

**Virginia Title V 2011 Needs Assessment
July 15, 2010**

**Office of Family Health Services
Virginia Department of Health**

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1. Process for Conducting the Needs Assessment

Goals and Vision:

The Virginia Department of Health (VDH) is dedicated to promoting and protecting the health of Virginians, and has as its vision to achieve, throughout the Commonwealth, healthy people in healthy communities. The Virginia Maternal and Child Health (MCH) Title V Program contributes to the agency mission of promoting and protecting health through its goal of improving outcomes among MCH populations. The agency vision of achieving healthy people in healthy communities is actualized through the strengthening of partnerships between the state Title V agency and stakeholders that include federal, state, and local MCH partners. The needs assessment contributes to the achievement of these goals by identifying needs for preventive and primary care services for pregnant women, mothers, and infants, preventive and primary care services for children, and services for Children with Special Health Care Needs (CSHCN) and examining the capacity of the state to provide services by each level of the MCH pyramid.

Leadership:

A needs assessment team made up of representatives from the Office of Family Health Services (OFHS) was formed to lead the assessment efforts. The OFHS Needs Assessment Team was led by the Policy and Assessment Unit (PAU) of the OFHS and was made up of representatives from each of the six OFHS divisions (Division of Women's and Infants' Health, Division of Child and Adolescent Health, Division of Dental Health, Division of Injury and Violence Prevention, Division of Chronic Disease Prevention and Control, and Division of Nutrition, Physical Activity, and Food Programs). In addition, the OFHS Management Team, comprised of the directors of the PAU and the six divisions, was tasked with setting the final priorities and generating state performance measures.

Methodology:

Overall needs assessment methodology. Virginia's Title V Needs Assessment for FY2011 incorporated compilation, analysis, summary, and discussion of quantitative and qualitative data gathered throughout the past five years. More quantitative data were available for this needs assessment than ever before; efforts to increase access to data and analytic capacity have resulted in a wealth of data and reports from which to draw information on the needs of the population and gaps in capacity to meet those needs. To complement these quantitative data,

efforts were made to collect qualitative data from stakeholders using key informant interviews, focus groups, and online surveys. An effort was also made to capitalize on existing sources of qualitative data available from the state's 35 health districts.

Prior needs assessments and initial planning meetings indicated that a collaborative approach was needed to capture all essential aspects of the assessment. The OFHS Needs Assessment Team met throughout 2009 and 2010 to identify existing data sources and reports, plan and implement data collection, assemble lists of stakeholders, engage stakeholders in the process, discuss data findings, and plan the priority setting process. Concurrently, the OFHS Management Team conducted a comprehensive review of progress on each of Virginia's 10 Title V Priorities to determine whether those priorities were still relevant for the needs assessment and priority-setting process in the year to come. As part of this review, the team came to a consensus that while the priorities reflected the current issues of the time, the priorities were somewhat vague and difficult to measure. This was partially by design since the OFHS took a different approach to priority-setting five years ago. The group identified a need to develop priorities that were more focused and measurable for the current assessment.

Needs Assessment and Title V annual activities. Since the 2005 Needs Assessment, the OFHS has tracked progress on the Virginia State Performance Measures that were created to assess progress on the 10 state priorities. The annual application process has been used to facilitate an annual discussion of these indicators as well as the national performance and outcome measures, the health status indicators, and the health systems capacity indicators. As capacity to obtain and analyze data has increased over the past five years, trend analysis has been incorporated into the analytic and narrative portions of the annual application. Objectives are reviewed annually and revised if targets have been reached or alternatively, when a target is considered to be unrealistic for a given measure. With annual analysis, review and discussion of Title V indicators and trends, the assessment of health status and capacity are ongoing.

The Needs Assessment Cycle in Virginia. An analysis plan was designed to provide data for the needs assessment that would identify the needs for preventive and primary care services for pregnant women, mothers, and infants; preventive and primary care services for children; and services for Children with Special Health Care Needs (CSHCN). Specifically, through the analysis plan, the goals were to strengthen the link between maternal and child health data and the assessment of needs and capacity, to provide data on the MCH populations through a variety

of formats to inform the state priority setting process, and to identify indicators that could be used to measure progress towards addressing the new Title V priorities. Analysis of quantitative and qualitative data was conducted throughout 2009 and 2010 to ensure that the OFHS needs assessment and management teams had the most current information when assessing the needs of populations.

Data profiles were used to describe the health status of each of the state MCH populations to the OFHS Needs Assessment Team members and external stakeholders. Surveys were analyzed to help the OFHS Needs Assessment Team identify the needs of the state MCH populations. Worksheets were designed and implemented to examine the needs of participants in state funded programs and the capacity of the state to provide services by each level of the MCH pyramid to those in need. Each OFHS division also completed a worksheet on existing partnerships to facilitate the identification of new opportunities for partnerships and collaborative efforts to address the needs of the MCH populations. Quantitative and qualitative data were analyzed, summarized, and disseminated to facilitate the identification of state MCH priority needs and aid in the setting of state-negotiated performance measures.

The data analysis phase provided an evidence base to identify priority needs for MCH populations and assess capacity to address those needs. The data were examined in the context of national MCH operational theory components, such as the ten essential MCH public health services and the MCH pyramid of services, and the framework for the practice of maternal and child health at the state level, including the existing Title V priorities, the Title V performance and outcome measures, Title V capacity measures and Virginia's Title V programs. From the data and capacity discussions, the OFHS Needs Assessment Team and Management Team cycled through to identify priority needs, honing these needs into Virginia's MCH priorities for the next five years, and establishing state-negotiated performance measures to monitor progress on the priorities.

Stakeholder involvement in the Needs Assessment. Stakeholders had an integral role in the needs assessment, particularly in assessment of whether providers and consumers perceived that VDH had the capacity to address the needs of MCH populations. Stakeholder input was invited through three main avenues 1) Focus Groups, 2) Key Informant Interviews, and 3) Stakeholder Input Meeting. Both the Key Informant Interviews and the Focus Groups were carried out throughout the latter part of 2009 by the Central Virginia Health Planning Agency

(CVHPA). The CVHPA is a nonprofit organization with more than 30 years experience in health planning and needs assessment which assisted the OFHS with a similar needs assessment in 2004-05. A detailed description of the focus groups and key informant interviews can be found under “Primary Data Collection and Qualitative Assessments,” and an executive summary is located in Appendix A. Input from these efforts was gathered into a final report, and a representative from CVHPA made an oral presentation to the OFHS Needs Assessment Team. A detailed description of the Stakeholder Input Meeting can be found under *Section 2. Partnership Building and Collaboration Efforts*. Input from the stakeholder meeting was discussed by internal OFHS stakeholders and the OFHS Management Team immediately following the adjournment of this meeting. All forms of stakeholder input were considered in the priority-setting process.

Methods for Assessing Three MCH populations:

Both quantitative and qualitative methods were used to assess the strengths and needs of each of the MCH populations. To the extent possible with each data source, indicators were examined by race/ethnicity, age, education, insurance status, income, and geography. Results of trend analyses on the Title V National and State Performance Measures were used to describe progress on risk factors and outcomes. For each population group, quantitative and qualitative data were gathered, analyzed, and presented to the OFHS Needs Assessment and Management Teams. As part of each data presentation, the group was asked to consider these two questions: 1) What are the needs that you think should be propagated to the priority setting process? 2) What capacity issues should be targeted in the priority setting process? Each presentation was followed by a team discussion of the most urgent needs for the population group.

Pregnant women / mothers / infants. Data were reviewed on women, pregnant women, and infants around topics identified as being gaps in prior Needs Assessments. Since the previous needs assessment, there has been movement on the national level toward incorporating the lifespan approach into MCH and Title V. The 45 Core State Preconception Health and Health Care Indicators proposed by a CDC-sponsored state working group were used to fill gaps in previous assessments about the health of women before they become pregnant in addition to the well-studied prenatal and infant health indicators. Virginia was awarded the Pregnancy Risk Assessment Monitoring System (PRAMS) grant in 2006, and for the first time information from PRAMS was used in addition to birth certificates and Behavioral Risk Factor Surveillance

System (BRFSS) to describe the health status of women and pregnant women in Virginia. Infant health assessment utilized birth and infant death certificates and infant health information from the PRAMS survey. In addition, Fetal Infant Mortality Review (FIMR) analysis and Perinatal Periods of Risk (PPOR) were used to provide qualitative and quantitative data on where to target infant mortality reduction efforts.

Children. Assessment of child health relied heavily upon results from the National Survey of Children's Health (NSCH) from 2003 and 2007. Using the materials compiled by the Child and Adolescent Health Measurement Initiative (CAHMI) Data Resource Center (www.childhealthdata.org), Virginia's indicators were compared to the nation. Data from the NSCH were compiled with hospitalizations, mortality, education, WIC, social services, and other data into Child Health Profiles that summarized the state of child health in Virginia for the OFHS Needs Assessment Team and external stakeholders. Profiles were divided into three age groups (1 to 5 years, 6 to 11 years, and 12 to 17 years) to reflect the different indicators and health issues that affect children at different stages. Healthy child development has been a major focus of efforts to improve child health and ensure that children arrive at school healthy and ready to learn. This needs assessment includes indicators from the NSCH that can be used collectively to assess the progress towards healthy child development.

Children with special health care needs. The National Survey of Children with Special Health Care Needs was used to assess both health status and capacity of health systems to meet the needs of children with special needs. The MCHB Core Outcomes / National Performance Measures for Children with Special Health Care Needs were examined by age group, race/ethnicity, insurance status, consistency of insurance, and medical home status. Progress made in Virginia on these indicators was compared to surrounding states and the nation using tools and maps prepared by The CAHMI Data Resource Center.

Methods for Assessing State Capacity:

A combination of quantitative data sources and qualitative information was used to assess the state's capacity to provide direct health care, enabling, population-based, and infrastructure building services. Specifically, the Title V Health Systems Capacity Indicators, and National and State Performance Measures were used to assess trends over time in the utilization and provision of preventive services through the state's FAMIS and FAMIS Plus (SCHIP and Medicaid) programs, prenatal care utilization, asthma hospitalizations, high-risk deliveries at

appropriate facilities, SSI services, hearing screening follow-up, and dental providers in underserved areas. The Nurse Managers of the state's 35 Health Districts were surveyed to identify services provided, needs of their population, the district's capacity to meet those needs, and the partnerships utilized in their district. Key informant interviews and focus groups were used to identify what MCH stakeholders around the state believed were the biggest challenges for the OFHS to provide services to meet the needs of Virginia's MCH populations; suggestions were provided for how capacity could be utilized, expanded, or shifted to better accomplish the goal of improving outcomes. Worksheets were completed by the OFHS Title V programs to aid in assessment of current activities, capacity, barriers to implementation, and lessons learned.

Current capacity in OFHS was compared to capacity at the time of the 2005 needs assessment to determine the impact of changes in national and state policies, program staffing, activities of state and local partners, and loss of funding on capacity. Throughout the needs assessment period Virginians were affected by shifts in state funds for health services, loss of insurance coverage, and unemployment. As the team reviewed the data on needs of each population group, capacity to meet identified needs was discussed in the context of the current economic, political, and budgetary climates.

Data Sources:

OFHS Data Mart. Virginia's 2005 Title V Needs Assessment identified access to data as a critical gap and stated that a priority area of need was to "Enhance data collection and dissemination efforts to promote evidence-based decision making in planning, policy, evaluation, allocation and accountability." As part of efforts to improve the timeliness and quality of family health surveillance efforts and to establish regular and ongoing links among key datasets, the OFHS has used Title V and State Systems Development Initiative (SSDI) funds to support an MCH Epidemiologist and the MCH Lead Analyst. Through their work, the MCH Epidemiologist and MCH Lead Analyst have established and maintained the OFHS Data Mart, which is a repository of data selected and organized to support the surveillance, evaluation, policy and program planning needs of staff in OFHS.

The OFHS Data Mart was created to address gaps in the areas of data collection and access (primary data such as surveys and secondary data such as infant death certificates), statistical analysis (such as trend analysis), and data linkage (the connection of two or more datasets by common identifiers which adds information that cannot be obtained from a single

dataset alone). The OFHS Data Mart provides a platform for storage and linking of key family health datasets. These data are cleaned, aggregated, and standardized to enable ongoing surveillance reporting, to facilitate data analysis, and to evaluate programs. Detailed descriptions of data used for the needs assessment can be found below.

State and Health District Level Data

Vital Events. The Title V annual application and the five-year needs assessment rely heavily on the information obtained from certificates of live births, deaths, fetal deaths, intentional terminations of pregnancy, and linked infant birth-death records to assess the health of MCH populations. In Virginia, these data are collected by the Division of Vital Records and distributed by the Division of Health Statistics. The OFHS has obtained copies of these data through a Memorandum of Agreement, and these data represent the core datasets in the OFHS Data Mart. Vital events data are used extensively to describe pregnancies, the birth population, and mortality in Virginia. These data allow for assessment of risk factors, birth outcomes, and to some extent, the impact of social determinants of health.

Behavioral Risk Factor Surveillance System (BRFSS). Virginia BRFSS is an annual survey of Virginia's adult population about individual behaviors that relate to chronic disease and injury. The BRFSS is the primary source of state-based information on health risk behaviors among adult populations. BRFSS collects data through monthly telephone interviews with adults aged 18 years or older. Analyses of BRFSS data examined various preconception health, health status and health behaviors for all women (overall) and by age. Prevalence estimates and trend analyses were stratified by women of child-bearing age (18-44 years) and women 45 years and older to identify met and unmet needs of women across the lifespan. One limitation of BRFSS data is that not every household has a telephone. Although telephone coverage varies by state and by subpopulation, in 2003, BRFSS estimated that 97.6% of U.S. household had telephones.

Pregnancy Risk Assessment Monitoring System (PRAMS). Virginia PRAMS is a joint research project between the Virginia Department of Health and the Centers for Disease Control and Prevention (CDC). VA PRAMS collects Virginia-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. Virginia began collecting data for PRAMS in 2007. Each month, approximately 100 mothers of 2-4 month old

infants are randomly selected from birth certificate data, of which 50 are normal birth weight and 50 are low birth weight. Eligible mothers are mailed surveys. Mail surveys and phone interviews are conducted in English and Spanish. Virginia's weighted response rate in 2007 was 57%. VA PRAMS data have been used to address data gaps from prior needs assessments. While PRAMS data is weighted by the CDC to be representative of all mothers who recently gave birth in 2007, PRAMS does not represent pregnancies that resulted in fetal death or abortion.

Virginia Health Information (VHI). VHI distributes patient-level information on inpatient hospital discharges to Virginia residents. VHI data were used to determine the prevalence and trends of maternal morbidity during labor and delivery from 2000 to 2008. The methodology was based on a national study.¹ Maternal morbidity during labor and delivery was defined as a condition that adversely affects a woman's physical health during childbirth beyond what would be expected in a normal delivery. Maternal morbidity was divided into obstetric complications, pre-existing medical conditions, and cesarean delivery. VHI data were also used to assess childhood morbidity due to ambulatory-sensitive conditions and injuries. VHI data does not include outpatient and emergency department discharges.

Fetal and Infant Mortality Review (FIMR). There are five perinatal regions in Virginia. When an infant or fetal death greater than 20 completed weeks of gestation occurs, each region has a methodology to select which deaths to review. The medical record is abstracted for the infant and mother and a maternal interview is conducted. Information from the chart abstraction and maternal interview are presented to a Case Review Team (CRT) of experts in health care and community health and social services. The CRT reviews the deaths to identify issues related to the death and makes recommendations on how to improve perinatal health systems in their community. These recommendations are presented to a Community Action Team (CAT) composed of two types of members: those who have the political will and fiscal resources to create large-scale system changes, and those who can define a community perspective on how best to create the desired change in the community (National FIMR). The CAT develops an action plan and implements the recommendations of the CRT. Each region has at least one CAT and CRT.

¹ Danel, I., Berg, C., Johnson, C.H., Atrash, H. Magnitude of maternal morbidity during labor and delivery: United States, 1993-1997. *Am J Public Health.* 2003;93:631-4.

FIMR Mid-Year Assessment. Issues related to fetal and infant deaths were tallied by two raters (the Data Analyst and the Policy Analyst for DWIH) using summaries of the CRTs deliberations submitted from July 1, 2009 to December 26, 2009. Each rater independently developed a list of the most frequently identified issues by counting or tallying the issues within each region and then summing the all the regional issues into a state total. The lists of issues tallied by each rater were merged into one final list. To account for variability between raters, percentages calculated by each rater were averaged for final region-specific and statewide percentages.

Maternal Mortality Review Team (MMRT). In Virginia, the MMRT reviews every death of women during a pregnancy or within one year of a pregnancy regardless of the cause of death (termed pregnancy-associated death). Cases of pregnancy-associated death are identified through one or more of the following: (1) through the International Classification of Diseases, Tenth Revision (ICD), a designation of the cause of maternal death as occurring during pregnancy, childbirth and the puerperium; (2) by matching birth or fetal death certificates with maternal death certificate information; and/or (3) by selecting cases where a Commonwealth of Virginia death certificate indicates the decedent was pregnant within three months of her death. Team findings are used to educate colleagues and policymakers about these deaths, to propose ameliorations, changes in law and/or practice, and to recommend interventions to improve the care of women during the perinatal period.

Virginia Infant Screening and Infant Tracking System (VISITS). VISITS is a data system which contains tracking data for the Virginia Early Hearing Detection and Intervention Program (hearing screenings), the Virginia Congenital Anomalies Reporting and Education System (VaCARES: birth defects registry) and positive newborn screening results. VISITS data is used to measure hearing screening benchmarks such as the 1:3:6 guidelines, which require a hearing screening before one month of age, a diagnosis before three months, and initiation of intervention before 6 months of age, and to track the prevalence of birth defects in Virginia children up to 2 years of age.

National Survey of Children's Health. This survey, sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration, examines the physical and emotional health of children ages 0-17 years of age. The survey is administered using the State and Local Area Integrated Telephone Survey (SLAITS) methodology, and it is sampled and

conducted in such a way that state-level estimates can be obtained. The survey has been designed to emphasize factors that may relate to well-being of children, including medical homes, family interactions, parental health, school and after-school experiences, and safe neighborhoods. The main limitation of the survey is the fact it is based on parents' recollection of screenings received and child's health over the past year, with no opportunity for confirmation with medical records or physical measurements.

National Survey of Children with Special Health Care Needs. This module of the National Survey of Children's Health was used to assess the prevalence and impact of special health care needs among Virginia's children and evaluate changes since 2001. This survey included topics such as the extent to which children with special health care needs (CSHCN) have medical homes, adequate health insurance, and access to needed services. Other topics include functional difficulties, care coordination, satisfaction with care, and transition services. Interviews were conducted with parents or guardians who know about the child's health.

Virginia Youth Survey. Through a five-year grant provided by the Centers for Disease Control and Prevention, VDH lead the first effort to gather information about the health risk behaviors of youth. The Virginia Youth Survey (VYS) was developed to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults within in Virginia. These behaviors, often established during childhood and early adolescence, include tobacco use, unhealthy dietary behaviors, inadequate physical activity, alcohol and other drug use, and behaviors that contribute to unintentional injuries and violence. The Virginia Youth Survey is conducted every two years, usually during the spring semester. The school-based survey is anonymous, voluntary and is an integral tool for collecting information about the health behaviors of Virginia's high school youth. Like other surveys, a limitation of the VYS is that it is based on self-report, and it is likely that elements such as BMI will be an underestimate of the true value. The VYS did not reach the response rate necessary to receive weighted data and be included in the national Youth Risk Behavior Survey data.

Maternally-linked pregnancy history. This dataset was created by linking Virginia resident birth and fetal death records from 1990 to 2007 by a maternal identifier (SSN) to create a pregnancy history. The dataset was used to examine interpregnancy interval to assess whether

women in Virginia are practicing optimal pregnancy spacing. The dataset has also been used to examine factors that impact repeat outcomes such as low birthweight, preterm birth and teen pregnancy. One limitation of this dataset is that it does not include information on induced terminations of pregnancies because certificates for these events lack identifiers that can be used for linkage.

Population Denominators and Characteristics. Two modes of U.S. Census Data were used to provide population-level information on poverty, housing, and employment. The American Community Survey (ACS) is a nationwide survey designed to provide communities with population and housing information every year instead of every ten years so communities can assess how they are changing.² The Current Population Survey is a monthly survey of households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics to provide a comprehensive body of data on the labor force, employment, unemployment, and persons not in the labor force.³ The National Center for Health Statistics releases bridged-race population estimates of the resident population of the United States, based on Census 2000 counts, which were used in calculating vital rates. These estimates result from bridging the 31 race categories used in Census 2000, as specified in the 1997 Office of Management and Budget (OMB) standards for the collection of data on race and ethnicity, to the four race categories specified under the 1977 standards.⁴

Health District Survey of Prenatal Care. Every health district must submit an annual report that describes how prenatal services are provided in the health district. Information submitted includes level of prenatal care service provision, number and description of clinic sessions, medical management, ultrasound and non-stress testing, funding, and the roles of the district, the locality, hospitals, and private physicians in provision of PNC. These data were analyzed with both qualitative and quantitative techniques to provide information about capacity to meet prenatal care needs.

Virginia State 3rd Grade BSS Survey. The Division of Dental Health conducted a statewide dental assessment in 2009 to determine the oral health needs of Virginia's third graders. Weighted values from the survey yielded a population base of 90,299 third graders, and

² U.S. Census Bureau, American Community Survey, <http://www.census.gov/acs/www/SBasics/>

³ U.S. Census Bureau, Current Population Survey, <http://www.census.gov/cps/>

⁴ National Vital Statistics System, U.S. Census Populations with Bridged Race Categories http://www.cdc.gov/nchs/nvss/bridged_race.htm

weighted values are considered to be a reasonably realistic assessment of the population of Virginia third grade students enrolled in public schools in Region 3 in 2009. The assessment consisted of an open mouth exam during which sealants, decay, and restorations were identified.

Other data sources. Several other data sources were used to provide information on the health of maternal and child health populations:

- The National Immunization Survey is used annually to obtain data for Title V National Performance Measures regarding childhood immunization coverage and breastfeeding at 6 months of age in Virginia.
- The 2007-08 Virginia Youth Tobacco Survey (YTS) of public school students in grades 6 through 12 was used to describe tobacco use, availability of tobacco products, secondhand smoke exposure, tobacco prevention education, tobacco advertisements, and media depictions of tobacco use.⁵
- Data from The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) was used to assess body mass index for children ages 2 to 5 who participate in WIC.
- The VDH Webvision database contains demographic and service information from individuals receiving health department services in clinics across the commonwealth. Information was accessed via the VDH Data Warehouse and used to assess family planning utilization and prenatal care provision in the 35 health districts.
- The KIDS COUNT Data Book and online KIDS COUNT Data Center, funded by the Annie E. Casey Foundation, were used to the health needs and well-being of children at the state and local levels.⁶

Primary Data Collection and Qualitative Assessments

Program Worksheets. The OFHS Needs Assessment Team designed two program worksheets to capture information about OFHS programs that serve Title V populations and/or derive a portion of their budget from the Title V Block Grant. The first worksheet was designed to capture program goals and objectives, activities, indicators that measured activities, data collection efforts, and qualitative information to inform the Title V Priority-setting process. This

⁵ Virginia Foundation for Healthy Youth (formerly the Virginia Tobacco Settlement Foundation), <http://www.healthyouthva.org/about.asp>

⁶ The Annie E. Casey Foundation, KIDS COUNT Data Center, datacenter.kidscount.org.

worksheet was also an opportunity for programs to demonstrate needs, highlight areas where capacity could be expanded to meet needs, and make suggestions for the future. The second worksheet was adapted from “Worksheet 1: Assessment of Current and Potential Assets for MCH Systems Building” from the HRSA report *Promising Practices in MCH Needs Assessment: A Guide Based on a National Study*. The worksheet was modified to identify MCH program resources such as partnerships and advisory committees, and required the respondent to assess the strength of current relationship, perceived interest in MCH, contribution of resource to MCH systems-building, and suggest steps for further mobilization of the resource. The inventory of resources was used to capture formal and informal connections made with other important partners at the state and community level; the results were summarized to identify opportunities for cross-collaboration and expansion.

Survey of Health District Nurse Managers. A survey of the nurse managers of the 35 Virginia Health Districts was developed to identify needs and capacity issues in four domains: 1) the population’s need for services and the capacity of the Health District and surrounding community to meet those needs 2) the service capacity of the health district and other providers in the community for four types of services: prenatal, postpartum, well child, and sick child. 3) training, teaching, and technical assistance needs and capacity, and 4) partnerships and staff involvement with community organizations. The survey was created and delivered through SurveyGizmo.com and only one person from each health district was asked to respond, though the nurses were encouraged to confer with colleagues before completing the survey. Of the 35 Health Districts, 31 submitted responses, for a total response rate of 89%.

Focus Groups. Five focus groups were conducted from mid-October through the end of November 2009 by CVHPA staff with representatives from each of Virginia’s health planning regions. The needs assessment team identified participants in each region to be invited. Because of their ongoing community involvement, Virginia’s Regional Perinatal Councils (RPCs) were invited to help facilitate the engagement of participants; RPC staff arranged for meeting sites and sent invitations to participants. Each focus group invitation list included representatives involved with maternal and child health issues within the region to provide opinions on needs and gaps in service for the following population groups: infants (up to 1 year), children (1-11), children with special health care needs, adolescents (12 to 18), adult women, adult men, and older adults (65 and over). CVHPA staff conducted the focus groups using a standardized focus

group protocol. Questions for the focus groups and key informant interviews were generated by the OFHS Needs Assessment Team; the questions were nearly identical so that input from key informants and focus groups could be compared directly. Suggestions for improvement and involvement by state/local/regional government, community, and private sector were offered by the five focus groups.

Key Informant Interviews. Twenty-four key individuals representing health providers, governmental entities and organizational stakeholders with knowledge of various aspects of maternal and child health were identified by the OFHS Needs Assessment Team. Key informant Stakeholders were interviewed during the period of October through December 2009 by CVHPA staff. Each interview was conducted using a standardized interview protocol which was structured to elicit responses regarding the overall environment as it relates to children and families, the needs of the specific populations served by Title V funding, the perceived role of the OFHS in meeting the needs of these populations, and the steps that could be taken by OFHS and other organizations to better meet the needs of families and children. Focus group and key informant interview responses were reported back to the OFHS Needs Assessment Team in an oral presentation and a written report.

Health District MAPP Assessments. In Virginia, input from community groups and citizens was also received through community assessments conducted within several health districts. In order to better understand the scope of nutrition, health, recreation and the overall environment, the health districts used a MAPP process (Mobilizing for Action through Planning and Partnerships). MAPP is a community-driven strategic planning process for improving community health. This framework, which is facilitated by public health leaders, helps communities apply strategic thinking to prioritize public health issues and identify resources to address them. MAPP is not an agency-focused assessment process; rather, it is an interactive process that can improve the efficiency, effectiveness, and ultimately the performance of local public health systems. MAPP assessments were obtained from 7 of 35 health districts. The results and issues identified by non-health stakeholders through the MAPP process were compared with results received from key informant interviews and focus groups to identify commonalities and new areas of interest.

Linkages between Assessment, Capacity, and Priorities:

Assessment of strengths and needs, examination of capacity, and the selection of priorities were all driven by the qualitative and quantitative data collected for the needs assessment. Stakeholders were involved at each point in the process, providing input, participating in discussions, and making recommendations for priorities. Areas of need identified through discussions with stakeholders included health system capacity issues, population health status issues, and public health approaches or strategies. Several areas of need were relevant to more than one of the population groups or were noted to be important across population groups, which highlighted the importance of a holistic approach to MCH that can efficiently address cross-cutting issues. The final priorities were selected while taking into consideration the following factors: 1) progress can be tracked and measured, 2) OFHS can capitalize on opportunities for collaboration, 3) resources can be redirected or leveraged, 4) efforts are long-lasting and sustainable 5) the investment of time, effort, and money yields good returns, 6) innovation, 7) new populations could be reached, 8) efforts incorporate cross-cutting health care needs and the life span approach, 9) efforts are goal-oriented, 10) barriers to effectiveness, and 10) cost.

Dissemination:

Before the assessment was finalized, the Needs Assessment document was distributed to internal VDH stakeholders for comment, editing, and to ensure that the assessment captured all aspects of the work and findings of the needs assessment. The fully drafted assessment document was also disseminated to external stakeholders that attended the stakeholder input meeting and participants in the key informant process. The draft document was made available on the VDH website for a period of public comment, and input was addressed and incorporated into the Needs Assessment document when appropriate. Once the Needs Assessment document has been finalized and submitted, the complete version will be disseminated to stakeholders and posted on the VDH website.

Strengths and Weaknesses of Process:

One significant limitation of the Needs Assessment was limited public input on needs and capacity. In past needs assessment efforts, there were difficulties with finding reliable ways to garner input from general public. Public meetings, though publicized, were not well attended, and public online surveys generated fewer than desired responses. Additionally, limitations in

funding and the diversion of public health staff to H1N1 activities (increased caseload, vaccination events), caused the VDH Office of Community Health to advise the OFHS Needs Assessment Team against surveying health department clients. The logistics of conducting a paper-based survey in the health department at the time of service would have been an unrealistic imposition on the local health department staff given the extra H1N1 activities expected of them, and the desired information was unlikely to be obtained via other methodologies such as an online survey (no estimates exist of how many health department clients had access to a computer) or telephone survey (no way of funding or staffing this kind of initiative).

To address this limitation the OFHS Needs Assessment Team made other efforts to gain insight into the needs of Virginia's residents. The Team solicited the 35 health districts for MAPP assessments and any focus groups they had conducted over the past few years to obtain information on their clients and the communities in which they live. MCH stakeholders for the focus groups were drawn from the realms of medical care, public health, social services, universities, and the local communities to allow for input on health issues from a wider perspective. The types of partnerships that Virginia's Title V programs participate in revealed that public health is connected with myriad public, private, and non-profit organizations that can help tackle problems that reach beyond the scope of services OFHS alone can provide.

A major strength of this assessment was the wealth of quantitative data, and a concomitant increase in capacity in the OFHS to analyze, summarize, and disseminate this information. The increased availability of data and capacity to use more advanced analytic techniques over the past five years has increased evidence-based policy and planning efforts in the OFHS. Assessment of needs of the MCH population groups and the capacity of the OFHS to meet those needs was accomplished using a variety of techniques, including analysis by critical stratification variables such as race/ethnicity, age, geographic location, and when available, measures of socioeconomic status such as income / education level / insurance type. Trend analysis was used complement the point-in-time data to help the OFHS Needs Assessment Team and stakeholders determine if key indicators are increasing, decreasing, or showing no change.

2. Partnership Building and Collaboration Efforts

The Virginia Title V program has both formal and informal partnerships with the public and private sectors as well as state and local levels of government. The partnerships are

important in helping to build the strength of Virginia's MCH systems. The relationship between the Title V program and its partners is built on the need to expand capacity to address common goals and reach common target populations. The Title V program has forged partnerships that include funding, education, technical assistance and training, advising, and advocacy efforts to address common goals.

In Virginia, state health and human services agencies are organized under the jurisdiction of the cabinet level Secretary of Health and Human Resources who is appointed by the governor. The major health and human services agencies include the Department of Health, the Department of Medical Assistance Services (DMAS), the Department of Behavioral Health and Developmental Services (DBHDS, formerly the Department of Mental Health, Mental Retardation and Substance Abuse Services), and the Department of Social Services (DSS). The Departments of Juvenile Justice (DJJ), Corrections (DOC), and Education (DOE) are located under different cabinet secretaries. The Health and Human Resources Secretariat also includes a number of advisory boards that provide opportunities for coordination, including the Governor's Advisory Board on Child Abuse and Neglect, the Child Day Care Council and the Governor's Substance Abuse Services Council.

Partnerships with MCH and HRSA programs:

The Title V funded programs are coordinated with other health department programs that serve maternal and child populations, including Immunization, HIV and STD Prevention, and Emergency Medical Services. Immunizations are provided as part of local health department services, as are family planning and well-child services. Screening and treatment for STDs are provided in family planning clinics. Family planning, prenatal, and well-child patients may be referred to health department dental services. The Title V program works closely with the Lead Safe Virginia program located in the Office of Environmental Health. The Division of Dental Health's community water fluoridation program has a strong working relationship with the Office of Drinking Water.

Partnerships within the Virginia Department of Health:

Staff members from the Divisions of Injury and Violence Prevention and Women's and Infants' Health participate on the VDH Office of the Chief Medical Examiner's Child Fatality and Review Team and the Maternal Mortality Review Team. The Office of Minority Health and

Public Health Policy provides the Title V programs with resources regarding cultural competency and has provided opportunities for dialogues regarding the social determinants of health. Title V staff members participated with their office in planning the first state conference on health inequity. The Division of Child and Adolescent Health works closely with the Division of Immunization to track trends in childhood immunizations, and the Division of Injury and Violence Prevention has worked on issues such as traumatic brain injury and child emergency transport with the Office of Emergency Medical Services. The Office of Information Management provides support to the development and maintenance of specific data systems such as the CCC-SUN (Care Connection for Children-System Users Network), and VISITS II (the Virginia Infant Screening and Infant Tracking System), as well as access to OFHS health department clinic, family planning, and hospitalizations data through the data warehouse.

The VDH Divisions of Vital Records and Health Statistics are important partners in the provision of birth and death statistics. An agreement between the OFHS and Health Statistics is in place that promotes the sharing of birth and death data needed for MCH analysis, program planning and evaluation. The agreement also provides for timely release of monthly provisional birth and death data which is used for implementation of Virginia's Pregnancy Risk Assessment Monitoring System (PRAMS) and case follow-up for newborn hearing screening (EHDI), birth defects (VaCARES), and Fetal Infant Mortality Review (FIMR).

Title V funding is provided to the district health departments to address MCH related needs such as prenatal services, breastfeeding promotion, obesity prevention, injury prevention, dental health and access to care. This partnership is mutually beneficial; OFHS staff members work closely with the districts to increase capacity to serve high risk or at-risk populations, and district staff members serve on OFHS committees to provide a local health department perspective. Key staff from the districts participated in surveys, focus groups, and the stakeholder input meeting to help identify the top areas of need that shaped the Title V priorities.

Partnerships with other governmental agencies:

The Title V program also has strong relationships with other state agencies, including the Department of Medical Assistance Services (DMAS), the Department of Education (DOE), the Department of Social Services (DSS), and the Department of Behavioral Health and Developmental Services (DBHDS).

An interagency agreement exists between VDH and DMAS for the coordination of Titles V and XIX services (See Attached Memorandum of Agreement). The assignment of responsibilities as stated in the agreement are intended to result in improved use of state government resources and more effective service delivery by assuring that the provision of authorized Medicaid services is consistent with the statutory function and mission of VDH. The agreement has been modified to include a Business Associate Agreement for the purpose of data sharing. The current data sharing projects involve the exchange of blood-lead testing results, eligibility information and decedent information.

The interagency agreement also includes coordination of Medicaid and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Mechanisms to assist eligible women and infants to obtain Medicaid coverage and WIC benefits are included in the agreement. In addition, the Maternal Outreach Program, a cooperative agreement which expands the VDH Resource Mothers Program, supports the coordination of care and services available under Title V and Title XIX by the identifying pregnant teenagers who are eligible for Medicaid and assisting them with eligibility applications.

DMAS directs the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program and collaborates with the VDH and DSS on specific components of the program. VDH interagency responsibilities include, when appropriate, (1) providing consultation on developing subsystem and data collection modifications and (2) collaborating on (a) modifying the Virginia EPSDT Periodicity Schedule based on Bright Futures, (b) developing materials to be included in the EPSDT Supplemental Medicaid Manual and other provider notices as may be required, (c) providing EPSDT educational activities targeted to local health departments, (d) implementing strategies that will increase the number of EPSDT screenings, and (e) making available current EPSDT program information and materials that are needed to communicate information to local health department patients.

VDH partners with DMAS, and DSS to link high-risk pregnant women and infants to the Baby Care program. Program services include outreach and care coordination, education, counseling on nutrition, parenting and smoking cessation, follow-up, and outcome monitoring. This program has demonstrated significant improvements in birth outcomes. OFHS staff members participate in trainings with DMAS staff on Baby Care as well as Bright Futures and EPSDT.

The Division of Child and Adolescent Health's Care Connection for Children (CCC) and the Child Development Clinic Services (CDC) programs have provider agreements with DMAS. The CCC and CDC programs bill Medicaid for physician, laboratory, psychological, and hearing services. In the past, DCAH worked with DMAS to revise several state-specific reimbursement codes used for CSHCN. Copies of these agreements are on file in the Office of Family Health Services and are reviewed periodically.

The OFHS contracts with the six regional sites that make up the Statewide Human Services Information and Referral System, administered by the Virginia Department of Social Services, for information and referral services for the MCH Helpline. The system can be accessed from any location in the Commonwealth by dialing "211." The system has been helping Virginians since 1974. This number also serves as the state number for the National Baby Line which provides information and referral for prenatal care. Data documenting maternal and child health related service calls are collected and reported to the OFHS quarterly as required by the contract. This information provides data for future needs assessments and program planning. Copies of the most recent contracts are on file in the OFHS.

Until recently DSS provided TANF funding to support four OFHS programs – Partners in Prevention, Girls Empowered for Success (GEMS), Teen Pregnancy Prevention Initiative, and Statutory Rape Prevention through a Memorandum of Understanding. The TANF funding for these programs has been eliminated as a result of state budget cuts.

The Division of Child and Adolescent Health staff members are involved in the DBHDS early childhood intervention program and staff from the Division of Women's and Infants' Health serve on a DBHDS committee that focuses on the issue of substance use during pregnancy. The Commissioner of the Department of Health serves on the Early Intervention Agencies Committee that was established in 1992 through Section 2.1-760-768 of the *Code of Virginia* to ensure the implementation of a comprehensive system of early intervention services for infants and toddlers. A representative from the DCAH is an active participant on the Virginia Interagency Coordinating Council (VICC) and the Part C Interagency Management Team. At the local level, professional staff members from the health departments and the Child Development Clinics serve on the local interagency coordinating councils.

OFHS staff and programs are involved with the Department of Education in a number of ways. The VDH school-aged health specialist works closely with the DOE to develop policies

and guidelines for school nurses and participates in the annual School Nurse Institute. The Title V program collaborates with DOE to develop and maintain guidelines for school health services for CSHCN, such as the First Aid Guide for School Emergencies and the Guidelines for Specialized Health Care Procedures. DOE staff members serve on the Virginia Youth Survey (Virginia's YRBS) advisory committee. District health department staff serve on the local School Health Advisory Boards (SHAB). An interagency agreement exists between VDH and the DOE for the inclusion of educational consultants as members of the interdisciplinary teams in the Child Development Clinics and the Care Connection for Children centers. The OFHS Division of Dental Health also works closely with school districts, individual schools, and WIC programs to provide preventive dental services and surveillance.

A collaborative relationship has also been established between the Care Connection for Children Program, the Social Security Administration Field Office in Virginia, and the Disability Determination Services in the Virginia Department of Rehabilitative Services to enhance each program's roles and responsibilities pertaining to Supplemental Security Income (SSI) beneficiaries. All involved partners continue to implement strategies for publicizing each program, facilitating application for benefits and services, expediting referrals, acquiring medical and other evidence, and reciprocal training about programs available to children with disabilities.

University partnerships:

There are ongoing collaborations with Virginia's undergraduate and graduate medical and health education programs. For example, OFHS contracts with the Virginia Commonwealth University's (VCU) Department of Epidemiology and Community Health for the services of a faculty level MCH epidemiologist who works within the OFHS. Several Title V staff members are affiliate faculty in the VCU's emerging school of public health and provide mentorship and training opportunities for MPH student interns within the OFHS. VDH has used partnerships with a number of state universities, including VCU, Virginia Tech, Eastern Virginia Medical School, George Mason University, James Madison University and the University of Virginia, to augment capacity to develop trainings, conduct research, write reports, carry out web development, and evaluate programs. OFHS contracts with university medical centers to provide child development services and CSHCN services through Care Connection for Children. Other contracts with university medical centers include services for sickle cell disease, and bleeding disorders, as well genetic consultation.

Partnerships with state and local organizations:

The Comprehensive Services Act for At-Risk Youth and Families provides a comprehensive, coordinated, family-focused, child-centered, and community-based service system for emotionally and/or behaviorally disturbed youth and their families throughout Virginia. One representative from VDH/Title V serves on the State Executive Council and another serves on the State and Local Advisory Team (SLAT). Other representatives from the state and local health departments serve on workgroups. All local health departments and/or Child Development Clinics serve on local community policy and management teams and family assessment and planning teams.

The Breastfeeding Advisory Committee is comprised of influential Virginians representing various organizations that represent a variety of practice settings and create a multidisciplinary membership. Member organizations include, but are not limited to, the American College of Nurse Midwives, the American Dietetic Association, James Madison and Old Dominion Universities, La Leche League, Medela, and the Virginia Nurses Association. The BAC works in partnership with the OFHS to increase the initiation and duration of breastfeeding among Virginia mothers.

The Commissioner's Infant Mortality Work Group, staffed by OFHS, involves members of the community who have credibility and can influence local families. In addition to medical/health professionals, a wide range of community members such as local educators, civic and business officials, the NAACP, and the AARP are included as members. The Work Group's mission is to develop specific strategies and actions that can be taken in the state's local communities over the next several years to improve the health of pregnant women, new mothers and infants.

The Virginia Chapter of the March of Dimes (MOD) continues to be a significant partner in advocating for women and infants. The MOD has worked closely with Virginia's Healthy Start program and with the home visiting programs across the state. MOD staff members participate on numerous VDH advisory committees and working groups.

Intra-agency and interagency collaboration continue with the above mentioned agencies and others such as WIC, the Office of Primary Care and Rural Health, the Title X Federal Family Planning Program, the Commission on Youth, the Virginia Commission on Health Care, the Virginia Community Healthcare Association (formerly the Virginia Primary Care Association),

and the Virginia Hospital and Health Care Foundation. In addition, Title V staff members continue to support community-based organizations that have been working to improve the health of the MCH population including organizations such as the Virginia Perinatal Association, the Virginia Association of School Nurses, the Virginia Chapter of the March of Dimes and numerous single disease oriented voluntary organizations.

Title V staff members continue to represent MCH interests on interagency councils, task forces and committees such as the Governor's Office for Substance Abuse Prevention (GOSAP), the Governor's Council on Substance Abuse Services, the Governor's Advisory Board on Child Abuse and Neglect, and the Child and Family Behavioral Health Policy and Planning Committee. A Title V staff member represents the VDH on the legislatively mandated Children's Health Insurance Program Advisory Committee (CHIPAC). The formal and informal connections that MCH program managers have made with other important partners at the state and community level contribute greatly to the understanding of and support for MCH goals by the public as well as to the effectiveness of the system of care (Figure 1).

Figure 1. Organizations with significant active involvement of Title V staff members:

- American College of Nurse Midwives
- American Congress of Obstetricians and Gynecologists (ACOG)
- Child Day Care Council
- CHIP of Virginia
- Council on Local Government
- Family Voices
- Genetics Advisory Committee
- Head Start
- Health Systems/Medical Schools (Eastern Virginia Medical School, VCU, UVA, Bon Secours, Sentara, Centra, Carilion and Children’s Hospital of the King’s Daughters (CHKD))
- Healthy Families
- Hemophilia Advisory Committee
- Local PTAs
- Parent to Parent
- Partners for People with Disabilities
- Prevent Child Abuse Virginia
- Project Immunize Virginia
- Virginia Association of School Nurses
- Virginia Chapter of the American Academy of Pediatrics (VA AAP)
- Virginia Dietetic Association
- Virginia Early Childhood – Smart Beginnings
- Virginia Foundation for Healthy Youth (VFHY)
- Virginia Hospital and Healthcare Association
- Virginia Safe Kids
- Virginia Sexual and Domestic Violence Action Alliance (VSDVAA)

- Virginia Water Safety Coalition
- Voices for Virginia’s Children
- Women’s Health Virginia

Stakeholder involvement:

Throughout the needs assessment process, the Title V Needs Assessment Team engaged a variety of stakeholders. Stakeholders play a vital role in needs assessment, and efforts were made to gather information from stakeholders on the needs of MCH populations, the capacity of the Title V program and other health systems to meet those needs, and the needs that should become the top priorities for the next five years. Detailed descriptions of the Key Informant Interviews and Focus Groups have already been given. Figure 2 contains the stakeholder organizations that participated in each of the main avenues for stakeholder input. The key informants represent health providers, governmental agencies, and organizational stakeholders who are key decision-makers for maternal and child health issues. The focus groups, which were conducted within the five Perinatal Regions, involved stakeholders who are actively serving and interacting with maternal and child health populations. The Stakeholder Input Meeting included stakeholders from within the Office of Family Health Services and external stakeholders to have an open discussion of the most pressing needs and capacity gaps that affect Virginia’s MCH populations.

Figure 2. Stakeholder organizations who participated in 2011 Needs Assessment activities.

Key Informant Interviews Participant Organizations
Commissioner’s Office, Virginia Department of Health
Department of Behavioral Health and Developmental Services
Department of Medical Assistance Services
Governor’s Latino Liaison, Governor’s Office
Harrisonburg Community Health Center
Office of Special Education and Student Services
Parent to Parent
Safe Kids of Virginia
Secretary of Health and Human Resources, Commonwealth of Virginia
VA Dept. of Education
VA Health Care Foundation
VA Rural Health Association
VCU Health System
VCU Partnership for People with Disabilities
Virginia Chapter of the American Academy of Pediatrics (VA AAP)
Virginia Commission on Youth
Virginia Community Health Care Association
Virginia Dental Association
Virginia Department of Social Services

Virginia Early Childhood Foundation Virginia Poverty Law Center Women’s Health Virginia	
Focus Groups Participant Organizations	
<u>East Central Perinatal Region</u> 211 United Way Children's Hospital of Richmond CHIP of Richmond CHIP of VA City of Richmond-Sickle Cell Family Maternity Center of Northern Neck First Things First of Greater Richmond Henrico Doctors’ Hospital Homeward Richmond City Health Department Richmond Healthy Start Southside Regional Medical Center St Joseph's Villa VA Dental Hygienists' Association	<u>Northern Virginia Perinatal Region</u> Alexandria Health District Care Connection for Children Center for Well-Being Children's Medical Associates (Fairfax) Fairfax Health District Fairfax Neonatal Associates George Mason University Nursing School Infant and Toddler Connection of Fairfax/Falls Church INOVA Health System Naomi Project Northern Virginia 211 Program Northern Virginia FIMR Northern Virginia Regional Perinatal Council Private Citizen Reston Hospital
<u>Eastern Virginia Perinatal Region</u> 2-1-1 Virginia Children’s Hospital of The King Daughters CINCH/Eastern Virginia Medical School Eastern Virginia Planning Council Naval Medical Center Portsmouth Old Dominion University School of Nursing Peninsula Health District Prevent Child Abuse Hampton Roads Project Link Resource Mothers Riverside Regional Medical Center The UpCenter	<u>West Central Perinatal Region</u> Centra Health System Children Youth and Family Services Community Impact Monticello Area Community Action Agency Shenandoah University University of Virginia West Central Perinatal Council
Stakeholder Input Meeting Participant Organizations	
<u>External Stakeholders</u> Office of the Chief Medical Examiner Office of Minority Health and Public Health Policy Peninsula Health District Alexandria Health District Eastern Virginia Medical School Virginia Chapter of the AAP	<u>Office of Family Health Services Stakeholders</u> Division of Nutrition, Physical Activity and Food Programs Division of Child and Adolescent Health Children with Special Health Care Needs Division of Women’s and Infants’ Health Division of Chronic Disease Prevention and Control

Virginia Department of Education Virginia Department of Medical Assistance Services VA Community Healthcare Association Virginia Commonwealth University UVA Office of Continuing Education	Division of Dental Health Policy and Assessment Division of Injury and Violence Prevention
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The stakeholder input meeting was held in May 2010, and was facilitated by Marjory Ruderman, a consultant who had conducted a Capacity Assessment for State Title V (CAST-5) for the OFHS in 2004/05. Each OFHS Management and Needs Assessment Team member was asked to provide a list of staff and stakeholders to be invited to the session; the participants included staff from OFHS, other VDH offices, governmental entities, the private sector and non-profit organizations (see agenda, Appendix B). The MCH Lead Analyst from the Policy and Assessment Unit of OFHS presented data highlights from the Title V Needs Assessment to provide an evidence base for the stakeholder discussion. Following the data presentation, groups were formed according to the three Title V priority populations. Each group was asked to brainstorm a list of needs, using the following questions as prompts: 1) Do you see a worsening trend? 2) Do you see disparities in the populations you serve? Are some groups affected more than others? 3) Are you seeing an emerging problem, even if it's not showing up in the data yet? 4) What other needs do you see in your work and your communities? After discussing their initial lists, each group used the colored dot method to vote on the top needs for their population groups. Each group also began identifying promising strategies and stakeholder roles in addressing the top needs, brainstorming answers to the following questions: 1) What already is being done effectively to address the problem? 2) What are some promising opportunities or strategies that are not currently being done? 3) Who should be involved? 4) How can your organization help address the need? 5) What do you need in order to contribute to the solution?

3. Strengths and Needs of MCH Population Groups and Desired Outcomes

A. Pregnant Women, Mothers, and Infants

Women's Health Across the Lifespan

A lifespan approach to MCH. Preconception health is a critical part of wellness for women as well as an important factor for improving pregnancy outcomes. Optimal quality of life in later years depends heavily on prevention of chronic disease and disability through

lifestyle behaviors in youth and middle age. In 2007, the life expectancy at birth in Virginia was 81 years for women compared to 76 years for men (VDH Division of Health Statistics), and 58% of Virginia's 2006-2008 population ages 65 years and older were women (U.S. Census Bureau). It is important that women are healthy at all ages and stages of life to assure that longer life expectancy means more healthy years rather than longer periods of chronic disease and disability. As Title V programs move towards incorporating a life course perspective into MCH programs, strategies to promote overall health and wellness for women across the lifespan should include improving preconception health behaviors, increasing access and utilization of preconception health services, and identifying and managing chronic conditions before pregnancy.

Social determinants of health. Individual health behaviors are not the only factors that influence health outcomes. According to Jones et al, "the social determinants of health (SDOH) are those determinants of health that lie outside of the individual; they are beyond genetic endowment and beyond individual behaviors."⁷ For example, SDOH include, but are not limited to, education, occupation, income, poverty, employment, transportation, and toxic exposures to lead. While individual health behaviors, genetics and access to health care are important factors in improving women's health, it is also critical to address the SDOH to make sustained improvements in women's health across the lifespan. The data presented in the next paragraphs support the need to address the SDOH as an approach to improve health outcomes.

The issues identified by stakeholders who participated in the Mobilizing for Action through Planning and Partnerships (MAPP) process conducted by several Virginia Health Districts highlight how social determinants impact communities across Virginia. Among the MAPP assessments submitted to the OFHS Needs Assessment Team, the top three issues recognized across the state were housing, employment, and transportation. Both the MAPP assessments and the Title V qualitative assessments highlighted the need for coordination and collaboration of services and the importance of recognizing and addressing the needs of vulnerable populations (Table 1). While key informants emphasized the potential impact of health care reform and the economy as issues that affect Virginia's families, MAPP stakeholders expressed the need for affordable housing as an issue of growing importance, because it affects

⁷ Jones, C.P., Jones, C. Y., Perry, G.S., Barclay, G., and Jones, C.A. Addressing the social determinants of children's health: a cliff analogy. *Journal of Health Care for the Poor and Underserved.* 2009. 20:1-12.

the health and economic well-being of communities across the state. Through MAPP assessments, Virginians expressed an overarching concern about maintaining healthy communities.

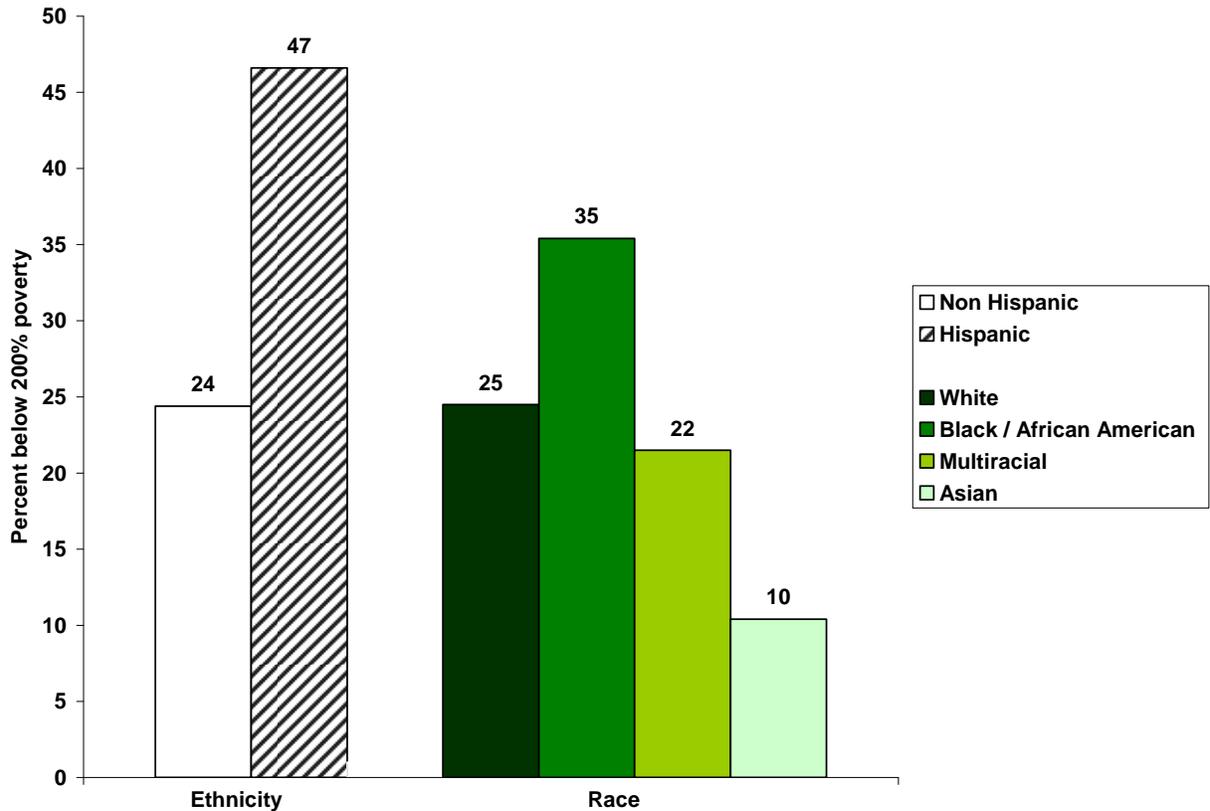
Table 1. Summary of findings from Health District MAPP process and Title V Key Informant Interviews and Focus Groups.

General concerns identified in the Health District MAPP process:
<ul style="list-style-type: none"> • Overall quality of life and better coordination of services • Lack of attention to the personal healthcare needs of vulnerable populations • Homelessness and the ability to maintain affordable housing • Transportation
Key Findings from Key Informant Interviews and Focus Groups:
<ul style="list-style-type: none"> • Coordination and collaboration among providers and services • Low income families, minorities (African Americans, Hispanics, and others), non-English speaking peoples, residents of rural areas, and teenagers with mental health or substance abuse problems were viewed as having the greatest unmet needs. • Improve communication, leadership and planning, • Develop additional resources (financial, data/information, and services) • Provide resources and leadership for planning and creating partnerships • Increase communication, outreach activities, and collaborative activities to address community needs. • Provide easily accessible data on populations served by OFHS.

Poverty. The income-to-poverty ratio is one way to look at socio-economic status, which is a major social determinant of health. Using the Current Population Survey of the US Census, 25.9% of Virginia women lived below 200% of the Federal Poverty Level (FPL) in 2008; almost 10% lived below 100% of poverty. From 2003-2008 the percent of women in poverty was highest in 2005 (28.3% at 200%). There is wide disparity in the percent of women living in poverty by race and ethnicity (Figure 3). The percent of Hispanic women living below 200% poverty was twice as high as the percent among their non-Hispanic counterparts. Among Black

women, 35% lived below 200% poverty, compared with 25% of White women and 22% of multiracial women.

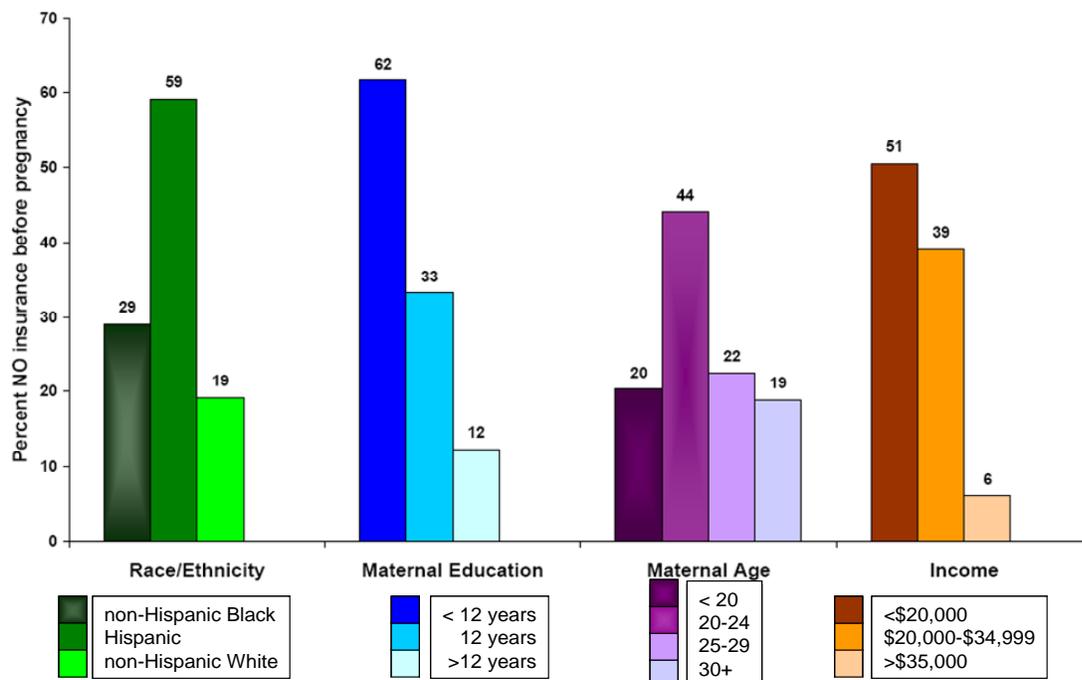
Figure 3. Percent of women 18-44 living below 200% of poverty by race and ethnicity, Virginia 2008



Insurance status. The lifespan approach indicates that to improve birth outcomes, maternal and child health needs to include a focus on optimal preconception health for women of childbearing age. To achieve this, women need access to preventive health care services at all times, not just during or shortly before pregnancy. Consistent access to care is especially critical for women of reproductive age with chronic medical conditions such as diabetes or hypertension. In Virginia, Behavioral Risk Factor Surveillance System (BRFSS) data indicate that 84% of women ages 18-44 had insurance coverage in 2008, but coverage was 94% among women 45 and older. A VDH study of women’s health indicators using BRFSS data from 2002-2006 showed that by age, women 18-24 were the least likely to have health insurance, with 22% reporting no insurance coverage. In addition, 31% of women who did not graduate high school had no insurance coverage. Among women who had a live birth, 25% had no health care

coverage during the month prior to pregnancy (2007 Pregnancy Risk Assessment Monitoring System (PRAMS) data). Hispanic women, women with less than 12 years of education, women ages 20-24, and low income women had the highest rates of uninsurance (Figure 4). Only 5% of women were on Medicaid before pregnancy, but 25% of mothers said Medicaid paid for prenatal care, and 30% of mothers indicated that Medicaid paid for their delivery.

Figure 4. Percent of women having a live birth who had no health care coverage during the month prior to pregnancy, PRAMS 2007



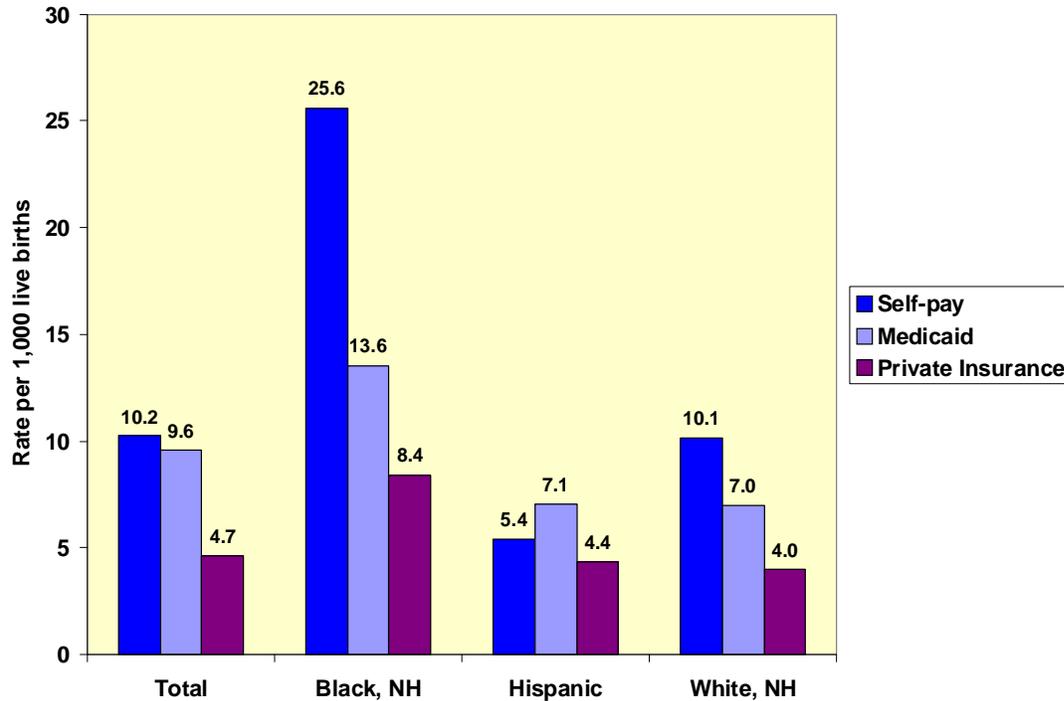
Access to health care. Access to health care is tied to health outcomes; those with more insurance have better access to preventive services and generally better health. Self-rated health status is an indicator of a population's overall well-being, and despite its simplicity, it is correlated with morbidity and mortality. In Virginia, 86% of women ages 18 and older reported good, very good, or excellent health in 2008 (91% among women 18-44). In 2008, just over 86% of women 18 and older had an ongoing source of primary care (Title V State Performance Measure 9), and this measure has shown no significant improvement since 1999. Only 66% of women 18-44 had a routine checkup in the past year; 17% indicated they could not afford to visit a doctor in the last year (BRFSS 2008).

Insurance coverage before pregnancy is a strong determinant of early entry into prenatal care. Birth certificate data indicates that although nearly 85% of pregnant women entered

prenatal care in the first trimester in 2008, when entry into prenatal care is examined by method of payment for birth, early entry is the lowest among women who were self-pay (meaning they had no insurance to pay for the birth), at 61%, compared to 91% early entry among women with private insurance, and 75% among women on Medicaid. Among women who said they did not get prenatal care as early as they wanted, 13% of women indicated that not having enough money or insurance to pay was a barrier to getting prenatal care (PRAMS 2007). The first opportunity for prevention of poor outcomes for a woman's next pregnancy is the postpartum visit, which is the beginning of the interconception period. This visit should be used to address a woman's reproductive life plan, health risks identified during pregnancy, and provide intensive interventions for women who had a pregnancy that ended in an adverse outcome. PRAMS data indicated that 90% of women had a postpartum checkup. Women less than 25 years of age, women with less than a college education, women with less than \$35,000 income, and women uninsured at delivery had lower rates of postpartum checkups.

Infant mortality is widely acknowledged to be a measure of a population's health and well-being. The overall infant mortality rate for Virginia in 2008 was 6.7 per 1,000 live births, which was the lowest rate in the state's history. Despite this recent improvement, infant mortality was two times higher among uninsured mothers (10.2 per 1,000) than those who were privately insured (4.7 per 1,000) (Figure 5). The disparity is even wider when infant mortality rates are examined by race/ethnicity; the infant mortality rate for non-Hispanic Black infants (12.1 per 1,000) was almost two and a half times higher than among non-Hispanic White infants (5.1 per 1,000). When infant mortality is examined by race/ethnicity and insurance status, a disturbing trend emerges. Among uninsured Non-Hispanic Black mothers, the infant mortality rate was almost three times higher than those who were privately insured (25.6 per 1,000 compared to 8.4 per 1,000); privately insured non-Hispanic White mothers had the lowest infant mortality, at 4.0 per 1,000 live births.

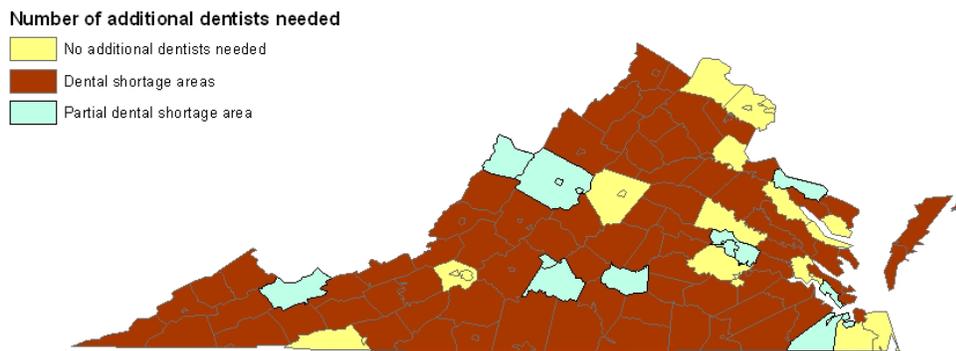
Figure 5. Infant mortality rate per 1,000 live births by method of payment for delivery and race/ethnicity, 2008.



Dental Care and Oral Health. An area of health care particularly sensitive to insurance coverage issues is dental care. According to 2008 BRFSS data, 72% of women ages 18-44 had their teeth cleaned within the past year, but among older women (45 and older) 81% had their teeth cleaned. The main reason women ages 18-44 did not go to the dentist was cost (32%). Delays in preventive and restorative dental care can result in chronic problems, and 25% of Virginia women ages 18-44 had at least one tooth removed due to tooth decay or gum disease. Less than half of all Virginia women went to the dentist during pregnancy (41%), but the percent was lowest among Hispanic women, at only 5% (PRAMS 2007). Women who were high school graduates (25%), with less than high school education (14%), less than 25 years of age (22% ages <20, 31% ages 20-24), and with incomes less than \$35,000 (15% <\$20,000, 28% \$20,000-\$34,999) were the least likely to see a dentist during pregnancy. Overall, 21% of women had a dental problem during pregnancy for which they needed to see a dentist. Women with dental problems were very similar to those who did not seek care during pregnancy; minority women, women with less than high school education, women less than 25 years of age, and women with lower incomes were more likely to indicate dental problems. Among pregnant women with

dental problems, 48% went to the dentist. Since dental care is strongly related to insurance, it should be no surprise that among women with a dental problem, the lowest rate of care-seeking was among women who were uninsured during the prenatal period (8%). Women were also asked whether they received oral health care information from any provider during their pregnancy, and only 39% had. Access to care is also related to the capacity of the healthcare system to meet the needs of the population; 66% of Virginia's cities and counties are designated as either a state or federal dental shortage area (Figure 6).

Figure 6. Virginia dental shortage areas



Mortality and Morbidity. In 2008 the three leading causes of death for Virginia women were cardiovascular disease (crude death rate: 171 deaths per 100,000 total female population), lung cancer (43 deaths per 100,000 total female population), and stroke (49 deaths per total female population). Women are disproportionately affected by chronic disease morbidity. Approximately 1,540,000 adults or 27.6% of Virginia's adult population reported to BRFSS in 2005 that they had doctor-diagnosed arthritis; this condition affected 32% of Virginia women compared to 23% of men. In 2007, about 113,786 women had gestational diabetes (diabetes during pregnancy), increasing their risk of developing type 2 diabetes by 20 to 50% in the 5 to 10 years following pregnancy.⁸ The leading cancers affecting women were breast (age adjusted rate: 122.1 per 100,000), lung and bronchus (53.8), colon and rectum (41.0), melanoma of the skin (15.4), oral cavity and pharynx (10.2) and cervix (6.6).⁹

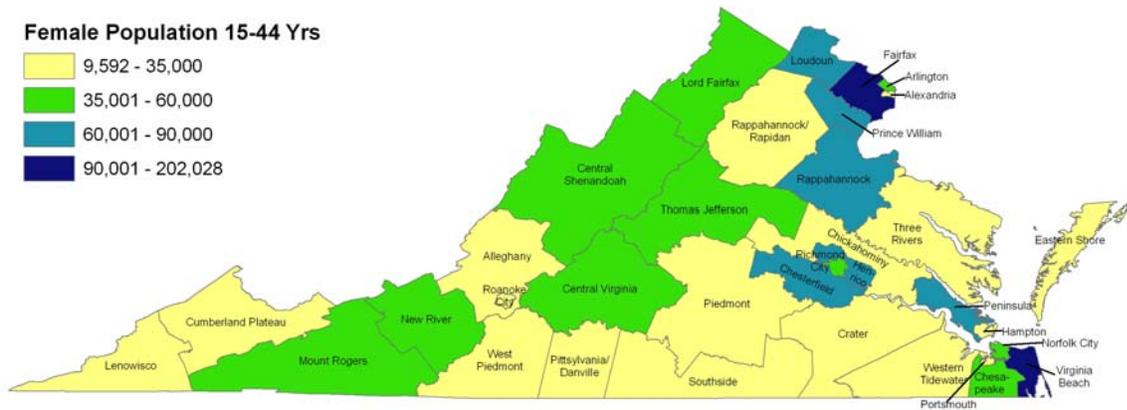
⁸ Based on estimates from the National Diabetes Education Program (NDEP) April 2006 Fact Sheet and Virginia 2006 female population ages 15-44.

⁹ Age-adjusted 2003-2007 rates, Virginia Cancer Registry.

Preconception health

According to the National Center for Health Statistics, there were an estimated 1.6 million women of childbearing age (15-44) living in Virginia in 2008. Hispanic women accounted for 7.4% of the childbearing population in 2008 compared with 6% in 2003; 64.1% of women identified themselves as non-Hispanic White and 22.1% as non-Hispanic Black. Northern Virginia was the state’s most densely populated area, and the Fairfax Health District accounts for 12.5% of the state’s population of women of childbearing age (Figure 7).

Figure 7. Female population ages 15-44 by health district



Reproductive health. There were 141,425 pregnancies in Virginia, which resulted in 106,578 live births, 27,410 induced terminations, and 7,437 fetal deaths in 2008 (VDH Division of Health Statistics). As shown, in Table 2, the fertility rate and rates of induced termination and non-marital birth continued to rise, while the teen pregnancy rate among females 18-19 years of age declined and overall birth rates remained relatively stable.

Table 2. Trends in Virginia’s Reproductive Health Statistics¹⁰

Vital Event	2004	2005	2006	2007	2008
Birth rate per 1,000 total population	13.9	13.8	13.9	14.1	13.7
Fertility rate per 1,000 women 15-44	64.9	65.1	65.5	66.7	66.0
Induced termination rate per 1,000 women aged 15-44	16.2	16.1	16.6	16.8	17.0
Teen pregnancy rate per 1,000 women aged 18-19	92.0	92.1	91.6	90.3	84.7
Non-marital birth rate among women	31.0	32.2	34.1	35.3	35.8

¹⁰ Source: Virginia Department of Health Division of Health Statistics compiled by the Office of Family Health Services, Division of Women’s and Infants’ Health, 2004-08.

Pregnancy planning and intention. The increase in the rate of induced terminations indicates an increased need for pregnancy planning. The 2002 National Survey of Family Growth (NSFG) estimates that nearly half of all pregnancies are unplanned. According to Virginia PRAMS data, 41% of women who gave birth in 2007 said the pregnancy was unintended (either unwanted or mistimed). Fathers who participated in the 2002 NSFG indicated that 65 percent of births in the 5 years before the survey were wanted at the time of conception, 25 percent were mistimed, and 9 percent were unwanted at the time of conception. Assuming that this national data reflects Virginia fathers, we find no evidence that Virginia has achieved the Healthy People 2010 goal to decrease the proportion of pregnancies that are unintended to 30%. Women who were non-Hispanic Black, high school graduates or less, less than 25 years of age, in a lower income group (annual household income less than \$35,000), uninsured or on Medicaid had the highest prevalence rates for unintended pregnancy in 2007 (Figure 8). Another indicator for pregnancy planning is preconception counseling from a health care provider. Only about one-quarter (27%) of women received preconception counseling from their health care provider to prepare for pregnancy in 2007. Thus, women were not accessing preconception health services. Further, analyses of Virginia maternally-linked pregnancy history data revealed that almost 40% of women with a second birth in 2007 had a birth interval less than 18 months, indicating that many women are not optimally spacing their births.

Figure 8. Progress towards HP2010 goal of reducing unintended pregnancy, PRAMS 2007

Healthy People 2010 Goal: Decrease the proportion of pregnancies that are unintended to 30%		
<i>Already Meeting the Goal</i> Women who are:	<i>Close to Meeting the Goal</i> Women who are:	<i>Target Groups</i> Women who are:
30 years or older In a higher income group (\$35,000 or more)	Hispanic or non-Hispanic White College graduates or some college 25 to 29 years old Privately insured	Non-Hispanic Black High school graduates or less Young (less than 25 years old) In a lower income group (less than \$35,000) Uninsured or on Medicaid

Contraceptive use. In 2007, PRAMS data indicate that about half (49%) of women and their partners were using some method of birth control when they became pregnant. This includes not having sex at certain times (rhythm) or withdrawal, using birth control pills,

condoms, cervical ring, intrauterine devices (IUD), and having tubal ligation or their partner having a vasectomy. Despite efforts to postpone or prevent pregnancy, women using contraception became pregnant due to inconsistent or incorrect use of the contraceptive method or use of an ineffective method. A quarter of women were not trying to get pregnant but not using contraception, indicating ambivalence about pregnancy planning. Among women who were not using contraceptives, reasons for not using any method included: their partner did not want them to use birth control (21%), perceived female infertility (17%), negative side effects from past birth control use (12%), issues getting birth control (7%), and perceived male infertility (4%). After giving birth to their new baby, 84% of mothers and their partners were currently using a method of birth control. Overall, Virginia’s healthcare providers discussed contraceptives with their postpartum patients; 89% of women who had a postpartum checkup said their healthcare provider discussed family planning or birth control at that visit. Virginia is doing well at getting postpartum women to use contraceptives, however, most VA women are not actively engaged in pregnancy planning (Figure 9).

Figure 9. Progress towards HP2010 goal of reducing risk for unintended pregnancy by increasing contraception use, PRAMS 2007.

Healthy People 2010 Goal: Decrease the proportion of females at risk of unintended pregnancy (and their partners) who do not use contraception to 0%		
<i>Already Meeting the Goal</i> Women who are:	<i>Close to Meeting the Goal</i> Women who are:	<i>Target Groups</i> Women who are:
NO GROUPS OF WOMEN ARE MEETING THIS GOAL	Non-Hispanic Black Teenagers (19 years of less) Insured by Tricare	Non-Hispanic White or Hispanic At any education level 20 years or older At any income level Uninsured, on Medicaid or privately insured

Target groups for reproductive health and family planning. Women who have induced terminations represent a group in need of contraceptive services. Induced termination rates among non-Hispanic Black women have been persistently higher than any other group. In 2008, rates for non-Hispanic Black women were 32.7 induced terminations per 1,000 females aged 15-44 years compared to non-Hispanic White women (9.3 per 1,000 females aged 15-44 years) and Hispanic women (22.6 per females aged 15-44 years). Women ages 20 to 29 years represented

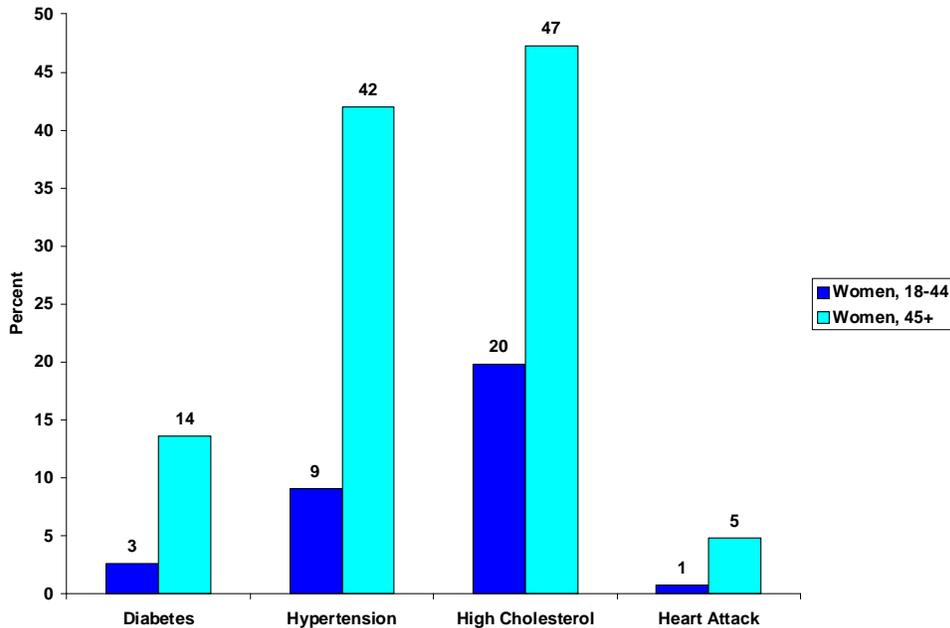
58% of induced terminations; 80% of terminations were among non-married women, and 61% of women had one or more previous live births. While induced termination rates for non-Hispanic Black women were almost four times higher than those for non-Hispanic White women, adjusted odds ratios show that non-Hispanic Black women were 2.8 times more likely to use postpartum contraception than non-Hispanic White women. More information is needed to understand what factors impact a woman's contraceptive behavior in the interconception period.

Men in Need. Currently male clients of the Virginia Family Planning Program comprise just over 1 percent of the population served. At baseline, the majority of male Partners in Prevention (PIP) participants, a VDH unintended pregnancy prevention program targeting single males and females age 20-29, believed that men and women do not share equal responsibility for family planning. Both male and female participants responded that men do not have control on whether women become pregnant. Clearly an increased engagement of men in reproductive responsibility could potentially bring greater equity into the arena of family relationships and parenting.

Health conditions. Many pregnant women and women of childbearing age currently have health conditions or behaviors that pose risks to optimal health across the lifespan as well as potential risks to future pregnancy outcomes. For example, 9% of women of childbearing age had high blood pressure and 20% had high cholesterol in 2008 (BRFSS, Figure 10); 12% of women who recently gave birth had high blood pressure, pregnancy-induced hypertension or toxemia during pregnancy (PRAMS). Overall, 2% of women of childbearing age had diabetes and 3% of women who recently gave birth had problems with diabetes that started before pregnancy. Further, analyses of in-patient hospital discharge data showed the prevalence of obstetric complications due to gestational diabetes almost doubled between 2000 and 2008 from 3.8% to 6.1%. Analysis of birth certificates showed a similar trend; maternal history of diabetes increased from 3.3% in 2000 to 4.9% in 2008. The prevalence rates of obstetric complications due to transient hypertension increased from 3.1% to 3.4% from 2000 to 2008. The prevalence of chronic hypertension during labor and delivery also increased, from 2.5% in 2000 to 3.1% in 2008. Hence, identification and management of chronic conditions before pregnancy is critical. Unfortunately, many women do not access care until their first prenatal care visit, and even early

prenatal care is too late to bring chronic conditions under control to prevent adverse pregnancy outcomes¹¹.

Figure 10. Chronic disease prevalence among Virginia women, BRFSS 2008.



Healthy weight. Women who are obese prior to pregnancy are at greater risk for complications during pregnancy, including hypertensive disorders, which are associated with cardiovascular diseases later in life. In 2008, more than half (52%) of women 18-44 years were overweight (27%) or obese (25%) in Virginia (BRFSS). Among women who gave birth, 36% were either overweight (17%) or obese (19%) before pregnancy in 2007 (PRAMS). While rates for overweight or obese women were slightly lower among pregnant women compared to women ages 18-44, Virginia has not met the Healthy People 2010 goal to reduce the proportion of adults who are obese to 15%. Women who were non-Hispanic Black, high school graduates or less, 20-24 years, in a lower income group (annual household income less than \$35,000), uninsured, or on Medicaid had the highest prevalence rates of obesity before pregnancy in 2007 (Figure 11). Women in Virginia who were overweight or obese when they entered pregnancy had increased risk for mortality, according to the findings of the Maternal Mortality Review

¹¹Hani K. Atrash, Kay Johnson, Myron (Mike) Adams, José F. Cordero, and Jennifer Howse. Preconception Care for Improving Perinatal Outcomes: The Time to Act Matern Child Health J. 2006 September; 10(Suppl 1): 3–11.

Team (MMRT).¹² Further, maternal weight before pregnancy and weight gain during pregnancy are two of the most important prenatal determinants of childhood obesity, according to “Solving the Problem of Childhood Obesity within a Generation,” a report released by the White House Task Force on Childhood Obesity. In Virginia, the prevalence of overweight/obese children increased between 2003 and 2007 from 30.6% to 31.6%. Similarly, Virginia has not met the Healthy People 2010 goal for childhood obesity, which is to reduce the proportion of children and adolescents who are overweight or obese to 5%.

Figure 11. Progress towards HP2010 goal of reducing adult obesity, PRAMS 2007.

Healthy People 2010 Goal: Reduce the proportion of adults who are obese to 15%		
<i>Already Meeting the Goal</i> Women who are:	<i>Close to Meeting the Goal</i> Women who are:	<i>Target Groups</i> Women who are:
College graduates or some college Young (less than 20 years old) In a higher income group (\$35,000 or more) Privately insured	Non-Hispanic White Older than 25 years old	Hispanic or non-Hispanic Black High school graduates or less 20-24 years old In a lower income group (less than \$35,000) Uninsured or on Medicaid

Nutrition and physical activity. Obesity, which can result from poor diet and lack of exercise, increases the risk for the leading causes of mortality and morbidities affecting women. In Virginia, 32% of all women consumed fruits and vegetables at least five times a day, but among women ages 18-44 years, only 28% consumed the recommended daily allowance of fruits and vegetables in 2007 (BRFSS). Furthermore, PRAMS data indicate most women (72%) did not take a multivitamin every day in the month prior to pregnancy in 2007 despite the recommendation that all women planning or capable of pregnancy should take a multivitamin containing 0.4 to 0.8mg folic acid every day. Virginia has not achieved the Healthy People 2010 goal of decreasing the proportion of pregnancies begun with an inadequate folic acid level to 20%, and no age, race, education, or income group in Virginia has met this goal (Fig 12). In addition, BRFSS data showed that less than half (40%) of women participated in enough moderate and/or vigorous physical activity in a usual week to meet the recommended levels of physical activity in 2007. Enough though Virginia achieved the HP2010 target of 30% of

¹² *Obesity and Maternal Death in Virginia, 1999-2002*, Maternal Mortality Review Team, Office of the Chief Medical Examiner, Virginia Department of Health.

women 18-44 years participating in moderate physical activity, it is necessary for more women of childbearing age to be active and physically fit. Engaging in healthy behaviors during youth and middle age can protect women against most chronic diseases and disabilities. For example, eating low fat diets with lots of green leafy vegetables and exercising reduce the risk of cardiovascular disease and some cancers. In addition, drinking milk and exercising in youth can protect women against osteoporosis and falls in old age by helping to maintain muscle strength, balance, and cardiovascular fitness. Being healthy in youth has many long-term benefits as well as benefits for reproductive health.

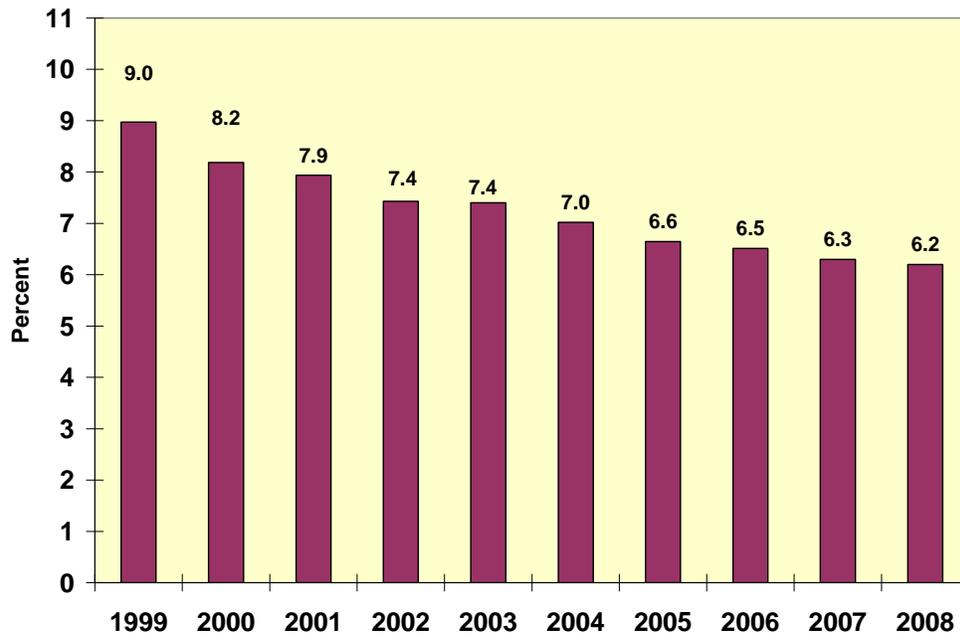
Figure 12. Progress towards HP2010 goal of reducing pregnancies begun without adequate folic acid, PRAMS 2007.

Healthy People 2010 Goal: Decrease the proportion of pregnancies begun with an inadequate folic acid level to 20%					
<i>Already Meeting the Goal</i>		<i>Close to Meeting the Goal</i>		<i>Target Groups</i>	
Women who are/ who have:	Women	Women who are/ who have:	Women	Women who are/ who have:	Women
NO GROUPS OF WOMEN ARE MEETING THIS GOAL		Non-Hispanic White College graduates or some college 25 years old or older In a higher income group (\$35,000 or more) Privately insured		Non-Hispanic Black or Hispanic High school graduates or less Young (less than 25 years old) In a lower income group (less than \$35,000) Uninsured or on Medicaid	

Smoking. According to 2007 PRAMS data, about one in four women (22%) who recently gave birth smoked before pregnancy. Among these smokers, 66% quit during pregnancy, 32% reduced the number of cigarettes smoked and 2% maintained or increased the number of cigarettes smoked during pregnancy. Health providers screened for smoking during a prenatal visit, with 92% of women indicating a health care provider ask if they smoked. Birth certificate data indicate that the percent of women who smoked during pregnancy has declined significantly from 1999 to 2008 (Figure 13), but PRAMS data showing that 11% of women smoked during the third trimester of pregnancy indicates that birth certificates may underestimate smoking behavior. Virginia has not achieved the Healthy People 2010 goal to increase abstinence from cigarettes among pregnant women to 99%. After delivery, 45% of women who quit smoking during pregnancy resumed smoking postpartum. Thus, most women were willing to quit

smoking during pregnancy but were not willing to stop smoking completely. On average, infants who lived with smokers were exposed to 4 hours of second hand smoke a day (PRAMS).

Figure 13. National Performance Measure 15, Percentage of women who smoke during pregnancy, Virginia 1999-2008 birth certificates.



Prenatal Care

Prenatal care is too late. In 2008, birth certificate data showed that 85% of women in Virginia entered prenatal care in the first trimester. On average, women in Virginia were sure about being pregnant at 6 weeks gestation but their first prenatal care visit was not until 11 weeks gestation, according to PRAMS. At 11 weeks, many of the fetal organs and any major structural anomalies of the forming fetus have already developed. Consequently, even with early entry into prenatal care, there is a missed opportunity to benefit fully from folic acid consumption and identification and management of pre-existing medical conditions before pregnancy. Hence, the first prenatal care visit is too late for women to receive health messages.

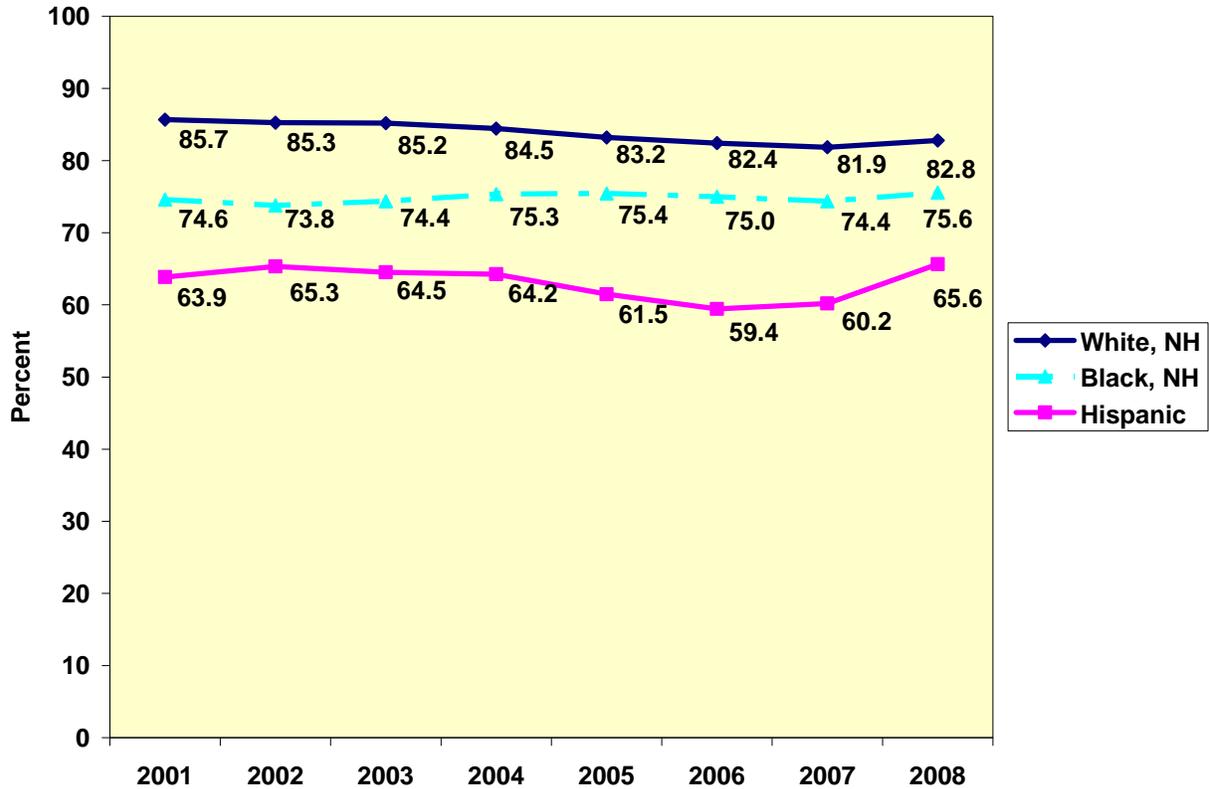
Entry and Adequacy of Utilization. Early entry into prenatal care varies by social determinants; the lowest early entry rates were among Hispanic women (73%), women with less than high school education (69.7%), and as mentioned earlier, women who were uninsured at time of birth (61%). Disparities in early entry by race/ethnicity have persisted over time; since 1999, non-Hispanic Black women and Hispanic women consistently had lower early entry rates

than non-Hispanic White women. Geographically, the lowest rate of early entry was in the Lenowisco Health District, where only 68% of women entered prenatal care in the first trimester. Early entry rates among non-Hispanic White women in Arlington and Eastern Shore Health Districts were more than 20 percentage points higher than non-Hispanic Black women living in those districts. Further, among districts with more than 500 Hispanic births, non-Hispanic White women in Arlington, Alexandria, Prince William and Loudon had early entry rates that were more than 20 percentage points higher than Hispanic women living in those districts.

When entry into prenatal care is examined using PRAMS information on insurance status before and during pregnancy, women who started out uninsured before pregnancy had a lower rate of entry into prenatal care in the first trimester (60%) than women who were insured both before pregnancy and for prenatal care (85%). Women who were uninsured before pregnancy were 7 weeks when they were sure of being pregnant, and they did not enter care until 13 weeks on average, which is beyond the first trimester. In fact, insurance before pregnancy appears to be a strong determinant of early care; no matter what kind of insurance a woman indicated paid for her prenatal care, if she was uninsured before pregnancy, she got into care later than a woman who was insured before pregnancy.

Using the Kotelchuck Adequacy of Prenatal Care Utilization Index, which combines birth certificate information on entry into prenatal care and the number of prenatal visits, 78.2% percent of women ages 15-44 had adequate or better prenatal care utilization. However, adequate utilization was 82.8% among non-Hispanic White women, 75.6% among non-Hispanic Black women, and only 65.6% among Hispanic women, indicating there are large disparities in utilization by race/ethnicity (Figure 14). While Lenowisco had the lowest rates of early entry, Eastern Shore and Alexandria Health Districts had the lowest rates of adequate or better utilization (57% and 61% respectively). Trend analysis has shown that since 1999, both early entry and adequate utilization of care have significantly declined.

Figure 14. Health Systems Capacity Indicator 4: The percent of women (15-44) with a live birth whose observed to expected prenatal visits are greater than or equal to 80 percent on the Kotelchuck Index by race/ethnicity, Virginia 2001-2008 birth certificates.



Barriers to prenatal care. The PRAMS survey asks women about problems they encountered when getting prenatal care, and this information might help to explain why both early entry and adequate utilization have declined over the past ten years. Of the choices given, the most common barrier women listed was being unable to get an appointment (17%), followed by not having enough money or insurance to pay (13%). Transportation to the clinic or doctor's office and work responsibilities were problems for 8% of women. When these barriers are examined by insurance status, the problems most often mentioned by uninsured women were not having enough money or insurance to pay for visits (42%) and no child care (27%), while the problem most often mentioned by women on Medicaid was not being able to get an appointment when they wanted (33%). Surprisingly, 19% of women already on Medicaid before pregnancy indicated that not having their Medicaid card was a problem. Women with private insurance before pregnancy had fewer problems getting prenatal care; the most common barrier was not

being able to get an appointment when they wanted (13%). Comments from PRAMS respondents help to illustrate the frustrations women experience with obtaining insurance for prenatal care. One mother expressed her dissatisfaction with the process for obtaining Medicaid: *“I filled out all paperwork for Medicaid services and waited [for]ever for them to let me know or even send me my ID [number] and card.”* Another mother shared her experience with insurance delays: *“I was denied Medicaid/FAMIS at [first], long wait for the health department, finally had insurance at the end of my pregnancy.”* A third mother indicated that she delayed care because she was, *“Waiting for husband’s insurance to start my coverage.”*

Content of prenatal care and prenatal services. Information about the types of services received during prenatal care is useful for determining whether women are receiving information from providers about healthy behaviors. The PRAMS survey asks women if a doctor, nurse or other health care worker spoke with them about the listed topics during their prenatal visits. These topics include how smoking, alcohol, and illegal drug use could affect the baby, healthy and safe behaviors (seat belt use, breastfeeding, medication use, and postpartum birth control methods), getting tests for birth defects and HIV, what to do about preterm labor, and partner abuse. Table 3 below indicates the percent of women who received information during prenatal care about each topic. Less than half of women indicated that providers talked about intimate partner abuse (41%) and seat belt use during pregnancy (49%). Nearly all women were given information about cigarette smoking (92%) and safe medications (91%). Women were also asked about whether they had been tested for HIV, and if not, whether they had been offered an HIV test. Almost 80% of women had been tested for HIV, but of those who were not tested, only 34% had been offered a test.

Table 3. Content of Prenatal Care, PRAMS 2007

Prenatal Care Topics	Percent
Cigarette smoking	92.1
Safe medications	91.4
Screening for birth defects	89.9
Breastfeeding	84.7
Preterm labor	84.0
Birth control postpartum	79.9
Alcohol use	71.3
Illicit drug use	62.5
Seat belt	49.4
Intimate partner physical abuse	41.2

HIV testing	Percent
Tested for HIV	79.7
Among those not tested, offered an HIV test	34.4

The PRAMS survey also asks women if they used services such as childbirth and parenting classes, smoking cessation classes, home visiting, food stamps, Temporary Assistance for Needy Families (TANF), and the WIC program during their most recent pregnancy. Childbirth classes were the most frequently accessed services (29%), followed by parenting classes (21%), and food stamps (18%). However, when services were examined by insurance status for prenatal care, 42% of women on Medicaid and 33% of uninsured women indicated that they received food stamps during pregnancy. The second most accessed service for women on Medicaid was home visiting (23%). TANF was only utilized by women on Medicaid (10%) and uninsured women (8%). The PRAMS survey indicates that 32% of women were on WIC during pregnancy, and a linkage of birth certificates to WIC client data indicates that almost 44% of infants born in 2007 or their mothers were WIC clients at some time during pregnancy or after delivery, indicating that the WIC program has an opportunity to interact with a substantial segment of the Virginia birth population.

Maternal Health

Maternal morbidity during labor and delivery. Morbidity during labor and delivery, defined as conditions that adversely affect a woman's physical health during childbirth beyond what would be expected in a normal delivery,¹³ was examined using inpatient hospital discharge records for Virginia residents (VHI). Total morbidity increased from 46.6% in 2000 to 51.7% in 2008 (Table 4). This increase was driven by cesarean delivery, which increased from 23.3% in 2000 to 34.4% in 2008. Excluding cesarean delivery rates, the total morbidity rates declined from 31.9% to 28.7% from 2000 to 2008. The rate for obstetric complications during labor and delivery decreased from 2000 to 2008. A closer look at specific obstetric complications showed rates for hemorrhage, obstetric trauma, and infection declined, but the rate for obstetric complications due to gestational diabetes almost doubled and rates for complications due to transient hypertension, preeclampsia, and eclampsia also increased from 2000 to 2008. For pre-

¹³ Danel, I., Berg, C., Johnson, C.H., Atrash, H. Magnitude of maternal morbidity during labor and delivery: United States, 1993-1997. *Am J Public Health.* 2003;93:631-4.

existing conditions, the overall rate increased from 4.9% in 2000 to 6.5% in 2008 and rates for chronic hypertension, asthma, and pre-existing diabetes also increased.

Table 4. Trends in maternal morbidity rates in Virginia, 2000-2008.

Morbidity Category	2000	2008
Total morbidity	46.6	51.7
Cesarean delivery	23.3	34.4
Total morbidity, excluding cesarean delivery	31.9	28.7
Obstetric complications	28.9	24.0
Gestational diabetes	3.8	6.1
Transient hypertension	3.1	3.4
Pre-eclampsia & eclampsia	2.2	2.4
Postpartum hemorrhage	2.8	2.1
3rd degree lacerations	3.6	2.0
Genitourinary infection	2.6	1.8
Pre-existing medical conditions	4.9	6.5
Chronic hypertension	2.5	3.1
Asthma	1.3	2.9
Pre-existing diabetes	1.2	1.4
Cardiac disease	1.8	0.9

In sum, medical interventions to reduce hemorrhage and lacerations (obstetric trauma) were successful, as evidenced by declining rates for complications. However, the increases in complications due to gestational diabetes, diabetes, and hypertension are markers of underlying problems exacerbated by pregnancy. Despite some progress in reducing certain types of obstetric complications, increases in complications due to chronic conditions during labor and delivery indicate that a decline in the overall health of women will continue to impact pregnancy morbidity. Increases in cesarean delivery seen in the hospital discharge data were confirmed using the method of delivery on birth certificates. Primary cesarean delivery (cesarean births among women with no previous cesarean delivery) increased from 15.9% in 1996 to 23.5% in 2006.¹⁴ The majority of the increase in primary cesarean delivery was due to the rise in cesarean deliveries to women with “no indicated risk,” women with full-term, singleton births, and no medical risk factors or labor and delivery complications reported on the birth certificate.¹⁵

¹⁴ Alvarez, A., Stampfel, C., & Chapman, D.A. (2008, December). Trends in Primary Cesarean Delivery, Virginia 1996-2006. Poster presented at 14th Annual Maternal & Child Health Epidemiology (MCHEPI) Conference, Atlanta, GA.

¹⁵ Eugene Declercq, Fay Menacker, Marian MacDorman. Rise in "no indicated risk" primary caesareans in the United States, 1991-2001: cross sectional analysis. *BMJ* 2005;330:71-72 (8 January)

Increases in cesarean delivery in Virginia are alarming, particularly in light of the increasing rates of obese, diabetic, and hypertensive pregnant women.

Obesity and maternal mortality. According to a 2007 report from the Office of the Surgeon General, moderate to excess weight of 10 to 20 pounds increases the risk of premature death. Obesity increases the risks not only for the leading causes of death but also for diabetes, arthritis of the weight bearing joints, and pregnancy complications. Findings from Virginia's Maternal Mortality Review Team (MMRT) reported in 2009 in *Obesity and Maternal Death in Virginia, 1999-2002*, indicated that overweight and obese women were overrepresented among women who died during or within one year of a pregnancy. Higher percentages of Virginia women who died of natural, pregnancy-associated deaths were overweight (21.9%) and obese (43.7%) prior to pregnancy compared to a national sample (from the Pregnancy Nutrition Surveillance program) in which only 14.5% were overweight and 28.5% were obese. Further, racial disparities were identified. The maternal mortality ratio for overweight or obese Black women was 2.2 times higher than for overweight or obese White women. With regard to health care, fewer than half of obese women had obesity noted as a risk factor in their prenatal record and nutrition assessments were rarely documented in their records.

Maternal stress and social support. A growing body of research has demonstrated that stress during pregnancy is associated with adverse birth outcomes, particularly preterm birth and low birthweight for gestational age. The mechanism by which stress exerts effects on pregnancy is through chronic exposure that results in wear and tear on body systems.¹⁶ In Virginia, 74% of women experienced one or more stressful life events in the twelve months before giving birth; these events included moving to a new address (38%), arguing more than usual (30%), having a sick family member (27%), being unable to pay bills (27%), having someone close to them die (20%), having someone close to them with a bad drug or drinking problem (12%), losing their job (11%), having a partner lose his job (11%), having a partner who did not want her to be pregnant (10%), separating or divorcing (8%), experiencing incarceration of self or partner (4%), experiencing a physical fight (4%), and experiencing homelessness (3%). While any one of these stressors might not necessarily be related to poor outcomes, the cumulative effect of chronic stress, added to the stress of pregnancy itself, has a negative impact on the body. Thirty-

¹⁶ Lu, MC. and Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. *Maternal and Child Health Journal*. 2003 Mar; 7(1):13-30.

four percent of women experienced at least three of the listed stressors, and of these women, 6% experienced six or more stressors. Results of a Fetal Infant Mortality Review (FIMR) Mid-Year Assessment found that experience of multiple stressors was the most frequently identified issue for the whole state (72% of cases) and a leading issue in three perinatal regions (East Central 86%, West Central 86%, and Northern 53%).

Analysis of national PRAMS comment data indicated that the most frequent theme women wrote about was the need for social support after hospital discharge.¹⁷ Adequate social support systems should help mitigate the effects of chronic stress. Four statements on the PRAMS survey were used to evaluate a woman's experience of social support. One in five Virginia women (20%) indicated she had no one to loan her \$50 during pregnancy, 13% of women had no one to help if she got sick, 12% had no one to talk with about her problems, and 9% had no one to take her to the doctor.

Postpartum depression. Chronic stress and lack of social support before and during pregnancy puts some women at increased risk for postpartum depression. While a clinical diagnosis cannot be made from a survey, the PRAMS questionnaire uses two assessment constructs, anhedonia (little interest or pleasure in doing things) and depressed mood (down, depressed, and hopeless) to estimate the prevalence of depressive symptoms (almost always, or always experience anhedonia or depressed mood; sometimes experience anhedonia and depressed mood). In Virginia, 26% of women having a live birth experienced depressive symptoms after pregnancy. The prevalence of depressive symptoms was higher among women who were uninsured at delivery (78%), Hispanic women (32%), women less than high school education (40%), and women with incomes less than \$20,000 (37%).

In addition, 77% of women indicated that a provider spoke with them about postpartum depression or "baby blues." This experience was less common among uninsured women (24%) and women with less than high school education (62%). A comment from a PRAMS respondent indicates that there is still work to be done to help women experiencing perinatal depression: "*I had a great deal of depression during the pregnancy and was surprised the MD didn't screen for it. My pregnancy was planned and I had support in place. The state needs a formal way of assessing prenatal and postnatal depression.*" Consistent with PRAMS findings, a follow-up

¹⁷ Kanotra S, D'Angelo D, Phares T, Morrow B, Barfield W, Lansky A. Challenges faced by new mothers in the early postpartum period: An analysis of comment data from the 2000 Pregnancy Risk Assessment Monitoring System (PRAMS) survey. *Maternal Child Health J* 2007; 11:549-558.

survey of perinatal health care providers found that 71% of respondents indicated that they routinely (“All of the time” or “Often”) assessed for perinatal depression among pregnant and postpartum women during health care visits; 78% indicated that they routinely assessed for perinatal depression during the first year postpartum for women who were demonstrating depressive symptomatology. This survey also found OB/GYN physicians (75%) and Family Practice physicians (48%) routinely screened, although use of a formal instrument was somewhat less common. Pediatricians and other physicians were the least likely to routinely screen (24% and 24%, respectively) or report utilizing a screening tool (4% and 11%, respectively). Other surveys have since confirmed that pediatricians are not routinely screening for depression and when they do screen, they are not using standardized tools.¹⁸

Abuse. Almost 8% of women who had a live birth indicated they experienced physical violence (pushed, hit, slapped, kicked, choked, or physically hurt in any other way) during the 12 months prior to becoming pregnant. Violence at the hands of a current or former intimate partner (IPV) before pregnancy was experienced by 6.4% of women. IPV before pregnancy was most common among Hispanic women (15.2%). Among women with less than high school education, 8.4% experienced physical IPV. Women living in the Northern Perinatal Region had the highest rates of abuse before pregnancy (10.5%). Reports of experience of intimate partner violence during pregnancy decreased to 3.4%. VDH’s Project RADAR (a provider-focused initiative to promote the assessment and prevention of intimate partner violence in the health care setting) surveyed health care providers in 2006 to assess the knowledge, attitudes and behaviors of Virginia’s health care providers concerning IPV. Over half (64.8%) of providers who responded reported that they do not use IPV screening questions with any patients, and only 17% reported having identified a patient who was a victim of IPV during the past 6 months.¹⁹ Further, only 1 out of every 3 providers always asked the patient about the possibility of IPV when the patient presented with an injury such as a bruise or laceration.

Intimate partner homicide. A report from the Family and Intimate Partner Homicide Surveillance Project of the Office of the Chief Medical Examiner,²⁰ indicated that four out of

¹⁸ Delatte R, Cao H, Meltzer-Brody S, Menard K. Universal screening for postpartum depression: an inquiry into provider attitudes and practice. *American Journal of Obstetrics & Gynecology*, 2009; 113(5):1117-23.

¹⁹ Intimate Partner Violence Health Care Provider Survey, Virginia 2006, Division of Injury and Violence Prevention, Office of Family Health Services, Virginia Department of Health.

²⁰ Family and intimate partner homicide: A descriptive analysis of the characteristics and circumstances surrounding family and intimate partner homicide in Virginia, 2007

five (80.4%) intimate partner homicide victims are female, and 65.8% of female victims are women of childbearing age (18-44). Black females were killed at over three and a half times the rate of White females (3.0 per 100,000 compared to 0.8 per 100,000). When risk factors for intimate partner violence were examined, the most frequent abuser characteristic was a history of arrests or convictions for non-domestic violence offenses (37.8%), and the most frequent victim characteristic was that the victim began an intimate relationship with a new person (17.8%). The two most frequent events that preceded an intimate partner homicide were that the relationship was ending or about to end (57.8%), and that the relationship had a history of physical abuse (40%).

Substance abuse, mental illness, domestic violence. Findings from the Maternal Mortality Review Team (MMRT) report *Pregnancy-Associated Maternal Death In Virginia 1999-2001*, indicated that pregnant and postpartum women suffered from severe problems with substance abuse, mental illness, and domestic violence, and these factors often contributed to maternal death. Women were considered to be at risk for problems related to substance abuse, mental illness, and/or domestic violence if either the prenatal care provider or a hospital or urgent care center noted the problem in the record or the MMRT determined that the factor contributed to death. Review of maternal death records for 1999-2001 revealed that 38 women (31.4% of all cases) were at risk for problems related to substance use/abuse, and in 35 cases, substance use actually contributed to death. Prenatal care providers and hospitals screened for substance use more often (69.4% and 49.5% respectively) than they screened for either mental illness (38.8% and 25.3%) or domestic violence (20% and 19.4%). Further, the leading cause of death among women ages 18-44 was accidental poisoning in 2008. The most common poisoning agents were narcotics and hallucinogens.

The MMRT found that more than a quarter of women with substance abuse risk (28.9%) were known to have used drugs during their pregnancy. The majority of the women identified with a substance abuse risk died a violent death; 21% were victims of homicide, 18.4% died from accidental overdoses, 13.2% committed suicide, and 10.5% died in motor vehicle incidents. Of the 27 women identified with a risk for mental illness, slightly more than half died a violent death. Twenty-two percent of these women committed suicide, 11.1% died in motor vehicle collisions, 11.1% died from accidental overdoses, and 7.4% were homicide victims. In three of the seven cases of suicide, the MMRT determined that the suicide was directly related to the

pregnancy. Twenty women were identified with a risk for domestic violence; in 17 cases the MMRT determined that domestic violence was a direct contributing factor in the death. Forty-five percent of women with a risk for domestic violence died from homicide. In 13 cases, the homicide perpetrator was an ex-boyfriend, boyfriend, husband, acquaintance, or family member. In over three-fourths of those cases, there was known conflict between the decedent and perpetrator at the time of death. In sum, the Maternal Mortality Review Team found that women who died were in contact with health systems where assessments, prevention efforts, treatments, referrals, and/or interventions might have changed the outcome.

Infant Health

Preterm birth. In 2008, birth certificate data showed that 10.5% of births in Virginia were preterm (born at less than 37 completed weeks of gestation). In the past decade, this rate steadily increased from 8.2% in 1990, which represents a 28% increase. According to the Institute of Medicine’s Report titled, *Preterm Birth: Causes, Consequences, and Prevention*, infants born preterm are at greater risk for mortality as well as short and long-term health and developmental problems. For example, in 2008 infant mortality rates among preterm infants were almost 20 times higher than full-term babies (40.9 compared to 2.1). In Table 5, infant mortality rates by gestational age for Virginia in 2008 show that full-term infants had the best survival. Further, the birth of a preterm infant has significant emotional and financial costs to families and their communities as well as having implications for public services, such as health insurance, education, and other social support systems. According to the March of Dimes, in 2005, every preterm infant cost the United States \$51,600 for a total of \$26.2 billion.

Table 5. Infant Mortality Rate by gestational age and weight at birth, Virginia 2008.

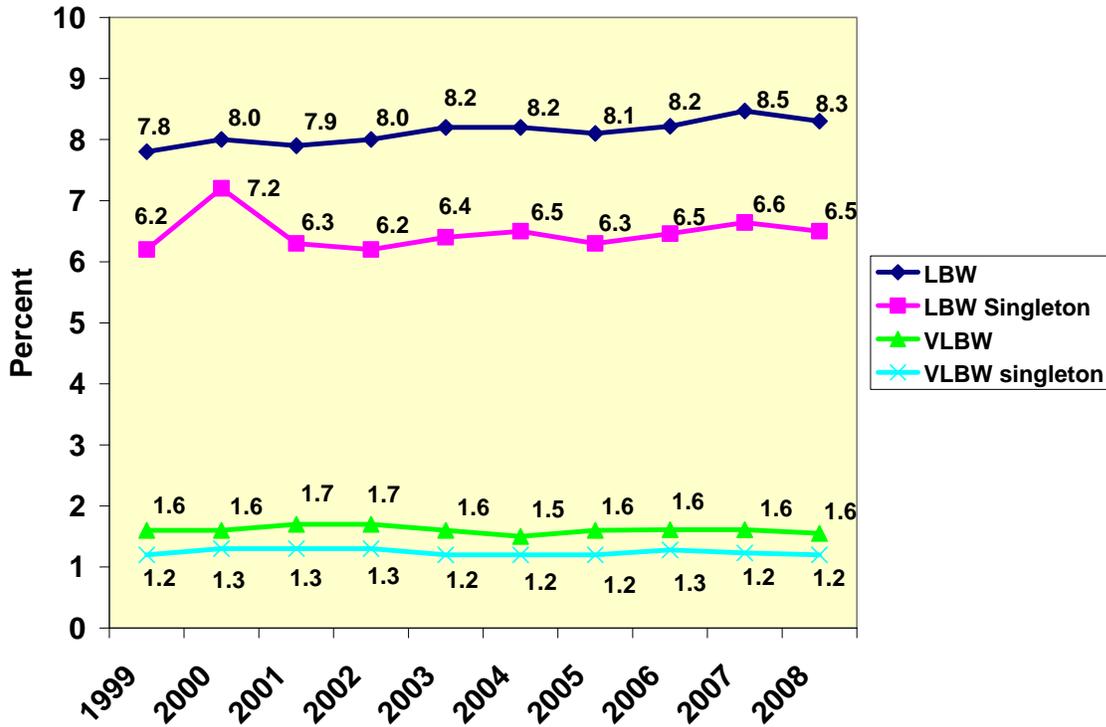
Gestational age at Delivery	Infant mortality rate per 1,000 live births
Preterm (< 37 completed weeks)	40.9
<32 completed weeks	200.3
32-36 completed weeks	8.2
Full Term (>37 completed weeks)	2.1
Birth weight at Delivery	Infant mortality rate per 1,000 live births
Low birth weight (< 2,500 grams)	36.1
<1,500grams	150.0
1,500-2,499 grams	10.0
Normal birth weight (>2,500 grams)	2.2
State Infant Mortality Rate	6.7

Low birth weight. Birth weight is an important determinant of infant health and survival. Infants born low birth weight (infants weighing less than 2500 grams / 5.5 pounds) are at increased risk for immediate health problems, such as respiratory problems due to underdeveloped lungs, and long-term problems, such as developmental disabilities.²¹ In 2008, 8.3% of births in Virginia were low birth weight infants (Health Status Indicator 1A), which represents a 17% increase from 1990 (7.1% low birthweight). Low birthweight infants have a mortality rate that is 16 times higher than that of normal weight infants (Table 5). Virginia has not met the Healthy People 2010 goal to reduce low birth weight to no more than 5% of all live births. Further, the black-white low birth weight ratio among singleton live births has remained at or above 2.0 since 1990 (State Outcome Measure 1).

Very low birth weight. Although very low birth weight infants (infants weighing less than 1500 grams/ 3.3 pounds) only represented 1.6% of all live births in 2008, Virginia has not met the Healthy People 2010 goal to reduce very low birth weight births to no more than 0.9% of all live births (Health Status Indicator 2A). Very low birth weight infants have a mortality rate 15 times higher than that of infants who are between 1,500 and 2,499 grams, and 68 times higher than normal birth weight infants. Figure 15 demonstrates that singletons were the main contributors for both low and very low birth weight infants.

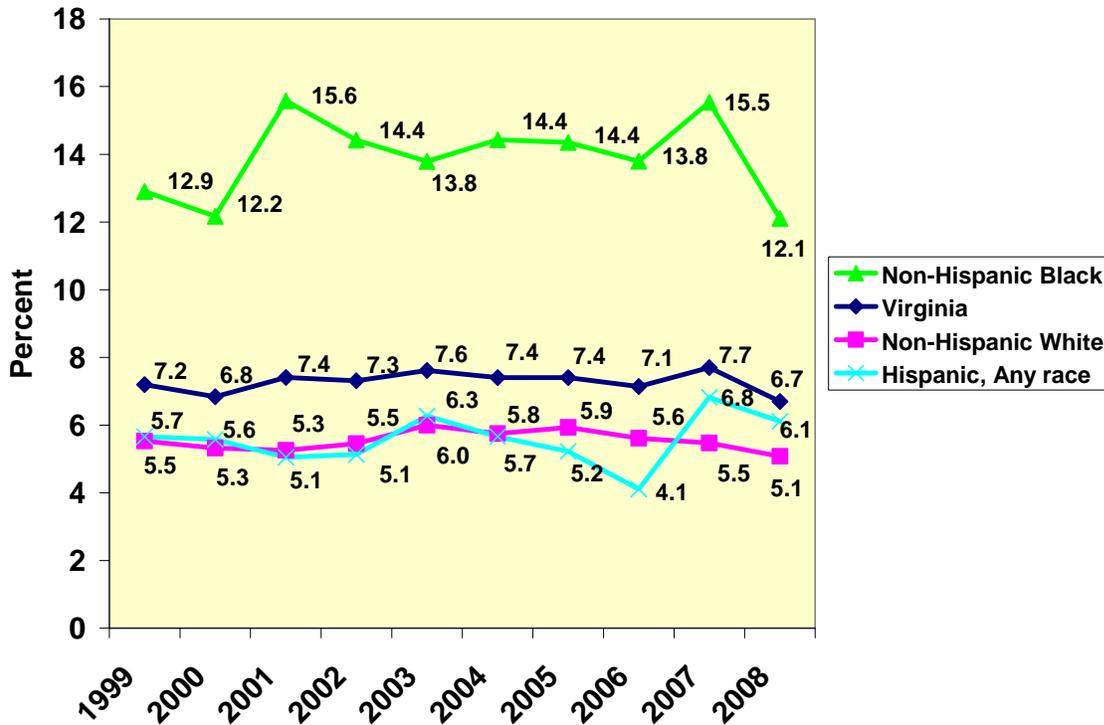
²¹ JAMA patient page. *Low birth weight.* JAMA. 2002 Jan 9;287(2):270.

Figure 15. Title V Health Status Indicators 1A, 1B, 2A, and 2B – Low Birth Weight (LBW) and Very Low Birth Weight (VLBW) Rates, Virginia 1999-2008



Infant mortality. Despite significant declines nationally and statewide, in the past decade infant mortality rates have leveled off. From year to year, there were fluctuations in the rate but analyses of 3-year rolling trends showed no improvement in infant mortality. In 2008, there were 701 infant deaths and the infant mortality rate in Virginia was 6.7 infant deaths per 1,000 live births, but disparities in mortality by race/ethnicity persisted (Figure 16, National Outcome Measure 1). Infant mortality among non-Hispanic Black infants is still more than double that of non-Hispanic White infants. The three leading causes of infant mortality in 2008 were (1) disorders of short gestation and low birth weight (204.6 deaths per 100,000 live births), congenital malformations deformations and chromosomal abnormalities (birth defects) (135.0 deaths per 100,000 live births), and Sudden Unexplained Infant Death (SUID) (69.7 deaths per 100,000 live births). Looking at infant age at death, 66% of infant deaths in 2008 occurred during the neonatal period. Virginia’s neonatal mortality rate was 4.5 deaths per 1,000 live births (National Outcome Measure 3) and the postneonatal mortality rate was 2.3 deaths per 1,000 live births in 2008 (National Outcome Measure 4).

Figure 16. Title V National Outcome Measure 1 – Infant Mortality Rate per 1,000 Live Births by race/ethnicity, Virginia 1999-2008



In sum, Healthy People 2010 goals to reduce infant mortality, preterm births, or low birth weight have not been met, and there are persistent disparities causing non-Hispanic Black women to be disproportionately affected by poor birth outcomes. Infants born to non-Hispanic Black women were twice as likely to die before their first birthday or be born low birth weight compared to infants born to non-Hispanic White women.

Infant sleep position and SIDS. Since the American Academy of Pediatrics (AAP) recommendations in 1992 followed by the “Back to Sleep Campaign” in 1996, there has been a dramatic decrease in SIDS rates nationwide (50 percent). However, the practices of placing babies in the prone sleep position and bed-sharing still occur. Compared to the nation, Virginia has suffered higher SIDS rates since 2000. Like the nation, SIDS is the third leading cause of infant death in Virginia and the leading cause of postneonatal infant mortality. While safe sleep messages were well received by many, there are still segments of the population that are not being reached, particularly mothers who are Black, young, poor, residents of a southern or mid-

Atlantic state, or who have more than one child.²² In Virginia, non-Hispanic Black infants were twice as likely as non-Hispanic White infants and three times more likely than Hispanic infants to die of SIDS in 2008, according to death certificate data.

Overall, the PRAMS survey found that 69% of mothers most often lay their baby on his or her back to sleep, which is very close to meeting the Healthy People 2010 Goal of 70% of healthy full-term infants put down to sleep on their backs (Figure 17). Non-Hispanic Black women had the lowest rate of placing infants on their backs to sleep (39%). The percent of back-sleep position was also lower among women ages 20-24 years (51%) and women in the \$20,000-\$34,999 income group (50%). There were no major differences in sleep position by insurance status.

Figure 17. Progress towards HP2010 goal of increasing use of supine sleep position, PRAMS 2007.

Healthy People 2010 Goal: Increase the percentage of healthy full-term infants who are put down to sleep on their backs to 70%		
<i>Already Meeting the Goal</i> Women who are/ Women who have:	<i>Close to Meeting the Goal</i> Women who are/ Women who have:	<i>Target Groups</i> Women who are/ Women who have:
Non-Hispanic White Hispanic College graduates or some college 30 years or older In a higher income group (\$35,000 or more) Privately insured	High school graduates or less Teens (less than 20 years) 25-29 years of age Uninsured or Insured by Tricare	Non-Hispanic Black 20-24 years of age In a lower income group (less than \$35,000) On Medicaid

In 2008, the Division of Women’s and Infants’ Health at VDH conducted a survey, “Sudden Infant Death Syndrome (SIDS) Risk Reduction Survey,” to examine hospital policies regarding infant safe sleep environment across Virginia as well as to assess patient and staff educational activities. Eighty-four percent of birth hospitals participated in the survey; of the participating hospitals only about half (52.1 percent) of birth hospitals in Virginia had a written policy regarding supine sleep position, and only about a quarter (25.4 percent) had written policy against bed sharing. Also, more than 80% of hospitals reported not having a nursing competency validation to promote safe sleep practices, where nurses must demonstrate their ability to follow

²² Williams L, Morrow B, Shulman H, Stephens R, D’Angelo D, Fowler CI. PRAMS 2002 Surveillance Report . Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2006.

policy related to infant safe sleep environment and practices. Hospital nurses can play a critical role in influencing and encouraging the safe sleep environment; infants are more likely to be placed in the supine position for sleep when healthcare professionals recommend the position and parents are able to observe the behavior.²³

Breastfeeding. Children who are breastfed are at reduced risk of obesity.²⁴ Studies have found that the likelihood of obesity is 22% lower among children who were breastfed.²⁵ Exclusive breastfeeding appears to have an even stronger effect than combining breastfeeding with formula feeding. The incidence of childhood overweight and obesity was lower among infants who were exclusively breastfed for the first six months of life.²⁶ Studies that controlled for exclusivity and duration of breastfeeding showed a more significant protective effect against childhood obesity. According to Virginia PRAMS data, women in Virginia did well at initiating breastfeeding and have met the Healthy People 2010 goal of 75%. However, Virginia was less successful at getting mothers to exclusively breastfeed and to breastfeed for the AAP recommended duration (Figure 18). Most (80%) women initiated breastfeeding, yet, within three months only 58% were still breastfeeding and only 9% were exclusively breastfeeding. By six months of age, only 41% were still breastfeeding at all.

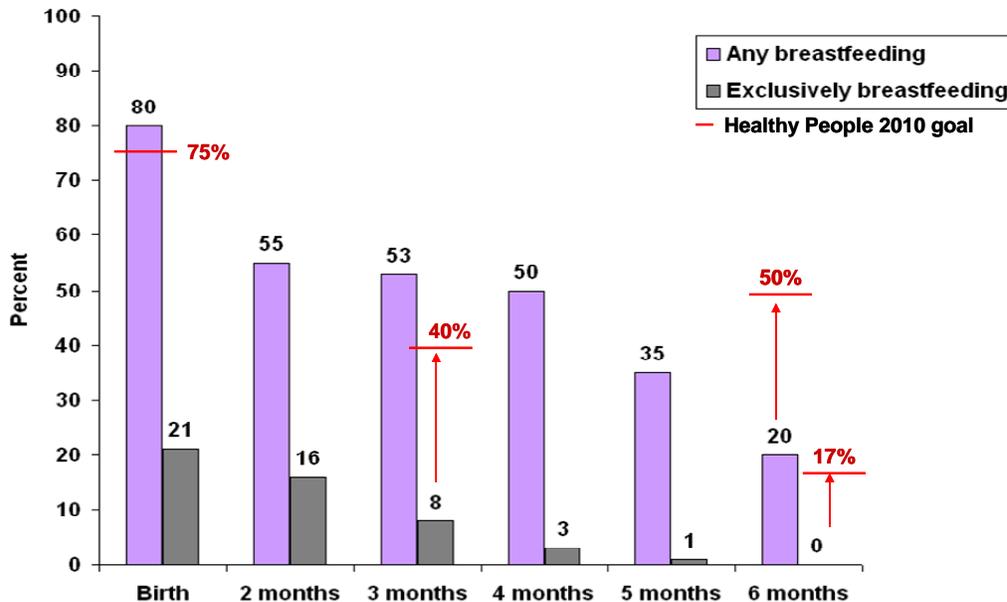
²³ Esposito, L., Hegyi, T., and Ostfeld, BM. 2007. Educating parents about the risk factors of sudden infant death syndrome: the role of neonatal intensive care unit and well baby nursery nurses. *Journal of Perinatal Neonatal Nurses*. 21(2):158-164.

²⁴ Owen C.G., Martin R.M., Whincup P.H., Davey Smith G., Cook D.G. (2005). Effect of infant feeding on the risk of obesity across the life course: a quantitative review of the published evidence. *Pediatrics*, 115, 1367-1377.

²⁵ Arenz S., Ruckerl R., Koletzko B., Von Kries R. (2004). Breast-feeding and childhood obesity: a systematic review. *International Journal of Obesity and Related Metabolic Disorders*, 28, 1247-1256.

²⁶ Gillman MW, Rifas-Shiman SL, Camargo CA, et al. Risk of overweight among adolescents who were breastfed as infants. *JAMA*. 2001;285:2461-2467.

Figure 18. Duration of breastfeeding by any and exclusive breastfeeding and comparison to Health People 2010 goals, PRAMS 2007.



Evidence shows that the policies and practices of birth facilities significantly affect breastfeeding initiation and duration. The Baby Friendly Hospital Initiative (BFHI) is a recognition program for maternity facilities that have created an optimal environment for appropriate infant feeding and mother-baby bonding. 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. The Baby Friendly Hospital Initiative (BFHI), which incorporates the Ten Steps to Successful Breastfeeding, has been shown to increase the incidence and duration of breastfeeding. In 2009, the CDC’s Breastfeeding Report Card found that 0.49% of Virginia’s live births occurred at facilities designated as “Baby Friendly” compared to 2.9% for U.S. As of today, there is only one hospital designated as “Baby Friendly” in Virginia (Culpeper Regional Hospital).

Findings from FIMR. Based on FIMR’s Mid-Year Assessment, the top five issues related to fetal and infant deaths for the state were multiple stressors (72% of cases), prematurity and low birth weight (47% of cases), maternal infection (45% of cases), preterm labor (42% of cases), and unintended pregnancy (38% of cases). The top issues identified from FIMR create a picture that suggests a cascade of events that leads to a fetal or infant death. For example,

maternal stress (physical, emotional, financial and/or traumatic) may create a physiological environment that makes the mother susceptible to maternal infection, which may lead to preterm labor resulting in a premature or low birth weight fetal or infant death. While this cascade of events cannot be proven, it suggests that there is a relationship between stress, infection, and preterm labor and infant mortality. According to a CDC report titled, *Current Research in Preterm Birth*, preterm birth is a multifactorial issue caused by genetic, social, and environmental factors, which most likely interact to increase risk. In addition, there is a growing body of research acknowledging that social determinants (such as race, education, income level, racism, neighborhood safety, social capital, etc.) interact to impact birth outcomes. More research is needed at the state level to identify these interactions to improve primary prevention efforts for birth outcomes in Virginia.

The FIMR Mid-year Assessment identified substance abuse as a factor associated with 33% of fetal and infant deaths that were reviewed. Substance abuse was identified by both the Eastern and Southwestern Perinatal Regions as an issue for 50% of cases. Birth certificate data underestimates smoking, alcohol, and drug use behavior because it is based on self-report, and Virginia birth certificates lack information on prescription drug use during pregnancy. While there are not reliable sources of state-level data on substance abuse by pregnant women and the exposure received by their infants, the Virginia Department of Behavioral Health and Developmental Services (DBHDS) calculates estimates for Virginia based on prevalences reported from the National Survey of Drug Use and Health. The DBHDS estimates that of the 104,990 infants born to women ages 15-44 in Virginia in 2008, 12,178 (12%) were exposed to alcohol *in utero*, 6,229 (6%) were exposed to the non-medical use of prescription medications, and 4,514 (4%) were exposed to an illicit substance such as cocaine or heroin).

Findings from PPOR. Perinatal Periods of Risk (PPOR) analyses of the five perinatal regions in Virginia found that the highest feto-infant mortality rates in every region were in the area of “Maternal Health/Prematurity” (Table 6). These findings show that prevention efforts should focus on preconception health and health behaviors in all regions of the state. It further justifies the need to focus not only on those women already pregnant but to focus primary prevention efforts to women who may not be contemplating pregnancy if pregnancy outcomes are to be improved. The second highest feto-infant mortality rate in three regions was in the area

of Infant Health, which indicates the need for prevention efforts for infant safe sleep environment and promotion of breastfeeding.

Table 6. PPOR Results: Feto-Infant Mortality Rates per 1,000 live births and fetal deaths 24 weeks and older by Virginia Perinatal Region, 2006-2008

Perinatal Region	Maternal Health / Prematurity	Maternal Care	Newborn Care	Infant Health
East Central	3.7	1.4	1.1	1.6
Eastern	3.3	1.7	1.2	1.9
Northern	1.4	1.1	0.8	0.8
Southwestern	2.5	0.8	1.1	1.7
West Central	3.2	1.8	1.3	1.5

Results across data sources

Consistent findings across data sources. Qualitative data from focus groups, interviews with key stakeholders and quantitative data from mortality reviews and statewide surveillance systems confirm the unmet need to improve preconception health for pregnant women and women of childbearing age. In Virginia, more women need to plan their pregnancy with their partner, maintain a healthy weight, consume the recommended amounts of fruits and vegetables everyday, take a multivitamin containing 0.4 to 0.8 mg of folic every day, exercise regularly, and abstain from smoking. BRFSS data, morbidity analyses and mortality reviews confirm that pre-existing conditions need to be identified and managed, and women need to engage in healthy behaviors before pregnancy to improve pregnancy outcomes and prevent long-term chronic disease and disability later in life. Further, PPOR analyses and PRAMS data support the need to improve infant safe sleep environment and breastfeeding duration. PRAMS data regarding information mothers received from providers is consistent with a survey of health care providers. Therefore, information from many sources of perinatal and women’s health data in Virginia illustrates the health status needs of women of childbearing age, pregnant women, mothers, and infants.

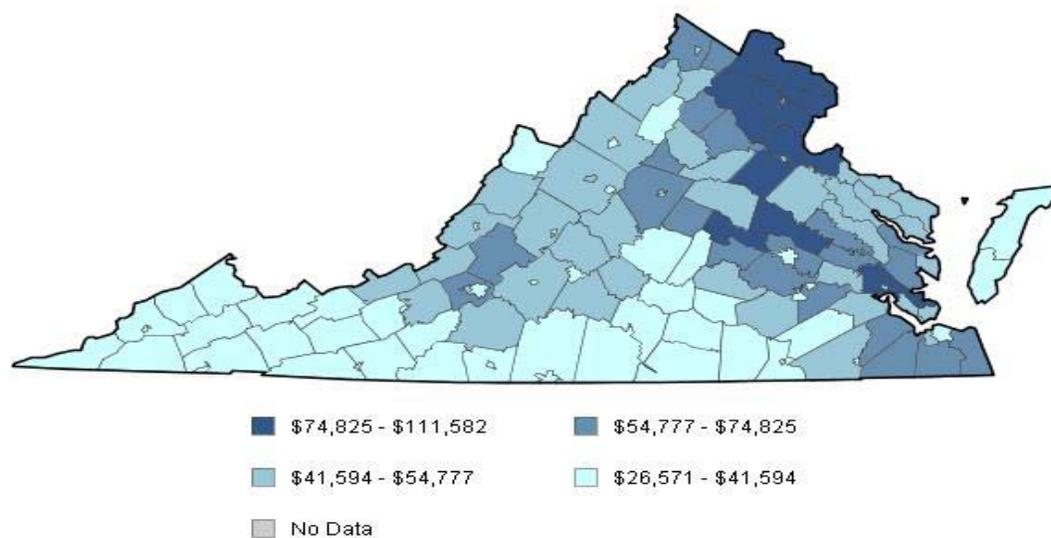
B. Children

Health Status and Poverty. In general, Virginia’s 1.6 million children and adolescents under 18 years of age are healthy. According to the 2007 National Survey of Children’s Health (NSCH 2007), 88% of parents reported their child or teenager less than 18 years of age was in excellent or good health and 96% stated that their school-aged child had not missed 11 or more

days of school in the last 12 months due to illness or injury. Over 289,000 of Virginia’s children under age 18 are considered children with special health care needs, which is 15.8% of all children and adolescents.

Using the Current Population Survey of the US Census, the percentage of children under 18 years old at or below 135% of the federal poverty level increased from 24.9% in 2003 to 25.5% in 2007.²⁷ An estimated 9% of children ages 0 to 17 years in Virginia live in a “working poor” household, where parents are employed full-time and have a household income less than 100% of the federal poverty level (NSCH 2007). The areas of the state with the highest median household income extend from Northern Virginia through Richmond and Charlottesville and to the Tidewater area. The far southwest and southern areas have the lowest median household income (Figure 19).

Figure 19. Median Household Income in Dollars, Virginia 2008²⁸



Since 2006, there has been an increase in the number of children ages 0-17 who live in poverty. While nearly 70% of the children under 18 are white, they make up about 8% of children living in poverty. By contrast, a little over one-fifth of Virginia children are black but 30% of those live in poverty and 60% live in single-parent families.²⁹ Hispanic children make up 10% of children and youth in Virginia but nearly 16% of those in poverty.

²⁷ US Census Bureau

²⁸ The Annie E. Casey Foundation, KIDS COUNT Data Center, Retrieved 05/03/10 from datacenter.kidscount.org.

²⁹ The Annie E. Casey Foundation, KIDS COUNT Data Center, Retrieved 05/03/10 from datacenter.kidscount.org.

In Virginia 87% of employed parents of children under age five said their work life was not affected by child care issues (NSCH 2007). Among children ages 3 to 5 years, 30.9% regularly attended preschool, kindergarten, Head Start or Early Head Start during the past month. Nationally, this percentage varies by income level, with only half of children under 200% of poverty with regular attendance in the past month as compared to three-quarters of children living in households at or above four times the poverty level.³⁰ There are a total of 24,400 children served using child care fee assistance. In Virginia, approximately 95% of requests for assistance are for full time care, which exceeds the US percentage of 79%.³¹ A recent study of Virginia child care data found that the average annual cost for care in a center for a school age child was \$6,604.

Emerging Health Issues for Children. The VDH Office of Family Health Services, through a contract with the Central Virginia Health Planning Agency, conducted focus groups and key informant interviews to assess perceptions of the major issues facing children and adolescents. Respondents noted that efforts to promote immunizations, early intervention, and dental care for children have improved child health over the past five years, but needs for increased preventive care, early intervention of disease, and stronger efforts to promote health were noted across the state (Table 7). Efforts are still needed to ensure diagnosis is followed by adequate treatment and continuity of care for populations in need. Dental care continues to be a problem for pregnant women and adults unable to receive dental insurance under Medicaid. Access to preventive care is limited, particularly for adolescents and adult males who are often lost in the system. For all age groups, there is significant need to promote nutrition and active lifestyles while improving/providing the infrastructure needed to make healthy choices (i.e. sidewalks, grocery stores). When asked to identify what emerging issues would be the most important for the next five years, healthcare reform, the current economic environment, health insurance coverage, and behavioral health issues were the top health concerns expressed by stakeholders (Table 7). Medical and dental improvements for children, mental health and substance abuse treatment were additional issues of concern.

³⁰ Child and Adolescent Health Measurement Initiative (2007). *National Survey of Children's Health*, Data Resource Center on Child and Adolescent Health website. Retrieved 05/05/10 from www.nschdata.org.

³¹ Data are provided by the State CCR&R Network and are derived from March 2009 CCR&R monthly data.

Table 7. Emerging Health Issues and Impact on Virginia Children and Families, Findings from Key Informants and Focus Groups.

Existing Issues with the Most Impact Last Five Years	Emerging Issues with the Most Impact Next Five Years
Healthcare reform, loss of jobs and health insurance Growth in SCHIP (FAMIS) enrollment and Medicaid Prenatal care and early childhood Medical and dental care improvements for children Mental health/substance abuse treatment	Healthcare reform Increased need for screenings/preventative care Limited access to medical and dental care Lifestyle/health education issues Child healthcare and access

Participants in statewide focus groups cited improvements made in prenatal care, collaboration, development of coordinated services statewide, and community education and outreach. Participants also noted the improvement in cultural sensitivity and placed an emphasis on needed efforts to meet the needs of the increasing Hispanic population (Table 8). Key issues participants identified were:

- Access to and cost of health care;
- Unmet needs of vulnerable populations;
- Need for a greater focus on prevention and early intervention; and
- Fostering of greater coordination, communication and collaboration.

When asked to suggest improvements for the Virginia Department of Health, stakeholders expressed that improvements should be focused on community education and outreach, comprehensive planning, expansion and more effective use of resources. Most of the feedback from both focus groups and interviews with key stakeholders were centered on fostering statewide collaboration and the coordination of services and programs.

Table 8. Issues Affecting Virginia’s Children and Suggested Recommendations from Key Informant Interviews and Focus Groups with Stakeholders.

Access to Health Care

- Inadequate access to medical and dental care services, particularly by the uninsured and Medicaid recipients;
- Growing cost of health care and its impact on health insurance coverage, especially lower income families and individuals;
- Critical shortage of pediatricians, pediatric specialists, support services, and dentists in many areas willing to serve children with Medicaid or FAMIS (Virginia SCHIP) coverage, generally due to low reimbursement rates; and
- Inadequate supply of dental, mental health and substance abuse services for low-income children.

Vulnerable Populations

- Immigrants’ access to the myriad of health-related services, particularly linguistically and culturally appropriate services;
- Unmet health needs of low income, uninsured people and minority populations; and
- Identification and coordination of needed services for CSHCN.

Prevention and Early Intervention

- Need for prevention and early intervention services, particularly for infants and children; and
- Need for health education and initiatives for adolescents on health issues, particularly those addressing risky behaviors.

Recommendations

1. Ensure the availability of and coordination and collaboration among providers and services
2. Increase and improve communication, leadership and planning, and develop additional resources (financial, data/information, and services)
3. Provide resources and leadership for planning and creating partnerships
4. Increase communication, outreach activities, and collaborative activities to address community needs.
5. Provide easily accessible data on populations served by OFHS.

Virginia communities who used the Mobilizing for Action through Planning and Partnerships (MAPP) process highlighted three top issues: housing, employment and transportation. In 2007, 11.7% of Virginia’s children lived in neighborhoods that contained poorly kept or dilapidated housing (NSCH). The Center for Housing Policy reports that there is significant correlation between health and educational outcomes based on the availability of affordable housing. Research has shown that decent, affordable housing can reduce health problems associated with exposure to allergens, neurotoxins, and other dangers in the home. Good physical and mental health depends on homes that are safe and free from physical hazards.

When adequate housing protects individuals and families from harmful exposures and provides them with a sense of privacy, security, stability, and control, it can make important contributions to health. In contrast, poor quality and inadequate housing contributes to health problems such as infectious and chronic diseases, injuries, and poor childhood development.^{32,33,34}

Though affordable housing may improve health outcomes by freeing up family resources for nutritious food and health care expenditures, there has been a rise in the number of uninsured due to the loss of jobs and increasing health care costs. Virginia's five year annual average for unemployment (2005-2009) stood at only 4%. However, the statewide unemployment rate for Virginia in April 2010 increased to 6.7% compared to the April 2009 rate of 6.3%.³⁵ Free health clinics have been overwhelmed as a result of the rising number of uninsured, forcing some to close their doors to new patients, cut back available slots, or inform new patients that they have to wait months for an appointment.

The ability to reliably and affordably get to doctor's visits or healthcare appointments is also a matter of transportation equity. Minorities, households in rural areas, the disabled and low-income families face even greater barriers because transportation is often unavailable, inaccessible or unreliable. Another major issue identified by stakeholders was childhood obesity, which is associated with inactive, sedentary, auto-dependent lifestyles.

In addition to qualitative data, Virginia has quantitative data that describes the health status of children. Numerous data collection efforts have been conducted in Virginia by local, state and federal agencies to describe the major health and developmental problems for families and children in Virginia. Child health will be described using prevalence estimates gathered from hospitalization, death, and state and national survey data.

Child Development. The period of early childhood represents a time of substantial brain development that has a significant impact on children's later emotional and intellectual development.³⁶ What children know and can do at the time they start school helps determine

³² Lanphear BP, Aligne CA, Auinger P, et al. "Residential Exposures Associated with Asthma in U.S. Children." *Pediatrics*, 107(3): 505-11, 2001.

³³ Jacobs DE, Clickner RP, Zhou JY, et al. "The Prevalence of Lead-Based Paint Hazards in U.S. Housing." *Environ Health Perspect*, 110(10): A599-606, 2002

³⁴ Russo A, Jiang HJ and M. B. *Trends in Potentially Preventable Hospitalizations among Adults and Children, 1997-2004*. Rockville, MD: Agency for Healthcare Research and Quality, August 2007.

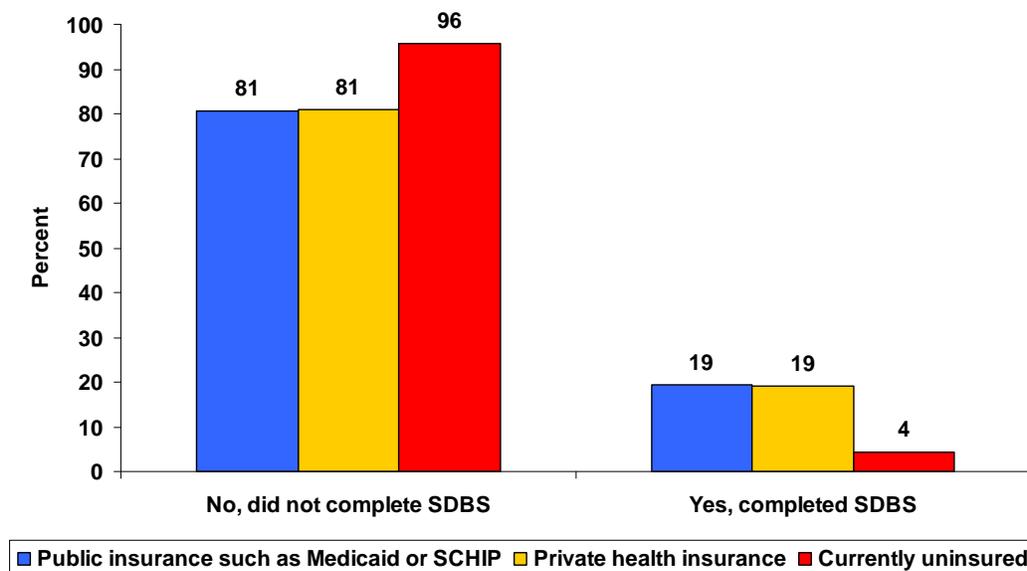
³⁵ Virginia Employment Commission. www.vec.virginia.gov. Accessed on 6/14/10.

³⁶ Early Childhood Health, Division of Child and Adolescent Health, Virginia Department of Health, <http://www.vahealth.org/childadolescenthealth/EarlyChildhoodHealth/>

their educational and lifelong success. The need for regular developmental screenings, social and emotional well being, obesity, nutrition and oral health were identified as emerging issues facing Virginia in the next five years.

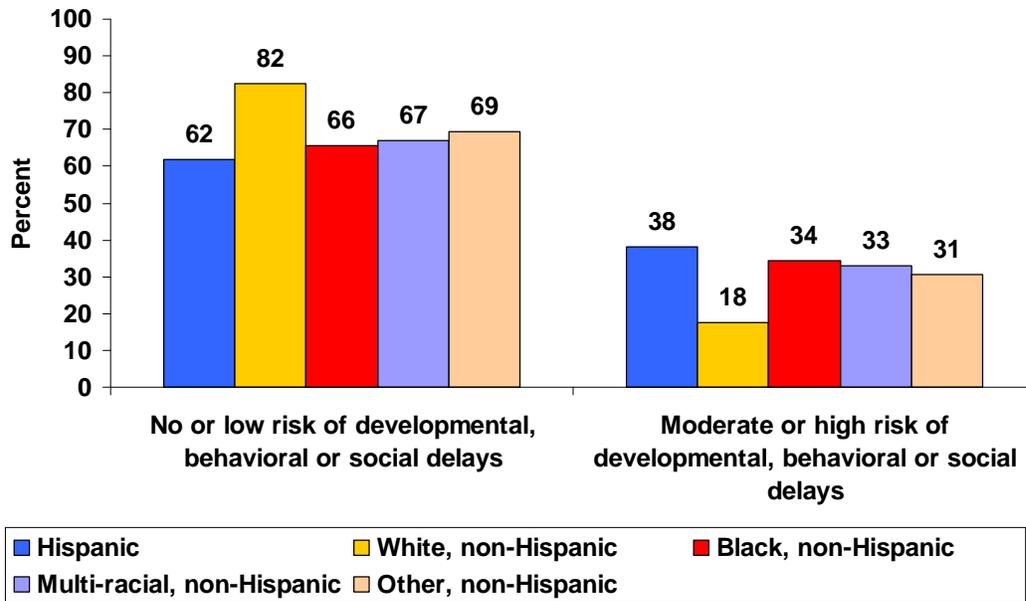
Among children age 10 months-5 years who had a health care visit in the past 12 months, only 18% of parents completed a standardized developmental and behavioral screening (SDBS) despite the standard of care that all children be screened for developmental progress at periodic points during well child visits (Figure 20). Parents of children who were currently uninsured had the lowest rate of completing an SDBS. The prevalence of developmental issues is estimated at around 15 to 20%.

Figure 20. Percent of Parents Completing a Standardized Developmental and Behavioral Screening (SDBS) by Insurance Status, Among Parents of Children ages 10 months-5 years With a Health Care Visit in the Past 12 Months, Virginia 2007.



The National Survey of Children’s Health uses eight items from the Parents’ Evaluation of Developmental Status (PEDS) to determine risk status. Using this tool, 26% of Virginia children ages 4 months to 5 years are at moderate to high risk of developmental, behavioral, or social delays. Hispanic children (38%) and non-Hispanic Black children (34%) were almost twice as likely as non-Hispanic White children (18%) to be at risk (Figure 21).

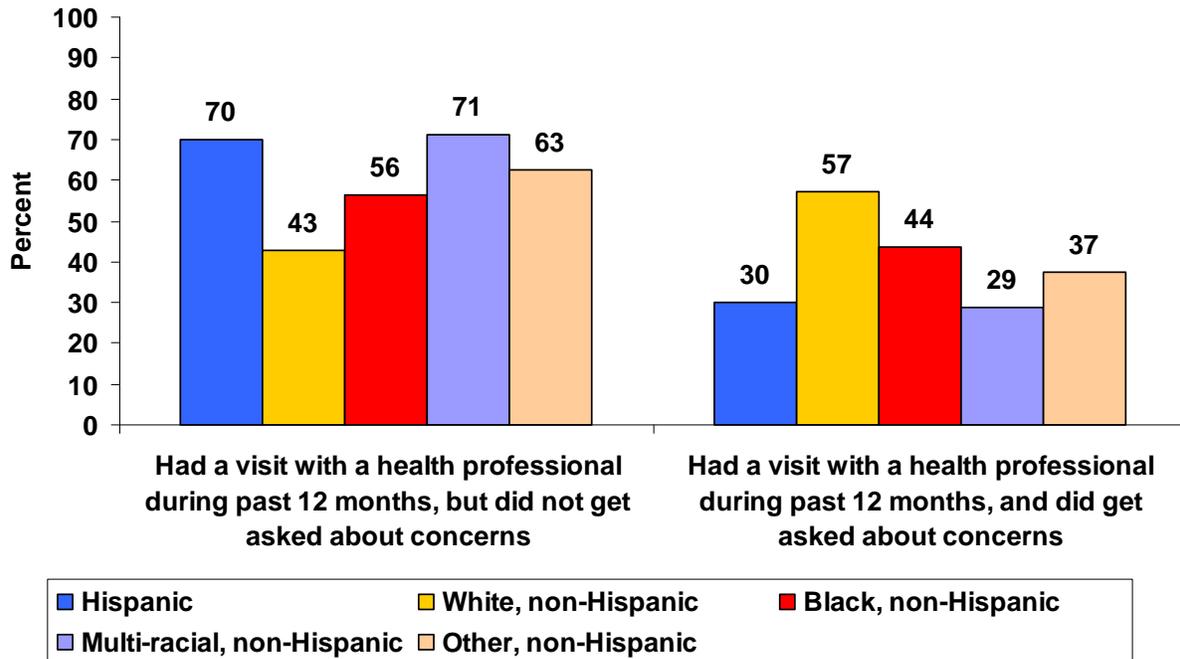
Figure 21. Risk of Developmental or Behavioral Problems by Race/Ethnicity, Virginia 2007 NSCH.



There were also disparities in parental concern about child development and whether a doctor asked about these concerns. In Virginia, almost 40% of parents with children ages 4 months to 5 years expressed concern about their child’s physical, behavioral, or social development. However, parents of Hispanic children and non-Hispanic Black children had the highest percent of having at least one concern about their child’s development. Of children who had a doctor visit, 48% of parents were asked about concerns regarding their child’s learning, development, or behavior; 57% of parents of non-Hispanic White children were asked about their concerns compared with only 30% of parents of Hispanic children and 44% of parents of non-Hispanic Black children (Figure 22). Among parents with children ages 4 months to 5 years, 4% reported that their child has developmental problems and has a written intervention plan called an Individualized Family Services Plan (IFSP) or an Individualized Education Plan (IEP). In 2008, 15.0% of kindergarteners were identified as needing additional help in reading by the Phonological Awareness Literacy Screening for Kindergarten (PALS-K).³⁷

³⁷ School Readiness, Virginia Performs. <http://vaperforms.virginia.gov/indicators/education/schoolReadiness.php>

Figure 22. Doctor Asked About Parental Concerns During Past 12 Months, Virginia 2007.



A child’s health is also dependent on the health of the family unit. In Virginia, 40% of children have mothers whose overall physical and mental health status is not excellent or very good, and 34% of children have fathers whose overall physical and mental health status is not excellent or very good (NSCH 2007). Among mothers, there was disparity by race/ethnicity; twice as many mothers of Hispanic children and non-Hispanic Black children said their health was not excellent or very good compared with mothers of non-Hispanic White children. Among fathers, there was disparity by insurance status. Fathers of children who were uninsured or on public insurance were twice as likely to rate their health status as not excellent or very good compared with fathers of children on private insurance.

A study by the National Institute of Mental Health from 2005 found that half of all lifetime cases of mental illness begin by age fourteen.³⁸ National prevalence rates suggest about 102,000 children and adolescents in Virginia have a serious emotional disturbance and 65,000 of them are extremely impaired, demonstrating that Virginia shares similar trends with the nation. Unfortunately, Virginia has placed little emphasis in treatment and services: only 7% of mental

³⁸ National Institute of Mental Health. Press Release June 6, 2005. mental Illness Exacts Heavy Toll, Beginning in Youth

health expenditures in Virginia go to children under the age of 18 years.³⁹ Virginia also lacks in-home and community-based services: 87 localities have no child psychiatrist.⁴⁰

Injuries. Injuries are a major cause of morbidity for children, and they accounted for 9% of inpatient hospitalizations for children ages 1 to 19 years in 2008. The majority of childhood injuries (69%) were unintentional across all age groups (Table 9). Children ages 5 to 9 years old were most likely to experience unintentional injuries, which accounted for 97% of their overall injuries, compared to 95% of children ages 1 to 4 years, 75% of children ages 10 to 14 years, and 80% of children less than one year. As children age, the proportion of injuries that are intentional (either self-inflicted or assaults) increases. Children ages 15 to 19 years had the highest rates of self-inflicted injuries. However, self-inflicted injuries increased at 10 years of age. Children less than one year had the highest rates of assault (13%).

Table 9. Intent of Injury by Age Group (0-19 years), 2008⁴¹

Intent	<1		1 to 4		5 to 9		10 to 14		15-19	
	N	%	N	%	N	%	N	%	N	%
Unintentional	221	80.66	557	95.54	461	97.05	555	75	1,211	52.74
Self-Inflicted	--	--	1	0.17	6	1.26	156	21.08	796	34.67
Assault	37	13.5	16	2.74	6	1.26	20	2.7	220	9.58
Undetermined	13	4.74	9	1.54	2	0.42	9	1.22	67	2.92
Other	3	1.09	--	--	--	--	--	--	2	0.09
Total	274	100	583	100	475	100	740	100	2,296	100

Overall, children under one year old were most likely to have an injury-related hospital discharge (Table 10), with a rate of 256 discharges per 100,000 children less than one year; rates were lower among children ages 10 to 14 years, with only 151 discharges per 100,000 children, among children ages 1 to 4 years (140 discharges per 100,000 children), and children ages 5 to 9 years (95 discharges per 100,000 children). Nine percent of all inpatient hospitalizations for children ages 1 to 19 were due to injuries in 2008.

³⁹ Ricks & Meyer. (2006). An Integrated Policy & Plan to Provide & Improve Access to Mental Health, Mental Retardation, and Substance Abuse Services for Children, Adolescents and Their Families. A presentation to the Joint Commission on Health Care.

⁴⁰ JLARC. (2007). Availability and Cost of Licensed Psychiatric Services in Virginia. Report of the Joint Legislative Audit and Review Commission to the Governor and General Assembly.

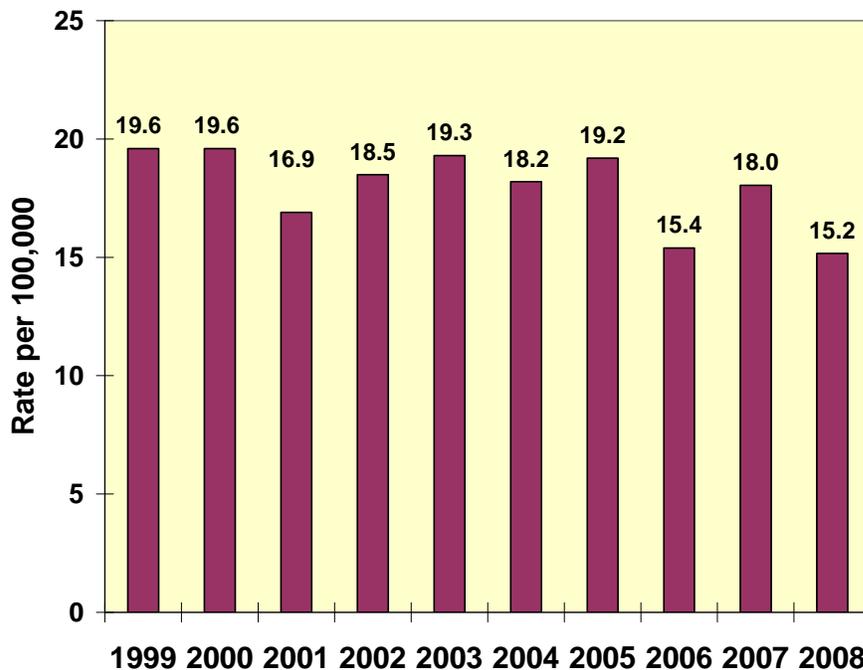
⁴¹ Injury in Virginia 2008, Division of Injury and Violence Prevention, Virginia Department of Health.

Table 10. Injury Hospitalization Rates for children aged 0-19, 2008⁴²

Age	Total Hospital Discharges (HD)	Total Injury Hospital Discharges (HD)	% HD due to Injury	Injury HD rate per 100,000*	Age-adjusted rate per 100,000**
<1	105033	274	0.26	256.07	3.54
1 to 4	9744	583	5.98	140.26	7.76
5 to 9	6248	475	7.6	95.46	6.92
10 to 14	7848	740	9.43	150.91	11.02
15 to 19	23110	2296	9.94	428.65	30.93

Since 1999 the child death rate among children ages 1 to 14 years in Virginia (National Outcome Measure 6) has shown a significantly decreasing trend (Figure 23). Injuries account for approximately 61% of all deaths to children ages 1 to 19 years. The unintentional injury mortality rate for children less than 14 years (Health Status Indicator 3A) was 5.2 deaths per 100,000 children in 2008. The mortality rate for non-Hispanic Black children was slightly higher than the state rate (6.4 deaths per 100,000 children) and lowest for Hispanic children (1.9 deaths per 100,000 children).

Figure 23. National Outcome Measure 6: Child Death Rate per 100,000 children ages 1 to 14 years, Virginia 1999-2008.



⁴² Injury in Virginia 2008, Division of Injury and Violence Prevention, Virginia Department of Health *Crude rate per 100,000 population **Adjusted to 2000 standard population

Children under one (33.64) and 15-19 years old (49.1) had the highest injury death rates per 100,000. The rates and causes of death during the childhood years vary, with changes in development, levels of independence and parental supervision, access to care, and exposure to risks. Furthermore, almost 78% of deaths were injury related among 15-19 year olds (Table 11).

Table 11. Injury Mortality Rates by Age, Virginia 2008.

Age	Total Deaths	Total Injury Deaths*	% Deaths due to Injury	Injury Death rate per 100,000**	Age-adjusted rate per 100,000***
<1	742	36	4.85	33.64	0.46
1 to 4	96	27	28.13	6.5	0.36
5 to 9	48	16	33.33	3.22	0.23
10 to 14	69	35	50.72	7.14	0.52
15 to 19	339	263	77.58	49.1	3.54

Motor vehicle crashes and drowning are leading causes of injury deaths for all children regardless of age (Figure 24). When the leading causes of death are examined by age group, suffocation is the leading cause for children less than one year, drowning is the leading cause for children ages 1 to 4 years, and motor vehicle crashes are the leading cause of death for children ages 5 to 19 years. The mortality rate for children ages 14 years and younger due to motor vehicle crashes in 2008 (National Performance Measure 10) was 1.5 deaths per 100,000 children in 2008. However, mortality rate due to motor vehicle crashes among children ages 15 to 24 years (Health Status Indicator 3C) was 21.7 per 100,000 children, more than 14 times higher than the 0 to 14 age group.

The State Child Fatality Review Team performed a comprehensive review of the circumstances surrounding motor vehicle deaths to children in 2002 and identified strategies to prevent future deaths. In their report published in “Motor Vehicle Deaths to Children in Virginia” published in May 2009, the Team found that over half (57%) of the children whose deaths were reviewed by the Team were not using any type of safety belt, child restraint or protective gear at the time of the fatal injury. Five of the six ATV riders who died were fourteen or under, yet only one was being supervised by an adult at the time of the injury. Collisions involving child drivers accounted for 57% of the motor vehicle occupant deaths to children in 2002. Overall, the Team found that as many as four-fifths of motor vehicle collision deaths could have been prevented through changes in policy, law, education, and behavior. Also, child

deaths in and around motor vehicles occur when drivers, passengers and pedestrians do not follow simple safety practices.

Figure 24. Three Leading Causes of Injury Deaths by Age and Number of Deaths, Virginia 2008.

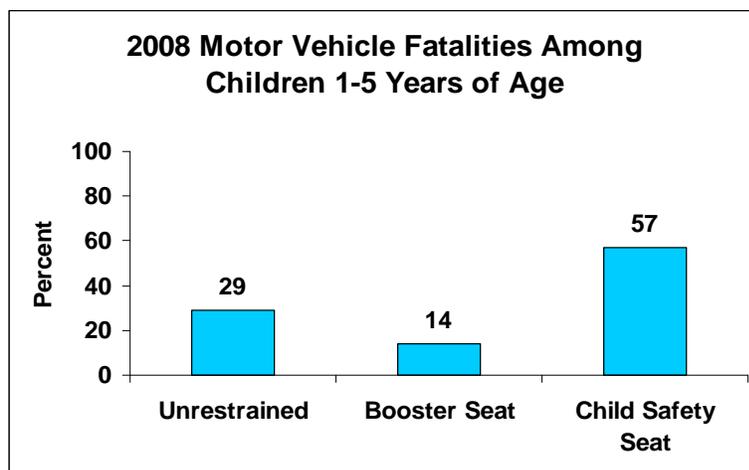
Three Leading Causes of Injury Deaths

<01	1 to 4	5 to 9	10 to 14	15-19
Suffocation 69	Drowning 37	Motor Vehicle 50	Motor Vehicle 60	Motor Vehicle 556
Motor Vehicle 12	Motor Vehicle 34	Fire/Flame 19	Drowning 17	Poisoning 68
Drowning 7	Fire/Flame 22	Drowning 18	Fire/Flame 10	Drowning 36

Excludes unspecified and other categories

The most effective prevention strategy for motor vehicle crashes among children under 5 years of age is the proper use of child safety seats. When used properly, child safety seats have been found to reduce the risk of fatal injury by 54% for children 1-4 years old. During 2008 in Virginia, 29% of children 1-5 years of age killed in a motor vehicle crash were unrestrained despite a state law requiring restraints (Figure 25). Fatalities among restrained children may be due to improper securing of restraints or age-inappropriate restraints.

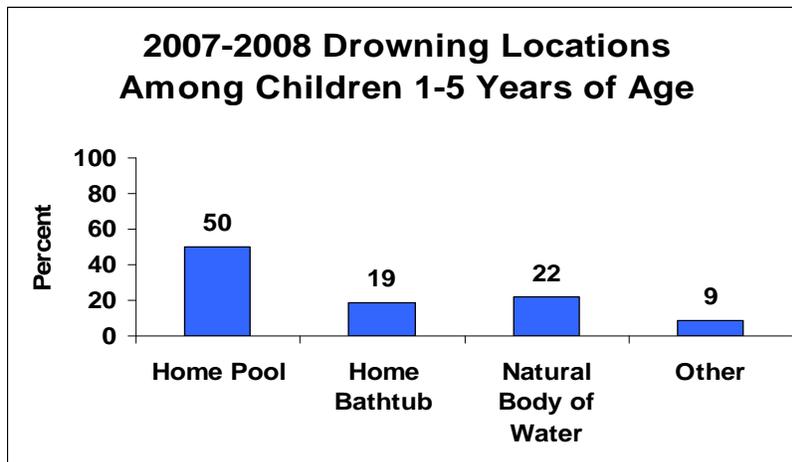
Figure 25. Motor Vehicle Fatalities Among Children Ages 1 to 5 Years by Restraint Type, Virginia 2008.



The circumstances surrounding drowning deaths differ with different age groups. Children ages 1 to 5 years of age drown most often in home settings. During 2007-2008 in Virginia, 69% of the drowning deaths among children ages 1 to 5 years occurred in or around the

home (Figure 26). More effective drowning prevention efforts involve adult supervision of children in and around water as well as teaching children to swim.

Figure 26. Drowning Locations, Children Ages 1 to 5 years, Virginia 2008.



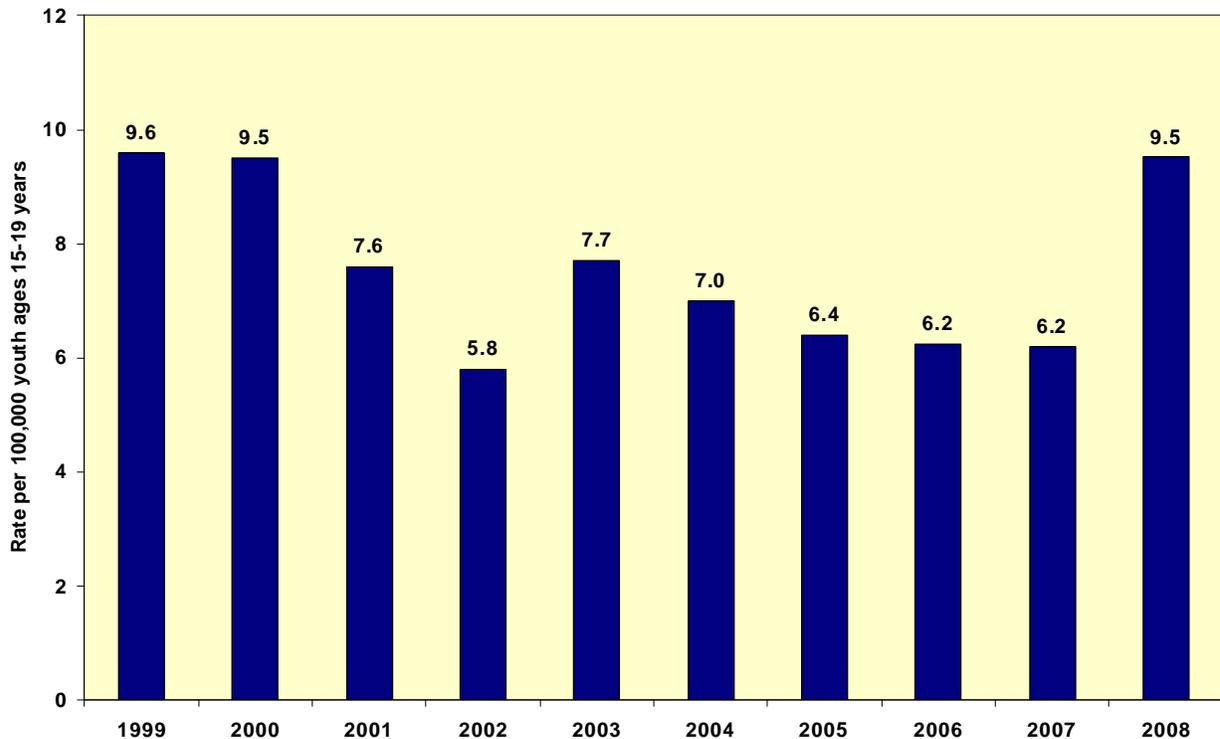
Although homicide is the second leading cause of death for children ages 12 to 18 years in Virginia (2007-2008), for every suicide, it is estimated there are 25 suicide attempts. Suicide attempts are three times more common in women than in men.⁴³ Nationally in 2007, approximately 14.5% of high school students attempted suicide during the past year, and 6.9% had attempted suicide one or more times in the previous 12 months. Overall, the prevalence of having attempted suicide was higher among female (9.3%) than male (4.6%) students; higher among white female (7.7%), black female (9.9%), and Hispanic female (14.0%) than white male (3.4%), black male (5.5%), and Hispanic male (6.3%) students, respectively.⁴⁴ Of the students who responded to the 2009 Virginia Youth Survey, 16.6% considered suicide in the previous 12 months; 14.4% made a plan to attempt suicide in the previous 12 months. Almost 10% attempted suicide one or more times in the previous 12 months. Suicide was the third leading cause of death among youth and adolescents ages 12 to 18 years in Virginia in 2007-2008. Despite nine years of declining suicide death rates among youth ages 15 to 19 years (National Performance Measure 16), the suicide rate increased substantially in 2008 (Figure 27). Data from the Virginia Violent Death Reporting System indicate that 34.5% of children ages 10 to 14

⁴³ McIntosh, J.L. (2003). *U.S.A. Suicide: 2001 Official Final Data*. Retrieved June 12, 2004, from the American Association of Suicidology website: <http://www.suicidology.org/associations/1045/files/2001datapg.pdf>

⁴⁴ Centers for Disease Control and Prevention. *2007 Youth Risk Behavior Survey*. Available at: www.cdc.gov/yrbss. Accessed on 5/21/10.

years and 41.7% of children ages 15 to 17 years whose manner of death was suicide from 2003-2007 had a mental health problem.

Figure 27. Youth Suicide Rate (per 100,000) of suicide deaths among youth aged 15-19



During the 2008-2009 school year, there were 6,595 incidents of bullying reported to the Department of Education. There were 2,422 reports of bullying in elementary schools and 3,799 reports in middle and high schools. Of the students who participated in the 2009 Virginia Youth Survey, 43.9% strongly agreed or agreed that harassment and bullying by other students is a problem at their school. Additionally, 16.7% of those same respondents had ever been electronically bullied, such as through text messaging, email, websites, chat rooms and instant messaging, during the past 12 months.

Adolescents involved in dating violence are at increased risk of injury and death, more likely to engage in risky sexual behavior, more likely to have eating disorders, more likely to be substance users, and more likely to consider and attempt suicide, according to the Centers for Disease Control and Prevention. In 2008, there were 3,240 (596 males and 2,644 females) victims of forcible sex offenses ages 0 to 17.⁴⁵ In 2008, 481 youth sought services for teen

⁴⁵ Crime in Virginia, 2008. Virginia State Police.

dating violence from local domestic violence agencies in Virginia.⁴⁶ Of the ninth through twelfth graders who participated in the Virginia Youth Survey, 15.8% had ever been hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months.

Asthma. According to the Agency for Healthcare Research and Quality (AHRQ) definition, ambulatory care sensitive conditions are those for which hospital stays can potentially be avoided through good outpatient care. Despite a significantly decreasing trend in the asthma hospitalization rate for children ages 0 to 5 years (Health Systems Capacity Measure 01), asthma is the leading ambulatory care sensitive condition for inpatient hospital discharges for children in this age group as well as for all children ages 0 to 18 years (Table 12). Charges for inpatient asthma stays totaled more than \$49 million dollars in 2008. Ten percent of all Virginia children under eighteen have asthma (NSCH 2007).

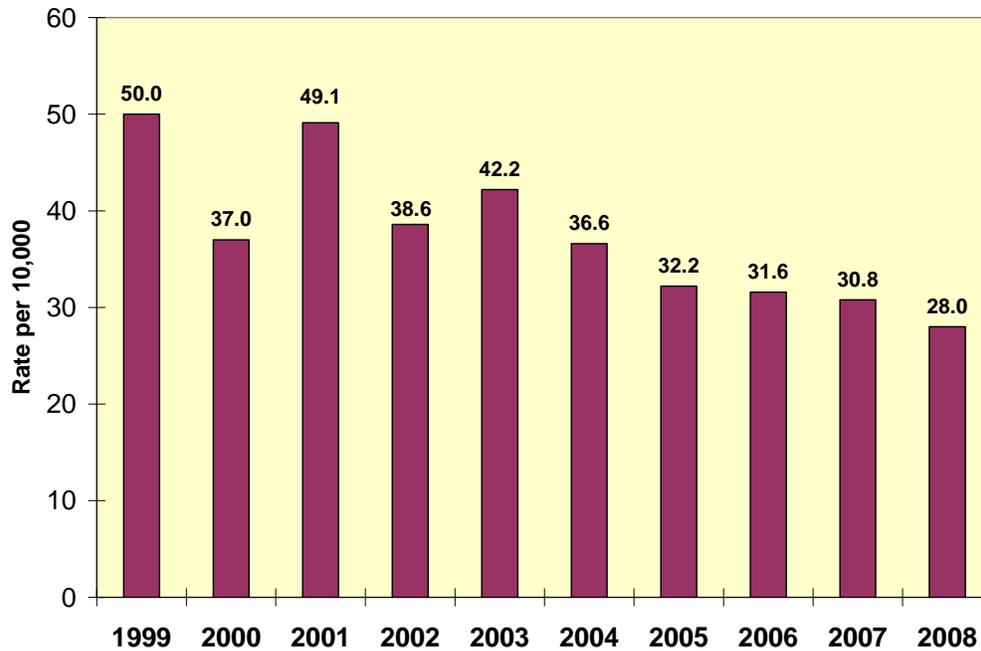
Table 12. Hospitalizations and Charges Due to the Leading Ambulatory Care Sensitive Conditions, Virginia 2008.

All Children (0-18)	N	Rate	Charges
Asthma	5752	148.5	\$49,462,803
Bacterial Pneumonia	4785	123.6	\$50,090,661
Dehydration - volume depletion	3473	89.7	\$16,387,778
Kidney/urinary infection	2036	52.6	\$16,377,399
Grand mal status and other epileptic convulsions	1264	32.6	\$20,838,978

About one-third of children with asthma are reported by their parents to experience no health effects from the condition (NSCH 2007). Asthma discharges among children ages 0 to 5 years have declined since 1999, to 28 discharges per 10,000 children in 2008 (Figure 28). Nationally, asthma rates are higher among non-Hispanic Black children and youth (15.7%), compared to non-Hispanic White (8%) and Hispanic children (7.1%); in Virginia 18.1% of non-Hispanic Black children and 16.5% of children described as Multiracial reported current asthma compared with 7.8% of non-Hispanic White children (NSCH 2007). There are also disparities by economic status; 11.8% of children living in poverty had asthma compared to 7.1% among those in families at four times the poverty rate. Hospitalization rates for asthma among children ages 0 to 5 years were more than twice as high among non-Hispanic Black children compared with non-Hispanic White children (48.9 per 10,000 children ages 0 to 5 years vs. 20.1 per 10,000) in 2008.

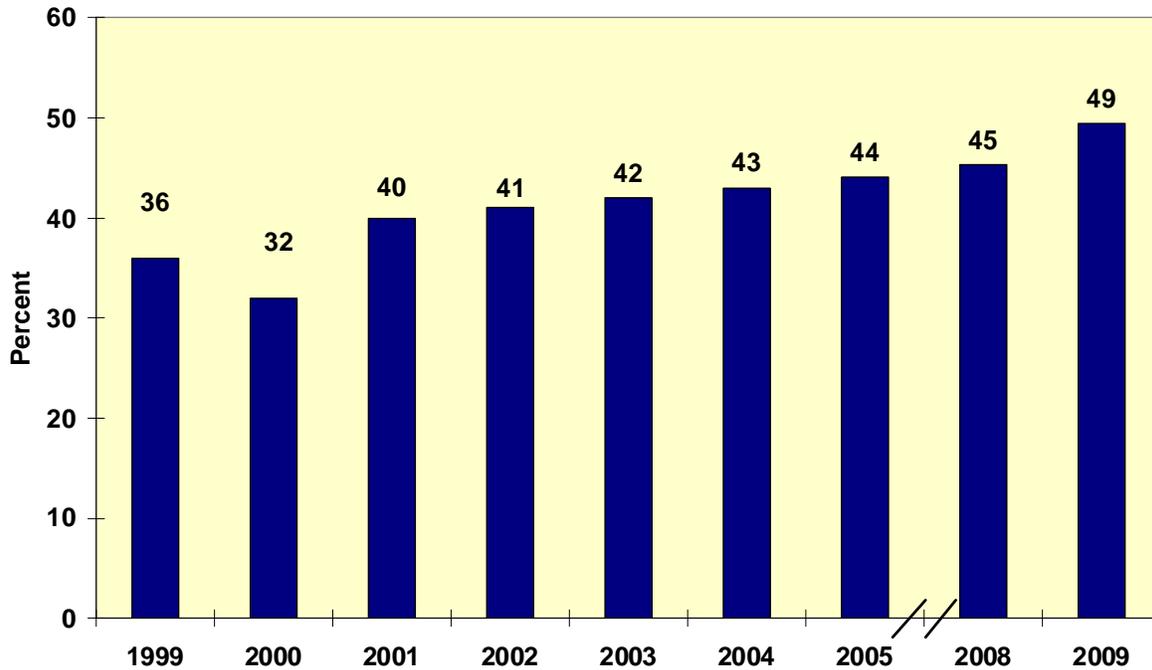
⁴⁶ Virginia Sexual and Domestic Violence Action Alliance

Figure 28. Health Systems Capacity Indicator 01: Asthma Hospital Discharge Rate per 10,000 Children ages 0 to 5, Virginia, 1999-2008.



Oral Health. In spite of many advances in preventive modalities, dental decay remains the most common chronic disease in children in Virginia. The most recent statewide dental survey of Virginia school children was completed by the Division of Dental Health in 2009 using the Basic Screening Survey from the Association of State and Territorial Dental Directors. Of the nearly 8,000 children examined, 47.4 % of children had decay experience, 15.4% of children had untreated decay, and 13% of children were determined to need early or urgent care. As seen in Figure 29, which shows trends over time, 49% of children had received protective dental sealants on at least one permanent molar tooth in 2009.

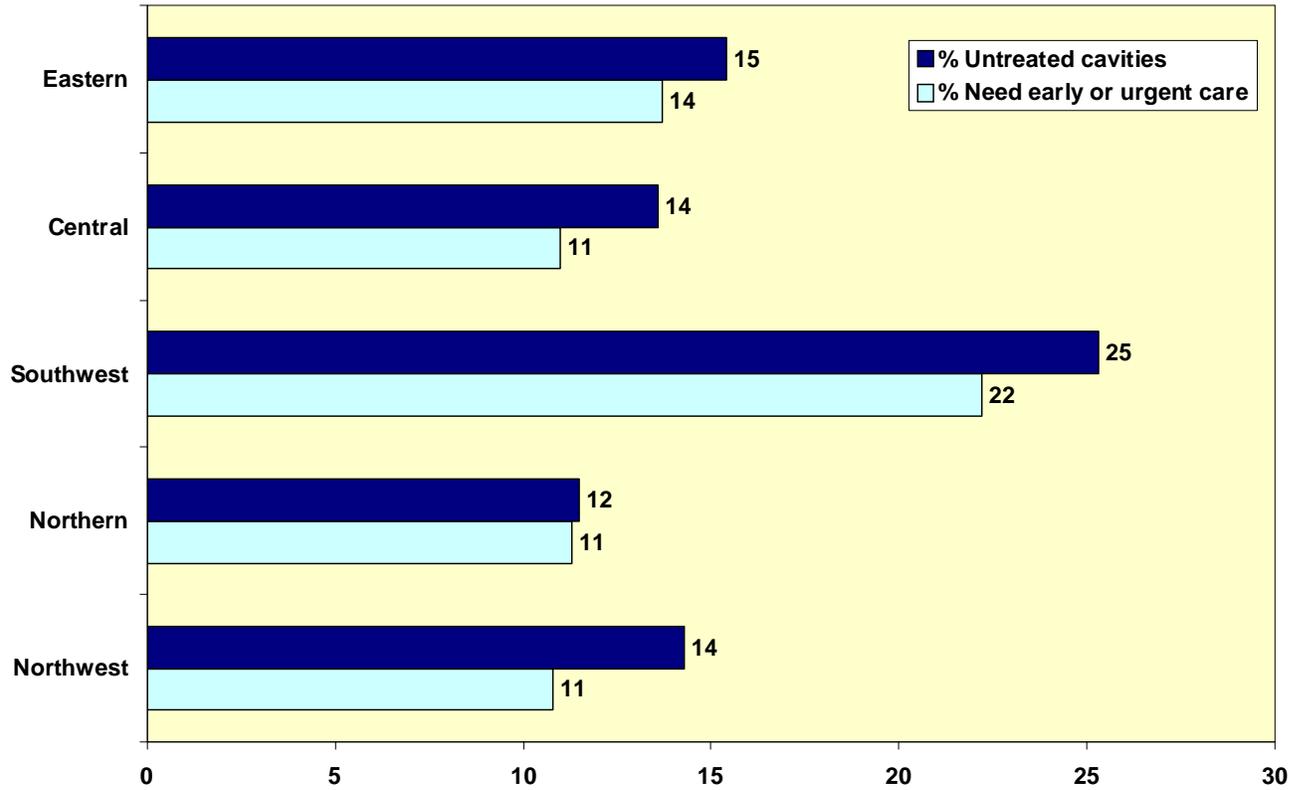
Figure 29. National Performance Measure 9: Percent of third grade children who have received protective sealants on at least one permanent molar tooth



While 81% of children surveyed had been to a dentist in the past year, children with untreated decay were much less likely to have had a dental visit in the past six months than their peers. Among children with untreated decay, 38% had not been to a dentist in at least a year (some never), compared to only 13.9% of children with no untreated decay. The Healthy People 2010 objective for decay rates in children ages 6 to 8 years is less than 21%. Overall, Virginia third graders exceed this objective, with only 15.4% of children with untreated dental decay.

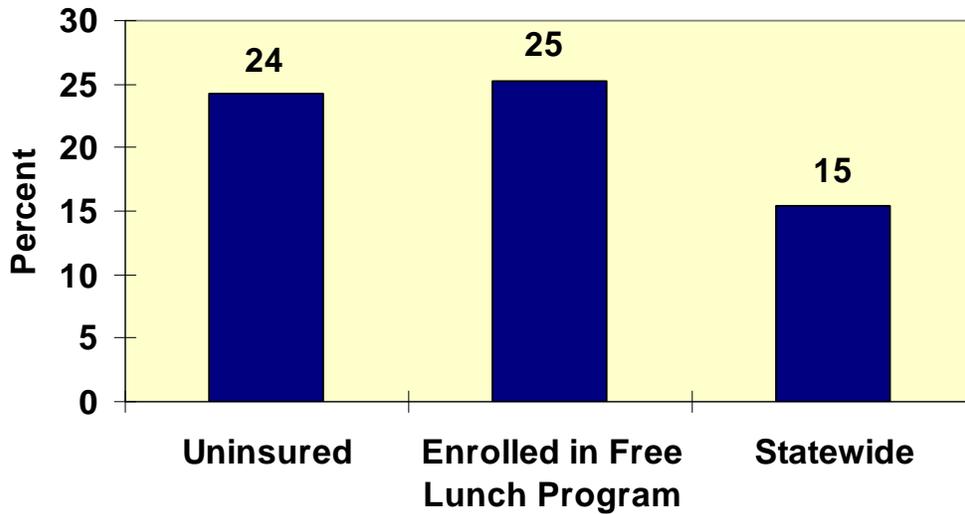
However, in reviewing the data, it is clear that there are significant differences in regional, racial and socioeconomic status with regard to dental disease in the Commonwealth. For example, there were statistically significant differences in the proportion of children with untreated dental caries by region. The Southwest Region of the state had the greatest proportion of children with untreated dental decay at 25%, while the Northern Region had the smallest at 11% (Figure 30). As a result, Southwest Region children did not meet Healthy People 2010 Objectives for the nation with regard to dental decay.

Figure 30. Percent of Third Grade Children with Untreated Dental Caries and In Need of Early or Urgent Care by Region, 2009.



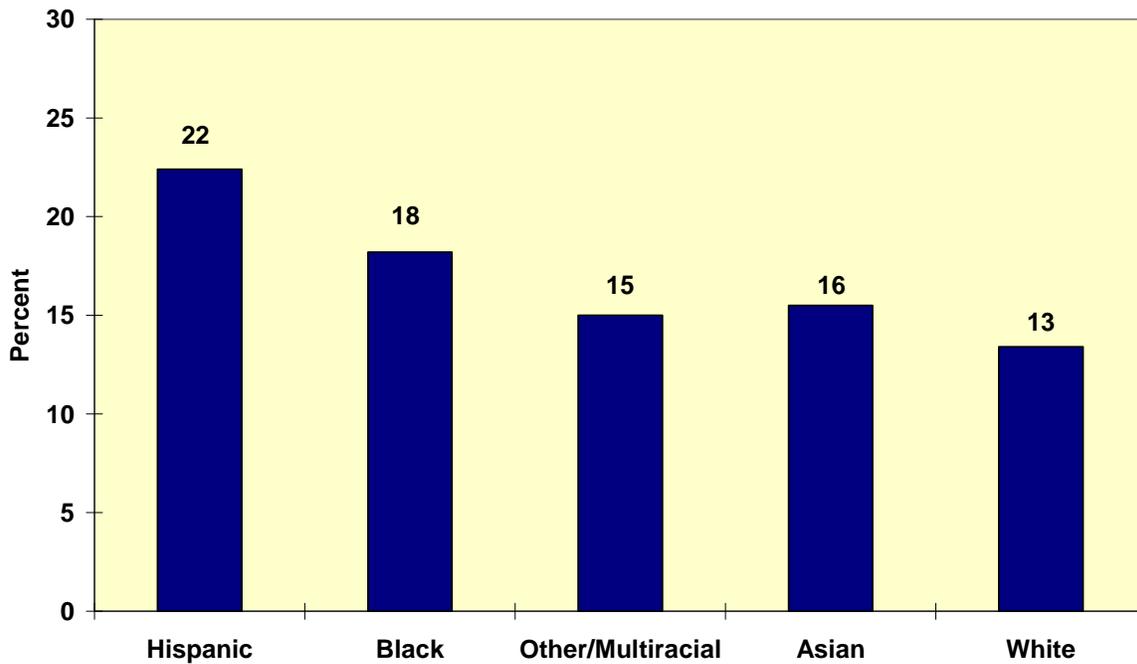
The survey also showed children enrolled in the free lunch program and those without dental insurance had higher rates of untreated dental decay than those who were not enrolled in the free lunch program and had dental insurance. The data shows that children enrolled in the free lunch programs and those without dental insurance at 25% and 24% respectively, did not meet Healthy People 2010 Objective of less than 21% for the nation (Figure 31).

Figure 31. Percent of Virginia Third Grade Children with Untreated Dental Caries by Free Lunch Enrollment and Dental Insurance, 2009.



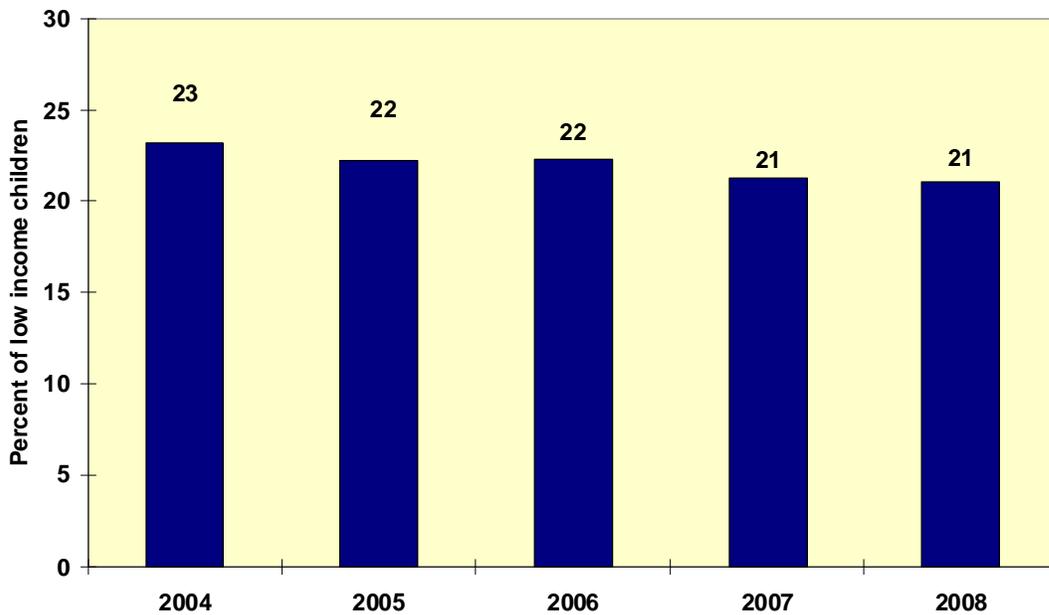
The proportion of children with untreated dental caries varies significantly by race (Figure 32). Children classified as non-Hispanic White had lower decay rates than their peers in any other racial category, and Hispanic children had the highest untreated decay rate at 22.4%.

Figure 32. Percent of Virginia Third Grade Children with Untreated Dental Caries by Race, 2009.



The Division of Dental Health also continues to document the prevalence of dental decay in young children. Data from Virginia’s Head Start program on the percent of low income children ages 0 to 5 years with dental decay (State Performance Measure 5, Figure 33) shows the need for dental care to be 21 to 23% for children under five years old in the program. These findings are significant because it has been proven that dental decay experience in primary teeth is a consistent predictor of future disease. It is also well documented that poor dental health can have both financial and social costs. Chronic pain and dental disease can lead to poor nutritional status, affect speech development, interfere with learning and contribute to “failure to thrive.”

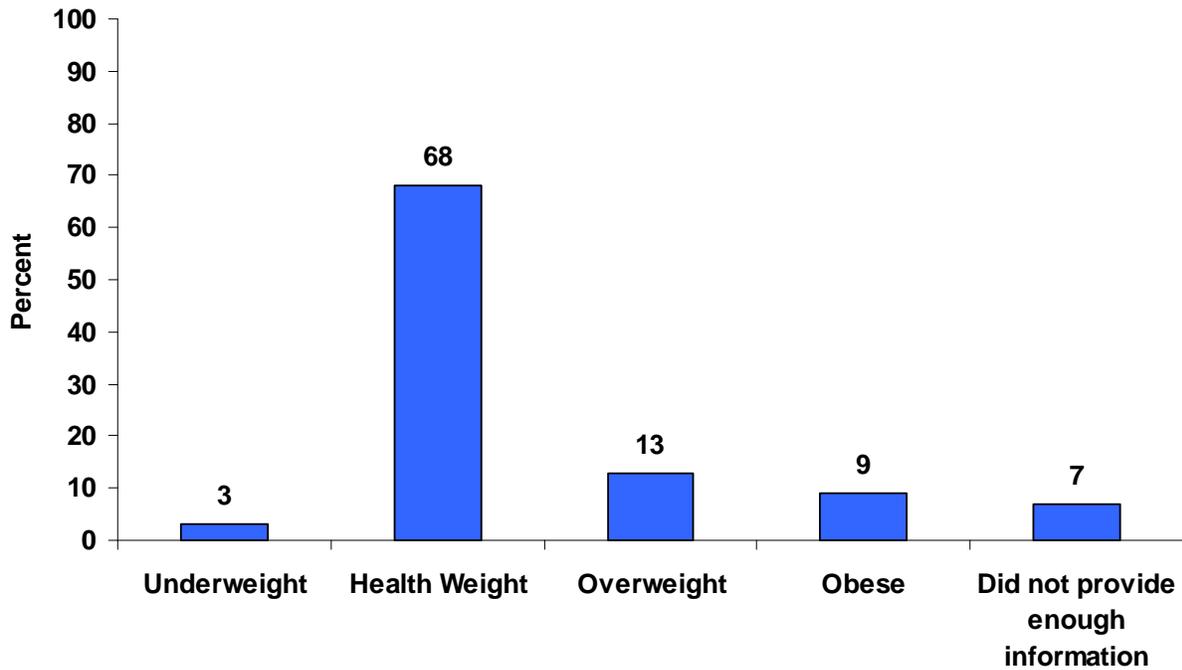
Figure 33. State Performance Measure 5: Percent of Low Income Children Ages 0 to 5 years with Dental Decay (2004-2008)



Obesity. The results from the 2009 Virginia Youth Obesity Survey indicated that over two-thirds (68%) of Virginia youth are a healthy weight while 3% are underweight and 22% are overweight or obese (Figure 34). There are demographic differences in obesity prevalence. In comparing girls and boys, girls and young women (17%) are less likely to be overweight or obese for their age compared to boys and young men (27%). Minority youth (26%) are more likely to be overweight or obese for their age compared to white, non-Hispanic youth (19%).⁴⁷

⁴⁷ Virginia Foundation for Healthy Youth. 2009 Virginia Youth Obesity Survey. May 2010

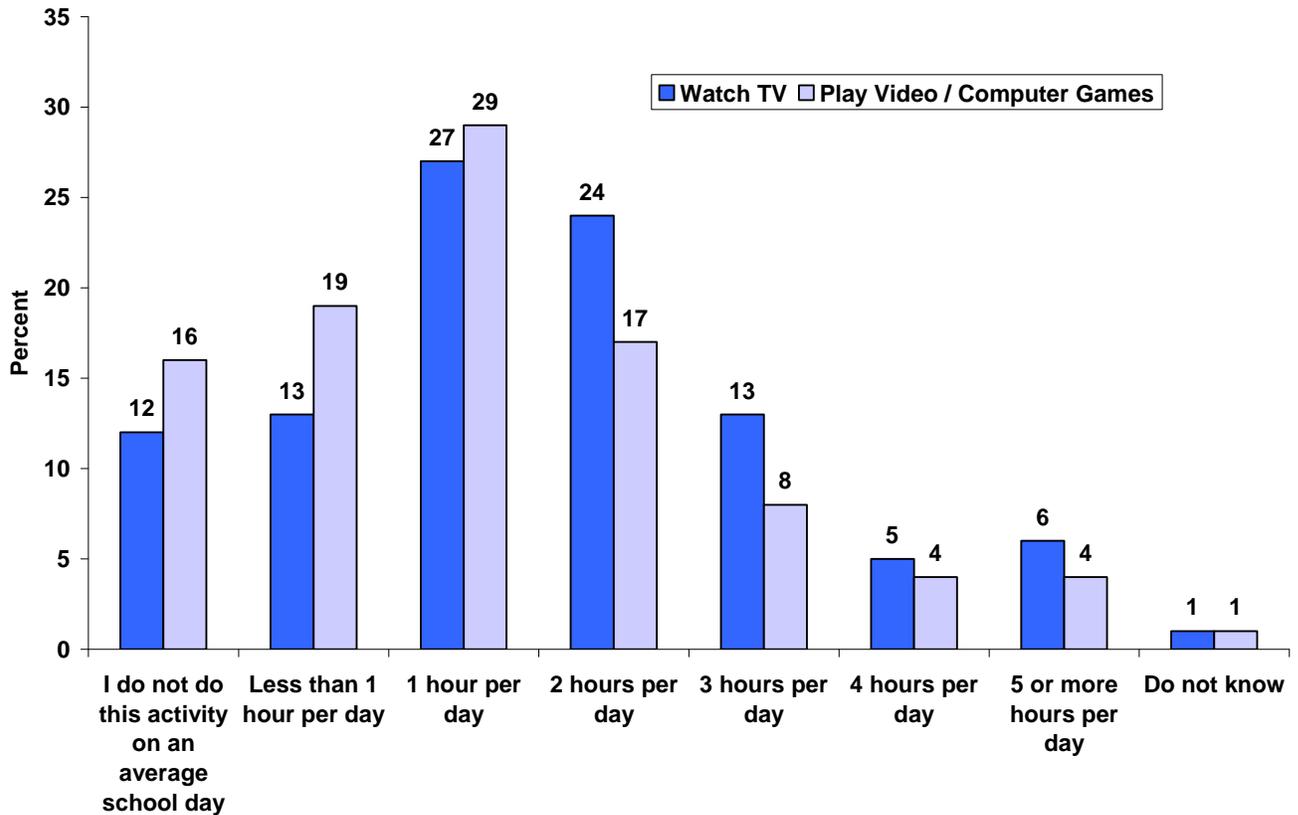
Figure 34. Body Mass Index (BMI) for Age, Virginia Youth Obesity Survey 2009.



Physical activity is a key component to maintaining a healthy, active lifestyle. During an average week, 66% of youth exercised 60 minutes or more per day 4 or more days (VYS 2009). When comparing age and activity level, older youth were less likely to participate in physical education classes. Survey results also found that youth ages 15 to 17 years (49%) were less likely to participate in physical education for school in an average week compared to those ages 10 to 14 years (86%). Screen time, which is any time spent watching television, using a computer, playing video games, surfing the internet, or using hand-held gaming devices, is a measure of lack of physical activity. According to the Virginia Youth Obesity Survey, on an average school day, almost half of young people watched 2 or more hours of TV and a quarter of young people watch 3 or more hours of TV in 2009 (Figure 35). On an average school day, 33% of young people play two or more hours of video games. 16% play more than 3 hours/day.⁴⁸

⁴⁸ Virginia Foundation for Healthy Youth. *2009 Virginia Youth Obesity Survey*. May 2010

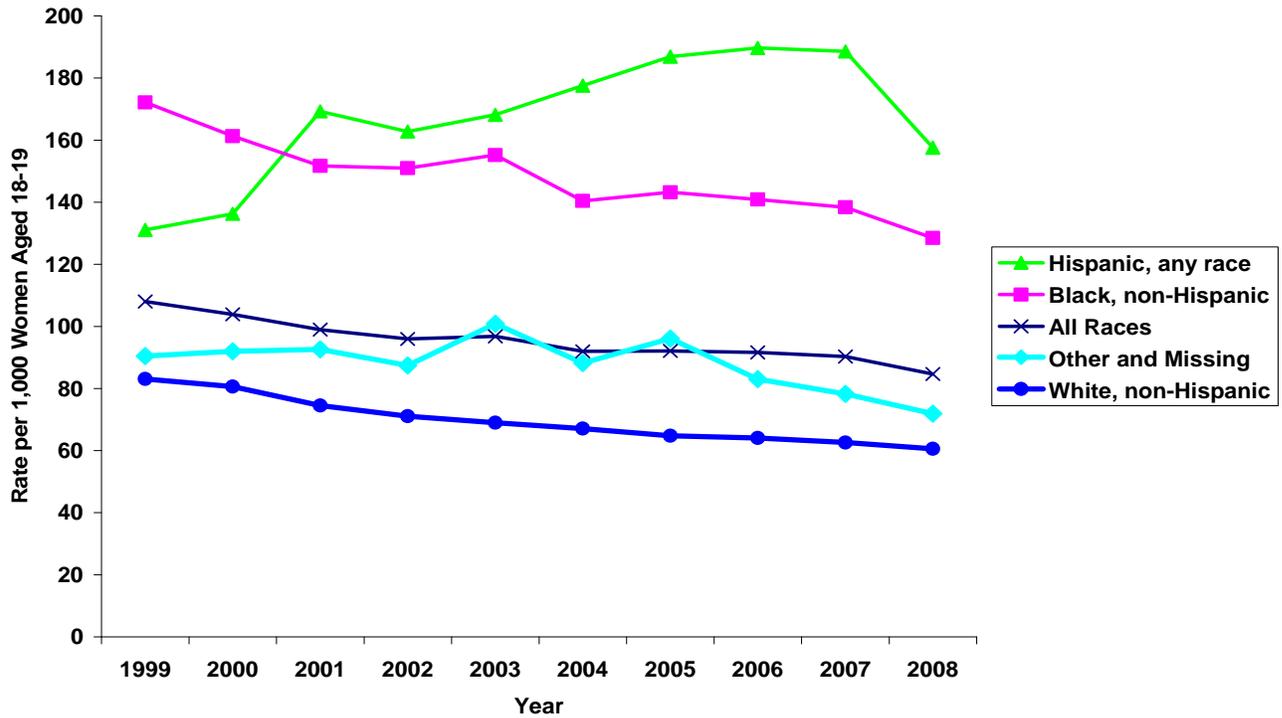
Figure 35. Hours Spent Watching TV or Playing Video or Computer Games, Virginia Youth Obesity Survey 2009.



Reproductive Health and Sexual Activity. Teen pregnancy rates and prevalence of sexually transmitted diseases among teenagers can be used to examine needs related to reproductive health and sexual activity. Teenage mothers tend to come from disadvantaged backgrounds, and they and their children are more likely to have poorer educational, economic, health, and developmental outcomes.⁴⁹ From 1999 to 2008, teen pregnancy rates decreased across all racial/ethnic groups, except for Hispanic females (Figure 36). In 1999, non-Hispanic Black females had the highest percentage of teen pregnancies (172 pregnancies per 1,000 females ages 18-19) but in 2001 the rate for Hispanic females surpassed that for non-Hispanic Black females, and Hispanic females continued to have the highest rate (189 per 1,000 females ages 18-19).

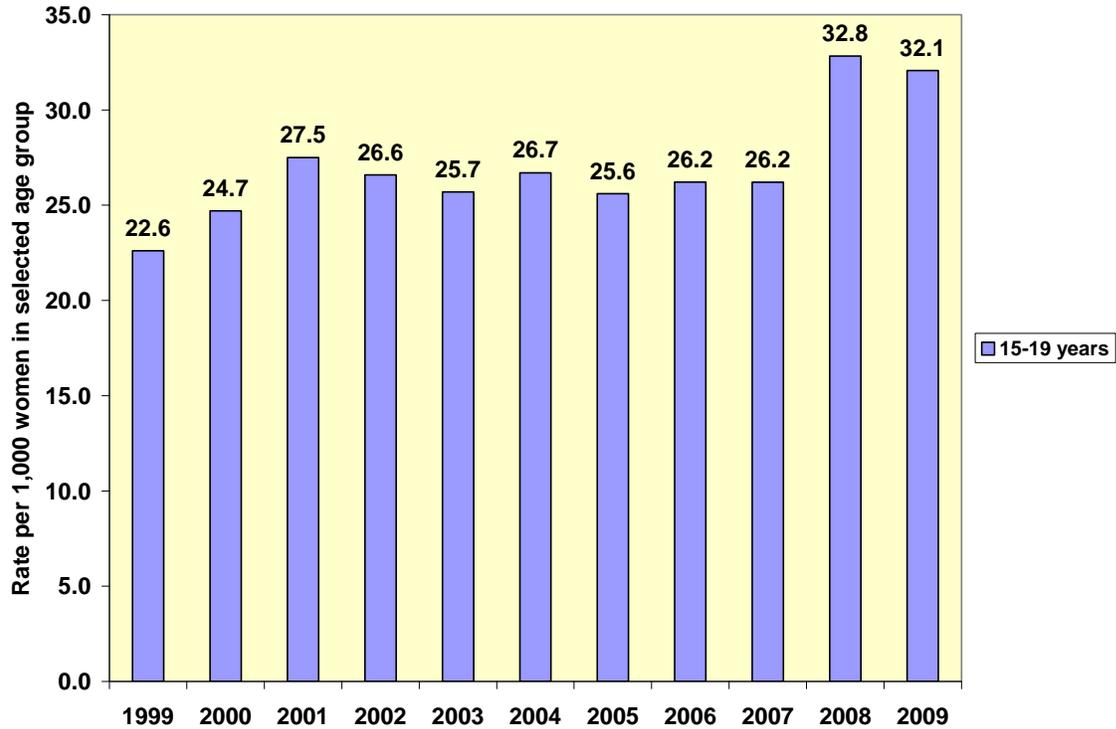
⁴⁹ Schelar, E., Franzetta, K., and Manlove, J. Repeat Teen Childbearing: Differences Across States and by Race and Ethnicity, Child Trends Research Brief 2007.

Figure 36. Teen Pregnancy Rate, 18-19 Year Olds by Race/Ethnicity, Virginia 1999-2008.



Compared to older adults, sexually-active adolescents ages 15 to 19 years and young adults ages 20 to 24 years are at higher risk for acquiring STDs because of a combination of behavioral, biological, and cultural reasons. In 2009, there were 10,387 cases of Chlamydia and 2,307 cases of gonorrhea among female’s ages 15-19 years in Virginia. There has been a significant increase in the number of cases of Chlamydia reported between 2007 and 2009 (Figure 37); this is in part due to changes in the reporting mechanism, but an increasing trend was seen between 1999 and 2007 even before reporting procedures changed. In 2007, Virginia was the second state to add the HPV vaccination to the immunization schedule making it a requirement for all girls entering sixth grade before returning to school. HPV is a sexually transmitted virus that causes almost 7,000 cases of cervical cancer annually.

Figure 37. Health Status Indicator 5A: The rate per 1,000 women 15-19 years with a reported case of Chlamydia, Virginia 1999-2009.



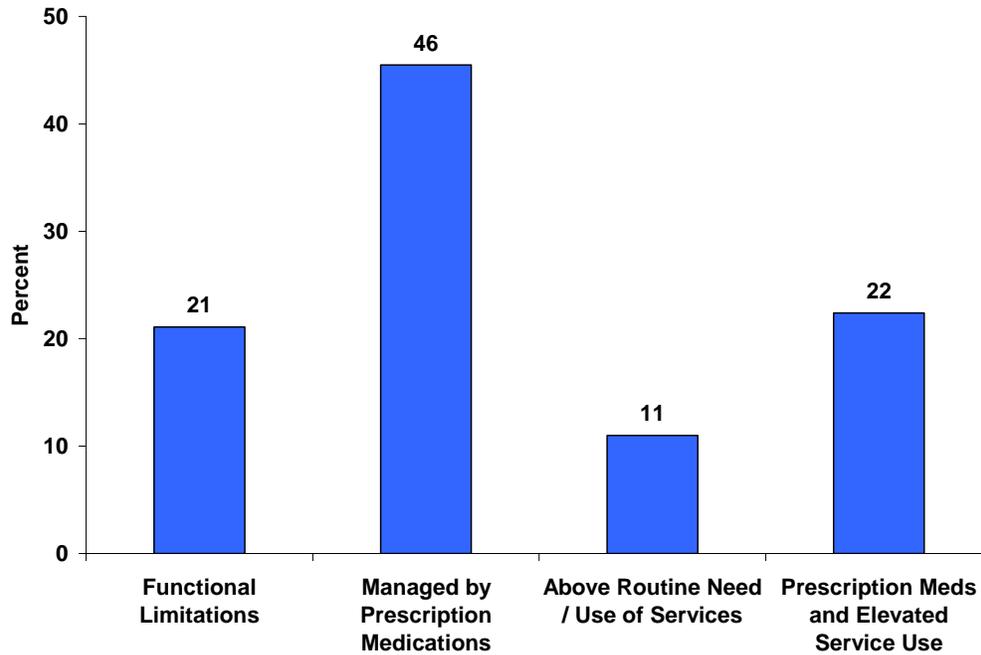
Alcohol, Tobacco, and Other Drugs. In Virginia, 26% of children ages 0 to 17 lived in a household where someone smoked in 2007 (NSCH). Nine percent of children were exposed to secondhand smoke because the tobacco user smoked inside the home. Results from the 2007 Virginia Youth Tobacco Survey show that 25% of middle school students and 49% of high school students reported that they had used a tobacco product. Of the respondents who participated in the 2009 Virginia Youth Survey, 34.2% of youth drank alcohol within the past 30 days and 18.5% used marijuana within the past 30 days.

C. Children with Special Health Care Needs

Children with Special Health Care Needs (CSHCN) are defined as those who meet any one of the following conditions (Figure 38):

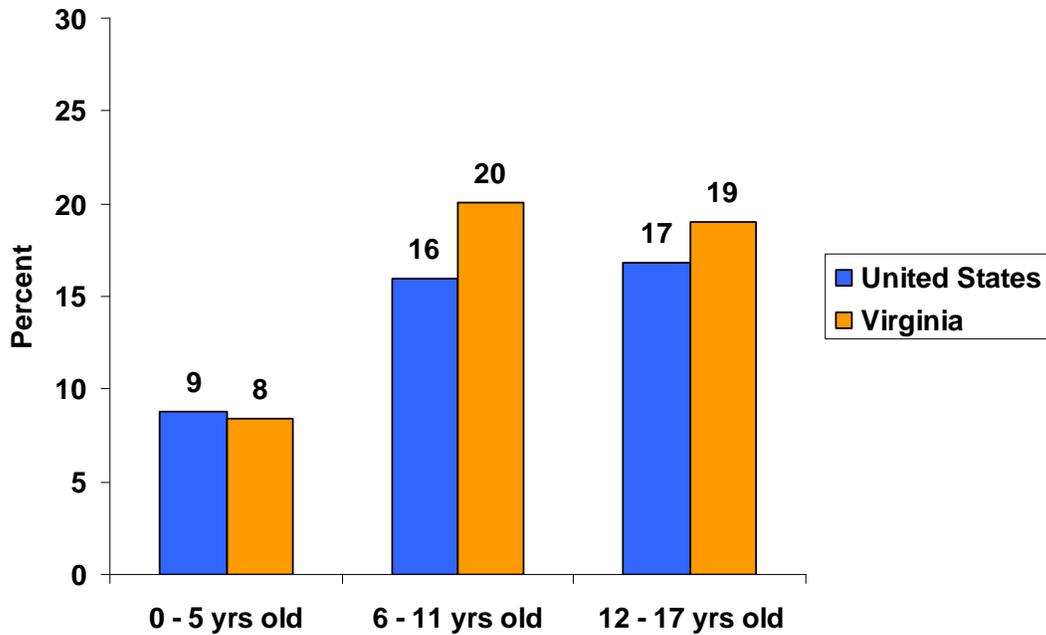
- Conditions result in functional limitations (21.1%)
- Conditions are managed with prescription medicine only (45.5%)
- Conditions result in above routine use of medical, mental or other services (11.0%)
- Conditions require prescription medicine AND above routine use of services (22.4%)

Figure 38. Percent of CSHCN ages 0 to 17 Qualifying on Specific Types of Special Health Needs Criteria, Virginia 2005-06.



The 2005-06 National Survey of CSHCN estimates the number of children (ages birth to 18 years) with special health care needs in Virginia at 289,176. This comprises 15.8% of all children and adolescents living in Virginia. Special needs are slightly more prevalent among male children. In Virginia, approximately 13% of female children and 18% of male children have special health care needs. In Virginia, 8% of children ages 0 to 5 years had special needs. Twenty percent of children ages 6 to 11 years met the definition for special needs, as did 19% of children and youth ages 12 to 17 years. Virginia’s CSHCN population is compared to the U.S. in Figure 39 below.

Figure 39. Children and Youth with Special Health Care Needs by Age group, Virginia and the United States 2007.



When parents were asked about the impact of health on their child’s daily activities, 22% of families reported that their child’s health condition consistently and often greatly affected their ability to perform daily activities and 11% had difficulty taking care of themselves (National Survey of CSHCN). Health conditions also impacted the ability of children with special needs to attend school. Approximately 14% of Virginia’s CSHCN were absent from school 11 or more days due to illness. The national survey also collects information on the percent of CSHCN that have specific health conditions (Table 13).⁵⁰

Table 13. Prevalence of Specific Health Conditions Among CSHCN, Virginia and United States 2005-06.

Health Condition	% of Virginia CSHCN	% of Nationwide CSHCN
Allergies	59.6%	53.0%
Asthma	43.5%	38.8%
ADD or ADHD	32.4%	29.8%
Mental Retardation /Developmental	13.3%	11.4%

⁵⁰ Child and Adolescent Health Measurement Initiative. 2005/2006 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent health website. Retrieved 05/03/10 from www.cshcndata.org

Delay		
Depression, anxiety, eating disorder or other emotional problem	16.7%	21.7%
Migraine/ Frequent Headaches	16.0%	15.1%
Autism	-----	5.4%
Seizure	-----	3.5%
Heart Conditions	-----	3.5%
Diabetes	-----	1.6%
Cerebral Palsy	-----	1.9%
Down Syndrome	-----	1.0%

---- State data is not available due to small sample sizes

MCHB Core Outcomes for CSHCN

HRSA’s Maternal and Child Health Bureau (MCHB) identified six core outcomes to promote the community based system of services mandated for all children with special health care needs under Title V, Healthy People 2010, and the President’s New Freedom Initiative, which was designed to break down barriers to community living for people with disabilities.⁵¹ These outcomes provide states with a concrete way to measure progress towards family-centered care and systems of care that meet the complex needs of families of children with special health care needs. The core measures are listed in Figure 40. In August 2009, the Virginia Department of Health convened a “Community Partners for Children and Youth Summit” to review Virginia’s progress toward implementation of a system of services for children and youth with special health care needs. Products of this summit included issue briefs for each of the six MCHB Core Outcomes of a system of services based on evidence-based practices for CSHCN, which can be found on the VDH website.⁵² Each brief defines the outcome or issue, presents information and data on the status of this outcome in Virginia, and concludes with a list of challenges to be addressed in order to fully achieve the desired outcome in Virginia. Below is a summary of Virginia’s progress on each of the Core Outcomes.

⁵¹ The National Survey of Children with Special Health Care Needs Chartbook 2005–2006.

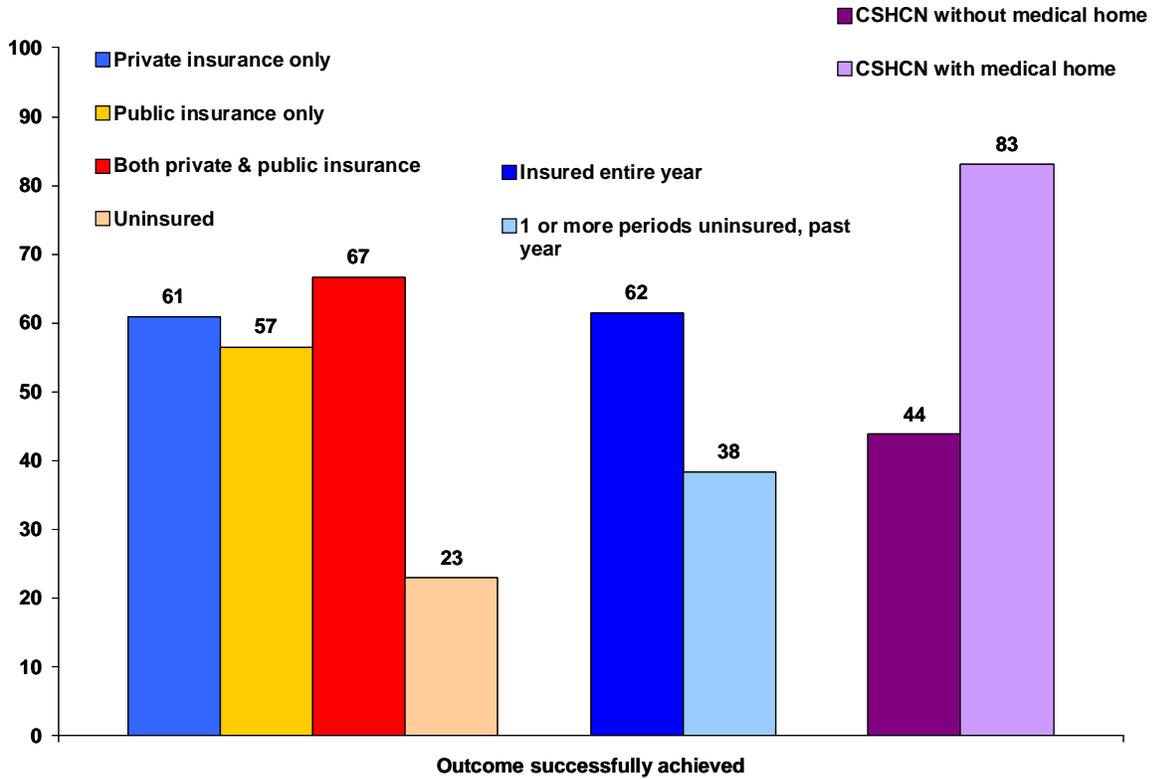
⁵² <http://www.vahealth.org/specialchildren/publications.asp>

Figure 40. Maternal Child Health Bureau Core Outcomes for Children and Youth with Special Health Care Needs.

Outcome Measure 1: Percent of CSHCN whose families are partners in decision making and satisfied with services.
Outcome Measure 2: Percent of CSHCN who have a medical home.
Outcome Measure 3: Percent of CSHCN who have adequate public or private insurance.
Outcome Measure 4: Percent of CSHCN who are screened early and continuously for special health care needs.
Outcome Measure 5: Percent of families who report that community-based service systems are organized for ease of use.
Outcome Measure 6: Percent of children and youth with special health care needs who receive services needed for transition to adulthood.

Core Outcome Measure 1: Percent of CSHCN whose families are partners in decision making and satisfied with services. Of Virginia families surveyed, 59.8% reported that they feel like a partner with their child’s physician in decision-making and are satisfied with the overall care experience. This compares to 57.4% at the national level. Family satisfaction in Virginia improved slightly from 58.3% in 2001 to 59.8% in 2005-06. In Figure 41 this core outcome is presented by insurance status, consistency of insurance coverage throughout the year, and whether the child had a medical home. CSHCN with a medical home had the highest percent of achieving this outcome (83%). Uninsured CSHCN had the lowest percent of achieving this outcome at only 23%.

Figure 41. Core Outcome Measure 1: The percent of CSHCN ages 0 to 18 years whose families partner in decision-making at all levels and are satisfied with services by insurance status, insurance consistency, and medical home status, Virginia 2005-06.



According to the Virginia Department of Behavioral Health and Developmental Services (DBHDS) Comprehensive State Plan 2008-2012, involvement of families is a critical component of all services delivered. For the past seven years, DBHDS has conducted the Youth Services Survey, which is an annual survey of clients receiving community mental health services through Virginia’s 40 Community Services Boards. The survey assesses the perceptions of caregivers in six domains: 1) access to services, 2) cultural competency, 3) family participation in treatment, 4) satisfaction with services, 5) outcomes of treatment, and 6) social connectedness. Among respondents, 78% agreed with the statement “Overall, I am satisfied with the services my child received”. When asked about caregiver participation in treatment, 86% agreed that they participated in their child’s treatment, 72% agreed with the statement “I helped to choose my child’s services,” and 75% agreed with the statement “I helped to choose my child’s treatment goals.” Eighty percent agreed that staff were sensitive to their cultural/ethnic background, and 91% reported staff treated them with respect.

An Annual Report for the Infant & Toddler Connection of Virginia, Part C, presented Family Survey 2002 results which indicated that 95% of respondents said their early intervention experiences made them feel more confident in finding ways to meet their child’s needs. Further, 94% said the services provided to their child and family helped them reach the goals they had set, 96% said their family got the early intervention services they needed, and 70% said that people who worked with their family helped them learn more about informal and community resources. The report further noted that there is room to improve the effectiveness of and family satisfaction with, service coordination provided through Infant & Toddler Connection of Virginia.

Core Outcome Measure 2: Percent of CSHCN who have a medical home. Approximately 44% of CSHCN received coordinated, ongoing comprehensive care within a medical home in 2005-06. This is slightly less than the national percentage (47%), and of concern because the reported percent is lower than the reported percent in the 2001 survey (55%). However, the results between the surveys are not comparable because some of the questions defining medical home changed from the 2001 survey. Three of the five questions used to define medical home are directly comparable across surveys (Table 14). In Virginia, survey results indicate that unmet needs for specific health care services and family support services have increased. In addition, the percentage of CSHCN without family-centered care also increased. Conversely, the percentage of CSHCN without a usual source of care when sick decreased. Access to care continues to present problems for some Virginia CSHCN families. Approximately 13% of families reported that their child had an unmet need for specific health care services and 6% indicated that there was an unmet need for family support services. In addition, approximately 21% indicated that their child had difficulty getting a needed referral. Approximately 35% of the CSHCN reported that they were without family-centered care, while 6.6% reported being without a personal doctor or nurse and 4.3% of CSHCN have an unmet need for preventive dental care.

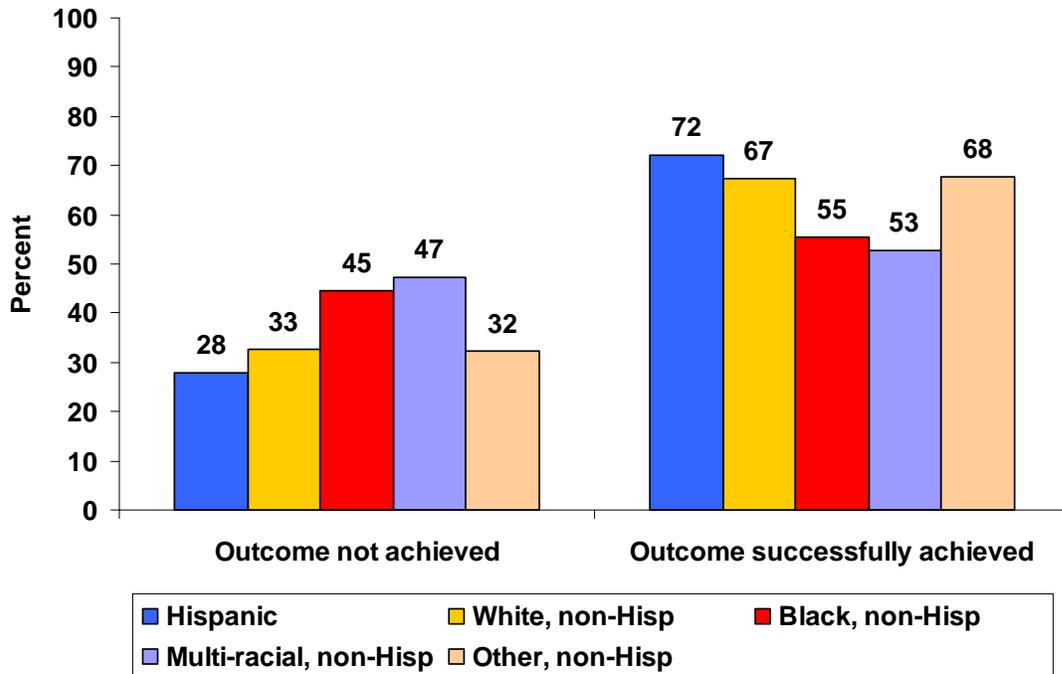
Table 14. Comparison of Medical Home Components from the 2001 and 2005-06 National Surveys of Children with Special Health Care Needs, Virginia.

Indicator: Virginia	2001	2005/06	Change
Percent of CSHCN with any unmet need for specific health care services	12.1	13.1	Worsened
Percent of CSHCN with any unmet need for family support	5.3	6.0	Worsened

services			
Percent of CSHCN without a usual source of care when sick (or who rely on the emergency room)	8.1	5.4	Improved
Percent of CSHCN without family-centered care	31.1	34.6	Worsened

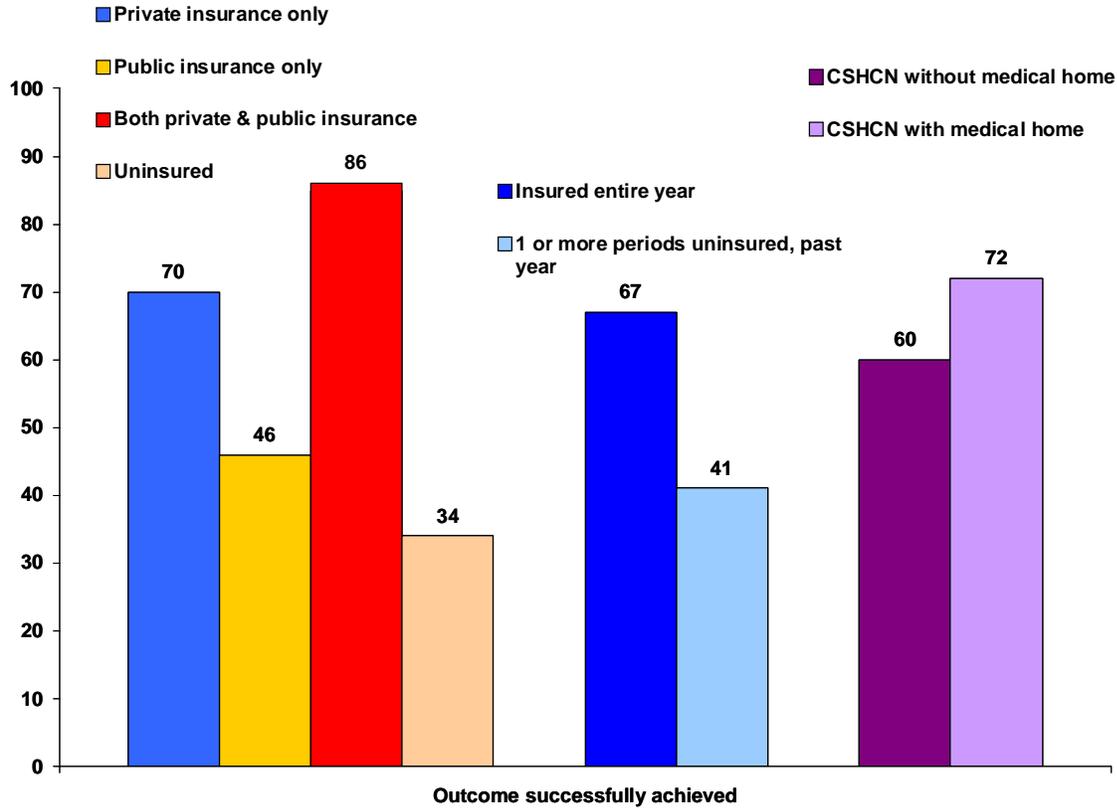
Core Outcome Measure 3: Percent of CSHCN who have adequate public or private insurance. Approximately 92% of CSHCN surveyed in Virginia were reported to have been insured for all of the previous twelve months, with approximately 8% uninsured for all or some part of the prior year. In the National Survey, the measure of “adequate insurance” is a derived measure, based on three questions about health insurance coverage: 1) whether the plan offers benefits and covers services that meet their needs; 2) whether the costs not covered by the plan are reasonable; and 3) whether the plan allows the child to see the health care providers he or she needs. Those families of children with answers of “usually” or “always” to all three questions were considered to have adequate coverage. The 2005-06 survey results for Virginia indicate that approximately two-thirds (64%) of CSHCN have adequate public and/or private insurance to pay for the services they need, while the remaining one-third of families with CSHCN report that they have inadequate coverage by this definition. When this outcome is examined by race/ethnicity, minority children have the highest percentage of inadequate insurance, 47% among Multi-racial CSHCN and 45% among non-Hispanic Black CSHCN (Figure 42).

Figure 42. Core Outcome Measure 3: Percent of CSHCN ages 0 to 18 years whose families have adequate public or private insurance to pay for the services they need by race/ethnicity, Virginia 2005-06.



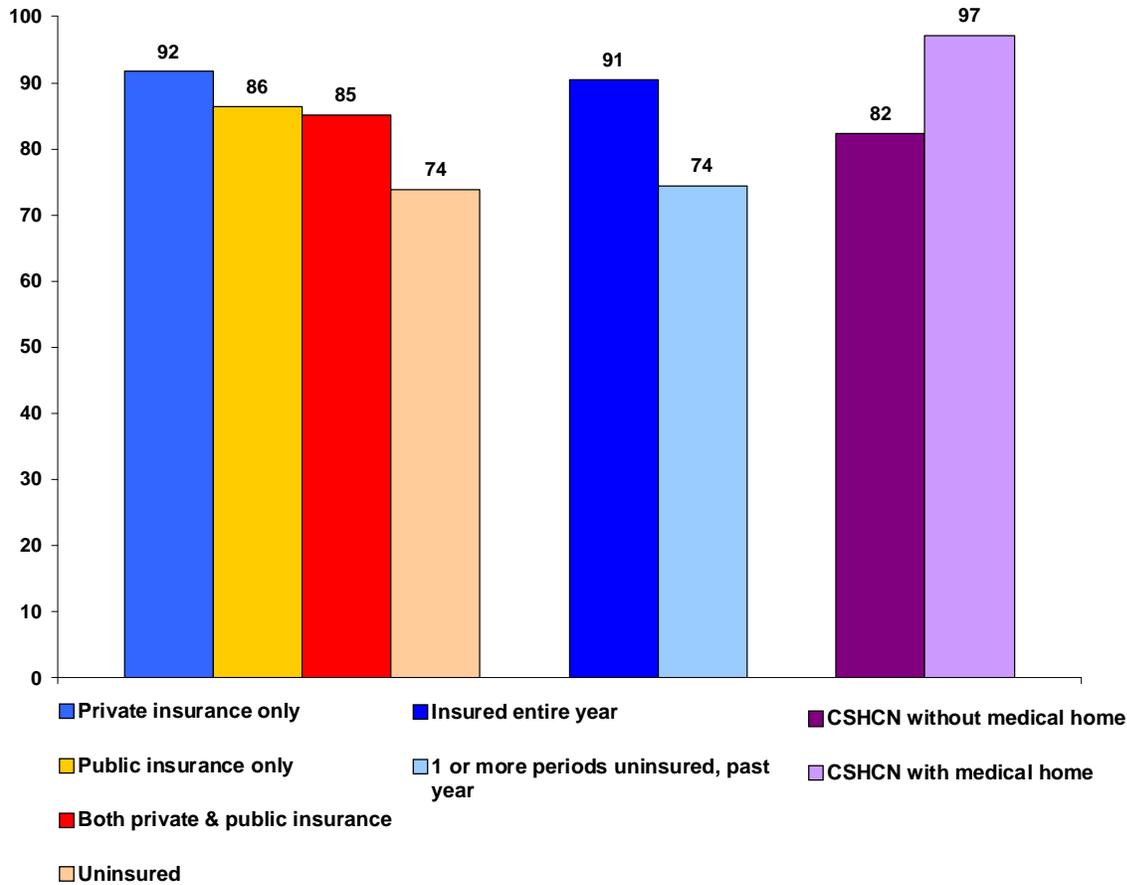
Core Outcome Measure 4: Percent of CSHCN who are screened early and continuously for special health care needs. The 2005-2006 National Survey for CSHCN, estimates that less than two-thirds (65%) of Virginia CYSHCN met the outcome for being screened early and continuously. Disparities exist by type of health insurance (Figure 43): 70% of those with private health insurance met this outcome, while 86% of those with both public and private coverage met the outcome. Less than half of CSHCN with only public health insurance met this outcome (46%), and only 34% of uninsured CSHCN met this outcome. There were differences between CSHCN who had consistent coverage (67%) and those who had periods of uninsurance (41%). There were also differences between CSHCN who have a medical home (72%) and those without a medical home (60%) in being screened early and continuously for special health care needs.

Figure 43. Core Outcome Measure 4: Percent of CSHCN ages 0 to 18 years who are screened early and continuously for special health care needs, Virginia 2005-06.



Core Outcome Measure 5: Percent of families who report that community-based service systems are organized for ease of use. There was a substantial improvements in the percent of families reporting that community-based services systems were organized so that they could use them easily (80% in 2001 and 90% in 2005-06). Achievement of this outcome was lowest among those CSHCN who were uninsured (74%) or had one or more periods of uninsurance (74%, Figure 44). Children without a medical home also had a lower percent of achievement of this outcome (82%) than children with a medical home (97%).

Figure 44. Core Outcome Measure 5: Percent of CSHCN ages 0 to 18 years whose families report community-based service systems are organized so they can use them easily, Virginia 2005-06.

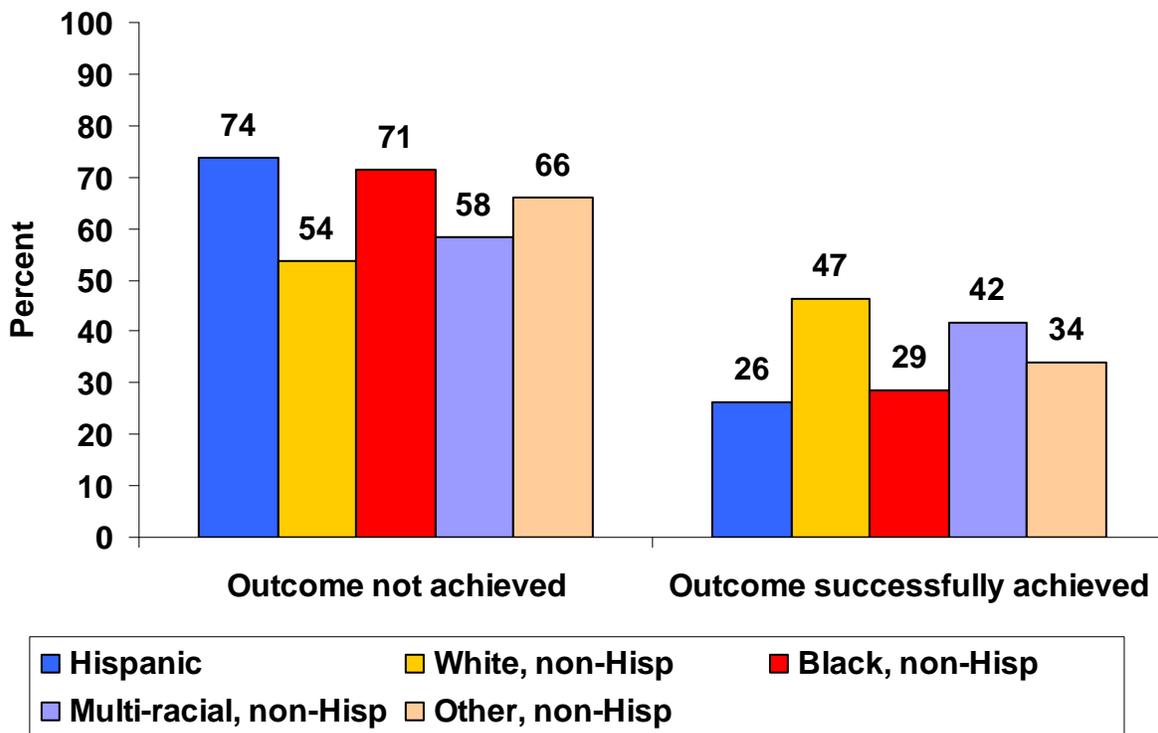


The Virginia Board for People with Disabilities Biennial Assessment of the Disability Services System in Virginia (April 2008) focused on services funded or operated by the Commonwealth that are available from multiple state and local agencies as well as local providers. The report was developed through a variety of mechanisms including analysis of source documents, public comments, and written comments provided and verified by state agencies in their reviews of the report. The Biennial Assessment reports that the Disability Services System in Virginia is comprised of numerous entities including organizations and agencies, both public and private, and at the state-level and community level. Issues and concerns related to service and planning fragmentation include the following 1) Services are managed and administered in highly compartmentalized systems at both the state and local level. 2) Virginia, unlike other states that have a more inclusive system, does not have a state entity

designated with responsibility for policy development, service planning, or service provision regarding those with developmental and / or other disabilities. 3) Some agencies serve the entire of disability diagnoses but have a narrow service mandate, e.g., provision of vocational rehabilitation services. 4) State agencies that do not have a focus on disabilities often lack information, knowledge, and experience with regard to the needs of person with disabilities and do not include them in their planning. Despite Virginia’s success on Core Outcome Measure 5, these factors contribute to structural fragmentation that exists in the service system.

Core Outcome Measure 6: Percent of children and youth with special health care needs who receive services needed for transition to adulthood. The percent of youth with special health care needs who received the necessary services to transition to adult health care, work and independence was only 6% in 2001 and increased to 38% in 2005-06. Successful transition to adult life was less likely to be reported by Hispanic youth (26%) and non-Hispanic Black youth (29%) compared with non-Hispanic White youth (47%, Figure 45).

Figure 45. Core Outcome Measure 6: 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, Virginia 2005-06.



The 2007 Disability Status Reports provides data on the social and economic status of people ages 21 through 64 living in Virginia who have disabilities (Table 15). According to the April 2008 Biennial Assessment of the Disability Service System in Virginia, employment of persons with disabilities statewide is low, with approximately two-thirds of adults ages 18 to 64 years with disabilities not employed. In addition, Virginia lags behind other states in its support of customized and supported employment opportunities, maintaining numerous facility-based, “sheltered” programs.

Table 15. Working Age (21- 64 years) With Disabilities Living in Virginia, 2007.

Working Age (21- 64 years) With Disabilities Living in Virginia	2007 National Percentage
Prevalence of working age individuals who report a disability	11.1%
Employment rate	37.7%
Full-time/Full-Year Employment	23.9%
Median Annual Labor Earnings	\$36,600
Poverty	20.1%

Care Systems Meeting All Core Outcomes. Among CSHCN ages 0 to 11 years, Virginia ranked slightly, but not significantly, lower than the U.S on the number of MCHB core outcomes achieved by care systems serving CSHCN ages 0 to 11, with 19% of CSHCN in Virginia served by care systems that met all five core outcomes compared to 20% nationwide. Among CSHCN ages 12 to 17 years, Virginia performed as well as the U.S. on the number of MCHB core outcomes achieved by care systems serving CSHCN ages 12 to 17; 14% of Virginia’s CSHCN ages 12 -17 were served by care systems meeting all six core outcomes. A summary of Virginia’s progress on CSHCN indicators and a comparison to the US is presented in Table 16.⁵³

Table 16. Selected Results from the National Survey of Children with Special Health Care Needs, Children 0-17 Years Old, Virginia and U.S., 2005/2006

Prevalence Statistics			Indicator		
Child-Level Prevalence:	State %	Nation %	Child Health:	State %	Nation %
Percent of Children and Youth with Special Health Care Needs, 0 - 17 yrs old	15.8	13.9	% of CSHCN whose conditions consistently and often greatly affect their daily activities.	22.1	24.0
Household-Level Prevalence:			% of CSHCN with 11 or more days of school absences due to illness.	14.4	14.3
Percent of Households with Children	23.8	21.8			

⁵³ Child and Adolescent Health Measurement Initiative. 2005/2006 *National Survey of Children with Special Health Care Needs*, Data Resource Center for Child and Adolescent health website. Retrieved 05/03/10 from www.cshcndata.org

that have one or more CYSHCN, 0 - 17 yrs old

Prevalence by Age:

Children 0-5 years of age	8.4	8.8
Children 6-11 years of age	20.0	16.0
Children 12-17 years of age	19.1	16.8

Prevalence by Sex:

Female	13.3	11.6
Male	18.3	16.1

Prevalence by Poverty Level:

0% - 99% FPL	22.1	14.0
100% - 199% FPL	14.1	14.0
200% - 399% FPL	14.0	13.5
400% FPL or greater	16.0	14.0

Prevalence by Race/Ethnicity:

Hispanic	5.9	8.3
White (non-Hispanic)	17.1	15.5
Black (non-Hispanic)	17.3	15.0
Multi-racial (non-Hispanic)	16.5	17.9
Asian (non-Hispanic)	6.1	6.3
Native American/Alaskan Native (non-Hispanic)	14.5
Native Hawaiian/Pacific Islander (non-Hispanic)	11.5

....Prevalence data only available for States where this minority group makes up at least 5% of total population of children in the State.

* Estimates based on sample sizes too small to meet standards for reliability or precision. The relative standard error is greater than or equal to 30%.

Health Insurance Coverage:

% of CSHCN without insurance at some point during the past year.	7.6	8.8
% of CSHCN currently uninsured.	*2.0	3.5
% of currently insured CYSHCN with coverage that is inadequate.	31.7	33.1

Access to Care:

% of CSHCN with any unmet need for specific health care services.	13.1	16.1
% of CSHCN with any unmet need for family support services.	6.0	4.9
% of CSHCN needing a referral who have difficulty getting it.	20.8	21.1
% of CSHCN without a usual source of care (or who rely on the emergency room).	5.4	5.7
% of CSHCN without a personal doctor or nurse.	6.6	6.5
% of CSHCN who have unmet need for preventive dental care.	4.3	6.3

Family-Centered Care:

% of CSHCN without family-centered care.	34.6	34.4
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Impact on Family:

% of CSHCN whose families pay \$1,000 or more in medical expenses per year.	22.7	20.0
% of CSHCN whose conditions cause financial problems.	17.4	18.1
% of CSHCN whose families spend 11 or more hours per week providing and/or coordinating health care for child.	8.1	9.7
% of CSHCN whose health needs caused family members to cut back or stop working.	24.9	23.8

4. MCH Program Capacity by Pyramid Levels

Overarching Capacity Issues for the Office of Family Health Services.

The Virginia Title V program is housed within the Virginia Department of Health, one of twelve agencies within the cabinet level Health and Human Resources Secretariat. In January 2010, the newly elected Governor, Bob McDonnell, appointed Dr. Bill Hazel as the Secretary of Health and Human Resources. Dr. Hazel is involved with numerous health care related associations and is a board certified orthopedic surgeon. Dr. Karen Remley, appointed by the previous governor Tim Kaine, remains the State Health Commissioner. The Virginia

Department of Health includes four deputy commissioners that provide oversight for Community Health Services, Emergency Preparedness and Response, Public Health, and Administration.

The Virginia Department of Health (VDH) is mandated by the *Code of Virginia* to “administer and provide a comprehensive program of preventive, curative, restorative and environmental health services, educate the citizenry in health and environmental matters, develop and implement health resource plans, collect and preserve vital records and health statistics, assist in research, and abate hazards and nuisances to the health and environment, both emergency and otherwise, thereby improving the quality of life in the Commonwealth.” In carrying out these responsibilities, VDH, in conjunction with the Board of Health, promulgates and enforces over 60 sets of regulations and manages over 70 federal and state grants.

In 1947, the Virginia General Assembly passed legislation requiring “each county and city to establish and maintain a local health department.” Then in 1954, the Virginia General Assembly passed legislation that permitted VDH to organize the local health departments into 35 health districts which now include 119 local health departments (Figure 46). The local health departments are jointly funded by the state and the cities and counties that they serve. The local funding is based on the ability to pay with some localities contributing as little as 18% while others contribute as much as 45% match to state dollars. Each health district has a cooperative agreement that delineates the mandated basic health services that each district must provide and any additional services based on need and available funds. The General Assembly has authorized the local governments in Arlington and Fairfax to manage their own health departments and they operate under a contractual agreement with the state.

Figure 46. Virginia Health Districts



Section 32.1-77 of the *Code of Virginia* specifically addresses VDH's authorization to prepare and submit to the U.S. Department of Health and Human Services the state Title V plan for maternal and child health services and services for children with special health care needs. The Commissioner of Health is authorized to administer the plan and expend the Title V funds. Within the VDH central office, the Title V Block Grant is managed by the Office of Family Health Services (OFHS). Dr. David Suttle, the OFHS and Title V director, retired on April 30, 2010, and Diane Helentjaris, MD, MPH was appointed director on May 25, 2010. Formerly, Dr. Helentjaris served as the district health director in Loudoun and Lord Fairfax, the deputy director in the Richmond City Health Department and the deputy director of the VDH Office of Epidemiology. The OFHS director reports directly to the Deputy Commissioner for Public Health, Dr. James Burns who has recently announced his retirement effective in June 2010. Other offices under the direction of Deputy Commissioner for Public Health include Drinking Water, Epidemiology and Environmental Health.

The mission of the OFHS is to provide the leadership, expertise and resources that enable all Virginia residents to reach and maintain their optimum level of health and well-being throughout life. In order to accomplish this, the office is organized into the Director's office and six divisions. The Director's office includes crosscutting functions which are comprised of the Business Unit and the Policy and Assessment Unit. The Business Unit includes budgeting, accounting, contracting, grants management, procurement and human resource functions. The Policy and Assessment Unit (PAU) mission is to assure that valid, reliable, and timely health

information is available to direct effective policies and actions. More specifically the PAU provides leadership in the development and management of the Title V and the Preventive Health and Health Services (PHHS) block grants, manages special information technology projects, coordinates the legislative review process, manages the Behavior Risk Factor Surveillance System Survey (BRFSS), the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Virginia Youth survey (VYS), creates and maintains a standard electronic repository of OFHS health-related data including linked datasets, develops and provides web-based tools to disseminate health information for community health assessments, and provides training and consultation to OFHS staff regarding epidemiologic practices, statistical analysis and program evaluation.

The six OFHS divisions include Women's and Infants' Health, Child and Adolescent Health, Dental Health, Injury and Violence Prevention, Chronic Disease Prevention and Control, and Nutrition, Physical Activity and Food Programs (formerly WIC and Community Nutrition). The OFHS Management Team, which is comprised of the office director, the deputy for administration (Business Unit Director), the Policy and Assessment Director, and the six division directors, meets weekly to keep key staff informed of current activities and issues and to plan short and long term strategies for addressing current issues. A similar process occurs within each of the divisions at least monthly or more often as needed.

In reviewing the capacity assessment for the different population groups, several specific issues were identified that cross population groups. These issues included the impact of changing demographics on the need for increased capacity to provide services to more diverse populations, an increased recognition of factors that impact health equity, the continued need to provide reliable and timely information regarding available services, changes in Medicaid coverage, and the increased availability of timely data for decision-making.

Since the last MCH needs assessment, there has been a continuing trend towards increased racial and ethnic diversity in the state. The racial and ethnic groups in Virginia include African Americans, Asian/Pacific Islanders, Native Americans, and Hispanics in addition to the non-Hispanic White population. Culturally diverse populations include the following groups: Cambodian, Central American, Chinese, Ethiopian, Filipino, Korean, Loa, Russian/Ukrainian, Somalian, Sierra Leone, South American, Thai, and Vietnamese. The minority population has grown since 1980. Approximately 48% of Virginia's population was born in another state or

nation. In 2007, there were more than 794,000 foreign-born Virginians, an increase from approximately 570,000 in 2000. Immigrants tend to be younger and divided between the less- and better-educated population segments. The mix of immigrants in Virginia includes a higher percentage of Asians compared to the national average. Virginia's most racially and ethnically diverse communities are in Northern Virginia and the Tidewater area. In Tidewater, where the population is mostly comprised of non-Hispanic White and non-Hispanic Black residents, it is also home to one of the largest Asian populations in the state.

Virginia's Hispanic population tripled between 1990 and 2006. Hispanics account for approximately 6.5% of the population, which is significantly lower than the national average of 15.1%. The distribution of Virginia's Hispanic population is concentrated in the three major metropolitan areas and selected rural areas. In Northern Virginia, Hispanics represent more than 15% of the populations of Manassas Park City, Manassas City, Prince William County, Arlington County and Fairfax County.

According to the 2000 Census, 10.5 % of Virginia's children ages 5 to 17 years speak a language other than English at home. An assessment of district health departments indicated that all the districts have increasing numbers of clients that have limited English proficiency (LEP) with Spanish as the most frequent primary language. Fairfax, Arlington, Henrico, Loudoun, and the Eastern Shore health districts reported the highest percentage of LEP clients. This assessment data from 2006 most likely underestimates the current percent of LEP clients. Cultural competency continues to be a critical issue for health systems as they attempt to meet the needs of growing minority and multicultural populations. Adequately serving Hispanic and other non-English speaking groups has challenged language resources, however the need to deliver services in culturally appropriate ways is also challenging. The VDH Office of Minority Health and Public Health Policy has developed a number of resources to address culturally and linguistically appropriate health care (CLAS Act Initiative). Resources include educational sessions, assessment tools, commonly used clinical phrases in different languages, policies and regulations, and links to research and other resources such as links to interpreter services. These resources can be found on the Office of Minority Health and Public Health Policy website <http://www.vdh.state.va.us/healthpolicy/healthequity/clasact.htm>

There is also a growing interest in going beyond the issue of health disparities to understand the social determinants of health and how health inequities impact health status

across population groups. Health inequities are differences in health status and mortality rates across population groups that are systemic, avoidable, unfair and unjust. This includes decisions that governments and corporations make that benefit some and burden others and often reinforce inequities. One example is in the area of obesity prevention and the concept of “food deserts.” Some communities do not have supermarkets or the supermarkets are mainly devoid of fresh vegetables and fruits, but the same community may have a number of fast food restaurants available. These systematic decisions impact the health of community members. Strategies to promote health equity should include a focus on systems of discrimination that address racism, classism, and sexism as the primary determinants of health inequities. The Office of Minority Health and Public Health Policy has provided leadership in understanding health equity through the promotion of a 4-hour PBS documentary series called “Unnatural Causes: Is Inequality Making Us Sick,” providing community action toolkits, press releases, and fact sheets. In September 2009, approximately 400 individuals attended the first Virginia Health Equity Conference. The conference was sponsored by VDH and the Virginia Public Health Association. OFHS staff participated in the conference planning, presented posters, and attended the conference.

The Association of Maternal and Child Health Programs (AMCHP) has identified father involvement in families’ and children’s lives as an emerging issue. In their 2009 brief “Father Involvement in MCH Programs,” AMCHP noted that State Title V programs are increasingly incorporating fathers into maternal and child health programs. These programs have an important role in facilitating communication and expanding collaborations among state and local agencies and programs to increase father involvement with MCH populations. Stakeholders in Virginia have identified father involvement as an area of concern; future Title V activities around this issue will be to seek out ways to secure data around fatherhood involvement and pregnancy outcomes, early parenting, and perceived barriers to a father’s ability to support their family’s positive health seeking behaviors.

Title V legislation requires that states establish a MCH Helpline to ensure that families have access to resources. Availability of information is crucial in linking families with the help they need, especially in economically challenging times when families are facing loss of employment, insurance, and sometimes loss of their home through foreclosure. Prior to 1995, the OFHS had a memorandum of understanding with the Department of Medical Assistance

Services (the Medicaid agency) to staff an MCH Helpline. The helpline provided information to assist callers in identifying physicians who accepted Medicaid patients. Following 1995, the OFHS entered into a memorandum of understanding with the Department of Social Services (DSS) to provide more comprehensive information and referral for the MCH population through the Statewide Information and Referral System. These services, provided by six regional sites, were accessed through a toll free number (1-800-230-6977). In 2006, the system implemented a “211” number that could be dialed from any location in the Commonwealth except Northern Virginia. By 2008 the “211” system was available statewide. The “211” centers are staffed during general office hours on weekdays, and an answering machine provides callers the opportunity to leave a message and contact information. Center staff returns calls within the next business day. Spanish speaking callers are linked with appropriate staff. In addition, the Virginia “211” website (www.211virginia.org) provides an interactive directory of services available by locality, zip code, and statewide. The website information is available in both English and Spanish. The site also allows service providers the ability to add or update service information. However, maintaining a directory of current OFHS and health department services and programs is a challenge with reduced staff and increased workload. In addition, making the public and service providers aware of the resources that “211” offers is a challenge that requires both a commitment of scarce time and funding. Currently, OFHS contracts directly with each of the six regional sites to provide quarterly reports on the types of calls that are received. OFHS staff worked with the centers to define the types of calls that are considered MCH related. The “211” line averages approximately 32,000 MCH calls each year. A number of OFHS programs and initiatives have included the “211” number on brochures and websites. The information obtained from the “211” reports has helped to identify populations served, unmet needs and helped in evaluating the success of some of the OFHS initiatives. The “211” number also serves as the state number for the national resource line 1-800-311-BABY that provides information and referral for prenatal care.

A number of significant changes in the Virginia Medicaid program have occurred since the implementation of the first State Plan for Medical Assistance on July 1, 1969. As a result of the Balanced Budget Act of 1997 which created the State Children’s Insurance Program (SCHIP), the Virginia General Assembly created the Children’s Medical Security Insurance Plan to provide health care services for uninsured children under age 19 whose families have incomes

above the Medicaid limit but less than or equal to 200% FPL. In August 2001, the program was renamed the Family Access to Medical Insurance Security Plan (FAMIS). In 2005, FAMIS was amended through a HIFA waiver from the Centers for Medicare and Medicaid Services (CMS) to create FAMIS MOMS for uninsured pregnant women who have incomes above the Medicaid limit of 133% FPL but less than or equal to 150% FPL. The income limit was increased in 2006 to 166% FPL and to 200% FPL in July 2009.

The FAMIS Select Premium Assistance Program is also operated under a HIFA waiver from CMS. In 2005 the program replaced the former Employee Sponsored Health Insurance (ESHI) program to provide an option for families that have children enrolled in FAMIS who have access to private or employer sponsored coverage. The family is provided \$100 per child to help pay for the cost of covering the child in a private or employer's health plan. The funds from the program often help to cover the entire family through coverage from these policies.

Beginning in January 2008, Virginia implemented Plan First, a family planning waiver program designed to reduce Medicaid expenditures for pregnancy and childbirth by preventing unintended pregnancies. Both men and women who have income less than or equal to 133% FPL are eligible for family planning services including annual physical exams for men and annual gynecological exams for women. Plan First also covers sterilization procedures and FDA approved prescription contraceptives. Individuals who are eligible for full Medicaid benefits are not covered by Plan First.

As a result of the State Child Health Insurance Program Reauthorization Act (2009), Virginia began verifying citizenship requirements for FAMIS and FAMIS MOMS by matching applicants' Social Security number against the files of the Social Security Administration. FAMIS enrollees who live in an area of the state that has only one managed care organization (MCO) available, will now have the option of changing to a fee for service plan. Effective in July 2010, FAMIS enrollees will no longer be charged co-payments for pregnancy-related services. In addition, parity for mental health/substance abuse treatment and medical services will be established.

Virginia was one of eight states that received a \$1 million grant for each of four years from the Robert Wood Johnson Foundation to increase enrollment and retention of children in FAMIS and FAMIS Plus (children's Medicaid). Under the direction of the national Academy for State Health Policy, experts from the national program office for Maximizing Enrollment for

Kids, are working with Virginia officials to identify ways to strengthen systems, policies, and procedures. Best practices from the eight states will be shared nationally.

Following the 2005 Title V Needs Assessment, a major focus was placed on increasing the OFHS data capacity so that data would be readily available and used for program planning and evaluation. The State Systems Development Initiative (SSDI) and Title V Block Grant funds have been used to support two MCH epidemiologists. Through their work the OFHS Data Mart was established. The OFHS Data Mart is a repository of data selected and organized to support the surveillance, evaluation, policy and planning needs of OFHS staff.

As noted in the Data Sources section, the OFHS Data Mart was created to address gaps in the areas of data collection (primary data such as surveys and secondary data such as infant death certificates), statistical analysis (such as trend analysis) and data linkage (the connection of two or more datasets by common identifiers which adds information that cannot be obtained from a single dataset). The data housed in the OFHS Data Mart are used by all division for surveillance, assessment, policy, program planning, grant applications, and reporting. The OFHS Data Mart has facilitated the automation of calculating over 85% of the Title V grant National Performance Measures and other required indicators. The automation of this data has also allowed indicators to be calculated by race/ethnicity and health district as well as for all of Virginia. Analysis of OFHS Data Mart data has filled critical gaps in Title V Needs Assessment. The SSDI Project has enabled OFHS to use data to identify the needs of the state MCH populations and provided an evidence base to identify priority needs for MCH populations and assess capacity to address those needs.

A. and B. Direct and Enabling Services

Direct and enabling services offered through the local health departments such as prenatal care, family planning, and well child care continue to be utilized by a sizable proportion of the maternal and child population. Services to children with special health care needs are funded through Title V and provided through Care Connection for Children and the Child Development Clinics. In addition, Community Health Centers and Free Clinics provide safety net care in the medically underserved areas of the state. When the previous Title V needs assessment was completed 29 district health departments provided varying levels of prenatal care from pregnancy testing and referral to care up to the deliver. All the local health departments provide

immunizations and 23 of the 35 districts provide well child services. Very few districts provide sick child services.

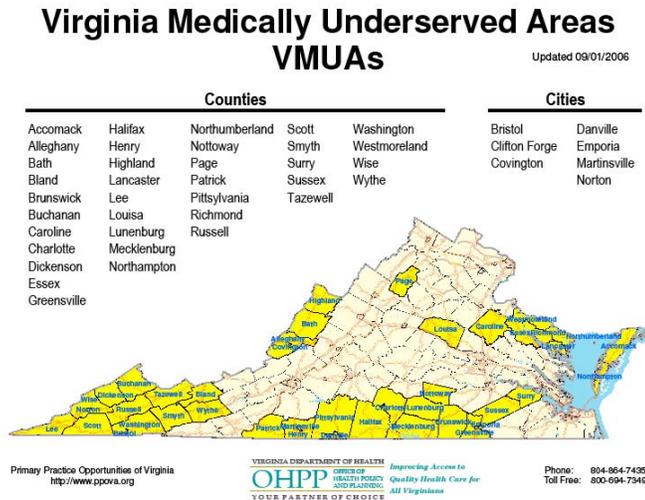
Access to services remains highly dependent on insurance coverage. Children and women without insurance are less likely to access early and preventive services. A recent study (February 2010) conducted by the Urban Institute for the Virginia Health Care Foundation reports that even before the economic downturn, one million Virginians had no health insurance. A very clear trend is that fewer employers are making health insurance available to their employees. The Urban Institute found that the vast majority of the uninsured (80%) live in households with at least one full-time or part-time worker. Forty-six percent (46%) of uninsured Virginians live in a household with a worker employed by a small company or with a self-employed worker. Only one in four uninsured Virginians lives in a household that has a worker who is offered employer-sponsored health insurance. The majority of the uninsured are U.S. Citizens and white, non-Hispanic (50% are Caucasian/non-Hispanic, 20% are African-American, 20% are Hispanic, and 10% are “other”). Another significant group of uninsured is young adults aged 20 to 29 years. According to data from the 2008 National Health Interview Survey, 30% of the young adults aged 20 to 29 years did not have health insurance coverage. They were four times as likely to have unmet health needs as those who had private insurance and two times as likely as those with Medicaid to have unmet needs. These are individuals who are transitioning into the workforce to jobs that often have limited or no access to health insurance, and at the same time they are transitioning off their parents insurance or public insurance coverage. This is also a time for high risk health issues such as pregnancy, sexually transmitted infections, injuries and substance use. Beginning September 2010, the Patient Protection and Affordable Care Act requires health plans who allow parents to cover children on their policy must allow children to remain on the policy until they turn 26.⁵⁴

While Virginia has an overall sufficient number of primary, preventive, and specialty service providers, the providers are unevenly distributed throughout the state. Regional differences affect access with the Southwest, South Central Virginia, and the Eastern Shore consistently exhibiting provider shortages or other underserved qualifications. The lack of Medicaid providers in some areas is a concern that has improved somewhat since the last needs assessment. Additionally, an analysis of needed services identified by Health District Nurse

⁵⁴ The Affordable Care Act: Immediate Benefits for Virginia. www.HealthReform.gov

Managers found that existing resources are at or near capacity. Figure 47 shows Virginia’s Medical Underserved Areas.

Figure 47. Virginia Medically Underserved Areas (MUAs), 2006.



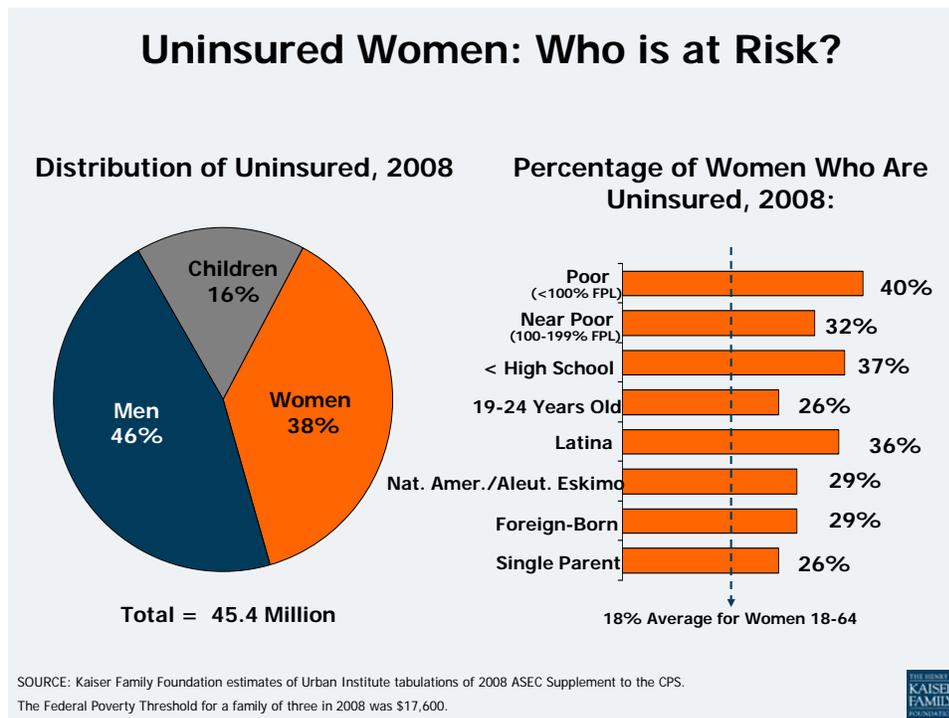
Virginia’s safety net providers include community health centers, free clinics, and others. Community Health Centers (CHCs) are located in areas of the state that lack adequate providers to meet the needs of the community. In addition to health care, they provide prescription medication and more than 25 provide dental services. Some CHCs also provide mental health services and OB/GYN services. The CHCs accept all patients regardless of the ability to pay, and fees are based on a sliding scale and/or insurance coverage. Free Clinics exist in many locations across the state to provide free or low cost health services to eligible individuals. These clinics depend on volunteers, grants and donations to keep the clinics operating. Each clinic establishes its own income eligibility level ranging between 100% and 200% FPL. With the economic downturn, free health clinics have been overwhelmed as a result of the rising number of uninsured, forcing some to close their doors to new patients, cut back available slots, or inform new patients that they have to wait months for an appointment. Other safety net providers include hospitals that have financial assistance programs to help low income patients with medical costs and/ or have special community health services such as services provided through mobile units, community organizations that provide medical assistance, and local health departments.

Direct and Enabling Services for Pregnant Women, Mothers and Infants. Virginia recognizes that the health of a woman during and after pregnancy, as well as the health of her

infant, is heavily influenced by her health status over the years and months prior to conception and pregnancy. As a result, the focus of Virginia’s efforts remains on women’s health across the lifespan. This broader perspective takes into account the interrelationship between smoking, substance abuse, chronic diseases such as asthma and diabetes, obesity, violence, and depression.

Access to services is again highly dependent on insurance coverage. Based on the opinions and insights of stakeholders that participated in statewide focus groups, the complexities of the healthcare system and the impact of job losses continue to be emerging issues that impact the capacity to provide direct services to Virginia families. According to the Kaiser Family Foundation, approximately 17.2 million women nationally are uninsured, with the result that they are more likely to lack adequate access to care and have poorer health outcomes. Most women have some form of insurance, however approximately 20% of non-elderly women are uninsured. Nationally, women make up 38% of the uninsured (Figure 48). In Virginia, the Kaiser Foundation estimates that approximately 13.8% of non-elderly women are uninsured.

Figure 48. Uninsured Women in the United States.



In 2008, 32% of all Virginia births were covered by Medicaid. The Governor’s Work Group on Rural Obstetrical Care issued an interim report on July 1, 2004. Based on recommendations in that report, the Governor provided emergency authority and funding effective September 1, 2004, for the Department of Medical Assistance Services (DMAS) to

increase the Medicaid payment rates for outpatient obstetrical and gynecological services by 34% through the emergency regulation process. The Medicaid income eligibility level remains at 133% FPL. The Work Group also recommended expanding FAMIS to pregnant women with family incomes above the 133% FPL currently covered under Medicaid and revamping the premium assistance program for FAMIS SELECT. In 2005, FAMIS was amended through a HIFA waiver from the Centers for Medicare and Medicaid Services (CMS) to create FAMIS MOMS for uninsured pregnant women who have incomes above the Medicaid limit of 133% FPL but less than or equal to 150% FPL. The income limit was increased in 2006 to 166% FPL and to 200% FPL in July 2009. As of November 1, 2009, 1,191 pregnant women were enrolled in FAMIS MOMS.

Pregnant women eligible for FAMIS MOMS will:

- Have a gross family income greater than 133% FPL and less than 200% FPL; and
- Not have credible health insurance coverage under a private or employer-sponsored group or individual health insurance plan; and
- Not have access to the State Employee Health Plan; and
- Be a resident of the Commonwealth of Virginia; and
- Be a U.S. citizen or a qualified legal immigrant; and
- Have a medically confirmed pregnancy or be within the 60 day postpartum period.

FAMIS MOMS provides enrollees the same coverage that pregnant women currently receive from the Virginia Medicaid program. There is no difference in covered services, service limitations, and pre-authorization requirements. FAMIS MOMS use the same system (fee-for-service and MCOs) as Medicaid recipients. There is one important difference between Medicaid and FAMIS MOMS. Once the baby is born, the child will not automatically be enrolled in FAMIS; the mother must apply for the baby's coverage.

As mentioned above, the FAMIS Select Premium Assistance Program is also operated under a HIFA waiver from CMS. In 2005 the program replaced the former Employee Sponsored Health Insurance (ESHI) program to provide an option for families that have children enrolled in FAMIS who have access to private or employer sponsored coverage. The family is provided \$100 per child to help pay for the cost of covering the child in a private or employer's health plan. The funds from the program often help to cover the entire family through coverage from these policies. In SFY 09 more than 440 children were provided coverage. However by the end

of SFY 09 the number had begun to decrease, most likely a result of the economic turndown and the family's access to these policies due to loss of work and/or resources.

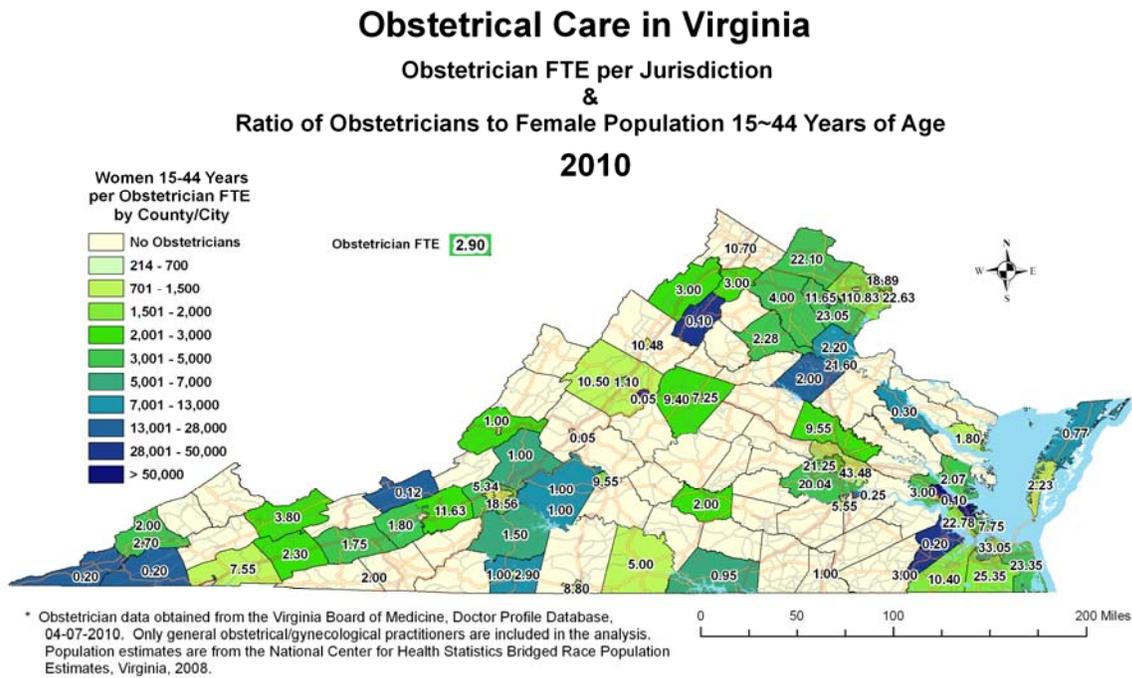
The Virginia Medicaid program is one of six in the nation that has the income limit set had a low level of 133% FPL (FAMIS MOMS is 200% FPL). The Kaiser Family Foundation published the report *State Medicaid Coverage of Perinatal Services: Summary of State Survey Findings* in November 2009. Table 17 summarizes the components of Virginia's Medicaid Coverage of Prenatal Services.

Table 17. Prenatal Services Covered by Virginia's Medicaid Program

Prenatal Service	Service Covered by Virginia Medicaid
Prenatal Care Visits	Yes
Prenatal Vitamins	Yes
Psychological Risk and Medical Risk	Yes
Ultrasound	Yes
Lab	Yes
Genetic Screening	Yes
Chorionic Villus Sampling	Yes
Amniocentesis	Yes
Vaginal and C-Section Delivery	Yes
Anesthesia	Yes
Birth Centers or Home Births	No
Childbirth Support	No
Postpartum Care	Yes
Preconception Counseling	No
Genetic Counseling	Yes, if billed as regular office evaluation
Nutrition Counseling	Yes
Psychosocial Counseling	Yes
Case Management	Yes
Transportation	Yes
Home visits	Yes
Substance Abuse Treatment	Yes
Smoking Cessation	Yes
Childbirth, Health and Infant Care Education	Yes
Breastfeeding Education	No
Individual Lactation Consultation	No
Breastfeeding Equipment Rentals	No

The 2005 needs assessment identified 55 communities that were considered perinatal underserved areas. Of those communities, 20 had manpower and resource deficiencies, 44 were underserved because of under-utilization of health care services, and 9 were underserved in both categories. Although a study to update the perinatal underserved areas has not been completed recently, it is likely that there continue to be underserved areas resulting from additional obstetrical service closures in rural areas and the loss of associated physician practices in those areas. The map below shows obstetrician FTEs per jurisdiction and the ratio of obstetricians to the population of women ages 15 to 44 years (Figure 49).

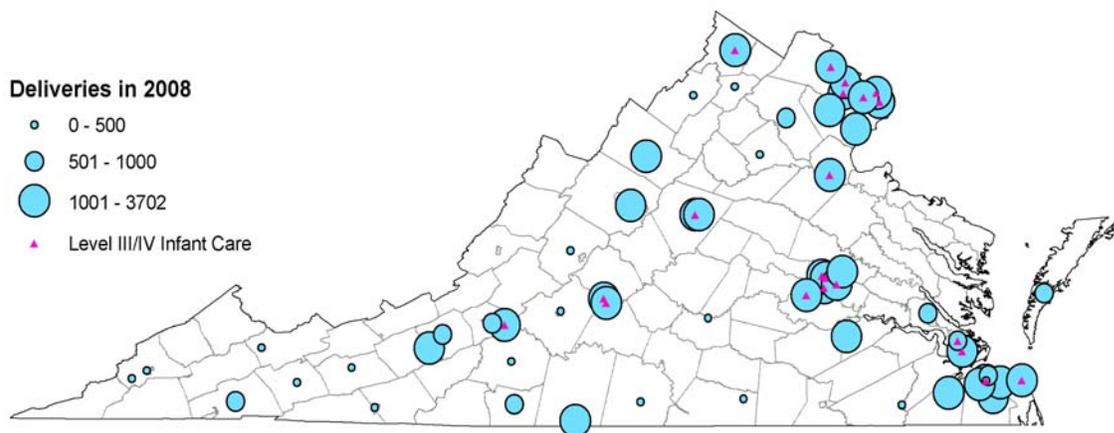
Figure 49. Map of Obstetrical Care in Virginia, 2010.



The most recent Annual License Survey Data (ALSD) shows that there are 100 hospitals providing services in Virginia. Of these, 16 only provide specialty care such as rehabilitation, psychiatric services or only serve children. Of the remaining 84 facilities, 58 provide obstetrical services with 11 of the facilities maintaining 10 beds or less for obstetrical care. Two of the community hospitals are closing or discontinuing obstetrical services; Bedford Memorial Hospital will close in September, 2010 and the Carillion Stonewall Jackson Hospital has recently discontinued obstetrical services. The hospitals that have discontinued their obstetrical services now deliver babies only in an emergency when a woman presents with delivery being imminent.

Hospitals with level III and IV infant care facilities for high-risk infants are generally located in the larger urban areas of the state (Figure 50). The ALSD shows that 20 of the 58 hospitals that provide obstetrical care also provide intensive level III and IV newborn care (defined as specialty and subspecialty care). In addition, the Children’s Hospital of the King’s Daughter in Norfolk provides subspecialty care for newborns. Only two hospitals in Virginia’s Southwest region provide level III or IV newborn care. These hospitals are located in Lynchburg and Roanoke. Tennessee hospitals offer another source of obstetrical care and intensive newborn care for the far southwest region of Virginia.

Figure 50. Virginia Hospitals with Obstetrical Services and Level III and IV High-Risk Newborn Care.



The source of prenatal care varies depending in large part on insurance status; however the district health departments continue to play an important role in providing services. In 2009, the Office of Family Health Services surveyed the health districts to determine what services they were providing. The survey found that 19 of the 35 districts provide some level of prenatal care. District prenatal services vary; some districts have relationships with private physicians and refer patients for prenatal care and delivery, while others provide prenatal care for some period or until delivery. All districts have referral mechanisms in place for high risk pregnancies. Districts may also provide support services including childbirth education classes, parent education, genetic counseling, mental health referral, and smoking cessation. A number of districts participate in Baby Care, which provides support and services through intensive case management and coordination of care to women who are on Medicaid and are at high risk of poor birth outcomes. However, women who originally come to the districts for prenatal care

often transfer to a private provider once they are enrolled in Medicaid coverage. Generally prenatal care delivered through local health departments has been viewed as being particularly effective in meeting the needs of vulnerable populations. The prenatal care provided by the health department remains a very important service particularly for low-income, minority, or otherwise “at risk” populations that do not qualify for Medicaid assistance. In the majority of districts, as pregnancy progresses, care is transferred to a healthcare provider for delivery.

The Virginia Department of Health has a long history of providing family planning services dating back to the 1960’s. In 1972, VDH began receiving Title X funds to supplement the state and local funds in order to expand services. The Division of Women’s and Infants’ Health (DWIH) in the Office of Family Health Services (OFHS) manages the Virginia Family Planning Program (VFPP). The following family planning information is from the recent Title X needs assessment.

The federal Title X grant funds 135 of the 178 publicly funded family planning clinics in Virginia. These clinics include ones located in the local health departments as well as 2 Federally Qualified Community Health Centers located in Alexandria and Richmond, a free clinic located in Richmond (Fan Free Clinic), 2 college clinics located at Longwood College and the University of Virginia at Wise, 3 school linked health centers located in Roanoke, Western Piedmont and Alexandria health districts, and 3 public housing clinics located in Richmond City and Chesapeake health districts. In addition, there are a number of other non-Title X family planning clinics including 8 Planned Parenthood clinics (Richmond, Hampton, Virginia Beach, Norfolk, Falls Church, Charlottesville, Roanoke and Blacksburg), 101 FQHC clinics, and 3 major medical schools – the University of Virginia, Eastern Virginia Medical School, and Virginia Commonwealth University Health Systems.

The VFPP has begun to address the new goal of improving women’s health across the lifespan. In addition to providing the routine family planning clinical services including assessment for risk of HIV/STD, the program also includes elements of preventive care such as BMI screenings and nutrition counseling/referral, and an assessment of postpartum depression and inter-conceptual health. All teens receive counseling on the need to include their parents in their decision to seek family planning services, abstinence and how to prevent sexual coercion.

According to the Guttmacher Institute, in 2006 there were 921,450 women in need (WIN) of contraceptive services and approximately 42 percent of these were in need of publicly funded

services based on the population and poverty estimates of the United States Census Bureau. This is an increase of approximately 6.1 percent from 2000. During this time the Title X funded VFPP program was only able to meet approximately 19 percent of the need for publicly funded contraceptives while the Medicaid program and other partners met approximately 15 percent leaving approximately two-thirds of WIN for publicly funded services potentially without services. Undoubtedly with the downturn in the economy and the resulting loss of employment and insurance coverage for many Virginia residents, the number of WIN for publicly funded services has increased. Data from the 2008 VFPP do show a modest increase in caseload despite statewide budget reductions and the loss of many key staff positions supporting the program. However a number of challenges remain. There continues to be a need to increase the efficiency of the family planning clinics so that additional clients may be served. One challenge to increasing the efficiency is the increasing number of Hispanic and other immigrant patients that need services. These populations require additional service time due to the use of interpreters, language lines, etc. There is also a need to serve additional males. Various data sources suggest that men may not be fully engaged in the prevention of unintended pregnancy and some passively assign the family planning responsibility to women. Changes in Medicaid with the new family planning waiver have resulted in the potential to reach a greater number of men; however the challenge is to create a “male friendly” clinic setting and to provide staff training on serving the male client.

The increasing cost of contraceptives is also a major challenge. The cost of oral contraceptives has greatly increased without an equal increase in available federal funds and women are choosing more convenient and expensive methods such as Depo-Provera and the Nuva Ring. The IUD and Implanon are essentially not available in the local health departments due to the expense. In addition to Title X funding, \$475,000 of state funds have been used to purchase contraceptives for clients seeking family planning services in local health departments. Due to decreasing state revenues and budget reductions these state funds were eliminated in FY 10. This has resulted in several districts depleting their contraceptive stock and others expressing concern about the shortage. The impact on the clients will be that they may have to switch to other less effective over-the-counter methods or will need to fill a prescription in a private pharmacy. The cost of contraceptives is even more prohibitive for the indigent and working poor. The VFPP is currently attempting to identify additional funding for the purchase

of contraceptives; however with changes in the eligibility criteria, the Medicaid Funded Family Planning Waiver, Plan First, has the potential to fund contraceptive services for a greater number of women and now men. Individuals who are eligible for full Medicaid benefits are not covered by Plan First. To date, the level of enrollment in Plan First has been low. By December 1, 2009, 4,480 individuals were enrolled in Plan First. This may be due to a lack of resources to market the program and to some degree the application process. Local health departments promote Plan First to the family planning clients and print out a copy of the application from the VDH billing system, but there is no incentive for them to enroll since family planning clinics are required to provide the services. Utilizing Plan First to its full potential would have a dramatic impact on serving Virginia's women and men in need of contraceptive services. Private medical providers are located throughout Virginia but many providers do not accept Medicaid or they limit the number of Medicaid patients. In 2008, of the 5,000 enrolled Medicaid providers, only 612 actually billed Plan First for services. Both an increase in Plan First enrollment and an increase in the number of private physicians who accept and treat Medicaid patients are important to meeting the need for family planning services.

In the past, the Voluntary Sterilization program, managed by the DWIH, has utilized state funds to provide permanent birth control methods to low income individuals, male and female, age 21 and over who wish to conclude their ability to reproduce children. The age range of the clients served in FY 09 was 22 to 41 years of age for females and 32 to 43 years of age for males. The program has historically served between 200-300 persons annually. Over 135 statewide contractors participated in this program including private practice physicians and community hospitals. The program served individuals on a first-come-first serve basis. In 2007, a total of 257 people were served but in 2008 and 2009 the number of persons served dropped to 150 each year. With decreasing state revenue, funding for the program was eliminated in FY 10. Individuals seeking publicly funded sterilizations at local health departments will be assisted in applying and obtaining services with a local Medicaid provider in the Plan First Program. The loss of state funds for sterilization will have a major impact on the non-citizen residents who are not eligible for the Medicaid supported program and may not be able to obtain a desired sterilization procedure. In a 2009 survey of district health departments, 84% indicated that there was a significant need for sterilization services because there were no resources available or wait lists were common.

VDH has a number of programs that focus on improving birth outcomes. The Virginia Healthy Start Initiative (Loving Steps) is one such program. The goal of Loving Steps is to reduce health disparities within the African American population in order to improve birth outcomes. Virginia's federally funded Healthy Start Initiative, which began in 1997, currently serves two urban areas, Norfolk and Petersburg, and one rural area, Westmoreland County. These communities were chosen because of their higher than average infant mortality and low birth weight rate along with a high rate of births to teens. The communities all have high rates of poverty and other risk factors for poor perinatal outcomes. Loving Steps provides at-risk pregnant women, inter-conceptual women, and at-risk infants and toddlers with case management, health education, inter-conceptual care, and perinatal depression screening using the Edinburgh Postnatal Depression Scale. Loving Steps also works closely with the Resource Mothers program, the Regional Perinatal Councils and the Fetal/Infant Mortality Review (FIMR) program to improve birth outcomes.

Another effort to improve birth outcomes is the Baby Care program, also known as the Maternal and Infant Care Coordination Program (MICC). The program has been in existence since 1987. The program provides support and services through intensive case management and coordination of care to low income pregnant women who are receiving services through FAMIS, FAMIS Plus, FAMIS MOMS or Medicaid and are at high risk of poor birth outcomes. Baby Care is provided in 18 of Virginia's health districts and by a number of private community organizations. The services include not only case management of medical services and community services, but also nutrition counseling for the mother and nutritional assessment of the infant, smoking cessation classes, prenatal care education, child development education, homemaker services if the mother is placed on restricted activities or bed rest, and substance abuse treatment. Pregnant women are eligible for Baby Care during pregnancy and up to the end of the month of their 60 day post-partum period, and infants are eligible for up to age two. Low income pregnant women who are enrolled in an MCO are not eligible for Baby Care; however, the MCOs have other services focused on the high-risk patient with the goal of improving birth outcomes. In the 2005 Needs Assessment, VDH reported that a national policy research firm had been contracted to explore optional program designs for the case management services for high-risk pregnant women and infants. The changes that resulted from that study included an increase in the monthly Medicaid reimbursement rate from \$1.35/day to \$4.05/day and an

increase for the mileage reimbursement rate from \$.25/mile to the federal rate. The paperwork burden was also decreased. As a result of the Home Visiting Consortium work, there will also be changes to the intake process which will make referrals to Baby Care more efficient and will standardize the risk screening tools and the intake form.

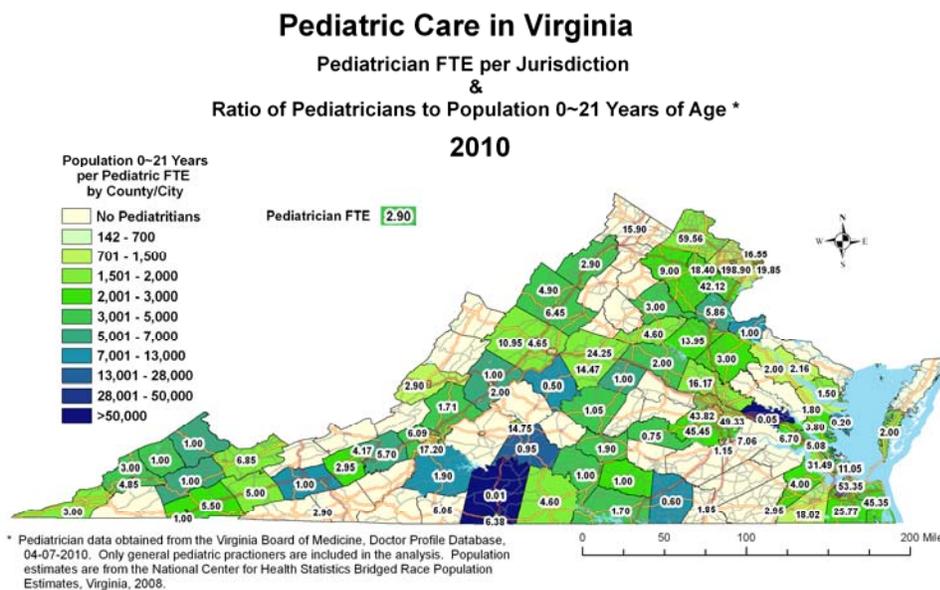
The Virginia Resource Mothers program began in 1986 with 4 pilot sites and has grown to the current 23 programs serving 67 of the 135 Virginia localities. The program includes community health workers who provide home visitation services to pregnant teens during the prenatal period and infant's first year of life. The women who serve as resource mothers promote early entry into prenatal care, healthy behaviors (avoidance of smoking, alcohol and drugs), up-to-date immunizations for the teen and her baby, staying in school in order to be self-sufficient, establishment of a stable home environment for the new baby with the help of the baby's father and the teen's family, and appropriate use of other community services such as WIC, family planning and Medicaid. The Resource Mothers Program collaborates with a number of other community services (e.g., CHIP, Healthy Families, Healthy Start, Project Link, Baby Care, Part C Early Intervention, managed care organizations and private providers) to provide intake, assessment, and coordination of care including a case-by-case determination of the most appropriate local program for the particular teen and her family. Following the last Title V needs assessment, the March of Dimes successfully advocated to the Virginia General Assembly for an increase for the Resource Mothers program based on the success of the existing program. As a result, services were expanded to serve 275 more pregnant teens annually. A cost-of-living adjustment in the contracts was modified to reflect the time spent per teen. This adjustment is the first that has been made in the 20 years since the program began. However, the capacity of sites remains limited by available staff hours, and for a number of programs waiting lists remain. In addition, community partners such as doctors, hospitals and school guidance counselors are usually aware of the capacity and do not make referrals when the programs have reached maximum capacity. In a number of localities, a challenge for program staff has been the changing demographics, such as the increasing number of Hispanic teen pregnancies. Over the past few years, mental health and social service needs of the teens, especially with the current economy, have required more staff time. Successes of the program include earlier entry into prenatal care, enrollment in Medicaid/FAMIS, improved birth outcomes, self-reported decreases in smoking, substance use and alcohol use. The infants, at one year, were more often up-to-date

on immunizations, and the majority of mothers were enrolled in school, training programs or working. In addition, the repeat pregnancy rate was low during the first year following the birth.

An Interagency Agreement between VDH and DMAS enumerates the responsibilities of each department with regard to the Resource Mothers and Baby Care programs. The Interagency Agreement is on file in the OFHS.

Direct and Enabling Services for Children and Adolescents. Pediatricians, as shown in Figure 51, practice in all areas of the Commonwealth, but are primarily concentrated in urban areas. Areas that are particularly sparse include the Northwest, the Northern Neck, and along the North Carolina border, west of Hampton Roads. Unfortunately, this map does not convey the extent of access to pediatricians by children living in low-income families or the availability of other pediatric providers, such as pediatric nurse practitioners.

Figure 51. Pediatric Care in Virginia, 2010.



An additional measure of the access to pediatric health care providers are areas that qualify as medically underserved (MUA) or health professional shortage areas (HPSAs) (see Figure 52 and 53), which are concentrated in the Southwest, Southside, Northern Neck, Eastern Shore, and Western Virginia.

Figure 52. Virginia Medically Underserved Areas.

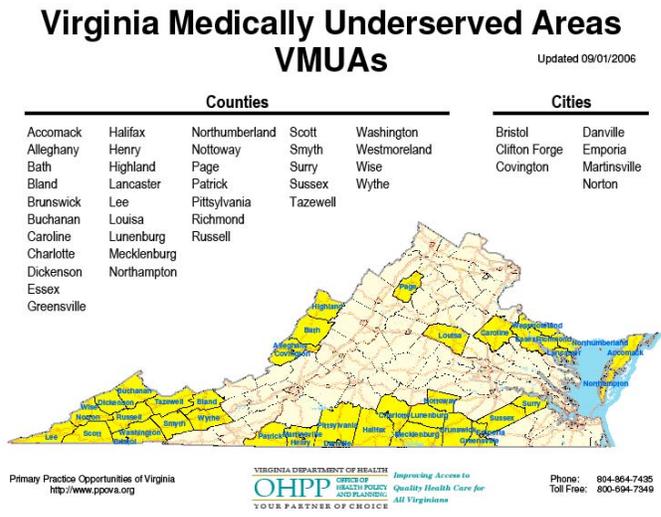
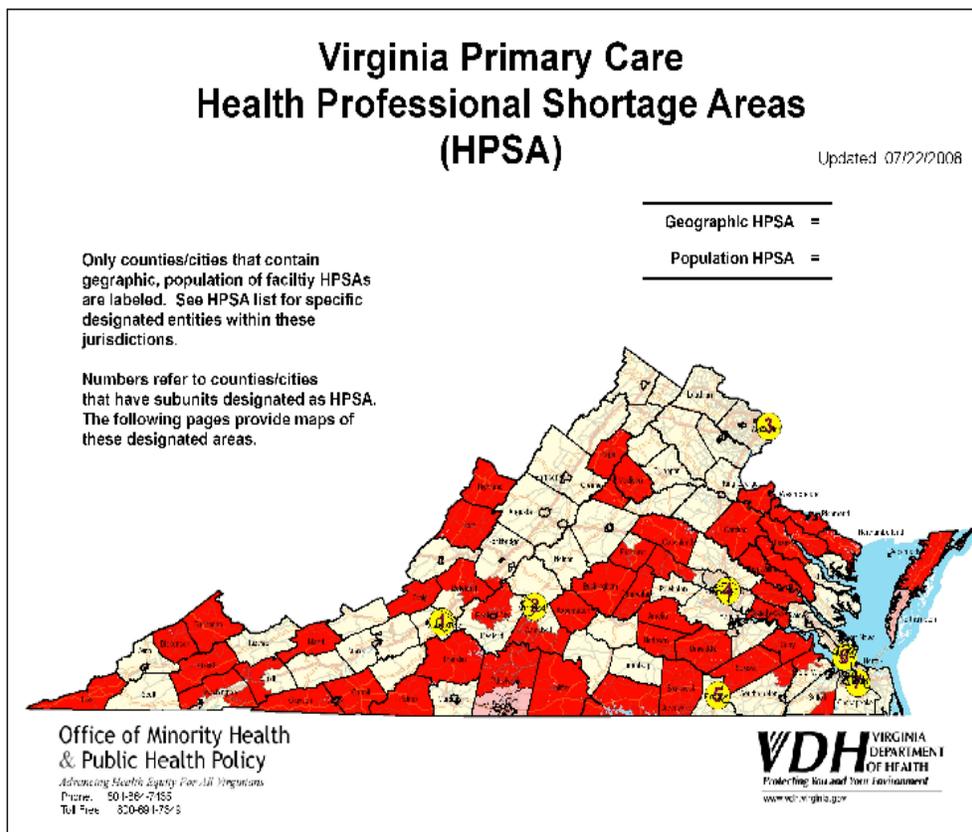


Figure 53. Virginia Primary Care Health Professional Shortage Areas.

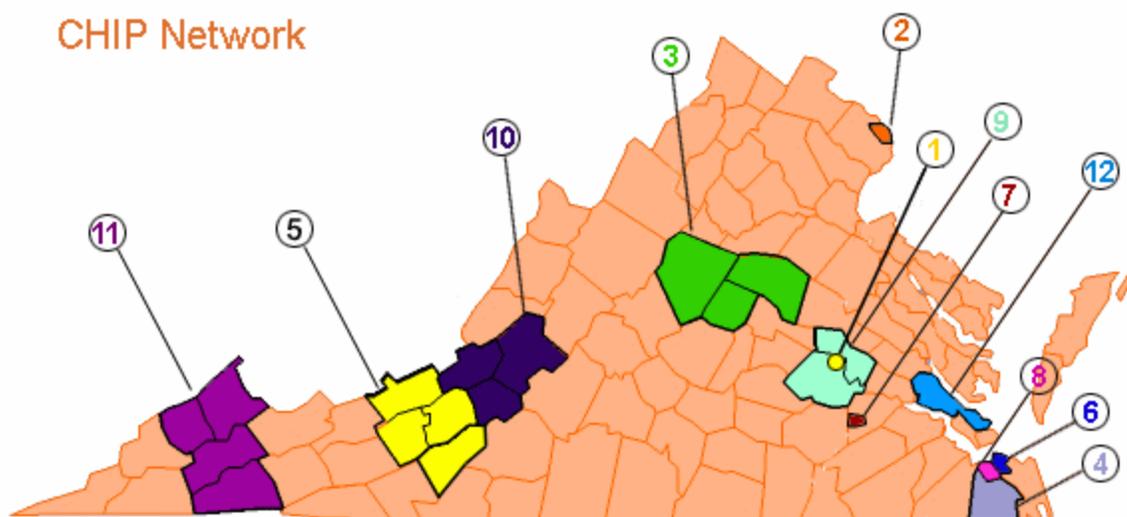


All district health departments provide child immunizations and most provide school entry physicals, but for the most part district health departments do not serve as a safety net for routine children's medical care. In a recent survey of health departments, 39 % of the districts

reported that they do not provide well child care, and 65% reported that they do not provide sick child care. For the most part, families depend on private providers, community health centers, school based centers, hospital systems and free/charity clinics for health care for their children. Private providers and community health centers were mentioned most frequently by the district health department respondents as providing well and sick child care. A need for coordination of health care was identified as a significant need by 81% of the districts.

The Comprehensive Health Investment Project (CHIP) is a network of 12 sites that provides health care services to low income families in over 30 communities (Figure 54). CHIP's mission includes increasing access to health care for low income children and families with a focus on children from birth to age six. The three program components include promoting and linking children to a medical home, health supervision that promotes wellness and safety and enhances normal growth and development, and family support to strengthen the family's ability to provide for the well-being of their children. These components are carried out through a home visiting model that provides an outreach worker and a public health nurse to work with the family to improve the health of the child, but also to promote parental involvement, and strengthen the family's ability to provide a safe environment for children to learn and succeed. In FY 09, CHIP provided services to over 4,000 children and 600 pregnant women in over 3,000 families. Families are eligible for CHIP if they have one or more children between birth and 6 years of age, have an income at or below 200% of the federal poverty level, and live in a locality with a CHIP program.

Figure 54. Comprehensive Health Investment Project Sites.



Virginia has active Healthy Families programs that use a home visiting model to provide education and support services for first time parents prior to the birth of a baby and up to the age of 5 years. The major goals of the program are to prevent child abuse and to promote child health. A public health nurse and a family support worker visit the family to provide education in parenting, health, nutrition, problem-solving, stress management and other areas as needed. They provide the family with parenting education including information on the stages of child development, and they assist the family in obtaining health care, including immunizations, well-child care, preventive care and nutrition information. Currently there are approximately 38 Healthy Families programs operating across the state.

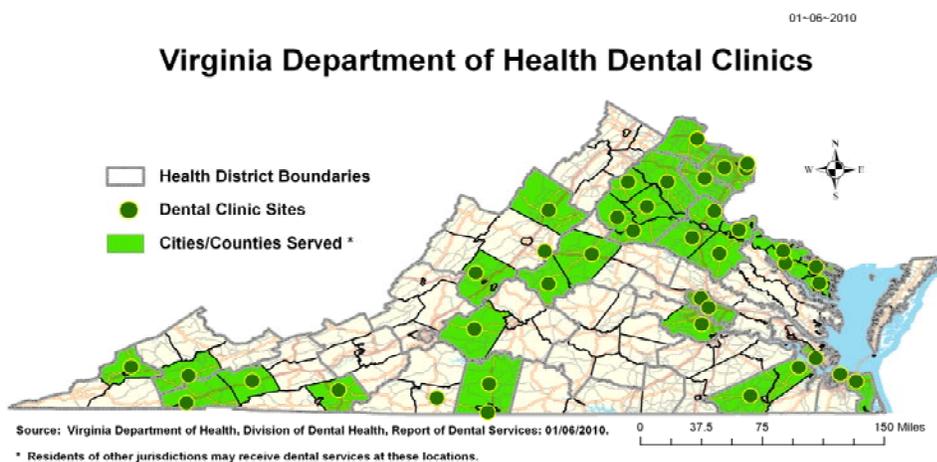
In 2006, Virginia established a Home Visiting Consortium (HVC) comprised of representatives from 10 state-funded early childhood home visiting programs who serve families of children from pregnancy through age 5 to improve efficiency and effectiveness. Under the new governor, the early childhood initiatives will be reporting to the Early Childhood Advisory Council, which is required by Head Start regulations, and consists of high-level administrative representatives from multiple agencies and parent representatives. The HVC is developing 12 modules in core knowledge areas as a basic training for all early childhood home visitors to complete by December 2011; modules will be available on the web and in live sessions. The HVC contracted with James Madison University to develop www.homevisitingva.com, where home visitors can have individual training folders; there are also documents about home visiting in Virginia, national home visiting documents, and an interactive map for locating services. In addition, the HVC has piloted system enhancement projects within VDH such as the Oral Health Workforce grant, intimate partner violence, developmental screening, and connections to medical homes. The HVC is exploring ways to connect all home visiting programs' data entry using core data elements to evaluate outcomes at school entry. Future activities will focus on developing local home visiting coalitions and enhancing the state system of home visiting services following health care reform legislation.

Dental Services. Since 1921, the Commonwealth of Virginia has recognized the need for access to care for underserved populations through the establishment of a Division of Dental Health and through local health department dental programs. Although the number of local health department dental programs has declined in recent years due to budgetary constraints, VDH has dentists providing comprehensive dental care in fixed and mobile clinics in half of the

state's cities and counties. During FY 09, six VDH dental programs were closed. In FY 09, VDH dentists provided care to 21,532 individuals in 39,500 visits, the majority of which were children (81%). They provided 149,426 preventive and treatment services valued at 12.9 million dollars. Fifty-three percent of the visits were covered by Medicaid, 38% were “no pay” visits, and 9% were based on a sliding fee scale. Therefore, in addition to providing services for patients with Medicaid who may have limited access to private providers, VDH dental programs provide a safety net to those who do not have dental insurance. Preventative care for all age groups is a pressing need of families in Virginia and statewide dental care is a significant population need expressed by nurses and other stakeholders alike.

In a recent survey of District Health Nurse Managers, 96% identified the need for dental services as the greatest service need indicating that either the existing resources are at or near capacity, wait lists are common, or there are no available resources. Dental services provided by the Community Health Centers and Free Clinics have increased in recent years; however, they are unable to completely fill the dental needs of the low-income population. Additionally, the target patient population between these providers and VDH dental clinics is different, with the VDH dental program traditionally providing more services for school age children. The map below shows the VDH dental clinic sites and the cities/counties that they serve (Figure 55).

Figure 55. Virginia Department of Health Dental Clinics, 2010.

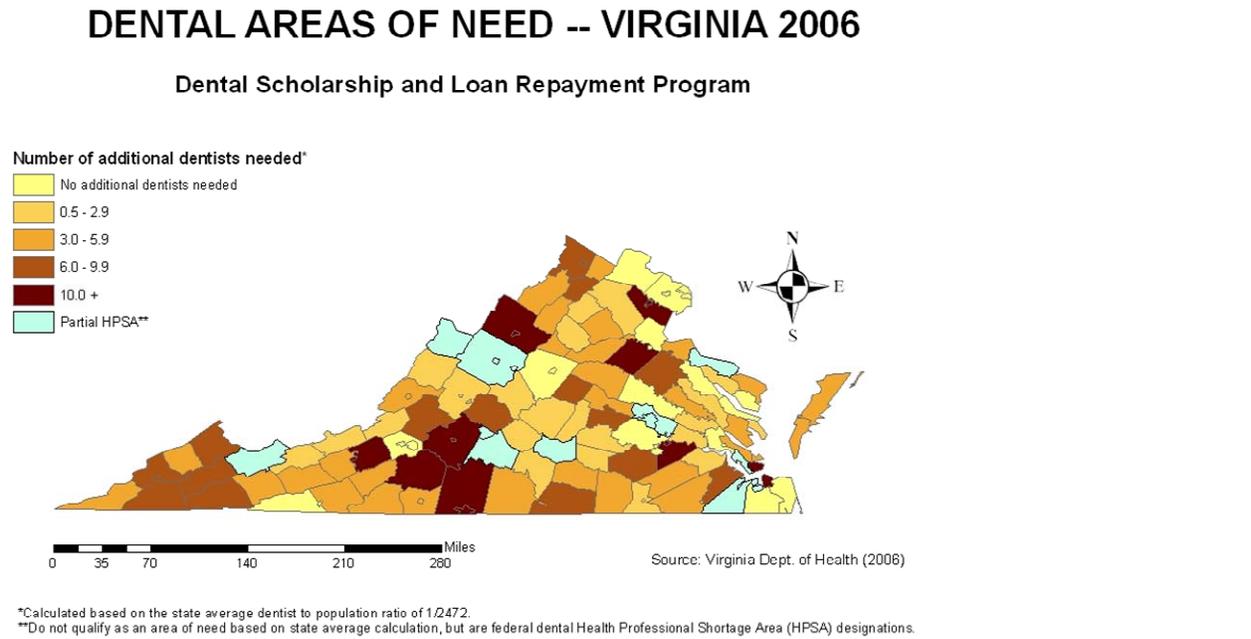


The percent of children ages 6 through 9 years receiving EPSDT benefits who received dental services during the year increased from 28% in 2000 to 53.1% in 2008 (Health Systems Capacity Indicator 07B). The number of children ages 0-20 who received dental services

increased from 240,973 in FY 08 to 275,501 in FY 09. According to the 2007 National Survey of Children, 79% of Virginia children ages 1 to 17 years had one or more preventive dental visits during the previous 12 months. One ongoing dental health care issue that has impacted the access to dental services has been the lack of Medicaid providers. On July 1, 2005, with the support of the Governor and the General Assembly, the Smiles for Children program was implemented to improve access to quality dental services for Medicaid and FAMIS children. The program is currently administered by Dentaquest. Medicaid and FAMIS dental benefits for children include: diagnostic, preventive, restorative/surgical procedures, and orthodontics. A goal of the Smiles for Children program has been to increase the number of providers. In 2005, there were 620 dental providers (11% of Virginia licensed dentists) and at the end of August 2009 there were 1,264 providers. According to Dentaquest, from July 2008 thru October 2009, 41 dentists practicing in specialty fields joined the Smiles for Children network. Over 80% of the participating providers are now submitting claims.

The dentist to population ratio in Virginia approximates the national average with one dentist to 2,472 persons or ~ 0.5 dentists per 1,000 persons. Figure 56 depicts the state dental areas of need. The Virginia Dental Scholarship Program, established in 1952, and the Dental Loan Repayment Program, implemented in FY 06, were established to address the need for additional dentists in underserved areas. However, early in FY 08, the funding for both programs was eliminated due to state budget reductions. It should be noted that a review of records of 63 scholarship recipients who graduated between 1986 and 2008 and completed their obligation to practice in an underserved area have remained in the same practice location. One time federal funds have supported 10 loan repayment awards and for FY 10 a federal Oral Health Workforce Grant from HRSA will provide loan repayment awards to four dentists practicing in federal or state designated shortage areas. A Dental Hygiene Loan Repayment program provides funding for a limited number of hygienists who agree to practice in a dental underserved area in a practice that accepts Medicaid or FAMIS. The program will be discontinued in 2011.

Figure 56. Dental Areas of Need, Virginia 2006.

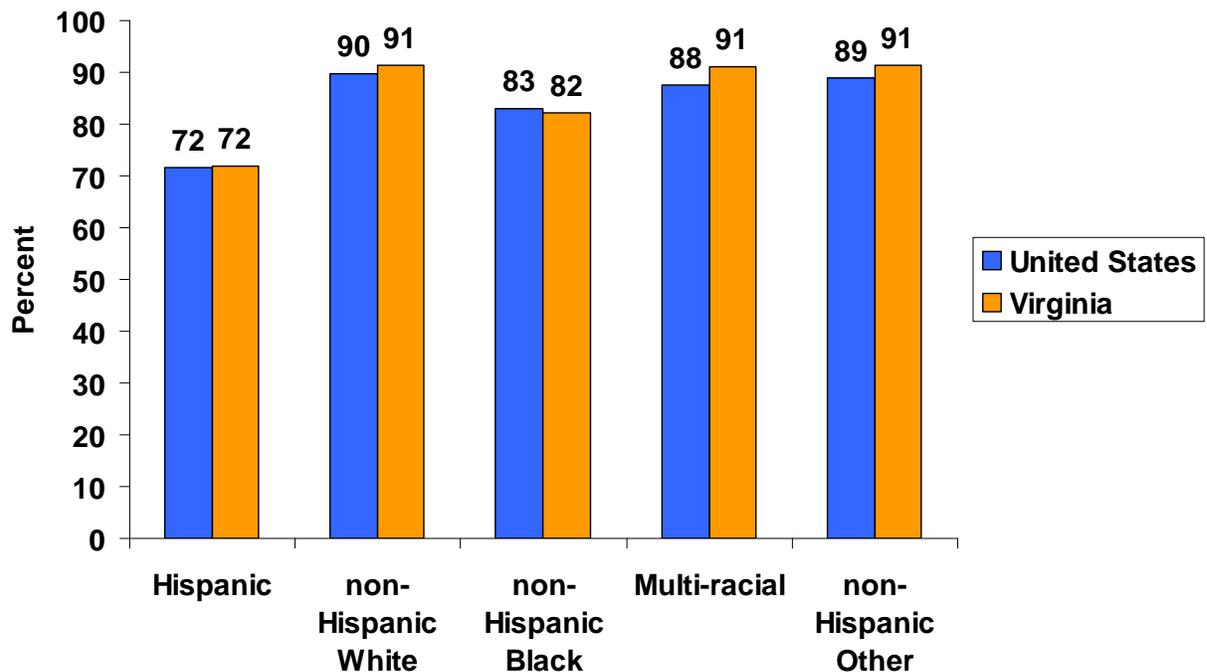


The 2009 General Assembly enacted legislation that authorizes any dental hygienist employed by VDH, who holds a license issued by the Board of Dentistry, to provide educational and preventive dental care in three areas of need on a pilot basis: Cumberland Plateau, Lenowisco, and Southside Health Districts. The practice protocol enables the participating dental hygienists to provide educational and preventive dental care under the general, as opposed to direct, supervision of a dentist. The legislation is only in effect until July 1, 2011. An evaluation of the effectiveness of the pilot will be completed and provided to the General Assembly through a written report in late 2010.

Health Insurance. According to the 2007 National Survey of Children’s Health, 92.8% of Virginia’s children were insured in 2007, a somewhat higher percent than the U.S. population of children (90.9%). However, this level of coverage does not necessarily extend throughout the year. Twelve percent of Virginia children ages 0-17 were currently uninsured at the time of the survey or uninsured at some time during the previous 12 months, somewhat lower than the children in the U.S. as a whole (15.1%). Figure 57 below shows that the level of consistent coverage varies by race/ethnicity with Hispanic children having the lowest consistent insurance coverage (71.9%) followed by black non-Hispanic (82.1%). In addition, the current insurance was not always adequate with 19.6% of Virginia children compared to 23.5% of the nation’s

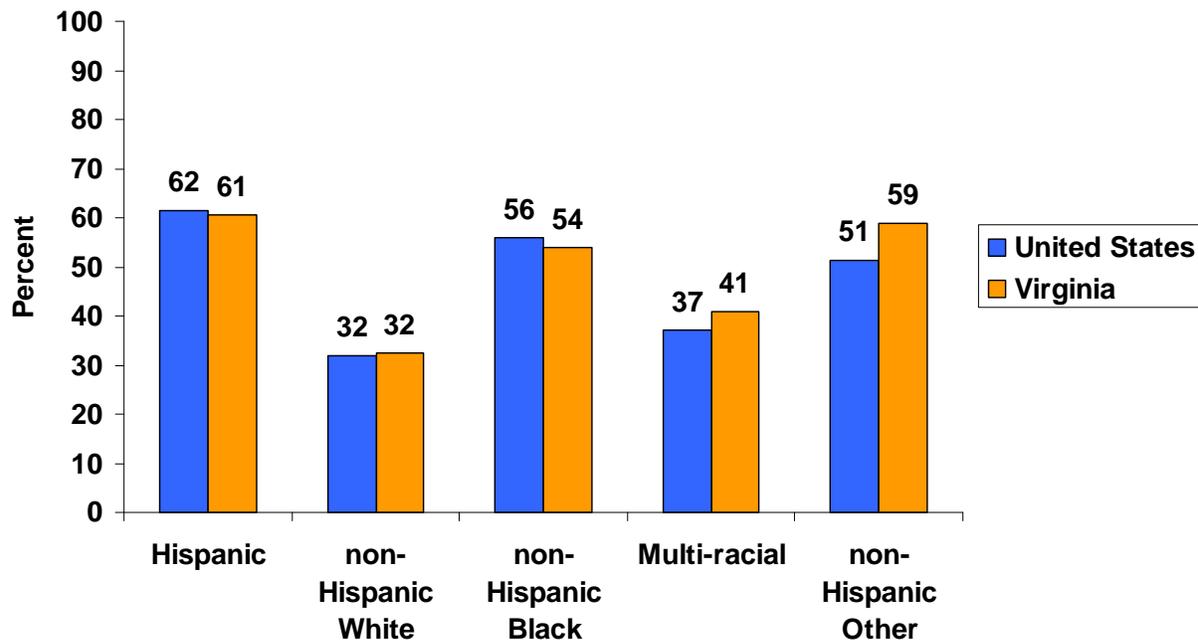
children experiencing inadequate insurance coverage in regards to meeting the health needs, allowing access to needed providers and reasonable out-of pocket expenses.

Figure 57. Percent of Children Insured for the Entire Year During Past 12 Months by Race/ethnicity, Virginia and United States, NSCH 2007.



The VDH Division of Child and Adolescent Health (DCAH) has worked closely with the Virginia Chapter of the American Academy of Pediatrics (VA AAP) to promote the concept of a medical home for children including children with special health care needs. Having a medical home promotes access to appropriate health care that is a regular source meeting the standards of accessibility, continuousness, comprehensiveness, coordination, compassion, family-centered, and cultural sensitivity. The National Survey of Children’s Health shows that 58.8% of Virginia children have a medical home. The white non-Hispanic population is much more likely to obtain health care within a medical home setting. Figure 58 below shows the disparity in race/ethnicity of children without a medical home.

Figure 58. Children without a Medical Home by Race/ethnicity, and United States, NSCH 2007.



According to the 2007 National Survey of Children’s Health, most (88.1%) Virginia children ages 0 to 17 years saw a doctor or nurse for preventive medical care in the past year as compared to 79.8% reported in the 2003 survey. The percent of children receiving preventive dental care has also improved from 73.8% in 2003 to 79% reported in the 2007 survey. The 2007 survey found that among children ages 0 to 17 years, 72.1% received both medical and dental preventive care, an increase from 60.8% reported in the 2003 survey.

Mental health care for children is an identified unmet need in Virginia. Key Informants, Focus Group participants and the District Nurse Managers all identified this as need. Of particular concern is the number of children diagnosed with autism spectrum disorders (ASD), attention deficit disorders (ADD), and attention deficit hyperactivity disorders (ADHD). Of the children ages 2 to 17 years with mental health treatment and counseling needs, 72.2% actually received care according to the NSCH 2007 survey. In 2009, the Department of Behavioral Health and Developmental Services created a unit to address ASD in response to a study by the Joint Legislative Audit and Review Commission that identified a need for state agency leadership on this issue.

Perhaps even more importantly, screening is essential in the early identification and treatment of both physical and social-emotional needs of children. Following the Assuring

Better Child Health and Development (ABCD) Screening Academy project, Medicaid paid claims for developmental screening surpassed 14,000/year in 2009 from a baseline of zero in 2007. However, only 18.2% of Virginia children ages 10 months to 5 years received a standardized developmental screening during a health care visit in the past 12 months according to the NSCH 2007. The need for developmental check-ups was identified by key stakeholders as a significant need for young children, and yearly physicals with a focus on developmental changes was identified as a significant need for adolescents. It has also been identified that there is a need for improved coordination and identification of required services for children with special healthcare needs.

Of all the children with health insurance coverage, 21.1% are covered through public health insurance. In Virginia, SCHIP, under Title XXI of the Social Security Act, is called Family Access to Medical Insurance Security (FAMIS) program. FAMIS was created for children ages 0 to 19 years who are not eligible for Medicaid, living in families that have a gross income greater than 133% FPL but less than or equal to 200% FPL, and are not covered under another insurance plan or through the state employee health plan. FAMIS provides these children with well-child and preventive services without costs. The traditional Medicaid, called FAMIS Plus, covers medical services to children less than 6 years of age whose family income is less than 133% FPL and children ages 6 through 20 with family income less than comprehensive 100% FPL. Children covered under FAMIS Plus receive comprehensive EPSDT Medicaid benefits including well-child, preventive care and immunizations.

The Medicaid Expansion program covers children ages 6 to 18 years whose family income is greater than 100% FPL but less than or equal to 133% FPL. The FAMIS Select Premium Assistance Program replaced the former Employee Sponsored Health Insurance (ESHI) program to provide an option for families that have children enrolled in FAMIS who have access to private or employer sponsored coverage. The family is provided \$100 per child to help pay for the cost of covering the child in a private or employer's health plan. The funds from the program often help to cover the entire family through coverage from these policies. In SFY 09 more than 440 children were provided coverage. However by the end of SFY 09 the number had begun to decrease most likely a result of the economic turndown and the family's lack of access

to these policies due to loss of work and/or resources. Table 18 shows numbers of Virginia children enrolled in Virginia Medicaid/SCHIP Programs as of April 1, 2010.⁵⁵

Table 18. Number of Children Enrolled as of April 1, 2010

PROGRAM	INCOME LEVEL	NUMBER ENROLLED	% OF TOTAL ENROLLMENT
FAMIS	> 133%, < 200% of FPL	54,116	10%
Children < 19 Years			
MEDICAID Expansion			
Children < 19 Years	> 100% < 133% of FPL	44,885	8%
FAMIS Plus		342,264	82%
Children <6 years	< 133% of FPL &		
Children > 6 to < 21 Years	<100% of FPL		
Total		540,700	100%
FAMIS Select	>133%to < 200% FPL	429	1%

Direct and Enabling Services for Children with Special Health Care Needs. The most recent National Survey of Children with Special Health Care Needs (2005-06) estimates that there are 289,176 Virginia children with special health care needs. This is 15.8% of the all Virginia children. Almost all (98%) of CSHCN in Virginia were insured at the time of the survey. However, this level of coverage does not necessarily extend throughout the year. In 2005-06, 7.6 % of CSHCN had no insurance at some point during the past year and the families of 31.7% currently insured CSHCN reported that the insurance is inadequate. Table 19 summarizes Virginia’s progress towards implementing community-based systems of care for CSHCN.

⁵⁵ Source: Department of Medical Assistance Services, March 2010 CHIP Enrollment Report.

Table 19. Progress toward Implementing Community-Based Systems of Services for Children with Special Health Care Needs, Virginia and U.S. 2005-06.⁵⁶

Measure	VA	U.S.	Comparison VA With US
1. CSHCN whose families are partners in decision-making at all levels and are satisfied with the services they receive.	59.8	57.4	Better
a. Doctors usually or always make the family feel like a partner.	88.7	87.7	Better
b. Family is very satisfied with services received.	61.9	59.8	Better
2. CSHCN will receive coordinated ongoing comprehensive care within a medical home.	43.9	47.1	Worse
a. CSHCN without a usual source of care when sick.	5.4	5.7	Same
b. CSHCN without any personal doctor or nurse.	6.6	6.5	Same
c. CSHCN needing a referral for specialist care or services and had problems getting it.	20.8	21.1	same
d. Effective care coordination is received when needed.	56.8	59.2	Worse
e. CSHCN without family-centered care.	34.6	34.4	Same
i. Doctors usually or always spend enough time.	78.1	78.7	Same
ii. Doctors usually or always listen carefully.	87.7	88.8	Same
iii. Doctors are usually or always sensitive to values and customs.	88.5	89.0	Same
iv. Doctors usually or always provide needed information.	83.9	83.1	Same
v. Doctors usually or always make the family feel like a partner.	88.7	87.7	Same
3. Currently insured CSHCN whose insurance is inadequate.	31.7	33.1	Better
a. CSHCN without insurance at time of survey.	2.0	3.5	Better
b. CSHCN without insurance at some point in the past year.	7.6	8.8	Better
c. Insurance usually or always meets the child's needs.	87.3	84.3	Better
d. Costs not covered by insurance are usually or always reasonable.	65.4	64.2	Same
e. Insurance usually or always allow child to see needed providers.	90.9	90.7	Same
4. CSHCN whose services are organized in ways that families can use them easily.	89.6	89.1	Same
5. CSHCN whose conditions cause financial problems for the family.	17.4	18.1	Same
6. Youth with special health care needs who receive the services necessary to make transitions to adult life, including adult health care, work, and independence.	37.8	41.2	Worse

Many families of CSHCN experience financial problems (17.4%) as a result of the child's condition, with 22.7% reporting that they made payments of at least \$1,000 in the past year for their child's medical care. In addition to increased expenses, parents had to devote more time to their child with close to a quarter (24.9%) reporting that they had to cut back or stop working due to their child's health.

⁵⁶ Source: Child and Adolescent Health Measurement Initiative. 2005/06 National Survey of Children with Special Health Care Needs, Data Resource Center for Child and Adolescent Health website. Retrieved 04/21/2010 from www.cshcndata.org

In Virginia, 13.1% of CSHCN had an unmet need for specific health care services and 20.8% of families of CSHCN reported that they had difficulty getting a referral for care. In 2005-06, 43.9% of CSHCN in Virginia received coordinated, ongoing, comprehensive care within a medical home, which is lower than reported in the 2001 National Survey of Children with Special Health Care Needs (54.5%). However, the results of the surveys are not directly comparable because some of the questions defining medical home changed. Three of the five questions used to define medical home are directly comparable across surveys. In Virginia, survey results indicate that unmet needs for specific health care services and family support services have increased. Conversely, the percentage of CSHCN without a usual source of care when sick decreased.

In the past, transition of CSHCN to adult services has been a weak area in Virginia as well as nationally. In 2001, 5.8% of families reported that youth received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence. In the latest survey, the percent increased to 37.8% for Virginia as compared to 41.2% nationally.

The Child Development Clinics (CDCs) were initially established in 1955 to provide medical evaluations of children with learning problems. The program evolved into a statewide network of clinics that provide comprehensive diagnostic evaluation services for children suspected of or at risk of developmental disabilities. In 1995 the clinics were decentralized with the administration transferred from the central office to the various health districts where the clinics are located. In 2007 the clinic in Crater closed due to difficulties staffing positions; services for this catchment area (Central Virginia) were transitioned to a new clinic based at Virginia Commonwealth University (VCU). The VCU clinic, like the one in Roanoke, is led by a developmental pediatrician. There are currently nine clinics located across the state (Danville, Gate City, Fredericksburg, Harrisonburg, Lynchburg, Norfolk, Richmond, Roanoke and Winchester). The clinics provide comprehensive diagnostic evaluations of children ages birth to 21 years by an interdisciplinary team. With the exception of the Roanoke clinic (which provides NICU follow-up services), the CDCs see very few children under the age of two.

Comprehensive evaluations include a physical exam, psychological testing, and educational testing to identify learning disabilities, developmental delays or disabilities, behavioral and emotional disabilities or diagnoses. As a result of these evaluations, treatment

plans are developed and there is short-time care coordination to link families with community resources. Referrals to Child Development Clinics (CDCs) come most frequently from physicians, parents and the local social service departments. The majority of the clients are Medicaid recipients and approximately 23% are insured through private insurance. Only the medical services are billable to Medicaid and private insurance. Medicaid also reimburses for the Individual and Family Developmental Disabilities Support Waiver (DD Waiver) screening. The comprehensive evaluations with involvement of multiple professionals and the lack of billable services results in a high cost per child. Over time, two different service models have emerged. Seven clinics have maintained the model of completing comprehensive evaluations which include a physical, psychological, social and educational evaluation on every child, while the two clinics that are associated with pediatric specialty clinics in medical centers have adopted the process of completing the comprehensive physical assessment and then referring the child for any additional evaluations and services as needed. The CDCs located in the medical centers serve a much higher volume of clients than the other clinics. For all the CDCs there is typically a four to six month waiting list for services. In Lynchburg, the CDC has taken on the role of local lead agency for the Part C program.

In the coming year, the VDH Division of Child and Adolescent Health's CSHCN program staff will be looking at the geographic distribution of the centers, the service model, how to address the needs of the clients and families with limited English proficiency, the target age group, how to strengthen the relationship with the local Part C programs and other issues. The intent is to assure statewide access and serve more children with more targeted services.

Care Connection for Children (CCC) is a statewide network of centers of excellence for CSHCN. The six regional centers are located in Bristol, Charlottesville, Falls Church, Norfolk, Richmond, and Roanoke. The centers provide care coordination, medical insurance benefits evaluation and coordination, information and referral to CSHCN resources, family-to-family support, and training and consultation with community providers on CSHCN issues. The program covers Virginia resident children from birth to 21 years old who have a physical disorder that has lasted or is expected to last at least 12 months and either requires health care or other services over and above the usual, or special ongoing treatments or accommodation at home or school, or limits functions in the areas of physical, cognitive, emotional and development as compared to healthy peers, or has a dependency on medications, special diet,

medical technology, assistive devices or personal assistance. The program also manages the CSHCN Pool of Funds that provides a limited amount of money to assist CSHCN who are uninsured or underinsured (families have gross family income at or below 300% of the Federal Poverty Level, without insurance coverage for needed services). The funds assist with payment for certain services such as medication and durable medical equipment. As operational costs have increased, monies available for the Pool of Funds have decreased. This has resulted in curtailing the scope of services that the Pool covers. Funds should be adequate to keep the Pool in place through FY 11, but this will be evaluated quarterly. Without the Pool of Funds, capacity to assist families without insurance will be substantially reduced.

The increasing numbers of non-English speaking populations continue to provide challenges as does the relatively large population of undocumented clients who are uninsurable. In addition, basic provider understanding of the medical home concept and family-centered care has presented challenges that will continue to require provider education. One significant challenge has been the privacy laws that prohibit the sharing of referral information without additional parental consent, making it difficult to determine the outcome of the referrals. The transitioning of youth from pediatric providers to adult providers is also challenging; some adult-serving providers are uncomfortable treating children with some special needs and conditions.

The single most unmet need for CSHCN is dental care. These children are almost twice as likely to have untreated decay as children without special needs. The VDH Division of Dental Health recently expanded their Bright Smiles for Babies program to provide training, presentations, educational materials and resources for parents, caregivers, and providers regarding oral health for children with special health care needs. In the past it has been difficult for parents to find dentists who provide care to CSHCN. To address this capacity need, the Division of Dental Health surveyed Virginia's dentists in order to develop a provider directory. As a result of the responses received from the dentists, an interactive provider directory is now available to families of CSHCN on the VDH website.⁵⁷

The Virginia Bleeding Disorders Program (VBDP), a legislatively enacted program, was established to serve as a "safety net" for persons with inherited bleeding disorders. It is estimated that 75% of uninsured persons with bleeding disorders have no clear plan for obtaining health insurance. Approximately 20% of persons with insurance change policies each year due

⁵⁷ <http://www.vahealth.org/dental/dentaldirectory/QuickSearch.aspx>

to divorce, job changes, temporary unemployment or increased cost of premiums. Others change policies only to find preexisting condition exclusion for hemophilia care. Given the expensive nature of hemophilia care, cost can be overwhelming for families. A major challenge is the increasing number of persons with bleeding disorders who are uninsured. This is a particularly significant issue for young adults transitioning from their parent's insurance coverage and the inadequate coordination of all youth-serving agencies to manage the transition across disciplines. The VBDP provides insurance case management that assists persons in considering their options and completing the insurance application and enrollment process. In addition, the program provides assistance in accessing specialty health care services and establishing a medical home, care coordination, information and referral, family-to-family support, training and technical assistance for community providers, transition from child to adult oriented health care system, and the promotion of quality assurance. A limited amount of money is also available to assist uninsured and underinsured persons to receive care that they would otherwise not be able to afford. Bleeding disorder centers are located in Norfolk, Fairfax, Richmond and Charlottesville. During FY 09 the program served 275 clients. The Governor-appointed Virginia Hemophilia Advisory Board provides a mechanism to advise and assist efforts to address the needs of persons with inherited bleeding disorders statewide.

The *Code of Virginia* establishes regional HIV/AIDS resource centers to address the special health care needs of persons with HIV/AIDS through education of health care professionals on HIV-related issues. The centers offer clinical training for health care practitioners and students, medical consultation to community health care providers, and provision of current technical medical materials and literature. In addition, the centers supply medical care and support services for persons with HIV/AIDS. The federal Ryan White program provides funding to address critical gaps in care for low income and un/underinsured Virginians with HIV. In 2008, the program provided access to HIV-related medical care for 7,297 Virginians. In 2009, 61,340 prescriptions from the VDH AIDS Drug Assistance Program were dispensed for 3,774 clients.

Parent to Parent of Virginia, a chapter of the national non-profit organization Parent to Parent USA, works closely with Virginia's Care Connection for Children (CCC) program to provide parent to parent support for families with children who have a special health care need, disability or mental health issue. Parents of CSHCN are matched with experienced trained

support parents that provide emotional support and assist them in finding information and resources. The Executive Director of Parent to Parent of Virginia, Dana Yarbrough, serves as Virginia's family representative member to the Association of Maternal and Child Health Programs (AMCHP). CCC staff have also partnered with Parent to Parent to provide educational presentations, information on parent involvements and have served as a resource to parents of CSHCN. Both Parent to Parent and the ARC of Virginia have collaborative relationships with other parent organizations as well as the Department of Education, the Department of Behavioral Health and Developmental Services, the Parent Education and Training Information Center, and other agencies and organizations serving CSHCN and their families.

The Family-to-Family Health Information Center (F2F) is based at the Partnership for People with Disabilities at Virginia Commonwealth University, a federally designated university center for excellence in developmental disabilities that helps families of CYSHCN and the professionals who serve them. F2F is staffed by parents of CYSHCN who understand the issues that families face, and can provide advice, offer a multitude of resources, and tap into a network of other families and professionals for support and information. The Virginia F2F center is contracted to the Title V CSHCN program to assist with implementing family support components of the Virginia Systems Improvement Project (VSIP), a federal State Implementation Grant for Systems of Services for CYSHCN. In addition, the Partnership is implementing grant activities to increase understanding and awareness of racial and ethnic disparities in services provided to CYSHCN.

C. Population Based Services

Title V serves various population-based cohorts among women, infants, children, and CSHCN through programs that have multiple funding streams. In fact, some of the programs discussed are not Title V-funded, but are included to help present a complete picture of services available statewide. Many of the population-based programs managed by the state operate through community-based coalitions and organizations. Some services, such as the Genetics Centers, are contracted largely through university-based health centers. Other collaborative efforts include working with state-level professional organizations, such as the Virginia Chapter of the American Academy of Pediatrics and the Medical Society of Virginia and involve both the private and public sectors. Mandated programs, such as immunizations, are available statewide;

other programs more reliant on community-based organizations or are located in target areas or in areas selected through competitive application processes.

Population Based Services for Pregnant Women, Mothers and Infants. The infant mortality rate in Virginia was 7.7 per 1,000 live births in 2007. The mortality rate for African-American babies was 15.5 per 1,000 births, over twice as high as the overall rate. In 2007, 839 infants died in Virginia, with premature births accounting for more than half the total. As a result, Governor Kaine set a goal of reducing the state's infant mortality rate below 7.0 by 2010. In 2008, the infant mortality rate dropped to 6.7 per 1,000 live births. The rate for African-American babies was also decreased to 12.2 per 1,000 live births.

The State Health Commissioner recognized that it was important to involve members of the community who have credibility and can influence local families. In November 2008, the Commissioner established the Infant Mortality Workgroup, which not only included medical/health professionals, but also a wide range of community members such as local educators, civic and business officials, NAACP, members of the faith communities and the AARP because many members are grandparents and caregivers. The workgroup developed strategies and actions that could be undertaken over the next few years to improve birth outcomes and reduce infant mortality.

The Commissioner's Infant Mortality Workgroup partnered with representatives from the Department of Medical Assistance Services, the Virginia Section of the ACOG, the Virginia Chapter of the AAP, Virginia Section of AWHONN, Virginia WIC, Richmond City Healthy Start, Virginia Healthy Start Initiative, Inova Health System, a private obstetrics practice located in eastern Virginia, and the United Way to implement an educational program developed by the national Healthy Mothers, Healthy Babies Coalition (HMHB). The program, Text4Baby, provides three free text messages each week to pregnant women and new mothers who sign up for the service by texting BABY to 511411 (or BEBE for Spanish). The messages are timed to the due date or baby's date of birth and cover such topics that include birth defects prevention, immunization, nutrition, mental health, oral health and safe sleep. The messages also connect women to prenatal and infant care services and other resources. The White House launched Text4Baby on February 4th, and on February 11th Virginia became the first state to implement the service. As of May 24, 2010, 2,011 Virginia women were enrolled.

The Virginia Chapter of the March of Dimes (MOD) continues as a significant partner in advocating for women and infants. Each year the Virginia MOD hosts a prematurity awareness day. The MOD has created publicity materials describing the relationship of the pregnant woman's risk factors such as depression, stress, domestic violence, and anxiety, to prematurity and low birth weight. The MOD has also worked closely with Virginia's Healthy Start program and with home visiting programs across the state.

Previously VDH worked with the Department of Social Services to develop a New Parent Tool Kit that was a part of the Governor's Initiative to promote lifelong education for children and to support families. The kit was funded by private foundations and public funds and distributed to all new parents through the home visiting and hospital network established in all 135 localities. Due to budget restrictions, the kit is no longer available; however, a web site for parents and distributors is being developed which will allow downloads of the New Parent Tool Kit materials and other child development, child health, and parenting materials created based on the Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents.

The Partners in Prevention program (PIP) was first established in 1997 to reduce the number of non-marital births while reducing the incidence of abortions through the establishment of community-based coalitions. The program targeted young adults aged 20 to 29 years, the population that makes up over half (62.7%) of all the non-marital births in the state. The program provided innovative interventions including marriage before conception, the male's responsibility to prevent pregnancy, discouraging cohabitation outside of marriage, delaying sexual involvement until marriage, family planning, healthy attitudes and behavior intentions regarding marriage, career and family, and discouraging high risk sexual behavior. The program has been funded with TANF funds and/or state funds. The PIP program was recognized by the National Campaign to Prevent Teen and Unplanned Pregnancy as a model program for targeting men and addressing the issue of male responsibility. However, with the economic decline, the budget for the program has been eliminated effective July 1, 2010.

In September 2004, the Division of Women's and Infants' Health was awarded a grant (State Grants for Perinatal Depression and Related Mental Health Problems in Mothers and Families) by the US Department of Health and Human Services. The project, entitled "The 3 Ps of Perinatal Depression: Perinatal Health, Provider Education and Public Awareness," took a three prong approach to improving mental health services for women and their families during

the perinatal period. In 2005, an expert panel of academic and community providers developed a comprehensive survey as a component of a widespread perinatal depression education campaign based in Virginia. The study offered a baseline for understanding knowledge, practices, and systemic barriers to detection and treatment among health providers who work with women during this critical time period. A web-based curriculum was developed to educate providers about the signs and symptoms of perinatal depression and provide them with the tools to easily recognize and refer pregnant and postpartum women to treatment. Although the funding has ended, the project has led to the incorporation of depression screening into a number of programs. For example, the Virginia Healthy Start program, Loving Steps, routinely screens for perinatal depression using the Edinburgh Postnatal Depression Scale.

The provider survey was re-administered in 2008-2009 as a direct replication of the earlier survey. The survey showed that a high percentage of midwives, nurses and social workers, as well as nurse practitioners/physician assistants screen routinely and use a screening tool. There are also high numbers of Ob/Gyn providers and moderately high numbers of family practice physicians who routinely screen, although use of a formal instrument is less common. Pediatricians and other physicians were the least likely to routinely screen or report utilizing a screening tool. Treatment barriers were also identified. Those healthcare practitioners who had managed a case identified more tangible and system-level barriers to both screening and treating perinatal depression. Those who had not managed a case more frequently identified inadequate knowledge and skills or other uncertainties as barriers to screening and treatment. Perceived responsibility for follow-up mental health care as well as perceived liability issues were of equal importance. The majority of respondents indicated low to moderate familiarity with resources and dissatisfaction with the current referral process. Satisfaction with professional training was also low to moderate, with 28.2% of respondents indicating that they had never received specific training on perinatal depression; this was particularly noteworthy for pediatricians (28.8%), other MD's (24.3%) and nurse practitioners/physician assistants (21.1%). In all these disciplines, this is significantly more than the 13% reporting no training in the initial study. Although progress has been made on screening, the 2009 health district survey showed that approximately three-fourths of the district health departments identified mental health/depression counseling as a significant need, with either no resources or wait lists in their districts.

Effective July 1, 2008, the Virginia General Assembly passed legislation that brings Virginia law more in line with the CDC's 2006 Revised Recommendations for HIV Testing of Adults, Adolescents and Pregnant Women in Health Care Setting. The revised law removes the informed consent requirements, but requires that the patient is informed that the test is planned, provided information about the test and advised that they have a right to refuse. Testing must be completed on all pregnant women unless they refuse. The Division of Disease Prevention in the VDH Office of Epidemiology worked closely with the district health department's clinics to implement the change. The VDH Family Planning Program collaborates with the VDH Division of STD/AIDS and the Division of Consolidated Laboratory Services to screen women for STDs and HIV in the family planning clinics.

In the 2009 survey of health districts, over three-fourths of the districts identified substance abuse treatment as a significant need. VDH continues to work with the Department of Behavioral Health and Developmental Services (DBHDS) and the Department of Social Services (DSS) to improve access and knowledge among clients and providers regarding services for pregnant women who are using substances. In the past, VDH and DBHDS have networked to apply for grants that would increase provider knowledge in the area of substance abuse treatment of pregnant women, increase access to mental health services, and improve provider awareness of mental health as a factor in overall maternal and child health. One issue that has been identified by both VDH and the DBHDS is the need for a standardized substance use screening instrument for use by the local health departments and other providers. In addition, VDH staff work closely with the DBHDS staff on Project LINK, which is an innovative community-based interagency project that serves substance-using and at-risk pregnant, post partum and parenting women and their children. Project LINK provides family focused, intensive case management, outreach, and home visiting services. In 2007, the 8 Project LINK sites served more than 2,120 women and 771 children. Of infants born to program participants, 76% had healthy birth weights (greater than 2,500 grams). The Regional Perinatal Councils are involved locally in the program to assist in providing coordinated care for these women.

The Virginia General Assembly has enacted legislation that has a direct impact on pregnancy and substance use. Section 32.1-127 of the *Code of Virginia* requires hospitals to implement protocols requiring written discharge plans for substance abusing, postpartum women and their infants. The discharge plan must be discussed with the patient and appropriate referrals

made and documented. When possible the discharge plan must involve the child's father and members of the extended family who may participate in follow-up care. Hospitals are required to notify the local Community Services Boards (CSBs) of any substance-using postpartum women in order for a discharge plan manager to be appointed. The DBHDS provides funding to CSBs that are responsible for providing substance abuse emergency services, prevention and outpatient treatment services. In addition, Section 63.1-248.3 of the *Code of Virginia* requires an attending physician to file a report with the local department of social services whenever a newborn infant evidences exposure to non-prescription, controlled substances or signs of fetal alcohol syndrome.

Prenatal care at the local health departments includes an assessment of whether the expectant mother currently smokes. Information and referral for smoking cessation programs are provided. Virginia Medicaid and FAMIS MOMS both provide funding for smoking cessation services for pregnant women. The Quit Now Virginia program provides a toll-free phone service to Virginia residents ages 18 and older and pregnant teens on Medicaid. Callers can listen to topic-specific messages and/or leave a message for a callback. Callers can also receive self-help materials and find out about local community resources. Tobacco users on Medicaid or uninsured and are ready to quit within 30 days receive a comprehensive counseling intervention. The program provides specialized counseling services to pregnant/perinatal smokers.

The Division of Women's and Infants' Health (DWIH) works with the Virginia SIDS Alliance to educate parents on safe sleep practices. The Regional Perinatal Councils also have close relationships with the local Alliance representatives and refer parents who have experienced an infant death caused by SIDS to resources provided by the Alliance. The Virginia Child Fatality Review Team is currently reviewing cases of infant deaths classified as Sudden Infant Death Syndrome (SIDS), Sudden and Unexpected Infant Death (SUID), and Undetermined by the Office of the Chief Medical Examiner. The team has added a member from the DWIH and a representative from the SIDS Mid-Atlantic as a Special Advisor for the review. The Team is reviewing 110 to 120 cases from 2009. Recommendations developed as a result of the review will be used by the OFHS and Regional Perinatal Councils as the basis for program evaluation and/or development. In April, 2010, the DWIH conducted seven trainings for 120 hospital-based nurses entitled, "Role Modeling, The Most Important Job of your Life".

This training was funded by the C.J. Foundation for SIDS. The training was conducted by First Candle/SIDS Alliance.

The Special Supplemental Nutrition for Women, Infants and Children (WIC) is located in the OFHS's Division of Nutrition, Physical Activity and Food Programs (DNUPAFP). The program's goal is to improve the health of income eligible pregnant women, infants and children (under 5 years of age) through better nutrition and access to health care. The WIC program implemented the Breastfeeding Peer Counselor program to provide mother-to-mother support for breastfeeding. In addition, WIC also has a breast pump loan program. The division works closely with both the Divisions of Women's and Infants' Health and Child and Adolescent Health on issues such as early prenatal care, breastfeeding, physical activity, and obesity prevention. Most recently the DNUPAFP updated the Health Bites website that provides information on nutrition for pregnant women, new mothers, infants, toddlers and preschoolers. The site also includes information on the stages of pregnancy and the importance of proper nutrition and breastfeeding. Recipes are included along with other resources. Although the site targets WIC clients, it is available to the general public. The site is available at <http://www.vahealth.org/wic/healthbites/welcome.htm>.

CHAMPION, the Commonwealth's Health Approach and Mobilization Plan for Inactivity, Obesity, and Nutrition, is a program developed by the Office of Family Health Services' Division of Nutrition, Physical Activity and Food Programs (DNUPAFP) to address obesity. The program uses a community driven approach by providing communities with evidence based program models, technical assistance, and limited grant funds implement the community initiative. Grants are available to targeted communities within the Roanoke, Central Virginia, Blue Ridge and Northern Virginia regions. Communities are required to implement one of four evidence based programs, Business Case for Breast Feeding, Personal Empowerment Plan, Creating Communities for Active Aging, or Body Works. In the 2009 survey of district health departments, obesity/overweight counseling was identified as a significant need by 94% of districts.

Since its inception in 1999, the Virginia Council on Folic Acid (VDFA) has provided targeted information for women of childbearing age to encourage the consumption of foods high in folate and use of folic acid supplements. The Council prevention efforts included educating professionals and the community, particularly women of child bearing age. The Council was

made up of members from 49 diverse organizations such as the March of Dimes, WIC, Head Start and universities. Beginning in July 2005, the VDH began a pilot project to offer folic acid supplements to patients in selected VDH family planning clinics that had spina bifida birth rates of at least 5.24 per 10,000 live births and districts that had at least 29 percent Hispanics since they have been shown to experience higher rates of neural birth defects. In addition, brochures, public service announcements, and other materials were made available for distribution by the district health departments and the Regional Perinatal Councils. Currently the Commissioner's Infant Mortality Work Group is looking at additional ways to increase women of childbearing age's use of multi-vitamins including the possible provision of multivitamins to health department family planning patients. This is an important issue since Virginia's PRAMS data show that 70% of women were not taking a daily multivitamin in the month before they became pregnant.

The VDH Division of Injury and Violence Prevention (DIVP) studied the services for victims of intimate partner violence and issued a report in the winter of 2004. One of the major findings was the need for more provider training on how to recognize intimate partner violence and depression. Project RADAR is a DIVP provider-focused initiative that promotes the assessment and prevention of intimate partner violence in the health care setting. As a result, best practice policies, guidelines, and assessment/intervention tools have been developed for health care providers. An online version of the Project RADAR Curriculum for Responding to Intimate Partner Violence in the Health Care Setting is now available. Resources include links to current literature and assessment tools such as danger and abuse assessments and safety planning. The DIVP also provides resources and training on the prevention and response to sexual assault. Through the Preventive Health and Health Services block grant, sexual assault set-aside funding is available to provide a limited amount of support for sexual assault programs across the state.

The Virginia Breast and Cervical Cancer Early Detection Program Every Woman's Life program (EWL) began in 1998 with funding obtained from the Centers for Disease Control and Prevention. EWL provides low-income, uninsured and underinsured women with access to timely, high-quality screening and diagnostic services to detect breast and cervical cancer at the earliest stages. EWL currently receives over \$2.9 million of federal and state funds each year. EWL has 26 enrollment sites across the state, with a network of approximately 250 healthcare

providers who perform clinical breast exams, mammograms, pelvic exams, Pap tests and diagnostic tests for enrolled women. Legislation passed in 2001 by the Virginia General Assembly made it possible for most EWL clients diagnosed with breast or cervical cancer to receive treatment under the Breast and Cervical Cancer Prevention and Treatment Act. Since 1998 over 20,000 women have been served by the program. Funding provided by the Virginia General Assembly enables the program to serve women aged 18 to 49 years who are symptomatic for breast or cervical cancer, whereas the federal dollars provides funding for the women aged 50 to 64 years. In FY 09 the program served approximately 7,000 women or approximately 1 in 7 women who were eligible for services according to the US Census.

In 2008, Virginia was awarded a CDC grant to establish a WISEWOMAN program as a part of the EWL program. The WISEWOMAN program provides lifestyle counselors that conduct health screenings and provide counseling, materials, education, and referrals to community resources to low income and uninsured or underinsured women ages 40 to 64 years in addition to EWL participant. The screenings include blood pressure, glucose, and cholesterol, and counselors also assess weight, medical history, tobacco use, poor diet, and physical activity. The WISEWOMAN program works closely with the Division of Chronic Disease and Control's Heart Disease and Stroke Prevention program, Diabetes Prevention and Control program, and the Tobacco Use and Control project.

Population Based Services for Children and Adolescents. To reduce unnecessary morbidity and mortality from potential or existing genetic conditions, the *Code of Virginia* requires screening of all newborns for certain disorders. Beginning in March 2006, the screening panel was expanded to cover 28 inborn errors of body chemistry (metabolic, endocrine, and hematologic). In 2007, 107,261 infants were screened and 130 were diagnosed with having one of the conditions. As a part of the Newborn Screening Services, VDH notifies the attending physician of any suspicious results. Further diagnostic testing, if required, is performed at a laboratory of choice as the state laboratory has only screening capability. The newborn screening program is supported largely by newborn screening fees through the Department of General Services, Division of Consolidated Laboratory Services, with some additional Title V support.

Genetics screening/testing, education, counseling and follow-up services are provided through four regional centers located in Charlottesville at the University of Virginia (UVA),

Richmond at the Virginia Commonwealth University Medical Center (VCUMC), Fairfax at Genetics and IVF Institute, and in Norfolk at Eastern Virginia Medical School (EVMS) and their satellite clinics. Contracts with UVA, VCUMC, and EVMS support metabolic treatment services for families referred from Newborn Screening or other sources. Title V funding helps assure service availability for all Virginia residents and helps to remove financial barriers for the medically indigent. Access to services, however, continues to be a problem.

With the expansion of the Newborn Screening Services panel, VDH modified the program that provided special formula and foods to individuals with metabolic disorders. Infants diagnosed through Newborn Screening are referred to Care Connection for Children (CCC). CCC assists families with accessing insurance coverage for formula. Efforts have been so successful that all but one insurer in Virginia now cover special formula for metabolic conditions as medically necessary treatment. Families who meet the Pool of Funds requirements (gross income < 300% FPL and no insurance coverage for the necessary service) can receive special formula for their child or children at no cost through CCC. Children dually eligible for WIC and Medicaid receive special formulas through WIC, paid for through Medicaid EPSDT. Other individuals in need of special formula for metabolic conditions may purchase their formula through VDH Pharmacy Services at a substantial discount; if they meet the Pool of Funds financial status noted above, they can receive their formula at no charge. Very few individuals are now accessing this service.

The *Code of Virginia* requires that all infants born in a hospital with a newborn nursery be given a hearing screening before discharge. The Code also requires health insurers and HMOs, including Medicaid and the state's health insurance plan for state employees, to provide coverage for infant hearing screenings and certain other audiological examinations. In addition, the Code gives VDH the responsibility for tracking and follow-up, including identification and monitoring of infants with hearing loss to ensure that these infants receive appropriate early intervention through treatment, training, and education. Through the Virginia Early Hearing Detection and Intervention Program (VEHDIP), a state level advisory committee and a hospital screening program are in place. The newborn hearing screening and follow-up data are a part of the Virginia Infant Screening and Infant Tracking System (VISITS). In addition to the screening and follow-up activities, the program has developed parent reference materials, professional and public education. The program also developed a hearing aid loan bank that is available to

children under age 18 whose hearing loss is confirmed by an audiologist. The bank lends hearing aids and FM systems for up to six months or longer in certain circumstances. To qualify, families must be residents of Virginia and be in the process of securing permanent hearing aids through insurance or other means. The program also supports the Guide By Your Side Program, which matches parents of children with hearing loss to parents of newly diagnosed infants and children to provide family-to-family support.

The *Code of Virginia* mandates VDH to establish a voluntary program for screening individuals for sickle cell trait. The Virginia Sickle Cell Awareness Program (VASCAP), through a contract with Virginia Commonwealth University, provides the adult screening and education services. VASCAP also provides education to schools, organizations, and other groups, conducts outreach, and promotes public awareness regarding hemoglobinopathies. The screenings are done in the local health departments and include screening of family planning and maternity clients with appropriate one-on-one counseling.

Four regional Comprehensive Sickle Cell Centers provide those affected by sickle cell with comprehensive services for treatment, follow-up, physician consultation, family and client education, case management, and other services aimed at assisting families. All newborns identified with sickle cell through the Newborn Screening program are referred to one of the regional centers, and efforts are made to secure a medical home for them. These centers are funded through state funds with the VDH Title V program providing oversight and technical assistance. In 2008, 1,115 children received services through the four regional centers with a total of 3,136 medical management visits. VDH provides funding for community-based sickle cell programs. These programs are required to focus on education and family-centered support as a means to assist families in the development of necessary skills and resources to improve their health status, family functioning and self-sufficiency. This year, budget reductions led to the cancellation of the community-based contracts, however the FY 2011 state budget includes funding for these programs.

In 1985 the *Code of Virginia* established the Virginia Congenital Anomalies Reporting and Education System (VaCARES), a statewide birth defects registry. VaCARES collects data to evaluate possible causes of birth defects and seeks to improve diagnosis and treatment of congenital anomalies. Virginia hospitals submit reports on children from birth to age 2 who have at least one diagnosis from a specified ICD-9-CM code list of anomalies. In 2006, VDH

received a grant from CDC for Population–Based Birth Defects Surveillance Programs and the Utilization of Surveillance Data by Public Health Programs. The funding has supported VDH’s efforts to improve and expand the capacity of VaCARES to identify cases and generate timely population-based data on major birth defects occurring in Virginia. A major component of the funding was focused on enhancing VISITS, a web-based tracking and data management system that integrates several child health databases. The enhanced tracking system (VISITS II) is now operational and by design it is linked to the electronic birth certificate system. Improvements realized in VISITS II will increase the ability of VaCARES to identify children with special health care needs and expand the ability to refer to early intervention services statewide and to the CCC network. VISITS II will also minimize the number of infants lost to follow-up. Data from the new tracking system will increase VDH’s ability to evaluate progress in improving access to services (e.g., identify children and families eligible for services and evaluate the timeliness of referrals to services).

The *Code of Virginia* requires all children determined to be at risk to be screened for elevated blood lead levels at the age of one year, two years, and between the ages of 36-72 months if never tested previously. All laboratories are required to report the results electronically within ten days. Lead poisoning is a reportable disease in Virginia. According to the Lead-Safe Virginia’s 2008 Surveillance Summary Report, 91,308 children under 6 years (72 months) of age were tested for lead exposure in 2008. Of these, 377 children were reported as having a confirmed elevated blood lead test. Of the high-risk age category, under 36 months, 54,634 were tested with 217 confirmed elevated blood lead levels (EBLLs). Medicaid enrolled children under 36 months of age accounted for 38.5% of the children tested in this high-risk age category, and 124 of those were confirmed EBLLs. This accounts for 57% of the confirmed EBLLs in this age category. The CDC has determined that children enrolled in Medicaid are at high-risk for lead exposure for various reasons. Lead-Safe Virginia works closely with the Department of Medical Assistance Services to educate providers regarding the federal and state requirement to test Medicaid enrolled children at both 12 and 24 months of age. VDH receives federal funding from the U.S. Environmental Protection Agency and the Centers for Disease Control and Prevention for the Lead-Safe Virginia Childhood Lead Poisoning Prevention program. These funds are used to coordinate blood lead screening, medical follow-up, environmental lead hazard investigation, risk assessments, and public education. The program

was formerly housed in the Office of Family Health Services but has been relocated to the Office of Environmental Health.

Immunizations are mandated by the *Code of Virginia* and are provided by all local health departments. VDH's Division of Immunization within the Office of Epidemiology has primary responsibility for this service. The division provides federal CDC funds to each health district for infrastructure enhancement of the vaccine delivery system. The CDC funded Vaccine for Children (VFC) program provides vaccine at no cost for children who are Medicaid enrolled, Native American, or uninsured; vaccines are administered at local health departments and enrolled private physicians' offices. Title V supports immunizations by promoting quality primary care services through a medical home, child care health consultant services, and staff participation in Project Immunize Virginia. Child care health consultants work with child care providers to promote and assure that immunizations are complete. VDH sponsored programs such as Resource Mothers and Healthy Start help to ensure that infants are up-to-date on their immunizations during the first year of life. Other providers such as CHIP also assist families in having children immunized.

In August 2006, the VDH Division of Immunizations implemented a statewide immunization registry, the Virginia Immunization Information system (VIIS). The VIIS is a web-based system containing birth to death immunization histories for clients of all ages and allows for direct user input for enrolled providers. VIIS now contains immunization data for over 3.2 million clients, including over 60% of all children less than six years of age with two or more immunizations. The system improves the accuracy and completeness of immunization records and minimizes under and over immunization of children. It also enables providers to produce an official printout of immunization records required for school entry and other needs.

New immunization requirements for school and child care entrance were implemented in 2009-2010. The new requirements include two doses of varicella and mumps vaccine for children entering kindergarten, and legislatively mandated HPV vaccine, for females entering 6th grade (parents and guardians can opt-out of this requirement).

During the past several months, VDH has promoted H1N1 vaccinations, particularly for high risk populations including children. A CDC report shows that Virginia exceeded the national vaccination rates through January 2010. VDH led the vaccination effort, combining the

resources of private providers with local health department staff, schools, and community organizations. As a result, 40% of Virginia children 6 months-17 years were vaccinated.

The VDH Division of Dental Health (DDH) supports population-based activities to reduce dental disease. Community water fluoridation is viewed as the single most effective public health measure to prevent tooth decay and improve oral health. Approximately 81% of Virginians drink water that has fluoride adjusted to the optimal level, meeting the Healthy People 2010 Objective. National studies indicate that water fluoridation will reduce dental decay in permanent teeth by approximately 17 to 40%. The DDH supports fluoridation in Virginia through one staff person and funds for ongoing projects. DDH monitors water systems for compliance in conjunction with the VDH Office of Drinking Water, reports water system data to the CDC's Water Fluoridation Reporting system (WFRS), provides information about the benefits of fluoridation to citizens and communities, and provides limited grant funding for communities to start or upgrade fluoridation equipment for water systems.

In areas without access to community water fluoridation, school children were eligible to participate in a weekly topical fluoride mouth rinse program. Due to state budget reductions, the program will be discontinued at the end of the 2009-2010 school year. At the close of 2008-2009 school year, the number of children rinsing was 47,236 students in 48 counties. The impact on the prevalence of tooth decay for these children will be documented when the DDH completes the analysis of cohort data collected from 2006 to 2009 regarding the program's effectiveness. National studies have shown that children participating in fluoride mouth rinse programs during their elementary school years have up to a 15% reduction in tooth decay. In addition to the elimination of the funding for the fluoride rinse program, the recent budget reduction also eliminated funding for school oral health training.

DDH staff provide screenings, fluoride varnish, and anticipatory guidance for WIC children aged 0 to 5 years for approximately 12,000 children annually in multiple districts through the Bright Smiles for Babies Fluoride Varnish Program. A DDH manager provides supervision, training and program evaluation oversight. Training in oral health risk assessment, fluoride varnish application, and anticipatory guidance also is provided to medical and dental providers. DDH staff provides sealants and treatment referrals for low-income school children in targeted areas of the state through a limited School-Based Dental Sealant Program.

The Healthy Child Care Virginia program promotes the healthy development of children in child care, including those with special health needs. This includes promoting access to preventive health services and a safe physical environment. This is accomplished through the work of Child Care Health Consultants (CCHC), trained professionals (i.e., nurses and nurse practitioners) who provide expert guidance and technical assistance to child care providers on a wide range of health and safety topics. CCHCs provide training to child care staff, assist in developing policies regarding health and safety, assist in developing strategies for the care of children with special needs, connect child care providers and parents with community resources, and provide health education as well as health screenings. Some of the trainings provided include control of communicable diseases, medication administration, nutrition, and safety.

As noted in the section on Population Based Services for Pregnant Women, Mothers and Infant, the Division of Nutrition, Physical Activity and Food Programs includes the Special Supplemental Nutrition for Women, Infants and Children (WIC) program, an Obesity Prevention Team and CHAMPION initiative, strong breastfeeding promotion efforts, and as of October 1, 2010, the Child and Adult Food Program and the Summer Food Service Program. The programs in the division focus on family-centered health approaches across the lifespan, maternal health, children's health, and consistent nutrition education messages for families. The Virginia WIC Program serves more than 50% of infants in Virginia. In March 2010, the program served a total of 160,068 participants including 39,654 infants, 40,159 women and 80,255 children under five.

CHAMPION, the Commonwealth's Healthy Approach and Mobilization Plan for Inactivity, Obesity, and Nutrition, is a statewide obesity prevention program focusing on proven strategies, creating a healthy nutritional environment, and appropriately emphasizing physical activity to improve the health of all Virginians. According to recent data collected by the Virginia Foundation for Healthy Youth (VFHY) through a youth-reported telephone survey, Virginia has the 27th highest rate of overweight youth ages 10-17 with approximately 31% being overweight or obese. Currently, CHAMPION is making grant funding available to community groups to implement evidence-based programs that are proven effective, low cost, and take the first step in creating healthier communities in the Commonwealth.

Through partnerships with the Virginia Breastfeeding Advisory Committee, the Virginia Foundation for Healthy Youth, the Virginia Chapter of the American Academy of Pediatrics and others, CHAMPION has begun implementing proven strategies such as incorporating nutrition

and physical activity policies for children in childcare settings, promoting lactation support services, implementing worksite wellness programs, providing nutrition education resources for physicians, and expanding school-age nutrition and physical activity programming for obesity prevention statewide.

In February 2010, the VDH CHAMPION program received approximately \$750,000 in American Recovery and Reinvestment Act (ARRA) funding which, through partnering with VFHY and their non-profit arm, Prevention Connections, will be used to focus on promoting physical activity, increasing access to healthy foods for school-age youth, and breastfeeding promotion in worksites and licensed childcare centers.

The VDH Division of Child and Adolescent Health (DCAH) staff work in conjunction with Department of Education staff to provide education, training, and technical assistance to school nurses on a wide variety of health topics. The two agencies collaborate on School Health Guidelines, Specialized Health Care Procedures, Emergency Response, and tools for helping school nurses manage chronic conditions such as asthma and diabetes. Additionally, the VDH School Age Health Specialist has strengthened relationships with private school nurses and home school associations to provide public health resources and information through those networks.

The DCAH Teen Pregnancy Prevention Initiative (TPPI) operates in the Richmond, Norfolk, Roanoke City, Crater, Portsmouth, and Eastern Shore health districts. These sites were stipulated due to historically high teen pregnancy rates. Although all of the programs are community-based and have common components, they are uniquely designed to serve the needs of their communities. Over the years funding to support TPPI has varied with only state support some years and more recently a combination of state funds and TANF. For FY 2011, the funding has been decreased to half the FY 2010 funds due to the elimination of TANF funding. The reduction will have a major impact on the local TPPI programs. As a result, programs have been given the option of continuing to operate evidence-informed programs, provide additional clinical services to adolescents, or incorporate health education and outreach into existing reproductive health services to adolescents.

The VDH Division of Injury and Violence Prevention (DIVP) works to prevent unintentional, intentional and self-inflicted injuries and death among MCH populations. Division activities include needs assessment, analysis and reporting of injury death and hospitalization data, outreach and education, training and consultation, policy development and

implementation, community projects and safety device dissemination across a wide range of injury areas. DIVP programs are funded through multiple federal sources, including NHTSA, CDC, and SAMHSA, in addition to Title V. DIVP partners with several other state agencies, including the Department of Education, Department of Social Services, Department of Behavioral Health and Developmental Services, Department of Criminal Justice Services, Department of Juvenile Justice, Department of Motor Vehicles and Department of Transportation, other organizations, including the Virginia SAFE KIDS Coalition, Bike Walk Virginia, Brain Injury Association of Virginia, Mid-Atlantic AAA, Virginia Sexual and Domestic Action Alliance, Virginia High School League, Virginia Chapter of AAP, and several universities to prevent injuries, violence and suicide among MCH populations.

To address unintentional injuries, DIVP collaborates with local agencies, organizations and groups on outcome oriented projects to address leading causes of unintentional injury death across the lifespan (e.g. motor vehicles, drowning, falls, fire, suffocation and poisoning prevention). DIVP coordinates statewide public and provider education on child passenger safety, works in partnership with local health districts to provide child safety seats and booster seats to low income families, and supports staffed local sites where the public can learn how to properly install their safety seats. DIVP funds and provides technical assistance to local fire departments and other organizations to install smoke alarms and provides fire safety education to low income households whose inhabitants include young children. DIVP promotes protective headgear, environmental modifications, and outreach and education efforts (e.g. parents, coaches, youth) to prevent traumatic brain injuries among youth athletes, cyclists, and children on the playground and at other recreational venues.

To prevent suicide, DIVP coordinates statewide prevention efforts which include partnering with several state agencies, coordinating awareness activities, supporting evidence based programs at secondary schools and colleges, and coordinating statewide training for school personnel, human service providers, faith communities and others on suicide prevention and intervention. Activities include identifying persons at-risk, screening, counseling and referral.

To prevent intentional injuries, DIVP provides training and educational resources, funds community programs to prevent sexual violence, and implements specific projects to engage men in ending violence against women. DIVP coordinates Project RADAR, which enable health care providers to recognize and respond to intimate partner violence by providing them access to

policies, guidelines, and assessment tools, training programs and specialty-specific curricula, and Project Connect, which improves the ability of home visitation, perinatal health, and reproductive health providers to assess for and respond to domestic violence, sexual violence and reproductive coercion. DIVP coordinates general outreach and education on research-based strategies to prevent bullying and dating violence and provides small grants, technical assistance and training to schools and youth serving organizations to implement evidence based approaches.

The VDH Division of Chronic Disease Prevention and Control Tobacco Use Control Project (TUCP) provides funds to local coalitions across the state to develop and promote policies relating to clean indoor air and the dangers of second-hand smoke. TUCP also funds youth-based coalitions that mentor younger youth on how to advocate for policy change regarding smoke free environments and incorporating tobacco prevention curriculum in their schools. TUCP also funds a statewide tobacco Quitline, Quit Now Virginia, 1-800-QUIT Now.

The Virginia Department of Social Services (DSS) provides leadership for the prevention of child abuse and neglect. Using a combination of state and federal grant funds, DSS contracts with community organizations to provide a variety of prevention services (including some home visiting and case management services described earlier) targeting the general population and families at high-risk for child abuse and neglect. Prevent Child Abuse Virginia provides technical assistance for parenting education programs and for Parents Anonymous groups.

DSS has been charged with developing a plan for assuring health screening and services (including physical, developmental, mental, and dental) to children entering and residing in foster care. The DCAH Director participates on the committee overseeing this initiative, as well as on the subcommittee defining standards, guidance, and performance measures. Bright Futures Guidelines for Health Supervision of Infants, Children, and Adolescents are being used as the foundation for defining necessary health and developmental services.

Population Based Services for Children with Special Health Care Needs. See Children and Adolescent Population Based Services Section.

D. Infrastructure Building Services

Strengthening infrastructure continues to be an area of focus for VDH and the Title V program. To promote comprehensive systems of services, the Title V program has participated in or taken the lead in numerous interdisciplinary efforts to bring together both the public and

private sectors. These efforts continue through collaborative efforts involving all maternal and child health populations. Cooperative efforts with agencies such as Medicaid, Education and Social Services have grown due to a common interest in reaching shared audiences.

Efforts to improve assessment functions have continued since the last needs assessment. One of the overall themes identified in the 2004 CAST-5 assessment was the need for better data collection and analysis, and to use data to 1) inform programmatic decision making, 2) enhance accountability and quality improvement in progressing particularly with regard to the local level, 3) drive improvements in MCH outcomes, 4) better identify emerging public health issues, and 5) educate key stakeholders about Title V supported activities. Since the last needs assessment various improvements have been accomplished. The SSDI project continues to support a MCH Epidemiologist through a contract with Virginia Commonwealth University's Department of Epidemiology and Community Health. During the past five years, the Policy and Assessment Unit has been fortunate to host two CSTE fellows; one of the fellows was hired as an epidemiologist in the Policy and Assessment Unit following the completion of her fellowship. A third CSTE fellow will be joining the Policy and Assessment Unit later this summer. In addition, an OFHS Data Mart was created to address gaps in data collection, statistical analysis, and data linkage. The assessment functions for the office have also been improved through three additional grants. Virginia received funding in 2006 to implement the Pregnancy Risk Assessment Monitoring System (PRAMS), which provides additional data on new mothers' pre-pregnancy, prenatal and postpartum experiences. Virginia was also awarded CDC funding to implement the Youth Risk Behavior Survey (YRBS) in Virginia as the Virginia Youth Survey. In addition, Virginia was awarded a five-year CDC Assessment Initiative grant to improve the way data are used to provide information for community health assessment as well as public health decisions and policy.

Legislation (HB2097) enacted by the 2003 General Assembly required each state agency to develop a strategic plan. VDH's strategic plan contains the agency's vision and mission statements, agency goals, and other provisions. A key component of the strategic planning process was the identification and development of service area plans. VDH has 41 service area plans, which are reflective of the large number and wide variety of public health services that the agency provides. The service area plans contain information on customers, funding, objectives, strategies and performance measures. Four of the service area plans relate specifically to the

state Title V activities. These service area plans include 1) Women's and Infants' Health Services; 2) Injury and Violence Prevention; 3) Child and Adolescent Health Services; and 4) Chronic Disease Prevention, Health Promotion and Oral Health. Periodic reporting on the objectives and performance measures is required. The information is available on the public website www.vaperforms.virginia.gov

Infrastructure Building Services for Pregnant Women, Mothers and Infants. The five Regional Perinatal Councils (RPC) make up a statewide network of public/private partnerships that assess the needs of infants and women of reproductive age. Their goal is to improve perinatal health by providing resource and referral information and education on preconception health, pregnancy, childbirth and infancy. Their services also include bereavement support and support for the coordination and linkage of perinatal health services in each region. Another major activity of the RPCs is to conduct Fetal and Infant Mortality Review (FIMR). Individuals and organizations that participate include parents, health professionals, medical school faculty, health and human service organizations, religious groups, businesses, and community leaders. The Virginia FIMR model is based on the national model and has been administered by the RPCs each year since 1996. It is a community-based program that collects data from medical records and from maternal interviews and analyzes information about infant deaths to identify common causes or precipitating factors. The knowledge from the analysis is used to design and implement improvements in programs and systems of care for mothers and infants.

Currently, the Division of Women's and Infants' Health has entered into a contract with GoBeyond, LLC to provide a system to document the work of FIMR. The Baby Abstracting System and Information NETWORK (BASINET) is a web-based, project management system designed to support all aspects of FIMR. It is accessed securely through a web browser, eliminating the need for any software to be installed on individual computers or servers. BASINET offers a solution for statewide FIMR program management, as state-level users have access to regional and aggregate data. It will improve the ability to evaluate the factors contributing to fetal and infant mortality, which will enhance the efficiency of the project and improve capacity to focus on interventions to make a difference.

The Virginia Pregnancy Risk Assessment Monitoring System is part of a national surveillance project that provides data on maternal attitudes and experiences before, during and shortly after pregnancy. The information from VA PRAMS is not available from other sources.

Virginia implemented the first PRAMS surveys in 2007 after being awarded funding by the CDC in 2006. The PRAMS project surveys a sample of about 1,200 Virginia women who have recently delivered a live-born infant. The data is used to identify groups of women and infants at high risk for health problems, to monitor changes in health status, and to measure progress towards goals in improving the health of mothers and infants. VA PRAMS is the only statewide source of information about the attitudes and behaviors of Virginia women before, during, and immediately after pregnancy. The results have provided insight into a number of issues including pregnancy intention, pre-pregnancy body weight, preconception multi-vitamin use, and postpartum contraceptive use. A major challenge in gaining the response rate required by CDC for inclusion in the national dataset is the mobility of new mothers, especially young mothers. Originally the implementation of the VA PRAMS was contracted to the Virginia Commonwealth University's Survey Evaluation and Research Laboratory (SERL). The implementation has recently been transitioned to the VDH Division of Disease Prevention. The internally managed implementation of the survey will provide greater day to day oversight and ability to increase the response rate while decreasing the costs.

The Virginia BRFSS is a survey of Virginia's adult population that has been conducted annually since 1989. The survey is a part of the national BRFSS survey and the primary source for information regarding the health behaviors of adults. Virginia surveys approximately 5,000 adults aged 18 years and older annually. Virginia uses the BRFSS data to identify emerging health problems, to establish health objectives and track their progress toward meeting them, and to develop and evaluate public health policies and programs to address identified problems. The survey questions relate to behaviors that are associated with preventable chronic diseases, injuries, and infections. Although the survey does not specifically target women of childbearing age, in the past, questions relating to such areas as weight, smoking, insurance, Pap smears, sexual assault and domestic violence, multi-vitamin use, and mammograms have provided insight into their health and health risk behaviors. The continued increase in implementation costs of the BRFSS survey is a challenge. With the increased use of cell phones particularly for younger adults and some other groups, calling land lines as well as cell phones is necessary but also more expensive. There is also increased interest in adding additional questions to the core survey. The interest comes from programs, both internal to VDH and external, that often have

requirements to use BRFSS data for reporting. This leads to competition between programs to have specific questions added to the survey and the need to consider survey length and cost.

In the spring of 2002 the maternal mortality review process was reintroduced. Earlier reviews had been carried out through a partnership with the Medical Society of Virginia and the VDH Office of Family Health Services. The surveillance project is now located in VDH's Office of the Chief Medical Examiner. The Maternal Mortality Review Team reviews all deaths occurring to woman within one year of the end of their pregnancy, whether the pregnancy ended with a termination, a fetal death, or a live birth. Approximately one-half of these deaths are from natural causes, and the other on-half are violent deaths attributed to homicide, suicide and unintentional injuries. Each of the deaths is reviewed by the team to determine if the death was pregnancy-related and if the death was preventable. If the death could have been prevented, then the team develops strategies and recommendations aimed at preventing similar deaths. Most recently, the team reviewed maternal deaths from 1999 to 2002 to examine the relationship between obesity and maternal death, and a report was published in March 2009. In addition, the findings from the obesity-related review were presented at the CDC/ACOG Maternal Mortality Study Group and the ACOG Maternal Mortality Special Interest Group in Chicago in May 2009.

Since the last needs assessment, VDH has established a Statewide Breastfeeding Advisory Committee. As described previously in the Partnerships section, the Committee is comprised of influential Virginians representing various organizations. Member organizations represent a wide variety of practice settings and create a multidisciplinary membership. They work in partnership with the Virginia Department of Health to aid in increasing the incidence and duration of breastfeeding among mothers. Representatives include such organizations as the American college of Nurse Midwives, the American Dietetic Association, universities, La Leche League, Medela, the Virginia Nurses Association and others. Member organizations were selected as those who can make a difference in increasing Virginia's breastfeeding rates, reveal current data, and make breastfeeding a priority within the Commonwealth. The Committee has developed the Virginia Breastfeeding Advisory Committee's Strategic Plan 2009-2014.

Over the years the Virginia General Assembly has passed legislation that protects women who are breastfeeding. In 1994 section 18.2-387 of the *Code of Virginia* was enacted to exempt mothers engaged in breastfeeding from the indecent exposure laws. In 2002 section 2.2-1147.1 of the *Code of Virginia* was amended to guarantee a woman the right to breastfeed her child on

any property owned, leased or controlled by the state. The section also stipulates that childbirth and related medical conditions specified in the Virginia Human Rights Act include activities of lactation, including breastfeeding and expression of milk by a mother for her child. In 2005 section 8.01-341.1 of the *Code of Virginia* was amended to provide that a mother who is breastfeeding a child may be exempted from jury duty upon her request.

Infrastructure Building Services for Children and Adolescents. VDH continues to take a lead role in ensuring that all children have access to preventive and primary care medical services and a medical home regardless of payor source. VDH has worked closely with the Virginia Comprehensive Health Investment Project (CHIP) and the Virginia Chapter of the American Academy of Pediatrics (VA AAP) to provide Virginia's practitioners with training on how to establish a family-centered medical home for children. The Virginia Systems Improvement Project (VSIP) initiated in 2009 sponsors a medical home learning collaborative, in partnership with VA AAP and the Community Health Care Association, to foster further spread of medical home in practice.

Title V representatives worked closely with the Virginia Covering Kids and Families Coalition to bring about changes that resulted in an increase in child enrollment in the Medicaid and SCHIP programs. The Department of Medical Assistance Services (DMAS) obtained a Robert Wood Johnson Foundation Grant to increase and retain enrollment in public insurance programs. DCAH staff is participating in the grant work group.

An Interagency Agreement between VDH and DMAS focuses on the agency's responsibilities in relation to the administration of EPSDT services. These responsibilities include sharing data, training providers, and monitoring service delivery. VDH and DMAS sponsored a State Leadership Workshop on EPSDT in 2008. Representatives from Title V routinely work with DMAS staff to plan trainings on EPSDT administration, including clinical guidelines and billing practices. VDH, DMAS, and DBHDS partnered in the ABCD Screening Academy to foster use of standardized tools to screen for developmental delay, and the three agencies continue to take advantage of opportunities to promote statewide spread of the ABCD project and lessons learned.

VDH collaboration with the Department of Social Services (DSS) has continued. In addition to outreach for Medicaid and FAMIS, the Title V program collaborates with DSS for child abuse prevention and health and safety in child care settings. In the past, DSS has provided

TANF funding for VDH programs including Teen Pregnancy Prevention, Statutory Rape Awareness, GEMS, and Partners in Prevention. The TANF funding will end June 30, 2010.

A Title V program representative continues to serve on the Advisory Board for the Community-Based Family Resource and Support program. DIVP staff serve and on the Governor's Advisory Board for Child Abuse and Neglect. In addition, VDH staff serve on review panels for DSS grants to communities for the Virginia Family Violence Prevention Program and the Community-Based Family Resource and Support Program.

The Early Childhood Comprehensive Systems (ECCS) project is a systems-building initiative administered by VDH to promote integrated health and early care and education systems statewide. This project served as the foundation for what has become the state Smart Beginnings Plan, which is co-managed by a public-private partnership. The ECCS project now focuses primarily on implementing the Smart Beginnings goal that targets parenting education. Other goals address health, early care and education, and community engagement. The Early Childhood Foundation has funded numerous community-based coalitions that are integrating services for young children and their families. Multiple Title V representatives participate in subcommittees working on the Smart Beginnings Plan.

The Virginia Statewide Parent Education Coalition (VSPEC) was established as a result of the ECCS project and subsequent Smart Beginnings Plan implementation. The VSPEC is a public/private coalition of professionals and parents working to advocate for and ensure that all caregivers have access to quality parent education and information. VDH maintains a website with early childhood resources on topics such as safety, health risks, physical activity and nutrition and a link to the New Parent Tool Kit materials.

The Title V program maintains a strong collaborative relationship with the Virginia Department of Education (DOE) with regard to school nursing services and health and physical education. Collaborative activities include developing and maintaining the School Entrance Health Form and guidelines for school health services. Collaborative efforts also include working on programs related to Children with Special Health Care Needs, and addressing chronic disease management such as asthma and diabetes. VDH staff participate in educational planning and consultation including the planning of the annual Virginia School Health Services Institute. VDH and DOE staff meet regularly with school health representatives and the Virginia Association of School Nurses. In addition, the School Nurse Institute Partnership, a partnership

with VDH, DOE, Virginia Commonwealth University's Partnership for People with Disabilities, institutions of higher learning, the Virginia Association of School Nurses, and the Emergency Medical Services for Children provide statewide school nursing staff development activities and support academic preparation of registered nurses in the specialty practice of school nursing.

The *Code of Virginia* requires each school division to have a School Health Advisory Board (SHAB) comprised of broad-based community representatives including parents, students, health professionals, and educators. SHABs assist with the development of health policy and the evaluation of the status of school health, health education, the school environment, and health services. Each SHAB meets at least two times a year and submits an annual report to the DOE. School Divisions are encouraged to include representatives from local health districts on their SHAB, and most do; some are chaired by health district staff, which generally is reported as a strong partnership.

Title V staff continue to work with DOE staff to maintain and update material on the Health Smart Virginia website. The site supports teachers (primarily elementary school and health teachers), and school nurses with curricular resources to assist them in meeting the state standards of learning for health.

The Virginia Interagency Coordinating Council (VICC) is an advisory council for the early intervention services provided through Part C of the Individuals with Disabilities Education Act (IDEA). A representative from the VDH DCAH is an active participant on the VICC and serves as the designated Agency liaison to the program. At the local level, professional staff from the health departments and the Child Development Clinics serve on the local interagency coordinating councils. In 2009, the Central Virginia Health District assumed the role of local lead agency for Part C in that region.

The Comprehensive Services Act for At-Risk Youth and Families provides a comprehensive, coordinated, family-focused, child-centered, and community-based service system for emotionally and/or behaviorally disturbed youth and their families. Representatives from Title V serve on the State Executive Council and on the State and Local Advisory Team. Local health departments and/or Child Development Clinics may have representatives that serve on local community policy and management teams and family assessment and planning teams.

The VDH DDH administers a Quality Assurance (QA) program for the local health department dental clinics. DDH supports QA through maintenance of a Manual of Operations

for Public health Dental Clinics in VA, on-site QA review and technical assistance for VDH dental programs, and semi-annual statistical reports for each VDH dental program. DDH also assists with recruitment and orientation of new dental staff and provides workforce training through two polycoms per year.

The Division of Dental Health has a major role in the collection, analysis and reporting of oral disease data. The division recently completed a clinical assessment of 8,000 Virginia public school students. Unfortunately, due to recent budget reductions funding for the full time dental epidemiologist position was eliminated.

Virginia has continued to promote Bright Futures as a framework, a set of expert guidelines, and a practical developmental approach to providing health supervision for children from birth through adolescence. Bright Futures has been adopted as the expert guidelines for the district health departments' supervision for children of all ages. Most recently VDH worked closely with the AAP and James Madison University to develop a web-based version of Bright Futures, which can be found at www.healthyfuturesva.com. The website takes the children's health information in Bright Futures and puts it into the hands of parents through videos and text. The web-based version is intended to increase family knowledge, skills, and participation in health promotion and prevention activities, thereby enabling parents to be informed, active partners in their child's health care.

Virginia's injury prevention programs are very fortunate to have a legislatively mandated Child Fatality Review Team housed in the VDH Office of the Chief Medical Examiner. Although the chief responsibility of the medical examiner's office is to determine the cause and manner of certain deaths in Virginia, the office also includes one of the very few forensic epidemiology units in the nation. The Virginia State Child Fatality Review Team is a surveillance project that systematically examines child deaths to determine whether the death could have been prevented and to make recommendation for education, training and prevention strategies. The membership and the purpose of the team are legislatively mandated and include physicians and representatives from state and local agencies who provide services to children or who may be involved in the investigation of the death. Over the years, the team has produced reports on such topics as child deaths from heat-related motor vehicle entrapment deaths, motor vehicle deaths, caretaker homicide and suicide. The reports have provided information for such organizations as VDH's Division of Injury and Violence Prevention, Drive Smart Virginia, the

Office of Emergency Services EMS for Children, Prevent Child Abuse Virginia, Safe Kids of Virginia, and Voices for Virginia's Children.

The availability of data for planning, decision making and evaluating health status and program outcomes is an essential infrastructure function. Voices for Virginia's Children (formerly the Action Alliance for Virginia's Children and Youth) is a part of the KIDS COUNT national network funded by the Annie E. Casey Foundation. The Virginia KIDS COUNT provides state and local data on the health status of children. In addition, the VDH Center for Health Statistics provides data and annual reports on such topics as teen pregnancy and teen births, as well as death data. The Virginia Health Information (VHI) provides information on hospital discharges and the associated costs. Quantitative data on local health department services are available from the agency reporting system, Web Vision. Beginning in 2003, the Office of the Chief Medical Examiner (OCME) implemented the National Violent Death Reporting System (NVDRS), funded by the CDC. This data system links information about violent deaths, defined as homicides, suicides, accidental firearm deaths, legal interventions, undetermined deaths, and deaths due to acts of terrorism, from sources such as forensic pathology, law enforcement, forensic science, and vital records. Reports using this data include such topics as substance use and violence, suicide and mental health, and poison-related suicides.

In the past, there was a lack of data on youth risk behaviors, and this gap in knowledge was identified as a major area of need for program planning and evaluation. A statewide survey of youth risk behaviors was conducted in 1993 and was not conducted again until the spring of 2009. In 2008, the VDH collaborated with the DOE to submit an application for funding from the Centers for Disease Control and Prevention to conduct a survey of Virginia's youth. The application for Youth Risk Behavior Survey (YRBS) funding was approved and the survey was conducted in a sample of public high schools in the spring of 2009. The Virginia Youth Survey (VYS) was created as a modified version of the YRBS to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth within the Commonwealth of Virginia. Unfortunately, the number of schools that agreed to participate was not sufficient to have findings included in the national dataset and the findings are limited to the youth who actually participated in the survey. However, the information fills a data gap and will be used to inform policy and planning efforts in Virginia. The survey will be administered again in 2011, and efforts will be made to increase school participation in order to

generate a response rate that allows Virginia's results to be included in the national dataset and generalized to all Virginia youth.

Infrastructure Building Services for Children with Special Health Care Needs. The *Code of Virginia* gives the Commissioner of Health authority to appoint a Virginia Genetics Advisory committee. Agencies with representatives on the committee include the Genetic Centers, the Metabolic Treatment Centers, the Division of Consolidated Laboratory Services in the Department of General Services, the Department of Education (DOE), the Department of Behavioral Health and Development Services (formerly the Department of Mental Health, Mental Retardation, and Substance Abuse Services), the March of Dimes, Virginia Hospital and Healthcare Association, and the VDH divisions of Women's and Infants' Health, Child and Adolescent Health (including Genetics and Newborn Screening, Sickle Cell Awareness program and the CSHCN program), Nutrition, Physical Activity and Food Programs (formerly the Division of WIC and Community Nutrition), and the Chronic Disease Prevention and Control. The advisory committee also has a Community Partners Subcommittee that includes families of children with diagnosed genetic conditions. The Committee discusses updates from various represented programs, and has recently shared insights on genetic contributions to and prevention of infant mortality, specifically regarding folic acid and neural tube defects.

The Virginia Early Hearing Detection and Intervention Program (VEHDIP) is guided by an active advisory committee, established by the *Code of Virginia* and appointed by the State Health Commissioner, to assist in system design, implementation, and revisions. Members include the a representative of the health insurance industry, physicians, including at least one pediatrician or family practitioner, one otolaryngologist, and one neonatologist, nurses representing newborn nurseries, audiologists, hearing aid dealers and fitters, teachers of the deaf and hard-of-hearing, parents of deaf or hard-of-hearing children, deaf or hard-of-hearing adults, hospital administrators, local health departments, civic organizations, and personnel of state agencies, including the Departments of Medical Assistance Services, Education and Deaf and Hard of Hearing.

The *Code of Virginia* gives authority to the Governor to appoint a Hemophilia Advisory Board to consult with the Board of Health in the administration of the Virginia Bleeding Disorders Program. The Board is composed of seven persons, one representative each from hospitals, medical schools, blood banks, voluntary agencies interested in hemophilia, local public

health agencies, medical specialists in hemophilia, and the general public. Family participation is provided via the representative from the voluntary agency, the United Virginia Chapter of the National Hemophilia Foundation and the general public.

VDH maintains an agreement with Department of Education (DOE) to have educational consultants as members of the interdisciplinary teams in the Child Development Clinics and Care Connection for Children centers. The consultants provide liaison services among the clinics and centers, the children's families and local education agencies serving children. Duties include administering and interpreting developmental and/or educational evaluations, identifying learning styles, strengths and weaknesses, recommending educational strategies and modifications, consulting with school personnel regarding modifications in school programs, monitoring and reevaluating progress of the children, and providing staff development. DOE provides the position and funding, and administers a contract with a local school division to provide the supervision and fiscal management of the position. VDH provides the office space and secretarial support and participates in the evaluation of the educational consultants.

The Title V program has established and maintains ongoing interagency collaboration for systems building in some defined areas. The Title V program collaborates with DOE to develop and maintain guidelines for school health services for CSHCN, such as the First Aid Guide for School Emergencies and the Guidelines for Specialized Health Care Procedures. VDH and the Virginia Chapter of the American Lung Association have established the Virginia Asthma Coalition to assess needs, share information and collaborate on the use of available resources.

A goal of the Virginia Systems Improvement Project (VSIP), a federal State Implementation Grant for Systems of Services for CYSHCN, is to strengthen, link, and integrate existing systems of care so that families can easily use them. In August 2009, Title V CSHCN Program convened a "Community Partners for Children and Youth Summit" to update existing issue briefs to reflect the current status in Virginia for each of the six national core outcomes of a system of care for CYSHCN. Summit participants reflected a wide range of stakeholders including youth and parents of CYSHCN. The finalized issue briefs have been widely distributed. They will provide guidance to a statewide consortium that is being formed to carry forward with system-building initiatives for CYSHCN. A planning team, reflective of representation at the Summit, has developed an organizational structure for the consortium. The Consortium for Children and Youth with Special Needs will be a public/private collaborative

working group that seeks to promote state and community supports and services to enhance development and quality of life for CYSN and their families across their life span. Members are now being recruited to join a network of experts and stakeholders to share information, receive statewide support from partners, collaborate to find and promote solutions to the gaps and barriers in the supports and services, and receive timely updates on issues across the Commonwealth. The first meeting of the Consortium is scheduled for September 2010.

In 2009, the Joint Legislative Audit and Review Commission (JLARC) completed a comprehensive study of service capacity for autism spectrum disorders. The first action resulting from this study was the Secretary of Health and Human Resources naming the Department of Mental Health, Mental Retardation, and Substance Abuse Services as the “state agency home” for autism. The agency was renamed the Department of Behavioral Health and Developmental Services; internal reorganization has created an Office of Developmental Services with staff focused on creating and implementing a plan to respond to the JLARC study. Title V staff, along with Part C, DOE, Medicaid and other stakeholders, are partnering with the new DBHDS staff on this effort to assure that work begun under the Assuring Better Child Health and Development (ABCD) Project is not lost, and appropriate connections are made to existing programs and state plans. The ABCD Project promoted routine surveillance for risk factors and the use of standardized developmental screening tools by primary care providers as part of well-child visits.

VDH maintains contracts with DMAS for the Child Development Clinics and Care Connection for Children to provide Medicaid and FAMIS services on a fee-for-service basis. Title V program staff participate in an interagency group organized by DMAS to discuss issues of common interest for Medicaid special needs populations.

The *Code of Virginia* establishes Community Services for At-Risk Youth and their Families (CSA), a collaborative system of services and funding that is child-centered, family-focused, and community-based to address needs of troubled and at-risk youths and their families. CSA strives to ensure that services and funding work to preserve families and operate in the least restrictive environment while protecting children’s welfare and maintaining public safety. The CSA seeks to identify and intervene early with young children and their families who are at risk of developing emotional or behavioral problems. The Act promotes increasing private partnerships in service delivery and provides communities flexibility in funding and decision

making while maintaining accountability. The CSA funds are pooled from various state agencies including the Departments of Social Services, Education, Juvenile Justice and Behavioral Health and Development Services. CSA has formal structures for interagency collaboration to address systems issues. The commissioners from VDH, DSS, DBHDS, the Superintendent of Instruction, the Executive Secretary of the Virginia Supreme Court, the directors of DMAS and Juvenile Justice, an elected or appointed local official, a private provider representative as a non-voting ex officio member, and a parent representative serve as the CSA State Executive council. In addition, representatives from these agencies and groups comprise a State Management Team, the State and Local Advisory Team (SLAT), Community Policy and Management Teams (CPMT), and the community Family Assessment and Planning Teams (FAPT). Title V program staff represents VDH on the State Executive Council, the SLAT, and the State Management Team. Local health department staff serve on the local CPMTs and the FAPTs.

Formal statewide mechanisms in communities are in place for young children with special developmental needs for coordination and service integration among programs serving CSHCN. The *Code of Virginia* establishes the Virginia Interagency Coordinating Council (VICC) to promote and coordinate Part C early intervention services in the state. The VICC is comprised of parents of infants and toddlers with disabilities, public or private providers of early intervention services, a Virginia General Assembly member, representatives from relevant state agencies, and a Head Start agency or program member. Title V staff provides VDH representation on the VICC. The Code also provides for local interagency councils on a statewide basis to advise and assist the local lead agencies and to enable early intervention service providers to establish working relationships that will increase the efficiency and effectiveness of those services. Membership on the local councils includes designees from the local Community Services Board, health department, DSS, and school division as well as community service providers and at least one parent. VDH and other participating agencies maintain an MOA with the DBHDS for participation in the Part C service system, including coordination and utilization of community-level services for children birth to three years of age.

Title V staff continue to work closely with the state Part C program operated by DBHDS. In 2007, a decision was made to move administration of the Part C program to VDH, to better integrate with the CSHCN program. Subsequently, the administration determined that such a move would be too disruptive to localities. In lieu of integration or co-management, the CSHCN

and Part C programs are actively seeking opportunities to collaborate more effectively. The implementation of the electronic birth certificate and its connection to the VISITS II system gives VDH staff ready access to birth outcomes and risk factors that will, in time, enable more direct child-find activities for referral to Part C. The Child Development Clinic model is under review for potential enhances partnerships with local Part C agencies. The Care Connection for Children and Part C programs routinely work together to assure that services are streamlined for children served by both programs.

Over 2008 and 2009 the Part C program implemented a system transformation working with the Medicaid program. Services under Part C are now covered under the EPSDT benefit, rather than the rehabilitation benefit; some services that were previously not reimbursable now are. This systems change should (1) provide more children access to services, (2) provide more services to children already served, (3) increase the funds available to the program by leveraging existing Part C dollars, and (4) encourage more providers to participate in the program. This change constitutes a significant enhancement to the system of supports and services for young children with developmental delay.

The Virginia-LEND program was developed in collaboration with VCU Department of Pediatrics and VDH's Title V program to prepare health professionals for leadership and advocacy roles in working with children with special needs and their families. The program is interdisciplinary with a curriculum that emphasizes neuro-developmental and related disabilities, the social environment, leadership, and research. Current students or graduates in of Master's programs in related fields such as public health, social work, genetics, pediatric dentistry, and psychology may apply. A number of VDH employees have participated in the program. The LEND students have contributed to Title V needs by assisting with data analysis as requested. Most recently, they have completed some detailed analysis on health disparities identified through SLAITS data as part of the VSIP grant; a final report is in progress. The LEND program is funded through a Maternal and Child Health Bureau grant to the Partnership for People with Disabilities.

5. Selection of State Priority Needs

Stakeholder Input:

On May 17, 2010 nearly 40 external stakeholders and Office of Family Health Services staff members met to provide input on the top maternal and child health needs in Virginia. As described in *Section 2. Partnership Building and Collaboration Efforts*, the priority setting meeting was facilitated by Marjory Ruderman, an affiliate of Johns Hopkins University. Participants were assigned to groups addressing the needs of three population groups: women and infants, children and adolescents, and children with special health care needs.

Caroline Stampfel, MPH, Maternal and Child Health Lead Analyst, presented selected data from the Title V Needs Assessment. Each group was asked to brainstorm a list of needs based on the data presented and their personal experiences with the populations they serve. The groups were also asked to identify emerging problems not yet reflected in the data. The initial brainstorming lists are provided in Appendix C. Groups were given time to discuss their initial lists and then each group member was tasked with voting, using the colored dot method (each participant had sticky dots to place next to up to three needs, and participants were allowed to place more than one dot next to a single need.), for their top three needs; the results were compiled into the top 10 needs for each population groups. Following the completion of the list of top needs, each group was tasked with identifying promising strategies and stakeholder roles in addressing the top needs. Groups were asked to consider what was already being done effectively to address the problem, what might be some promising opportunities or strategies that are not currently being done, who should be involved in implementing these strategies, and how their organization could help address the need. Finally, groups were asked to think about their own needs in order to contribute to the solution.

List of Potential Priorities:

Several needs appeared on more than one of the population group lists (e.g., access to dental care and medical home) or were noted to be important across population groups; these needs were consolidated as cross-cutting issues. In the full group discussion, participants identified some of the listed needs as “emerging,” meaning that sufficient data are not yet available to understand the full scope of the problem, and added them to a “c-list” of issues to track over time. Other needs were identified as current or emerging mandates or responsibilities,

and added to a “b-list” of needs that will be addressed regardless of the final priorities. The following is the resulting list of 18 needs/priorities, along with the b- and c-lists:

A-List: Top 18 MCH Needs/Priorities

Across Population Groups (Cross-Cutting Issues)

1. Increase workforce capacity and education (medical, dental, mental health, and non-traditional providers)
2. Alleviate families’ multiple life stressors and their serious physical and mental health consequences
3. Use a socio-ecological approach to health that addresses social and environmental determinants and promotes safe and healthy communities
4. Increase access to dental care and prevention across the lifespan
5. Address Virginian’s low perception of risk

Women and Infants

6. Improve access to medical prevention and treatment services, including medical home
7. Improve pre- and inter-conception health, including family planning
8. Improve patients’ and providers’ awareness of existing resources
9. Increase male involvement with respect and responsibility

Children and Adolescents

10. Address mental health and social-emotional needs (including substance abuse, addiction, and violence)
11. Communicate appropriate health messages across all cultures
12. Reduce negative environmental health effect on pregnancy outcomes and child health
13. Address chronic health conditions
14. Improve access to care and insurance (including helping people access available services through transportation and other means)

Children with Special Health Care Needs

15. Improve integration of care
 - a. Community role and coordination
 - b. Centralized locations for comprehensive services
 - c. Re-evaluate system of care
16. Reduce financial barriers to care
 - a. Insurance coverage for young adults
 - b. High out-of-pocket costs
 - c. Reimbursement issues
17. Enhance family education (e.g., for navigating the CSHCN system)
18. Improve access to mental health services (including early intervention)

B-List: Must Be Addressed (regardless of priority ranking)

- Disparities/inequities
 - Race/ethnicity
 - Age
 - Geography

- Insurance status
- Socioeconomic status measures (income, educational attainment, poverty, persistent poverty, and employment)
- Response to healthcare reform—TBD (e.g., workplace lactation support)
- Access to healthy food

C-List: Emerging Needs to Track

- Will the expansion of the newborn screening panel increase the need for services (due to increased identification of conditions)?
- Effects on families of transition home from jail
- Effects on families of parents’ departure for and return from military service
- Males’ reproductive planning and access to contraceptive services

Methodologies for Ranking / Selecting Priorities:

The 18 top priorities represented a mix of health system capacity issues, population health status issues, and public health approaches or strategies, all expressed in very broad terms. As a result, participants felt that defining criteria for further prioritization would be untenable. Instead, participants made recommendations to the priority-setters, the OFHS Division Directors, regarding factors to consider in narrowing down the list to the 7 to 10 MCH priorities that will be the focus of Title V work during the next five years. The recommendations included:

- Ability to track/measure
 - Ability to measure over a 5-year period
 - Ability to set milestones and track intermediate and process measures (not just outcomes) with meaningful discussion
- Opportunities for collaboration/synergy
- Ability to redirect or leverage resources
- Duration of effect and sustainability
- Return on investment/impact
- Innovative approaches
- Reach new populations (e.g., men)
- Degree to which it affects cross-cutting health care needs and the life span
- “Begin with the end in mind”
- Barriers to effectiveness
 - Authority/responsibility

- Structural barriers
- Political barriers
- Effect on disparities/inequities
- Cost
 - Staff resources and effort
 - External resource availability

Priorities Compared with Prior Needs Assessment:

On May 19, 2010 the six OFHS Division Directors, along with the three primary planning and data staff and the acting OFHS director, met to finalize a list of up to 10 priorities with measurable indicators. As noted above, the 18 top needs identified by participants in the stakeholder input meeting were too broad to translate into measurable indicators, and several represented strategies or approaches to addressing population health status needs rather than priority needs themselves.

Broad priority statements have benefits; they reflect a holistic and forward-thinking approach, and they may help to expand others’ understanding of the mission, goals, and accomplishments of the OFHS. Broad priority statements lend themselves to capacity-building efforts with the potential for long-term impact, and they can help to frame categorical programs in the context of wider goals. The challenge of working with broad priority statements lies in the inherent tension between the overarching principles that drive MCH work (e.g., life course framework, socio-ecological approach) and pragmatic considerations (e.g., structure / authority / funding streams, political viability, other constraints). A discussion of the priorities adopted in 2005 highlighted a number of issues that participants wished to avoid with the priorities adopted for 2011-2015: 1) the 2005 priorities were not very useful in planning and evaluating efforts, 2) there is a disconnect between priorities and resource allocation, 3) the priorities did not balance “what we’d like to do” with “what we have to do,” and 4) the broad priorities were not aligned with the OFHS pragmatic approach to addressing health status problems.

Priority Needs and Capacity:

As a result of the discussion of the broad priorities identified in the 2005 needs assessment, the 18 priorities identified by the stakeholders, and the recommendations of areas to be considered when narrowing down the priorities, the Division Directors reached a consensus that the new priorities needed to be more focused and measurable. They also agreed that the list

of 18 priorities identified by the stakeholders at the initial priority setting meeting would provide guidance for ongoing OFHS planning and implementation. Eight new MCH priorities were set for FFY 2011-2015. The following are the Title V priorities for 2011-2015:

1. Reduce infant mortality
2. Reduce injuries, violence, and suicide among Title V populations
3. Increase access to dental care and population-based prevention of dental disease across the lifespan
4. Decrease childhood obesity
5. Decrease childhood hunger
6. Improve access to health care services for children and youth with special health care needs by promoting medical home in practice
7. Promote independence of young adults with special health care needs by strengthening transition supports and services
8. Support optimal child development

In developing the eight priorities, consideration was given to the OFHS capacity and the political will and commitment to successfully address the priorities over the next five years. The OFHS staff have expertise in the planning and implementation of activities at all levels of the pyramid. In addition, current activities offer opportunities for expansion or opportunities for innovations. Two of the priorities specifically address major initiatives supported by the Commissioner and the administration. These include reduction of infant mortality, an initiative supported by the Health Commissioner and the Commissioner's Infant Mortality Work Group, and the reduction of childhood obesity, an initiative supported by the Commissioner and the Commissioner's Work Group on Obesity Prevention and Control. The OFHS capacity to successfully address the eight priorities and the support by the Commissioner and the administration is further enhanced through the strong collaborative relationships that exist between OFHS programs and other state agencies, local agencies, organizations and the faith-based communities.

MCH Population Groups:

The eight new MCH priorities address the three major MCH population groups. Pregnant women, mothers and infants are covered by priorities 1, 2, 3, and 8, and incorporate a lifespan approach to improving outcomes. Children are covered by priorities 3, 4, 5, and 8. Children

with Special Health Care Needs are covered specifically by priorities 6 and 7, and are also covered by the priorities aimed at improving health status for all children.

Priority Needs and State Performance Measures:

Participants also identified 10 State Performance Measures that will be used to track progress in addressing four of the priorities. In addition, the participants identified National Performance Measures, National Outcome Measures, Health System Capacity Measures and Health Status Indicators that will be used to measure success in meeting the priority needs. A chart showing all the measures that will be used to measure success in meeting the priorities is available in Appendix D. The new State Performance Measures along with the rationale for choosing the measure are listed below. Note that Priorities 4, 6, and 7 are adequately measured using existing performance measures, and Priority 8 will be measured using National Performance Measure 12 while other appropriate and measurable indicators of children development are identified.

Priority #1: Reduce infant mortality

New State Performance Measure 1: Percent of infants born preterm (gestational age less than 37 weeks)

Numerator: Number of infants with a gestational age less than 37 weeks

Denominator: Total number of live births

Data Source: Virginia Birth Certificates

Rationale: The rate of preterm births has continually risen in Virginia as well as nationally.

There is a strong link between preterm birth and infant mortality. In Virginia, preterm birth is the most frequent cause of infant death. Women who have already experienced a preterm birth are at greater risk for delivering early again. Virginia has been more successful in reducing SIDS than mortality due to preterm births. Separating out the preterm infants will help identify some of the causes and/or contributing factors that may be preventable. Existing National Performance Measures do not specifically measure the preterm birth rate. It is important to understand the factors that impact preterm births in order to reduce infant mortality.

New State Performance Measure 2: Percent of women ages 18-44 who report good/very good/excellent health.

Numerator: Female respondents aged 18-44 years who reported their general health status was excellent, very good, or good

Denominator: Female respondents aged 18-44 years who reported their general health status was excellent, very good, good, fair, or poor

Data Source: Virginia BRFSS

Rationale: Self-rated health status is a simple measure of health-related quality of life. Lower ratings of subjective health status have consistently been associated with increased mortality, adverse health events, health care utilization, and illness severity. Much of the needs assessment data supports the need to examine the general health of women prior to pregnancy since underlying conditions such as diabetes, cardiovascular disease including hypertension and obesity contribute to poor pregnancy outcomes such as low weight birth, prematurity, infant mortality and maternal death.

Priority #2: Reduce injuries, violence, and suicide among Title V populations

New State Performance Measure 3: Percent of 9th-12th graders who have ever been bullied on school property during the past 12 months

Numerator: Number of 9th-12th graders who have ever been bullied on school property during the past 12 months

Denominator: Total number of 9-12 graders in public school

Data Source: Virginia Youth Survey (every two years)

Rationale: VDH's violence prevention programs have coordinated statewide activities to address bullying, dating violence, and suicide over the past several years; schools in Virginia have been a large focal area for these activities. Teen dating violence and bullying continue to be emerging public health concerns. The Virginia Youth Survey identified that a significant percentage of sampled youth have experienced bullying and violence. Suicide is a required national performance measure. Virginia was limited in the selection of state performance measures and could not select both bullying and teen dating violence as measures. A bullying measure encompasses dating violence.

New State Performance Measure 4: The rate of childhood injury hospitalizations per 100,000 children ages 0-19.

Numerator: Number of injury hospitalizations to children ages 0-19

Denominator: Total population of children ages 0-19

Data Source: Virginia Health Information (VHI) hospital discharge data /National Center for Health Statistics Virginia Population Estimates

Rationale: VDH's injury prevention program primarily focuses on children. Tracking this measure will provide a good assessment of progress in the state.

Priority #3: Increase access to dental care and population-based prevention of dental disease across the lifespan

New State Performance Measure 5: The percent of low income children (ages 0-5) with dental caries.

Numerator: Total number of children enrolled in Head Start with decayed and filled teeth.

Denominator: Total number of children ages 0-5 enrolled in Head Start.

Data Source: Virginia Head Start

Rationale: Oral health is an important part of children's overall health and wellbeing, but many children do not receive comprehensive oral health care. Dental caries is the most common chronic childhood disease. Untreated oral disorders affect a child's overall medical health, as well as their growth, school attendance, and social and economic outcomes. Particular populations of children are more likely to have oral disease: those from low-income families, minority groups, and CSHCN. The information will provide quantification of the problem and assist in the identification of priority areas for prevention. The measure will also provide evaluative data to determine if prevention efforts are effective.

New State Performance Measure 6: Percent of low income third grade children with dental caries

Numerator: Number of third grade children who receive free and reduced lunch who have dental caries

Denominator: Total number of third grade children who receive free and reduce lunches

Data Source: Division of Dental Health Sentinel Schools Surveillance / Virginia Department of Education

Rationale: In spite of a long history of care and prevention in Virginia, dental disease remains the most common chronic disease of the state's children. Virginia dental screenings have

consistently shown that children enrolled in the free lunch program have higher decay levels than those children that do not participate. The collection of this data supports the need for a continued effort to meet the Healthy People National Objectives. The information will provide quantification of the problem and assist in the identification of priority areas for prevention. The measure will also provide evaluative data to determine if prevention efforts are effective.

New State Performance Measure 7: Percent of women with a live birth who went to a dentist during pregnancy

Numerator: Number of women with a live birth who went to a dentist during pregnancy

Denominator: Total number of women with a live birth

Data Source: Virginia PRAMS

Rationale: Growing evidence suggests a link between oral diseases and premature, underweight infants. Pregnant women who have gum disease may be more likely to have a baby that is born prematurely or under weight. Updated guidelines for dental care for pregnant women have been developed. The information will provide quantification of the problem and assist in the identification of priority areas for prevention. The measure will also provide evaluative data to determine if prevention efforts are effective and the new guidelines are having an impact.

Priority #5: Decrease childhood hunger

New State Performance Measure 8: Percent of children eligible for WIC that are enrolled in WIC, ages 0 to 5. *Numerator:* Number of children ages 0 to 5 enrolled in WIC

Denominator: Total number of children estimated to be eligible for WIC, ages 0 to 5

Data Source: Virginia WIC program data

Rational: The WIC program has a well documented positive impact on children's health, which emphasizes the significance and importance of the program's participation levels. Research has shown that children participating in WIC are more likely to receive necessary immunizations and consistent medical care. Research has also show children who are eligible for but not receiving WIC are more likely to be underweight and at risk for developmental delays.

New State Performance Measure 9: Percent of eligible children in daycares that participate in Child and Adult Care Feeding Programs (CACFP).

Numerator: Number of children ages 0-12 in daycares that participate in Child and Adult Care Feeding Programs (CACFP).

Denominator: Total number of children ages 0-12 in daycare.

Data Source: Virginia WIC program data

Rationale: The goal of the CACFP is to improve the quality of day care and make it more affordable for low-income families. CACFP participation rates will reflect the number of children in day care who are receiving nutritious meals and snacks in an affordable day care setting.

New State Performance Measure 10: Percent of eligible children participating in Summer Food Service Program (SFSP)

Numerator: Number children ages 0-18 participating in summer feeding programs

Denominator: Total number of children ages 0-18 eligible for free or reduced-price lunch in Virginia

Data Source: Virginia WIC Program data / Virginia Department of Education

Rationale: The SFSP provides healthy meals to children in the absence of the national School Lunch (NSLP) and the School Breakfast Program (NSBP) during the summer months. The levels of eligibility for free-and-reduced-price meals indicate a lack of financial resources to provide healthy nutrition to children at home. SFSP participation rates will indicate how many children are accessing nutritious meals while school is not in session.

6. Outcome Measures – Federal and State

Virginia's MCH activities are organized to address the National and State Performance Measures. The following briefly describes the performance measure status, some of the major activities that impact the performance measure and any factors that may have affected the achievement of the performance measure.

National Performance Measures

Performance Measure 1: The percent of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their State-sponsored newborn screening programs.

Virginia has continued to meet the annual performance measure of 100%. All 174 screen positive newborns received timely follow up. Newborns are screened for 28 inborn errors of body chemistry and all infants with abnormal results are tracked and followed up. Confirmed

cases are referred into treatment. The Newborn Screening Program also provides education and technical assistance to providers and maintains contracts with three metabolic treatment centers.

Performance Measure 2: The percent of children with special health care needs age 0 to 18 years whose families partner in decision making at all levels and are satisfied with the services they receive.

Based on the 2005-2006 National CSHCN Survey, 59.8% of CSHCN families indicated that they partnered in decision making and were satisfied with the services that they received. This was less than the annual performance objective of 65%. Results from surveys conducted by the CSHCN program show high satisfaction among families served by the Child Development Clinics (97% satisfaction), Care Connection for Children (96% satisfaction) and the Virginia Bleeding Disorders Program (85% satisfaction). Survey respondent recommendations for the CCC included improving delivery of transition services, partner more with the dental health resources, and better assess parents' need for support and resources.

Performance Measure 3: The percent of children with special health care needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home.

According to the 2005-2006 National CSHCN Survey, 43.9% of Virginia CSHCN received services within a medical home. This percentage not only is lower than the objective of 60%, but is also lower than the reported percentage in the 2001 survey. However, changes in the wording, skip pattern revisions and additions to the questions used to generate this indicator call into question the data comparability. All children seen in the Child Development Clinics, the CCC and the Virginia Bleeding Disorder Program are screened to determine if they have a primary care provider. In 2009, 99.4% of the CDC clients, 100% of both the CCC and the Virginia Bleeding disorder program had a primary care provider. Plans for the upcoming year include additional training for health professionals regarding the medical home concept, standardizing developmental screening tools, and working with the Home Visiting Consortium to enhance skills of home visitors to serve as care coordinators in support of primary care practices.

Performance Measure 4: The percent of children with special health care needs age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need.

According to the 2005/2006 National Children with Special Health Care Needs Survey, Virginia had a reduction in the percentage of CSHCN that had adequate insurance from the percentage reported in the 2001 survey. A major component of the CCC program and the VBDP

is the provision of insurance case management to assist families to obtain, understand, and use health insurance. The programs refer all potentially eligible children to Medicaid, FAMIS and the SSI programs and follow-up with families to assure that the application is processed. In FY09, 98.5% of CDC, 92.2% of CCC and 91% of VBDP clients had health insurance coverage. The CSHCN program continues to work with DMAS to remove obstacles causing underinsurance of CSHCN on Medicaid and FAMIS. Clients who are not eligible for public insurance, who cannot afford private insurance, or whose insurance does not cover the needed services continue to receive financial assistance from the CSHCN Pool of Funds. In fact, the number receiving these funds increased from 324 in FY 06 to 464 in FY 09.

Performance Measure 5: Percent of children with special health care needs age 0 to 18 whose families report the community-based service systems are organized so they can use them easily.

According to the national survey, the percent of families reporting positively on this measure has increased from 80.1% in 2001 to 89.6% in 2005/2006 survey. The Virginia CSHCN program convened a summit of partners representing a wide range of stakeholders including parents. It was organized so that six groups met to review draft issue briefs and make suggestions for changes relating to the core outcome measures. The finalized briefs will be used to provide guidance to a statewide consortium in the fall.

Performance Measure 6: The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence.

There has been a major increase in this measure since the 2001 national survey, where only 5.8% reported receiving transition services. In the 2005/2006 survey, 37.8% reported receiving transition services. Some data issues may have impacted this increase, such as wording changes, skip pattern revision, additions to the questions used to generate the indicator, and small sample size in 2001, so the 2005/2006 data will be considered the baseline. Virginia is lower than the national average of 41.2%. The CCC Inter-center Work Group has determined that transition is an area of significant need for focus in the coming year, and this has also been designated as a Title V priority.

Performance Measure 7: Percent of 19 to 35 month olds who have received full schedule of age appropriate immunizations against Measles, Mumps, rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, and Hepatitis B.

The immunization data indicate that coverage rates are trending down. In 2008, the rate for 4:3:1:3:3: dropped to 73.2%. This may be related to several issues: an increase in medical and religious exemptions; adverse publicity regarding concerns about vaccines and autism; and the recession and loss of jobs and insurance. The Title V program has supported several state and local efforts to provide parents and caregivers with information about immunizations. Programs such as WIC, Resource Mothers and Healthy Start provide information and encourage parents to immunize their children. District health departments provide immunizations, and some have used Title V funds to supplement their immunization efforts. The newly implemented Text4Baby provides messages to pregnant women and new mothers who register for the service. The messages include info on the importance of immunizations. VDH maintains a Bright Futures web site that provides information on immunizations.

Performance Measure 8: The rate of birth (per 1,000) for teenagers aged 15 through 17 years.

Virginia has met the annual performance objective. Although the overall teen birth rate is flattening out, analyses suggest that rates are increasing for older (18 and 19 year old) Hispanic teenagers. The local health departments serve teens in their family planning clinics. In addition, the Teen Pregnancy Prevention Initiative (TPPI) provides funding to 7 districts. However the funding for TPPI has been reduced by half, making it imperative for the sites to operate at maximum potential. The Resource Mothers program continues to mentor young teens to prevent secondary pregnancies. Teen birth rate and teen pregnancy data is being provided to localities so that they may apply for federal teen pregnancy prevention funding opportunities.

Performance Measure 9: Percent of third grade children who have received protective sealants on at least one permanent molar tooth.

According to the provisional 2009 data, the performance objective has been exceeded. The performance measure data comes from the Virginia Statewide 3rd Grade Public School Dental Assessment completed in 2009. In 2009 the district health department dental clinics provided more than 12,000 dental sealants. A pilot sealant program in three health districts (Crater, Henrico and Piedmont) provided 1,200 sealants for 547 children in 2009 and in 2010 to date has provided sealants to over 327 children. Future plans include an expansion of the program to other targeted areas.

Performance Measure 10: The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.

In 2008, Virginia's rate of death of children aged 14 years and younger caused by motor vehicle crashes was less than the annual performance objective. In 2007 the Virginia child restraint laws were strengthened to require the following: all children through the age of seven must be placed in a child restraint device, rear-facing child restraint devices must be placed in the back seat, all children between their 8th and 16th birthday must be restrained by a child restraint system or a safety belt and children no longer are allowed to ride unrestrained in the rear cargo area of vehicles. Staff in the Division of Injury and Violence Prevention provide managerial oversight to a child passenger safety program that provides public and professional education to increase correct child restraint usage for children 0 to 8. The division also provides approximately 16,700 children restraints and child passenger safety education to low income families.

Performance Measure 11: The percent of mothers who breastfeed their infants at 6 months of age.

The 2008 data from the National Immunization Program shows that approximately 43% of Virginia mothers are breastfeeding their infants at the age of 6 months. This is less than the annual performance objective of 49% however the percent has increased since 2005. The VDH Statewide Breastfeeding Advisory Committee is continuing to make efforts to include wider representation. The Division of Nutrition, Physical Activity, and Food Programs is working with the University of Virginia to host a web-based training course in lactation management. The division also manages the Breastfeeding Peer Counselor Program in each of the 35 health districts. Currently there are over 80 breastfeeding peer counselors.

Performance Measure 12: Percentage of newborns who have been screened for hearing before hospital discharge.

The data from the Virginia Early Hearing Detection and Intervention System shows that approximately 97% of newborns are screened for hearing prior to hospital discharge. This percentage has remained basically the same for the past few years. The Virginia Early Hearing Detection and Intervention Program (VEHDI) employs a number of activities to ensure that newborns are screened. These include providing hospitals with quarterly and annual reports regarding their performance, and training hospital staff in data reporting requirements. Hospitals not meeting data reporting requirements receive targeted interventions. In addition to these

activities, the VEHDI provides public education materials, a Hearing Aid Loan Bank and a family-to-family support program, “Guide By Your Side.”

Performance Measure 13: Percent of children without health insurance.

The National Survey of Children’s Health, released in 2009, shows that 7.2% of Virginia’s children are without health insurance. This does not meet the annual performance objective. The percent of uninsured children has not changed significantly since the 2005 national survey although there have been changes in the Medicaid eligibility levels for children. Title V program staff participate in the state mandated Children’s Health Insurance Advisory Committee and work closely with the Medicaid agency and other agencies including the local health departments to ensure that eligible children are enrolled in Medicaid/FAMIS. The CSHCN and the Virginia Bleeding Disorders Program also work closely with families to obtain insurance, either private or public, for their clients. In FY 2010, five health districts used their Title V funds to support clinic-based case management efforts to identify, refer, and assist with enrollment or re-enrollment for publicly funded children’s health insurance programs and representatives from WIC and the Division of Child and Adolescent Health are participating in the Robert Wood Johnson funded Maximizing Enrollment for Kids grant awarded to the Virginia Department of Medical Assistance Services.

Performance Measure 14: Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile.

For the past few years, the percent of WIC children with a BMI at or above the 85th percentile has remained fairly constant. The 2008 data show that about one-third of WIC children have a BMI at or above the 85th percentile. The annual performance objective is 30 percent. The Virginia WIC program has implemented the new food packages that are designed to improve the nutrition and health of low-income pregnant women, new mothers, infants and young children with nutrition education and more fruits, vegetables and whole grains to improve dietary quality. The Division of Nutrition, Physical Activity and Food Programs has also expanded the education for WIC participants and the public through HealthBites and continues to implement the CHAMPION program to address obesity.

Performance Measure 15: Percentage of women who smoke in the last three months of pregnancy.

According to the 2008 birth certificate data, 6.2 percent of new mothers reported that they smoked during the pregnancy. This reflects a statistically significant downward trend in smoking rates almost 9% in 1999. Data regarding smoking in the last three months of pregnancy were not available from the current birth certificate, however PRAMS data indicates that 10.8% of new mothers smoked in the last three months of pregnancy, 22% reported smoking prior to pregnancy, and 66% quit during pregnancy. The Virginia Healthy Start Initiative, Resource Mothers, the local health departments' Family Planning and Maternity Clinics all screen for tobacco use. The Regional Perinatal Councils and the Resource Mothers have implemented educational programs to address tobacco use.

Performance Measure 16: The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

The rate of youth suicide in 2008 was 9.5 per 100,000 much higher than the annual performance objective of 5.2 per 100,000. However, based on trend data from 1999 to 2009, the projected rate for 2009 is 6.6 per 100,000. The Division of Injury and Violence Prevention manages the SAMHSA funded youth suicide prevention program. The program works with secondary schools to promote helping and help seeking for suicidal youth through evidence based models. The Division is also coordinating a series of trainings for mental health clinicians on recognizing and responding to suicide risk.

Performance Measure 17: Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.

In 2008 approximately 88% of very low birth weight infants were delivered at facilities for high-risk deliveries and neonates. This percentage has remained fairly constant since 2000. There has been no significant increase or downward trend. The Resource Mothers and the Virginia Healthy Start Initiative staff receive information on the signs and symptoms of obstetrical risk. Both programs work with their clients to identify obstetrical issues such as the signs of preterm labor and encourage them to seek early, and sometimes urgent medical care. The local health departments that provide perinatal services provide education regarding the signs and symptoms of preterm labor. The Regional Perinatal Councils continue to use FIMR as a method of identifying issues pertaining to access to care.

Performance Measure 18: Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

In 2008, 84.6% of infants were born to pregnant women who received prenatal care beginning in the first trimester. This percentage has shown no significant increase or decrease since 1999. All local health departments provide pregnancy testing and, if positive, provide patient counseling and referral for prenatal care within two weeks. The Regional Perinatal Councils have initiated programs to increase early entry into prenatal care, and each Resource Mothers Program develops an annual plan to enhance first trimester entry into prenatal care.

State Performance Measures:

State Performance Measure 1: Percent of children and adolescents who have a specific source of ongoing primary care for coordination of their preventive and episodic health care.

According to the latest National Survey of Children's Health, Virginia has exceeded the annual performance objective. Approximately 93% of families reported that their children and adolescents have an ongoing source of care for both preventive and episodic health care. This is an improvement over the original survey where 85% had an ongoing source of care. Changes in Medicaid and FAMIS eligibility have contributed to this. In addition, Title V staff continue to promote the medical home concept in all partnerships. VDH has partnered with the AAP to launch the Bright Futures web site (www.healthyfutureva.com) to provide anticipatory guidance themes for well child visits. Future plans include a learning collaborative on medical home for 15 primary care practices (including a range of federally qualified health centers). This collaborative will reach across geographic areas of the state. Though targeted toward improving systems for CSHCN, the promotion of medical home will benefit all children served.

State Performance Measure 2: Percent of children and adolescents who are overweight or obese.

Like many states, childhood obesity is a major issue. Virginia's annual performance objective is 14% however approximately 32% of WIC children are overweight or obese in 2008. The Division of Nutrition, Physical Activity and Food Programs worked to expand the nutrition education component of WIC through HealthBites, a web site providing web-based nutrition education for WIC participants and the public. The division continues to work closely with the VA AAP and their Obesity Taskforce as well as the Commissioners Obesity Prevention Work Group. The division continues to implement the CHAMPION obesity prevention plan that includes grant funding for local obesity prevention programs.

State Performance Measure 3: The percent of newborns who fail the hearing screening and who receive a diagnosis before three months of age.

The Virginia Early Hearing Detection Program (VEHDI) data shows that 65.5% of newborns who failed the hearing screen received a diagnosis before three months of age, much lower than the annual performance objective of 95%. A number of improvements are underway to increase success on this measure. A revised 1-3-6 Follow Up Plan has been implemented. In FY 2010, the VEHDI Program is building follow up efforts through improved data quality, reporting, stakeholder collaboration, public awareness, and family-to-family support initiatives.

State Performance Measure 4: The unintentional injury hospitalization rate for children aged 1-14 per 100,000.

Virginia has a lower unintentional injury hospitalization rate for children aged 1-14 than our annual performance objective. Based on final Virginia Health Information data, in 2008 Virginia's rate was 112/100,000 as compared to the objective of 130/100,000. The Division of Injury and Violence Prevention (DIVP) staff continue to coordinate numerous state and community childhood injury prevention projects and provide data, educational resources and information through a website, resource center, and 1-800 line. DIVP produced an annual report on injury deaths and hospitalizations occurring in 2008, the most recent year available, and updated the Virginia Online Injury Reporting System with 2008 data. DIVP produced an injury update report on sports related injuries among children emphasizing sports-related concussions.

State Performance Measure 5: The percent of low income children (ages 0-5) with dental caries.

Based on 2008 Head Start data, Virginia has not met the annual performance objective. In 2008, 21.3% of Head Start participants had dental caries. Between July 1 and December 30, 2009 local health districts provided 2,343 visits for children under four years old and 2,879 fluoride varnish applications. To date in FY 2010, 4,208 children enrolled in WIC have received assessment, fluoride varnish by staff funded through the TOHSS and PHHS Grants. The program has been implemented in several health districts. In addition, Title V funds provide support to some districts' dental programs. The Division of Dental Health continues to educate and train providers and caregivers regarding the oral health of CSHCN.

State Performance Measure 6: The ratio of dentists to population in underserved areas.

Virginia did not meet the annual performance objective. Early in FY 2009, due to budget cuts, the state general funding was lost for both the Dental Scholarship and Loan Repayment

programs. Revenue funds were also lost (financial obligation paid back by dentists who decided not to serve in an area of need). The Virginia Dental Scholarship Program had been in place since 1952 and the Loan Repayment program was first implemented during FY 2006. Both programs have been funded by state general funds.

State Performance Measure 7: The proportion of children (0-21) who receive genetic testing.

The 2009 provisional data show that Virginia did not meet the annual performance objective of 39% of children who receive genetic testing. In 2009, approximately 31% received testing. The Genetics and Newborn Screening unit within DCAH continued to contract with three genetic/metabolic treatment centers to assure that genetic services were available to all uninsured and under-insured children and their families in the state. Work on coordinating access to clinical genetic services across the Commonwealth, assuring the provision of genetic awareness, and quality services and education for consumers and providers will continue. However, the contracted Genetic Counselor position was not funded at the end of a five-year CDC cooperative agreement and the duties were transferred to others within the unit.

State Performance Measure 8: The percent of women reporting substance use during pregnancy.

The provisional data for this performance measure indicate that Virginia has not met the annual performance measure of 5.7%. In 2009, provisional birth certificate data show that 6.3% of new mothers reported using substances during pregnancy. The Regional Perinatal Councils (RPCs) monitor substance use trends through FIMR. Trends are discussed during Community Action Team meetings with key stakeholders planning and implementing programs and services unique to the needs of regional citizens. Project Link representatives continue to provide consultation to all the RPCs within Virginia. The Southwest region, in partnership with Project Link, has placed a billboard message on a major road in Southwest Virginia. The message reminds people that substance use of any kind affects both mother and fetus. This area has a higher percentage of substance use within the state. This region also expanded the substance use task force with a plan to examine existing screening policies and coordinate efforts to implement inpatient prenatal drug screening.

State Performance Measure 9: The percent of women with an ongoing source of primary care.

The 2009 provisional BRFSS data show that Virginia has not met the annual performance objective. In 2009 85.8% of women reported having an ongoing source of primary care. The annual performance objective is 93%. VDH will continue to support health districts that provide

obstetrical and interconception health by providing financial, technical, and educational opportunities. Access to care will be monitored, and programs such as Resource Mothers and Healthy Start continue to ensure women have an ongoing source of primary care.

A number of the national and state performance measures contribute to the overall National Outcome Measures relating to infant and child death. Virginia's 2011 -2015 priorities and performance measures link to the National Outcome Measures. These specifically include the focus on infant mortality and injury and violence prevention. Virginia has not developed a state outcome measure for 2011-2015.

Conclusions and Next Steps:

Several recommendations have been made by stakeholders to assure that this needs assessment is used in program planning, policy development, and resource allocation. The first recommendation was to establish a structure and timeline for an ongoing planning process with interim assessments of progress toward goals and objectives. While this step has already been initiated with through the setting of priorities and performance measures, next steps will be to include a focus on capacity needs, such as allocation of staff time, alignment of job descriptions with priorities and objectives, and training opportunities.

Another recommendation for this process was to include staff at different levels of the organizational hierarchy in meaningful ways in an ongoing planning process in order to enrich their understanding of their programs' roles in the agency and the larger MCH system, provide opportunities for leadership development, and promote ownership of overarching goals. External stakeholders can also be engaged in the planning process to promote system-level solutions and build on the partnerships that already exist; interagency planning can enhance coordination, minimize duplication, and leverage existing funding.

Finally, the OFHS Title V program will use the overarching guidelines generated during the stakeholder meeting to communicate the holistic approach to multiple audiences, including internal VDH stakeholders, consumers, and policymakers. Communication with stakeholders will help to disseminate findings from this needs assessment that highlight the broad reach of MCH, the multi-factorial influences on health, and how the new priorities and plans fit into the larger vision of achieving healthy people in healthy communities.

Maternal & Child Qualitative Health Needs Assessment

Prepared for:

Virginia Department of Health's
Office of Family Health Services

February 2010

Prepared by:

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EXECUTIVE SUMMARY

In September 2009, the Virginia Department of Health's (VDH) Office of Family Health Services (OFHS), contracted with the Central Virginia Health Planning Agency CVHPA) to conduct a qualitative needs assessment of populations served by Title V (Maternal and Child Health Block Grant). The CVHPA is a nonprofit organization with more than 30 years experience in health planning and needs assessment which assisted the OFHS with a similar needs assessment in 2004/05. The needs assessment is comprised two components: 1) interviews of key health provider, governmental, and organizational stakeholders that are involved with maternal and child health issues, and 2) a focus group conducted in each of the State's five health planning regions. The health planning regions are the same as Virginia's five perinatal councils' regions.

It should be noted this needs assessment reflects the opinions and insights at a particular point in time and policies/practices/circumstances may have altered somewhat since the needs assessment was conducted. Certain community and/or regional differences are apparent in this needs assessment though common themes between the interviews and focus groups emerged and are stated as follows:

Cost of Health Care

There is considerable concern over the current state of the economy and its impact on the health of families and children. Extensive job loss combined with increasing costs of healthcare has severely limited access to medical care and has placed increased strain on free or reduced cost services. Segments of the population whom five years ago traditionally did not need these services are now finding themselves necessary recipients. Increased demand, combined with fewer resources, is creating significant gaps in service for Virginia's lower income and/or uninsured populations. Medicaid reimbursement and enrollment continued to be a concern five years after the needs assessment conducted in 2004. While Medicaid reimbursement has improved for some areas of provider offered services, such as dental and pediatric care, there is still a significant need to either increase or provide reimbursement rates for mental health services and preventative care. Improvement in Medicaid and FAMIS enrollment has ensured provision of services to a larger portion of children but administrative problems still exist within the current programs. Health care reform was frequently mentioned as a possible solution to improve access for lower income and/or uninsured populations while also being a concern relative to payment rates and possible provider shortages.

Coordination, Communication, and Data Driven Collaboration

There continues to be a need for greater coordination and collaboration. Several times the healthcare system was noted as a complex, difficult, and demanding system in need of clarity and a central source for the disbursement of information. Many were concerned that services and information were available to populations in need but unattainable due to the complexity of the system. One of the primary roles identified for OFHS was that of a strong leader in the coordination of services, ensuring limited waste and duplication resulting in the most efficient use of resources possible while providing needed resources to fund community-based action. It was also noted that the OFHS and VDH are good

sources for data but could improve in their role as disseminators of information to better promote collaboration and best practices among the various organizations and programs. Communities and private organizations need to capitalize on their close proximity to populations in need by becoming strong collaborators in the promotion of health messages and initiatives. Greater and more unified communication needs to be implemented to promote a clear message of health and smart health behaviors, similar to the efforts put into place following the H1N1 pandemic concerns (i.e. dissemination of information from the VDH, radio messages, and collaboration amongst various organizations).

Prevention, Early Intervention, and the Promotion of Health

Participants across the state noted the need for increased preventive care, early intervention of disease, and stronger efforts in the promotion of health. Respondents noted that efforts to promote immunizations, early intervention, and dental care for children have improved health over the past five years. However, efforts are still needed to ensure diagnosis is followed by adequate treatment and continuity of care for those populations in need. Dental care continues to be a problem for pregnant women and adults unable to receive dental insurance under Medicaid. Access to preventive care is limited, particularly for adolescents and adult males who are often lost in the system. For all age groups, there is significant need to promote nutrition and active lifestyles while improving/providing the infrastructure needed to make healthy choices (i.e. sidewalks, grocery stores). Programs like “text4baby” and “Period of Purple Crying” were recommended as excellent models for the promotion and distribution of health information.

Vulnerable Populations

Low income families, minorities (African Americans, Hispanics, and others), non-English speaking peoples, residents of rural areas, and teenagers with mental health or substance abuse problems were viewed as having the greatest unmet needs. Also, many were concerned over the rise in immigrant populations and the cultural challenges facing them in regard to language barriers and well baby care. There was significant concern over the availability of financial access, transportation, and cultural barriers for this group. Improvements in cultural sensitivity, particularly due to VDH efforts, were noted as having been significant.

Access to Care

There continues to be a need for more providers and greater resources; especially in rural areas, areas with high incidence of substance abuse and mental health diagnosis, and for children with special needs. For many population sub-groups financial access is less of a barrier than availability of specialists. There are many excellent programs available offering the necessary services which have extensive waiting lists due to high demand and limited resources. Transportation continues to be a barrier to the accessibility of care and improvements are needed in some language services. There is still a need for prenatal care especially among teenagers and low-income women. There is a rise in single young mothers ill-equipped to care for their selves or their children and they require additional support in receiving services. Increased efforts to involve fathers in the care and support

of their children, beginning during pregnancy, was identified as one way to provide that support.

This Executive Summary cannot begin to capture the rich information, insights, and recommendations provided by the more than seventy five highly informed individuals who were consulted during the course of this needs assessment. We encourage all interested parties to read the entire report to gain greater insight into the community, regional, and statewide needs of women and their families in Virginia and recommendations to improve their health and wellbeing.

Appendix B. Stakeholder and Priority Setting Meeting Agenda

Identifying Maternal and Child Health Needs
Office of Family Health Services
Virginia Department of Health
Stakeholder Input Session
May 17, 2010

AGENDA

8:30 am	Welcome
8:40 am	Icebreaker/Introductions
9:00 am	Overview of the Agenda
9:10 am	Ground Rules
9:15 am	Highlights of Needs Assessment Data
10:00 am	Small Group Work: Major and Emerging MCH Needs
11:00 am	Break
11:15 am	Small Group Work: Top Needs and Promising Strategies
12:15 am	Small Group Reports
12:45 pm	External Stakeholders Dismissed Lunch Break
1:30 pm	OFHS Stakeholders Discussion
2:30 pm	Defining Criteria for Prioritization
3:00 pm	Break
3:20 pm	Scoring Needs According to Criteria
4:00 pm	Discussion and Wrap Up
4:30 pm	Adjourn

May 19, 2010

OFHS Management Team Priority Setting Agenda

- 9:00 am Overview of the Agenda/Process
- 9:15 am What We're Starting From: Preliminary List of Priority Areas
- What are the challenges posed by the types of priorities?
 - What was your experience using the 2005 priority list?
- 9:45 am Process for Today's Work
- Options for narrowing down the list of priorities
 - Discuss and agree on a process
- 10:15 am 7-10 Priorities
- Come to agreement on 7-10 priorities, using the agreed upon process
 - (Take a break at an appropriate point....)
- 12:00 am Lunch Break
- 12:45 pm Developing Measurable Objectives
- Review elements of objectives that work
 - Pair up, draft objectives
- 1:45 pm Review and Discuss Objectives
- 2:30 pm Break
- 2:45 pm Identify Performance Measures
- National performance measures
 - State performance measures
- 3:45 pm Keeping the Momentum
- Establishing an ongoing process of planning and assessment
- 4:00 pm Adjourn

Appendix C. Initial Brainstorming Lists of Needs, by Population Group

[Numbers in brackets = number of sticky dot votes]

Children with Special Health Care Needs

- Changing population (expect increase in number of children with special health care needs)
- Poverty
- Insurance coverage [5]
 - especially for young adults
 - additional reimbursement for providers treating CSHCN
 - high out-of-pocket costs for families
 - Medicaid doesn't reimburse for physician's oral health screening
- Declining numbers of dentists
- Access to dental care [4]
- Transition issues (pediatric vs. adult care)
- Parental education about oral health
- Provider education needs to focus on prevention [2]
- Mental health (early identification of potential emotional/mental health; limited resources for 0-5 population; number of providers; referral wait time) [2]
- Early dental screenings, identification of oral risk factors being incorporated into medical screening/medical home
- Integration of care (community role and coordination; parental education) [8]
- Family education (navigating complex system; including government; network of care coordinators) [3]
- Capacity issues and time
- Need for centralized location to receive multiple/comprehensive services (medical, dental, mental health, etc.)
- Increase in behavioral health services
- Requests for in-home services and associated rates
- Obesity—emerging chronic issue
- Look at re-evaluating system of care, using efficient service delivery model

Children and Adolescents

- Integrate messages
- Family approach/multi-generational [2]
- Data gaps (data exists, but not included)
- Mental health/social/emotional [3]
- Whole child approach
- Integrate services across agencies [1]
- Access to care and insurance [2] (getting people to access the care, not just ensuring it is available)
- Diversity of need (multicultural)
- Determining the appropriate approach/educational, motivational for the audience
- Health across the lifespan
- Healthy communities that are all inclusive [2]
- Best practice vs. reality
- Capacity
- Multiple stressors for children
- Substance abuse [1]
- Health of parents
- Family stress impacts children [1]
- Lifetime exposure to violence [1]
- Repeated cycles of risk [1]

- Across agency planning
- Childcare capacity—affordable, quality, available, infant and toddler
- Childcare for school-age children
- Socio-emotional development and influence of electronic devices on parental bonding and interaction between parents and children [1]
- Increasing screen time, decreasing physical activity and increasing bullying opportunities and brain development [1]
- Loss of real communication between parents and children
- Changing risk perception [3]
- Combating laissez-faire parenting attitude
- Low follow-through of breastfeeding
- Lack of child and adolescent mental health, substance abuse services, dental health
- Need to have providers have a coordinated approach for family members
- Provider education
- Dental insurance [1]
- Older adolescents and young adult time frame – decision making, lack of insurance
- Health education for high school juniors and seniors is lacking [1]
- Continue well-child care after age 5
- Well-child visits not being paid for
- Sports physicals not being paid for
- Need to teach parents to parent
- Need to educate teen parents
- Increasing chronic health conditions and recognizing that they start early [2]
- Need to continuously involve the families
- Early intervention
- Dental/oral health from birth and educate this to all health care providers [2]
- Confusing parents with multiple messages
- Changing media messages to be more public health focused, targeted, culturally-appropriate [3]
- Are messages too complicated
- What are the best avenues to get the message across?
- We need to be more educated about social media venues
- Messages that are too broad
- What are the approaches that really work for the high risk groups
- Agency-wide approach to better reach various audiences effectively
- Still need the one-to-one approach for some audiences
- Central office is disconnected from local health services and planning, and sharing of information at the local level
- Poverty, local unemployment, racism, and other stressors have a tremendous impact [2]
- Challenge of the working parent—both one- and two-parent homes
- Women entering pregnancy overweight
- Impact of environmental health on pregnancy outcomes and health of the child [2]
- Recalled child products
- More extended families living together and the implications of younger adults on children
- Caregiving of parents
- Educating previous generation
- Acceptance of violent behavior, disrespect
- Economic downfall on young families trying make it
- Health isn't easy
- Health isn't always a top priority

Women and Infants

- Unplanned pregnancy

- Maternal death
- Disparities (racial/ethnic, socio-economic, educational, geographic)
- Lack of insurance
- Infant mortality/morbidity
- Multiple family stressors [2]
- Obesity
- Workplace lactation [1]
- Access to dental prevention and treatment [4]
- Chronic disease/health status
- Pre- and inter-conception [2]
- Hunger/food security
- Access to healthy foods
- Workforce—all health [4]
- Lack of mental health resources
- Reimbursement structure
- Healthcare reform
- Neighborhoods/social environmental/family (social determinants) [1]
- Resource awareness by both sides [1]
- Decreasing government, increasing need
- Culture/generational “fat”
- Breastfeeding vs. formula
- Medical/dental home [3]
- Changes in recommendations
- Nontraditional providers (good acceptance by professional workforce and parents) [1]
- Male involvement with respect and responsibility [2]
- Parenting—new issues
- Violence—domestic, bullying, suicide
- Teen pregnancy/ disparities (racial/ethnic and age)
- Undocumented and documented immigrants’ issues
- Sexually transmitted infections
- Information overload/need to filter
- Community training/education toward integration
- Prison population and release
- Response to military return
- Navigating Tricare
- Including nontraditional partners and community representatives
- Lead exposure
- Redefining public health and its role

Top Needs Reported by Small Groups

Children with Special Health Care Needs

- Integration of care
 - Community role and coordination
 - Centralized locations for comprehensive services
 - Re-evaluate system of care
- Financial issues
 - Insurance coverage for young adults
 - High out-of-pocket costs
 - Reimbursement issues
- Access to dental care
- Family education (system navigation)
- Mental health (early intervention, limited resources)
- Provider education

Children and Adolescents

- Mental health/social/emotional needs (including substance abuse, addiction, violence)
- Low perception of risks
- Communicate appropriate health messages across all cultures
- Impact of environmental health on pregnancy outcomes and child health
- Poverty, local unemployment, racism, stressors
- Dental health from birth
- Chronic health conditions (on the rise, early onset)
- Healthy communities that are all inclusive
- Socio-ecological approach to child health
- Access to care and insurance, and helping people access available care (including transportation)

Women and Infants

- Multiple family stressors having physical and mental health consequences
- Workplace lactation support
- Access to dental and medical prevention/treatment (including medical home)
- Increasing medical and dental workforce
- Pre- and inter-conception health (including family planning)
- Social determinants (neighborhoods/social/environment/family)
- Resource awareness (so patients and providers know about existing resources)
- Medical/dental home
- Nontraditional providers
- Male involvement with respect and responsibility

TITLE V PRIORITIES AND MEASURES (2011-2015)

Appendix D. Title V Priorities and Measures (2011-2015)

TITLE V PRIORITY	STATE PERFORMANCE MEASURE	NATIONAL PERFORMANCE MEASURE	NATIONAL OUTCOME MEASURE	HEALTH SYSTEMS CAPACITY INDICATOR	HEALTH STATUS INDICATOR
1. Reduce infant mortality	<p>SPM 1: % of infants born preterm (gestational age less than 37 weeks)</p> <p>SPM 2: % of women ages 18-44 who report good/very good/excellent health.</p>	<p>NPM # 8: Rate of birth per 1,000 for teenagers aged 15 - 17 years</p> <p>NPM # 11: % of mothers who breastfeed their infants at 6 months of age</p> <p>NPM # 18: % of infants born to pregnant women receiving prenatal care beginning in the first trimester</p>	<p>NOM # 1: infant mortality rate per 1,000 live births</p> <p>NOM # 2: Ratio of the black infant mortality rate to the white infant mortality rate</p> <p>NOM # 3: Neonatal mortality rate</p> <p>NOM # 4: Post-neonatal mortality rate</p> <p>NOM # 5: Perinatal mortality rate per 1,000 live births plus fetal deaths</p>	<p>HSCI # 04: % of women (15-44) with a live birth during the reporting year whose observed to expected prenatal visits are greater than or equal to 80% on the Kotelchuck Index</p>	<p>HSI # 01A: % of live births weighing less than 2500 grams</p> <p>HSI # 01B: % of singleton births weighing less than 2500 grams</p> <p>HSI # 02A: % of live births weighing less than 1500 grams</p> <p>HSI # 02B: % of live singleton births weighing less than 1500 grams</p>
2. Reduce injuries violence and suicide among Title V populations	<p>SPM 3: % of 9-12 Graders who have Ever been bullied On school property During the last 12 Months.</p> <p>SPM 4: The rate of childhood injury hospitalizations per 100,000 children ages 0-19.</p>	<p>NPM # 10: Rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children</p> <p>NPM # 16: Rate per 100,000 of suicide deaths among youths aged 15 through 19</p>			<p>HSI # 03A: Death rate per 100,000 due to unintentional injuries among children aged 14 years and younger</p> <p>HSI # 03B: Death rate per 100,000 due to unintentional injuries among children aged 14 years and younger due to motor vehicle crashes</p> <p>HSI #03C: Death rate per 100,000 due to</p>

TITLE V PRIORITIES AND MEASURES (2011-2015)

					<p>unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years.</p> <p>HSI #04A: Rate per 100,000 of all nonfatal injuries among children aged 14 years and younger</p> <p>HSI #04B: Rate per 100,000 of all nonfatal injuries due to motor vehicle crashes among children aged 14 years and younger</p> <p>HSI #04C: Rate per 100,000 of all nonfatal injuries due to motor vehicle crashes among youth aged 15 through 24 years</p>
<p>3. Increase access to dental care and population-based prevention of dental disease across the lifespan</p>	<p>SPM 5: % of low income children (ages 0-5) with dental carries</p> <p>SPM 6: % of low income 3rd grade children with dental carries</p> <p>SPM 7: % of women with a live birth who went to a dentist during pregnancy</p>	<p>NPM# 9: % of third grade children who have received protective sealants on at least one permanent molar tooth</p>		<p>HSCI # 07B: % of EPSDT eligible children aged 6 through 9 years who have received any dental services during the year</p>	
<p>4. Decrease childhood obesity</p>		<p>NPM # 11: % of mothers who breastfeed their infants at 6 months of</p>			

TITLE V PRIORITIES AND MEASURES (2011-2015)

		age NPM # 14: % of children ages 2 to 5 years receiving WIC services that have a BMI at or above the 85 th percentile			
5. Decrease childhood hunger	SPM 8: % of children eligible for WIC that are enrolled in WIC, ages 0 to 5 SPM 9: % of eligible children in daycares that participate in Child and Adult Care SPM 10: % of eligible children participating in summer feeding programs	NPM # 11: % of mothers who breastfeed their infants at 6 months of age			
6. Improve access to health care services for children and youth with special health care needs by promoting medical home in practice		NPM # 1: % of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their State-sponsored newborn screening programs NPM # 3: % of CSHCN age 0 to 18 who			

TITLE V PRIORITIES AND MEASURES (2011-2015)

		receive coordinated, ongoing, comprehensive care within a medical home			
7. Promote independence of young adults with special health care needs by strengthening transition supports and services		NPM # 6: % 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		HSCI # 08: % of State SSI beneficiaries less than 16 years old receiving rehabilitative services from the State Children with Special Health Care Needs (CSHCN) Program.	
8. Support optimal child development		NPM # 12: % of newborns who have been screened for hearing before hospital discharge		HSCI # 02: % of Medicaid enrollees whose age is less than one year during the reporting year who received at least one initial periodic screen HSCI # 03: % of State Children’s Health Insurance Program enrollees whose age is less than one year during the reporting year who received at least one periodic screen	