COMMONWEALTH of VIRGINIA

Office of the Governor

Robert F. McDonnell
Governor

June 19, 2012

Kathleen Sebelius, Secretary
U. S. Department of Health & Human Services
200 Independence Avenue, S.W.
Washington, D.C. 20201

Dear Secretary Sebelius:

Attached for your review and approval is an application to extend Virginia's section 1115 demonstration "FAMIS MOMS and FAMIS Select" (No. 21-W-00058/3). I request that your office approve this change as quickly as possible.

Sincerely,

[redacted]

Robert F. McDonnell

Attachment

cc: Cynthia B. Jones, Director
Virginia Department of Medical Assistance Services

Rebecca Mendoza, CHIP Director
Virginia Department of Medical Assistance Services

DEMONSTRATION EXTENSION APPLICATION
FAMIS MOMS and FAMIS *Select* (No. 21-W-00058/3)

Historical Summary of the Demonstration Project

Virginia's Title XXI Health Insurance Flexibility and Accountability (HIFA) Demonstration has two objectives. First, it expands Title XXI coverage to uninsured pregnant women with family income up to 200% of the federal poverty level (FPL) who are not eligible for Medicaid through a program known as FAMIS MOMS. Second, it uses Title XXI funds to support a health insurance premium assistance program known as FAMIS *Select*. Virginia's Title XXI Child Health Insurance Plan (CHIP) covers children with family income from 133% to 200% FPL under a separate child health plan known as the Family Access to Medical Insurance Security Plan (FAMIS). Children must first be found eligible and enroll in FAMIS before electing coverage through FAMIS *Select*.

By targeting these two populations: uninsured pregnant women not eligible for Medicaid with family income up to 200% FPL and FAMIS-eligible children with access to employer-sponsored or private health insurance, Virginia expects to see the following outcomes:

- A decrease in the rates of uninsurance among pregnant women,
- An increase in participation in premium assistance in CHIP,
- An increase in access to appropriate medical services, and
- An improvement in certain health outcomes of children.

The Affordable Care Act (ACA) creates additional options for subsidized health care coverage for low-income individuals and families effective January 1, 2014. The Department of Medical Assistance Services (DMAS) is assessing the potential impact of the ACA on both components of this demonstration and will continue to consider the impact of the ACA as specifics for implementation are developed.

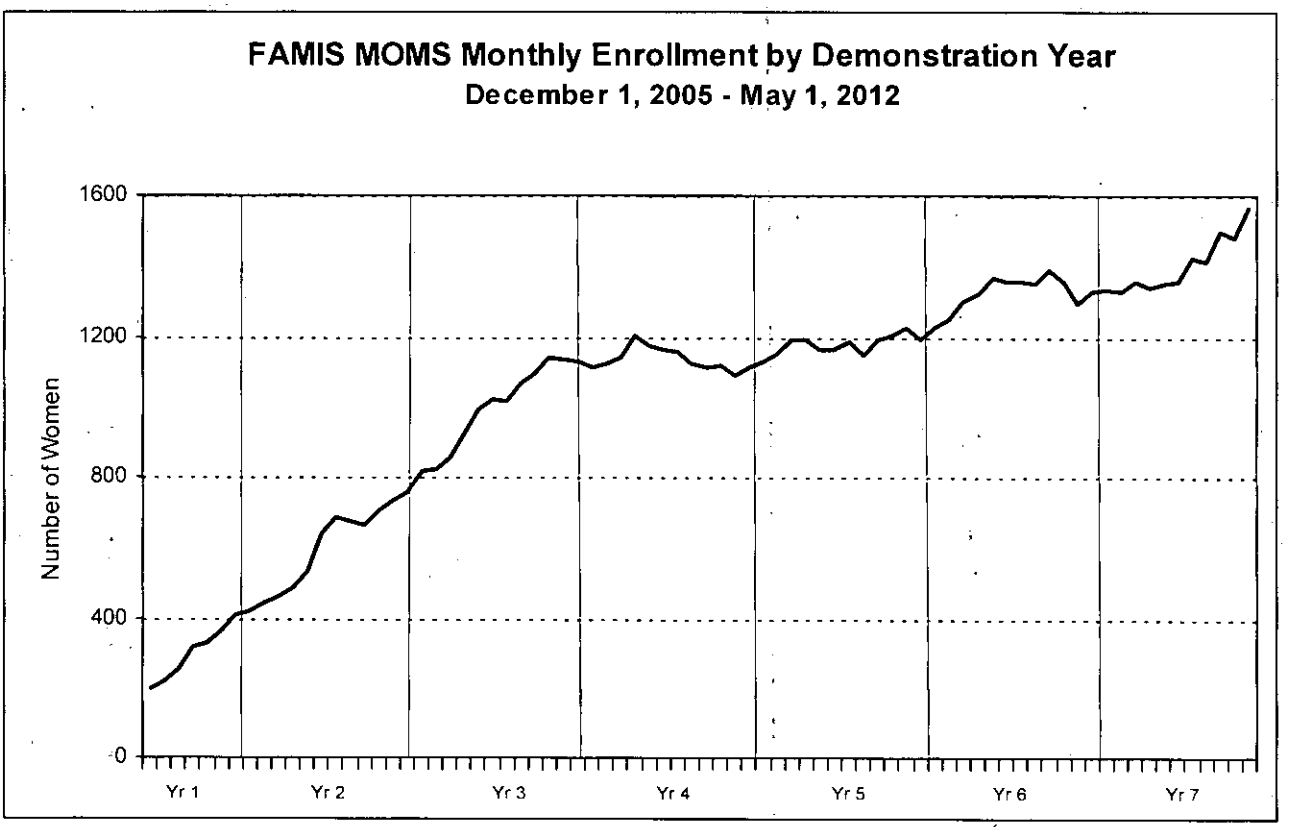
FAMIS MOMS

Virginia implemented the FAMIS MOMS program incrementally beginning August 1, 2005. The first increment expanded eligibility to pregnant women with family income above the Medicaid limit of 133% FPL but less than or equal to 150% FPL. The second increment, implemented September 1, 2006, covered pregnant women with incomes through 166% FPL. The third increment, implemented July 1, 2007, covered pregnant women through 185% FPL. The final increment, implemented July 1, 2009, covers pregnant women through 200% FPL.

Effective July 1, 2010, eligibility requirements were amended to allow enrollment of pregnant women with income below 133% FPL who are do not meet eligibility requirements for full Medicaid coverage but do meet the FAMIS MOMS requirements. In addition, infants born to FAMIS children and FAMIS MOMS are deemed eligible for Medicaid or CHIP coverage, as appropriate, on the date of birth and remain eligible until attaining the age of 1, unless, after a reasonable opportunity period, the state fails to obtain satisfactory documentation of citizenship and identity.

The intent of this program expansion is to provide prenatal care to uninsured women living within the Title XXI income range and likely to give birth to FAMIS eligible children. Enrollment in FAMIS MOMS increased steadily during the first three years of the Demonstration, leveled off in years four and five, then increased again with the economic downturn in years six and seven (Figure 1). By May 1, 2012, over 1,500 uninsured women were receiving coverage for prenatal and postpartum care during the month through FAMIS MOMS.

Figure 1

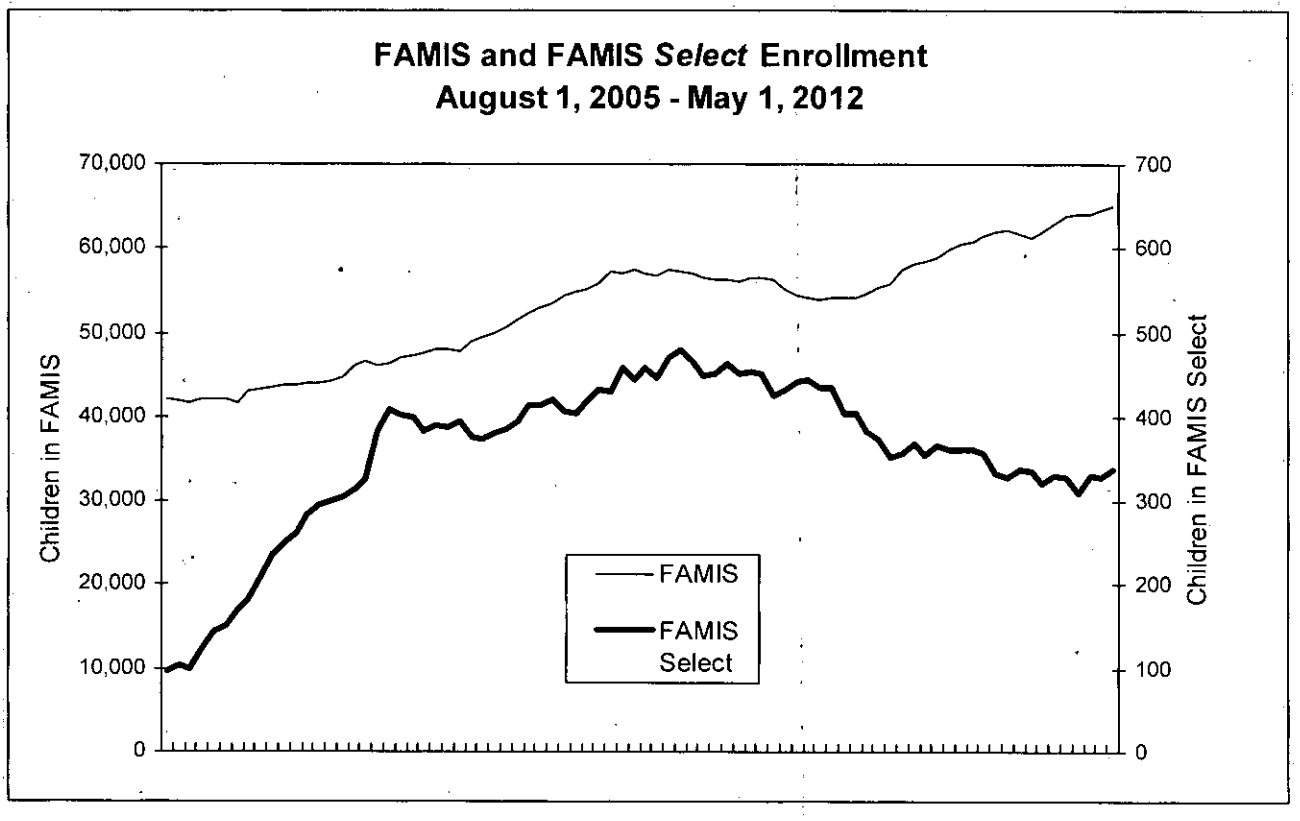


FAMIS *Select*

Virginia implemented the FAMIS *Select* program beginning August 1, 2005. FAMIS *Select* replaced the former employer-sponsored health insurance (ESHI) program and provides an alternative for families with children enrolled in FAMIS who have access to private or employer-sponsored coverage. All children are first enrolled in FAMIS. For some families, the FAMIS *Select* payment may make health coverage affordable for the entire family. In other cases, it may allow a child to continue to see a doctor or dentist that may not accept FAMIS.

FAMIS *Select* has enrolled more families and proven to be easier to administer than the former ESHI program. In August 2005, 66 children transferred from the ESHI to FAMIS *Select*. Figure 2 shows enrollment in FAMIS and FAMIS *Select* over the course of the Demonstration. Enrollment in FAMIS *Select* increased to a high of 480 children on March 1, 2009 before declining to 309 children on February 1, 2012, despite a continued increase in FAMIS enrollment. FAMIS *Select* enrollment has stabilized during the current demonstration year beginning July 1, 2011, averaging 329 children on the first of the month. In federal fiscal year 2011, a total of 186 parents and 34 siblings not enrolled in FAMIS were also incidentally covered through the same health plans supported through FAMIS *Select*.

Figure 2



Changes Requested

Virginia has enacted legislation expanding health care coverage for pregnant women under Medicaid and for pregnant women and children under FAMIS to otherwise eligible lawfully residing immigrants, including those in their first five years of lawful residency in the United States, pursuant to § 214 of the Children's Health Insurance Program Reauthorization Act of 2009. Virginia has requested an amendment to the Demonstration to implement this provision for FAMIS MOMS effective July 1, 2012. State plan amendments are being submitted to implement the provision for children under FAMIS and pregnant women under Medicaid. Children in this population were already eligible under Medicaid.

Each year an unknown number of children with employer-sponsored or private insurance lose Medicaid coverage due to an increase in family income that places them in the FAMIS income range. Unless they were enrolled in Medicaid's Health Insurance Premium Payment (HIPP) program, a premium assistance option for families with children enrolled in Medicaid, these children do not qualify for enrollment into FAMIS because they do not meet the Title XXI uninsured criterion. Beginning January 1, 2014, when major provisions of the Affordable Care Act (ACA) go into effect, a small number of children with insurance coverage are expected to be transferred from Medicaid to FAMIS as federally required because they exceed the MAGI limit for Medicaid due to changes in disregards. These children are required to be enrolled in the state's separate CHIP program. Although some clarification was provided in the final Medicaid eligibility regulations, the Department needs additional information on how to identify these children and streamline this process without performing an additional eligibility determination using the old rules or manual processes. As a result DMAS is interested in discussing options for changing the Demonstration to allow enrollment into FAMIS for these children with access to other insurance, but who lose Medicaid coverage at their first redetermination in 2014 due to the new MAGI eligibility rules. These children would then have the option to enroll in FAMIS *Select* to avoid termination at their next annual eligibility review. The number of children affected and the budget impact is currently unknown.

The ACA creates additional options for subsidized health care coverage for low-income individuals and families effective January 1, 2014. DMAS is assessing the potential impact of the ACA on both the FAMIS MOMS and FAMIS *Select* programs and will continue to consider the impact of the ACA as specifics for implementation are developed. Virginia requests that this Demonstration be extended for three additional years with the understanding that an amendment will be requested at a later date if needed to accommodate changes resulting from the ACA.

Waiver and Expenditure Authority

Virginia is requesting the same waiver and expenditure authorities as those approved in the current demonstration.

Quality Assurance

DMAS contracted with the Delmarva Foundation for Medical Care, Inc. as the External Quality Review Organization (EQRO) to conduct annual prenatal care/birth outcomes focused clinical studies. The aim of the studies was two-fold: 1) to evaluate the adequacy of prenatal care for pregnant women in Medicaid and FAMIS MOMS; and 2) to determine the impact of prenatal care on birth outcomes. Here are the major study findings for births that occurred in calendars years 2008, 2009, and 2010:

- Women in the FAMIS MOMS program received adequate prenatal care at rates that were more favorable than the HEDIS® National Medicaid Managed Care Averages in all years.

- The rate of infants born prematurely (before 37 completed weeks of pregnancy) in the FAMIS MOMS program improved (decreased) and was more favorable than the national rates for all three years.

- Low birth weight rates for FAMIS MOMS improved in each of the three years and outperformed the national benchmark in all years.

Financial Data

Historical and projected expenditures and financial analysis are provided in a spreadsheet format as a separate document.

Evaluation

An interim evaluation report, updated to include activities and findings from the current demonstration extension period, is provided as a separate document. This and previous evaluation reports are available on the FAMIS web site at http://famis.org/waiver.cfm.

Compliance with Public Notice Process

DMAS has complied with the State public notice process for applications for an extension of an existing demonstration project. On April 30, 2012, DMAS added a page to the FAMIS website providing information about the demonstration, including the public notice, proposed demonstration extension application, and link to the demonstration page on the CMS

website. The new website also includes links to the EQRO birth outcomes focused studies and demonstration evaluation reports, as well as notice of the public hearings and contact information for comments. A link to the demonstration page was added to the main DMAS website in the *What's New* column May 1, 2012. Public hearings, along with the link to the demonstration web page, were announced through the Virginia Regulatory Town Hall and Commonwealth Calendar on May 3, 2012. In addition, this information was sent by email to registered public users of the Town Hall, members of the Board of Medical Assistance Services, Children's Health Insurance Program Advisory Committee (CHIPAC), Joint Commission on Health Care, DMAS contracted managed care organizations, and the Virginia Health Care Foundation's listserv.

Public hearings were held May 22, 2012, at the Virginia Department of Medical Assistance Services, 600 East Broad Street, Richmond, Virginia 23219 with a conference call option and June 7, 2012, in conjunction with the Quarterly Children's Health Insurance Program Advisory Committee quarterly meeting at the Virginia Hospital and Healthcare Association, 4200 Innslake Drive, Glen Allen, Virginia 23060. The public comment period was open through June 7, 2012.

Comments were received from three individuals representing the Virginia Poverty Law Center, Healthcare for All Virginians (HAV) coalition of 68 organizations, and two managed care organizations serving FAMIS MOMS. One commenter noted that among its priorities, HAV supports protection of current eligibility in Medicaid and FAMIS and promotes filling gaps in coverage for legal immigrants. At its June 7, 2012 quarterly meeting, the CHIPAC unanimously adopted a formal resolution supporting the FAMIS MOMS and FAMIS *Select* Demonstration Waiver.

No issues were raised by the public during the public comment period. All comments supported the demonstration extension application. No changes were made to the demonstration extension application based on public comments. The application was updated to reflect the most recent enrollment numbers and the request to discuss options to allow enrollment into FAMIS for children with access to other insurance, but who lose Medicaid coverage at their first redetermination in 2014 due to the new MAGI eligibility rules. The Department needs additional clarification from CMS to understand the full financial and policy implications.

HIFA Demonstration Waiver Budget Template for States Using SCHIP Funds

VIRGINIA	FFY 2009	FFY 2010	FFY 2011	FFY 2012	FFY 2013
	Federal Fiscal Year -3	Federal Fiscal Year -2	Federal Fiscal Year -1	Federal Fiscal Year	Federal Fiscal Year +1
State's Allotment	$175,860,300	$184,454,740	$175,234,257	$184,004,091	$184,004,091
Funds Carried Over From Prior Year(s)	$24,436,278	$51,907,027	$70,641,677	$73,784,399	$81,672,564
SUBTOTAL (Allotment + Funds Carried Over)	$200,296,578	$236,361,767	$245,875,934	$257,798,490	$265,676,655
Reallocated Funds (Redistributed or Retained that are Currently Available)					
TOTAL (Subtotal + Reallocated funds)	$200,296,578	$236,361,767	$245,875,934	$257,798,490	$265,676,655
State's Enhanced FMAP Rate	65.00%	65.00%	65.00%	65.00%	65.00%

COST PROJECTIONS OF APPROVED SCHIP PLAN					
Benefit Costs					
Insurance payments					
Managed care	$97,829,945	$118,175,833	$127,453,131	$133,684,459	$150,965,987
per member/per month rate @ # of eligibles	$110.82* @ 80,256 avg elig/mo	$118.03 @ 83,438 avg elig/mo	$119.76 @ 88,682 avg elig/mo	$116.64 @ 95,498 avg elig/mo	$121.21 @ 103,320 avg elig/mo
Fee for Service	$106,345,991	$111,163,126	$114,192,932	$112,382,798	$118,026,176
Total Benefit Costs	**$204,175,936**	**$229,338,759**	**$241,646,063**	**$246,047,257**	**$268,992,163**
(Offsetting beneficiary cost sharing payments)					
Net Benefit Costs	**204,175,936**	**229,338,759**	**241,646,063**	**246,047,257**	**268,992,163**
Administration Costs					
Personnel	$1,147,399	$1,241,923	$969,688	$1,019,331	$1,071,492
General administration	*$65,159*	*$117,287*	*$212,119*	$229,088	$247,415
Contractors/Brokers (e.g., enrollment contractors)	$6,133,472	$7,936,390	$5,224,596	$5,770,703	$6,371,658
Claims Processing	$896,888	$1,041,073	$969,680	$1,018,164	$1,069,073
Outreach/marketing costs	$633,782	$1,131,831	$640,966	$676,014	$712,815
Other	$0	$0	$0	$0	$0
Total Administration Costs	**$10,876,699**	**$11,468,504**	**$8,017,049**	**$8,713,300**	**$9,472,453**
10% Administrative Cap	$22,686,215	$25,482,084	$26,849,563	$27,338,584	$29,888,018
Federal Title XXI Share	$139,784,213	$156,524,721	$162,281,023	$165,594,362	$181,002,000
State Share	$75,268,422	$84,282,542	*$87,362,089*	*$89,166,195*	*$97,462,616*
TOTAL COSTS OF APPROVED SCHIP PLAN	**$215,052,636**	**$240,807,262**	**$249,663,112**	**$254,760,557**	**$278,464,616**

COST PROJECTIONS OF HIFA DEMONSTRATION PROPOSAL					
Benefit Costs for Demonstration Population #1 (pregnant women < 200% FPL)					
Insurance payments					
Managed care	$9,765,521	$9,903,091	$10,878,185	$11,867,501	$13,343,441
per member/per month rate @ # of eligibles	*$929.08* @ 956 avg elig/mo*	*$836.27 @ 987 avg elig/mo*	$901.77 @ 1,005 avg elig/mo	$974.34 @ 1,015 avg elig/mo	$888.24 @ 1,252 avg elig/mo
Fee for Service	$2,603,713	$3,278,009	$3,429,300	$3,567,407	$3,278,445
Total Benefit Costs for Waiver Population #1	**$12,369,234**	**$13,181,100**	**$14,307,485**	**$15,434,908**	**$16,621,886**
Benefit Costs for Demonstration Population #2 (children in premium assistance)					
Insurance payments	$496,536	$588,291	$389,029	$381,916	$381,888
Managed care					
per member/per month rate @ # of eligibles					
Fee for Service	$1,000	$904	$481	$500	$500
Total Benefit Costs for Waiver Population #2	**$497,536**	**$589,194**	**$389,510**	**$382,416**	**$382,388**
Benefit Costs for Demonstration Population #3					
Insurance payments					
Managed care					
per member/per month rate @ # of eligibles					
Fee for Service					
Total Benefit Costs for Waiver Population #3					
Benefit Costs for Demonstration Population #4					
Insurance payments					
Managed care					
per member/per month rate @ # of eligibles					
Fee for Service					
Total Benefit Costs for Waiver Population #4					
Total Benefit Costs	**$12,866,770**	**$13,770,295**	**$14,696,995**	**$15,817,324**	**$17,004,273**
(Offsetting beneficiary cost sharing payments) * Premium Payments will be net of cost sharing					
Net Benefit Costs	**$12,866,770**	**$13,770,295**	**$14,696,995**	**$15,817,324**	**$17,004,273**
Administration Costs					
Personnel	$54,636	$56,275	$57,964	$59,703	$46,120
General administration					
Contractors/Brokers (e.g., enrollment contractors)	$257,575	$260,151	$262,753	$265,380	$201,025
Claims Processing					
Outreach/marketing costs	$60,000	$60,000	$60,000	$60,000	$45,000
Other (specify)					
Total Administration Costs	**$372,212**	**$376,426**	**$380,716**	**$385,083**	**$292,146**
10% Administrative Cap					
Federal Title XXI Share	$8,605,338	$9,195,369	$9,800,512	$10,531,565	$11,242,872
State Share	$4,633,643	$4,951,352	$5,277,199	$5,670,842	$6,053,747
TOTAL COSTS FOR DEMONSTRATION	**$13,238,981**	**$14,146,721**	**$15,077,711**	**$16,202,407**	**$17,296,419**

TOTAL PROGRAM COSTS (State Plan + Demonstration)	**$228,291,617**	**$254,953,984**	**$264,740,823**	**$270,962,964**	**$295,761,035**
Total Federal Title XXI Funding Currently Available (Allotment + Reallocated Funds)	$200,296,578	$236,361,767	$245,875,934	$257,798,490	$265,676,655
Total Federal Title XXI Program Costs (State Plan + Demonstration)	*$148,389,551*	*$165,720,089*	$172,081,535	$176,125,927	$192,244,673
Unused Title XXI Funds Expiring (Allotment or Reallocated)					
Remaining Title XXI Funds to be Carried Over (Equals Available Funding - Costs - Expiring Funds)	$51,907,027	$70,641,677	$73,794,399	$81,672,564	$73,431,982

*The demonstrations end 9 months into FFY 2013.

INTERIM EVALUATION REPORT

Virginia Title XXI Health Insurance Flexibility and Accountability (HIFA) Demonstration: FAMIS MOMS and FAMIS *Select*

Section 1115 Research and Demonstration Project
Project Number **21-W-000 18/10**

Virginia Department of Medical Assistance Services
June 2012

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Virginia Title XXI Health Insurance Flexibility and Accountability (HIFA) Demonstration: FAMIS MOMS and FAMIS *Select*

Project Number 21-W-000 18/10

Executive Summary

Virginia's Title XXI Health Insurance Flexibility and Accountability (HIFA) Demonstration has two objectives. First, it expands Title XXI coverage to uninsured pregnant women with family income up to 200% of the federal poverty level (FPL) who are not eligible for Medicaid through a program known as FAMIS MOMS. Second, it uses Title XXI funds to support a health insurance premium assistance program known as FAMIS *Select*. Virginia's HIFA Demonstration was approved for a three year extension for the period July 1, 2010, through June 30, 2013. This interim evaluation report provides an update of previous evaluation findings for the first half of this extension period.

Virginia continues to compare favorably with the United States population as a whole on rates of insurance coverage while covering a smaller proportion of the population through Medicaid and CHIP. There remains, however, a substantial uninsured population. The uninsurance rate for the Virginia population with income less than 200% FPL is approximately twice that of the population as a whole. Adults in the child-bearing age group are more likely than other age groups to be uninsured. Virginia's HIFA Demonstration targets pregnant women and families with children in population groups with high rates of uninsurance.

During the current Demonstration period the FAMIS MOMS program has continued to accomplish its goal of providing quality prenatal care to uninsured women living within the Title XXI income range and likely to give birth to a FAMIS eligible child. FAMIS MOMS enrollment continued to increase. Outreach efforts succeeded in increasing the proportion of enrollees who are Hispanic. While the percent of pregnant women receiving adequate prenatal care decreased for those pregnant women who were enrolled in a FAMIS MOMS health care delivery system before the last six weeks of their pregnancy, birth outcomes improved for this population.

The FAMIS *Select* program has continued to accomplish its goal of providing a streamlined and cost-effective alternative to the standard FAMIS program. However, enrollment declined during this Demonstration period despite an increase in FAMIS enrollment. To promote more participation in premium assistance, DMAS is exploring mechanisms for enrolling children in FAMIS who exceed the MAGI limit for Medicaid due to changes in income disregards. These children would then have the option to enroll in FAMIS *Select* to avoid termination at their next annual eligibility review.

Background

Virginia's Title XXI Health Insurance Flexibility and Accountability (HIFA) Demonstration has two objectives. First, it expands Title XXI coverage to pregnant women with family income from the Medicaid income limit of 133% of the federal poverty level (FPL) to 200% FPL through a program known as FAMIS MOMS. Second, it uses Title XXI funds to support a health insurance premium assistance program known as FAMIS *Select*. Virginia's Title XXI Children's Health Insurance Program (CHIP) covers children with family income from 133% to 200% FPL under a separate child health plan known as the Family Access to Medical Insurance Security Plan (FAMIS). Children must first be found eligible and enroll in FAMIS before electing coverage through FAMIS *Select*.

By targeting these two populations: pregnant women with family income from 133% to 200% FPL and income eligible children with access to employer-sponsored or other private health insurance, Virginia expects to see the following outcomes:

- A decrease in the rates of uninsurance among pregnant women,
- An increase in participation in premium assistance in CHIP,
- An increase in access to appropriate medical services, and
- An improvement in certain health outcomes of children.

Virginia's initial HIFA Demonstration was approved for a three year extension for the period July 1, 2010, through June 30, 2013. This interim evaluation report provides an update of evaluation findings for the first half of this extension period.

FAMIS MOMS

Virginia implemented the FAMIS MOMS program incrementally beginning August 1, 2005. The final increment, implemented July 1, 2009, covers pregnant women through 200% FPL. Effective July 1, 2010, eligibility requirements were amended to allow enrollment of pregnant women with income below 133% FPL who are do not meet eligible requirements for full Medicaid coverage but do meet the FAMIS MOMS requirements.

The intent of this program expansion is to provide prenatal care to uninsured women living within the Title XXI income range and likely to give birth to a FAMIS eligible child. The FAMIS MOMS program provides eligible pregnant women the same comprehensive coverage that pregnant women receive from the Virginia Medicaid program. There is no difference in covered services, service limitations, or pre-authorization requirements. The cost sharing requirements for FAMIS MOMS are consistent with those described in the Medicaid State plan for pregnant women. There are no premiums or enrollment fees, but co-payments apply to services that are not pregnancy-related. The Title XXI cost sharing limits are not applied to FAMIS MOMS. However, consistent with Title XXI requirements, to be eligible for FAMIS MOMS a pregnant woman must be uninsured, not a member of a family eligible for coverage under the state employee health insurance plan, and not be an inpatient in an institution for mental diseases.

FAMIS MOMS uses the same health care services delivery systems (fee-for-service and managed care organizations) as FAMIS. All pregnant women are initially enrolled under fee-for-service. Approximately 85% were transferred to a managed care organization within two months during the period of this evaluation.

FAMIS Select

Virginia implemented the FAMIS *Select* program beginning August 1, 2005. FAMIS *Select* replaced the former Employer Sponsored Health Insurance (ESHI) program under the Title XXI state plan and provides an alternative for families with children enrolled in FAMIS who have access to private or employer-sponsored coverage. All children are first enrolled in FAMIS. With FAMIS *Select*, the family of a FAMIS enrolled child may buy into their employer's health insurance program or a private health insurance plan, submit a pay stub or other proof of payment to the FAMIS *Select* program, and be reimbursed $100 per month, per eligible child not to exceed the total amount of the premium. The child then receives the health care services provided by the private/employer-sponsored health plan and the family is responsible for any costs associated with that policy. For families with enrolled children who choose to receive coverage through premium assistance, cost sharing requirements are set by their private or employer-based coverage with no FAMIS wrap around benefits other than immunizations. Virginia has established a mechanism to reimburse providers for the cost of immunizations not covered by the employer or private insurance. For some families, the FAMIS *Select* payment may make health coverage affordable for the entire family. In other cases, it may allow a child to continue to see a doctor or dentist that may not accept FAMIS and gives a family greater choice of providers.

Other factors impacting the Demonstration

December 2007 marked the beginning of an economic recession while health care costs continued to rise. Key informant interviews and stakeholder focus groups were conducted in the latter part of 2009 for the 2010 Title V Maternal and Child Health Needs Assessment. These groups identified the growing cost of health care and its impact on health insurance coverage, especially for lower income families and individuals, as a major issue affecting Virginia's children.

After increasing each year since 1997, the number of resident live births in Virginia declined each year from 2007 to 2010 by a total of 5.1%. Data are not yet available for calendar year 2011. It is likely that both the economic recession and the associated decline in births impacted the number of pregnant women and young children eligible for FAMIS MOMS and FAMIS *Select*.

In November 2008 the State Health Commissioner appointed a group of medical and health professionals and community and civic leaders to work jointly with the Department of Health in the development and implementation of creative/innovative prevention strategies to address Virginia's high infant mortality rate. Rebecca Mendoza, Director of Virginia's Children's Health Insurance Program and the FAMIS MOMS/ FAMIS *Select* Demonstration, serves on the Infant Mortality Work Group. The work group collaborated in promoting the national text4baby health education campaign to reduce premature births among low income women and improve maternal and child health outcomes, launched in February 2010.

In September 2011 the Virginia Department of Health, in collaboration with Virginia's Home Visiting Consortium, made available funds authorized under the Affordable Care Act to support home visiting programs in "at-risk" communities in Virginia. One goal of the home visiting programs is to improve birth outcomes. In October 2011 Virginia added Medicaid coverage of family planning services for individuals with family income up to 200% FPL, thus expanding this benefit to those in the FAMIS MOMS income range. It is too soon to observe the impact of these services on enrollment and birth outcomes for FAMIS MOMS.

Evaluation Design

The Demonstration evaluation plan has three components: (1) monitoring the rate of uninsurance, (2) evaluating participation in premium assistance in CHIP, and (3) quality measures on access and outcomes.

Monitoring the Rate of Uninsurance

Data sources used for this component of the interim evaluation:

- *State Health Access Data Assistance Center (SHADAC):* Health insurance coverage estimates from the Current Population Survey Annual Social and Economic Supplement (CPS), 2006-2011, were obtained from SHADAC. SHADAC, a project of the University of Minnesota, is funded by the Robert Wood Johnson Foundation to help states monitor rates of health insurance coverage and to understand factors associated with uninsurance. Information about SHADAC is available at http://www.shadac.org/.

- *Profile of Virginia's Uninsured 2010:* The Virginia Health Care Foundation contracted with the Urban Institute to produce the *Profile of Virginia's Uninsured 2010*. Data from both the American Community Survey (2009) and the Current Population Survey (2009) were analyzed to develop the Profile. The full report is available at http://www.vhcf.org/wp-content/uploads/2010/10/Profile-of-Virginias-Uninsured-2010.pdf.

- *Virginia Title V 2011 Needs Assessment*, July 15, 2010: The Virginia Department of Health administers the Commonwealth's Title V program, including assessment of the maternal and child health needs of the population. The assessment is available at http://www.vdh.virginia.gov/OFHS/documents/2012/policyandassesment/pdf/2011%20Virginia%20MCH%20Needs%20Assessment.pdf.

- *Virginia Pregnancy Risk Assessment Monitoring System (PRAMS)*: PRAMS is a surveillance project of the Virginia Department of Health and the US Centers for Disease Control and Prevention. PRAMS collects Virginia-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. Information about Virginia PRAMS is available at http://www.vahealth.org/prams/.

Evaluating Participation in FAMIS MOMS and FAMIS Select

Data sources used for this component of the interim evaluation:

- *DMAS Recipient file*: The DMAS Recipient file maintains eligibility and demographic data for individuals enrolled in all DMAS programs funded by Medicaid and CHIP.

- *FAMIS Select data base:* The FAMIS *Select* data base is a case maintenance system that includes data about FAMIS *Select* enrollees obtained from the DMAS Recipient file, information from the FAMIS *Select* application, and premium payments records.

Quality Measures on Access and Outcomes

Data sources used for this component of the interim evaluation:

- *2010 Improving Birth Outcomes through Adequate Prenatal Care Study:* DMAS contracted with the Delmarva Foundation for Medical Care, Inc. to evaluate the quality of prenatal care provided to women enrolled in the FAMIS MOMS and Medicaid for Pregnant Women programs. This report is available at http://dmasva.dmas.virginia.gov/Content_pgs/mc-home.aspx.

- *Maternal and Child Health Services Title V Block Grant State Narrative for Virginia, July 15, 2011:* The Virginia Department of Health reports on health status and health system indicators in its annual report and application for Title V block grant funds.

- Virginia Department of Health (VDH), Division of Health Statistics: VDH collects, analyzes, and publishes annual data from vital records, including official birth records. The Division of Health Statistics works as a partner with the National Center for Health Statistics.

- Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2010. National vital statistics reports web release; vol 60 no 2. Hyattsville, MD: National Center for Health Statistics. 2011.

- *FAMIS Select data base:* The FAMIS *Select* data base is a case maintenance system that includes data about FAMIS *Select* enrollees obtained from the DMAS Recipient file, information from the FAMIS *Select* application, and premium payments records.

Rate of Uninsurance

Estimates made available by the State Health Access Data Assistance Center (SHADAC) from the Current Population Survey Annual Social and Economic Supplement (CPS), 2006-2011 were used to track the rate of uninsurance in Virginia. The data presented in this report are the CPS estimates rather than SHADAC's enhanced CPS estimates.

Estimates of the uninsurance rates for the total Virginia population, as well as the income and ages groups targeted by this demonstration, are shown in Table 1 and Figure 1. The uninsurance rate for the total Virginia population remained fairly stable during calendar years 2005 to 2010. The uninsurance rate for children through 18 years of age was consistently lower than that of the population as a whole. Uninsurance rates for the Virginia population with income less than 200% FPL were approximately twice the rates of the population as a whole. While the uninsurance rate for children in this low-income group has fluctuated during the period of this demonstration, three-year averages suggest that rates have dropped, from 17.7% (±1.95%) in 2005-2007 to 13.9% (±1.75%) in 2008-2010.

Table 1: Uninsured Population Estimates by Age and Poverty Level Groups
Virginia: Calendar Years 2005-2010

Calendar Year	All ages All income levels		Age 0-18 Yrs All income levels		All ages <200% FPL		Age 0-18 Yrs < 200% FPL	
	%	SE	%	SE	%	SE	%	SE
2005	12.8	0.8	8.7	1.1	25.4	2.1	16.9	2.9
2006	13:3	0.8	10.6	1.2	28.1	2.1	20.3	3.0
2007	14.8	0.8	10.8	1.2	26.9	2.0	17.2	2.7
2008	12.4	0.8	7.7	1.1	24.4	1.8	13.1	2.7
2009	13.0	0.8	7.3	1.1	25.7	1.8	12.9	2.4
2010	14.1	0.8	8.7	1.1	29.2	2.0	16.7	2.8

Source: SHADAC from Current Population Survey (CPS)
Definitions: '%' = Percent; 'SE' = Standard Error as a percent

Figure 1: Uninsurance Rates by Age and Income Group
Virginia, 2005 - 2010

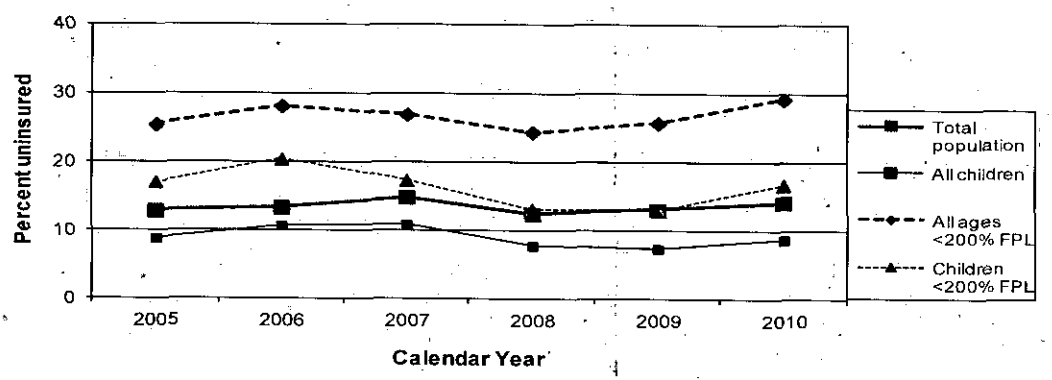
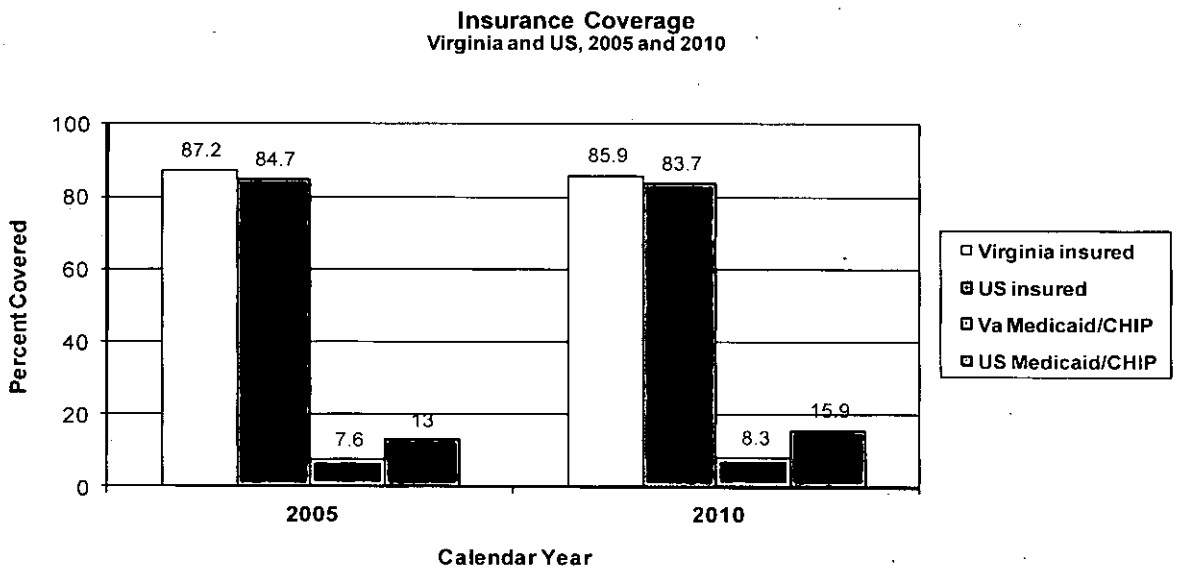


Figure 2 compares health insurance coverage (of any type) and Medicaid/CHIP coverage for Virginians to that of the United States (US) population in 2005, the beginning of the Demonstration, and 2010, the latest data available. A slightly higher percentage of the Virginia population was insured than the US population. In 2005, an estimated 87% of Virginians were insured compared to 85% of the US population. In 2010, 86% of Virginians were insured compared to 84% of the US population. A lower percentage of the Virginia population was covered by Medicaid and CHIP than in the US population. In 2005, 8% of Virginians were covered by Medicaid or CHIP compared to 13% of the US population. In 2010, 8% of Virginians were covered by Medicaid or CHIP compared to 16% of the US population. Virginia, like the US, experienced an increase from 2005 to 2010 in the proportion of the population covered by Medicaid or CHIP.

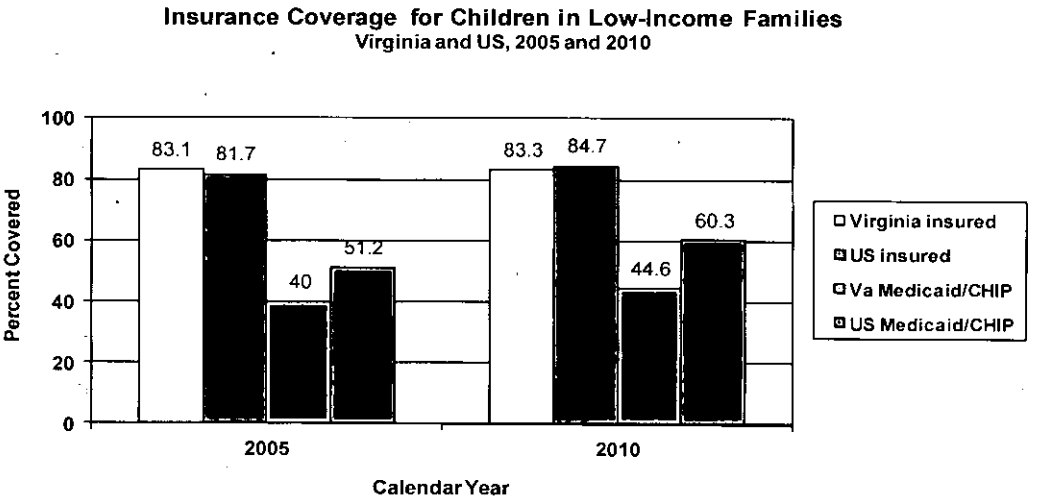
Figure 2:



Source: SHADAC from CPS, 2006, 2011

The comparison between Virginia and the US is similar for coverage of children through 18 years of age in families with income below 200% FPL, the population targeted by Medicaid and FAMIS, Virginia's CHIP (Figure 3). In 2005, an estimated 83% of children in low-income families in Virginia were insured, comparable to 82% in the US population. In 2010, 83% of children in low-income families in Virginia were insured, comparable to 85% in the US population. In 2005, 40% of children in low-income families in Virginia were covered by Medicaid or CHIP compared to 51% in this subpopulation of the US. In 2010, 45% of children in low-income families in Virginia were covered by Medicaid or CHIP compared to 60% in the US.

Figure 3:



Source: SHADAC from CPS, 2006, 2011

The *Profile of Virginia's Uninsured 2010* found the highest rate of uninsurance in the 19 to 24 year age group followed by the 25 to 34 year age group. Individuals with income below 200% FPL were found to have significantly higher rates of uninsurance than those with higher income. A Department of Health study of women's health using Behavioral Risk Factor Surveillance System data from 2002-2006, reported in the Virginia Title V 2011 Needs Assessment, confirmed that by age, women 18 to 24 years of age were the least likely to have health insurance, with 22% reporting no insurance coverage. FAMIS MOMS provides health care coverage for pregnant women in these population groups with high rates of uninsurance.

The Virginia Pregnancy Risk Assessment and Monitoring System (PRAMS) provides information about insurance coverage among pregnant women. PRAMS is a survey of live births and does not capture information about pregnancies that terminated in a natural fetal death or induced abortion. PRAMS data are currently available for births that occurred during calendar years 2007 through 2009.

The PRAMS survey asks women about Medicaid and CHIP coverage at three points in time: prior to pregnancy, for prenatal care, and for delivery. The PRAMS survey of 2009 births estimates that only 9 percent of infants were born to mothers who were covered by Medicaid before they became pregnant. Outreach for FAMIS MOMS targets women who become eligible for full Medicaid or CHIP coverage only when they are pregnant. Medicaid, FAMIS, or FAMIS MOMS paid for prenatal care for mothers of about 27 percent of newborns (Figure 4). Unlike the CPS, women who have both private or Tricare (military) coverage and Medicaid/CHIP coverage are counted in the private or Tricare category only. While PRAMS data show a slight increase in the proportion of pregnant women with Medicaid/CHIP coverage from 2007 to 2009,

the increase is not statistically significant (Table 2). The difference between women who were covered by Medicaid/CHIP for delivery but not for pregnancy decreased from 5.4 percentage points in 2007 to 3.0 percentage points in 2009; however, this decrease is not statistically significant.

Figure 4:

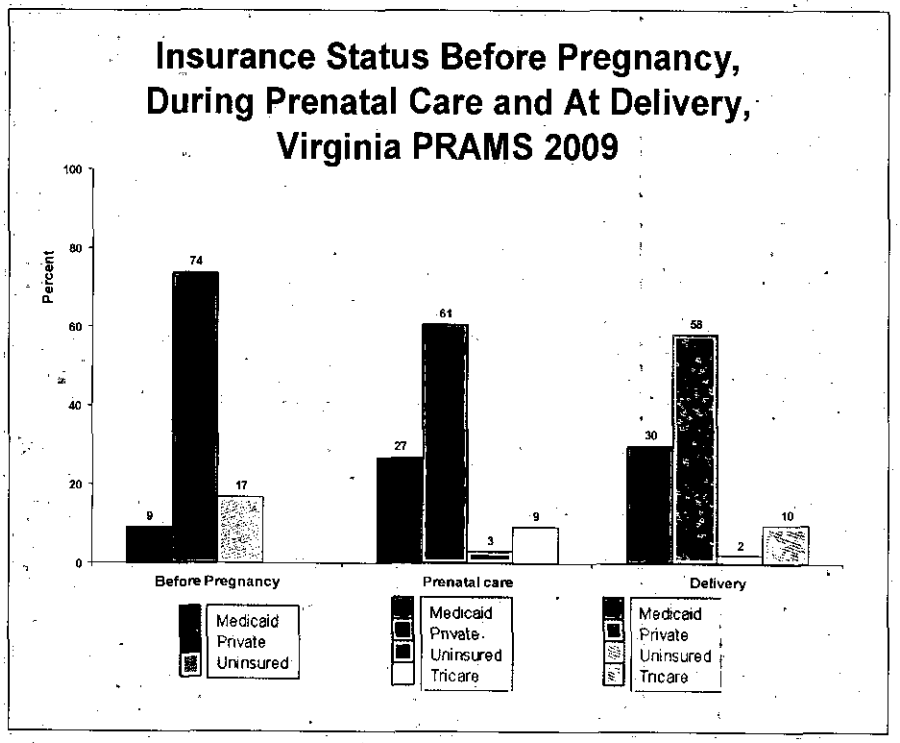


Table 2: Insurance Status, VA PRAMS 2007 and 2009

Before Pregnancy	2007			2009		
		95% Confidence intervals			*95% Confidence intervals*	
	%	LCL	UCL	%	LCL	UCL
Medicaid	**5.5**	3.4	8.8	**9.2**	5.3	13.1
Private insurance	69.7	64.4	74.5	73.9	68.5	79.3
Uninsured	24.8	20.4	29.8	16.9	12.4	21.4

During Pregnancy	2007			2009		
		95% Confidence intervals			*95% Confidence intervals*	
	%	LCL	UCL	%	LCL	UCL
Medicaid/FAMIS	**24.9**	20.2	30.3	**26.9**	21.5	32.4
Private insurance	62.1	56.5	67.4	60.6	54.8	66.5
Uninsured	4.1	2.3	7.1	3.1	1.1	5.0
Tricare	8.9	6.3	12.5	9.3	5.8	12.9

At Delivery	2007			2009		
		95% Confidence intervals			*95% Confidence intervals*	
	%	LCL	UCL	%	LCL	UCL
Medicaid/FAMIS	**30.3**	25.4	35.8	**29.9**	24.4	35.4
Private insurance	59.1	53.6	64.4	58.2	52.3	64.0
Uninsured	1.4	0.5	4.0	2.1	0.2	4.0
Tricare	9.1	6.5	12.6	9.8	6.2	13.4

Source: Virginia Pregnancy Risk Assessment Monitoring System, Virginia Department of Health

Note: The questions to assess insurance status before, during and after pregnancy changed starting in 2009. To account for this change, the data was coded to ensure consistency in the reporting of insurance across years.

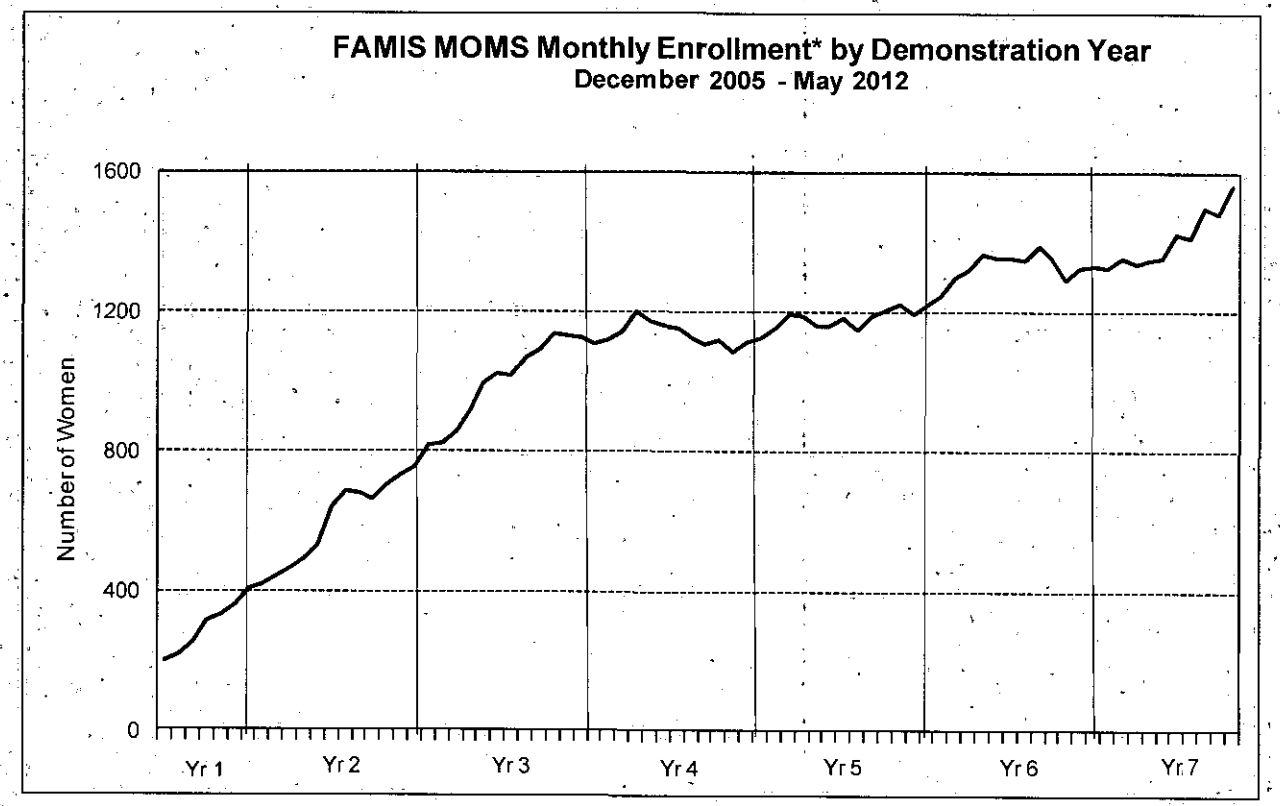
Conclusions

Virginia compares favorably with the United States population as a whole on rates of insurance coverage while covering a smaller proportion of the population through Medicaid and CHIP. There remains, however, a substantial population that is uninsured. The uninsurance rate for the Virginia population with income less than 200% FPL is approximately twice that of the population as a whole. Adults in the child-bearing age group are more likely than others to be uninsured. Virginia's HIFA Demonstration targets pregnant women and families with children in population groups with high rates of uninsurance.

Participation in FAMIS MOMS

Enrollment in FAMIS MOMS began in August 2005. Data for the first four months of the Demonstration are not included in the graph due to a change in the way enrollment was calculated. The number of women enrolled increased to 1,203 pregnant women on October 1, 2008, and then remained relatively level during the final two years of the initial Demonstration period. Enrollment has increased during the current Demonstration period to a high of 1,564 on May 1, 2012. Figure 5 shows the enrollment trend beginning December 1, 2005. A total of 3,818 women received FAMIS MOMS coverage in FFY 2011.

Figure 5:



* Number enrolled as of the first day of the month

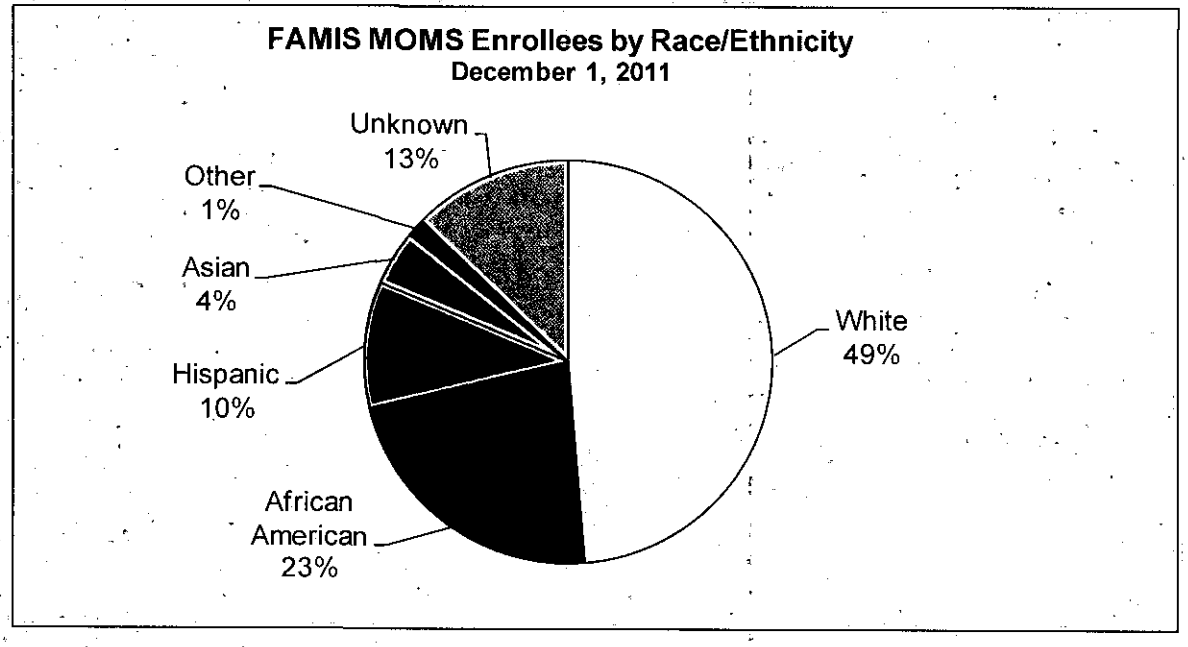
Source: DMAS Recipient file

The evaluation of the initial five-year Demonstration period resulted in two recommendations to enhance participation in FAMIS MOMS: (1) target outreach to Hispanic women, and (2) implement initiatives to simplify the application process and reduce application denials for administrative reasons.

A Hispanic Outreach Liaison actively promoted the FAMIS MOMS program to the Hispanic community statewide through July 2011. She participated in events and festivals aimed specifically at the Hispanic community, particularly in Northern Virginia, Central Virginia, Norfolk/Virginia Beach, and Rockingham County and leveraged no cost advertising on Spanish radio and newspapers. Since July 2011 outreach has been limited to regular distribution of printed materials in Spanish and through the Spanish FAMIS website.

The proportion of women enrolled in FAMIS MOMS who identified their race as Hispanic increased from 8% on June 1, 2010, to 10% on December 1, 2011. As illustrated by Figure 6, almost one-half (49%) of women enrolled in FAMIS MOMS as of December 1, 2011, identified their race as non-Hispanic white, 23% identified as non-Hispanic black/African American, 10% identified their race as Hispanic, and 4% identified as Asian. One percent of enrolled women specified another race or dual races. Race was unknown for the remaining 13% of enrollees.

Figure 6:



Source: DMAS recipient file

Beginning July 15, 2010, FAMIS MOMS applicants who submit an online application have the option to upload verification documents and sign the application with an electronic signature. As of January 1, 2011, applications can also be signed over the telephone with an electronic signature. Data are not available specific to FAMIS MOMS. However, in March 2012, 78% of all new applications for FAMIS and FAMIS MOMS received at the FAMIS Central Processing Unit were submitted with an e-signature. Since implementation, over 12,500 documents have been uploaded by new and renewing FAMIS and FAMIS MOMS applicants. Data are not yet available to evaluate the effectiveness of these strategies for reducing denials for administrative reasons.

Quality Measures on Access and Outcomes for FAMIS MOMS

The evaluation of the initial five-year Demonstration recommended that DMAS continue to work with the Virginia Infant Mortality Workgroup to improve adequacy of prenatal care and birth outcomes. During the first half of this demonstration period the workgroup continued its work with hospital emergency departments for pregnancy verification, identified and implemented strategies to promote utilization of Plan First family planning services, and promoted training for home visitors. Evaluation data suggest that birth outcomes are improving for FAMIS MOMS.

DMAS contracted with the Delmarva Foundation for Medical Care as the external quality review organization to evaluate access and outcomes for the FAMIS MOMS and Medicaid programs for pregnant women. Coverage and delivery systems are the same for both programs. Findings are published in *Calendar Year 2010 Improving Birth Outcomes through Adequacy Prenatal Care Study*.

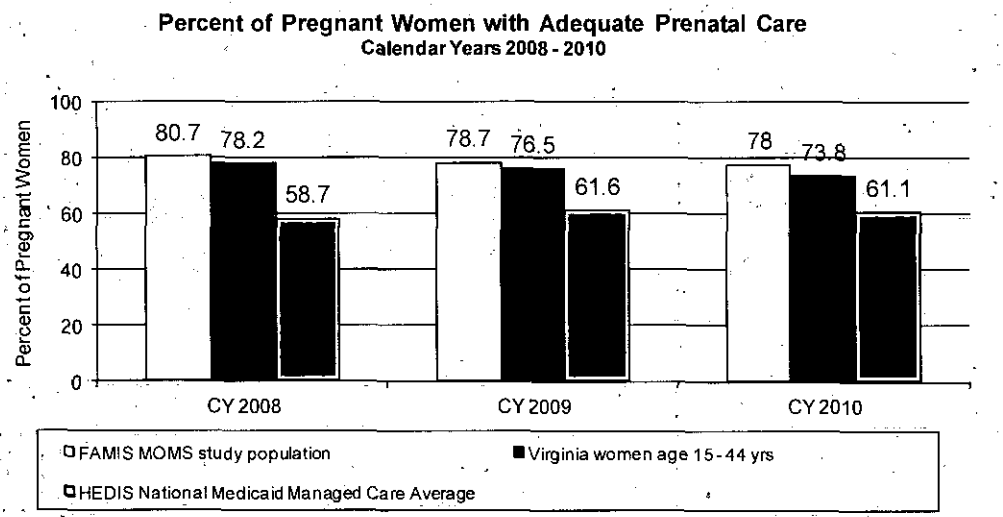
The Delmarva study population was limited to pregnant women who were eligible for coverage under the FAMIS MOMS or the Medicaid for pregnant women eligibility category and who were enrolled in a managed care organization (MCO) or the fee-for-service delivery system for at least 43 days prior to delivery and on the day of delivery, consistent with the HEDIS measure for managed care plans. Enrollment data for the study population were linked to data from birth certificate records to obtain the month prenatal care began, number of prenatal care visits, birthweight, and gestational age at delivery. The Delmarva study population definition excluded women who enrolled in FAMIS MOMS or an MCO close to the date of delivery because late enrollment affords the delivery system limited opportunity to provide prenatal care and impact pregnancy outcome.

A brief summary of the Delmarva study findings specific to FAMIS MOMS and related to the Demonstration hypotheses follows, supplemented by data from other sources.

Hypothesis 1 FAMIS MOMS will result in improved prenatal care for pregnant women between 133-200 percent of the FPL.

The Delmarva *Calendar Year 2010 Improving Birth Outcomes through Adequacy Prenatal Care Study* evaluated the adequacy of prenatal care for women in the FAMIS MOMS program for the study population (n=1,387 for 2008; 1,403 for 2009; 1,497 for 2010) using birth record data and the Kotelchuck Adequacy of Prenatal Care Utilization Index. Prenatal care was defined as adequate if care began in the first trimester of pregnancy and the number of prenatal care visits was at least 80% of expected visits, controlling for when care began and gestational age at delivery. Findings were compared with the national Medicaid managed care average for the HEDIS measure, Frequency of Ongoing Prenatal Care. The Delmarva study concluded that 80.7% of FAMIS MOMS participants giving birth in 2008 received adequate prenatal care, 78.7% giving birth in 2009 received adequate prenatal care, and 78.0% giving birth in 2010 received adequate prenatal care compared with HEDIS national Medicaid managed care averages of 58.7% in 2008, 61.6% in 2009, and 61.1% in 2010 (Figure 7).

Figure 7:



Sources: *CY 2010 Improving Birth Outcomes through Adequate Prenatal Care Study* and *Maternal and Child Health Services Title V Block Grant State Narrative for Virginia*

Data analysis for the Delmarva study was based on all prenatal care visits reported on the birth certificate record, including visits prior to enrollment in FAMIS MOMS or an MCO. DMAS program staff and community health care providers have observed that many women initiate prenatal care at a local health department or other safety net provider or under the DMAS fee-for-service delivery system prior to enrolling in an MCO. The Delmarva study findings support this observation. A larger proportion of the study population began prenatal care in the first trimester than enrolled in their final FAMIS MOMS delivery system during the first trimester.

While similar in concept, the Delmarva study and HEDIS measures use different definitions and data sources. The Delmarva study definition of adequate prenatal care, unlike HEDIS, includes the criterion that that prenatal care be initiated in the first trimester of pregnancy. The Delmarva study counted all prenatal care visits; the HEDIS measure is limited to visits provided under a particular health plan. The Delmarva study is based on the number of prenatal care visits reported on the birth certificate; the HEDIS measure counts visits based on insurance claims data and medical record review. The HEDIS measure references the national Medicaid population, which includes pregnant women with lower family income than FAMIS MOMS.

The Title V Maternal and Child Health program monitors adequacy of prenatal care as a health systems capacity indicator. This measure applies the Kotelchuck Index to birth record data. The *Maternal and Child Health Services Title V Block Grant State Narrative for Virginia, July 15, 2011*, reported that the percent of all Virginia women age 15 to 44 years giving birth who received adequate care was 78.2% in 2008, 76.5% in 2009, and 73.8% in 2010 (Figure 7).

Neither of these comparison statistics on adequacy of prenatal care is strictly comparable to the Delmarva FAMIS MOMS study population. However, taken together these data suggest that, at least for those pregnant women who are enrolled in a particular FAMIS MOMS health care delivery system before the last six weeks of their pregnancy, the adequacy of prenatal care exceeded that of the general population in Virginia. The percent of pregnant women receiving adequate prenatal care decreased from 2008 to 2010 among both the FAMIS MOMS study population and all pregnant women giving birth in Virginia. Both groups continue to fall short of the Healthy People 2010 objective for the Nation to increase the proportion of pregnant women who receive early and adequate prenatal care to 90%.

Hypothesis 2 FAMIS MOMS will improve birth outcomes thereby decreasing the medical costs incurred for infants born to women in this income range.

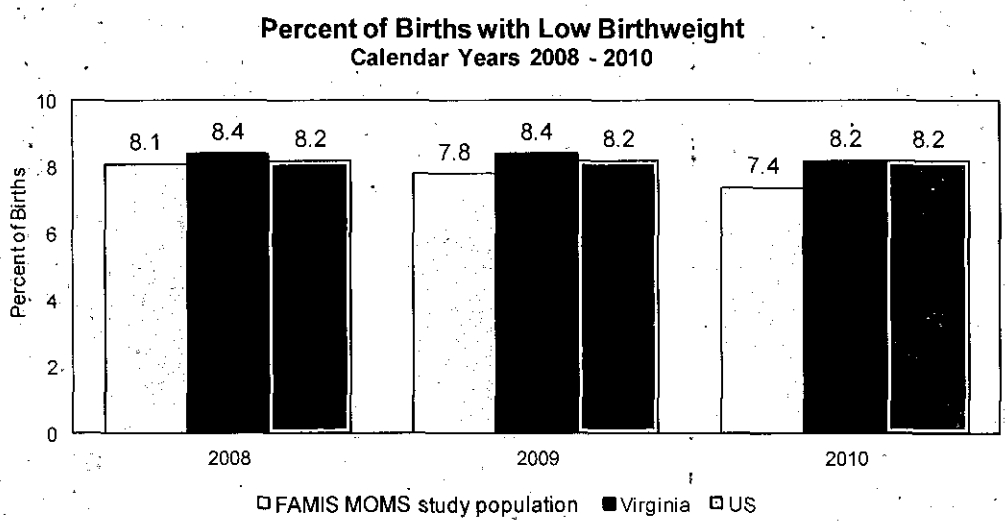
Infants born premature or weighing less than 2,500 grams have a higher risk of health problems at birth as well as long-term developmental and other health problems. The 2007 report from the Governor's Health Reform Commission estimated the average cost covered by taxpayer dollars for a baby carried to term at $3,200, compared to $31,000 to $48,000 for care of a premature baby who remains in a neonatal intensive care unit for an average of 11 days.

The Delmarva *Calendar Year 2010 Improving Birth Outcomes through Adequacy Prenatal Care Study* evaluated the birth outcomes for women in the FAMIS MOMS study population (n = 1,390 for 2008; 1,405 for 2009; 1,499 for 2010) based on birthweight and gestational age from the birth record data. Findings were compared with national birthweight and gestational age data for the previous year. The Delmarva study found that low birthweight (<2,500 grams) among the FAMIS MOMS study population fell each year from 8.1% (n=112) of births in 2008 to 7.8% (n=109) of births in 2009 and 7.4% (n=111) of births in 2010.

Nationally, low birthweight remained stable at 8.2% in 2008, 2009, and 2010 (preliminary). The Virginia Division of Health Statistics reported that 8.4% of births were low weight in 2008 and 2009, decreasing to 8.2% of births 2010. Figure 8 compares the Delmarva study population with birthweight data for the total Virginia and United States populations of the same year. Low birthweight declined in both the Delmarva study population and among all Virginia births from 2008 to 2010. This still falls short of the Healthy People 2010 objective for the Nation to reduce low birthweight to 5.0%.

The Delmarva study found that very low birthweight (< 1,500 grams) among the FAMIS MOMS study population declined from 2.2% (n=31) of births in 2008 to 1.6% (n=22) of births in 2009 and 1.3% (n=19) in 2010. The Virginia Division of Health Statistics reported that 1.7% of all births to Virginia residents in 2008 and 1.6% of resident births in 2009 and 2010 were very low weight. Nationally, very low birthweight remained stable at 1.5% of births in 2008, 2009, and 2010. The Healthy People 2010 objective for the Nation was to reduce very low birthweight to 0.9%.

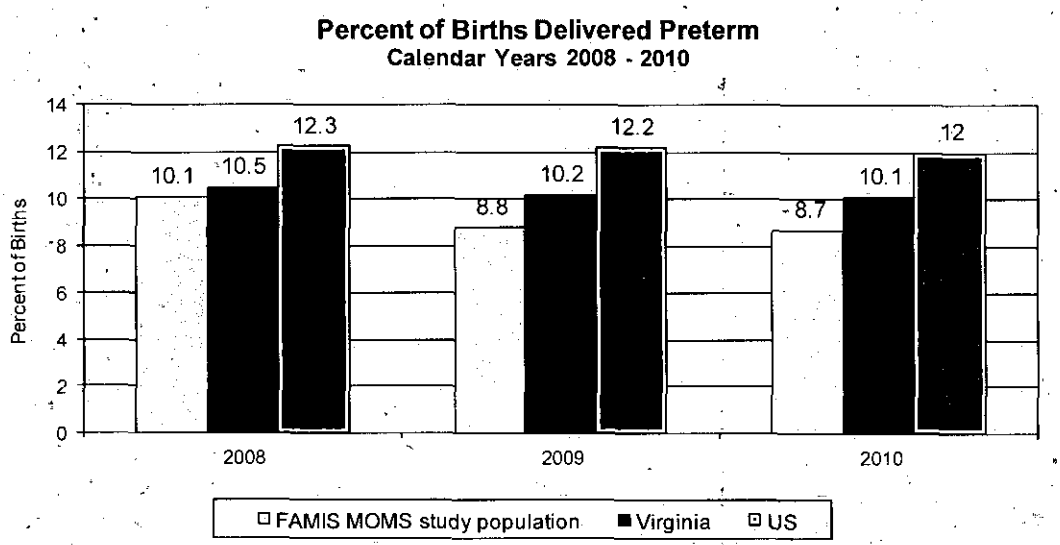
Figure 8:



Sources: CY *2010 Improving Birth Outcomes through Adequate Prenatal Care Study* and VDH Division of Health Statistics

Prematurity is the primary risk factor for low birthweight and infant mortality. A preterm birth is defined as a birth delivered at less than 37 completed weeks gestation. Figure 9 compares percent of preterm births in the Delmarva study population with that of all Virginia and United States births of the same year. Preterm births among the Delmarva study population fell from 10.1% of births in 2008 to 8.8% in 2009 and 8.7% in 2010.

Figure 9:



Sources: *CY 2010 Improving Birth Outcomes through Adequate Prenatal Care Study* and VDH Division of Health Statistics

The Virginia Division of Health Statistics reported that 10.5% of all births to Virginia residents in 2008 were preterm, falling to 10.2% in 2009 and 10.1% in 2010. Nationally, 12.3% of births were preterm in 2008, falling to 12.2% in 2009 and 12.0% in 2010 (preliminary). The Healthy People 2010 objective for the Nation is to reduce preterm births to 7.6%.

It is difficult to make a meaningful comparison between birthweight and prematurity of infants born to FAMIS MOMS and the general population. Women who enter prenatal care late or who deliver prematurely are at higher risk for delivering an infant with low birthweight. These births were less likely to meet the criteria for inclusion in the Delmarva study population. The data suggest that birth outcomes for those pregnant women who were enrolled in a FAMIS MOMS health care delivery system before the last six weeks of their pregnancy were better than birth outcomes for all Virginia residents.

Hypothesis 3 FAMIS MOMS will decrease the number of months income eligible babies will go without insurance.

Beginning July 1, 2010, children who are born to individuals eligible for FAMIS MOMS on the date of the child's birth are deemed to have applied and been determined eligible for Medicaid or FAMIS, as appropriate, on the date of birth and remain eligible until their first birthday.

Conclusions and Recommendations for FAMIS MOMS

In the current Demonstration period beginning July 1, 2010, the FAMIS MOMS program continues to accomplish its goal of providing quality prenatal care to uninsured women living within the Title XXI income range and likely to give birth to FAMIS eligible children. During this Demonstration period DMAS has implemented initiatives to simplify the application process and reduce application denials for administrative reasons. Beginning July 15, 2010, FAMIS MOMS applicants who submit an online application have the option to upload verification documents and sign the application with an electronic signature. Beginning July 1, 2010, children who are born to individuals eligible for FAMIS MOMS on the date of the child's birth are deemed to have applied and been determined eligible for Medicaid or FAMIS, as appropriate, on the date of birth. FAMIS MOMS enrollment increased to 1,564 pregnant women in May 2012.

A staff position was dedicated to outreach pregnant and parenting Hispanic women through July 2011. The proportion of women enrolled in FAMIS MOMS who identified their race as Hispanic increased from 8% in June 2010 to 10% in June 2011.

DMAS continued to work with the Virginia Infant Mortality Workgroup to improve adequacy of prenatal care and birth outcomes. This workgroup continued working with hospital emergency departments for pregnancy verification, identifying strategies to promote utilization of Plan First family planning services, and promoting training for home visitors.

For those pregnant women who were enrolled in a particular FAMIS MOMS health care delivery system before the last six weeks of their pregnancy, the total number of prenatal care visits received was at least as adequate as that received by the general population in Virginia. However, the percent of pregnant women receiving an adequate number of prenatal care visits decreased from 2008 to 2010 among the FAMIS MOMS study population and all births in Virginia.

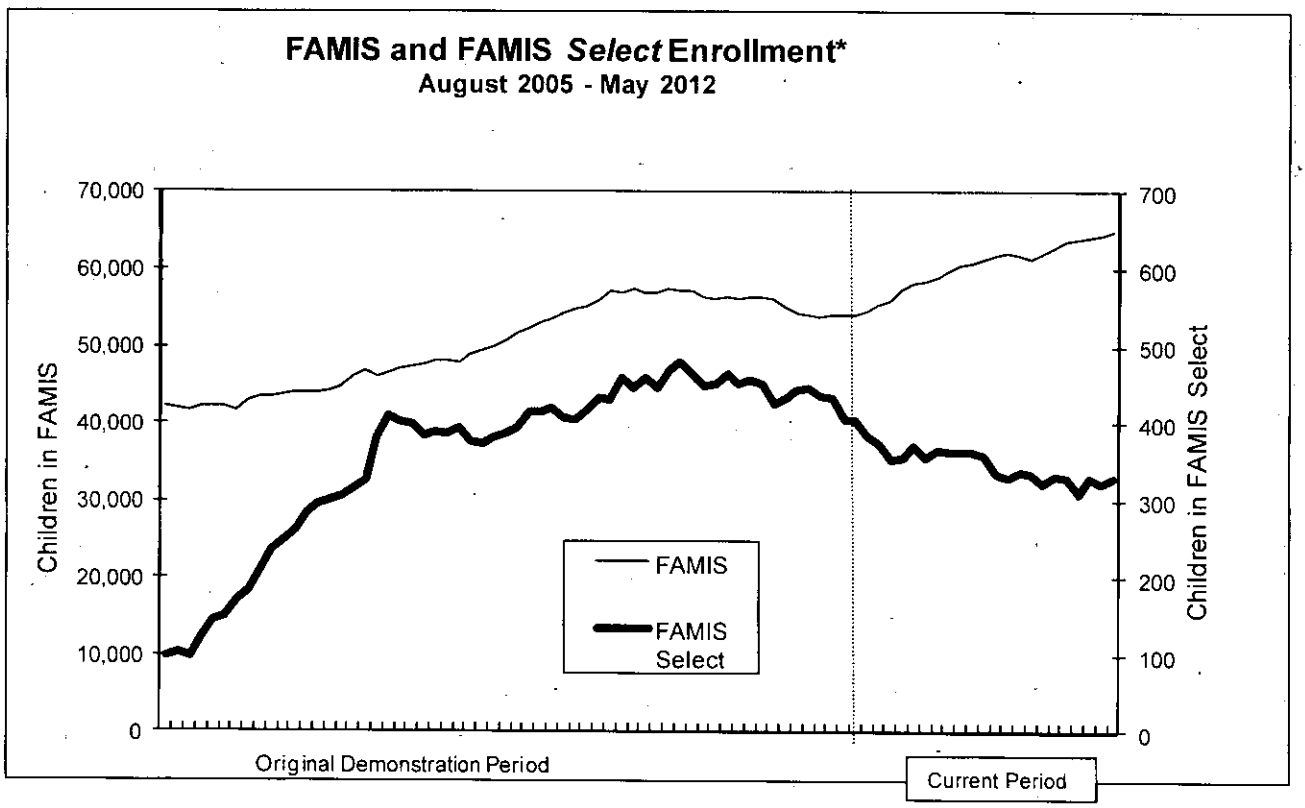
The FAMIS MOMS program continues to provide eligible pregnant women the same comprehensive coverage that pregnant women receive from the Virginia Medicaid program. Birth outcomes improved for those pregnant women who were enrolled in a FAMIS MOMS health care delivery system before the last six weeks of their pregnancy. FAMIS MOMS experienced a decline in low birth weight and preterm births from CY 2008 to CY 2010.

This interim evaluation supports DMAS' application to continue the FAMIS MOMS Demonstration.

Participation in Premium Assistance in CHIP: FAMIS *Select*

Figure 10 shows the trend in FAMIS and FAMIS *Select* enrollment over the course of the Demonstration through May 2012. A total of 98 children were enrolled in FAMIS *Select* in August 2005, the first month of the program. Enrollment reached a high of 480 children in March 2009. Both FAMIS and FAMIS *Select* experienced a decline in enrollment during the final year of the initial Demonstration period. Although FAMIS enrollment began to increase again during the current Demonstration period, enrollment in FAMIS *Select* continued to decline. By May 2011 only 328 children, 0.5% of FAMIS recipients, were enrolled in FAMIS *Select* statewide.

Figure 10:



* Number enrolled as of the first day of the month.

Source: DMAS Recipient file

In December 2011, 93% of children in FAMIS *Select* were covered under an employer-sponsored plan; 7% were covered under a private plan.

The evaluation of the initial five-year Demonstration period resulted in two recommendations to enhance participation in FAMIS *Select*: (1) initiate a contact from FAMIS *Select* at the time of FAMIS eligibility renewal to remind families that continued participation in FAMIS *Select* is dependent on FAMIS eligibility, and (2) explore the possibility of allowing children with health insurance coverage who otherwise meet FAMIS eligibility requirements to enroll directly into FAMIS *Select*. DMAS initiated a process in May 2012 for FAMIS *Select* staff to contact families the month prior to their FAMIS eligibility renewal to remind them that continued participation in FAMIS *Select* is dependent on FAMIS eligibility. Data are not yet available to evaluate the effectiveness of this strategy. To promote more participation in premium assistance, DMAS is exploring mechanisms for enrolling children in FAMIS who exceed the MAGI limit for Medicaid due to changes in income disregards. These children would then have the option to enroll in FAMIS *Select* to avoid termination at their next annual eligibility review.

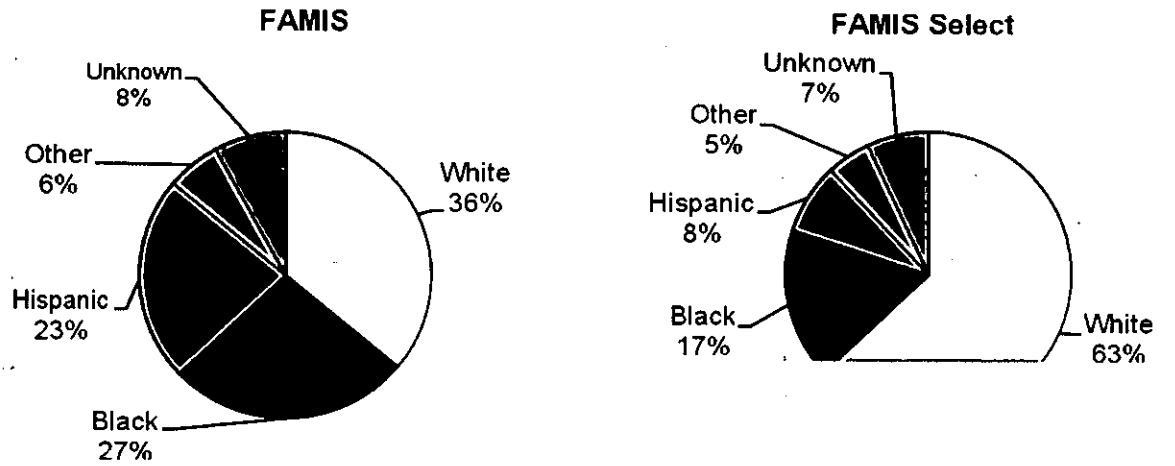
Consistent with the first Demonstration period, in December 2011 the less populated Southwest region of Virginia had the highest participation rate of FAMIS enrollees in FAMIS *Select*. FAMIS *Select* participation continued to be especially strong in Lynchburg and the surrounding counties. The Northern region continued to have the lowest participation rate, followed by the Eastern region. Of the localities with more than 1,000 FAMIS enrollees, Chesterfield (Central Region) and Loudoun (Northern Region) Counties had a comparatively large proportion of FAMIS enrollees participating in FAMIS *Select*. The following large localities had a comparatively small proportion of FAMIS enrollees participating in FAMIS *Select*: Richmond City (Central Region), and Fairfax County, Prince William County, Arlington County, and Alexandria (Northern Region). Norfolk and Newport News (Eastern Region) had no participants. Henrico County (Central Region) and Chesapeake and Virginia Beach (Eastern Region) had average participation of FAMIS enrollees in FAMIS *Select*.

As illustrated in Figure 11, the racial distribution of FAMIS *Select* participants continues to be disproportionately white compared to all children enrolled in FAMIS. In December 2011, 63% of children in FAMIS *Select* were non-Hispanic white compared to 36% of all FAMIS enrollees. Only 20% of children in FAMIS *Select* were identified as non-Hispanic black/African American compared to 27% of all FAMIS enrollees. Only 8% of children in FAMIS *Select* were identified as Hispanic compared to 23% of all FAMIS enrollees. Five percent of children in FAMIS *Select* and 6% of all children in FAMIS were identified as another race or biracial.

Figure 12 compares the ages of children in FAMIS and FAMIS *Select* in December 2011. As in June 2010 at the end of the initial Demonstration period, FAMIS *Select* enrollees were distributed more toward the center of the age spectrum compared to all FAMIS enrollees. Seventy percent of children in FAMIS *Select* were 4 through 13 years of age compare to 55% of all children in FAMIS. This is consistent with the previous finding that FAMIS *Select* is more attractive to families with multiple children enrolled in FAMIS. Families with more than one eligible child are more likely to have at least one child in the middle age group.

Figure 11:

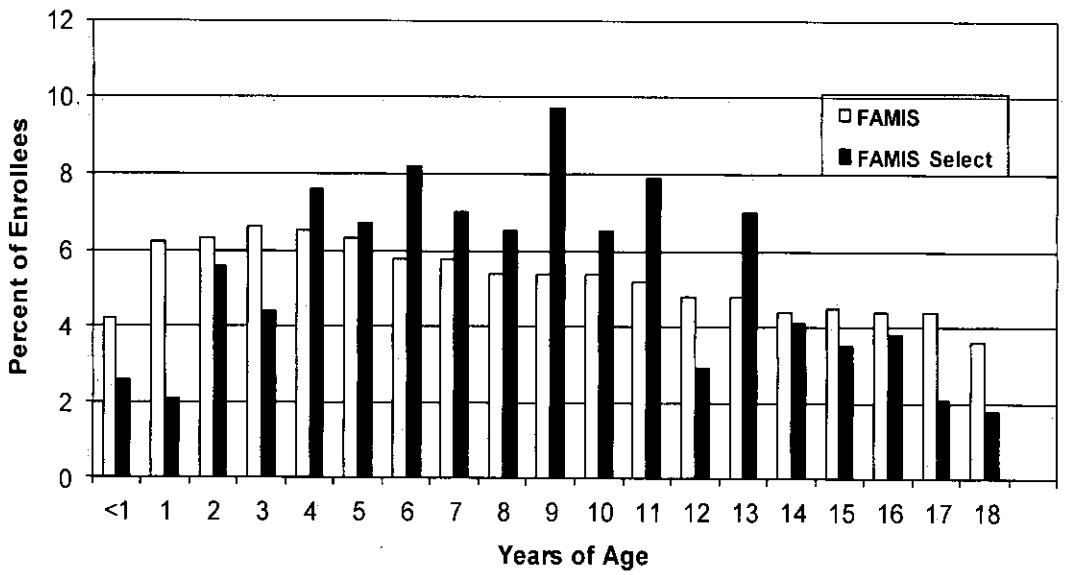
FAMIS and FAMIS *Select* Enrollees by Race and Ethnicity
December 2011



Source: DMAS Recipient file

Figure 12:

FAMIS and FAMIS *Select* Enrollees by Age
December 2011



Source: DMAS Provider file

Coverage of Adults and Other Children

FAMIS *Select* provides premium assistance only for children eligible for the FAMIS program and does not cover adults. However, because families receive $100 per month per eligible child, the premium assistance payment often makes family coverage affordable for the entire family. Based on the information provided on enrollment applications, in December 2011, 730 additional family members (620 adults and 110 other children) were also covered by the health insurance policies supported by FAMIS *Select*.

Quality Measures on Access and Outcomes for FAMIS *Select*

Access to Services

Children enrolled in the FAMIS *Select* program have access to the services covered by their private or employer-sponsored insurance plan from the network of providers offered by that plan. Parents are encouraged to carefully compare services covered under the private or employer plan with covered services available through the standard FAMIS package. Coverage provided under their plan for children participating in FAMIS *Select* during December 2011 as reported on the FAMIS *Select* enrollment application is shown in Table 3. Based on parental report, all children are covered for doctor visits. Almost all children are covered for prescription drugs, and hospital and emergency care, lab and x-rays, well-child check-ups, and immunizations. Coverage for dental care, vision care, and mental health care are each available to about three-fourths of the children.

Table 3:

Coverage Provided by FAMIS Select Plans, December 2011

Coverage	Number of children	Percent of children
Doctor visits	379	100%
Prescription drugs	377	99%
Hospital and emergency care	372	98%
Lab and x-rays	367	97%
Well-child checkups	364	96%
Immunizations	360	95%
Dental care	306	81%
Vision care	284	75%
Mental health care	273	72%

Source: FAMIS Select Applications

Hypothesis 1 ***The number of providers serving as usual sources of care (medical homes) for children in the State's Title XXI program will increase.***

No additional data are available.

Hypothesis 2 ***There will be no difference in the percentage of children who are up-to-date on immunizations among FAMIS and FAMIS Select children and that both programs result in an increase in the percent of children who are up-to-date on immunizations.***

With some exceptions State law mandates that medical care insurers cover routine immunizations for children from birth through six years of age. Ninety-five percent of children enrolled in FAMIS *Select* in December 2011 were reported to have immunization coverage through their private or employer-sponsored plan. All children are provided coverage on a fee-for-service basis for routine immunizations not covered by the plan.

Hypothesis 3 There will be no difference in the percentage of FAMIS and FAMIS Select children who receive appropriate well-child care and that both programs result in an increase in the number of children receiving appropriate well child care.

With some exceptions State law mandates that most health care plans cover child health supervision services at intervals from birth through six years of age. Nine-six percent of children enrolled in FAMIS *Select* in December 2011 were reported to have coverage for well-child care through their private or employer-sponsored plan.

Conclusions and Recommendations for FAMIS *Select*

The FAMIS *Select* program continues to accomplish its goal of providing a streamlined and cost-effective alternative to the standard FAMIS program. However, enrollment continued to decline during this Demonstration period despite an increase in FAMIS enrollment. The program remains small, as expected given the availability of the alternative FAMIS plan with a comprehensive benefits package and very low cost sharing. The FAMIS *Select* plan is generally advantageous only for those families with more than one child and a generous employer-sponsored plan.

Most children have coverage for basic health care services, including immunizations and well child care, through their insurance plan. However, coverage for dental care, vision care, and mental health care is reported for only about three-fourths of children enrolled in FAMIS *Select*.

DMAS initiated a process in May 2012 for FAMIS *Select* staff to contact families the month prior to their FAMIS eligibility renewal to remind them that continued participation in FAMIS *Select* is dependent on FAMIS eligibility. Data are not yet available to evaluate the effectiveness of this strategy.

This interim evaluation supports DMAS' application to continue the FAMIS *Select* Demonstration. To promote more participation in premium assistance, DMAS is exploring mechanisms for enrolling children in FAMIS who exceed the MAGI limit for Medicaid due to changes in income disregards. These children would then have the option to enroll in FAMIS *Select* to avoid termination at their next annual eligibility review.

Demonstration No. 21-W-00058/3
FAMIS MOMS and FAMIS *Select*
Virginia Department of Medical Assistance Services

COMPLANCE WITH SPECIAL TERMS AND CONDITIONS

I. PREFACE

The following documents compliance as of May 2012 with the Special Terms and Conditions (STCs) for the Virginia FAMIS MOMS and FAMIS *Select* programs, a Children's Health Insurance Program section 1115 Demonstration, during the Demonstration renewal period beginning July 1, 2010. The STCs are arranged into the following subject areas: Program Description and Objectives; General Program Requirements; General Reporting Requirements; Eligibility and Enrollment; Benefits; Cost Sharing; Program Design; General Financial Requirements for Demonstration Populations 1 and 2.

II. PROGRAM DESCRIPTION AND OBJECTIVES

The Virginia FAMIS MOMS and FAMIS *Select* Demonstration was initially approved on June 30, 2005, and implemented August 1, 2005. The Demonstration provides coverage for uninsured children through age 18, and services to pregnant women without creditable coverage in families with incomes through 200 percent of the Federal poverty level (FPL).

Virginia continued to use Medicaid methodology for determining income eligibility for FAMIS MOMS, and continued to provide health care benefits that are identical to those provided to pregnant women under the Medicaid State plan. With this renewal effective July 1, 2010, Virginia deemed infants born to FAMIS children and FAMIS MOMS eligible for Medicaid or CHIP coverage, as appropriate, on the date of birth. The infants remain eligible until attaining the age of 1, unless, after a reasonable opportunity period, the DMAS fails to obtain evidence to satisfy satisfactory documentation of citizenship under 42 CFR 435.407(c)(1) and (2), and identity under 42 CFR 435.407(e) and (f).

The FAMIS *Select* premium assistance program continued with no changes. Wrap-around coverage continued to be provided for immunizations only.

III. GENERAL PROGRAM REQUIREMENTS

1. **Compliance with Federal Non-Discrimination Statutes.** Virginia complies with all applicable Federal statutes relating to non-discrimination. These include, but are not limited to, the Americans with Disabilities Act of 1990, title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975.

2. **Compliance with Medicaid and Children's Health Insurance Program (CHIP) Law, Regulation, and Policy.** All requirements of the Medicaid and CHIP programs expressed in law, regulation, and policy statement, not expressly waived or identified as not applicable in the waiver and expenditure authority documents (of which these terms and conditions are part) were applied to the Demonstration.

3. **Changes in Medicaid and CHIP Law, Regulation, and Policy.** No change in Federal law, regulation, or policy affecting the Medicaid or CHIP programs has occurred during this Demonstration approval period.

4. **Impact on Demonstration of Changes in Federal Law, Regulation, and Policy.** No change in Federal law, regulation, or policy required either a reduction or an increase in Federal financial participation (FFP) for expenditures made under this Demonstration.

5. **State Plan Amendments.** No conforming title XIX or title XXI State plan amendments were required.

6. **Changes Subject to the Amendment Process.** No changes were made related to eligibility, enrollment, benefits, cost sharing, sources of non-Federal share of funding, budget neutrality, or other comparable program elements.

7. **Amendment Process.** Virginia submitted a request to CMS on April 13, 2012, to amend the Demonstration. Virginia asked to implement the amendment July 1, 2012, recognizing that the request was submitted later than the 120 days required by the STC. The request includes: (a) an explanation of the public process used by the Commonwealth to reach a decision regarding the requested amendment; (b) an up-to-date CHIP allotment neutrality worksheet; and (c) a detailed description of the amendment, including impact on beneficiaries, with sufficient supporting documentation.

8. **Extension of the Demonstration.** The Governor of Virginia is submitting to CMS a Demonstration extension request to CMS 12 months prior to the expiration date of the Demonstration.

   The Demonstration Extension Application provides documentation of compliance with the public notice requirements outlined in paragraph 15:

   a) Demonstration Summary and Objectives: The Demonstration Extension Application provides a narrative summary of the Demonstration project, reiterates the objectives set forth at the time the Demonstration was proposed, and provides evidence of how these objectives have been met as well as future goals of the program. The application includes a narrative of the changes being requested along with the objective of the change and desired outcomes.

b) Special Terms and Conditions (STCs): This document provides documentation of compliance with each of the STCs.

c) Waiver and Expenditure Authorities: Virginia is requesting the same waiver and expenditure authorities as those approved in the current demonstration. To promote more participation in premium assistance, DMAS is exploring mechanisms for enrolling children in FAMIS who exceed the MAGI limit for Medicaid due to changes in income disregards.

i. General Requirements, Eligibility and Outreach — Section 2102

The Commonwealth's Child Health Insurance Plan (CHIP) is not required to reflect the demonstration populations, and eligibility standards need not be limited by the general principles in section 3202(b) of the Act. To the extent other requirements in section 2102 of the Act duplicate Medicaid or other CHIP requirements for these or other populations, they do not apply, except that Virginia performs eligibility screening to ensure that the demonstration populations do not include individuals otherwise eligible for Medicaid.

ii. Cost Sharing — Section 2103(e)

Rules governing cost sharing under section 2103(e) of the Act do not apply to the FAMIS *Select* population to the extent necessary to enable Virginia to impose cost sharing in private or employer-sponsored insurance plans.

iii. Cost-Sharing Exemption for American Indian/ Alaskan Native (AI/AN) Children — Section 2102(b)(3)(D) 42 CFR Section 457.535

Virginia is permitted to impose cost sharing on AI/AN children who elect to enroll in the premium assistance program.

iv. Benefit Package Requirements — Section 2103

Virginia is permitted to offer a benefit package that does not meet the requirements of section 2103 at 42 CFR section 457.4 10(b)(1) for the demonstration populations.

v. Federal Matching Payment and Family Coverage Limits — Section 2105

Federal matching payment in excess of the 10-percent cap for expenditures related to the demonstration population and limits on family coverage are not applicable to the demonstration population.

d) Quality: A summary of the most recent focused study conducted by the External Quality Review Organization is provided in the Demonstration Extension Application.

e) Draft Report with Evaluation Status and Findings: A narrative summary of the evaluation design, status (including evaluation activities and findings to date) is provided as a separate document. No change in evaluation activities is planned for the extension period.

9. **Demonstration Phase-Out.** Virginia does not plan to suspend or terminate this Demonstration in whole, or in part, prior to the expiration date.

10. **Enrollment Limitation During Demonstration Phase-Out.** Virginia anticipates that this Demonstration will be extended.

11. **CMS Right to Terminate or Suspend**. CMS has not suspended or terminated the Demonstration (in whole or in part).

12. **Finding of Non-Compliance.** CMS has not found that Virginia materially failed to comply.

13. **Withdrawal of Waiver Authority.** CMS has not withdrawn waiver or expenditure authorities.

14. **Adequacy of Infrastructure.** Virginia has made available adequate resources for implementation and monitoring of the Demonstration, including education, outreach, and enrollment; maintaining eligibility systems; compliance with cost sharing requirements; and reporting on financial and other Demonstration components.

15. **Public Notice and Tribal Consultation, and Consultation with Interested Parties.** Virginia has no federally recognized Indian tribes, Indian health programs, and/or Urban Indian organizations.

16. **Federal Financial Participation (FFP).** No Federal matching funds for expenditures for this Demonstration were requested for this demonstration period prior to the effective date identified in the Demonstration approval letter.

IV. GENERAL REPORTING REQUIREMENTS

1. **Quarterly and Monthly Enrollment Reports.** Each quarter Virginia provides CMS with an enrollment report, by Demonstration population, which shows the end of the quarter actual and unduplicated ever-enrolled figures. These enrollment data are entered into the Statistical Enrollment Data System within 30 days after the end of each quarter. In addition, Virginia provides monthly enrollment data in the written report format agreed to by CMS and the Commonwealth.

2. **Monitoring Calls.** CMS and the Commonwealth held monitoring calls as needed to discuss issues associated with the continued operation of the Demonstration.

3. **Annual Reports.** Virginia has not yet submitted the annual report for the current demonstration period. Within 30 days of receipt of comments from CMS, Virginia will submit a final annual report.

4. **Final Report.** Virginia proposes to extend the Demonstration so does not plan to submit a final report at this time.

5. **Final Evaluation Design and Implementation.** CMS did not provide comments on the draft evaluation design. Virginia continues to implement the evaluation design and report its progress in the quarterly reports. Virginia will submit to CMS a draft evaluation report 120 days after the expiration of the current Demonstration period. If comments are received from CMS, Virginia will submit a final report no later than 60 days after the receipt of the comments from CMS.

V. ELIGIBILITY AND ENROLLMENT

1. **Screening for Medicaid.** Virginia continues to screen all applicants for the Demonstration for Medicaid eligibility. Demonstration applicants eligible for Medicaid are enrolled in Medicaid and receive the full Medicaid benefit package.

2. **Enrollment in Premium Assistance.** CMS gave approval through this Demonstration renewal for children eligible for Virginia's Separate CHIP program and not eligible under the Medicaid State plan as of March 31, 1997, to continue to choose to receive coverage through premium assistance for private or employer-sponsored insurance. Such enrollment is voluntary and based on informed choice regarding all implications of choosing premium assistance, including the possibility of reduced benefits and increased cost sharing, and that the title XXI cost-sharing limit of 5 percent on annual, aggregate cost sharing does not apply. Virginia notifies families at enrollment and during the month of May that they may choose direct coverage at any time. In the case of title XXI-eligible children; Virginia continues to inform families that all age-appropriate immunizations in accordance with the recommendations of the Advisory Committee on Immunization Practices (ACIP) are covered. Families continue to be told that this coverage is a factor to consider in choosing private or employer-sponsored insurance. Virginia provides information as to where children may receive immunizations in the event these services are not covered in the employer-sponsored plan or private health plan in which they are enrolled. In the case of title XXI eligibles whose employer or private insurance does not include immunizations, the Commonwealth has an established mechanism in effect to reimburse providers for the cost of immunizations.

3. **Enrollment Limits.** There is no enrollment cap for FAMIS MOMS and FAMIS *Select*. Enrollment in a private or employer-sponsored plan is voluntary, and the child may elect to switch to direct FAMIS coverage at any time.

VI. BENEFITS

1. **Prenatal Coverage.** No changes were made to the benefit package.

2. **Premium Assistance**. For children who chose to receive coverage through premium assistance, the benefit package available through the private or employer-sponsored insurance company was the benefit package delivered.

VII. COST SHARING

1. **Prenatal Coverage.** The cost- sharing requirements for the FAMIS MOMS Demonstration are consistent with those described in the title XIX State plan. There are no premiums or enrollment fees. Copayments continue to apply to services that are not pregnancy-related as specified in Attachment E of the Demonstration proposal.

2. **Premium Assistance**. For children who chose to receive coverage through premium assistance, cost-sharing requirements continued to be set by their private or employer-based coverage.

VIII. PROGRAM DESIGN

1. **Concurrent Operation.** Virginia's title XXI State plan, as approved, continued to operate concurrently with this section 1115 Demonstration.

2. **Maintenance of Coverage and Enrollment Standards for Children**

   a) Virginia continued to review of enrollment data to provide evidence that children were not denied enrollment and continued procedures to enroll and retain eligible children for CHIP.

   b) Virginia's established monitoring process ensured that expenditures for the renewal did not exceed available title XXI funding (i.e., the title XXI allotment or reallocated funds) and the appropriate State match.

   Virginia did not employ the option to, for Demonstration population 1:
   - Lower the Federal poverty level used to determine eligibility, or
   - Suspend eligibility determination and/or intake into the program, or
   - Discontinue coverage.

IX. GENERAL FINANCIAL REQUIREMENTS FOR DEMONSTRATION POPULATIONS 1 AND 2

1. Virginia continues to report Demonstration expenditures through the Medicaid and State Children's Health Insurance Program Budget and Expenditure System (MBES/CBES), following routine CMS-21 reporting instructions as outlined in section 2115 of the State Medicaid Manual. Title XXI Demonstration expenditures are reported on separate Forms CMS-21 Waiver and/or CMS-21P Waiver, identified by the Demonstration project number assigned by CMS (including project number extension, which indicates the Demonstration year in which services were rendered or for which capitation payments were made). Virginia continues to identify the program code and coverage (children or adults) on the appropriate waiver forms.

   a) Virginia makes all claims for expenditures related to the Demonstration (including any cost settlements) within 2 years after the calendar quarter in which the Commonwealth made the expenditures. All claims for services during the Demonstration period (including cost settlements) will be made within 2 years after the conclusion or termination of the Demonstration. During the latter 2-year period, the Commonwealth will continue to identify separately, on the Form CMS-21, net expenditures related to dates of service during the operation of the Demonstration.

   b) The standard CHIP funding process continues to be used during the Demonstration. Virginia continues to estimate matchable CHIP expenditures on the quarterly Form CMS-21B. Virginia provides updated estimates of expenditures for the Demonstration population on a separate CMS-21B. Within 30 days after the end of each quarter, Virginia submits the Form CMS-21 quarterly CHIP expenditure report.

   c) The Virginia continues to certify Commonwealth/local monies used as matching funds for the Demonstration and certifies that such funds are not used as matching funds for any other Federal grant or contract, except as permitted by Federal law.

2. Virginia has not expended its available title XXI Federal funds for any claiming period.

3. Virginia has not expended its available title XXI Federal funds.

4. Total expenditures for outreach and other reasonable costs to administer the title XXI State plan and the Demonstration renewal that are applied against Virginia's title XXI allotment have not exceeded 10 percent of total title XXI expenditures.

5. If Virginia exhausts the available title XXI Federal funds in a Federal fiscal year during this renewal period of the Demonstration, the Commonwealth will continue to provide coverage to the approved title XXI State plan separate child health program population and the Demonstration population(s) with Commonwealth funds.

6. Virginia has not closed enrollment or instituted a waiting list with respect to the Demonstration Populations.

Commonwealth of Virginia
Department of Medical Assistance Services

Calendar Year 2010

Improving Birth Outcomes Through Adequate Prenatal Care Study

March 2012

Delmarva Foundation

Submitted by
Delmarva Foundation for Medical Care
9240 Centreville Road
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Table of Contents

Improving Birth Outcomes through Adequate Prenatal Care

Executive Summary

The Virginia Department of Medical Assistance Services (DMAS) is responsible for evaluating the quality of prenatal care provided to pregnant women enrolled in the Family Access to Medical Insurance Security (FAMIS) FAMIS MOMS and Medicaid for Pregnant Women programs. DMAS contracted with the Delmarva Foundation for Medical Care, Inc. (Delmarva) as the External Quality Review Organization (EQRO) to conduct a prenatal care/birth outcomes focused study as an optional EQR task under the Centers for Medicare & Medicaid Services (CMS) Medicaid guidelines.

The Medicaid for Pregnant Women program is funded under Title XIX (Medicaid State Plan) serving pregnant women with incomes up to 133 percent of the federal poverty level (FPL). The FAMIS MOMS program is funded under Title XXI (CHIP Demonstration Waiver) and serves pregnant women with incomes up to 200 percent FPL during the time period covered by this study. FAMIS MOMS provides benefits similar to Medicaid through the duration of the pregnancy and for 60-days postpartum.

Women must have a medically confirmed pregnancy in order to enroll in these programs. Care coordination is available for pregnant women who are identified as high-risk in both the Medicaid and FAMIS MOMS programs. Beginning prenatal care within the first trimester and obtaining the recommended number of prenatal care visits are essential to reducing the likelihood of maternal and newborn complications. Complications, including low birth weight (LBW) infants and premature births, can result in long-term health and developmental problems for the child and family. Timely access to high quality prenatal care is extremely important for pregnant women enrolled in Medicaid, as it can significantly contribute to optimal birth outcomes.

The aim of the study was two-fold: 1) to evaluate the adequacy of prenatal care for Virginia's pregnant women in the two Medicaid programs; and 2) to determine the impact of prenatal care on birth outcomes. This study evaluated the status of prenatal care and birth outcomes and compares the performance of the FAMIS MOMS and Medicaid for Pregnant Women programs with each other and with national averages for births that occurred in calendar years (CY) 2008, 2009, and 2010.

Findings and Recommendations

The majority (92.1 percent) of pregnant women were in the Medicaid for Pregnant Women program while 7.9 percent were in the FAMIS MOMS program. The percentage of pregnant women enrolled in a managed care organization (MCO) increased from 70.2 percent in 2008 to 74.9 percent in 2010. The number of women enrolled in FFS and PCCM continued to decrease each year from 2008 to 2010.

- Data analysis showed that enrollees in both programs received adequate prenatal care at rates that are notably better than the HEDIS® National Medicaid Managed Care Average.
- Rates of low birth weight infants born to FAMIS MOMS have improved and outperformed the Centers for Disease Control and Prevention's (CDC's) national benchmark.
- Medicaid for Pregnant Women low birth weight rates remained unfavorable when compared with the national CDC averages for all three years but showed an improvement (lower rate) in 2010.
- It should be noted that FAMIS MOMS is the higher income group of the two programs.

Adequate Prenatal Care Rates for CY 2008, 2009 and 2010

- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs received adequate prenatal care at rates that were more favorable than the HEDIS® National Medicaid Managed Care Averages in all three years.

Overall Low Birth Weight (LBW)

- LBW rates for FAMIS MOMS improved in each of the three years and outperformed the national CDC's benchmark in all years.
- LBW rates for infants born to women in a managed care organization improved from 2009 to 2010 and outperformed the national benchmark in 2010.
- LBW rates for FFS enrollees were the least favorable of all delivery systems and when compared with the national benchmarks for all years.

Preterm Infants

- The rate of infants born prematurely (before 37 completed weeks of pregnancy) in the FAMIS MOMS and Medicaid for Pregnant Women programs improved (decreased) and was more favorable than the national rates for all three years.

Recommendations

Women who are eligible for Medicaid for Pregnant Women or the FAMIS MOMS Programs are considered to be at increased risk for adverse birth outcomes. Health care coverage may improve access to care but does not guarantee improved outcomes. Other considerations such as social determinants of health including race, ethnicity, and socioeconomic factors related to poverty, housing and access to health services play a role in health outcomes. Further, cultural beliefs of the expectant mom impact the effectiveness of evidenced based care. The ability to analyze variables and gaps in expected outcomes can help to identify effective, focused interventions to improve birth outcomes.

- DMAS should track, trend, and compare standardized Birth Registry data to have an accurate evaluation of prenatal care and birth outcomes for these populations.
- Root-cause analyses can identify subgroups whose barriers may cause or contribute to adverse outcomes. This analysis can be used for tailoring education, outreach, and other interventions in order to reduce barriers.
- The MCOs should conduct a root cause analysis to determine disparities and identify barriers in their prenatal population outcomes. For example, African American women recorded the highest (worst) rates of all categories of low birth weights. These outcomes persist even though this subgroup received adequate prenatal care at rates that exceed all racial groups except White women.
- The MCOs' successful strategies for improving birth outcomes should be explored for possible replication in the FFS populations.
- DMAS should evaluate program results and strategies of other Medicaid agencies that implemented statewide partnerships and collaborative efforts to improve the rates of infants born at healthy gestational ages and birth weights.

Improving Birth Outcomes through Adequate Prenatal Care

Introduction

The Virginia Department of Medical Assistance Services (DMAS) is responsible for evaluating the quality of prenatal care provided to pregnant women enrolled in the Family Access to Medical Insurance Security (FAMIS) FAMIS MOMS and Medicaid for Pregnant Women programs. DMAS contracted with the Delmarva Foundation for Medical Care, Inc. (Delmarva) as the External Quality Review Organization (EQRO) to conduct prenatal care/birth outcomes focused study as an optional EQR task under the Centers for Medicare & Medicaid Services (CMS) Medicaid guidelines.

The Medicaid for Pregnant Women program is funded under Title XIX (Medicaid State Plan) serving pregnant women with incomes up to 133 percent of the federal poverty level (FPL). The FAMIS MOMS program is funded under Title XXI (CHIP Demonstration Waiver) and serves pregnant women with incomes up to 200 percent FPL during the time period covered by this study. FAMIS MOMS provides benefits similar to Medicaid through the duration of the pregnancy and for 60-days postpartum.

Women must have a medically confirmed pregnancy in order to enroll in these programs. Care coordination is available for pregnant women who are identified as high-risk in both the Medicaid and FAMIS MOMS programs.

Beginning prenatal care within the first trimester and obtaining the recommended number of prenatal care visits are essential to reducing the likelihood of maternal and newborn complications. Complications, including low birth weight (LBW) and premature births, can result in long-term health and developmental problems for the child. Access to high quality services for all persons enrolled in Medicaid is very important and particularly critical for pregnant women to achieve optimal birth outcomes.

The Centers for Disease Control and Prevention (CDC) uses the National Center for Health Statistics (NCHS) and the National Vital Statistics Systems (NVSS) to produce aggregated birth weight results from all state Birth Registry data. The definition of each low birth weight category is as follows:

- Overall low birth weight (OLBW< 2,500 grams)
- Moderately low birth weight (MLBW – 1,500 to 2,499 grams
- Very low birth weight (VLBW<1,500 grams).

Purpose and Objectives

The aim of the study was two-fold: 1) to evaluate the adequacy of prenatal care for pregnant women in the two programs; and 2) to determine the impact of prenatal care on birth outcomes. This study evaluated the status of prenatal care and birth outcomes and compares the performance of the FAMIS MOMS and Medicaid for Pregnant Women programs with each other and with national averages for births that occurred in calendars years (CY) 2008, 2009, and 2010.

Methodology

The Virginia Department of Health (VDH) Birth Registry and DMAS' Medicaid enrollment data were used to identify the eligible population (denominator) for the births that occurred in CY 2010. First, a file of enrollment data was created to include the demographic strata needed to perform the required analysis. This file was matched to the VDH Birth Registry for records meeting the numerator specifications.

The following administrative data files for calendar year 2010 were used in conducting this study to assess birth outcomes for women enrolled in FAMIS MOMS or Medicaid for Pregnant Women* programs:

- Enrollment Files—Included information about gender, race/ethnicity, date of birth, the enrollment spans for both the FAMIS MOMS and Medicaid for Pregnant Women programs, and the enrollment spans for the three delivery systems Fee for Service (FFS), Primary Care Case Management (PCCM) and Managed Care Organization (MCO).
- Birth Registry—Included both mother's and child's demographic information for women who met the enrollment criteria and had a live birth in calendar year 2010.

The birth outcomes study used enrollment and birth registry data as the primary data source. Encounter and fee-for-service claims data were used only as a secondary analysis to confirm the indicator results from the primary data in the birth registry. The secondary, confirmatory analysis compares information from the birth registry about the trimester in which prenatal care began and frequency of prenatal visits to the same information from the claims data.

*Prenatal Data containing the Other Medicaid population is included in Appendix 3.

Significant, positive correlations between the birth registry data and the claims data for these two indicators (the trimester in which prenatal care began and frequency of prenatal visits) substantiated the information in the primary data source in CY 2008, 2009 and 2010. The following data files were also utilized in this analysis:

- Encounter/FFS Claims Data—Includes claims where the dates of service were in the range April 1, 2009 – December 31, 2010.

After merging the birth registry and enrollment data, analyses were performed using SAS® Base software, a product of SAS Institute, Cary, North Carolina. The SAS® programs were modified to reflect each of the calendar years being analyzed. All programming was validated by a research scientist to assure the analytic logic. Results from these programs were compared with those from previous years to determine whether the eligible population size was as expected and that data appeared complete.

Since the Virginia Birth Registry data was the primary data source, the Kotelchuck Index, also called the Adequacy of Prenatal Care Utilization (APNCU) Index, was used to analyze the data. The Kotelchuck Index defines the expected number of visits based on the American College of Obstetricians and Gynecologists (ACOG) prenatal care standards for uncomplicated pregnancies and is adjusted for gestational age. This index identifies two crucial elements obtained from birth certificate (self-reported) data: when prenatal care began and the number of prenatal visits from initiation of prenatal care to delivery. The final measure combines these two dimensions into a single summary score. Adequate prenatal care as defined by the Kotelchuck Index is a score of > 80 percent.

Although some specifications were modified to meet the needs of DMAS, the Healthcare Effectiveness Data & Information Set (HEDIS®) Vol. 2, Technical Specifications were used as the model for constructing the indicators, numerators, and denominators. HEDIS® was developed and is maintained by the National Committee for Quality Assurance (NCQA) and is the most widely used set of performance measures in the managed care industry. The study results are compared with the corresponding HEDIS® measure: Frequency of ongoing Prenatal Care (FPC). The HEDIS® measure assesses the percentage of Medicaid women in managed care organizations who received the expected number of prenatal care visits. It should be noted that while over 71 percent of the enrollees in FAMIS MOMS and Medicaid for Pregnant Women received care through the managed care delivery system, the remaining 29 percent were served through the FFS or PCCM delivery system. Therefore, the numbers within each delivery system are not entirely comparable.

The eligible populations for this study were identified from both the Virginia Birth Registry and the DMAS enrollment file. To be included, a new mother must have been enrolled in either the FAMIS MOMS or the Medicaid for Pregnant Women program and in one of the three delivery systems for a minimum of 43 days prior to and including the date of delivery. Then, based on these identified populations, the Virginia Birth Registry data was utilized for calculating the various indicator results.

The most recent national data available from the CDC's National Center for Health Statistics (NCHS), National Vital Statistics System (NVSS), was used as national averages for comparative purposes. The NVSS obtains data from state Birth Registries and includes all births, but does not contain information about the insurance status of recorded births.

Study Indicators

The study results provide information about the adequacy of prenatal care, the timeliness of pregnant women receiving care, and the outcomes related to pregnancies of women who were enrolled in the FAMIS MOMS or Medicaid for Pregnant Women programs for CY 2010 and met the criteria for inclusion in the study. Please note that for indicators related to birth weight and gestational periods, the overall denominator will be slightly larger due to multiple births. Specifically, this report was designed to address a number of objectives:

- Determine to what extent pregnant women received adequate prenatal care to include both early prenatal care and the recommended number of prenatal care visits.
- Compare the adequacy of prenatal care rates among FAMIS MOMS and Medicaid for Pregnant Women programs with national averages.
- Determine the percentage of infants born with low (LBW), moderately low (MLBW), and very low birth weight (VLBW).
- Compare the birth outcomes by program and delivery system with national averages.

Study Population

The study population included women with a birth documented in the Virginia Birth Registry and who were also found in the DMAS enrollment file for CY 2010. The study population was limited to those who were enrolled in managed care, PCCM, or FFS for at least 43 days prior to

delivery and on the Day of Delivery (DOD). All data in this report are based on those deliveries that meet the study criteria, not all deliveries. Results are provided for the FAMIS MOMS and the Medicaid for Pregnant Women populations and by the following delivery systems:

- FFS (considered traditional Medicaid).
- Managed care in which recipients enroll in an MCO that provides care through its network of providers.
- The MEDALLION PCCM is a program administered by DMAS in which recipients select a primary care provider who provides a medical home and authorizes some specialty care.

When interpreting the findings of this study, it is important to note the size of the program populations in the following three tables.

Table 1. Overall Enrollment of Pregnant Women by Program Population for CY 2008 through CY 2010°

Program Population	CY 2008		CY 2009		CY 2010	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS♦	7.3%	1,387	7.2%	1,403	7.9%	1,497
Medicaid for Pregnant Women*	92.7%	17,631	92.8%	18,024	92.1%	17,423
Totals	100%	19,018	100%	19,427	100%	18,920

°Prenatal Data containing the Other Medicaid population is included in Appendix 3.
♦ FAMIS MOMS (a CHIP Title XXI waiver program)
* Medicaid for Pregnant Women (a Medicaid Title XIX program)

- There was a slight increase in the FAMIS MOMS program in 2010.
- Enrollment in the Medicaid for Pregnant Women program decreased slightly from 2009 to 2010; reversing the previous trend, but continuing to greatly exceed enrollment in the FAMIS MOMS program.

Table 2. Overall Enrollment of Pregnant Women by Delivery System for CY 2008 through CY 2010*

Delivery System	CY 2008		CY 2009		CY 2010	
	Percent	Count	Percent	Count	Percent	Count
FFS	22.1%	4,197	21.2%	4,110	19.1%	3,606
MCO	70.2%	13,348	71.5%	13,885	74.9%	14,177
PCCM	7.8%	1,473	7.4%	1,432	6.0%	1,137
Totals	101%*	19,018	101%*	19,427	100%*	18,920

*Rates may not add correctly due to rounding.

- The percentage of pregnant women enrolled in the MCO delivery system increased over the three-year period, to nearly 75 percent in 2010.
- Enrollment (both the number and percentage) of pregnant women in the FFS and PCCM programs decreased during the three-year period. As Virginia continues to expand managed care throughout the state, this trend of increased participation in managed care is also expected to continue.

Table 3. Overall Enrollment of Pregnant Women by Program Population and Delivery System for CY 2008 through CY 2010*

Delivery System	FAMIS MOMS✦ CY 2008	FAMIS MOMS✦ CY 2009	FAMIS MOMS✦ CY 2010	Medicaid for Pregnant Women⌘ CY 2008	Medicaid for Pregnant Women⌘ CY 2009	Medicaid for Pregnant Women⌘ CY 2010
FFS	15.7%	12.7%	12.5%	22.6%	21.8%	19.6%
MCO	84.3%	87.3%	87.5%	69.1%	70.2%	73.9%
PCCM	0%	0%	0%	8.4%	7.9%	6.5%

* Rates may not add correctly due to rounding.
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)

- The percentage of women enrolled in an MCO in both the FAMIS MOMS and Medicaid for Pregnant Women programs increased during this three-year period.
- The percentage of pregnant women enrolled in the FFS and PCCM programs decreased over the same time period.

Findings

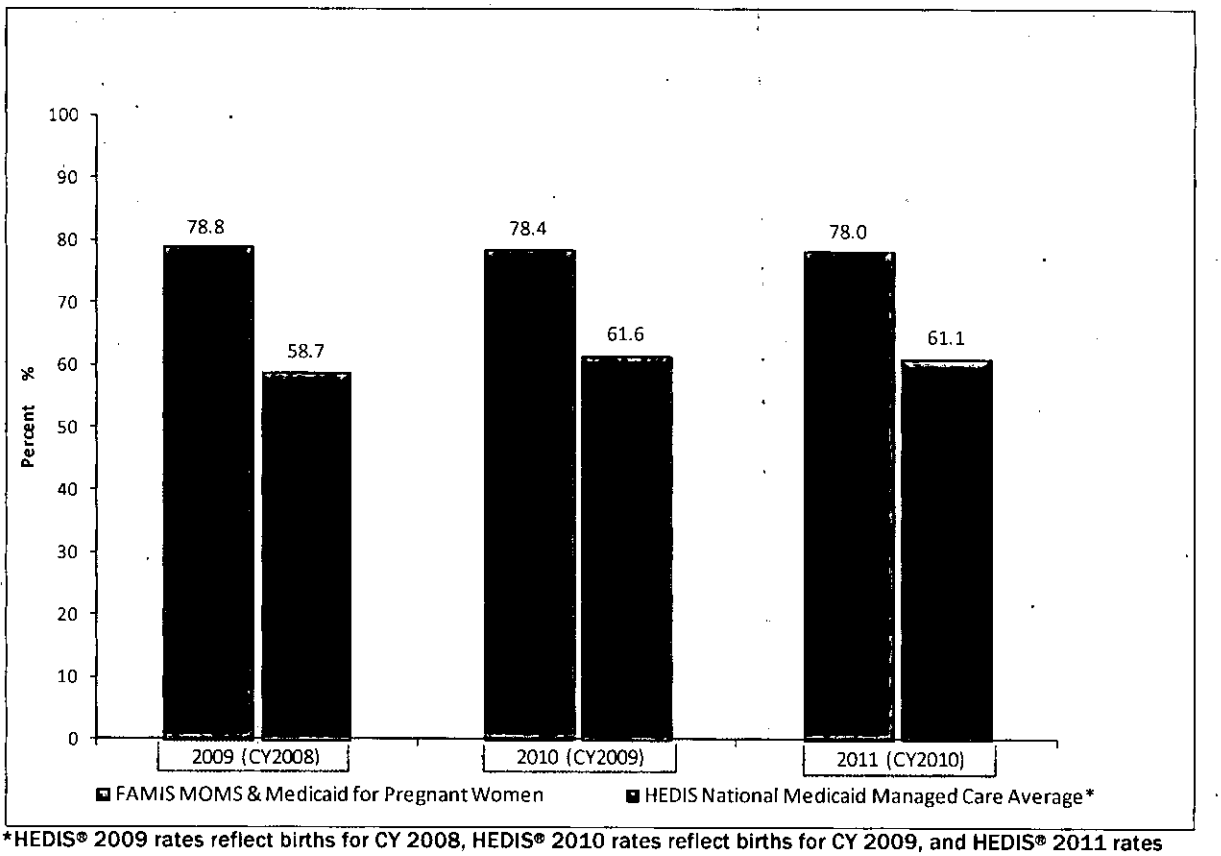
Adequate Prenatal Care: CY 2008, 2009, and 2010

Adequate prenatal care in this study is defined as a combination of two essential factors: early and regular prenatal care. Care is considered adequate if the first prenatal visit occurs in the first trimester of pregnancy and if the total number of visits was appropriate to the gestational age of the baby at birth. This is defined as the number and percent of pregnant women who received *early prenatal care* (in the first 13 weeks of pregnancy) and regular prenatal care (10 or more prenatal care visits).

Figure 1 displays the combined percentage of women in FAMIS MOMS and Medicaid for Pregnant Women who received adequate prenatal care in calendar years 2008, 2009, and 2010 as compared to the HEDIS® 2010 and 2011 National Medicaid Managed Care Averages.

The HEDIS® measure assesses the percentage of Medicaid women enrolled in managed care organizations who received the expected number of prenatal care visits (regardless of when prenatal care began). It should be noted that while almost 75 percent of the FAMIS MOMS and Medicaid for Pregnant Women populations were enrolled in managed care, the remaining percentage received care through FFS or PCCM and, therefore the averages for each delivery system are not entirely comparable.

Figure 1. Trends in Women Receiving Adequate Care

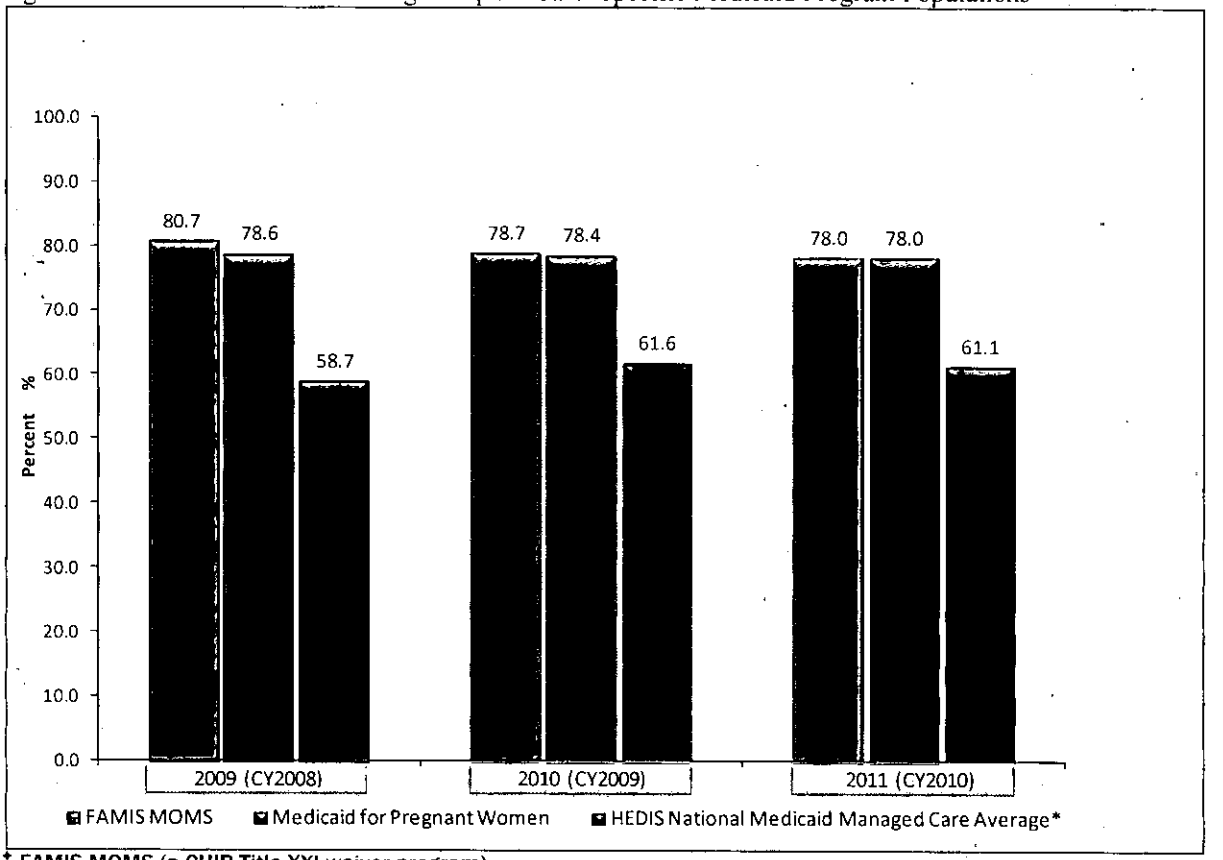


***HEDIS® 2009 rates reflect births for CY 2008, HEDIS® 2010 rates reflect births for CY 2009, and HEDIS® 2011 rates reflect births for CY 2010. Note: the data sources for the Kotelchuck Index (used for FAMIS MOMS and Medicaid for Pregnant Women) and the HEDIS® data are slightly different for this comparison and interpretation.**

- Combined rates for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program) receiving adequate prenatal care compare favorably with the HEDIS® National Medicaid Managed Care Averages for all three years.

Figure 2 summarizes the percentages of women receiving adequate prenatal care in 2008, 2009, and 2010 by specific Medicaid program populations compared to the HEDIS® National Medicaid Managed Care Averages for the same time periods.

Figure 2. Trends in Women Receiving Adequate Care–Specific Medicaid Program Populations✦✖



✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✖ Medicaid for Pregnant Women (a Medicaid Title XIX program)
*HEDIS® 2009 is the year the HEDIS data were reported, but reflect births of 2008 and HEDIS® 2010 is the year the HEDIS® data were reported, but reflect births of 2009. HEDIS® 2011 is the year the HEDIS® data were reported, but reflect births of 2010.

- From 2008 to 2010 both FAMIS MOMS and Medicaid for Pregnant Women showed slight decreases in the adequacy of prenatal care.
- The HEDIS® National Medicaid Managed Care Average also showed a slight decrease from 2009 to 2010.
- The women in both programs received adequate prenatal care at rates that compare favorably to the HEDIS® National Medicaid Managed Care Averages for all three years.

Low Birth Weight Outcomes

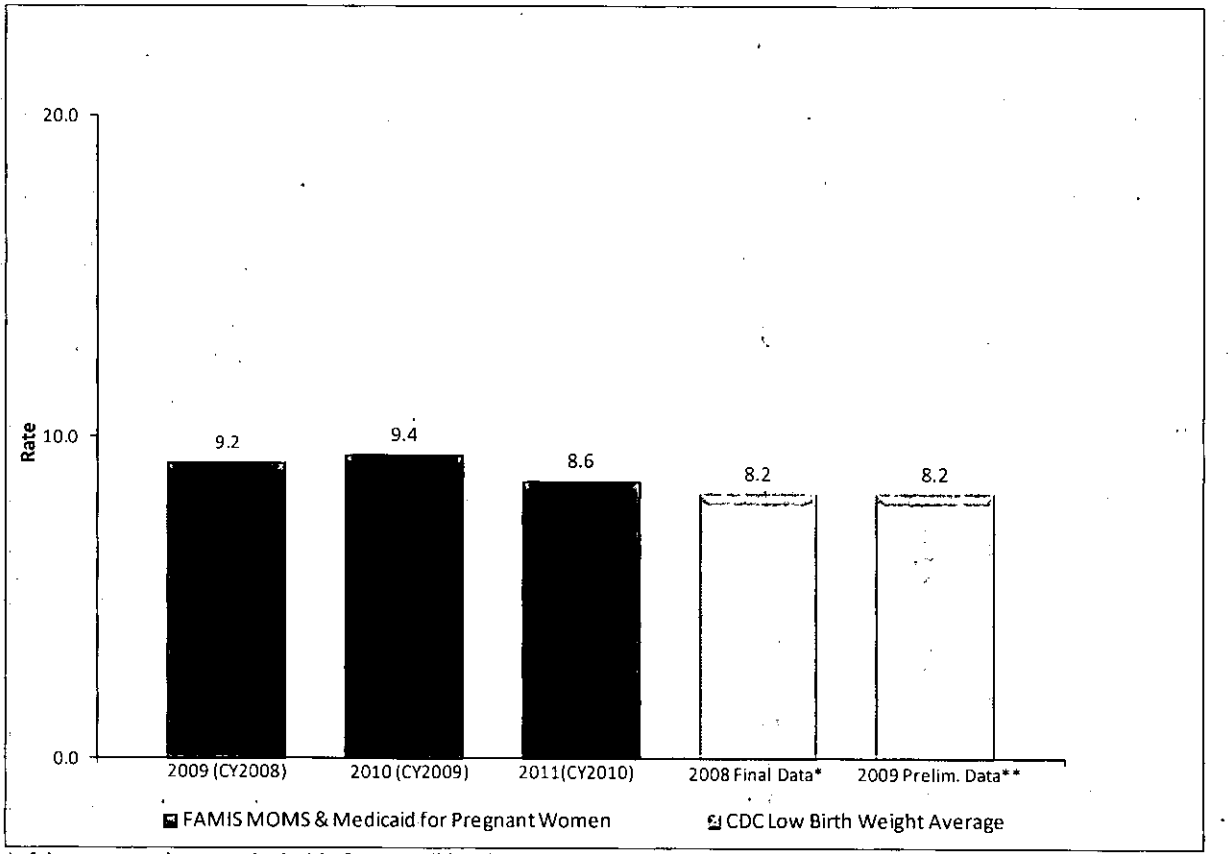
Infants born with overall low birth weights of less than 2,500 grams or 5 lbs. 8 oz. are at higher risk of long-term developmental or health issues than infants born at higher or normal birth weights. The CDC/NCHS publishes data on birth rates and birth outcomes in an annual NVSS Report for the United States. The CDC/NCHS data includes all births that occurred during the year, regardless of payer or income levels. Rates are provided in number per 100 live births.

In this category, a lower score is more desirable for overall low birth weight rates. Due to publishing lag times of national vital statistics data, the Virginia CY 2008 results are compared (for informational purposes only) with the NCHS National Vital Statistics Systems (NVSS) Final Birth Data for CY 2008. For CY 2009 and 2010, Virginia data are compared with the NCHS Preliminary Birth Data for CY 2009. Final national data for 2009 were not yet available at the time of this report. The definition of each low birth weight category is as follows:

- Overall low birth weight (OLBW< 2,500 grams)
- Moderately low birth weight (MLBW – 1,500 to 2,499 grams)
- Very low birth weight (VLBW<1,500 grams).

Figure 3 displays the low birth weight outcomes for FAMIS MOMS and Medicaid for Pregnant Women in CY 2008 through CY 2010 as compared to the national CDC/NCHS/NVSS rates.

Figure 3. Trends in Overall Low Birth Weight Rates ▲ ◘
(LBW < 2,500 grams)

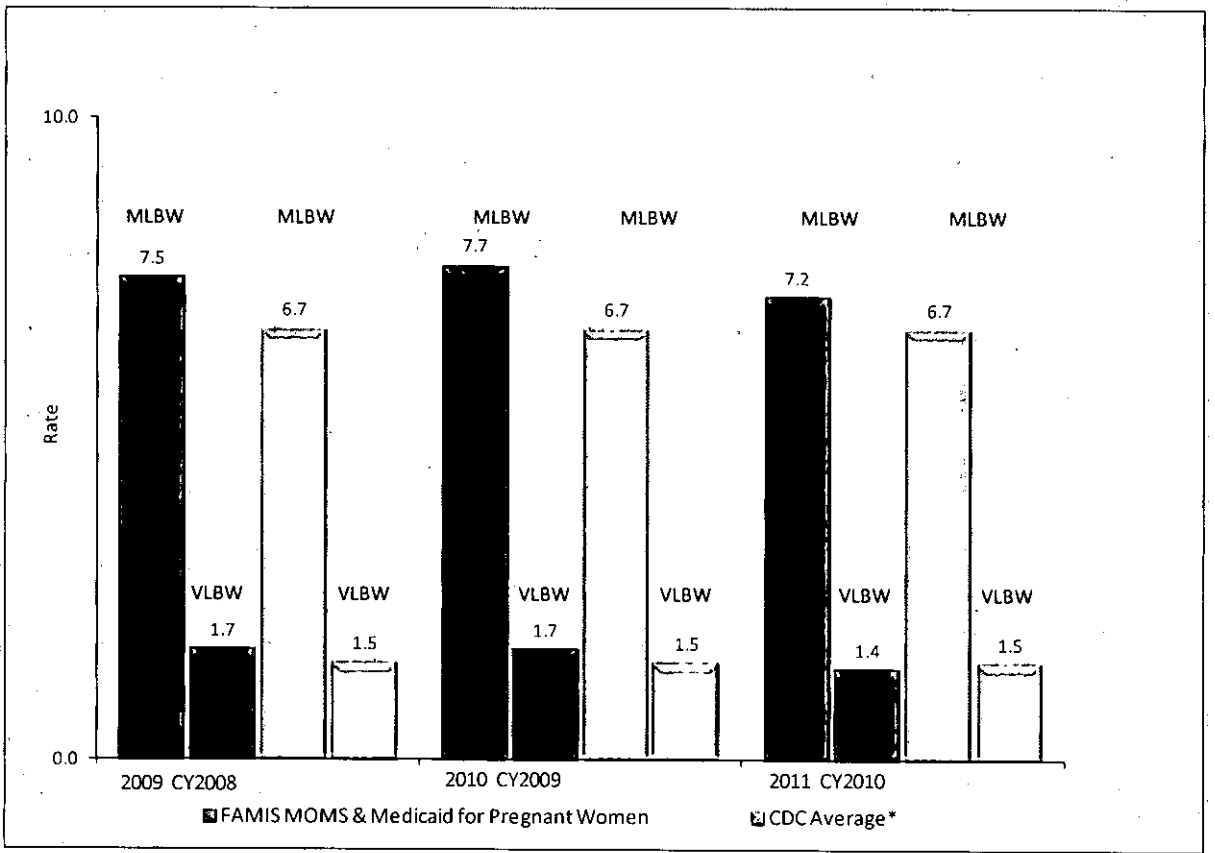


▲ A lower score is more desirable for overall low birth weight rates
◘ Rates calculated per 100 births
* CDC/NCHS/NVSS Final Birth Data CY 2008
** CDC/NCHS/NVSS Preliminary Birth Data CY 2009

- The combined rates for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program) improved (are lower) from 2009 to 2010.
- Although improved, these combined rates continued to compare unfavorably to the National Averages for Overall Low Birth Weight Rate for 2008 and 2009 (preliminary). The national averages, however, include all births, regardless of insurance status.

Figure 4 displays the moderately low birth weight (MLBW) and very low birth weight (VLBW) outcomes for FAMIS MOMS and Medicaid for Pregnant Women in CY 2008 through CY 2010 as compared to the CDC/NCHS/NVSS rates.

Figure 4. Trends in Moderately Low and Very Low Birth Weight Rates (lower rates are better) (MLBW – 1,500 to 2,499 grams; VLBW < 1,500 grams) ◘



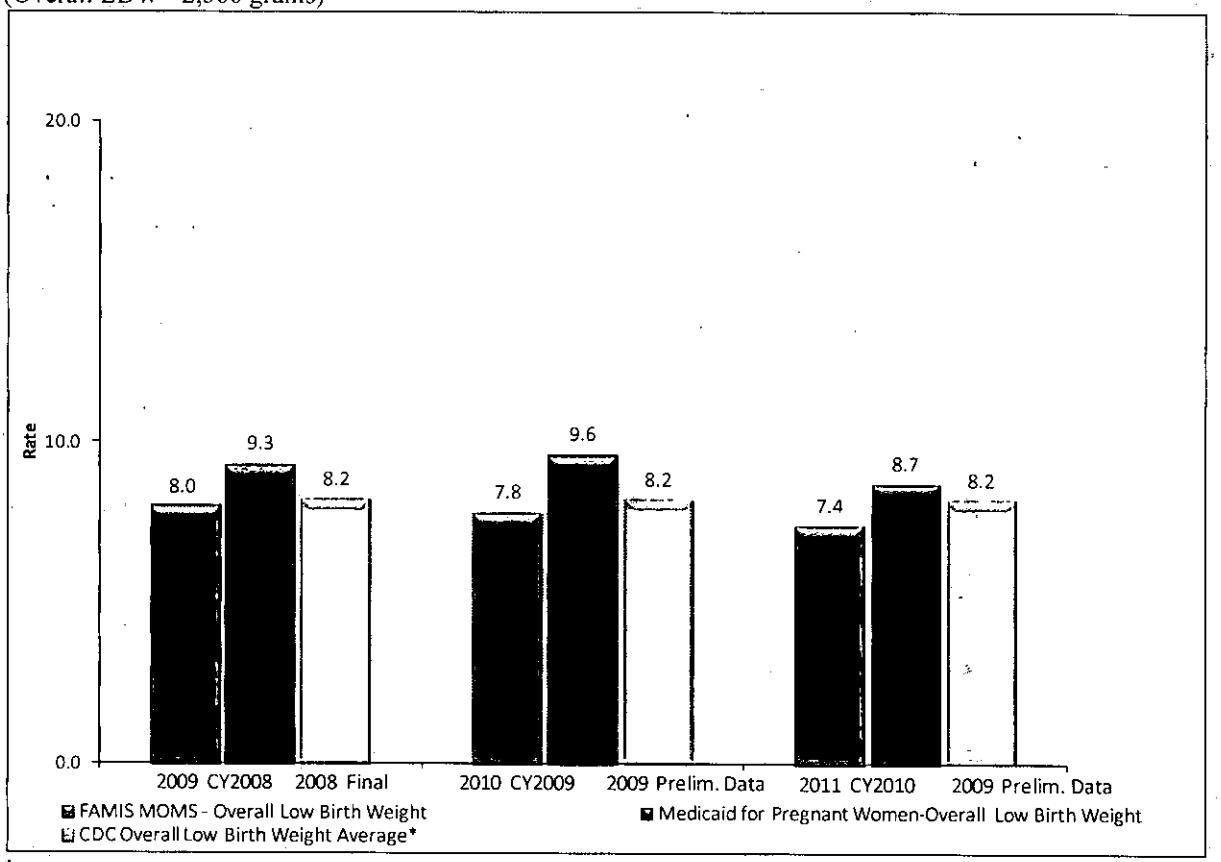
*** Final Birth Data 2008 from CDC/NCHS/NVSS is compared to CY 2008 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program). Preliminary Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 and CY 2010 Rates for FAMIS MOMS & Medicaid for Pregnant Women**

◘ Rates calculated per 100 births

- Combined rates for FAMIS MOMS and Medicaid for Pregnant Women who delivered infants of MLBW are higher (worse) than the national rates for all three years.
- While the same is true for the VLBW rates in 2008 and 2009, the combined Medicaid programs compare favorably (lower) to the national averages in 2010.

Figure 5 displays the overall low birth weight outcomes for the FAMIS MOMS and Medicaid for Pregnant Women populations for CY 2008, CY 2009, and CY 2010 as compared to the CDC/NCHS/NVSS averages.

Figure 5. Overall Low Birth Weights – Specific Medicaid Program Populations
(Overall LBW <2,500 grams) ◘



*** Final Birth Data 2008 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2008 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program). Preliminary Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 and CY 2010 Rates for FAMIS MOMS and Medicaid for Pregnant Women.**

◘ Rates calculated per 100 births

- Rates for FAMIS MOMS have continued to improve (lower rate is better) during the three year period and outperformed the national benchmark for all three years. It should be noted that FAMIS MOMS is the higher income group of the two programs.
- Medicaid for Pregnant Women rates remained unfavorable when compared with the national averages for all three years but showed an improvement (lower rate) in 2010.

Table 4. Trends in Moderately Low and Very Low Birth Weight Outcomes for Specific Program Populations in CY 2008 through CY 2010 as Compared to the CDC/NCHS National Vital Statistics Systems (NVSS) National Rates ■ ◘

(MLBW – 1,500 to 2,499 grams; VLBW < 1,500 grams)

Indicator	FAMIS MOMS CY 2008✦	FAMIS MOMS CY 2009✦	FAMIS MOMS CY 2010✦	MA for PW CY 2008⌘	MA for PW CY 2009⌘	MA for PW CY 2010⌘	CDC/NCHS NVSS Final Birth Data CY 2008*	CDC/NCHS NVSS Preliminary Birth Data CY 2009▲
Moderately Low Birth Weight Rates	5.8%✧	6.2%	6.1%	7.7%	7.9%	7.3%	6.7%	6.7%
Very Low Birth Weight Rates	2.2%✧	1.6%	1.3%	1.6%	1.7%	1.4%	1.5%	1.5%

■ Note that when aggregating the Very Low and Moderately Low Birth Weight values to determine the overall Low Birth Weight rate, any discrepancy is due to rounding

◘ Rates calculated per 100 births

✦ FAMIS MOMS (a CHIP Title XXI waiver program)

⌘ MA for PW indicates Medicaid for Pregnant Women (a Medicaid Title XIX program)

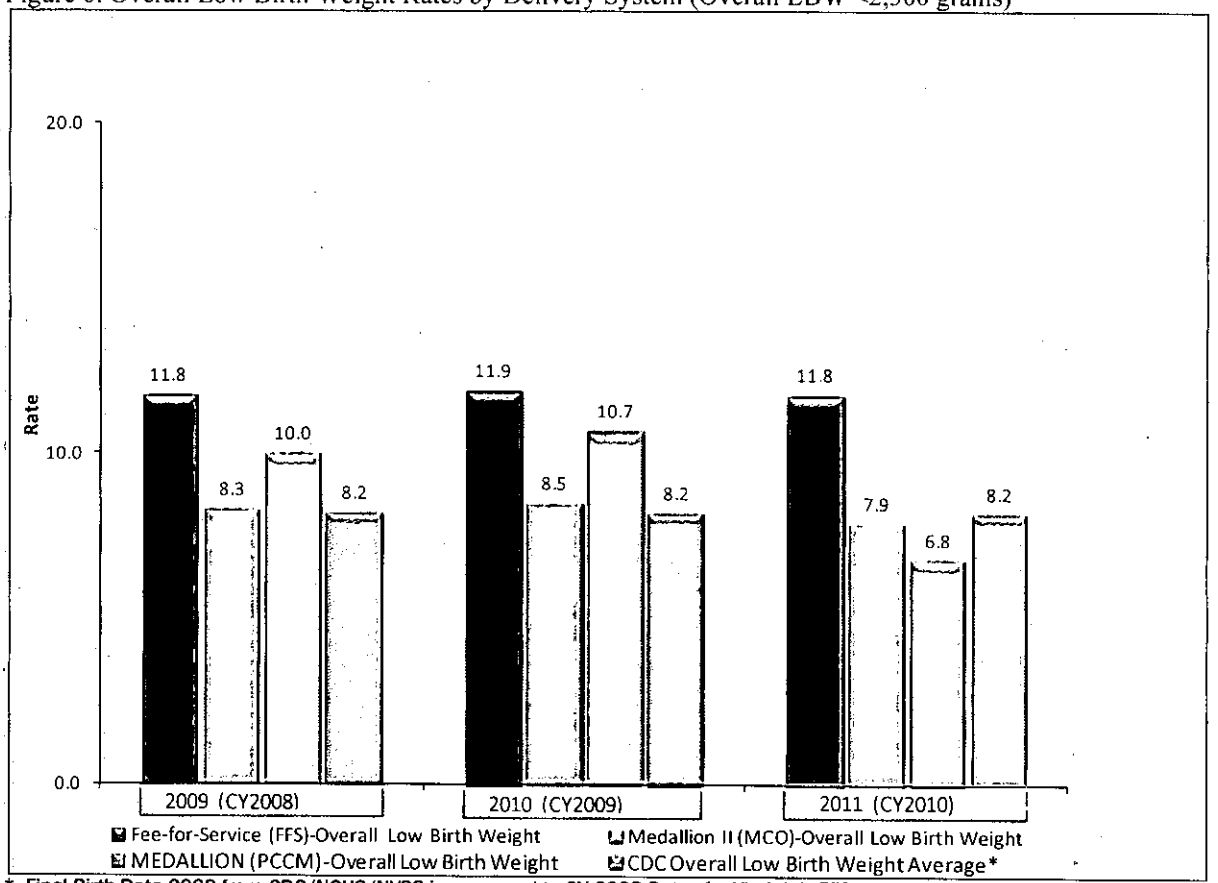
* CDC/NCHS/NVSS Final Birth Data 2008

▲ CDC/NCHS/NVSS Preliminary Birth Data 2009

- Rates of MLBW infants improved for FAMIS MOMS from 2009 to 2010. While this performance trend was inconsistent for the three year period, overall performance was better than the national benchmark, which remained unchanged.
- The rate for Medicaid for Pregnant Women was unfavorable during the three year period when compared with the national rate for MLBW infants. A downward (favorable) trend was noted from 2009 to 2010.
- Both the FAMIS MOMs and the Medicaid for Pregnant Women rates for VLBW infants improved and were below (lower is better) the national benchmark rate in 2010.

Figure 6 presents the overall low birth weight rates (a lower rate is better) by FFS, MCO, and PCCM delivery systems.

Figure 6. Overall Low Birth Weight Rates by Delivery System (Overall LBW <2,500 grams)



* Final Birth Data 2008 from CDC/NCHS/NVSS is compared to CY 2008 Rates for Virginia's FFS, MCO, and PCCM delivery systems. Preliminary Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 and CY 2010 Rates for Virginia's FFS, MCO, and PCCM delivery systems.

Rates calculated per 100 births

- Overall low birth weight (LBW) rates for FFS enrollees were the least favorable of all delivery systems and when compared with the national comparative rates for all years.
- Overall LBW rates for infants born to women in a managed care organization were the most favorable in 2008 and 2009 compared to FFS and PCCM and outperformed the national average in 2010.
- Rates for Overall LBW infants in the PCCM program reversed an unfavorable trend from 2008 to 2009 and were significantly better (lower) when compared with the national benchmark in 2010.
- It should be noted that PCCM primarily serves the far southwest region of Virginia, which is not as racially diverse as the other areas of the state. In fact, nearly 90% of pregnant women

in this area are White. As shown throughout this report, even when women in all racial categories receive the same timely access to prenatal care, African-American women experience a higher rate of delivering low-birth weight babies.

Table 5. Overall Low Birth Weight Rates by FFS, MCO, and PCCM Delivery Systems in CY 2008 through CY 2010 as Compared to the CDC/NCHS National Vital Statistics Systems (NVSS) Averages.

(Overall LBW <2,500 grams) ■ ◘

Indicator	FFS CY 2008	FFS CY 2009	FFS CY 2010	MCO CY 2008	MCO CY 2009	MCO CY 2010	PCCM CY 2008	PCCM CY 2009	PCCM CY 2010	CDC CY 2008 *	CDC CY 2009 ▲
Moderately Low Birth Weight Rates	8.7%	8.8%	8.7%	7.2%	7.4%	6.9%	7.3%	8.0%	6.0%	6.7%	6.7%
Very Low Birth Weight Rates	3.1%	3.1%	3.1%	1.1%	1.1%	1.0%	2.7%	2.7%	0.8%	1.5%	1.5%

■ Note that when aggregating the Very Low and Moderately Low Birth Weight values to determine the overall Low Birth Weight rate, any discrepancy is due to rounding.
◘ Rates calculated per 100 births
* CDC/NCHS/NVSS Final Birth Data 2008
▲ CDC/NCHS/NVSS Preliminary Birth Data 2009

Moderately Low Birth Rates (MLBW)

- MLBW rates reversed its unfavorable trend and improved in all delivery systems from 2008 to 2010 while the national rates remained unchanged.
- Virginia Medicaid MLBW rates for both FFS and PCCM programs compared unfavorably with national averages for all three years. The 2010 rate of 6.9% for the MCO population is now only slightly higher (worse) than the 6.7% national rate.

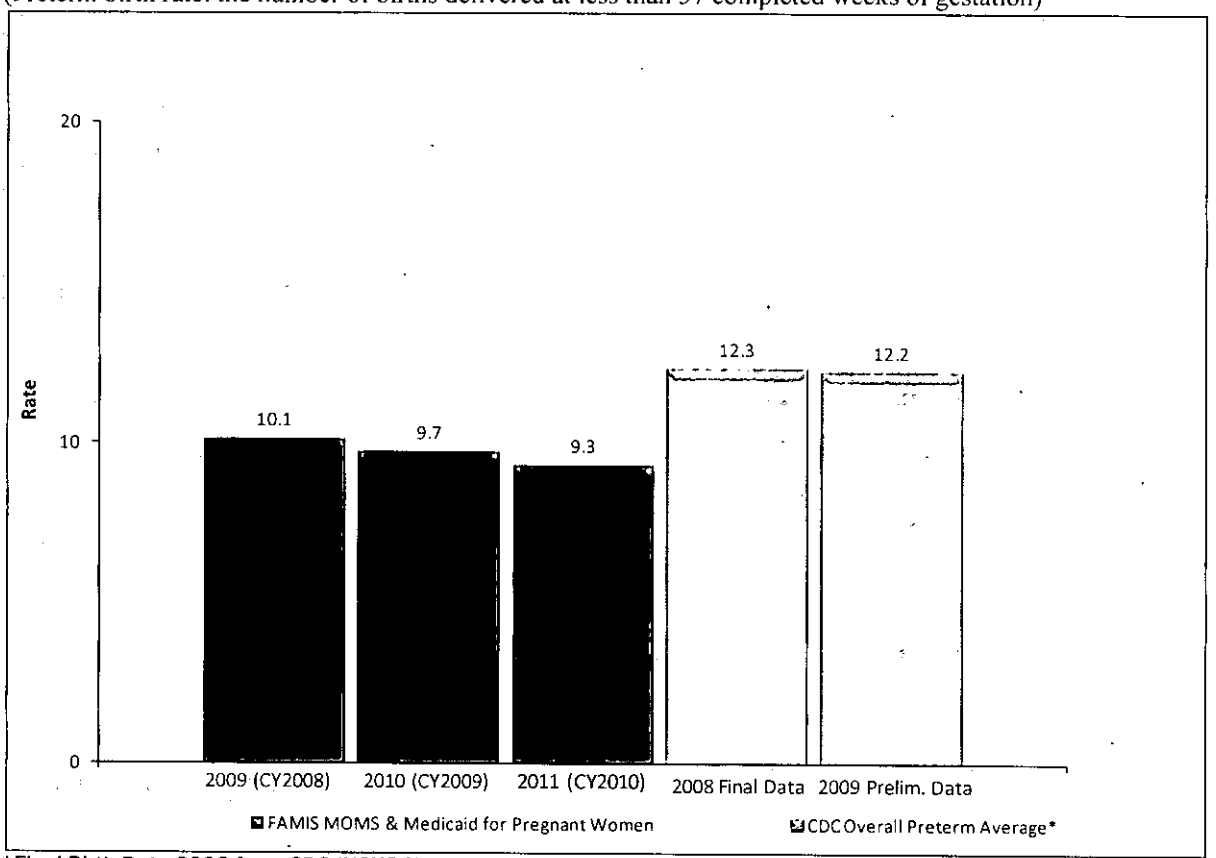
Very Low Birth Weight (VLBW)

- Rates of VLBW decreased slightly for infants born in the managed care delivery system and remain lower (better) than the national benchmark for all three years.
- The FFS VLBW rates remain unchanged from 2008 to 2010 at 3.1% in 2010. However, the rate was more than twice the national average of 1.5 for all three years.
- VLBW rates for infants born into the PCCM program reversed an unfavorable trend that was more than double the national rate in 2008 and 2009. The 2010 rate decreased to 0.8% and is well below (better) than the 1.5% national rate.

Premature Infants

Infants born before 37 completed weeks of gestation are considered preterm or premature. The latest March of Dimes White Paper in 2009 reported that preterm birth rates in the United States increased by 36 percent in the last 25 years. The results in this study compare the rates of preterm births for the FAMIS MOMS (CHIP Title XXI waiver) and Medicaid for Pregnant Women (Medicaid Title XIX) programs with national averages in calendar years 2008, 2009, and 2010.

Figure 7. Percentage of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women▪
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)



***Final Birth Data 2008 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2008 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program). Preliminary Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 and CY 2010 Rates for FAMIS MOMS and Medicaid for Pregnant Women.**

▪ Rates calculated per 100 births

- The rate of infants born prematurely to women in the FAMIS MOMS and Medicaid for Pregnant Women programs improved (decreased) from 2008 to 2010.
- There was a slight improvement (decrease) in the national averages for this same time period.

- The rate of infants born prematurely in the FAMIS MOMS and Medicaid for Pregnant Women programs compared favorably to the national rate for all three years.

Conclusions

This study evaluated the adequacy of prenatal care services and the birth outcomes of Virginia women enrolled in the FAMIS MOMS and the Medicaid for Pregnant Women programs. The results are compared with national benchmarks for calendar years 2008, 2009, and 2010.

The majority (92.1 percent) of pregnant women in the study were enrolled in the Medicaid for Pregnant Women program while 7.9 percent were enrolled in the FAMIS MOMS program. The percentage of pregnant women enrolled in an MCO increased to almost 75 percent in 2010 while women enrolled in FFS and PCCM decreased each year from 2008 to 2010.

Women in both programs received adequate prenatal care at rates that are notably better than the national averages. However, infants born to women enrolled in the Medicaid for Pregnant Women program experienced low birth weight rates that were less favorable when compared to the national benchmark.

Adequate Prenatal Care

- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs received adequate prenatal care at rates that were more favorable than the HEDIS® National Medicaid Managed Care Averages in all years.

Overall Low Birth Weight Outcomes by Program

- OLBW rates for FAMIS MOMS improved during the three years and outperformed the national benchmark in all three years.
- Medicaid for Pregnant Women OLBW rates improved from 2009 to 2010, but remained unfavorable when compared to the national rates for all three years.

Overall Low Birth Weight Outcomes by Delivery System

- OLBW rates for infants born to women in a managed care organization were favorable in all years when compared with the national benchmark.
- OLBW rates for FFS enrollees showed no improvement and were the least favorable of all delivery systems and when compared with the national benchmarks for all years.
- Rates for OLBW infants in the PCCM program reversed an unfavorable trend from 2008 to 2009. The PCCM 2010 rates were the lowest (most favorable) when compared with both the national rates and the other delivery systems. The PCCM program also compared favorably to the FFS program for the three-year period.
- The rates of infants born prematurely in the FAMIS MOMS and Medicaid for Pregnant Women programs were better than the national rates for all three years.

Recommendations

Women who are eligible for Medicaid or the FAMIS MOMS Programs due to pregnancy may be at increased risk for adverse birth outcomes due to their lower socioeconomic status. Health care coverage may improve access to care but does not guarantee improved outcomes. Other considerations such as social determinants of health including race, ethnicity, and socioeconomic factors related to poverty, housing and access to health services play a role in health outcomes. Further, certain cultural beliefs among enrollees may impact the effectiveness of evidenced based care. The ability to analyze variables and gaps in expected outcomes can identify effective, focused interventions to target and improve birth outcomes. Consideration should be given to the following interventions:

- DMAS should trend and compare standardized Birth Registry data to have an accurate evaluation of prenatal care and birth outcomes for these populations.
- The MCOs should conduct a root cause analysis to determine disparities and identify barriers in their prenatal population outcomes. For example, African American women recorded the highest (least favorable) rates of all categories of low birth weights. These outcomes persist even though this subgroup received adequate prenatal care at rates that exceeded all racial groups except White women.
- Disparities in birth outcomes are a national issue. DMAS, the MCOs, and providers should monitor the results of promising practices throughout the country for opportunities to replicate strategies for reducing the disparities.
- The MCOs should determine any gaps in services and design initiatives to improve outcomes.

- The MCO strategies that are producing improved outcomes should be evaluated for integration and replication in the FFS population.
- DMAS should evaluate program results and strategies of other Medicaid agencies that implemented statewide partnerships and collaborative efforts to improve the rates of infants born at healthy gestational ages and birth weights.

APPENDIX 1

Demographic Characteristics of Study Population

Race Distribution

The racial distribution of births of Virginia Medicaid for Pregnant Women and FAMIS MOMS recipients are displayed by specific population groups. Tables A1-4 and A1-6 include the percentage of White, African American, Asian, Hispanic and Other Women enrolled in the FAMIS MOMS and the Medicaid for Pregnant Women programs during CY 2008 through CY 2010.

Table A1-1. Racial Distribution by Specific Program Population for births during CY 2008*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS+	50.5% (700)°	29.7% (412)	2.3% (32)	8.7% (121)	8.8% (122)	1,387
Medicaid for Pregnant Women✱	48.9% (8,622)	37.6% (6,633)	1.2% (220)	6.3% (1,106)	6.0% (1,050)	17,631

* Rates may not add correctly due to rounding
+ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

Table A1-2. Racial Distribution by Specific Program Population for births during CY 2009*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS+	49.0% (688)°	26.9% (377)	2.6% (37)	9.8% (138)	11.6% (163)	1,403
Medicaid for Pregnant Women✱	47.9% (8,627)	37.2% (6,711)	1.6% (281)	6.0% (1,081)	7.3% (1,324)	18,024

* Rates may not add correctly due to rounding
+ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

Table A1-3. Racial Distribution by Specific Program Population for births during CY 2010*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS+	47.2% (706)°	28.6% (428)	3.3% (50)	8.3% (124)	12.6% (189)	1,497
Medicaid for Pregnant Women✱	46.6% (8,110)	36.6% (6,374)	1.5% (253)	6.3% (1,102)	9.1% (1584)	17,423

* Rates may not add correctly due to rounding
+ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

- The overall percentage of women enrolled in FAMIS MOMS and Medicaid for Pregnant Women who were White declined each year from 2008 to 2010.
- The overall percentage of African-American women in the FAMIS MOMS program declined from 2008 to 2009 but increased in 2010.
- The overall percentage of African-American women in the Medicaid for Pregnant Women program declined in each of the three years.
- There was an increase in the percentage of total enrollment that were Asian or "other" race during this three year period, while the overall percentage of enrollees who were Hispanic decreased in the same time period.

Racial Group Analysis by Delivery System in CY 2008, 2009 and 2010

Table A1-4. Racial Distribution by Specific Program Population for births during CY 2008*

Delivery System		Race				
		White	African American	Asian	Hispanic	Other
FFS	N	2,042	1,518	46	281	310
	%	48.7%	36.2%	1.1%	6.7%	7.4%
MCO	N	5,989	5,448	202	903	806
	%	44.9%	40.8%	1.5%	6.8%	6.0%
PCCM	N	1,291	79	4	43	56
	%	87.6%	5.4%	0.3%	2.9%	3.8%

* Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

Table A1-5. Racial Distribution by Specific Program Population for births during CY 2009*

Delivery System		Race				
		White	African American	Asian	Hispanic	Other
FFS	N	1,920	1,478	64	263	385
	%	46.7%	36.0%	1.6%	6.4%	9.4%
MCO	N	6,127	5,532	252	931	1,043
	%	44.1%	39.8%	1.8%	6.47%	7.5%
PCCM	N	1,268	78	2	25	59
	%	88.6%	5.5%	0.1%	1.8%	4.1%

* Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

Table A1-6. Racial Distribution by Specific Program Population for births during CY 2010*

Delivery System		Race				
		White	African American	Asian	Hispanic	Other
FFS	N	1,604	1,297	45	203	457
	%	44.5%	36.0%	1.3%	5.6%	12.7%
MCO	N	6,190	5,452	257	998	1,280
	%	43.7%	38.5%	1.8%	7.0%	9.0%
PCCM	N	1,022	53	1	25	36
	%	89.9%	4.7%	0.1%	2.2%	3.2%

* Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✖ Medicaid for Pregnant Women (a Medicaid Title XIX program)
° Numerator

Racial Group Analysis by Specific Indicators in CY 2008, 2009 and 2010

Table A1-7. Racial Group Analysis of Recipients Who Gave Birth in CY 2008: Adequacy of Care, Moderately Low Birth Weight, Very Low Birth Weight, and Overall Low Birth Weight

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	80.8% (7,453/9,219)+	77.9% (5,480/7,035)	74.5% (187/251)	71.4% (875/1,225)
Moderately Low Birth Weight°□	6.6% (614/9,332)	9.5% (673/7,052)	6.3% (16/252)	5.1% (63/1,230)
Very Low Birth Weight°□	1.3% (125/9,332)	2.3% (162/7,052)	1.2% (3/252)	1.1% (14/1,230)
Overall Low Birth Weight°□	7.9% (739/9,332)	11.8% (835/7,052)	7.5% (19/252)	6.3% (77/1,230)

+ Numerator/Denominator
° Rates may not add correctly due to rounding
□ Rates calculated per 100 births

Table A1-8. Racial Group Analysis of Recipients Who Gave Birth in CY 2009: Adequacy of Care, Moderately Low Birth Weight, Very Low Birth Weight, and Overall Low Birth Weight

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	80.3% (7,273/9,056)+	77.9% (5,499/7,060)	68.8% (218/317)	71.1% (860/1,210)
Moderately Low Birth Weight°□	6.7% (622/9,320)	10.0% (707/7,099)	5.6% (18/319)	5.3% (65/1,221)
Very Low Birth Weight°□	1.3% (117/9,320)	2.4% (169/7,099)	1.9% (6/319)	1.1% (13/1,221)
Overall Low Birth Weight°□	7.9% (739/9,320)	12.3% (876/7,099)	7.5% (24/319)	6.4% (78/1,221)

+ Numerator/Denominator
° Rates may not add correctly due to rounding
□ Rates calculated per 100 births

Table A1-9. Racial Group Analysis of Recipients Who Gave Birth in CY 2010: Adequacy of Care, Moderately Low Birth Weight, Very Low Birth Weight, and Overall Low Birth Weight

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	80.3% (6,979/8,687)+	77.4% (5,215/6,737)	68.3% (207/303)	68.3% (830/1,215)
Moderately Low Birth Weight°□	6.3% (560/8,823)	9.1% (618/6,809)	5.0% (15/303)	5.0% (61/1,228)
Very Low Birth Weight°□	0.9% (81/8,823)	2.0% (135/6,809)	1.3% (4/303)	1.2% (15/1,228)
Overall Low Birth Weight°□	7.3% (641/8,823)	11.1% (753/6,809)	6.3% (19/303)	6.2% (76/1,228)

+ Numerator/Denominator
° Rates may not add correctly due to rounding
□ Rates calculated per 100 births

- African American women recorded the highest (worst) rates of Overall LBW, MLBW and VLBW even though they received adequate prenatal care at rates that exceed all racial groups except White women for all three years

Table A1-10. Trimester when Medicaid Eligibility Began for CY 2008 through CY 2010

Trimester	CY 2008	CY 2009	CY 2010
1	77.3% (14,707/19,018)+	77.2% (14,992/19,427)	79.6% (15,062/18,920)
2	17.2% (3,262/19,018)	17.2% (3,342/19,427)	15.7% (2,968/18,920)
3	5.5% (1,049/19,018)	5.6% (1,093/19,427)	4.7% (890/18,920)

+ Numerator/Denominator

Table A1-11. Trimester when Program* Enrollment Began for CY 2008**

Trimester	FAMIS MOMS✦	Medicaid for Pregnant Women✱
1	70.4% (977/1,387)+	66.9% (11,790/17,631)
2	24.7% (343/1,387)	24.7% (4,358/17,631)
3	4.8% (67/1,387)	8.4% (1,483/17,631)

*Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
+ Numerator/Denominator

Table A1-12. Trimester when Program* Enrollment Began for CY 2009**

Trimester	FAMIS MOMS✦	Medicaid for Pregnant Women✱
1	70.2% (985/1,403)+	66.5% (11,987/18,024)
2	25.5% (358/1,403)	24.8% (4,475/18,024)
3	4.3% (60/1,403)	8.7% (1,562/18,024)

*Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
+ Numerator/Denominator

Table A1-13. Trimester when Program* Enrollment Began for CY 2010**

Trimester	FAMIS MOMS✦	Medicaid for Pregnant Women✱
1	70.9% (1,061/1497)+	68.9% (12,009/17,423)
2	24.4% (366/1497)	23.3% (4,053/17,423)
3	4.7% (70/1497)	7.8% (1,361/17,423)

*Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)
+ Numerator/Denominator

Table A1-14. Trimester when Delivery System* Enrollment Began for CY 2008**

Trimester	Fee-for-Service (FFS)	MCO	PCCM
1	34.8% (1,509/4,341)+	12.9% (1,595/12,387)	16.4% (288/1,757)
2	35.6% (1,544/4,341)	63.7% (7,889/12,387)	64.9% (1,140/1,757)
3	29.7% (1,288/4,341)	23.4% (2,903/12,387)	18.7% (329/1,757)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A1-15. Trimester when Delivery System* Enrollment Began for CY 2009**

Trimester	Fee-for-Service (FFS)	MCO	PCCM
1	35.6% (1,464/4,110)+	13.3% (1,841/13,885)	18.9% (271/1,432)
2	35.0% (1,439/4,110)	65.1% (9,044/13,885)	66.1% (947/1,432)
3	29.4% (1,207/4,110)	21.6% (3,000/13,885)	14.9% (214/1,432)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A1-16. Trimester when Delivery System* Enrollment Began for CY 2010**

Trimester	Fee-for-Service (FFS)	MCO	PCCM
1	39.0% (1,405/3,606)+	13.8% (1,962/14,177)	22.3% (253/1,137)
2	32.7% (1,178/3,606)	66.8% (9,472/14,177)	66.2% (753/1,137)
3	28.4% (1,023/3,606)	19.3% (2,743/14,177)	11.5% (131/1,137)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A1-17. Number/Rate of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women for CY 2008 through CY 2010[□]
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2008	CY 2009	CY 2010	CDC/NCHS NVSS Final Birth Data CY 2008*	CDC/NCHS NVSS Preliminary Birth Data CY 2009▲
FAMIS MOMS & Medicaid for Pregnant Women[○]	10.1% (1,924/19,036) [+]	9.7% (1,893/19,444)	9.3% (1,757/18,934)	12.3%	12.2%

□ Rates calculated per 100 births
○ FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women is a Medicaid Title XIX program
+ Numerator/Denominator
*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009

Table A1-18. Number/Rate of Infants Born Premature by Program Population for CY 2008 through CY 2010 (Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation) □

Program Population	CY 2008	CY 2009	CY 2010	CDC/NCHS NVSS Final Birth Data CY 2008*	CDC/NCHS NVSS Preliminary Birth Data CY 2009▲
FAMIS MOMS[✦]	10.1% (140/1,390)[+]	8.8% (123/1,405)	8.7% (130/1,499)	12.3%	12.2%
Medicaid for Pregnant Women[✖]	10.1% (1,784/17,646)	9.8% (1,770/18,039)	9.3% (1,627/17,435)		

□ Rates calculated per 100 births
+ Numerator/Denominator
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✖ Medicaid for Pregnant Women (a Medicaid Title XIX program)
*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2007
▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2008

Table A1-19. Number/Rate of Infants Born Premature by Delivery System for CY 2008 through CY 2010 (Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation) ◘

Program Population	CY 2008	CY 2009	CY 2010	CDC/NCHS NVSS Final Birth Data CY 2008*	CDC/NCHS NVSS Preliminary Birth Data CY 2009▲
Fee for Service (FFS)	13.3% (559/4,203)+	13.2% (545/4,117)	13.5% (486/3,611)	12.3%	12.2%
MCO	9.1% (1,220/13,362)	8.6% (1,196/13,898)	8.3% (1,184/14,185)		
PCCM	9.9% (145/1,471)	10.6% (152/1,429)	7.7% (87/1,138)		

◘ Rates calculated per 100 births
+ Numerator/Denominator
*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2007
▲CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2008

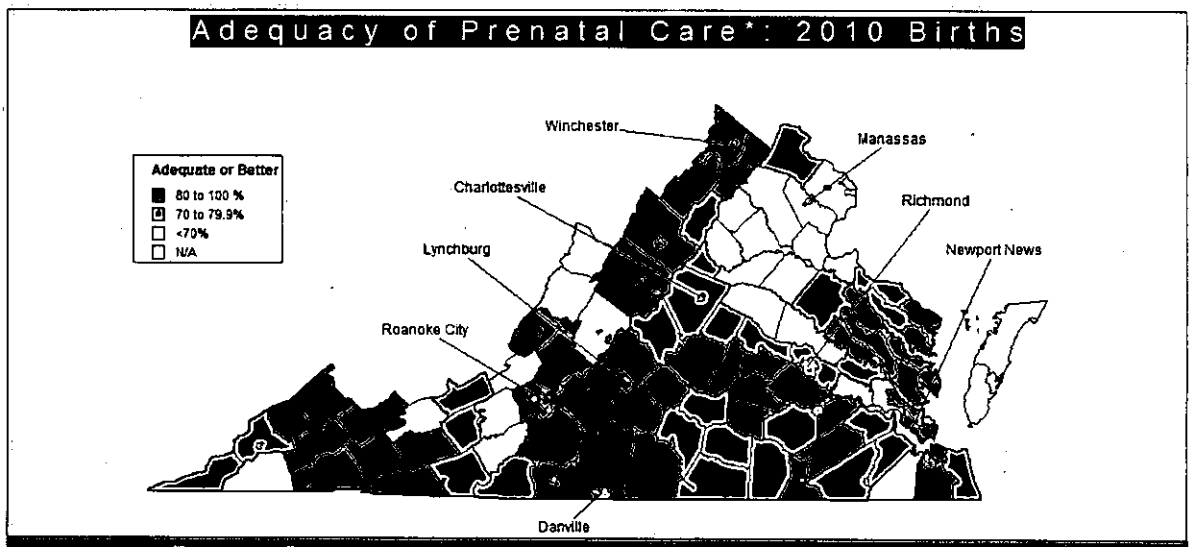
Table A1-20. Number/Rate of Infants Born Premature by Race for CY 2008 through CY 2010◘ (Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2008	CY 2009	CY 2010	CDC/NCHS NVSS Final Birth Data CY 2008*	CDC/NCHS NVSS Preliminary Birth Data CY 2009▲
White	9.5% (890/9,332)	8.9% (827/9,318)	8.2% (725/8,821)	12.3%	12.2%
African American	11.4% (806/7,050)	11.5% (817/7,098)	10.7% (729/6,810)		
Asian	9.9% (25/252)	9.1% (29/319)	9.9% (30/303)		
Hispanic	9.0% (111/1,230)	8.4% (102/1,221)	9.0% (111/1,228)		

◘ Rates calculated per 100 births
+ Numerator/Denominator
*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009

APPENDIX 2

Map 1. Adequacy of Prenatal Care for Births in CY 2010



Percent of Births with Adequate or Better Prenatal Care: Independent Cities, 2010

Alexandria	56%	Fairfax	N/A	Manassas	61%	Richmond	73%
Bedford	86%	Falls Church	N/A	Manassas Park	61%	Roanoke	98%
Bristol	91%	Franklin	69%	Martinsville	79%	Salem	N/A
Buena Vista	74%	Fredericksburg	67%	Newport News	92%	Staunton	84%
Charlottesville	74%	Galax	82%	Norfolk	90%	Suffolk	61%
Chesapeake	81%	Hampton	88%	Norton	71%	Virginia Beach	76%
Colonial Heights	85%	Harrisonburg	83%	Petersburg	75%	Waynesboro	88%
Covington	N/A	Hopewell	86%	Poquoson	N/A	Williamsburg	72%
Danville	76%	Lexington	N/A	Portsmouth	82%	Winchester	90%
Emporia	57%	Lynchburg	93%	Radford	76%	Median	76%

Data for areas marked N/A are not available due to low number of births

* Since the Virginia Birth Registry data was the primary data source, the Kotelchuck Index, also called the Adequacy of Prenatal Care Utilization (APNCU) Index, was used to analyze the data. The Kotelchuck Index defines the expected number of visits based on the American College of Obstetricians and Gynecologists (ACOG) prenatal care standards for uncomplicated pregnancies that is adjusted for the gestational age. This index identifies two crucial elements obtained from birth certificate data: when prenatal care began and the number of prenatal visits from when initiated until delivery. The final measure combines these two dimensions into a single summary score and adequate prenatal as defined by the Kotelchuck Index, is a score of > 80%.

- **Dark Green**: those areas where 80% or more of enrollees received adequate prenatal care.
- **Medium Green:** those areas where at least 70% but less than 80% of enrollees had adequate prenatal care.
- **Lightest green:** those areas where less than 70% of enrollees had adequate prenatal care.
- **Gray:** areas with too few births to be reliably displayed (not applicable).

Table A2-1. Adequacy of Prenatal Care for Births in CY 2010 by City

City Name	FIPS Code	Number of Births	Number with Adequate or Better Prenatal Care	Percent with Adequate or Better Prenatal Care
Alexandria	510	135	75	55.6
Bedford City	515	37	32	86.5
Bristol	520	21	19	90.5
Buena Vista	530	39	29	74.4
Charlottesville	540	139	103	74.1
Chesapeake	550	575	464	80.7
Colonial Heights	570	54	46	85.2
Covington	580	N/A	N/A	N/A
Danville	590	207	157	75.8
Emporia	595	21	12	57.1
Fairfax	600	N/A	N/A	N/A
Falls Church	610	N/A	N/A	N/A
Franklin	620	51	35	68.6
Fredericksburg	630	100	67	67.0
Galax	640	39	32	82.1
Hampton	650	448	396	88.4
Harrisonburg	660	132	109	82.6
Hopewell	670	107	92	86.0
Lexington	678	N/A	N/A	N/A
Lynchburg	680	347	323	93.1
Manassas	683	70	43	64.4
Manassas Park	685	23	14	60.9
Martinsville	690	81	64	79.0
Newport News	700	806	743	92.2
Norfolk	710	950	762	80.2
Norton	720	21	15	71.4
Petersburg	730	205	154	75.1
Poquoson	735	N/A	N/A	N/A
Portsmouth	740	472	385	81.6
Radford	750	46	35	76.1
Richmond	760	681	494	72.5
Roanoke	770	415	406	97.8
Salem	775	N/A	N/A	N/A
Staunton	790	93	78	83.9
Suffolk	800	236	144	61.1
Virginia Beach	810	1070	818	76.4
Waynesboro	820	109	94	86.2
Williamsburg	830	25	18	72.0
Winchester	840	110	99	90.0

* Not Applicable (N/A) due to low numbers *N* below 20

Table A2-2. Adequacy of Prenatal Care for Births in CY 2010 by County

County Name	FIPS Code	Number of Births	Number with Adequate or Better Prenatal Care	Percent with Adequate or Better Prenatal Care
Accomack	1	156	90	57.7
Albemarle	3	169	132	78.1
Alleghany	5	30	26	86.7
Amelia	7	38	31	81.6
Amherst	9	106	93	87.7
Appomattox	11	49	42	85.7
Arlington	13	92	46	50.0
Augusta	15	182	146	80.2
Bath	17	N/A	N/A	N/A
Bedford	19	133	118	88.7
Bland	21	N/A	N/A	N/A
Botetourt	23	48	46	95.8
Brunswick	25	70	52	74.3
Buchanan	27	99	87	87.9
Buckingham	29	64	54	83.1
Campbell	31	206	191	92.7
Caroline	33	109	84	77.1
Carroll	35	93	71	76.3
Charles	36	N/A	N/A	N/A
Charlotte	37	43	33	76.7
Chesterfield	41	655	556	84.9
Clarke	43	21	18	85.7
Craig	45	N/A	N/A	N/A
Culpeper	47	119	73	61.3
Cumberland	49	32	28	87.5
Dickenson	51	66	59	89.4
Dinwiddie	53	96	75	78.1
Essex	57	49	42	85.7
Fairfax	59	741	438	59.1
Fauquier	61	126	81	64.3
Floyd	63	61	42	68.9
Fluvanna	65	47	34	72.3
Franklin	67	145	129	89.0
Frederick	69	222	202	91.0
Giles	71	67	50	74.6
Gloucester	73	99	91	91.9
Goochland	75	34	24	70.6
Grayson	77	58	53	91.4
Greene	79	53	40	75.5
Greensville	81	39	33	84.6

This table is continued from the previous page.

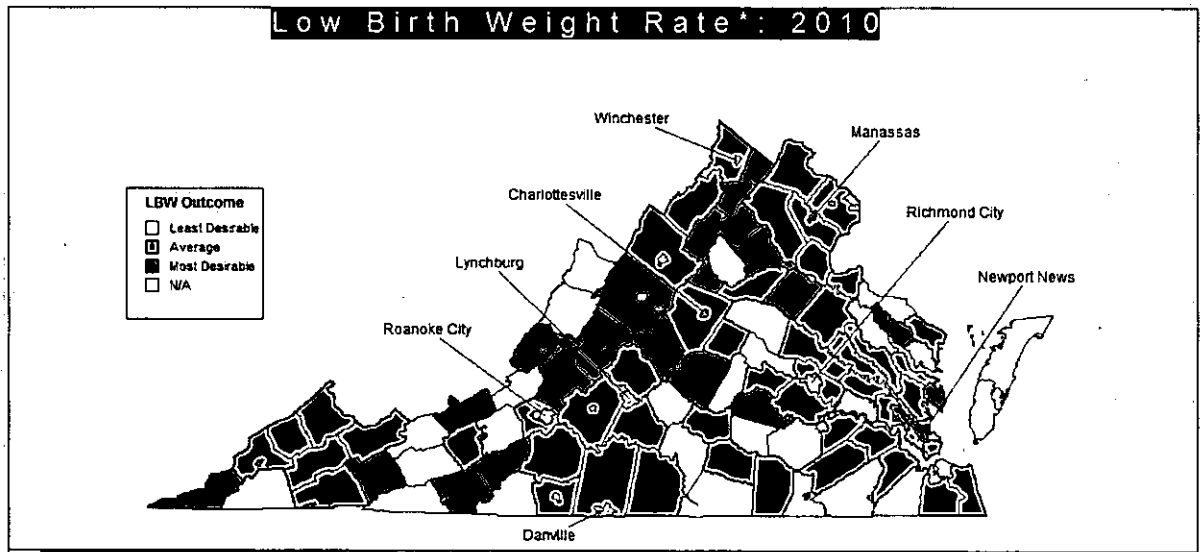
County Name	FIPS Code	Number of Births	Number with Adequate or Better Prenatal Care	Percent with Adequate or Better Prenatal Care
Halifax	83	144	124	86.1
Hanover	85	129	86	66.7
Henrico	87	763	547	71.7
Henry	89	173	150	86.7
Highland	91	N/A	N/A	N/A
Isle of Wight	93	64	47	73.4
James	95	118	82	69.5
King and Queen	97	33	27	81.8
King George	99	55	35	63.6
King William	101	43	40	93.0
Lancaster	103	41	35	85.4
Lee	105	76	57	75.0
Loudoun	107	227	177	78.0
Louisa	109	104	70	67.3
Lunenburg	111	42	31	73.8
Madison	113	49	33	67.3
Mathews	115	26	23	88.5
Mecklenburg	117	109	86	78.9
Middlesex	119	27	23	85.2
Montgomery	121	227	156	68.7
Nelson	125	57	43	75.4
New Kent	127	27	21	77.8
Northampton	131	58	34	58.6
Northumberland	133	40	34	85.0
Nottoway	135	67	54	80.6
Orange	137	68	35	51.5
Page	139	78	59	75.6
Patrick	141	34	27	79.4
Pittsylvania	143	200	169	84.5
Powhatan	145	48	45	93.8
Prince Edward	147	88	63	71.6
Prince George	149	63	51	81.0
Prince William	153	673	359	53.3
Pulaski	155	108	77	71.3
Rappahannock	157	23	15	65.2
Richmond	159	20	15	75.0
Roanoke	161	209	199	95.2
Rockbridge	163	56	39	69.6
Rockingham	165	204	166	81.4

This table is continued from the previous page.

County Name	FIPS Code	Number of Births	Number with Adequate or Better Prenatal Care	Percent with Adequate or Better Prenatal Care
Russell	167	84	77	91.7
Scott	169	N/A	N/A	N/A
Shenandoah	171	134	118	88.1
Smyth	173	129	121	93.8
Southampton	175	64	48	75.0
Spotsylvania	177	279	186	66.7
Stafford	179	200	121	60.5
Surry	181	24	18	75.0
Sussex	183	27	22	81.5
Tazewell	185	125	109	87.2
Warren	187	122	104	85.2
Washington	191	166	112	96.6
Westmoreland	193	62	48	77.4
Wise	195	181	141	77.9
Wythe	197	93	76	81.7
York	199	84	73	86.9

* Not Applicable (N/A) due to low numbers *N* below 20

Map 2. Low Birth Weight Rates in CY 2010 rate per 100 births



Low Birth Weight Rate* Independent Cities, 2010

Alexandria		Fairfax	N/A	Manassas		Richmond	
Bedford		Falls Church	N/A	Manassas Park		Roanoke	
Bristol		Franklin		Martinsville		Salem	N/A
Buena Vista		Fredericksburg		Newport News		Staunton	
Charlottesville		Galax		Norfolk		Suffolk	
Chesapeake		Hampton		Norton		Virginia Beach	
Colonial Heights		Harrisonburg		Petersburg		Waynesboro	
Covington	N/A	Hopewell		Poquoson	N/A	Williamsburg	
Danville		Lexington	N/A	Portsmouth		Winchester	
Emporia		Lynchburg		Radford			

Data for areas marked N/A are not available due to low number of births

*All infants weighing less than 2,500 grams or 5 lbs. 8 oz. at birth are included in overall low birth weight rates.

- **Dark Green**: those areas with Overall Low Birth Weight (LBW) rates in the lowest (lower is better) quartile statewide and labeled most desirable.
- **Medium Green:** those areas encompassing the two middle quartiles surrounding the statewide median (average) Overall LBW rate.
- **Lightest green:** those areas in the top quartile statewide of the Overall LBW rates (higher is least desirable outcome).
- **Gray:** areas with too few births to be included as reliable data (not applicable).

Table A2-3. Number of Infants Born with Low Birth Weight (LBW) CY 2010 by City

City Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Alexandria	510	136	10	7.4%
Bedford	515	37	3	8.1%
Bristol	520	N/A	N/A	N/A
Buena Vista	530	39	1	2.6%
Charlottesville	540	139	14	10.1%
Chesapeake	550	576	41	7.1%
Colonial Heights	570	54	4	7.4%
Covington	580	N/A	N/A	N/A
Danville	590	207	17	8.2%
Emporia	595	21	0	0.0%
Fairfax	600	N/A	N/A	N/A
Falls Church	610	N/A	N/A	N/A
Franklin	620	56	8	14.3%
Fredericksburg	630	109	9	8.3%
Galax	640	39	4	10.3%
Hampton	650	451	38	8.4%
Harrisonburg	660	134	9	6.7%
Hopewell	670	107	14	13.1%
Lexington	678	N/A	N/A	N/A
Lynchburg	680	347	28	8.1%
Manassas	683	70	2	2.9%
Manassas Park	685	23	1	4.3%
Martinsville	690	81	6	7.4%
Newport News	700	808	77	9.5%
Norfolk	710	956	103	10.8%
Norton	720	21	1	4.8%
Petersburg	730	205	30	14.6%
Poquoson	735	12	1	8.3%
Portsmouth	740	480	54	11.3%
Radford	750	46	2	4.3%
Richmond	760	682	78	11.4%
Roanoke	770	435	46	10.6%
Salem	775	N/A	N/A	N/A
Staunton	790	94	8	8.5%
Suffolk	800	274	36	13.1%
Virginia Beach	810	1076	90	8.4%
Waynesboro	820	109	6	5.5%
Williamsburg	830	25	1	4.0%
Winchester	840	110	7	6.4%

◆ The lowest (lower is better) quartile statewide is less than or equal to 6.88% and the top quartile (higher is least desirable) is greater than 11.35%.

* Not Applicable (N/A) due to low numbers N below 20

Table A2-4. Number of Infants Born with Low Birth Weight (LBW) CY 2010 by County*

County Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Accomack	1	156	19	12.2◆
Albemarle	3	170	14	8.2%
Alleghany	5	31	1	3.2%
Amelia	7	38	1	2.6%
Amherst	9	106	10	9.4%
Appomattox	11	49	5	10.2%
Arlington	13	94	9	9.6%
Augusta	15	182	10	5.5%
Bath	17	13	1	7.7%
Bedford	19	137	11	8.0%
Bland	21	N/A	N/A	N/A
Botetourt	23	52	2	3.8%
Brunswick	25	70	6	8.6%
Buchanan	27	99	8	8.1%
Buckingham	29	65	2	3.1%
Campbell	31	207	18	8.7%
Caroline	33	117	10	8.5%
Carroll	35	93	5	5.4%
Charles	36	14	1	7.1%
Charlotte	37	43	12	27.9%
Chesterfield	41	657	60	9.1%
Clarke	43	21	1	4.8%
Craig	45	13	1	7.7%
Culpeper	47	119	6	5.0%
Cumberland	49	33	6	18.2%
Dickenson	51	66	4	6.1%
Dinwiddie	53	96	11	11.5%
Essex	57	49	5	10.2%
Fairfax	59	743	53	7.1%
Fauquier	61	126	8	6.3%
Floyd	63	61	3	4.9%
Fluvanna	65	47	4	8.5%
Franklin	67	156	10	6.4%
Frederick	69	223	18	8.1%
Giles	71	68	4	5.9%
Gloucester	73	99	6	6.1%
Goochland	75	34	4	11.8%
Grayson	77	58	8	13.8%
Greene	79	53	1	1.9%
Greensville	81	39	4	10.3%
Halifax	83	145	10	6.9%

This table is continued from the previous page.

County Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Hanover	85	130	13	10.0%
Henrico	87	767	66	8.6%
Henry	89	173	13	7.5%
Highland	91	N/A	N/A	N/A
Isle of Wight	93	73	5	6.8%
James	95	119	10	8.4%
King and Queen	97	33	2	6.1%
King George	99	62	5	8.1%
King William	101	43	4	9.3%
Lancaster	103	40	5	12.5%
Lee	105	77	3	3.9%
Loudoun	107	227	16	7.0%
Louisa	109	107	12	11.2%
Lunenburg	111	42	4	9.5%
Madison	113	49	5	10.2%
Mathews	115	26	1	3.8%
Mecklenburg	117	111	14	12.6%
Middlesex	119	27	2	7.4%
Montgomery	121	228	25	11.0%
Nelson	125	57	2	3.5%
New Kent	127	27	2	7.4%
Northampton	131	58	8	13.8%
Northumberland	133	40	4	10.0%
Nottoway	135	67	11	16.4%
Orange	137	68	5	7.4%
Page	139	79	2	2.5%
Patrick	141	34	5	14.7%
Pittsylvania	143	200	13	6.5%
Powhatan	145	48	4	8.3%
Prince Edward	147	88	8	9.1%
Prince George	149	64	5	7.8%
Prince William	153	676	50	7.4%
Pulaski	155	109	10	9.2%
Rappahannock	157	23	1	4.3%
Richmond	159	20	1	5.0%
Roanoke	161	224	14	6.3%
Rockbridge	163	56	3	5.4%
Rockingham	165	207	14	6.8%
Russell	167	84	7	8.3%
Scott	169	N/A	N/A	N/A
Shenandoah	171	134	8	6.0%
Smyth	173	129	5	3.9%

This table is continued from the previous page.

County Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Southampton	175	68	9	13.2%
Spotsylvania	177	302	17	5.6%
Stafford	179	212	21	9.9%
Surry	181	27	2	7.4%
Sussex	183	29	2	6.9%
Tazewell	185	125	8	6.4%
Warren	187	123	7	5.7%
Washington	191	116	9	7.8%
Westmoreland	193	69	7	10.1%
Wise	195	181	14	7.7%
Wythe	197	93	13	14.0%
York	199	84	5	6.0%

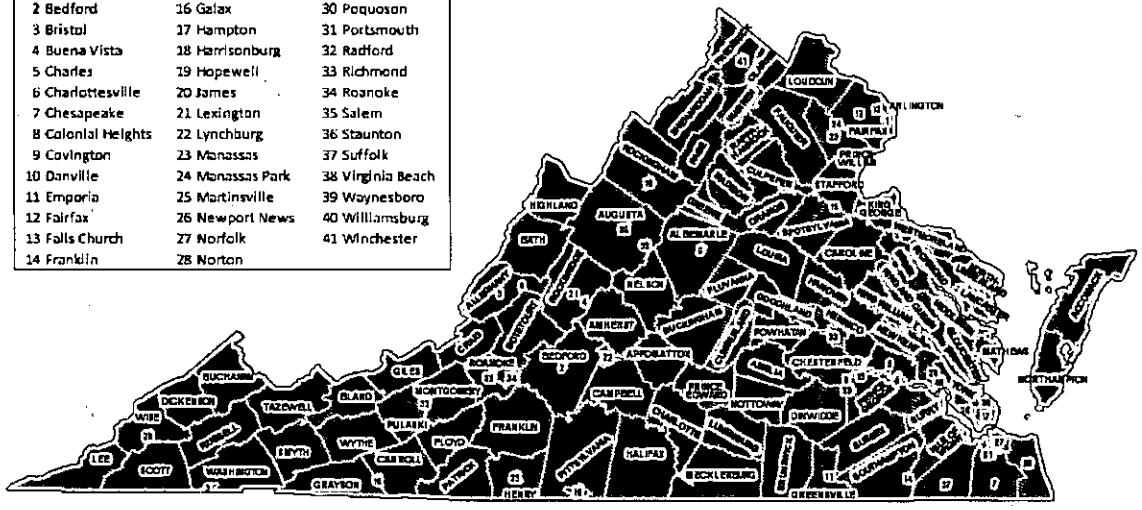
◆ The lowest (lower is better) quartile statewide is less than or equal to 6.88% and the top quartile (higher is least desirable) is greater than 11.35%.

* Not Applicable (N/A) due to low numbers N below 20

Virginia FIPS Areas

Independent Cities

1 Alexandria	15 Fredericksburg	29 Petersburg
2 Bedford	16 Galax	30 Poquoson
3 Bristol	17 Hampton	31 Portsmouth
4 Buena Vista	18 Harrisonburg	32 Radford
5 Charles	19 Hopewell	33 Richmond
6 Charlottesville	20 James	34 Roanoke
7 Chesapeake	21 Lexington	35 Salem
8 Colonial Heights	22 Lynchburg	36 Staunton
9 Covington	23 Manassas	37 Suffolk
10 Danville	24 Manassas Park	38 Virginia Beach
11 Emporia	25 Martinsville	39 Waynesboro
12 Fairfax	26 Newport News	40 Williamsburg
13 Falls Church	27 Norfolk	41 Winchester
14 Franklin	28 Norton	



APPENDIX 3

Appendix 3 contains data for women enrolled in the All Other Medicaid Program which is not reported in the body of the report, but displayed for historical trending purposes. Rates in the body of the report for Overall Low Birth Weights are displayed with rounding to one-tenth of a percentage point. Rates in the Appendix contain both numerators and denominators and may display a slight difference from rounded data.

Table A3-1. Program Populations for CY 2008 through CY 2010

Program Population	CY 2008		CY 2009		CY 2010	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS✦	5.8%	1,387	5.7%	1403	6.2%	1497
Medicaid for Pregnant Women✱	73.4%	17,631	72.8%	18,024	72.1%	17,423
All Other Medicaid	20.8%	4,992	21.6%	5,342	21.7%	5,247

✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✱ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-2. Delivery System Populations for CY 2008 through CY 2010

Delivery System	CY 2008		CY 2009		CY 2010	
	Percent	Count	Percent	Count	Percent	Count
Fee for Service (FFS)	21.5%	5,168	20.4%	5,057	18.5%	4,660
MCO△	70.9%	17,029	72.5%	17,947	75.7%	18,294
PCCM●	7.6%	1,813	7.1%	1,765	5.9%	1,413

△ Medallion II
● MEDALLION

Table A3-3. Program by Delivery System Populations for CY 2008 through CY 2010

Population	Fee-for-Service (FFS) CY 2008	Fee-for-Service (FFS) CY 2009	Fee-for-Service (FFS) CY 2010	MCO CY 2008	MCO CY 2009	MCO CY 2010	PCCM CY 2008	PCCM CY 2009	PCCM CY 2010
FAMIS MOMS[+]	15.7%	12.7%	12.5%	84.3%	87.3%	87.5%	0%	0%	0%
Medicaid for Pregnant Women[⌘]	22.6%	21.8%	19.6%	69.1%	70.2%	73.9%	8.4%	7.9%	6.5%
All Other Medicaid Programs	19.5%	17.7%	16.3%	73.7%	76.0%	78.5%	6.8%	6.2%	5.3%

[+] FAMIS MOMS (a CHIP Title XXI waiver program)
[⌘] Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-4. Trends in Women Receiving Adequate Care – Specific Program Populations for CY 2008 through CY 2010

Program Population	Women Receiving Adequate Care CY 2008	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	HEDIS 2008 National Medicaid Managed Care Average CY 2008[▪]	HEDIS 2009 National Medicaid Managed Care Average CY 2009[*]	HEDIS 2010 National Medicaid Managed Care Average CY 2010[˙]
FAMIS MOMS[+]	80.7%	78.7%	78.0%	1,111/ 1,377	1,093/ 1,389	1,155/ 1,480	58.7%	61.6%	61.1%
Medicaid for Pregnant Women[⌘]	78.6%	78.4%	78.0%	13,773/ 17,518	13,896/ 17,726	13,415/ 17,208			
All Other Medicaid Programs	71.6%	71.3%	71.7%	3,556/ 4,968	3,757/ 5,269	3724/ 5196			
Total	77.3%	76.9%	76.6%	18,440/ 23,863	18,746/ 24,384	18,294/ 23,884			

[▪] HEDIS 2009 rates are for CY 2008
[*] HEDIS 2010 rates are for CY 2009
[˙] HEDIS 2011 rates are for CY 2010
[+] FAMIS MOMS (a CHIP Title XXI waiver program)
[⌘] Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-5. Trends in Women Receiving Adequate Care - Specific Delivery Systems for CY 2008 through CY 2010

Delivery System	Women Receiving Adequate Care CY 2008	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	HEDIS 2009 National Medicaid Managed Care Average CY 2008*	HEDIS 2010 National Medicaid Managed Care Average CY 2009˜	HEDIS 2011 National Medicaid Managed Care Average CY 2010▪
Fee-for-Service (FFS)	71.4%	70.6%	70.5%	3,655/ 5,122	3,497/ 4,953	3,099/ 4,395	58.7%	61.6%	61.1 %
MCO△	78.2%	78.0%	77.5%	13,305/17,015	13,975/ 17,911	14,004/ 18,079			
PCCM●	85.8%	83.8%	84.5%	1,480/ 1,726	1,274 /1,520	1191/ 1410			

* HEDIS 2009 rates are for CY 2008
˜ HEDIS 2010 rates are for CY 2009
▪ HEDIS 2011 rates are for CY 2010
△ Medallion II
● MEDALLION

Table A3-6. Trends in Overall Low Birth Weight Rates - Specific Program Populations for CY 2008 through CY 2010 ⅄ ◘
(LBW < 2,500 grams)

Program Population	Overall Low Birth Weight Rates CY 2008	Overall Low Birth Weight Rates CY 2009	Overall Low Birth Weight Rates CY 2010	Numerator/Denominator CY 2008	Numerator/Denominator CY 2009	Numerator/Denominator CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲
FAMIS MOMS✦	8.1%✧	7.8%	7.4%	112/ 1,390	109/ 1,405	111/ 1,499	8.2%	8.2%
Medicaid for Pregnant Women⌘	9.3%	9.5%	8.7%	1,644/ 17,648	1,721/ 18,042	1514/ 17,437		
All Other Medicaid Programs	12.5%	13.2%	12.1%	624/ 4,991	707/ 5,341	637/ 5247		
Total	9.9%	10.2%	9.4%	2,380/ 24,029	2,537/ 24,788	2,262/ 24183		

⅄ A lower score is more desirable for overall low birth weight rates
◘ Rates calculated per 100 births
○ May differ from rates reported in the body of the report due to rounding
* CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2007
▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2008

Table A3-7. Trends in Overall Low Birth Weight Rates by Specific Delivery Systems for CY 2008 through CY 2010 ⅄ ◘○
(LBW < 2,500 grams)

Delivery System	Overall Low Birth Weight Rates CY 2008	Overall Low Birth Weight Rates CY 2009	Overall Low Birth Weight Rates CY 2010	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲
Fee-for-Service (FFS)	11.9%	12.3%	11.9%	617/ 5,175	625/ 5,066	532/ 4,465	8.2%	8.2%
MCO△	9.2%	9.5%	8.9%	1,564/ 17,040	1,712/ 17,959	1,622/ 18,303		
PCCM●	11.0%	11.3%	7.6%	199/ 1,814	200/ 1,763	108/ 1,415		

⅄ A lower score is more desirable for overall low birth weight rates
◘ Rates calculated per 100 births
*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
○ May differ from rates reported in the body of the report due to rounding
△ Medallion II
● MEDALLION

Table A3-8. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for CY 2008◘ (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)

Program Population	Moderately Low Birth Weight Rates CY 2008	Very Low Birth Weight Rate CY 2008	Moderately Low Birth Weight Numerator/ Denominator CY 2008	Very Low Birth Weight Numerator/ Denominator CY 2008	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
FAMIS MOMS✦	5.8%	2.2%	81/1,390	31/1,390	6.7%	1.5%
Medicaid for Pregnant Women⌘	7.7%	1.6%	1,354/ 17,648	290/17,648		
All Other Medicaid Programs	10.3%	2.2%	515/ 4,991	109/4,991		
Total	8.1%	1.8%	1,950/ 24,029	430/24,029		

◘ Rates calculated per 100 births
* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-9. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for CY 2009 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)

Program Population	Moderately Low Birth Weight Rates CY 2009	Very Low Birth Weight Rate CY 2009	Moderately Low Birth Weight Numerator/ Denominator CY 2009	Very Low Birth Weight Numerator/ Denominator CY 2008	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
FAMIS MOMS✦	6.2%	1.6%	87/1,405	22/1,405	6.7%	1.5%
Medicaid for Pregnant Women⌘	7.9%	1.7%	1,419/ 18,042	302/18,042		
All Other Medicaid Programs	10.4%	2.9%	553/5,341	154/5,341		
Total	8.3%	1.9%	2,059/ 24,788	478/24,788		

◘ Rates calculated per 100 births
*CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-10. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for CY 2010[□] (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)

Program Population	Moderately Low Birth Weight Rates CY 2010	Very Low Birth Weight Rates CY 2010	Moderately Low Birth Weight Numerator/ Denominator CY 2010	Very Low Birth Weight Numerator/ Denominator CY 2010	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
FAMIS MOMS✦	6.1%	1.3%	92/1,499	19/1,499	6.7%	1.5%
Medicaid for Pregnant Women⌘	7.3%	1.4%	1,271/ 17,437	243/17,437		
All Other Medicaid Programs	9.5%	2.6%	499/5,247	138/5,247		
Total	7.7%	1.7%	1,862/ 24,183	400/24,183		

□ Rates calculated per 100 births
*CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2008
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-11. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for CY 2008 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)[□]

Delivery System	Moderately Low Birth Weight Rates CY 2008	Very Low Birth Weight Rate CY 2008	Moderately Low Birth Weight Numerator/ Denominator CY 2008	Very Low Birth Weight Numerator/ Denominator CY 2008	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
Fee-for-Service (FFS)	8.8%	3.3%	474/5,368	178/5,368	6.7%	1.5%
MCO△	8.2%	1.5%	1,310/15,920	241/15,920		
PCCM●	8.6%	1.5%	186/2,162	32/2,162		

□ Rates calculated per 100 births
*CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2007
△ Medallion II
● MEDALLION

Table A3-12. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for CY 2009 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)▫

Delivery System	Moderately Low Birth Weight Rates CY 2009	Very Low Birth Weight Rate CY 2009	Moderately Low Birth Weight Numerator/ Denominator CY 2009	Very Low Birth Weight Numerator/ Denominator CY 2009	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
Fee-for-Service (FFS)	9.1%	3.2%	462/5,066	163/5,066	6.7%	1.5%
MCO△	8.1%	1.5%	1,447/17,959	265/17,959		
PCCM●	8.5%	2.8%	150/1,763	50/1,763		

▫ Rates calculated per 100 births
*CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2008
△ Medallion II
● MEDALLION

Table A3-13. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for CY 2010 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)▫

Delivery System	Moderately Low Birth Weight Rates CY 2010	Very Low Birth Weight Rate CY 2010	Moderately Low Birth Weight Numerator/ Denominator CY 2010	Very Low Birth Weight Numerator/ Denominator CY 2010	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
Fee-for-Service (FFS)	8.9%	3.0%	398/4,465	134/4,465	6.7%	1.5%
MCO△	7.5%	1.4%	1,372/18,303	250/18,303		
PCCM●	6.5%	1.1%	92/1,415	16/1,415		

▫ Rates calculated per 100 births
*CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
△ Medallion II
● MEDALLION

Table A3-14. Racial Distribution by Specific Program Populations Who Gave Birth During CY 2008*

Program Population	White	African American	Asian	Hispanic	Other	Denominator CY 2008
FAMIS MOMS✦	50.5% (700)▪	29.7% (412)	2.3% (32)	8.7% (121)	8.8% (122)	1,387
Medicaid for Pregnant Women⌘	48.9% (8,622)	37.6% (6,633)	1.2% (220)	6.3% (1,106)	6.0% (1,050)	17,631
All Other Medicaid Programs	33.7% (1,683)	58.9% (2,939)	0.6% (28)	5.0% (250)	1.8% (92)	4,992
Total	45.8% (11,005)	41.6% (9,984)	1.2% (280)	6.2% (1,477)	5.3% (1,264)	24,010

* Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
▪ Numerator

Table A3-15. Racial Distribution by Specific Program Populations Who Gave Birth During CY 2009*

Program Population	White	African American	Asian	Hispanic	Other	Denominator CY 2009
FAMIS MOMS✦	49.0% (688)▪	26.9% (377)	2.6% (37)	9.8% (138)	11.6% (163)	1,403
Medicaid for Pregnant Women⌘	47.9% (8,627)	37.2% (6,711)	1.6% (281)	6.0% (1,081)	7.4% (1,324)	18,024
All Other Medicaid Programs	32.3% (1,726)	59.7% (3,188)	0.6% (31)	5.3% (285)	2.1% (112)	5,342
Total	44.6% (11,041)	41.5% (10,276)	1.4% (349)	6.1% (1,504)	6.5% (1,599)	24,769

* Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
▪ Numerator

Table A3-16. Racial Distribution by Specific Program Populations Who Gave Birth During CY 2010*

Program Population	White	African American	Asian	Hispanic	Other	Denominator CY 2010
FAMIS MOMS✦	47.2% (706)▪	28.6% (428)	3.3% (50)	8.3% (124)	12.6% (189)	1,497
Medicaid for Pregnant Women⌘	46.6% (8,110)	36.6% (6,734)	1.5% (253)	6.3% (1,102)	9.1% (1,584)	17,423
All Other Medicaid Programs	32.0% (1,678)	59.1% (3,103)	0.6% (33)	5.2% (272)	3.1% (161)	5,247
Total	43.4% (10,494)	41.0% (9,905)	1.4% (336)	6.2% (1,498)	8.0% (1,934)	24,167

* Rates may not add correctly due to rounding
✦ *FAMIS MOMS (a CHIP Title XXI waiver program)*
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
▪ Numerator

Table A3-17. Racial Group Analysis of Recipients Who Gave Birth in CY 2008: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight*◘

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	80.3% (8,737/10,886)+	75.4% (7,517/9,967)	72.4% (202/279)	70.7% (1,043/1,475)
Moderately Low Birth Weight◘	6.9% (765/11,016)	10.1% (1,011/9,990)	5.7% (16/280)	5.5% (82/1,479)
Very Low Birth Weight◘	1.4% (152/11,016)	2.4% (239/9,990)	1.1% (3/280)	1.3% (19/1,479)
Overall Low Birth Weight◘	8.3% (917/11,016)	12.5% (1,250/9,990)	6.8% (19/280)	6.8% (101/1,479)

* Rates may not add correctly due to rounding
+ Numerator/Denominator
◘ Rates calculated per 100 births

Table A3-18. Racial Group Analysis of Recipients Who Gave Birth in CY 2009: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight*◘

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	79.5% (8,532/10,726)+	75.5% (7,731/10,233)	67.8% (236/348)	69.4% (1,036/1,493)
Moderately Low Birth Weight◘	7.0% (775/11,044)	10.4% (1,074/10,287)	6.0% (21/350)	5.6% (84/1,507)
Very Low Birth Weight◘	1.4% (157/11,044)	2.6% (274/10,287)	1.7% (6/350)	1.3% (20/1,507)
Overall Low Birth Weight◘	8.4% (932/11,044)	13.1% (1,348/10,287)	7.7% (27/350)	6.9% (104/1,507)

* Rates may not add correctly due to rounding
\+ Numerator/Denominator
◘ Rates calculated per 100 births

Table A3-19. Racial Group Analysis of Recipients Who Gave Birth in CY 2010: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight*◘

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	79.7% (8,248/10,348)+	75.0% (7,364/9,816	69.3% (232/335)	67.1% (995/1,482)
Moderately Low Birth Weight◘	6.6% (692/10,502)	9.6% (955/9,911)	5.4% (18/336)	4.9% (73/1,500)
Very Low Birth Weight◘	1.1% (112/10,502)	2.4% (237/9,911)	2.1% (7/336)	1.1% (17/1,500)
Overall Low Birth Weight◘	7.7% (804/10,502)	12.0% (1,192/9,911)	7.4% (25/336)	6.0% (90/1,500)

* Rates may not add correctly due to rounding
\+ Numerator/Denominator
◘ Rates calculated per 100 births

Table A3-20. Trimester Eligibility Began for All Programs in CY 2008 through CY 2010*

Trimester	CY 2008	Numerator/ Denominator CY 2008	CY 2009	Numerator/ Denominator CY 2009	CY 2010	Numerator/ Denominator CY 2010
1	80.4%	19,295/ 24,010	80.4%	19,925/ 24,769	82.5%	19,947/ 24,167
2	14.8%	3,545/ 24,010	14.7%	3,642/ 24,769	13.4%	3,230/ 24,167
3	4.9%	1,170/ 24,010	4.9%	1,202/ 24,769	4.1%	990/ 24,167

*Rates may not add correctly due to rounding

Table A3-21. Trimester Specific Program* Enrollment Began for CY 2008** by Program Population

Trimester	FAMIS Moms✦	Medicaid for Pregnant Women⌘	All Other Medicaid Programs
1	70.4% (977/1,387)✚	66.9% (11,790/17,631)	90.4% (4,514/4,992)
2	24.7% (343/1,387)	24.7% (4,358/17,631)	6.6% (327/4,992)
3	4.8% (67/1,387)	8.4% (1,483/17,631)	3.0% (151/4,992)

* Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
✚ Numerator/Denominator

Table A3-22. Trimester Program* Enrollment Began for CY 2009 by Program Population**

Trimester	FAMIS Moms✦	Medicaid for Pregnant Women⌘	All Other Medicaid Programs
1	70.2% (985/1,403)✚	66.5% (11,987/18,024)	90.8% (4,848/5,342)
2	25.5% (358/1,403)	24.8% (4,475/18,024)	6.6% (355/5,342)
3	4.3% (60/1,403)	8.7% (1,562/18,024)	2.6% (139/5,342)

* Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
✚ Numerator/Denominator

Table A3-23. Trimester Program* Enrollment Began for CY 2010 by Program Population**

Trimester	FAMIS Moms✦	Medicaid for Pregnant Women⌘	All Other Medicaid Programs
1	70.9% (1,061/1,497)✚	68.9% (12,009/17,423)	92.2% (4,839/5,247)
2	24.5% (366/1,497)	23.3% (4,053/17,423)	5.4% (284/5,247)
3	4.7% (70/1,497)	7.8% (1,361/17,423)	2.4% (124/5,247)

* Program of record is the program in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
⌘ Medicaid for Pregnant Women (a Medicaid Title XIX program)
✚ Numerator/Denominator

Table A3-24. Trimester Delivery System* Enrollment Began for CY 2008**

Trimester	Fee-for-Service (FFS)	MCO	PCCM
1	43.1% (2,229/5,168)+	26.7% (4,551/17,029)	26.1% (474/1,813)
2	31.3% (1,618/5,168)	54.1% (9,211/17,029)	59.1% (1,072/1,813)
3	25.6% (1,321/5,168)	19.2% (3,267/17,029)	14.7% (267/1,813)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A3-25. Trimester Delivery System* Enrollment Began for CY 2009**

Trimester	FFS	MCO	PCCM
1	41.2% (2,082/5,057)+	27.2% (4,875/17,947)	28.4% (501/1,765)
2	31.9% (1,615/5,057)	54.3% (9,740/17,947)	58.1% (1,025/1,765)
3	26.9% (1,360/5,057)	18.6% (3,332/17,947)	13.5% (239/1,765)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A3-26. Trimester Delivery System* Enrollment Began for CY 2010**

Trimester	FFS	MCO	PCCM
1	44.1% (1,965/4,460)+	28.0% (5,123/18,294)	31.4% (443/1,413)
2	29.8% (1,328/4,460)	55.5% (10,146/18,294)	57.7% (815/1,413)
3	26.2% (1,167/4,460)	16.5% (3,025/18,294)	11.0% (155/1,413)

*Delivery system of record is the system in which the mother is enrolled on the day of delivery
**Rates may not add correctly due to rounding
+ Numerator/Denominator

Table A3-27. Percentage of infants born premature to FAMIS MOMS, Medicaid for Pregnant Women (MA for PW), and Other MA for CY 2008 through CY 2010
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2008	CY 2009	CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲	Numerator/ Denomina tor CY 2008	Numerator/ Denomina tor CY 2009	Numerator/ Denomina tor CY 2010
FAMIS MOMS, Medicaid for Pregnant Women & Other MA⊙	10.7%	10.5%	10.2%	12.3%	12.2%	2,578/ 24,024	2,590/ 24,784	2473/ 24179

* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
⊙ FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women (MA for PW) is a Medicaid Title XIX program

Table A3-28. Percentage of Infants Born Premature by Program Population for CY 2008 through CY 2010
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2008	CY 2009	CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010
FAMIS MOMS✦	10.1%	8.8%	8.7%	12.3%	12.2%	140/ 1,390	123/ 1,405	130/ 1,499
Medicaid for Pregnant Women✖	10.1%	9.8%	9.3%			1,784/ 17,646	1,770/ 18,039	1,627/ 17,435
All Other Medicaid Programs	13.1%	13.1%	13.7%			654/ 4,998	697/ 5,340	716/ 5,245
Total	10.7%	10.5%	10.2%			2,578/ 24,024	2,590/ 24,784	2,473/ 24,179

* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
✦ FAMIS MOMS (a CHIP Title XXI waiver program)
✖ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-29. Percentage of Infants Born Premature by Delivery System for CY 2008 through CY 2010
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Delivery System	CY 2008	CY 2009	CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010
Fee for Service (FFS)	13.5%	13.6%	13.6%	12.3%	12.2%	700/5,175	690/5,066	608/4,464
MCO△	9.9%	9.5%	9.6%			1,689/17,036	1,714/17,957	1,746/18,300
PCCM●	10.4%	10.6%	8.5%			189/1,813	186/1,761	119/1,415

* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009
△ Medallion II
● MEDALLION

Table A3-30. Percentage of Infants Born Premature by Race for CY 2008 through CY 2010
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2008	CY 2009	CY 2010	CDC/ NCHS NVSS Final Birth Data CY 2008*	CDC/ NCHS NVSS Preliminary Birth Data CY 2009▲	Numerator/ Denominator CY 2008	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010
White	9.8%	9.3%	8.7%	12.3%	12.2%	1,084/11,013	1,023/11,042	920/10,499
African American	12.4%	12.3%	12.2%			1,234/9,988	1,267/10,285	1,207/9,912
Asian	9.3%	9.1%	10.7%			26/280	32/350	36/336
Hispanic	9.1%	9.1%	9.0%			135/1479	137/1,507	136/1,500

* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2008
▲ CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2009