Mental Hygiene Administration, which administers the State funded mental health system, reports that it served 32,360 severely emotionally disturbed children under age 18 in fiscal year 2008, representing 74.7% of the total children under age 18 served in that year.

Data from the Maryland State Department of Education indicate that as of October 2008, there were 102,593 children ages 3-21 receiving publicly funded special education services in Maryland. This represents 12.2% of the population of children enrolled in Maryland public schools, demonstrating a slight reduction compared with 2003 (13%) and 1998 (13.1%). Looking at the total enrolled population by ethnicity, students of Asian/Pacific Islander descent, Hispanic descent, and white students were underrepresented in the population of students receiving special education services, while African American students were overrepresented. The majority of the children receiving special education services were male (68.8%) and white (45.4%), though the proportion of African American students with disabilities has increased from 2003 (40.2%) to 2008 (43.1%) while the proportion of white students with disabilities has decreased (52.0% in 2003). Children with specific learning disabilities account for the highest percentage at approximately 32%. There were about 1.8 times more children receiving services under the autism category than in 2003.

As of October 2008, there were 7,315 children ages 0-3 years receiving services through the Infants and Toddlers program in Maryland, an increase of 16.5% since 2004.^{vi}

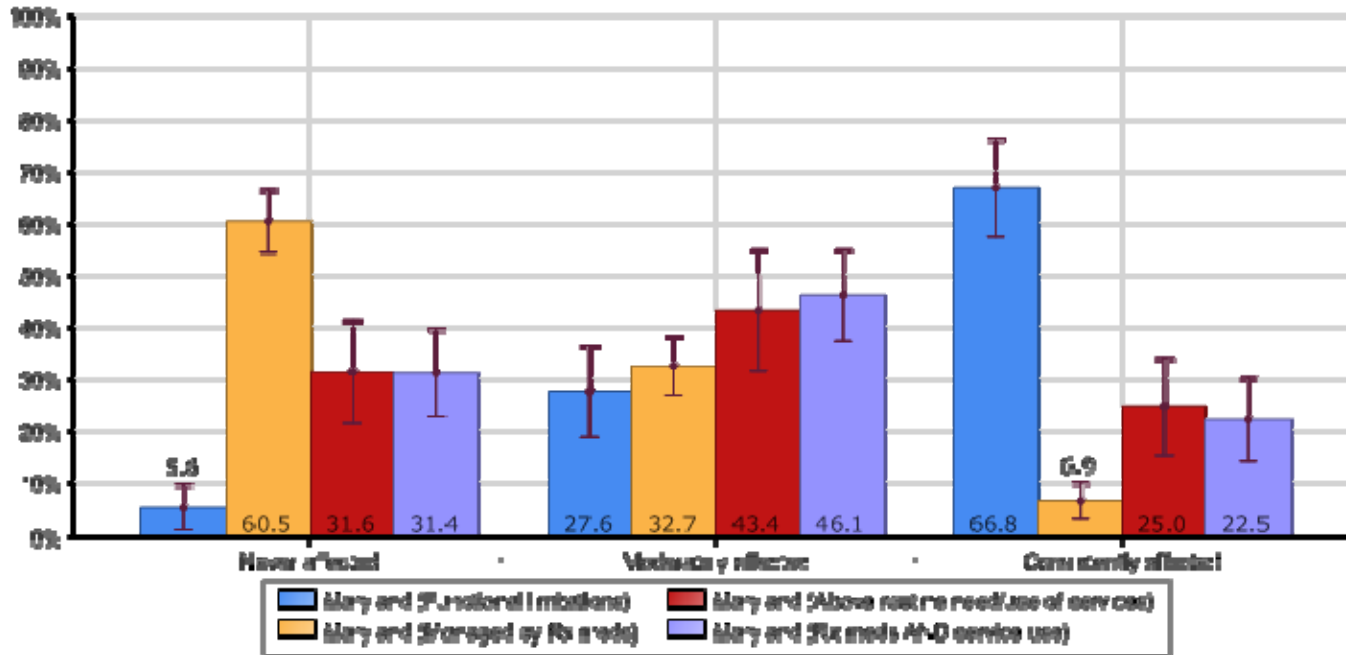
D. Health Status and Quality of Life

On the 2007 National Survey of Children's Health, the majority of Maryland parents of CYSHCN described the severity of their child's conditions as moderate or severe (49.3%). Most parents of Maryland CYSHCN also report that their child experiences some level of functional difficulties caused by their health problems.

In the 2005-06 NS-CSHCN, 39.5% of parents reported that their child's condition never affects his/her daily activities (see Figure 9); this is significantly less than in 2001 (45%). About 24% of parents reported that their child's condition consistently affected his/her daily activities and 36.4% reported moderate affects on their child's daily activities. Children managed by prescription medications alone were least likely to be affected in their daily activities, with 60.5% reported by parents never to be affected. As expected, children with functional limitations were most affected in their daily activities, with almost 67% consistently affected and almost 28% moderately affected. When compared by household

income, those CSHCN living between 0 – 99% FPL were the group most often consistently affected in their daily activities (41.4%) while CSHCN living at 400% FPL or above were least likely to be consistently affected (19.1%.)

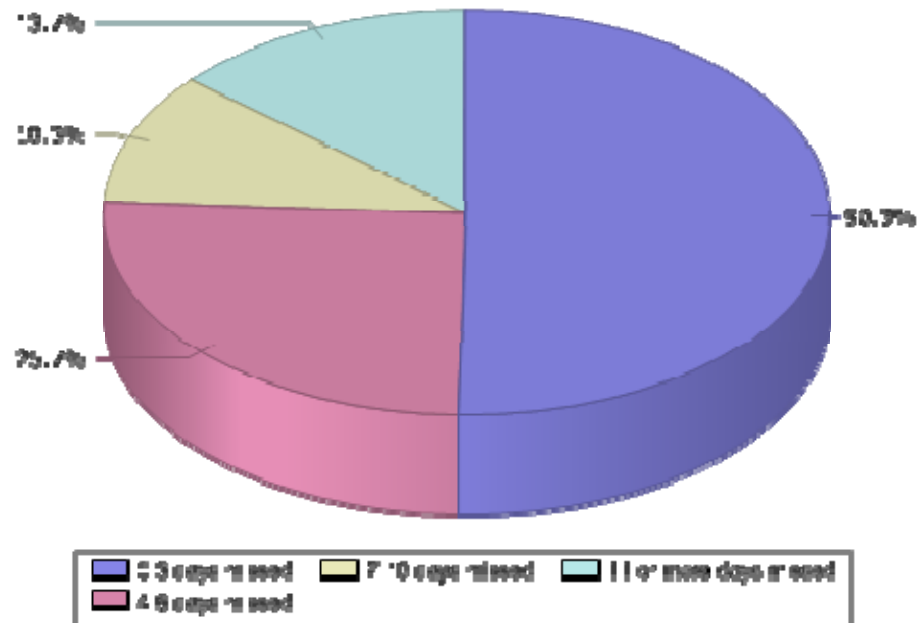
Figure 9. How often CYSHCN’s conditions affect daily activities by type of SHCN



Source: 2005-06 NS-CSHCN

According to the 2005-06 NS-CSHCN, about half of children (50.3%) missed only 0-3 days of school in the year prior to the survey due to their condition (see Figure 10). However, almost 14% were reported to have missed 11 or more school days. Children with functional limitations missed the most school.

Figure 10. CSHCN ages 5-17 missing school days due to illness



Source: 2005-06 NS-CSHCN

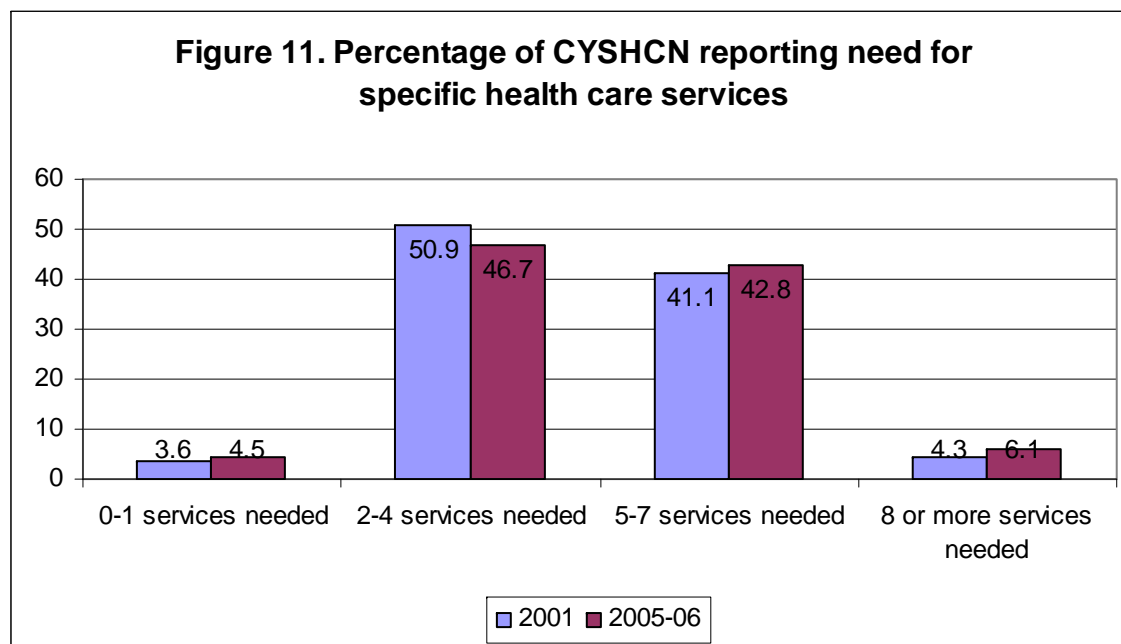
The 2007 National Survey of Children’s Health looked at overall health status of children. As might be expected, children without special health care needs were more likely to have their health status reported as excellent or very good than CYSHCN, 93% versus 77%.

E. Health Care Needs and Access to Care

Health Care Needs

CYSHCN often require access to a wide range of health and related services. On the 2005-06 NS-CSHCN, almost 49% of Maryland families reported that their CYSHCN required over 5 specific health care services or equipment, while almost 47% reported that their CYSHCN required 2-4 services in the past year (see Figure 11). More families reported requiring a greater number of health services or equipment in 2005-06 than

on the 2001 NS-CSHCN; 42.8% reported requiring 5-7 services (versus 41% in 2001) and 6.1% required 8 or more services (versus 4.3% in 2001.) Children with functional limitations generally required higher levels of services than other CYSHCN.



Source: 2001; 2005-06 NS-CSHCN

According to the 2005-06 NS-CSHCN, the services required the most by CYSHCN were prescription medications (88.3%), routine preventive health care (79.7%), preventive dental care (79.5%), and specialist care (52.5%). Other services that were needed frequently included vision care or eyeglasses (32.1%) and mental health care or counseling (28.5%) (see Table 3). This is similar to the patterns of need seen in the 2001 NS-CSHCN.

Table 3. Percent of CYSHCN requiring each of 15 specific health care services

	2001	2005-06
	%	%
Prescription medications	90.4	88.3
Routine preventive health care	81.7	79.7
Preventive dental care	81.0*	79.5
Specialist care	52.6	52.5
Vision care or eyeglasses	38.0	32.1
Mental health care or counseling	27.0	28.5
Other dental care	*	24.8
Physical, occupational, or speech therapy	22.6	21.9
Disposable medical supplies	24.3	15.0
Durable medical equipment	9.5	11.4
Hearing aids or hearing care	7.1	4.5
Mobility aids or devices	3.9	4.4
Home health care	3.4	3.6
Communication aids or devices	1.1	3.2
Substance abuse treatment or counseling	3.8	2.3

*Source: 2005-06 NS-CSHCN (*in 2001 there was only one category for 'dental care')*

Unmet Need

According to the 2007 NSCH, CYSHCN are three times more likely than non-CYSHCN to have unmet needs for medical, dental, mental health or other health care at some time in the year prior to the survey.

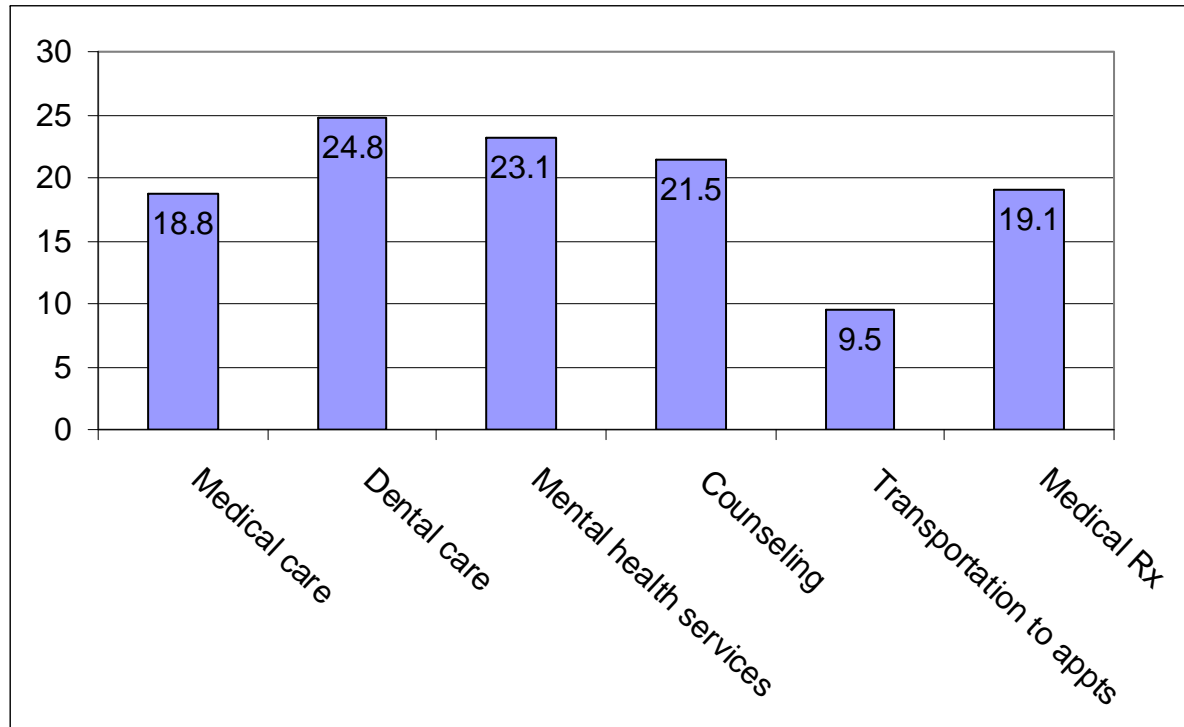
While the majority of CYSHCN received all of the services that they needed, over 16% had one or more unmet needs for health services in the past year, and 5.8% had 2 or more unmet needs (an increase from 4.5% in 2001). According to the 2005-06 NS-CSHCN, CYSHCN with public insurance only, uninsured CYSHCN, those with one or more emotional, behavioral, or developmental issue, and CYSHCN without medical homes are more likely to report one or more unmet needs.

The 2007 NSCH reports that CYSHCN who need specialty care in Maryland are 3.5 times more likely than non-CYSHCN to have problems getting it. Of those families whose child needed specialty care on the 2005-06 NS-CSHCN, almost 21% reported problems getting a referral. CYSHCN with public insurance only, with one or more emotional, behavioral, or developmental issue, and CYSHCN without medical homes are more likely to report having problems getting a referral for needed specialist care. On the 2006 Maryland Medicaid Managed Care Customer Satisfaction Survey, 15.6% of child members reported having significant problems seeing needed specialists. Difficulty accessing needed specialist services was also reported in Maryland Family Access Initiative focus group findings for both those with Medicaid and those with private insurance, as well as in a number of local health departments needs assessments. Issues included no appropriate specialist in network and no appropriate specialist in geographic proximity. There is a large disparity in the availability of needed providers in rural areas versus urban areas in Maryland.

Sample sizes in the 2005-06 NS-CSHCN for most specific types of unmet needs in Maryland were too small to draw conclusions; however dental care and mental health care and counseling also had relatively high rates of unmet needs.

According to the 2010 Maryland Needs Assessment Parent Survey (Maryland Parent Survey), one-quarter of parents of CYSHCN reported that their family needed dental care that was delayed or not received; over 23% reported that their family needed mental health services that were delayed or not received; and one-fifth reported that their family needed medical care that was delayed or not received (see Figure 12).

Figure 12. Unmet Needs (Care Delayed or Not Received) for Specific Services among CYSHCN Families



Source: 2010 Maryland Parent Survey

In addition to the above listed services that were delayed or not received, services such as occupational, physical, speech, and behavioral therapies were frequently reported as being delayed, often because these service were not covered or inadequately covered through the child's health insurance.

"[Needed services for my child that were delayed or not received include] several doctor-ordered therapies and supplements, because the health insurance held it up or because they wouldn't cover it and we cannot afford it." Parent Respondent, 2010 Maryland Parent Survey

F. Impact on Family

Impact on Employment

Caring for CYSHCN can have a significant impact on families. The needs of CYSHCN vary greatly. For instance, some children receive care from several providers and have frequent medical appointments. Some are dependent upon technology and may need assistance with basic activities of daily life such as feeding. Others may need to take medications. According to the 2005-06 NS-CSHCN, while the majority of families spend less than one hour per week providing and/or coordinating their child's care, over 8% of families spend 11 or more hours per week providing or coordinating their child's care. Some families find it necessary for a caregiver to cut back on work hours in order to be able to meet the multiple demands of caring for a CYSHCN. Over one-quarter of families responded that a family member had to cut back or stop working due to the health of a CYSHCN. The poorest families are more likely than others to cut back on work hours or to stop working. More recent data from the 2010 Maryland Survey found that, among families of CYSHCN, over 34% reported that they found it necessary to change their working hours or stop working to care for their CYSHCN.

Basic Needs

"Even though I'm a working professional, I'm a single parent (who is the sole support source for my family.) I often struggle with basic needs. I'm not capable of receiving assistance due to income restrictions. It would be nice to have help when needed." Parent respondent, 2010 Maryland Parent Survey, when asked what the State can do for her and her child.

The 2010 Maryland Parent Survey asked respondents whether or not they were having difficulty paying for basic needs, such as clothing and food. Table 4 shows the percentage of families of CYSHCN who have difficulty paying for particular needs. Of the families with CYSHCN, nearly one-quarter reported difficulty paying for medical prescriptions, almost 21% had difficulty paying for utilities, and about 17% reported difficulties affording clothing and housing.

Table 4. Difficulty Paying for Basic Needs among Families of CYSHCN

	% CYSHCN families having difficulty paying for basic needs
Medical Rx	23.2%
Utilities	20.7%
Clothing	17.0%
Housing	16.8%
Food	13.5%
Transportation	13.1%
School Supplies	12.4%
Phone	12.1%

Source: 2010 Maryland Parent Survey

Child Care

Lack of quality child care certainly contributes to the impact that having CYSHCN can have on employment. According to the Maryland Parent Survey, almost one-fifth of responding families with CYSHCN needed assistance with child care. 13% of families sought assistance for child care, and of those families, less than 37% were satisfied with the assistance they received. These problems with finding satisfactory child care are supported by data from the 2007 NSCH, where almost 44% of families with CSHCN ages 0-5 reported problems with child care, significantly greater than reported by families whose children did not have special health needs.

Financial Impact

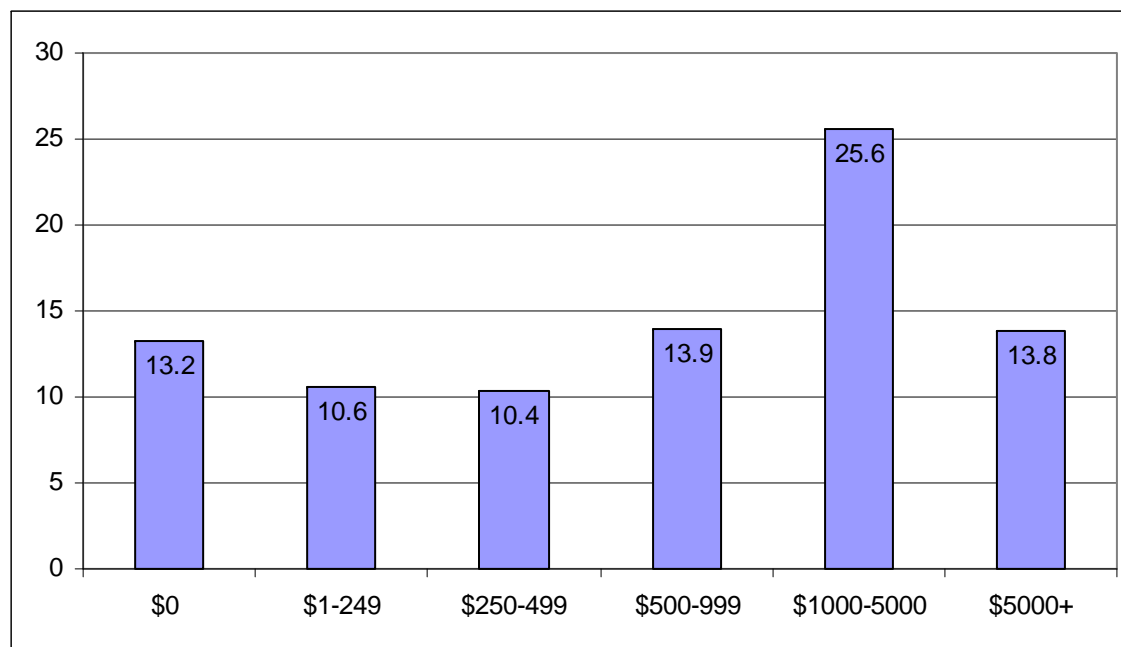
Cutting back on work hours or stopping work altogether can significantly impact a family’s finances. In addition, the costs associated with providing care for CYSHCN can be great. Almost one in four families reported out-of-pocket health care costs between \$1001-\$5000 per year on the 2005-06 NS-CSHCN, representing a very significant increase over the 2001 NS-CSHCN when about 1 in 10 families reported out-of-pocket costs in that range. 17.5% of families reported having experienced financial problems due to their CYSHCN health conditions.

“We have a \$5000 [health insurance] deductible for our family. My son’s medication went from a co-pay of \$60 per month to \$800 per month to make up the unused deductible before the end of the year. We began ordering his medications from Canada.” Parent Respondent, 2010 Maryland Parent Survey

The poorest families, Hispanic families, CYSHCN whose insurance is not adequate, and CYSHCN with functional limitations are more likely to have negative financial impacts from health conditions. More recent data from the 2010 Maryland Parent Survey indicates that out-of-pocket costs

for families of CYSHCN in Maryland are rising; of the responding families with CYSHCN, over one-quarter spent \$1000-\$5000 on out-of-pocket expenses for their CYSHCN care, while almost 14% spent over \$5000 (see Figure 13).

Figure 13. Out-of-Pocket Expenses for CYSHCN Medical Care



Source: 2010 Maryland Parent Survey

Family Health and Respite

“As a parent of 2 children with special needs, I NEED THERAPY. I am stressed, I cannot complete my BS due to my children's needs. I am sick and tired of being sick and tired.” Parent Respondent, 2010 Maryland Parent Survey

The issues discussed above can put stress on family members of CYSHCN. According to the 2007 NSCH, mothers and fathers of CYSHCN are significantly less likely to have mental and/or physical health rated as excellent or very good than mothers and fathers of children without special health needs (see Table 5).

Table 5. Children & youth with mothers and fathers whose mental health are both excellent or very good

	Overall	CSHCN	Non-CSHCN
% Maryland children currently living with their mother whose mother's general health and mental/emotional health are both excellent or very good	63.2	54.5	65.5
% Maryland children currently living with their father whose father's general health and mental/emotional health are both excellent or very good	66.8	54.6	69.4

Source: 2007 NSCH

The need for regular respite activities for families is a recurring theme in all local health department needs assessments. According to the 2010 Maryland Parent Survey, one-quarter of responding families with CYSHCN needed assistance with respite care. Almost 16% of families sought assistance for respite care, and of those families, less than 33% were satisfied with the assistance they received. The 2005-06 NS-CSHCN reports that among families who needed respite care, 47.5% did not receive all the respite care that was needed. In 2001, 22% of Maryland families who reported needing respite care did not get all the care they needed.^{vii} The limited availability of trained respite providers in certain areas of the state as well as lack of education on the part of families regarding respite services are barriers related to accessing respite care. The economic recession in Maryland and the resulting state and local budget cuts are a more recent barrier.

G. Education

As mentioned above, as of October 2008, there were 102,593 children ages 3-21 receiving publicly funded special education services in Maryland, representing 12.2% of the population of children enrolled in Maryland public schools.

The 2010 Maryland Parent Survey asked respondents whether or not their child needed certain services typically provided through public schools, whether or not the family sought the needed services, and whether or not they were satisfied with the services they received. The responses are summarized in Table 6. Among families of CYSHCN, the service needed most frequently was speech, occupational, or physical therapy (55%), followed by evaluations from the child's school (48%). When a service was needed, about 70% of respondents reported seeking out the service for their CYSHCN. Satisfaction rates varied – the highest rate of satisfaction was reported for speech, occupational, or physical therapy (72%).

Table 6. School-based services needed by families of CYSHCN

<u>Type of Service</u>	% of families whose CYSHCN needed service	% of families of CYSHCN who needed and sought assistance with service	% of families of CYSHCN who sought assistance and were satisfied with services received
An Evaluation from His/Her School	48%	73%	64%
Tutoring	27%	70%	44%
Speech/Occupational/or Physical Therapy	55%	73%	72%
Counseling	32%	73%	63%
Assistive Technology	6%	70%	51%

Source: 2010 Maryland Parent Survey

Children receiving special education services through public schools have Individualized Education Plans, or IEPs. Students who don't qualify for an IEP but still require some modifications or accommodations in the public education setting have 504 plans. Children receiving early intervention services have Individualized Family Service Plans, or IFSPs. The 2010 Maryland Parent Survey asked respondents if their CYSHCN had an IEP, IFSP, or 504 plan and if so, were they satisfied with the services the child was receiving through the plan. Over three-quarters of all respondents said that their child has either an IEP or IFSP, and almost 11% said their child has a 504 plan. Satisfaction rates for IEPs or IFSPs were about 56% among respondents, while the satisfaction rate for 504 plans was about 44%. Among parents whose CYSHCN have IEPs, less than 35% report that their child's health care needs are addressed in his/her IEP.

II. Core Outcomes for Children and Youth with Special Health Care Needs in Maryland

The current national priorities for CYSHCN focus on six core outcome areas identified by MCHB as critical indicators of success in implementing community-based systems of services mandated for all CYSHCN under Title V and Healthy People 2010. This section of the report focuses on data and information related to Maryland's performance on each of the core outcomes. First is a summary table (Table 7) containing broad information on all six outcomes; this is followed by more detailed information for each outcome.

Table 7. Summary of CSHCN Core Outcome Performance in Maryland

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Families partner in decision-making	Percent of children with special health care needs (CSHCN) age 0 to 18 years whose families partner in decision-making at all levels and are satisfied with the services they receive	68.1 (57.5) Maryland ranked 2 nd in the nation	54.8 (57.4) Maryland ranked 42 nd in the nation	Families with CSHCN in one or more of the following subgroups were the least likely to report feeling like partners or to be satisfied with care: Hispanic; family income less than 200% FPL; whose conditions have a greater impact on the child’s daily functioning; rural; and those with mental health issues.	Willingness of stakeholders to work together; Existing models of partnerships; Strong families; availability of data.	Inadequacies in: professional and family training opportunities; support for culturally and linguistically competent supports and services; family and professional supports including time, reimbursement, and financial support; County and regional variances; lack of value for family wisdom, experiences, expertise and knowledge; and existing partnerships are not consistently implemented across systems statewide.

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Medical Home	Percent of CSHCN age 0 to 18 years who receive coordinated, ongoing, comprehensive care within a medical home	56.3 (52.6) Maryland ranked 10 th in the nation	45.6 (47.1) Maryland ranked 38 th in the nation (2005-06 data cannot be compared to 2001 data due to significant changes in how this indicator is derived.)	Families with CSHCN in one or more of the following subgroups were less likely to report care consistent with a medical home: Hispanic and African American-non-Hispanic; family income less than 200% FPL; age 12-17 years; with public insurance only; with one or more periods of being uninsured in a year; or with one or more emotional, behavioral, and developmental issues.	Ongoing partnerships and relationships among stakeholders; strong interest among stakeholders in promoting the Medical Home model; current project in Baltimore City that is building medical home capacity in pilot practices.	Provider characteristics including communication, empathy, paternalism, competence, and cultural sensitivity, lack of knowledge, skills and resources to implement the Medical Home; parent characteristics including lack of information, not prepared to effectively coordinate child's care, isolation and lack of platform for education in Medical Home requirements and expectations, and care coordination; Care coordination agency fragmentation and lack of standards; lack of compensation for care coordination, non face-to-face care, and non-physician care; and seeming lack of interest in Medical Home on a statewide level

Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Adequate Insurance	Percent of CSHCN age 0 to 18 years whose families have adequate private and/or public insurance to pay for the services they need	67.5 (59.6) Maryland ranked 5 th in the nation	65.5 (62.0) Maryland ranked 14 th in the nation	Families with CSHCN in one or more of the following subgroups were less likely to report having adequate insurance: Hispanic; family income less than 200% FPL; with both private and public insurance; or with above routine need/use of services.	MCHIP expansion; Medicaid waiver for children with autism; Medicaid buy-in for employed individuals with disabilities; Kids First Act.	No comprehensive plan to address the needs of how services for CYSHCN are paid for; state budget cuts; long waiting lists for waiver programs; large disparity in the availability of needed providers in rural vs. urban areas; limits on scope of benefits; difficult to navigate health plans; erosion of employer-based benefits; lack of care coordination; lack of clarity about eligibility for services; and insurance not keeping pace with technological advances in therapies or Durable Medical Equipment

Early and Continuous Screening	Percent of CSHCN who are screened early and continuously for special health care needs	N/A (Not measured)	65.7 (63.8) (rank not available)	In the 2003 National Survey of Children's Health, almost 47% of Maryland families of children ages 0-5 reported that they were not asked by their providers if they had concerns about their child's learning, development, or behavior in the past year.	Effective statewide models of screening for selected conditions; increasing awareness of the importance of screening, particularly for developmental health issues.	Poor communication and information-sharing between providers, agencies and families; need for comprehensive statewide systems; need for improved education and professional development of providers; need for improved parent/family education and training.
Core Outcome	Title V Performance Measure	2001 Maryland (Nationwide)	2005-06 Maryland (Nationwide)	Issues	Strengths in Maryland	Barriers in Maryland
Community-Based, Easy-to-use Systems	Percent CSHCN age 0 to 18 years whose families report the community-based service systems are organized so they can use them easily	70.6 (74.3) Maryland ranked 42 nd in the nation	89.3 (89.1) Maryland ranked 26 th in the nation (cannot be compared to 2001 data)	Families with CSHCN in one or more of the following subgroups were less likely to report ease of use: Hispanic; those with functional limitations; or with one or more emotional, behavioral, and developmental issues.	There are many resources and services for families as well as good potential for infrastructure to improve these services.	Redundancy (ex: multiple entities offer case management); fragmentation; lack of acknowledgement of disparities; lack of knowledge among care providers of resources and services; turf issues among agencies.

<p>Youth Transition To Adulthood</p>	<p>Percent of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence</p>	<p>5.8 (these data deemed unreliable due to sample size and other concerns)</p>	<p>37.4 (41.2) Maryland ranked 42nd in the nation (cannot be compared to 2001 data)</p>	<p>Families with CSHCN in one or more of the following subgroups were less likely to report receiving transition services: family income less than 200% FPL or those with public insurance only.</p>	<p>Maryland currently has many government and parent-led activities focused on improving transition.</p>	<p>The current status of Transition to Adult Services in Maryland is characterized by fractured activities with no common end. Despite the activities focused on Transition in Maryland (see below), the state continues to lack a clearly defined, comprehensive, coordinated, community based, culturally competent, collaborative, youth/family centered system of care to facilitate success in transition from pediatric- to adult-based health care. This issue is compounded by the problem of this age group accessing their own health insurance.</p>
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Data come from the 2001 and 2005-06 National Survey of Children with Special Health Care Needs (NS-CSHCN) and from the Maryland Community of Care Consortium (CoC) for CSHCN.

A. Family-Professional Partnerships and Satisfaction with Services

According to the NS-CSHCN, family-professional partnerships and satisfaction with care were a relative strength for Maryland in 2001, when over 68% of families of CYSHCN reported that they were partners in decision-making and were satisfied with the services they received; Maryland ranked 2nd in the nation on this indicator. However, in the 2005-06 NS-CSHCN, Maryland ranked 42nd in the nation, with less than 55% of families of CYSHCN reporting that they were partners in decision-making and were satisfied with received services (see Table 8). This is a disappointing finding, as family-professional partnership and satisfaction with care have traditionally been areas of relative strength for Maryland compared with other states. The reasons for this change are not clear. Families of Hispanic children, children less than age 5, publicly insured children, children without a medical home, and families with incomes less than 200% FPL were least likely to report that they are partners in decision-making and satisfied with services. Maryland follows the national trend in which families whose child’s conditions have a greater impact on the child’s daily functioning are less likely to feel like a partner in decision-making and satisfied with services received. Only 33.9% of families whose children have more severe involvement report that they are partners in decision-making and satisfied with care compared to 54.8% overall.

Table 8. 2005-06 NS-CSHCN Indicators used to measure partnership and care satisfaction

Indicator	Maryland %	Nation %
Outcome #1: CYSHCN ages 0-17 whose families are partners in decision-making at all levels and are satisfied with the services they receive	54.8%	57.4%
CYSHCN whose health providers usually or always make parents feel like partners	88.4%	87.7%
CYSHCN whose parents are very satisfied with the health services their child receives	57.0%	59.8%

Source: 2005-06 NS-CSHCN

Family-Professional Partnerships

Over 88% of families of Maryland CYSHCN report that their child’s health care providers always (66.4%) or usually (22%) help them feel like a partner in care on the 2005-06 NS-CSHCN. In contrast, the 2006 Maryland Medical Home Survey found that, among a non-randomized sample of parents of CYSHCN receiving respite care through local health departments, only 43.5% said that they always (25.9%) or usually (17.6%) share decision-making responsibilities with their child’s primary care doctor. In 2006, The Parents’ Place of Maryland conducted a survey to obtain information about the impact of caring for CYSHCN (Maryland Survey of Parents of CYSHCN 2006). Responses were obtained from 250 parents across Maryland using Survey Monkey and on paper. Some key findings related to family-professional partnerships: while 76% of parents

reported they received information from their doctor, out of 12 possible sources of information, the families rated their doctor as 5th most effective when providing information about their child's care; 66% of parents reported that they usually or always wanted more information from their medical provider; and 58% of parents reported that they usually or always wanted their medical provider to provide information about non-medical concerns such as community resources.^{viii}

Maryland has a strong history of including parents and families in decision-making at all levels. The Office for Genetics and Children with Special Health Care Needs (OGCSHCN) in the Maryland Department of Health and Mental Hygiene (DHMH) supports The Parents' Place of Maryland (PPMD) with a yearly grant and has maintained a successful relationship with PPMD that has been a model for promoting family-professional partnerships and family involvement in policymaking at state and local levels. PPMD is a non-profit, family-directed and staffed center serving parents of children with disabilities and special health care needs and currently serves as the statewide Parent Training and Information Center (PTI) and Family to Family Health Information Center (F2FHIC) as well as being home to Maryland Family Voices. PPMD and OGCSHCN have an ongoing partnership in a number of activities including a variety of workshops (held across the state) for both parents and professionals aimed at increasing partnership and advocacy skills and effectively accessing health care services for CYSHCN. Additionally, OGCSHCN was instrumental in the award to PPMD of a State Implementation Grant for Integrated Community Systems for CYSHCN from MCHB. PPMD and OGCSHCN work together to carry out the work for this grant through the Maryland Community of Care Consortium for CSHCN (CoC). The CoC meets quarterly and has identified priorities which include building relationships between families and professionals through education and joint training. The CoC is facilitating family-professional partnerships through parent attendance and participation in workshops and trainings for providers centered around the early and continuous screening for special health care needs and medical home. Through the CoC, parent members receive regular updates on state activities for CYSHCN, and they also continuously contribute to shaping state goals and priorities for Title V activities. PPMD leadership has participated closely in all Title V 2010 Needs Assessment activities.

Satisfaction with Care

On the 2005-06 NS-CSHCN, 57% of Maryland families report that they are very satisfied with the health services their child receives, and almost 35% said they are somewhat satisfied. More recently, the 2010 Maryland Parent Survey found that 47.2% of parents of CYSHCN are very satisfied with their child's medical care, and almost 40% are somewhat satisfied.

Strengths and Barriers

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Family-Professional Partnerships Workgroup, Maryland has several strengths around this core outcome. These include a willingness of stakeholders to work together; existing models of partnerships; strong families; and availability of data. There are also barriers, which include inadequacies in: professional and family training opportunities; support for culturally and linguistically competent supports and services; family and professional supports including time,

reimbursement, and financial support; county and regional variances; lack of value for family wisdom, experiences, expertise and knowledge; and existing partnerships that are not consistently implemented across systems statewide.^{ix}

B. Comprehensive Care Through a Medical Home

Medical Home Prevalence

While having a medical home is important for all children, CYSHCN in particular need the type of care embodied by this model. According to the 2005-06 NS-CSHCN, just under 45% of Maryland CYSHCN are receiving care that meets criteria for a medical home compared with 47.1% nationally. In Maryland, certain variables are associated with the rate of successfully achieving this core outcome: age; race/ethnicity; type of SHCN; incidence of behavioral, emotional, or developmental issues; household income; consistency of insurance coverage; type of insurance; and living in an urban vs. rural area. Subgroups that show a lower rate of successfully achieving comprehensive care through a medical home (see Table 9) include CSHCN age 12 to 17 years; children who have one or more periods of being uninsured in a year; children with public insurance only; children who have one or more emotional, behavioral or developmental issues; children from low-income (0-199% FPL) households, children who are African American or Hispanic, children who have an above routine need/use of services, and children who live in rural areas.

Table 9. Percent of CYSHCN in Maryland Achieving a Medical Home – Subgroups

	% CSHCN successfully achieving medical home in Maryland (Nationwide)
Overall	45.6 (47.1)
Subgroups	
Age Group	
0-5 years of age	54.6
6-11 years of age	47.1
12-17 years of age	40.0
Consistency of Insurance Coverage	
Insured for the entire year	46.2
One or more periods of being uninsured in a year	34.2
Type of Insurance	
With private insurance only	50.4
With public insurance only	37.1
Emotional/Behavioral/Developmental Issues	
No emotional, behavioral, or developmental issues	53.3
One or more emotional, behavioral, and developmental issues	28.7

Source: 2005-06 NS-CSHCN

Although the more recent 2007 NSCH measured medical home in a different fashion, similar results were seen for Maryland with just over 53% of CYSHCN reporting care that meets the criteria for having a medical home. This is compared with 60% of children without SHCN reporting care that meets the criteria for having a medical home.

The 2006 Maryland Medical Home Survey found that, at the time the survey was conducted, most responding parents (87%) were not familiar with the term “medical home.”

Usual Sources of Care

Having a usual source of care is a starting point for a medical home. Almost 94% of Maryland CYSHCN are reported to have a usual source of care on the 2005-06 NS-CSHCN. A personal doctor or nurse for their CYSHCN was reported by almost 96% of families on this survey. On the 2006 Maryland Medical Home Survey, when asked where they most take their child for wellness care such as shots and check-ups, the vast majority of respondents (92%) indicated that well care is provided at the office of their child's doctor. More recent data from the 2010 Maryland Parent Survey shows that, among respondents with CYSHCN, over 90% report that they take their child to a doctor's office most often when the child is sick.

Coordinated Care

"Develop a Care Plan for Children with Special Healthcare Needs to be monitored closely by the child's Pediatrician and shared with all Specialists. This would better ensure a thorough, consistent and child-centered approach to the needs of children with complex medical conditions."

"We have considerable difficulty in obtaining appointments with specialists, scheduling procedures (hearing tests, swallow studies etc.) and in receiving results. The general service in the healthcare industry in MD/DC is poor compared with our experience in Minnesota where we had a Care Plan and where doctors, nurses and other healthcare industry employees were much more responsive to our child's needs and our questions." Parent Respondents, 2010 Maryland Parent Survey

On the 2005-06 NS-CSHCN, almost 58% of respondents were found to have effective care coordination for their CYSHCN when needed. This indicates improvement in care coordination in Maryland; in the 2001 NS-CSHCN, only about 35% of CYSHCN were found to have effective care coordination when needed.^x On the 2006 Maryland Medical Home Survey, only 33% of respondents indicated that their child's primary care physician has developed a plan of care that is shared with other providers/organizations involved in their child's care. Of those respondents whose child had a plan of care, half indicated that their child's plan of care was coordinated with their child's early intervention plan (IFSP) or individualized education plan (IEP). A key issue in care coordination is communication. On the 2005-06 NS-CSHCN, almost 61% of families of CYSHCN who needed care coordination reported that they were very satisfied with their doctor's communication with other health care providers. Again, this indicates an improvement in Maryland since 2001, when only 48% of families whose CYSHCN needed care coordination reported that their doctor's communication with other health care providers was excellent or very good. However, there is evidence that barriers to effective care coordination still exist in the state. On the 2006 Maryland Medical Home Survey, only 16% of respondents indicated that their child's primary care doctor "always" communicates with other care providers, 13% indicated that this "usually" happens, and almost 28% indicated that this "sometimes" happens. The 2006 Maryland Survey of Parents of CYSHCN found that 32% of responding parents reported

that they never get professional help coordinating their child's care or treatment services and 30% of responding parents spend 10 or more hours per week arranging or coordinating their child's care; for those respondents who have received professional help with care coordination the majority (almost 65%) received this help from a doctor's office and only 24% of respondents indicated that they were extremely or very satisfied with the help they received in coordinating their child's care.

Accessible Care

Accessibility of care is a critical medical home component. On the 2005-06 NS-CSHCN, almost 95% of families of CYSHCN reported that their child has a personal doctor or nurse and almost 94% reported that their child has a usual source of care when sick. Data from the 2006 Maryland Medical Home Survey indicate that accessing primary care is more difficult for families of CYSHCN in certain counties in Maryland; caregivers in Calvert and Caroline counties report having to travel 30 or more miles for their child's primary care, while almost 60% of respondents statewide reported traveling between 0 and 10 miles. According to focus groups conducted by the Maryland Chapter of the American Academy of Pediatrics in 2005, some pediatric providers do not accept Medicaid or limit the number of patients with Medicaid due to lower reimbursement rates.

Access to specialty care, oral health care, and mental health care are problematic issues for CYSHCN in Maryland. In the 2010 Maryland Needs Assessment Stakeholder Survey, 51% of respondents ranked access to specialty care among the top five priorities for CYSHCN in Maryland and almost 19% ranked it as the number one priority for CYSHCN in the state. According to the 2007 National Survey of Children's Health, 17.7% of CYSHCN in Maryland needed and had problems getting specialist care in the year before the survey was conducted, while only 5.1% of non-CYSHCN had problems getting needed specialty care. The 2005-06 NS-CSHCN indicates that over one-fifth of CYSHCN in Maryland who needed a referral for specialist care or services had problems getting the referral. CYSHCN with one or more emotional, behavioral, or developmental issues or those with public insurance only were more likely to have problems getting referrals for specialty care, as were CYSHCN living in an urban core area or a rural area.

In the 2010 Maryland Needs Assessment Stakeholder Survey, 46% of respondents ranked access to dental care among the top five priorities for CYSHCN in Maryland. Access to oral health care is more difficult for CYSHCN than for non-CYSHCN in Maryland. According to the 2007 NSCH, 71.6% of CYSHCN have teeth in excellent or very good condition, compared to almost 79% of non-CYSHCN. The 2005-06 NS-CSHCN shows that Maryland falls below the national average on indicators of oral health for CYSHCN: of those needing it, 6.5% of CYSHCN had unmet needs for preventive dental care (compared to 7% nationally), and 13.9% of CYSHCN had unmet needs for other dental care (compared to 9.6% nationally).

Access to mental health care is becoming a more prominent issue for CYSHCN in Maryland. In the 2010 Maryland Needs Assessment Stakeholder Survey, 53% of respondents ranked mental health screening, treatment, and services among the top five priorities for CYSHCN in Maryland and almost one-quarter of respondents ranked it as the number one or two priority for CYSHCN in the state. According to the 2007 NSCH, only 59%

of CYSHCN in Maryland who needed treatment from a mental health professional actually received that treatment, compared to over 70% of non-CYSHCN in Maryland. The 2005-06 NS-CSHCN indicates that almost 14 % of CYSHCN in Maryland needed and had unmet needs for mental health care and counseling. More recent data from the 2010 Maryland Parent Survey show that over 23% of families of CYSHCN needed mental health services but those services were delayed or not received.

Family-Centered Care

Another important pillar of the medical home model is family-centered care. The 2005-06 NS-CSHCN estimates that over 62% of Maryland CYSHCN receive care that is family-centered, compared with almost 66% nationwide. In the 2001 NS-CSHCN, Maryland ranked higher than the nationwide figure. The reasons for this change are unclear. The 2005-06 survey estimated that almost 89% of families felt that their child's doctors or other health care providers listen carefully to them, almost 88% felt that their child's doctors are sensitive to the family's customs and values, over 80% felt they got the specific information they needed from their child's doctors, and 79% felt that their child's doctors spend enough time with them. According to the 2006 Maryland Medical Home Survey, almost three-quarters of respondents felt that it is always clear that their child's primary doctor cares for their child and family's well-being, over 68% said that their child's primary doctor always makes every effort to be sure that the parent and child understand the results of medical appointments, and almost 77% responded that their child's primary doctor always recognizes and respects their child and family's cultural background.

Strengths and Barriers

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Medical Home Workgroup, Maryland has several strengths around this core outcome. These include tremendous opportunities based on Maryland's ongoing partnerships and relationships among stakeholders, and strong interest of stakeholders in promoting the Medical Home model. There are also barriers in the areas of providers and practices, family readiness and education, care coordination and aligning compensation with supporting medical home improvement. Certain provider characteristics are challenging, including a lack of communication and empathy, paternalism, competence, and cultural sensitivity, lack of knowledge, skills and resources to implement the medical home model. Challenges among parent characteristics include a lack of information; they are not always prepared to effectively coordinate child's care, isolation and the lack of a platform for education in medical home requirements and expectations. Additional challenges include care coordination agency fragmentation and a lack of standards; a lack of compensation for care coordination, non face-to-face care, and non-physician care; and a perceived lack of interest in medical home on a statewide level.^{xi}

C. Adequate Insurance and Financing to Pay for Services

"No one wanted to insure him [my child] because of his disability." Parent Respondent, 2010 Maryland Parent Survey.

Rate and Type of Insurance Coverage

On the 2005-06 NS-CSHCN, 97% of Maryland families of CYSHCN reported that their child had public or private health insurance at the time of the interview (see Table 10). Almost 94% of Maryland families of CYSHCN reported that their child had no gaps in health insurance in the year prior to the survey. While the overall rate of insurance coverage for Maryland CYSHCN is high, CYSHCN from poorer families, especially those living between 100-199% FPL, are more likely to lack insurance coverage. It is possible that these families miss the eligibility cut-offs for public insurance programs such as Medicaid.

“Allow me to ‘buy in’ to medical assistance like MCHP [Maryland Children’s Health Insurance Program]... I have no insurance and do not qualify for assistance since I returned to work. If I choose not to work and live off the state I could have full care for free.” Parent respondent, 2010 Maryland Parent Survey, when asked what the State can do for her and her child.

The majority (almost 70%) of Maryland CYSHCN have private insurance only, while the poorest CYSHCN are most likely to have public insurance. According to the 2010 Maryland Parent Survey, over 8% of families with CYSHCN had a problem getting health insurance for their child with special needs. When asked what problems they had in obtaining insurance for their child, respondents reported long waiting periods for public insurance, issues with eligibility, limits on benefits, and aging out of parents’ plans. The most frequently cited issues were with pre-existing conditions.

“[I] applied for Medical Assistance [for my child] 3 months ago. I have been calling every week and have not got an answer. Paperwork is supposed to be processed within 30 days. Other MA paperwork was lost for adult family members.” Parent Respondent, 2010 Maryland Parent Survey.

Table 10. Rate and type of insurance coverage for CYSHCN in Maryland by poverty level

Rate of Insurance	State vs. Nation		In Maryland by Household Income (%FPL)			
	Maryland	Nationwide	0-99	100-199	200-399	400 or greater
% of families whose child had health insurance at the time of interview	97.0	96.5	98.3	90.2	97.6	98.5
% of families whose child had no gaps in health insurance in the year prior to the survey	93.7	88.4	90.3	85.1	94.6	97.1
Type of Insurance						
% of families whose child had private insurance only	69.9	60.3	11.2	40.1	78.7	94.0
% of families whose child had public insurance only	23.1	28.6	74.5	44.7	16.4	2.7
% of families whose child had both private and public insurance	4.0	7.5	12.5	5.3	2.5	1.7

Source: 2005-06 NS-CSHCN

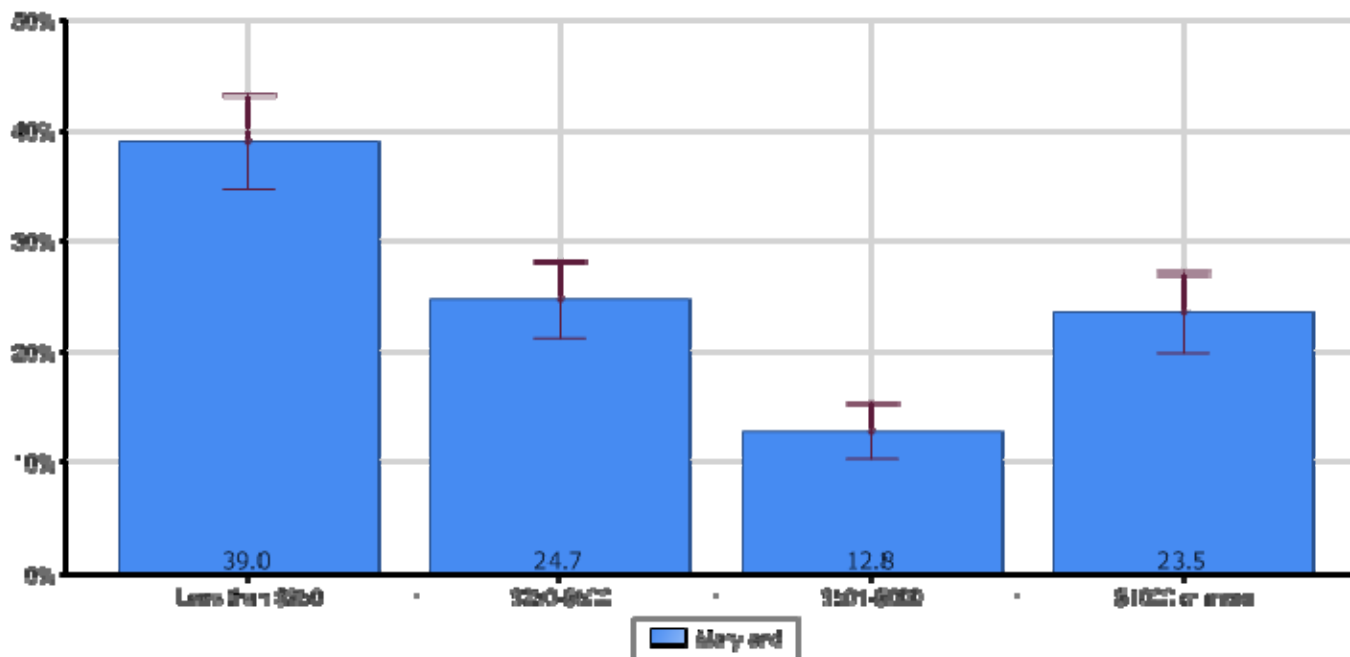
Adequacy of Insurance

Adequacy of health insurance is the greater challenge for CYSHCN in Maryland. According to the 2005-06 NS-CSHCN, one-third of Maryland CYSHCN do not have insurance that is adequate to pay for the services they need. The poorest families; those with public insurance only; those with an above routine need/use of services; those with one or more emotional, behavioral, or developmental issues; and those without a medical home are less likely to report having adequate insurance. In the 2010 Maryland Parent Survey, almost 55% of families with CYSHCN indicated that their child's insurance does not pay for all the health care services needed.

Out-of-Pocket Costs

One issue related to insurance adequacy is out-of-pocket costs. On the 2005-06 NS-CSHCN, almost 29% of Maryland families of CYSHCN reported that costs not covered by insurance were never or only sometimes reasonable; almost one-quarter of families reported spending \$1000 or more out-of-pocket in medical expenses for their CYSHCN in the year prior to the survey (see Figure 14).

Figure 14. Out-of-Pocket Medical Expenses for CYSHCN in Maryland



Source: 2005-06 NS-CSHCN

More recent data from the 2010 Maryland Parent Survey indicate that, of those responding families with CYSHCN, over one-quarter spent between \$1000-\$5000 on out-of-pocket expenses for their CYSHCN care, while almost 14% spent over \$5000.

Access to Needed Providers

Another critical issue is access to needed providers. On the 2005-06 NS-CSHCN, about 1 in 10 families reported that their child’s insurance never or only sometimes allowed them to see needed providers.

“Despite being enrolled in a PPO, the insurance provider refused to pay for my son’s private psychiatric care because the carrier refused to acknowledge the medical codes.”

"[My child's insurance] pays only in part for out-of-network specialists who can deal with issues related to my son's background (learning disabilities and adoption-related counseling.) These individuals with specialized expertise are not completely in-plan." Parent Respondents, 2010 Maryland Parent Survey

In the 2007 Families Report on the State of the State for Maryland,^{xii} problems accessing needed services were the most frequently noted issues in focus groups of families and providers. The report finds that there are a number of factors that restrict access for Maryland families, and these factors have several common themes, including insurance-related issues. Limited coverage of needed services, limited provider networks, and problems using their insurance with some providers are some of the challenges faced by families of CYSHCN. Families also struggle with the complexity of their health plans' administration and policies.

Other Scope of Benefits

Many insurance packages have gaps in coverage for key services, including mental health, ancillary therapies, home health care, and durable medical equipment. According to the 2005-06 NS-CSHCN, restrictions on the amount or scope of health benefits create unmet needs for about 30% of children and youth with special health care needs. Families of children with more complex needs more frequently report that their insurance coverage is not adequate to meet their child's needs. For example, 41.8% of families of children with emotional or behavioral needs and 43.8% of families whose children have above routine need and use of services report their insurance is not adequate. In the 2010 Maryland Parent Survey, services not covered or inadequately covered by insurance that respondents noted most frequently were: therapies (such as speech therapy and behavioral therapies), mental health services, testing and evaluations, and dental care.

"Most therapies are provided by small groups or individuals who cannot afford to accept private insurance. Speech and PT have to be paid 100% out of pocket."

"[Through my insurance] I only get 15 therapy sessions a year. 15 total – for OT/PT/Speech. [My child] is supposed to get 2 sessions of OT a week and one of speech. That gets me about 1 month of what he needs for the year." Parent Respondents, 2010 Maryland Parent Survey

Barriers

"Insurance submission hassles- they keep automatically rejecting claims and ask for a thorough review each time a claim is submitted, so I JUST STOPPED SUBMITTING THEM."

"Private insurance very difficult to get approval, REM [Rare and Expensive Case Management Program] then picks up most of what is not covered." Parent Respondents, 2010 Maryland Parent Survey

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Insurance and Financing Workgroup, Maryland has several obstacles to successfully achieving this core outcome. They found that overall, Maryland lacks a comprehensive plan to address how

services for CYSHCN are paid for and that there is inadequate synthesized data to use for problem identification. Other noted challenges to progress on this outcome were: an uneven geographic distribution of providers, the complexity of the system makes it difficult to navigate, a lack of clarity about eligibility for services, that insurance is not keeping pace with technological advances in therapy or durable medical equipment, and the erosion of employer-based benefits due to economic distress.^{xiii}

D. Early and Continuous Screening

Newborn Metabolic Screening

Screening is an important mechanism for the early identification of special health care needs in children. Institution of early treatment for children identified with certain disorders may prevent serious health and developmental consequences. Through the newborn metabolic screening and follow-up program in Maryland, almost 100% of babies identified with disorders are linked with appropriate medical care and other needed services. In CY 2009, only two babies (both with sickle cell disease) were lost to follow-up as defined by the State. In CY 2009, 95 babies with metabolic disorders and 104 babies with hematologic disorders were detected through the newborn “bloodspot” screening and follow-up program.

Legislation passed in the 2008 session and effective in 2009, restored the Maryland State Public Health Laboratory as the sole laboratory to perform first tier newborn screening. This was the first time newborn screening was established in statute, having always functioned under regulations alone. This was an enormous improvement over the last five years when there were two competing laboratories performing newborn screening in Maryland: the State Public Health Laboratory and a private lab, NeoGen/Pediatrix/Perkin- Elmer. The OGCSHCN always did the follow-up for newborn screening, receiving the abnormal results from both labs, evaluating them, contacting the medical home and sometimes the parents, recommending the appropriate follow up for definitive diagnosis, assuring that the baby actually got the recommended work up and, if affected, was entered into appropriate treatment program. With two labs, there were significant obstacles to providing what the OGCSHCN considered appropriate follow-up, related to data sharing with Pediatrix and with comparing the results from several specimens on the same baby when some went to Pediatrix and some went to the State Lab. (Maryland has a routine 2nd specimen.) The most serious problems encountered resulted from Pediatrix deciding not to report certain results to the OGCSHCN, contrary to our expectation. Their interpretation of HIPAA and their interpretation of the licensing agreement with the State led them to not report results from military facilities or home births. This resulted in several seriously delayed diagnoses and the near death of a baby with an organic aciduria. Another result of having two laboratories was that it was impossible to get clean data on the number of babies screened or to eliminate duplicates.

The State Lab implemented a new StarLIMS database in October of 2008 and began electronic reporting to hospital and medical homes in January 2009. A physician, properly credentialed, can look up a patient’s NBS results at any time of the day or night. The program was reorganized with the short term follow-up unit moving to the Laboratories Administration. The Vital Statistics Administration, after years of

struggle just implemented a truly electronic birth certificate. The State is looking forward to almost real-time matching of birth and newborn screening records to assure that all families are offered newborn screening.

Maryland currently screens for all of the disorders recommended by the American College of Medical Genetics and the March of Dimes except for severe combined immune deficiency (SCID). Maryland program worked on the development of the TREC assay for SCID with Drs. Jennifer Puck and Kee Chan when they were at the NIH. However, all the DNA analysis was done at NIH. Unfortunately, the Maryland NBS Lab does not have DNA capability at present. The State Public Health Laboratory is scheduled to move into a new facility in 2011, where they will have a DNA lab. The Maryland program also worked with Drs. Hugo and Ann Moser on a test for X-linked adrenoleukodystrophy and a feasibility study involving several hospitals is close to completion.

The recent national attention brought to newborn screening has created some tension between advocates and the newborn screening program. Maryland has had a voluntary newborn screening program since 1973 but very few families refuse (3 in 2007 and 2 in 2008). In 2008, a group advocating mandatory newborn screening wanted to amend the bill re-establishing a single laboratory to make screening mandatory. The legislature then requested the DHMH to prepare a report on whether newborn screening should be made mandatory. The report, prepared by OGCSHCN in collaboration with the Advisory Council on Hereditary and Congenital Disorders, recommended that Maryland move from informed consent for screening to informed dissent, bringing the State's policy in line with the majority of states. Despite this recommendation, a bill was introduced in the 2009 session, attempting to reconfigure testing on the Massachusetts model of split mandatory and voluntary panels and using the Nebraska model of taking legal action against parents who refuse screening. The bill failed and the policy of informed dissent was instituted with revision of the parent educational materials and website.

Newborn Hearing Screening

Until the fall of 2008, the Universal Newborn Hearing Screening Program relied on a paper reporting system to the Infant Hearing Program which was then entered into a closed database that by 2008 had far exceeded its capacity and severely hampered data analysis. Since that time, a new online data management system has been integrated statewide which not only has improved reporting and timely follow-up, it has allowed for much greater data analysis.

By having this new powerful database, we've found that in 2009, the first full year of electronic reporting, 99% of Maryland newborns received hearing screening and nearly all of them had their screenings before they were 1 month of age. The average age for follow up hearing screening was 25 days indicating that we have nearly achieved our goal of meeting the first milestone of the 1-3-6 EHDl mandate of screening all newborns before one month of age. However, of the 1,749 babies that missed their inpatient hearing screening, only 58.5% (1024) of that population returned for an outpatient hearing screening, and 73% (2,084) of the 2,854 babies that failed their inpatient newborn hearing screening

returned for an outpatient hearing screening. This means that only 2% of the newborn population that needed outpatient follow-up failed to return for further screening, but that percent equates to 1,495 babies or >30% of the failed/referred newborn population.

It is suspected that one of the reasons for families' non-compliance is the dwindling number of outpatient sites. More and more of the birthing hospitals are discontinuing or refusing to do outpatient hearing screenings, and for underserved areas of the state, that creates an issue for families if they have to travel for outpatient testing. Lack of providers is also an issue in regards to audiologic follow-up. Many parts of Maryland have no infant audiology services, making traveling a necessity. The Infant Hearing Program is committed to improving our loss to follow-up rate, but the solutions are multi-leveled, costly, and complicated. Future endeavors need to be focused on securing funding and physician, audiologist, and public health center buy-in to provide hearing screening equipment and training to remote medical home offices, training audiologists in infant assessment, purchasing diagnostic equipment, and instituting remote diagnostic testing via telehealth and/or itinerant service delivery systems. Procurement procedures need to also be rectified. Currently, purchasing of expensive equipment and contracts requires a lengthy approval process which often makes spending grant funding within the allotted required time virtually impossible.

Additionally, it is vital to the early hearing detection and intervention process to institute appropriate early intervention by 6 months of age. Early identification is useless unless it is followed by appropriate timely early intervention. We are now closing in on the goals of screening by 1 month of age and identification by 3 months, but currently we are unable to ensure that identified infants are receiving early intervention services. Early intervention services are provided by the Maryland State Department of Education (MSDE), and there has always been an issue about sharing data between MSDE and the Department of Health and Mental Hygiene (DHMH) where the Infant Hearing Program resides. It has been an ongoing struggle to get approval for sharing of individual early intervention information from MSDE due to interpretations of privacy restrictions in FERPA and IDEA Part C regulations. We have recently come to an agreement that data can be shared under the existing MOU between DHMH and MSDE and a plan has been devised to facilitate sharing of data. However, as of yet, we have not received any data from MSDE most likely due to key personnel leaving MSDE and manpower shortages. The current need is to incorporate an early intervention module into the existing online database.

Lastly, it is important that current legislation be strengthened and updated. Current legislation only mandates hearing screening. Changes to the universal newborn hearing screening law need to require reporting of audiologic testing as well as strengthen data sharing between agencies.

Birth Defects Surveillance

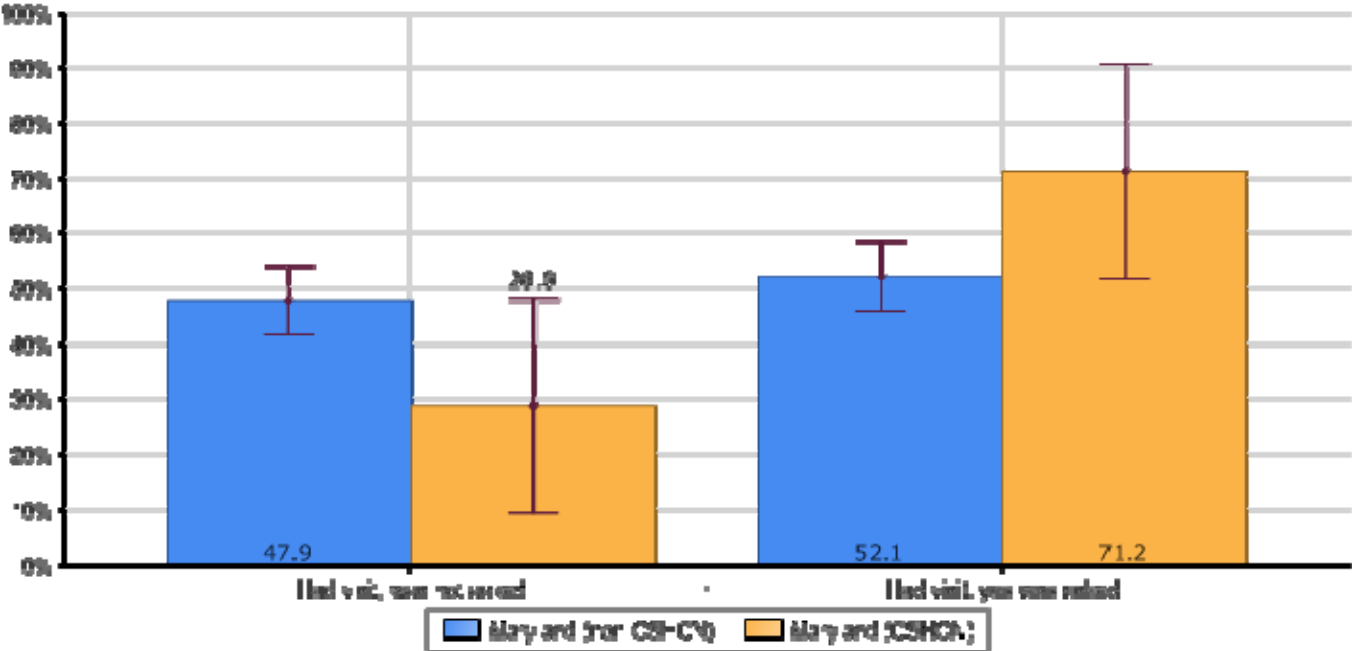
While not a screening program, the Birth Defects Reporting and Information System (BDRIS) seeks to identify children with birth defects as early as possible after birth and link their families with services. BDRIS is a passive surveillance system, and must rely upon reports from providers in addition to reviewing vital records for case ascertainment.

Maryland law historically mandated reporting of only 12 sentinel birth defects, with voluntary reporting of others. However, in 2008, a long sought legislative change authorized the program to collect data on all significant defects and established in statute the programs' right to review medical records in HIPAA compatible language. A new database, allowing electronic matching of case reports and vital records, has improved the timeliness of data. BDRIS data is now displayed on the Maryland Public Health tracking Network website. In 2008, 884 families were served. It is expected that, as the program moves to collecting data on all defects, the number of families served will increase. Vital records for 2009 are not yet available but reporting by hospitals has increased 10%. The rate of defects has been relatively stable over the past few years.

Screening for Development and Behavioral Problems

The 2007 NSCH estimated that almost 28% of Maryland children aged 4 months to 5 years are at moderate or high risk for developmental delay, higher than the nation as a whole (26.4%). However, in terms of screening for developmental and behavioral problems, this survey reports that only 22% of families report that their child aged 10 months to 5 years received a standardized screening for developmental or behavior problems. Almost 46% of families of children ages 0-5 years report that they were not asked by their providers if they had concerns about their child's learning, development, or behavior in the past year (see Figure 15). While over 71% of families with CSHCN were asked about these concerns, only 52% of families whose children did not have a special health care need were asked.

Figure 15. Percent of children whose doctors asked about parents' concerns, by SHCN status



Source: 2007 NSCH

According to the 2005-06 NS-CSHCN, almost two-thirds of CYSHCN in Maryland are screened early and continuously for SHCN, compared to less than 64% nationwide (see Table 11). Almost four out of five CYSHCN in Maryland received some preventive medical care during the previous 12 months, compared to 77% nationwide. Maryland is a few percentage points ahead of nationwide developmental screening indicators; however there are many disparities among subgroups in the state with respect to early and continuous screening as well as receipt of preventative medical care. For screening, CSHCN who are in families living below 200% FPL, are Hispanic or African American, are not insured or who have public insurance only, or who have an above routine need/use of services are far below the nationwide average.

Table 11. Screening Indicators for CYSHCN in Maryland, by Subgroup

		% CSHCN ages 0-17 who are screened early and continuously for SHCN in Maryland (Nationwide)	% CSHCN who received any preventive medical care during past 12 months in Maryland (Nationwide)
	Overall	65.7 (63.8)	79.3 (77.1)
	Subgroups		
Household Income (%FPL)	0-99% FPL	33.9	54.5
	100-199% FPL	48.2	75.7
	200-399% FPL	69.7	79.5
	400% or greater FPL	79.5	88.7
Race/Ethnicity	Hispanic	54.2	70.7
	White, non-Hispanic	72.1	82.5
	Black, non-Hispanic	54.6	74.1
	Multi-racial, non-Hispanic	65.8	81.3
	Other, non-Hispanic	69.2	79.7
Insurance Status	Currently Insured	67.1	80.1
	Currently NOT Insured	17.1	52.2
Type of Insurance	With private insurance only	72.5	83.6
	With public insurance only	50.9	68.9
Specific Type of Health Need	Functional Limitations		76.5
	Managed by Rx Meds		82.1
	Above routine need/use of services		70
	Rx meds AND service use		81.3
Presence of Medical Home	With Medical Home		87
	WITHOUT Medical Home		72.6

Source: 2005-06 NS-CSHCN

State programs in Maryland provide other data on developmental screening. Table 12 shows trends in screening according to Maryland program data. Maryland performs particularly well on follow-up for screen-positive newborns; from 2004 through 2008, 100% of screen-positive newborns received timely follow-up to definitive diagnosis and clinical management for conditions mandated by state-sponsored newborn

screening programs.^{xiv} For the past five years, over 84% of Medicaid enrollees in Maryland whose age is less than one year received at least one initial periodic screen, and in 2008 over 85% of Maryland’s state Children’s Health Insurance Program (SCHIP) enrollees in Maryland ages one year and under received at least one initial periodic screen. This is an improvement of over 10 percentage points from 2004.

Table 12. Trends in screening, Maryland program data 2004-2008

	2004	2005	2006	2007	2008
% Medicaid enrollees whose age is less than one year who received at least one initial periodic screen (Health Systems Capacity Indicator 02)	85.7	85.9	86	87.9	84.1
% SCHIP enrollees whose age is less than one year who received at least one initial periodic screen (Health Systems Capacity Indicator 03)	73.3	73.3	52.6	83.9	85.3

Source: 2009 Maryland Title V Block Grant

Table 13 shows 2008 data from Maryland’s Early Periodic Screening, Diagnosis, and Treatment (EPSDT) program. The data suggest that Maryland is performing better than the nation as a whole on several screening indicators, and while indicators for some Maryland Managed Care Organization enrollees are below the state average, they are above the national average. For example, at least 77% of HealthCare Managed Care enrollees aged 0 to 15 months received 5 or more well child visits, compared to the national average of 70.2%.

Table 13. 2008 Maryland EPSDT Data

	HealthChoice Managed Care Enrollees	Maryland Average	National Average
% children aged 0-15 months receiving five or more well child visits	77.1-87.3	83.2	70.2
% children between 3-6 years of age receiving one or more well child visits	70-89.9	76.8	65.3
% children between 12-20 years of age receiving one or more well child visits	49.5-76.1	54.7	42

Source: Maryland EPSDT Program

Strengths and Barriers

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Early and Continuous Screening Workgroup, Maryland has several strengths around this core outcome. There are effective statewide models of screening for selected conditions, and there is an increasing awareness of the importance of screening, particularly for developmental and mental health issues. The workgroup identified certain barriers to progress on this core outcome, including poor communication and information-sharing among providers, agencies, and families; an insufficient and dwindling availability of appropriate resources; a need for comprehensive statewide systems involving multiple stakeholders; the need for improved education and professional development of providers; and the need for improved parent/family education and training.^{xv}

E. Community-Based Services Organized for Easy Use

“Cut the red tape.” Parent respondent, 2010 Maryland Parent Survey, when asked what the State can do for her and her child.

Organization for Easy Use

CYSHCN and their families must often access a number of health-related and family support services to meet their needs. Ideally, all of the services that a child and family require would be easily available and accessible within that child’s community. On the 2005-06 NS_CSHCN, almost 90% of families of CYSHCN reported that services were usually or always organized for easy use. Data from this survey suggests that Maryland has made strides – on the 2001 NS-CSHCN, Maryland ranked 42nd in the nation on successful achievement on this outcome, and in the 2005-06 NS-CSHCN, Maryland moved up to rank 26th in the nation. While the success rate for this core outcome for CYSHCN has increased, 1 in 10 Maryland families of CYSHCN do report having difficulty using needed services. Table 14 shows the percent of CYSHCN families, by subgroup, who report community services that are organized for easy use. Hispanic families, those with CYSHCN with functional limitations, or with one or more emotional, behavioral, or developmental issue are more likely to have problems using needed services. In particular, less than three-quarters of families whose CYSHCN have functional limitations report that services are organized for easy use, compared to 98% of families whose CYSHCN conditions are managed by prescription medications. The survey data suggest that children with functional limitations are those with more severe health conditions or disabilities, and it is likely that they may require more extensive services than other children with special health care needs. Less than 76% of Hispanic families of CYSHCN report that services are easy to use; this may in part reflect issues with limited English proficiency and lack of culturally competent service systems.

Table 14. Percent of CYSHCN reporting community services organized for easy use, by subgroup

		% CSHCN whose services are organized in ways that families can use them easily in Maryland (Nationwide)
Overall		89.3 (89.1)
Subgroups		
	Hispanic	75.8
	White, non-Hispanic	88.4
	Black, non-Hispanic	94.6
	Multi-racial, non-Hispanic	84.8
	Other, non-Hispanic	86
Race/ Specific Ethnicity Types of Health Need	Functional Limitations	74.2
	Managed by Rx Meds	98
	Above routine need/use of services	82.3
	Rx meds AND service use	89
Emotional/ Beh./Dev Issues.	One or more emotional, behavioral, and developmental issues	80.9
	No emotional, behavioral, or developmental issues	93.2

Source: 2005-06 NS-CSHCN

Navigating the System

“Everything is so scattered that I feel like I am having to try to figure out what resources might be available for my daughter. Everyone I talk to tells me I have to talk to someone else. Why isn't there one place where I can call and find out what my daughter might be eligible for and help for me to try to get that assistance for her[?] When I called my county office, they told me I had to work with the state as they could not help me find services/assistance for my now adult (18 yr old) daughter who will graduate from high school in June 2010. Please make it easier for us to make sure we are accessing the proper resources and services to help our adult children with special needs (autism) know all possible options, whether Federal, state, or local to help them succeed as best they can in the adult world.” Parent Respondent, 2010 Maryland Parent Survey

A persistent problem for families of CYSHCN is the issue of “navigating the system” or finding out about available services within the community and gaining access to them. In 2007-2008, the Children’s Cabinet contracted with The Maryland Child and Adolescent Innovations Institute to conduct listening forums, discussion groups, and surveys in order to provide technical assistance and support for a strategic planning process. Several themes emerged related to the difficulty families have when trying to navigate the system. Stakeholders articulated the need for child-family serving agencies to better share information and communicate with one another more effectively. Family members stressed the need for there to be one agency or place where they can “tell their story” and subsequently receive necessary and appropriate referrals, supports, and services. Also, family members are uncertain of where and how to access services and supports, and observed that the process for applying for services is too lengthy, complicated, and bureaucratic. Finally, stakeholders felt that current resources and community programs could be better utilized and maximized if cross-system collaboration, communication, and coordination were practiced.^{xvi}

Local Access to Services and Transportation

The Maryland Center for Developmental Disabilities at the Kennedy Krieger Institute conducted focus groups, key informant interviews, and a statewide survey with over 500 individuals with developmental disabilities, parents/caregivers, and other providers. A key need identified that relates to user friendly systems was the need for transportation to medical appointments, work, and recreational activities. Also identified was a need for more professionals trained in developmental disabilities, including physicians, therapists, child care providers and teachers – particularly on the Eastern Shore and Western Maryland.^{xvii} According to the 2005-06 NS-CSHCN, 45% of Maryland families of CYSHCN who reported having trouble accessing services said it was because the needed services were not available in their area.^{xviii}

Strengths and Barriers

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Easy to Use Community Services Workgroup, Maryland has several strengths around this core outcome. There are many resources and services for families in Maryland, and great potential for infrastructure to improve those services. However, barriers to improving *systems* and *ease of use* include: redundancy (ex. multiple entities offer case management) and fragmentation (too many specialty areas); lack of acknowledgement of disparities; lack of knowledge of care providers of resources and services available for families; and turf issues among agencies. There are also regional issues that need to be dealt with at the community level.^{xix}

F. Youth Transition to Adulthood

“Transition to adulthood services. When I think I have located some kind of provider/s, they appear to this overwhelmed parent as one big mass of confused, overlapping, underfunded, understaffed, inefficient, and invisible not for profits with no clear instructions on how to get my very disabled child safely on her own somehow. I have been told to expect nothing unless I can afford a lawyer - I am dreading this process and just hope MY health remains well enough to fight this system and obtain a liveable result for my disabled child. My greatest fear is that these services

will disappear, or never arrive and she will end up on the street or in jail - and the costs to the State will be even higher in the long run.” Parent Respondent, 2010 Maryland Parent Survey

According to the 2005-06 NS-CSHCN, 37.4% of Maryland families of youth with special health care needs (YSHCN) aged 12 to 17 reported that their child received the services necessary to make appropriate transitions to adult health care, work, and independence (see Table 15). Maryland ranked 42nd in the nation on this core outcome.

Table 15. Transition Indicators for Maryland CYSHCN

Indicator	Maryland %	Nation %
Core Outcome #6: CYSHCN ages 12-17 who receive the services necessary to make appropriate transitions to adult health care, work and independence	37.4	41.2
CYSHCN ages 12-17 whose doctors and other health care providers have discussed eventually seeing providers who treat adults	10.8	11.9
CYSHCN ages 12-17 whose doctors and other health care providers have discussed youth’s health care needs as he/she becomes an adult	46.5	46.2
CYSHCN ages 12-17 who have had someone discuss how to obtain or keep health insurance as he/she becomes an adult	18.9	21.3
CYSHCN ages 12-17 whose doctors and other health care providers usually or always encourage development of self-management skills and knowledge	75.4	78.0

Source: 2005-06 NS-CSHCN

Health Care Transition Process

Transition must take place in a number of different arenas. Health care transition is helping young people with special health care needs plan their move from the child-centered health care system to the adult-centered health care system. On the 2005-006 NS-CSHCN, about 47% of families of CYSHCN reported that they had providers who have talked with them about changing needs as an adult. On the 2006 Maryland Medical Home Survey, 43.2% of respondents with CYSHCN aged 13 years or older reported that their child’s primary care doctor has talked to them about how their child’s needs might change as he/she becomes an adult.

Developing a transition plan for CYSHCN is an important tool in the process of moving to adulthood. Only 27% of respondents on the 2006 Maryland Medical Home Survey reported that a plan for addressing their child's changing needs has been developed with the child's primary care doctor; however respondents with children between the ages of 16 to 18 years were more likely (34%) to report development of a plan. The age group least likely (19%) to report development of a transition plan with the child's primary care doctor was YSHCN between the ages of 19 and 22 years. More recent data from the 2010 Maryland Parent Survey indicate that, among respondents who have a YSHCN aged 14 to 21 years with an IEP, approximately 48% have participated in the development of a transition plan for their child; 31% felt that their child's transition plan was specific to his/her needs and preferences; and 28% were satisfied with their child's transition plan.

In the 2006 Pediatric Primary Care Provider Survey of Transition Practices, Maryland pediatricians and family practitioners report that some of the areas of greatest weakness in transitioning youth to adulthood were found in creating a written health care transition plan, ability to direct patients and their families to resources that facilitate transition, and assisting families with identifying health care providers who are comfortable caring for adults and collaborating with those providers. Knowledge of health care resources, knowledge of educational and vocational resources, and time were the top three issues reported to impact pediatric primary care providers' ability to facilitate health care transition planning.^{xx} A relative strength in Maryland is that doctors encourage development of self-management skills among youth. According to the 2005-06 NS-CSHCN, over three-quarters of families of YSHCN in Maryland report that their child's doctors and other health care providers usually or always encourage development of self-management skills and knowledge. On the 2006 Pediatric Primary Care Provider Survey, areas of relative self-reported strength for pediatric primary care providers were in the areas of keeping comprehensive medical summaries, meeting privately with adolescents for part of the visit, and providing age-appropriate and developmentally-appropriate anticipatory guidance.^{xxi}

Change to Adult Providers

One aspect of health care transition is the change to adult health care providers. On the 2005-06 NS-CSHCN, almost one-quarter of CYSHCN families in Maryland reported that a discussion with the youth's doctors about a shift to adult health care providers was needed but had not happened. On the 2006 Maryland Medical Home Survey, over two-thirds of respondents with a CYSHCN aged 13 years or older have not had a discussion with their child's primary doctor about their child eventually seeing a doctor who treats adults. More recent data from the 2010 Maryland Parent Survey reveal that, among respondents who have a CYSHCN aged 13 years or older, only about 18% report that any of their child's health care providers have discussed having the child see a doctor who treats adults. As mentioned above, one of the greatest issues that YSHCN face is finding health care providers who are comfortable caring for adults with special health care needs.

Health Insurance

Maintaining health insurance into adulthood is a concern for YSHCN. According to the 2005-06 NS-CSHCN, less than 19% of families of CYSHCN in Maryland report that their child has had someone discuss how to obtain or keep health insurance as he/she becomes an adult. More recent data

from the 2010 Maryland Parent Survey reveals that, among respondents who have a CYSHCN aged 13 years or older, only about half have considered how to obtain or keep insurance as their child becomes an adult.

Strengths and Barriers

According to the 2008 Maryland Community of Care Consortium for CSHCN 2008 Summit Youth Transition Workgroup, Maryland has multiple activities in the state focused on improving this core outcome, but these attempts seem fractured and do not appear to have a common end goal. The state lacks a clearly defined, comprehensive, coordinated system of care to facilitate success in transition from pediatric to adult-based health care. The issue is compounded by the problem of youth in this age group accessing their own health insurance. Barriers to progress on this core outcome include youths not participating in the transition process, a lack of transition training among families and providers, a lack of capacity as well as uneven geographic distribution or adult health care providers who treat YSHCN, and a lack of data.^{xxii}

CSHCN Data Sources

Quantitative Assessment

National Databases

Maryland and national data from two modules of the State and Local Area Integrated Telephone Survey (SLAITS) were examined: the 2007 National Survey of Children's Health (NSCH) and the 2005-06 National Survey of Children with Special Health Care Needs (NS-CSHCN).

The NSCH allows comparisons among states as well as nationally on the estimated prevalence among children aged 0 to 17 years for a variety of physical, emotional, and behavioral child health indicators in combination with information on the child's family context and neighborhood environment. The survey was conducted for the first time during 2003-2004 and for the second time during 2007-2008, and time-trend comparisons for some indicators are possible.

The NS-CSHCN was conducted for the first time in 2000-2001 and for the second time during 2005-2006. This survey was used to provide estimates of the health needs and issues confronting Maryland children and youth with special health care needs under 18 years old. Data is available by state about the CSHCN population overall, and for subgroups such as age, race/ethnicity, family structure, and household income.

The second administration of both survey modules allows for a state-level comparison between CSHCN and non-CSHCN among many child health indicators, providing information about disparities between both groups.

State Surveys

The Parents' Place of Maryland Survey of Parents of CYSHCN 2006 was a non-randomized survey conducted by The Parents' Place of Maryland (PPMD) to obtain information about the impact of caring for CYSHCN. Responses were gathered from 250 parents across Maryland using Survey Monkey and on paper during March through May of 2006. The survey was disseminated through PPMD contacts, the PPMD website and electronic newsletter, various listservs, disability and support group newsletters, and other agency partners. The survey explored a variety of issues related to access to health care for CYSHCN.

The 2006 Maryland Medical Home Survey is a non-randomized survey conducted by the Maryland Department of Health and Mental Hygiene's (DHMH) Office for Genetics and Children with Special Health Care Needs (OGCSHCN) in order to gather information from parents/caregivers of CSHCN who were receiving services, primarily respite care, funded through Local Health Departments. Survey results were reported and used to estimate aspects of accessible care, continuous and comprehensive care, coordinated care, and compassionate and culturally effective care among survey respondents' CSHCN.

The 2010 Maryland Needs Assessment Parent Survey was developed and conducted by The Parents' Place of Maryland (PPMD) in conjunction with DHMH's Center for Maternal and Child Health (CMCH) and OGCSHCN, and the Johns Hopkins University School of Public Health during late 2009 and early 2010. In order to assure the broadest possible participation, the survey was available in two formats, a paper survey and an online survey. The statewide survey contained questions on the major health issues for the MCH populations, the most needed health

services that were not received, degree of satisfaction with existing care and suggestions for how the state health department may improve the health status of women, infants, and children. In addition to requesting that parents answer questions about their child with special health care needs, the survey was designed to solicit responses about all their children including those who may not have special needs and about their own health care needs as an adult. This survey provides a snapshot of the needs and issues confronting Maryland's families and provides an opportunity for parents to provide structured input into the Title V Needs Assessment process.

Qualitative Assessment

In 2008, PPMD, in partnership with OGCSHCN, was awarded a federal "State Implementation Grant for Integrated Community Systems for Children and Youth with Special Health Care Needs" from the Maternal and Child Health Bureau. The purpose of this grant is to implement the President's New Freedom Initiative by improving access to quality, comprehensive, coordinated, community-based systems of services for children and youth with special health care needs (CYSHCN) and their families that are family-centered and culturally competent. Other key partners in the Project are the Maryland Chapter, American Academy of Pediatrics and the Women's and Children's Health Policy Center at the Johns Hopkins Bloomberg School of Public Health.

The backbone of the Project was the development of a Maryland Community of Care Consortium for CYSHCN (CoC), the purpose of which is to engage diverse partners in shared planning, implementation, and evaluation of strategies to achieve six core components of a system of services for CYSHCN based on evidenced-based practices. The creation of the CoC was kicked off with a Community of Care for CYSHCN Summit held in November 2008.

Over 100 stakeholders from across the State of Maryland, including physicians, families, representatives from advocacy, government and professional organizations, public payers, and policy analysts were there to discuss the status of Maryland's current system of care. Summit participants worked in small groups focusing on each of the six core components and national outcomes for CSHCN and their families: 1) family-professional partnerships and satisfaction with care; 2) coordinated, ongoing, comprehensive care within a medical home; 3) adequate private and/or public insurance to pay for needed services; 4) early and continuous screening for special health care needs; 5) easy to use community-based service systems; and 6) receipt of services necessary to make transitions to adult life for YSHCN. In preparation for this small group work, OGCSHCN and PPMD prepared issue briefs for each of the above core outcomes. Summit participants chose and were assigned to core outcome workgroups before the Summit was convened and were provided with the issue brief corresponding to their workgroup prior to attending the Summit. The briefs were also used during workgroup discussions.

Workgroup discussions focused on identifying current objectives in each outcome area, identifying opportunities to improve systems of care, and developing strategies for improving Maryland's performance in each outcome area. Common issues included the critical need for ongoing collaboration among parents, professionals, and government and non-government organizations engaged in caring for CSHCN and the

need to identify and educate professionals (including physicians, schools, etc.) about best practices relating to CSHCN. Specific findings from each workgroup are as follows:

Family-professional partnerships and satisfaction with care. The members of this workgroup identified a vision for family-professional partnerships in Maryland, which included assuring that all parties work together collaboratively with shared ownership, responsibility, success, power and respect for each others' collective knowledge and expertise; that family-centered care, a component of family-professional partnerships, is the standard of practice that results in comprehensive high quality services; and that *all* families, regardless of income, culture, language, immigration status, SES, child's condition, or geographic location, are included in working toward this core outcome. With regards to progress on this outcome, this group summarized the current status in Maryland to be that while the state has made some progress in family-professional partnerships in certain systems (such as special education, mental health, and CYSHCN), these partnerships have not been consistently implemented across systems statewide, especially at the local and individual levels. As the NS-CSHCN data show, families who are more likely to experience disparities and less likely to achieve this outcome are from lower SES, have children with more severe conditions, and are from culturally, linguistically, and diverse communities (urban and rural). Strengths identified around this core outcome include willingness of the group to work together, existing models of family-professional partnerships, employers willing to give workgroup members time to come to meetings like the Summit, existing data, legislators willing to work with stakeholders, and Maryland families. Barriers to progress include inadequate professional and family training opportunities including pre/post professional education; support for culturally and linguistically competent supports and services; family and professional supports (time, reimbursement, financial support, etc.), and knowledge of available resources; county and regional variances; and the perception that family wisdom, experiences, expertise, and knowledge are not valued.

The group identified four interrelated strategies to improve outcomes for families of CSHCN around this core competency in Maryland. These strategies include (1) Training along several dimensions for health care providers that is developed through increased family participation in the development, training, and evaluation process for all curricula to address attitudes, beliefs, knowledge about CYSHCN; (2) Develop statewide leadership in addressing county & regional variances in family-professional partnerships, perhaps through an interagency forum to address issues; (3) Adequate reimbursement for professionals and stipends/honoraria and supports for families; and (4) Assist agencies, organizations, and providers to establish policies and procedures to promote family-professional partnerships where families participate in governance and are compensated for their time and training.

Medical Home. This workgroup felt that one strength in Maryland around this core outcome was that stakeholders have tremendous opportunities based on ongoing partnerships and relationships and strong interest in promoting the medical home model. They identified several challenges to making progress on increasing the number of CSHCN in Maryland who receive care in a medical home model. Provider characteristics, such as communication, empathy, paternalism, competence, and cultural sensitivity, and a lack of knowledge, skills and resources to implement medical home were seen as problematic. Parent characteristics such as a lack of information, inadequate preparation to effectively coordinate child's care, isolation and lack of a platform for education in Medical Home requirements and expectations, and care

coordination were also found to be problematic. The fragmentation and a lack of common standards among care coordination agencies were identified as a barrier to medical home, as was the fact that providers are not typically compensated for care coordination, non face-to-face care, and non-physician care. Finally, the group felt that there is a seeming lack of interest in Medical Home on a statewide level.

The group felt that there were several strategies that may help to improve medical home outcomes in Maryland. These included medical home indexing, physician training, family training, parent involvement in physician and resident training, revisiting how case management is implemented, realigning provider compensation to support medical home goals, and to create an ongoing inventory of community resources.

Adequate Health Insurance and Financing. This workgroup highlighted the absence of a comprehensive plan to address how services for CYSHCN are paid for in Maryland. Also missing is adequate, synthesized data to identify and address problems. Additionally, many insurance packages have gaps in coverage for key services, including mental health, ancillary therapies, home health care, and durable medical equipment. The workgroup felt that these challenges are compounded by the complexity of the insurance system in Maryland which makes it difficult to get information and contributes to a lack of clarity about eligibility for services for CSHCN. They also pointed out that there has been an erosion of employer-based benefits along with financial hardships and a loss of economic opportunities for families in the state. They identified some strategies to address insurance and financing needs, including: (1) Develop group for networking, outreach, education, advocacy, and legality around financing – prioritize issues and determine who will do what; (2) Develop a legislative agenda to address policies for financing; and (3) Develop training for insurance company customer service representatives. This group also felt it was important to create a summary of what exists now in terms of how services are currently financed in Maryland, to review information on complaints by using Maryland Insurance Administration data, and to further explore federal survey data about CYSHCN in Maryland such as the Chronic Illness and Disability Payment System as well as data from the Catalyst Center.

Early and continuous screening. According to this workgroup, there are effective statewide models of screening for selected conditions as well as an increasing awareness of the importance of screening, particularly for developmental and mental health issues. However, significant work remains to be done to implement universal developmental screening, and to improve referrals and linkages to services. Challenges to progress include poor communication and information-sharing between providers, agencies and families; insufficient and dwindling availability of appropriate resources; a need for comprehensive statewide systems involving multiple stakeholders; and a need for improved education and professional development of providers as well as a need for improved parent/family education and training. The group felt that attempts to improve this core outcome in Maryland should focus on increasing the efficiency of existing resources; promoting professional development around screening, referrals, and linkages to services; promoting education for families about recommended screening practices, available resources, and how to navigate relevant systems; creating simple, state-level policies and procedures to promote routine and continuous information sharing in order to document trends among population-level needs while retaining protections for families' privacy rights; and coordinating advocacy and lobbying efforts.

Easy to use community-based service systems. According to this workgroup, there are many resources and services for families in Maryland as well as good potential for infrastructure to improve these services. However, challenges to improving this core outcome include redundancy (ex. multiple entities offer case management) and fragmentation (too many specialty areas); lack of acknowledgement of disparities; lack of knowledge of care providers of resources and services available for families; and turf issues among agencies. There are also regional issues that need to be dealt with community by community. The workgroup identified several strategies to overcome these and other barriers: (1) streamlining services and funding (for example - one waiver not multiple waivers) as opposed to simply increasing funding; (2) a major marketing campaign about what is available and from whom, especially health departments; and (3) develop structure and strengthen relationships among local agencies for more effective communication and service provision. In order to facilitate the above suggestions, the workgroup recommended several actions, including surveying and identifying successful models in local and national communities as well as surveying local entities to find out what state level issues are making the system difficult to use.

Transition to Adulthood. This workgroup identified several issues around this core outcome in Maryland, finding that the transition system in the state is characterized by fractured activities with no common end. Despite activities within Maryland, the state continues to lack a clearly defined, comprehensive, coordinated, community based, culturally competent, collaborative, youth- and family-centered system of care to facilitate success in transition from pediatric to adult based health care. This issue is compounded by the problem of this age group accessing their own health insurance. Barriers to progress include a lack of capacity among providers to provide transition services; a lack of training among providers to assist with transition issues; a lack of data; a lack of awareness among policymakers, educators, healthcare providers, youths and families about the importance of transition planning and support; and not enough youth participation in the transition planning process. In order to improve upon this core outcome, the workgroup recommended the following: a public relations campaign to increase awareness about transition issues; development of a guide for youth and families in making health care decisions; development of a plan to collect data around transition issues; educating and empowering youth to take charge of their own healthcare; and provision of legal assistance to help families navigate the transition process.

ⁱ Maryland Department of Planning, Maryland State Data Center, *Population Estimates for Maryland with Components of Change*. Accessed on 2/4/10 from http://www.mdp.state.md.us/msdc/Pop_estimate/Estimate_09/popest_md09.shtml.

ⁱⁱ Maryland Department of Planning, Maryland State Data Center, *Demographic and Socioeconomic Outlook*. Accessed on 2/4/2010 from <http://www.mdp.state.md.us/msdc/county/stateMD.pdf>

ⁱⁱⁱ Child and Adolescent Health Measurement Initiative. 2005-06 National Survey of Children with Special Health Care Needs, Data Resource Center, www.cshcndata.org

^{iv} This is a conservative estimate: the numbers are based on projected 2010 total Maryland population estimates, which are lower than 2009 population estimates. Additionally, the estimate of 244,000 CSHCN in Maryland is calculated using 2010 projected children aged 0-19 years while the 15.5% estimate from the 2005-06 NS-CSHCN only includes children aged 0-17 years.

^v Social Security Administration, Office of Research, Evaluation, and Statistics, *SSI Annual Statistical Report, 2008*. SSA Publication No. 13-11827, September 2009.

^{vi} Maryland State Department of Education, Division of Accountability and Assessment, *Maryland Special Education/Early Intervention Services Census Data & Related Tables October 31, 2008*. Accessed on 5/11/10 from <http://www.marylandpublicschools.org/MSDE/divisions/planningresultstest/2008+-+2009+Student+Publications.htm>

^{vii} Wording changes in 2005/06. Descriptive text defining respite care ("for example, having someone care for (child's name) so you or other family members could do other things") was removed from the wording of this question C4Q06_X01 as it was asked for the 2001 NS-CSHCN. These changes should be taken into consideration when comparing results across survey years.

^{viii} Maryland Community of Care Consortium for CYSHCN (2008). *Core Outcome Brief: Family-Professional Partnerships and Satisfaction with Services*. Accessed on May 25, 2010 from <http://www.marylandcoc.com/Resources.html>

^{ix} Maryland Community of Care Consortium for CYSHCN (2008). *Family-Professional Partnerships Workgroup Report Out*. Accessed on May 25, 2010 from http://www.marylandcoc.com/uploads/Family_Professional_Partnerships.pdf

^x In the 2005-2006 version of the NS-CSHCN, significant changes and additions were made to the questions in the Care Coordination section of the survey. Questions C5Q012; C5Q17; C5Q09, C5Q10, C5Q05, C5Q06 used to derive the effective care coordination measure were newly added in 2005/06. The result is an improved and more robust assessment of this important component. Take these changes into consideration when comparing results across survey years.

^{xi} Maryland Community of Care Consortium for CYSHCN (2008). *Medical Home Workgroup Report Out*. Accessed on May 25, 2010 from http://www.marylandcoc.com/uploads/Medical_Home.pdf

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- ^{xii} Bronheim, S., Thomas, J. & McKay, K. (2007) *Families Report on the State of the State*. Maryland Family Access Initiative Project. Available from Parents' Place of Maryland.
- ^{xiii} Maryland Community of Care Consortium for CYSHCN (2008). *Insurance and Financing Workgroup Report Out*. Accessed on May 25, 2010 from <http://www.marylandcoc.com/uploads/Insurance.pdf>
- ^{xiv} 2009 Maryland Title V Block Grant Report and Application.
- ^{xv} Maryland Community of Care Consortium for CYSHCN (2008). *Early and Continuous Screening Workgroup Report Out*. Accessed on May 25, 2010 from <http://www.marylandcoc.com/uploads/Screening.pdf>
- ^{xvi} Maryland Community of Care Consortium for CYSHCN (2008). *Core Outcome Brief: Community Based Systems Organized for Easy Use*. Accessed on May 25, 2010 from http://www.marylandcoc.com/uploads/User_Friendly_Systems_Outcome_Brief_10.21.08.doc
- ^{xviii} Ibid.
- ^{xix} Maryland Community of Care Consortium for CYSHCN (2008). *Easy to Use Community-Based Services Workgroup Report Out*. Accessed on May 25, 2010 from http://www.marylandcoc.com/uploads/Easy_to_Use_Workgroup_report.pdf
- ^{xx} Maryland Community of Care Consortium for CYSHCN (2008). *Core Outcome Brief: Adolescent Transition*. Accessed on May 25, 2010 from http://www.marylandcoc.com/uploads/Transition_Core_Outcome_Brief_10.21.08.doc
- ^{xxi} Ibid.
- ^{xxii} Maryland Community of Care Consortium for CYSHCN (2008). *Transition Workgroup Report Out*. Accessed on May 25, 2010 from <http://www.marylandcoc.com/uploads/Transition.pdf>