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*Improving Birth Outcomes Through  
Adequate Prenatal Care Study*

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Delmarva Foundation

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# 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) 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 the annual Improving Birth Outcomes through Adequate Prenatal Care focused study, which is 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. 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 and FAMIS MOMS, 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 Medicaid and CHIP programs; and 2) to determine the impact of prenatal care on birth outcomes. Two additions from previous years were made to the CY 2011 study – a comparison group and a new measure. The comparison group included those women who did not meet the study group inclusion criteria for continuous enrollment of at least 43 days prior to delivery but who were deemed as Medicaid eligible on the day of delivery. The new measure was designed to determine the number of births delivered at less than 39 completed weeks of gestation.

Throughout the report, women who met requirements for continuous enrollment 43 days prior to delivery are referred to as the study population. Women who were not continuously enrolled 43 days prior to delivery, but were enrolled on the day of delivery, are referred to as the comparison group. Results for the comparison group are compared to results for the study population to ascertain how women who lack continuity in enrollment compare to women with continuous enrollment prior to delivery in prenatal care and birth outcomes.

Populations Analyzed in the Report	
Study Population	Women who met requirements for continuous enrollment 43 days prior to delivery
Comparison Group	Women who were not continuously enrolled 43 days prior to delivery, but were enrolled on the day of delivery
Programs	
FAMIS	Women enrolled in the Family Access to Medical Insurance Security Medicaid program
MA for PW	Women enrolled in Medicaid for Pregnant Women
Other Medicaid	Women enrolled in any of a number of other Medicaid programs other than FAMIS or MA for PW (Results reported in Appendix 3)
Delivery System	
FFS	Healthcare services are provided on a fee-for-service basis
MCO	Healthcare services are provided by a managed care organization
PCCM	Healthcare services are provided via primary care case management

The adequacy of prenatal care and the impact of prenatal care on birth outcomes is evaluated for the study population and the comparison group. In addition, outcomes of women in different

Medicaid programs – FAMIS, MA for PW, and Other Medicaid – are compared to one another and to national averages for the study group and for the comparison group. Outcomes of women in different delivery systems – FFS, MCO, and PCCM – are also compared to one another and to national averages for the study group and for the comparison group. This study evaluated the status of prenatal care and birth outcomes for the study population for births that occurred in calendar years (CY) 2009, 2010, and 2011. The results for the comparison group are for births that occurred in 2011.

## Findings

In the study population, the majority (92 percent) of pregnant women were in the Medicaid for Pregnant Women program while 8 percent were in the FAMIS MOMS program. Reversing a three year trend, the percentage of pregnant women in the study population and enrolled in an MCO declined from 74.9 percent in 2010 to 67.5 percent in 2011. The percentage of women enrolled in FFS and PCCM also reversed their declining trend and increased enrollment in 2011.

Women in the comparison group were similar to the study population in their distribution across programs in 2011 - the majority (95 percent) of pregnant women were in the Medicaid for Pregnant Women program while 5 percent were in the FAMIS MOMS program. However, the comparison group differed from the study population in its distribution across delivery systems. The majority (57.1 percent) of women in the comparison group were in the FFS delivery system on the date of delivery while 39.5 percent were in an MCO. Just under three and half percent were enrolled in PCCM. It should be noted that FAMIS MOMS is the higher income group of the two programs and research has shown that the lower income groups are most at risk for poor birth outcomes.

### Adequate Prenatal Care Rates for CY 2009, 2010 and 2011

- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs in the study population received adequate prenatal care at rates that were more favorable than the HEDIS<sup>®</sup> National Medicaid Managed Care Averages in all three years.
- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs in the comparison group received adequate prenatal care at rates that were comparable to the HEDIS<sup>®</sup> National Medicaid Managed Care Averages in 2011.

- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs in the study population received adequate prenatal care at rates that were more favorable than rates for the comparison group.

### **Overall Low Birth Weight (LBW)**

- LBW rates for FAMIS MOMS in the study population improved in each of the three years and outperformed the national Centers for Disease Control and Prevention (CDC's) benchmark in all years.
- LBW rates for FAMIS MOMS in the comparison group were lower than those for the study population and for the national CDC benchmark in 2011.
- Medicaid for Pregnant Women low birth weight rates in the study population remained unfavorable when compared with the national CDC averages for all three years but are trending at improved (lower) rates from 2009 to 2011.
- Medicaid for Pregnant Women low birth weight rates in the comparison group are higher than in the study population.
- LBW rates for infants born to women in an MCO in the study population improved from 2009 to 2011 and outperformed the national benchmark in both 2010 and 2011.
- The LBW rate for infants born to women in an MCO in the comparison group were higher than those in the study population and the national benchmark in 2011.
- LBW rate for infants born to PCCM enrollees in the comparison group were higher than those in the study population in 2011.
- LBW rates for FFS enrollees were the least favorable of all delivery systems in the study population and when compared with the national benchmarks for all years.
- LBW rates for FFS enrollees were lower than rates for MCO and PCCM enrollees for women in the comparison group.

### **Preterm Infants (37 weeks) Study Population**

- The rate of infants born prematurely (before 37 completed weeks of pregnancy) in the FAMIS MOMS and Medicaid for Pregnant Women programs for the study population improved (decreased) and was more favorable than the national rates for all three years.
- The rate of infants born prematurely (before 37 completed weeks of pregnancy) in the FAMIS MOMS and Medicaid for Pregnant Women programs for the comparison group in 2011 was higher than the rate for the study population and matched the national average.

## New Population Preterm Infants (39 weeks)

- The rate of infants born before 39 completed weeks of pregnancy for FAMIS MOMS and Medicaid for Pregnant Women programs in the study population was 33.7 percent. This rate is better (lower) than the national rate of 38.9 percent.
- The rate of infants born before 39 completed weeks of pregnancy for FAMIS MOMS and Medicaid for Pregnant Women programs in the comparison group was 37.2 percent in 2011 – higher than the rate for the study population but slightly lower than the national rate.

## 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. According to a study by the Commonwealth Fund in August 2012 many risk factors, including hypertension, smoking, obesity, heavy alcohol use, and diabetes, are examples of conditions and habits that disproportionately affect low-income women. Health care coverage may improve access to care but does not guarantee improved outcomes.

Other considerations such as social determinants of health including preconception health, race, ethnicity, and socioeconomic factors related to poverty, housing and access to health services play a role in health outcomes.

The intendedness of pregnancy and the frequency of repeated pregnancies may also impact birth outcomes. Pregnancies which are not planned tend to have poorer birth outcomes. The ability to identify gaps in expected outcomes and analyze subpopulation variables can help to formulate effective, focused interventions to improve birth outcomes.

DMAS has the ability and the organizational structure to address identified results that do not meet optimal birth outcomes. The MCO Collaboration presents a statewide population forum for collaborative efforts and targeted interventions. DMAS should consider the following recommendations to improve the number of babies born too soon to the Medicaid mothers in Virginia:

- DMAS should continue to monitor, 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. For example, African American women continued a trend and presented the least favorable rates among all racial groups 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.
- Each MCO should conduct a root cause analysis to determine disparities and identify specific barriers in their prenatal populations. This analysis can be used for designing education, outreach, and other targeted interventions to reduce barriers.
- Specific successful strategies that the MCOs have demonstrated to improve birth outcomes should be explored for possible replication in the FFS populations.
- DMAS and the MCOs should evaluate program results and successful strategies of other states' Medicaid agencies.
- DMAS should review the initial results of infants born before 39 weeks of gestation to determine if collaborative efforts should join national initiatives that address elective deliveries between 37 and 39 weeks of gestation.

## 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) 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.

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 and FAMIS MOMS 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 calendar years (CY) 2009, 2010, and 2011. The study also evaluates prenatal care and birth outcomes for a comparison group of women who do not meet continuous enrollment criteria and compares their outcomes to those of the study population. The comparison group lacks the continuity in enrollment prior to delivery that pregnant women in the study population possess.

## Methodology

The Virginia Department of Health (VDH) Birth Registry and DMAS' enrollment data were used to identify the eligible population (denominator) for the births that occurred in CY 2011. 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 2011 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 CY 2011.

\*Prenatal Data containing results for the 'Other Medicaid' program is included in Appendix 3.

The focused study used enrollment and birth registry data as the primary data sources. 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.

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 2009, 2010 and 2011. 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, 2010 – December 31, 2011.

After merging the birth registry and enrollment data, analyses were performed using SAS<sup>®</sup> Base software, a product of SAS Institute, Cary, North Carolina. The SAS<sup>®</sup> 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 Congress 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<sup>®</sup>) Vol. 2, Technical Specifications were used as the model for constructing the indicators, numerators, and denominators. HEDIS<sup>®</sup> 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<sup>®</sup> measure: Frequency of ongoing Prenatal

Care (FPC). The HEDIS<sup>®</sup> measure assesses the percentage of women in managed care organizations who received the expected number of prenatal care visits. It should be noted that while over 67 percent of the enrollees in FAMIS MOMS and Medicaid for Pregnant Women in the study group received care through MCOs, the remaining 33 percent were served through the FFS or PCCM delivery systems. Thus a much smaller percent of women receive services through FFS or PCCM than receive services through an MCO.

Women in the comparison group differed from the study population in their distribution across delivery systems. The majority (57.1 percent) of women in the comparison group were in the FFS delivery system on the date of delivery while 39.5 percent were in an MCO. Just under three and half percent were enrolled in PCCM.

The study population and the comparison group for this study were identified from both the Virginia Birth Registry and the DMAS enrollment file. To be included in the study population, 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. To be included in the comparison group, a new mother must have been enrolled on the date of delivery but lacked continuous enrollment for the 43 days prior to 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 focused 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 2011 and met the criteria for inclusion in the study population or the comparison group.

One new indicator was added for the first time for this 2011 data study. The new indicator evaluated the number of births delivered at less than 39 completed weeks of gestation. This is in

addition to the continued reporting and comparison of prematurity for the number of births delivered at less than 37 weeks of gestation.

The focused study analysis 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 rate of births delivered at less than 39 completed weeks of gestation.
- 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.

The analysis of these objectives includes comparisons between the study population and the comparison group - pregnant women who lacked continuous enrollment prior to delivery but who were enrolled on the date of delivery for CY 2011.

### **Study Population and Comparison Group**

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 2011. 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). Results for the study population are included in the body of this report and are based on those deliveries that meet the study criteria, not all deliveries. Results for the study population are also stratified by program (FAMIS MOMS and 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.

The corresponding tables for the comparison group are provided separately from and immediately following each study population table.

Table 1A stratifies the study population by program enrollment and Table 1B does the same for the comparison group.

Table 1A. Overall Program Enrollment for the Study Population of Pregnant Women for CY 2009 through CY 2011<sup>o</sup>

Program Population	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS <sup>†</sup>	7.2%	1,403	7.9%	1,497	8.0%	1,505
Medicaid for Pregnant Women <sup>**</sup>	92.8%	18,024	92.1%	17,423	92.0%	17,381
Totals	100%	19,427	100%	18,920	100%	18,886

<sup>o</sup>Prenatal Data containing the Other Medicaid population is included in Appendix 3.

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>\*\*</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

- There was a slight increase in the FAMIS MOMS program in both 2010 and 2011.
- Although enrollment in the Medicaid for Pregnant Women program decreased slightly in both 2010 and 2011, the program continued to greatly exceed enrollment in the FAMIS MOMS program.

Table 1B displays the program enrollment for the newly added comparison group for CY 2011.

Table 1B. Overall Program Enrollment for the Comparison Group of Pregnant Women for Comparison Group for CY 2011<sup>o</sup>

Program Population	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS <sup>†</sup>	N/A	N/A	N/A	N/A	5.2%	257
Medicaid for Pregnant Women <sup>**</sup>	N/A	N/A	N/A	N/A	94.9%	4,729
Totals	N/A	N/A	N/A	N/A	100%	4,986

<sup>o</sup>Prenatal Data containing the Other Medicaid population is included in Appendix 3.

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>\*\*</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

- The percentage of pregnant women in the comparison group who were in the FAMIS MOMS program was 5.2 percent.
- The overwhelming majority of the comparison group were in the Medicaid for Pregnant Women program (94.9 percent).
- A slightly larger proportion of women in the comparison group are enrolled in Medicaid for Pregnant Women than FAMIS MOMS when compared to the study population.

Tables 2A and 2B provide enrollment by delivery system for the study population and the comparison group, respectively.

Table 2A. Overall Enrollment of Pregnant Women by Delivery System for the Study Population for CY 2009 through CY 2011\*

Delivery System	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FFS <sup>◆</sup>	21.2%	4,110	19.1%	3,606	25.8%	4,875
MCO <sup>△</sup>	71.5%	13,885	74.9%	14,177	67.5%	12,742
PCCM <sup>●</sup>	7.4%	1,432	6.0%	1,137	6.7%	1,269
Totals	101%*	19,427	100%*	18,920	100%*	18,886

\*Rates may not add correctly due to rounding.

◆ Fee for Service

△ Medallion II

● MEDALLION

- The percentage of pregnant women enrolled in the MCO delivery system declined from 2010 to 2011, reversing a previous three-year trend. Virginia completed two geographic expansions during CY 2012 and increased participation in the managed care population is expected as a result.
- Enrollment (both the number and percentage) of pregnant women in the FFS and PCCM programs increased from 2010 to 2011, reversing a previous three-year decline.

Table 2B provides the delivery system enrollment for the comparison group.

Table 2B. Overall Enrollment of Pregnant Women by Delivery System Population for Comparison Group for CY 2011\*

Delivery System	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FFS <sup>◆</sup>	N/A	N/A	N/A	N/A	57.1%	2,848
MCO <sup>△</sup>	N/A	N/A	N/A	N/A	39.5%	1,971
PCCM <sup>●</sup>	N/A	N/A	N/A	N/A	3.4%	167
Totals	N/A	N/A	N/A	N/A	100%*	4,986

\*Rates may not add correctly due to rounding.

◆ Fee for Service

△ Medallion II

● MEDALLION

- The majority of women in the comparison group were in the FFS delivery system (57.1 percent).
- Nearly 40 percent of the comparison group were in managed care on the date of delivery.
- Only three and half percent of the comparison group were enrolled in a PCCM program on the date of delivery.

Table 3A stratifies the study population by program enrollment and delivery system enrollment and Table 3B does the same for the comparison group.

Table 3A. Overall Enrollment of Pregnant Women in the Study Population by Program and Delivery System for CY 2009 through CY 2011\*

Delivery System	FAMIS MOMS <sup>†</sup> CY 2009	FAMIS MOMS <sup>†</sup> CY 2010	FAMIS MOMS <sup>†</sup> CY 2011	Medicaid for Pregnant Women <sup>**</sup> CY 2009	Medicaid for Pregnant Women <sup>**</sup> CY 2010	Medicaid for Pregnant Women <sup>**</sup> CY 2011
FFS	12.7% 178	12.5% 187	15.3% 230	21.8% 3,932	19.6% 3,419	26.7% 4,645
MCO	87.3% 1,225	87.5% 1,310	84.7% 1,275	70.2% 12,660	73.9% 12,867	66.0% 11,467
PCCM	0% 0	0% 0	0% 0	7.9% 1,432	6.5% 1,137	7.3% 1,269

\* 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 majority of women in FAMIS MOMS in the study population were enrolled in an MCO from 2009 to 2011, although the percentage declined slightly from 2010 to 2011.
- The majority of women in Medicaid for Pregnant Women in the study population were also enrolled in an MCO from 2009 to 2011, but at somewhat lower percentages than for women in FAMIS MOMS.
- A larger percentage of women in Medicaid for Pregnant Women were enrolled in both the FFS and PCCM programs than women in FAMIS MOMS in the study population.
- Medicaid for Pregnant Women was the only program that had any enrollees in the PCCM delivery system.

Conversly, Table 3B shows that the majority of the comparison group of women received their care through FFS and were mostly in the Medicaid for Pregnant Women program.

Table 3B. Overall Enrollment of Pregnant Women by Program Population and Delivery System for Comparison Group for CY 2011\*

Delivery System	FAMIS MOMS <sup>†</sup> CY 2009	FAMIS MOMS <sup>†</sup> CY 2010	FAMIS MOMS <sup>†</sup> CY 2011	Medicaid for Pregnant Women <sup>‡</sup> CY 2009	Medicaid for Pregnant Women <sup>‡</sup> CY 2010	Medicaid for Pregnant Women <sup>‡</sup> CY 2011
FFS	N/A	N/A	56.8% 146	N/A	N/A	57.1% 2,702
MCO	N/A	N/A	43.2% 111	N/A	N/A	39.3% 1,860
PCCM	N/A	N/A	0% 0	N/A	N/A	3.5% 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)

- The majority of women in the comparison group were in the FFS delivery system for both programs.
- Medicaid for Pregnant Women was the only program that had any enrollees in the PCCM delivery system.
- The percentage of women enrolled in a FFS or MCO delivery system is similar for women in FAMIS MOMS and Medicaid for Pregnant Women in the comparison group. This contrasts with the study population in which women in FAMIS MOMS and Medicaid for Pregnant Women differ from one another in delivery system enrollment.

### Findings for the Study Population and Comparison Group

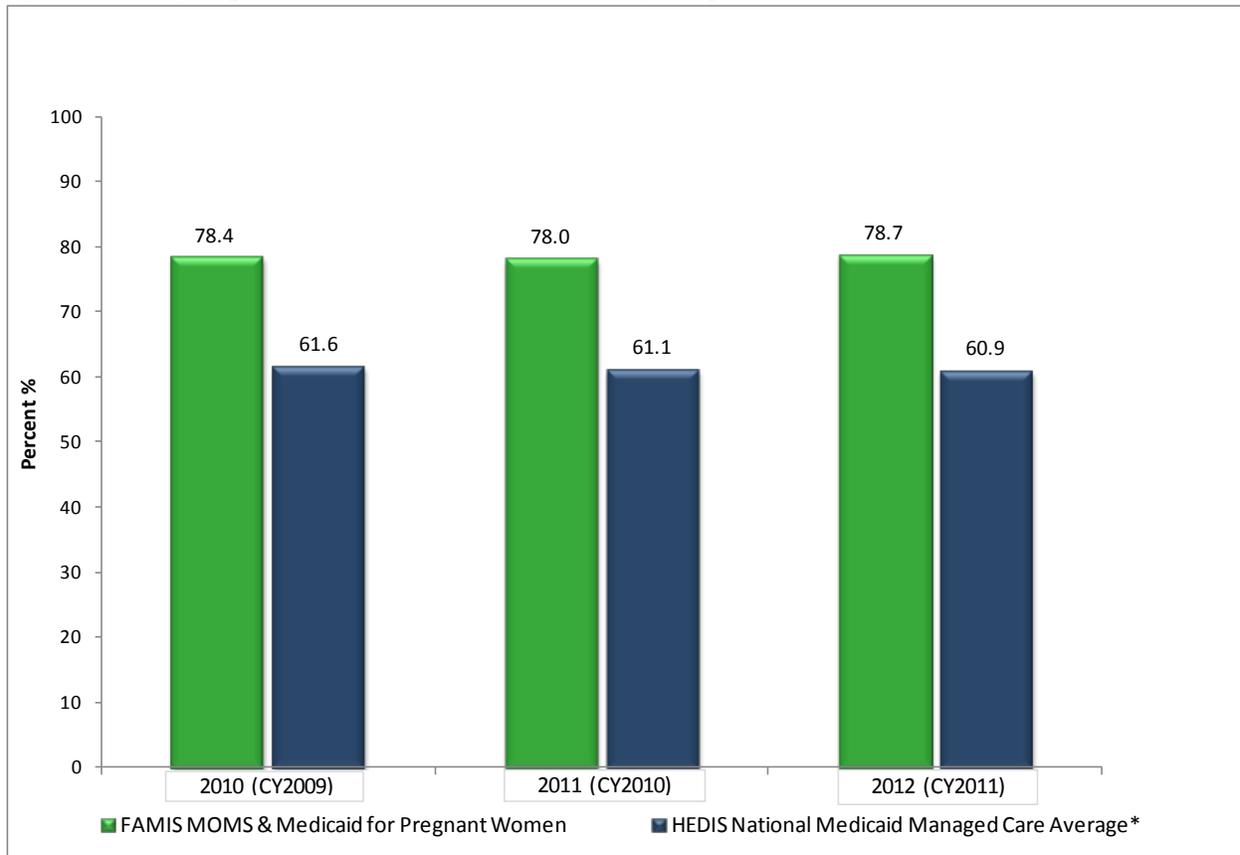
#### Adequate Prenatal Care: CY 2009, 2010, and 2011

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

The HEDIS<sup>®</sup> 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 68 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, there may be data limitations when comparing averages.

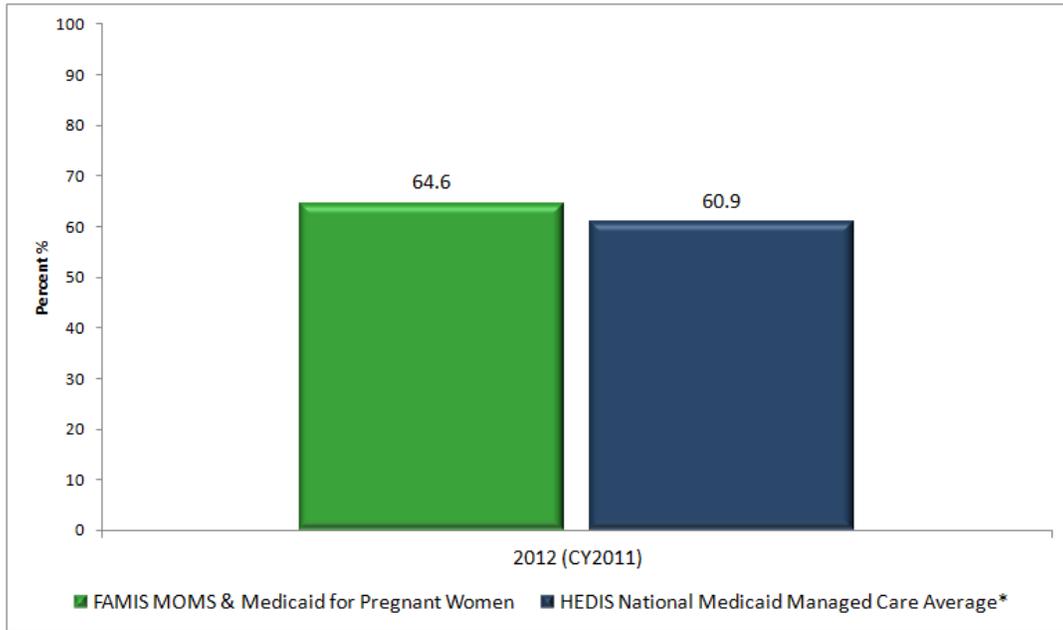
Figure 1A. Study Population Trends in Women Receiving Adequate Care



\*HEDIS<sup>®</sup> 2010 rates reflect births for CY 2009, HEDIS<sup>®</sup> 2011 rates reflect births for CY 2010, and HEDIS<sup>®</sup> 2012 rates reflect births for CY 2011. Note: the data sources for the Kotelchuck Index (used for FAMIS MOMS and Medicaid for Pregnant Women) and the HEDIS<sup>®</sup> data are slightly different for this comparison and interpretation.

- Combined rates for study population 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<sup>®</sup> National Medicaid Managed Care Averages for all three years.

Figure 1B. Comparison Group Trends in Women Receiving Adequate Care

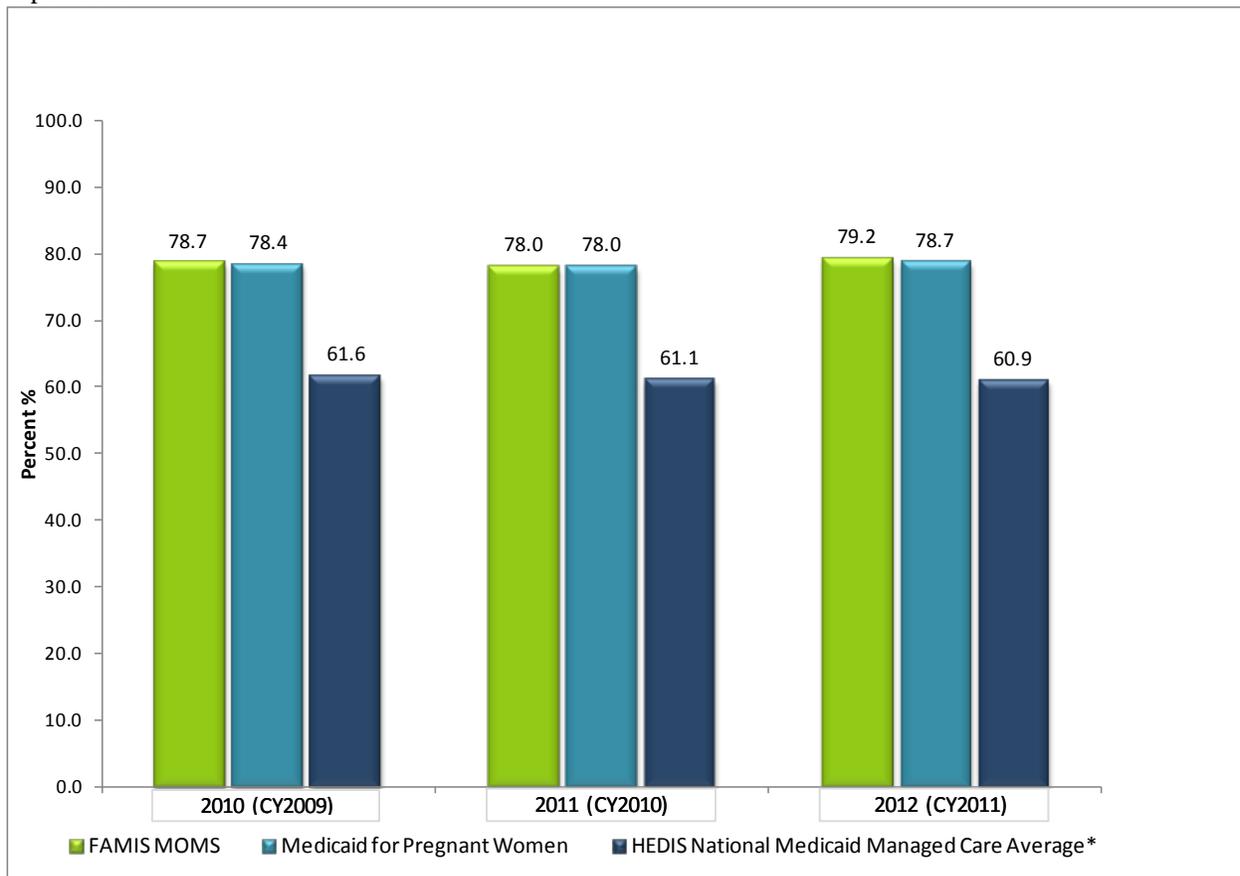


\*HEDIS® 2010 rates reflect births for CY 2009, HEDIS® 2011 rates reflect births for CY 2010, and HEDIS® 2012 rates reflect births for CY 2011. Note: the data sources for the Kotelchuck Index (used for FAMIS MOMS and Medicaid for Pregnant Women) and the HEDIS® data are slightly different for this comparison and interpretation.

- Combined rates for comparison group 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 2011.

Figure 2A summarizes the percentages of women receiving adequate prenatal care in 2009, 2010, and 2011 by specific program populations compared to the HEDIS® National Medicaid Managed Care Averages for the same time periods.

Figure 2A. Study Population Trends in Women Receiving Adequate Care—Specific Medicaid Program Populations<sup>†‡</sup>



<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

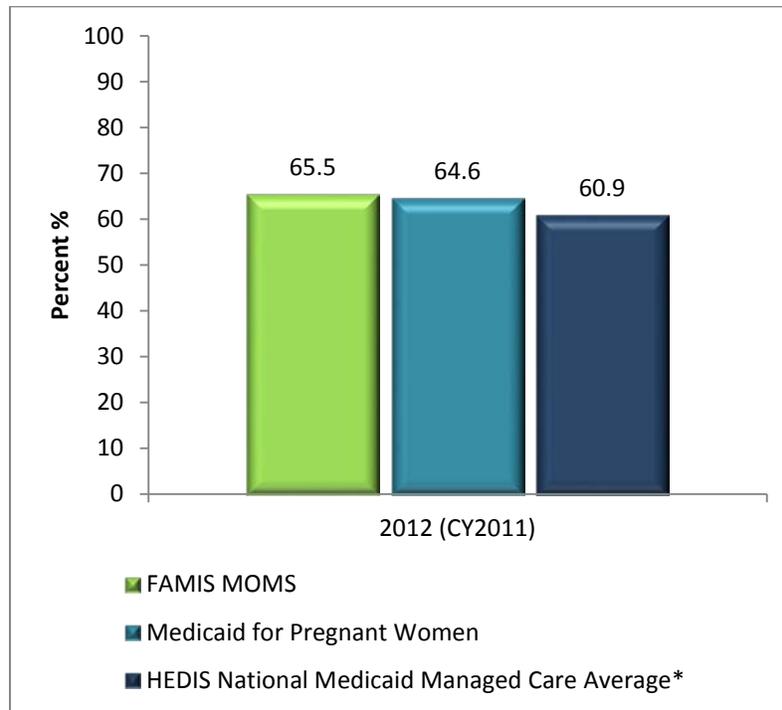
<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

\*HEDIS<sup>®</sup> 2010 is the year the HEDIS data were reported, but reflect births of 2009. HEDIS<sup>®</sup> 2011 is the year the HEDIS<sup>®</sup> data were reported, but reflect births of 2010. HEDIS<sup>®</sup> 2012 is the year the HEDIS<sup>®</sup> data were reported, but reflect births of 2011.

- From 2010 to 2011, both FAMIS MOMS and Medicaid for Pregnant Women showed slight increases (improvement) in the adequacy of prenatal care and reversed the previous three year trend of slightly decreasing rates.
- The HEDIS<sup>®</sup> National Medicaid Managed Care Average continued a slight decrease in all three years.
- The women in both programs received adequate prenatal care at rates that compare favorably to the HEDIS<sup>®</sup> National Medicaid Managed Care Averages for all three years.
- Women in FAMIS MOMS and Medicaid for Pregnant Women had similar rates of adequate prenatal care.

Figure 2B displays the percentage of women receiving adequate prenatal care in the comparison group in 2011 by specific program populations compared to the HEDIS® National Medicaid Managed Care Averages for the same time period.

Figure 2B. Comparison Group 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® 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. HEDIS® 2012 is the year the HEDIS® data were reported, but reflect births of 2011.

- Women in FAMIS MOMS had a slightly higher rate of adequate prenatal care than women in Medicaid for Pregnant Women for the comparison group.
- Women in both programs in the comparison group received adequate prenatal care at rates that compare favorably to the HEDIS® National Medicaid Managed Care Averages for 2011.

## Low Birth Weight Outcomes

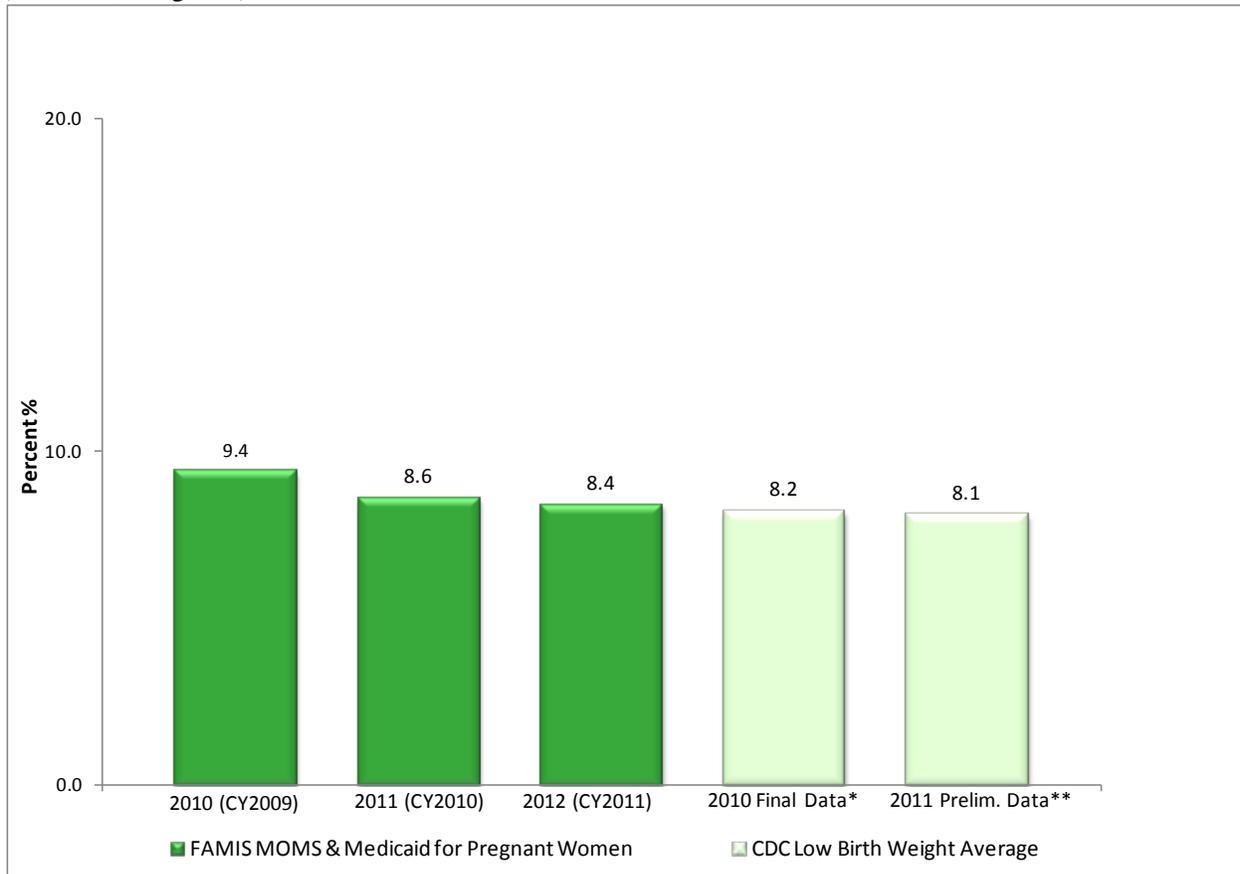
Infants born with overall low birth weights of less than 2,500 grams or 5 lbs. 8 oz. are at higher risk of long-term developmental or health issues than infants born at higher or normal birth weights. The CDC/NCHS publishes data on birth rates and birth outcomes in an annual National Vital Statistics System (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 2009 results are compared (for informational purposes only) with the NCHS National Vital Statistics Systems (NVSS) Final Birth Data for CY 2010. For CY 2010 and 2011, Virginia data are compared with the NCHS Preliminary Birth Data for CY 2011. Final national data for 2011 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 3A displays the low birth weight outcomes for FAMIS MOMS and Medicaid for Pregnant Women in the study population in CY 2009 through CY 2011 as compared to the national CDC/NCHS/NVSS rates.

Figure 3A. Study Population Trends in Overall Low Birth Weight Rates ▲ □  
(LBW < 2,500 grams)



▲ A lower score is more desirable for overall low birth weight rates

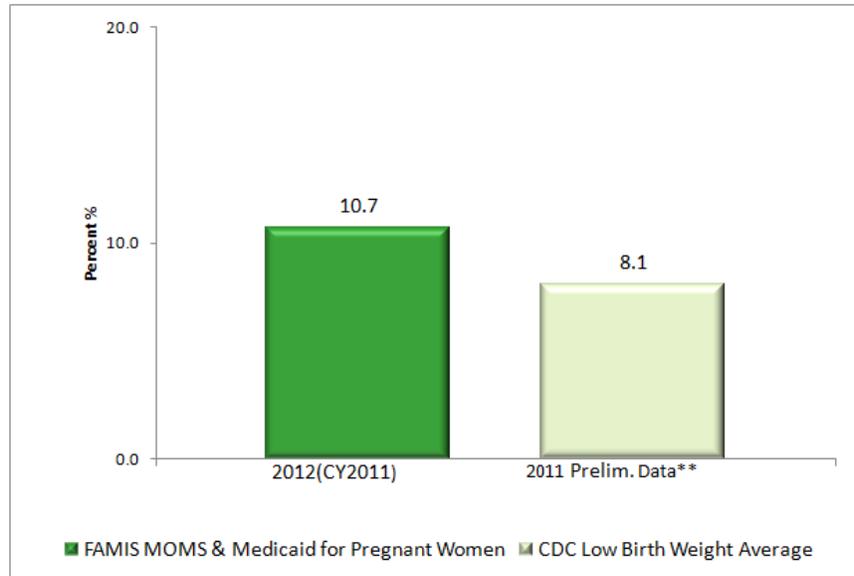
□ Rates calculated per 100 births

\* CDC/NCHS/ NVSS Final Birth Data CY 2010

\*\* CDC/NCHS/NVSS Preliminary Birth Data CY 2011

- The combined rates for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program) continued to improve (are lower) in all three years.
- These combined rates are now only slightly unfavorable when compared to the National Averages for Overall Low Birth Weight Rate for 2010 and 2011 (preliminary). The national averages, however, include all births, regardless of insurance status.

Figure 3B. Comparison Group Trends in Overall Low Birth Weight Rates <sup>▲</sup> <sup>■</sup>  
(LBW < 2,500 grams)



<sup>▲</sup> A lower score is more desirable for overall low birth weight rates

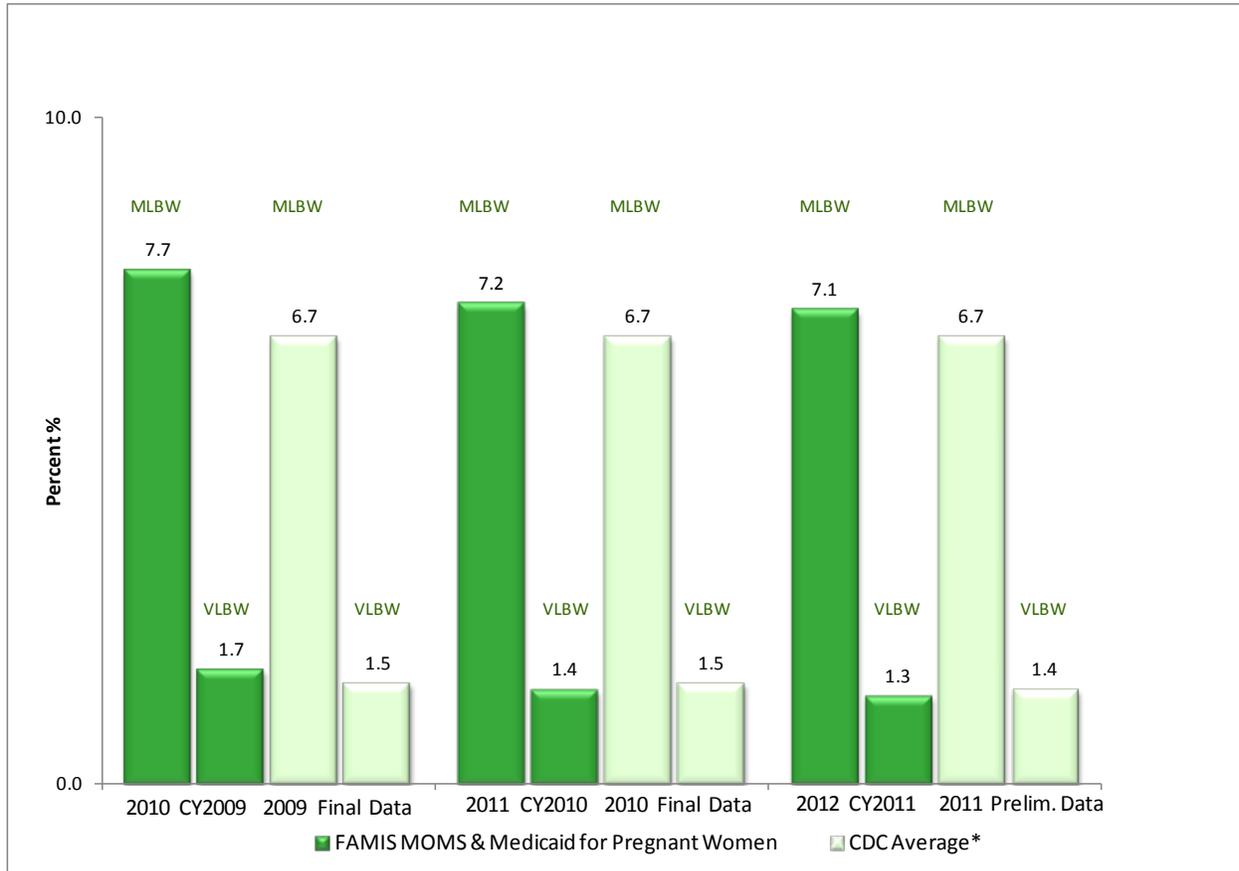
<sup>■</sup> Rates calculated per 100 births

\*\* CDC/NCHS/NVSS Preliminary Birth Data CY 2011

- The combined LBW rate for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program) is higher (less favorable) for the comparison group than for the study population. Over 10 percent of births to women in the comparison group are low birth weight births as compared to 8 percent of births to women in the study population.
- These combined LBW rate is unfavorable when compared to the National Average for Overall Low Birth Weight Rate for 2011 (preliminary). The national average, however, includes all births, regardless of insurance status.

Figure 4A displays the moderately low birth weight (MLBW) and very low birth weight (VLBW) outcomes for FAMIS MOMS and Medicaid for Pregnant Women in CY 2009 through CY 2011 as compared to the CDC/NCHS/NVSS rates.

Figure 4A. Study Population 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) <sup>□</sup>

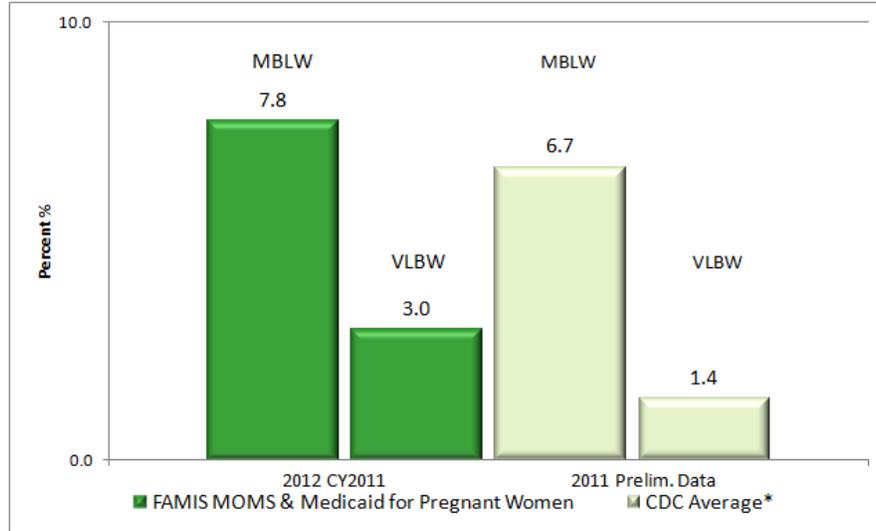


\* Final Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program). Final Birth Data 2010 from CDC/NCHS/NVSS is compared to CY 2010 Rates for FAMIS MOMS & Medicaid for Pregnant Women. 2011 Preliminary Data from CDC/NCHS/NVSS is compared to CY 2011 Rates for FAMIS MOMS & Medicaid for Pregnant Women

<sup>□</sup> Rates calculated per 100 births

- Combined rates for FAMIS MOMS and Medicaid for Pregnant Women who delivered infants of MLBW while trending lower, remain higher (worse) than the national rates for all three years.
- However, the VLBW rates in both 2010 and 2011 for the programs combined compare favorably (lower) to the national averages in both years.
- It should be noted the CDC/NCHS data includes all births that occurred during the year, regardless of payer or income levels.

Figure 4B. Comparison Group 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) <sup>□</sup>

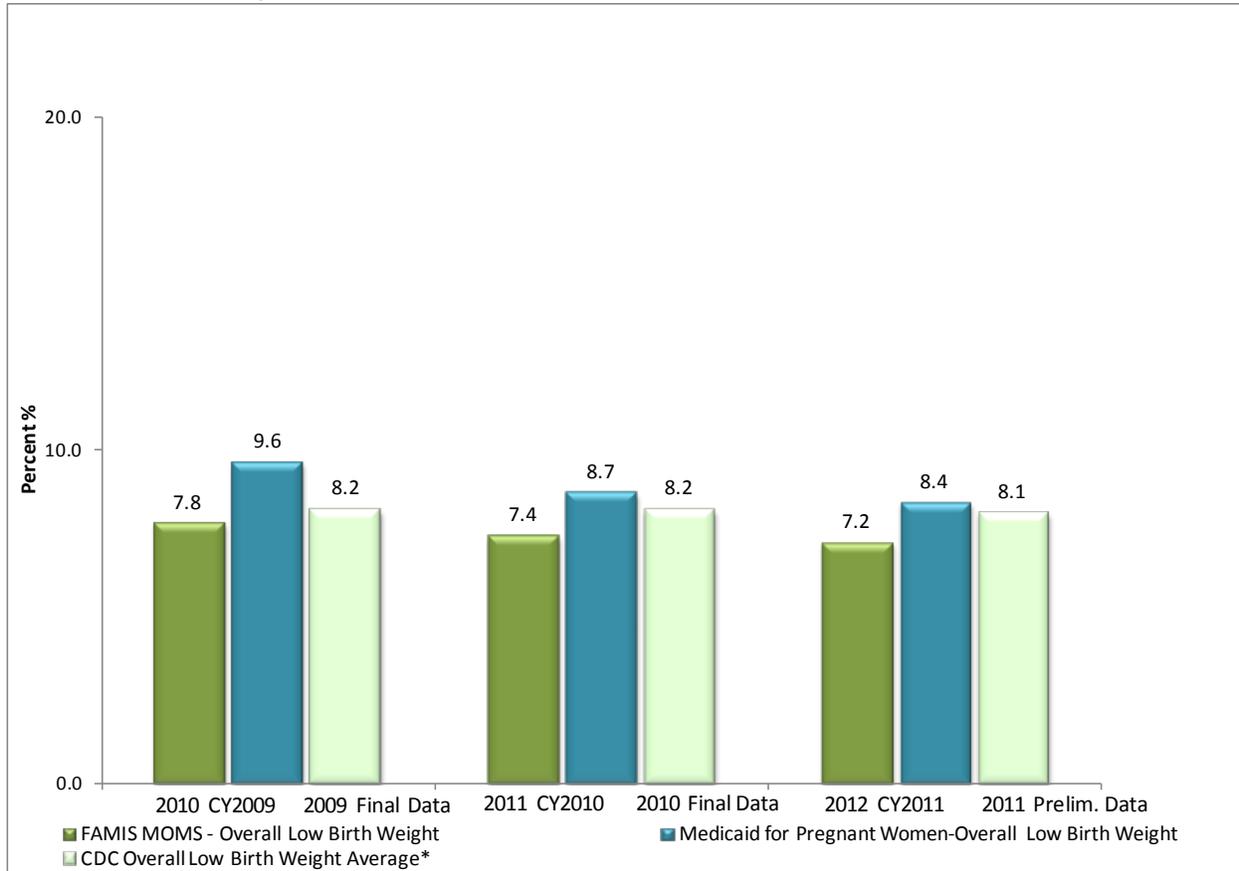


<sup>□</sup> Rates calculated per 100 births

- Combined rates for comparison group FAMIS MOMS and Medicaid for Pregnant Women who delivered infants of MLBW are slightly higher (worse) than rates for the study population and higher (worse) than the national rates for 2011.
- VLBW rates for the comparison group in 2011 are over two times the rate for the study population and the national rate in the same year.
- It should be noted the CDC/NCHS data includes all births that occurred during the year, regardless of payer or income levels.

Figure 5A displays the overall low birth weight outcomes for the FAMIS MOMS and Medicaid for Pregnant Women populations for CY 2009, CY 2010, and CY 2011 as compared to the CDC/NCHS/NVSS averages.

Figure 5A. Study Population Overall Low Birth Weights – Specific Medicaid and FAMIS MOMS Program Populations  
 (Overall LBW <2,500 grams) <sup>□</sup>

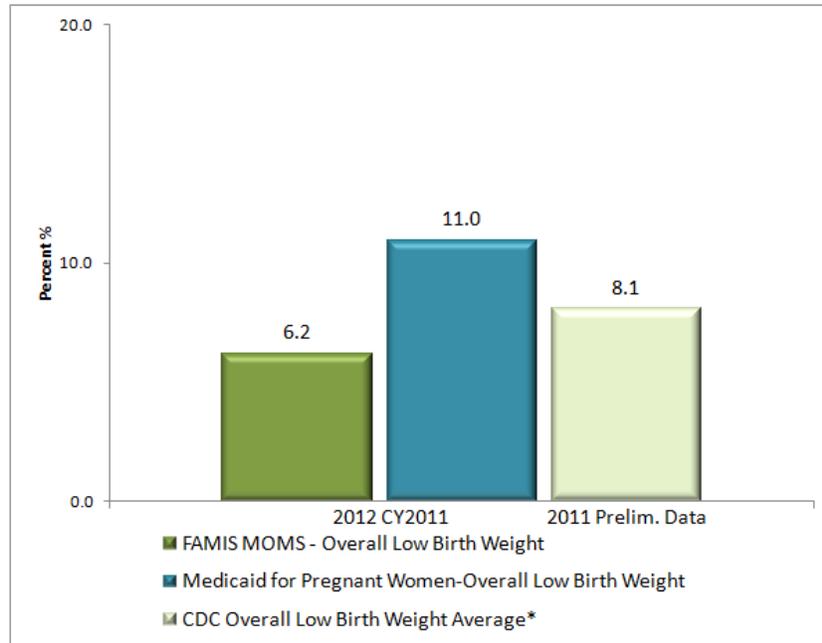


\* Final Birth Data 2009 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2009 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) and Medicaid for Pregnant Women (a Medicaid Title XIX program). Final Birth Data 2010 from CDC/NCHS/NVSS is compared to CY 2010 Rates for FAMIS MOMS and Medicaid for Pregnant Women. Preliminary Birth Data 2011 from CDC/NCHS/NVSS is compared to CY 2011 Rates for FAMIS MOMS and Medicaid for Pregnant Women.

<sup>□</sup> Rates calculated per 100 births

- Rates for FAMIS MOMS in the study population have continued to improve (lower rate is better) during the three year period and outperformed the national benchmark for all three years.
- Medicaid for Pregnant Women rates remained unfavorable when compared with the national averages for all three years but are trending at improved (lower rates) from 2009 to 2011.

Figure 5B. Comparison Group Overall Low Birth Weights – Specific Medicaid and FAMIS MOMS Program Populations  
(Overall LBW <2,500 grams) <sup>□</sup>



<sup>□</sup> Rates calculated per 100 births

- In the comparison group, Medicaid for Pregnant Women rates were unfavorable when compared with rates for FAMIS MOMS and the national average for 2011.
- Rates of low birth weights for FAMIS MOMS in the comparison group were lower (better) than the national average in 2011, and lower (better) than the rates for FAMIS MOMS in the study population.
- Medicaid for Pregnant Women low birth weight rates for the comparison group were much higher (worse) than Medicaid for Pregnant Women rates for the study population.

Table 4A. Trends in Moderately Low and Very Low Birth Weight Outcomes for Specific Program Populations for Study Population in CY 2009 through CY 2011 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 2009 <sup>†</sup>	FAMIS MOMS CY 2010 <sup>†</sup>	FAMIS MOMS CY 2011 <sup>†</sup>	MA for PW CY 2009 <sup>‡</sup>	MA for PW CY 2010 <sup>‡</sup>	MA for PW CY 2011 <sup>‡</sup>	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
Moderately Low Birth Weight Rates	6.2% 87	6.1% 92	5.6% 84	7.9% 1,419	7.3% 1,271	7.2% 1,256	6.7%	6.7%
Very Low Birth Weight Rates	1.6% 22	1.3% 19	1.6% 24	1.7% 302	1.4% 243	1.2% 215	1.5%	1.4%

■ 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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> MA for PW indicates Medicaid for Pregnant Women (a Medicaid Title XIX program)

\* CDC/NCHS/NVSS Final Birth Data 2010

<sup>▲</sup> CDC/NCHS/NVSS Preliminary Birth Data 2011

- Rates of MLBW infants improved for FAMIS MOMS from 2009 to 2010 with a significant improvement in 2011. Overall performance for the three year period was better (lower) than the national benchmark, which remained unchanged.
- The rate for Medicaid for Pregnant Women was unfavorable (higher) during the three year period when compared with the national rate for MLBW infants. A downward (favorable) trend continued during the three years from 2009 to 2011.
- The Medicaid for Pregnant Women rates for VLBW infants improved and were below (lower is better) the national benchmark rate in both 2010 and 2011.
- VLBW infants born to FAMIS MOMS reversed a downward (improved) trend and now compare unfavorably to the national benchmark, which improved (declined) slightly from 2010 to 2011.

Table 4B. Trends in Moderately Low and Very Low Birth Weight Outcomes for Specific Program Populations for the Comparison Group in CY 2011 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 2011 <sup>†</sup>	MA for PW CY 2011 <sup>‡</sup>	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
Moderately Low Birth Weight Rates	2.7% 7	8.0% 380	6.7%
Very Low Birth Weight Rates	3.5% 9	3.0% 140	1.4%

■ 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)

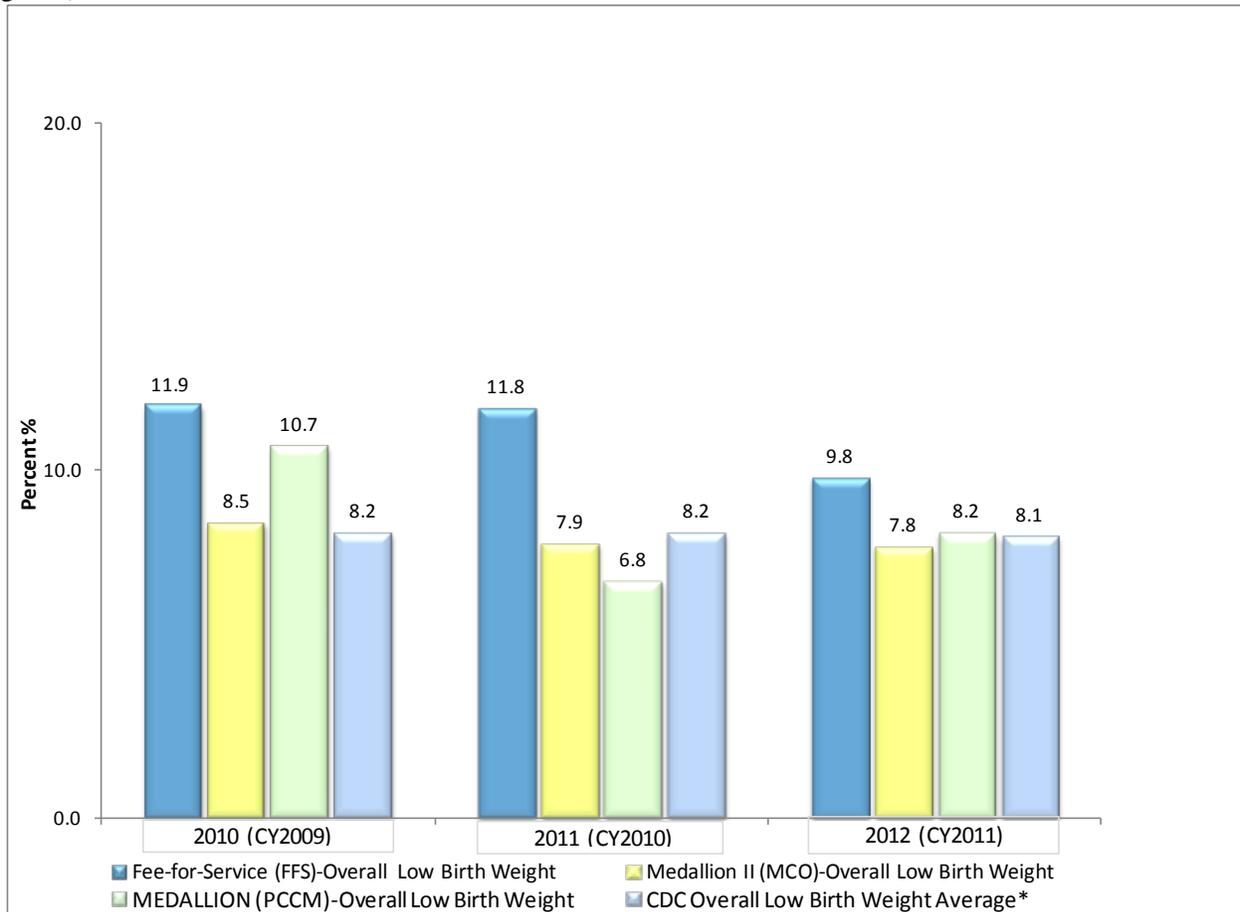
‡ MA for PW indicates Medicaid for Pregnant Women (a Medicaid Title XIX program)

▲ CDC/NCHS/NVSS Preliminary Birth Data 2011

- The FAMIS MOMS rate for MLBW infants for the comparison group is quite favorable (lower is better) when compared with the national average and the rate for FAMIS MOMS in the study population.
- In the comparison group, women enrolled in the Medicaid for Pregnant Women program had higher rates of MLBW than women in the Medicaid for Pregnant Women program in the study population and than the national average.
- For the comparison group, both FAMIS MOMS and the Medicaid for Pregnant Women rates for VLBW infants compare unfavorably (are higher) to the national average and to rates for the study population.
- It should be noted that women in the comparison group lack the continuous enrollment of women in the study population. In addition, the number of women in the comparison group is much smaller than the number of women in the study population.

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

Figure 6A. Overall Low Birth Weight Rates for Study Population by Delivery System (Overall LBW <2,500 grams) <sup>■</sup>



\* Final Birth Data 2009 from CDC/NCHS/NVSS is compared to CY 2009 Rates for Virginia's FFS, MCO, and PCCM delivery systems. Preliminary Birth Data 2010 from CDC/NCHS/NVSS is compared to CY 2010. Preliminary Birth Data 2011 from CDC/NCHS/NVSS is compared to CY 2011 Rates for Virginia's FFS, MCO, and PCCM delivery systems.

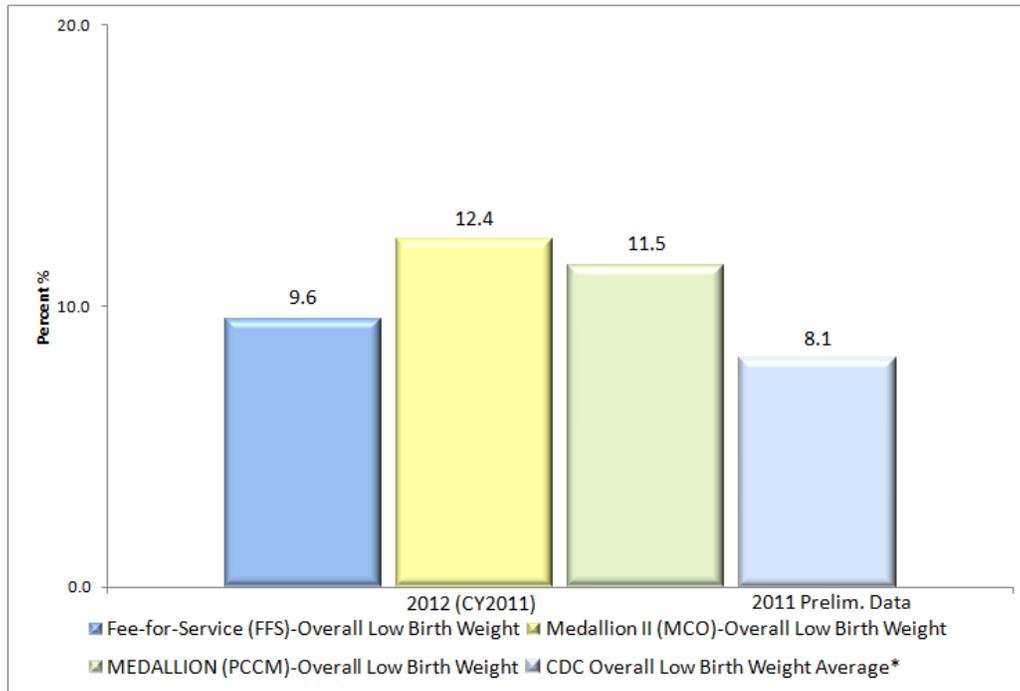
<sup>■</sup> Rates calculated per 100 births

- Overall low birth weight (LBW) rates for FFS enrollees in the study population were the least favorable of all delivery systems and when compared with the national rates for all years.
- Overall LBW rates for infants born to women in an MCO were the most favorable in all three years compared to FFS and PCCM and outperformed the national average in both 2010 and 2011.
- Rates for Overall LBW infants in the PCCM program reversed their favorable rate from 2010 and compare unfavorably (higher) than the 2011 national benchmark.

It should be noted that PCCM has primarily served the far southwest region of Virginia, which is not as racially diverse as the other areas of the state. In fact, nearly 90% of women in the study population in this area of Virginia 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 deliver low-birth weight babies at a higher rate than women of other races.

Figure 6B. Overall Low Birth Weight Rates for Comparison Group by Delivery System (Overall LBW <2,500 grams) ▣



▣ Rates calculated per 100 births

- Overall low birth weight (LBW) rates for all three delivery systems for the comparison group compared unfavorably (were higher) with the national rate in 2011.
- In contrast to the study population, LBW rates for FFS enrollees were lower than rates for MCO and PCCM enrollees in the comparison group.

The rates of moderately low and very low birth weights among the study population are presented by delivery systems and compared with national averages in Table 5A below.

Table 5A. Moderately Low and Very Low Birth Weight Rates by FFS, MCO, and PCCM Delivery Systems for Study Population in CY 2009 through CY 2011 as Compared to the CDC/NCHS National Vital Statistics Systems (NVSS) Averages.

(Overall LBW <2,500 grams) ■ ■

Indicator	FFS <sup>◆</sup> CY 2009	FFS <sup>◆</sup> CY 2010	FFS <sup>◆</sup> CY 2011	MCO <sup>△</sup> CY 2009	MCO <sup>△</sup> CY 2010	MCO <sup>△</sup> CY 2011	PCCM <sup>●</sup> CY 2009	PCCM <sup>●</sup> CY 2010	PCCM <sup>●</sup> CY 2011	CDC CY 2010 *	CDC CY 2011 ▲
Moderately Low Birth Weight Rates	8.8% 364	8.7% 313	7.5% 364	7.4% 1,027	6.9% 982	6.9% 883	7.3% 115	6.0% 68	7.3% 93	6.7%	6.7%
Very Low Birth Weight Rates	3.1% 127	3.1% 113	2.3% 112	1.1% 159	1.0% 140	0.9% 116	2.7% 38	0.8% 9	0.9% 11	1.5%	1.4%

■ 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 2010

▲ CDC/NCHS/NVSS Preliminary Birth Data 2011

◆ Fee for Service

△ Medallion II

● MEDALLION

- MLBW rates improved every year in FFS from 2009 to 2011 while the MCO delivery system rates declined from 2009 to 2010 but remained unchanged from 2010 to 2011. The national rates remained unchanged from 2010 to 2011, but a significant increase (unfavorable) was noted for the PCCM delivery system.
- Virginia Medicaid MLBW rates for the FFS program compared unfavorably with national averages for all three years. The PCCM rates improved (were lower) in 2010 but are again unfavorable (higher) than the national benchmark rate in 2011. The 2010 rate of 6.9% for the MCO population remained unchanged for 2011 and is now only slightly higher (worse) than the 6.7% national rate.
- Rates of VLBW continued their downward trend 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 declined (better) from 3.1% in 2010 to 2.3% in 2011. However, the rate still exceeds the national rate, now at 1.4%.
- VLBW rates for infants born into the PCCM program are sustaining their reversal of an unfavorable trend that was more than double the national rate in 2009. The 2010 rate decreased to 0.8% and the 2011 rate is 0.9%, both well below (better) than the 1.5% and 1.4% national rates respectively for the same time periods.

Table 5B presents the rates of both moderately low and very low birth weights for pregnant women with at least one day of enrollment prior to delivery and less than 43 days prior to delivery during the study period. These rates are displayed by the three delivery systems: FFS, MCO and PCCM for 2011.

Table 5B. Moderately Low and Very Low Birth Weight Rates by FFS, MCO, and PCCM Delivery Systems for Comparison Group in CY 2011 as Compared to the CDC/NCHS National Vital Statistics Systems (NVSS) Averages.

(Overall LBW <2,500 grams) ■ ■

Indicator	FFS <sup>◆</sup> CY 2011	MCO <sup>△</sup> CY 2011	PCCM <sup>●</sup> CY 2011	CDC <sup>▲</sup> CY 2011
Moderately Low Birth Weight Rates	7.3% 208	8.4% 167	7.2% 12	6.7%
Very Low Birth Weight Rates	2.3% 64	3.9% 78	4.2% 7	1.4%

■ 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

◆ Fee for Service

△ Medallion II

● MEDALLION

- The comparison group incurred rates of MLBW that are unfavorable (higher) when compared with the national rate, regardless of the delivery system.
- The same unfavorable (higher) result is present in VLBW infants born to pregnant women in the comparison group in each of the three delivery systems.

The comparison group rates of MLBW and VLBW are comparable to the rates for the study population for FFS enrollees. However comparison group rates of MLBW and VLBW for MCO enrollees are higher (worse) than those for the study population. Rates of VLBW for PCCM enrollees are also higher for the comparison group than the study population.

## Premature Infants

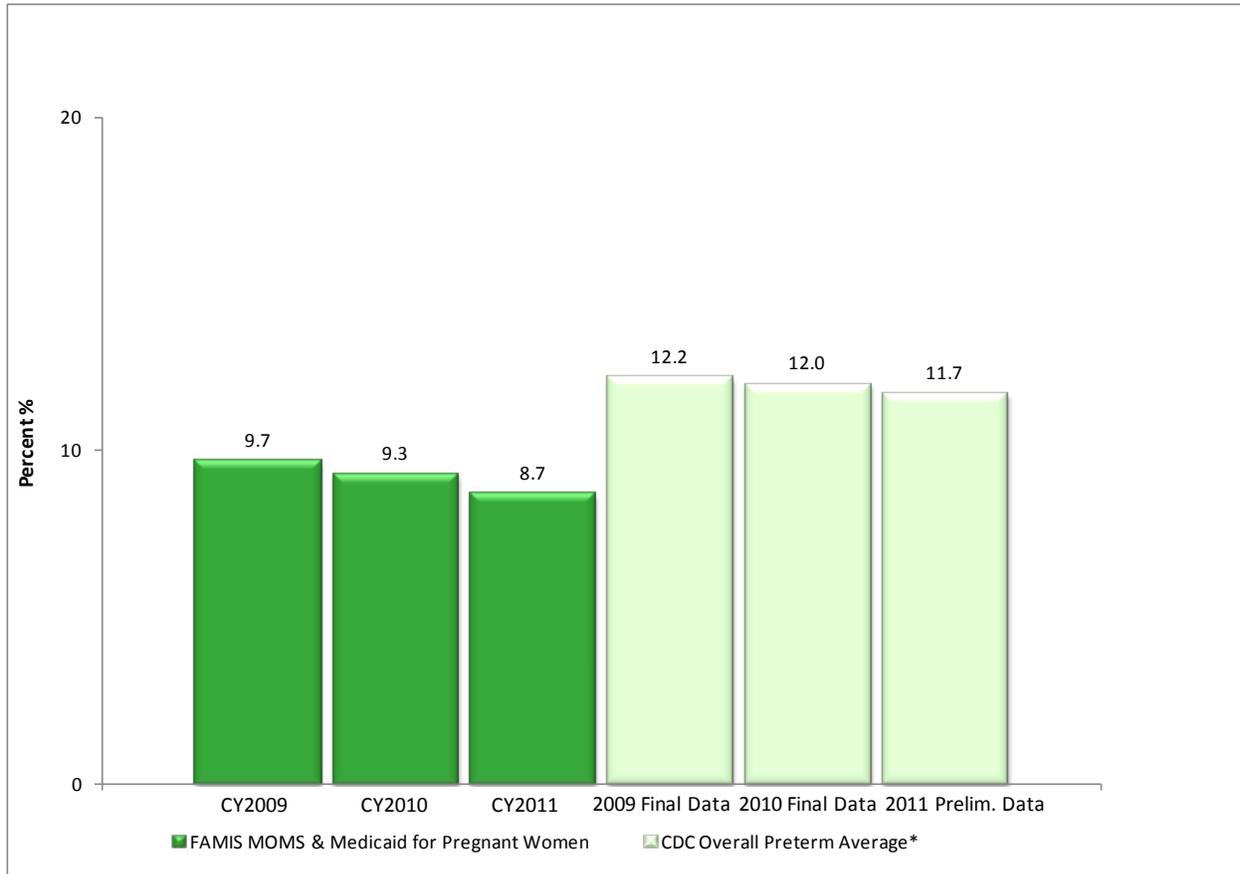
Infants born before 37 completed weeks of gestation are considered preterm or premature. The March of Dimes reported that preterm birth rates in the United States increased by 36 percent in the last 25 years (White Paper, 2009). Late preterm births (between 34 and 36 weeks gestation) are responsible for most of this increase in preterm birth rates. Even though the preterm birth rate in the United States has been decreasing for the fifth year and the 2011 rate of 11.7 percent is the lowest in ten years, there is still room for improvement.

According to the latest March of Dimes' national/state-by-state report, there are several major factors that still contribute to infants being born too soon. These include smoking by the pregnant woman and a lack of health insurance coverage. Another primary factor is the pregnant woman undergoing either an elective scheduled cesarean delivery or an early induction of labor, between 34 and 36 weeks of gestation without a medical reason for the early delivery.

Both ACOG and the American Academy of Pediatrics (AAP) have a long-standing guideline that requires 39 completed weeks of gestation prior to any elective delivery, either vaginal or operative (C-section). The Joint Commission's National Quality Core Measures include the following performance measure for perinatal care: percentage of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 and less than 39 weeks of gestation completed.

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 2009, 2010, and 2011. The additional data indicator for 2011 calculated the number of births delivered at less than 39 completed weeks of gestation. This is in addition to the continuing reporting and comparison of prematurity for the number of births delivered at less than 37 weeks of gestation.

Figure 7A. Percentage of Infants Born Premature within the study population – less than 37 completed weeks to gestation - to FAMIS MOMS and Medicaid for Pregnant Women<sup>□</sup>

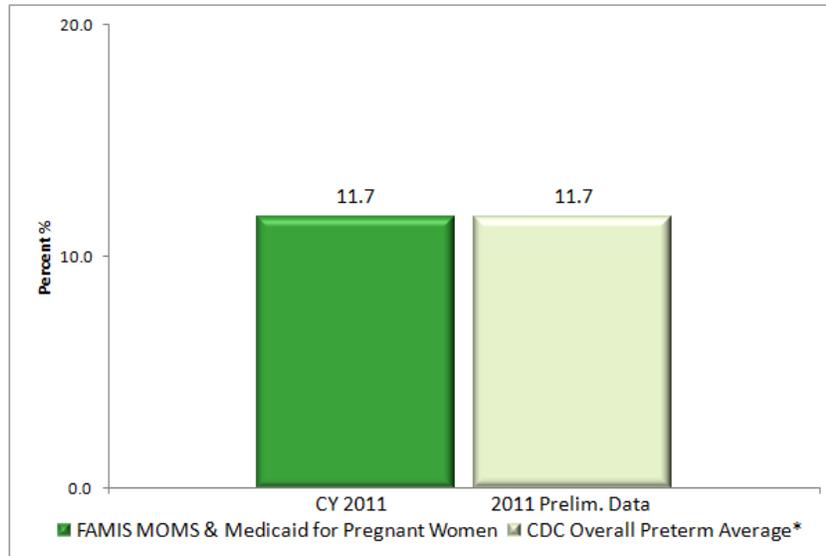


\*Final Birth Data 2009 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2009 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program). Final Birth Data 2010 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2010 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program). Preliminary Birth Data 2011 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2011 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program).

□ Rates calculated per 100 births

- The rate of infants born prematurely to women in the study population who are in the FAMIS MOMS or Medicaid for Pregnant Women programs continues an improved trend (decrease) from 2009 to 2011.
- 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.

Figure 7B. Percentage of Infants Born Premature within the Comparison Group – less than 37 completed weeks to gestation - to FAMIS MOMS and Medicaid for Pregnant Women<sup>□</sup>

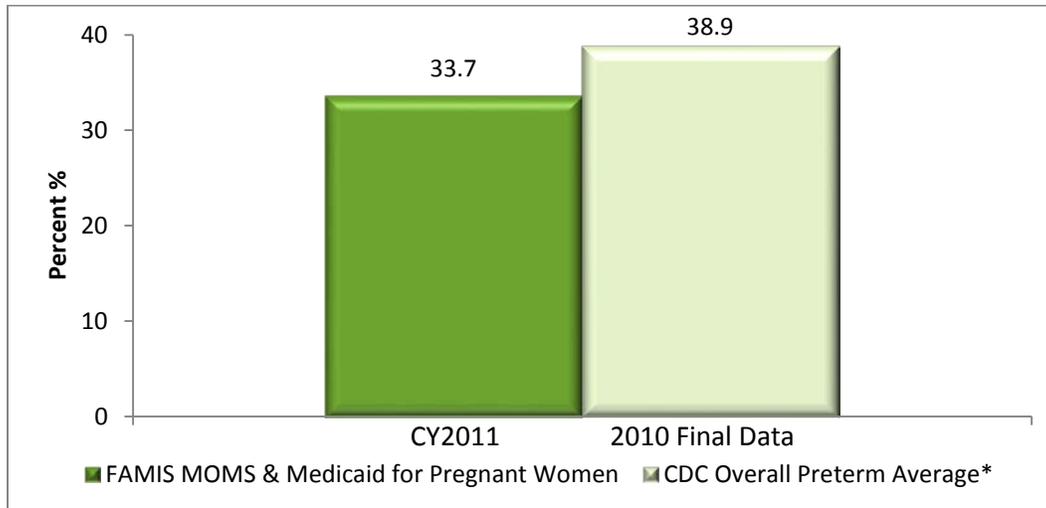


<sup>□</sup> Rates calculated per 100 births

- The rate of infants born prematurely to women in the comparison group who are in the FAMIS MOMS and Medicaid for Pregnant Women programs did not differ from the national rate in 2011.

Because elective deliveries before 39 completed weeks of gestation can pose both short-term and long-term health risks for the newborn, this information was collected for the first time in 2011. The data demonstrates the number of births delivered at less than 39 completed weeks of gestation and is displayed in Figure 8 below. It should be noted that there are no national benchmarks currently available for comparison; however, the most recent national average is provided.

Figure 8A. Percentage of Infants Born to FAMIS MOMS and Medicaid for Pregnant Women in the Study Population (39Week Birth Rate: the number of births delivered at less than 39 completed weeks of gestation)

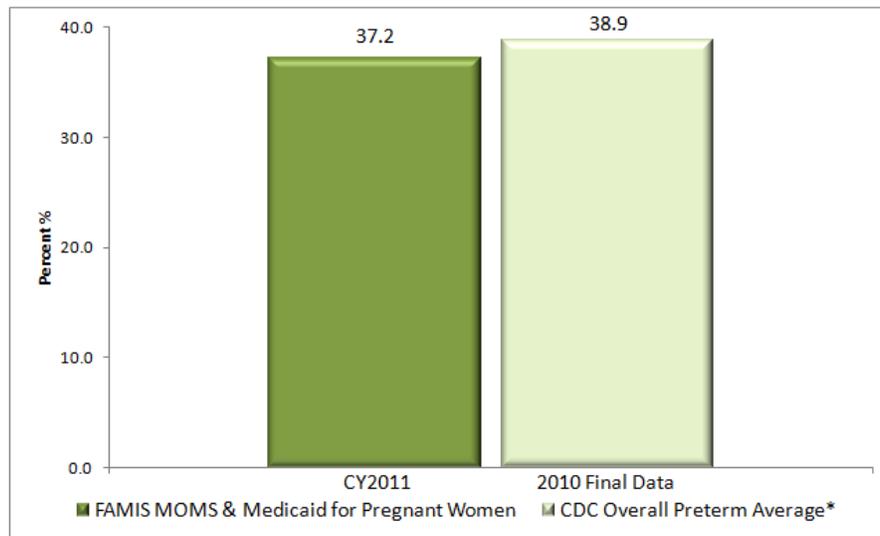


▣ Rates calculated per 100 births

\*Final Birth Data 2010 from CDC/NCHS National Vital Statistics Systems (NVSS) is compared to CY 2011 Rates for FAMIS MOMS (a CHIP Title XXI waiver program) & Medicaid for Pregnant Women (a Medicaid Title XIX program).

- The percentage (33.7) of infants born at less than 39 completed weeks of gestation to women in FAMIS MOMS and Medicaid for Pregnant Women was first reported in this 2011 study.
- This rate is better (lower) than the national rate of 38.9 percent reported from the CDC/NCHS 2010 Final Birth Data.
- Both rates are worse (significantly higher) than the March of Dimes goal of lowering the overall rate of premature infants to 9.6 percent of all live births by 2020.

Figure 8B. Percentage of Infants Born to FAMIS MOMS and Medicaid for Pregnant Women in the Comparison Group (39Week Birth Rate: the number of births delivered at less than 39 completed weeks of gestation)



▣ Rates calculated per 100 births

- The rate of infants born at less than 39 completed weeks of gestation to women in the comparison group in FAMIS MOMS and Medicaid for Pregnant Women in 2011 is a little less than the national rate from the CDC/NCHS 2010 Final Birth Data.
- The rate of infants born at less than 39 completed weeks of gestation to FAMIS MOMS and Medicaid for Pregnant Women in 2011 is higher (worse) for the comparison group than for the study population.

## 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 of a study population and a comparison group (in 2011) are compared with each other and with national benchmarks for calendar years 2009, 2010, and 2011.

The majority (92 percent) of pregnant women in the study population were enrolled in the Medicaid for Pregnant Women program while 8 percent were enrolled in the FAMIS MOMS

program. The percentage of pregnant women enrolled in an MCO reversed a three year trend and declined from 74.9 percent in 2010 to 67.5 percent in 2011. The percentage of women enrolled in FFS and PCCM in the study population also reversed their declining trend and increased enrollment in 2011.

Program enrollment for the comparison group was similar to the study population with 95 percent of pregnant women in the comparison group enrolled in the Medicaid for Pregnant Women program and 5 percent enrolled in FAMIS MOMS in 2011. However, representation in delivery systems differed markedly for the comparison group relative to the study population. Over half of all women in the comparison group were enrolled in FFS in 2011 as compared to 26 percent of women in the study population. Similarly, 40 percent of women in the comparison group were enrolled in an MCO in 2011 as compared to 68 percent of women in the study population.

#### *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<sup>®</sup> National Medicaid Managed Care Averages in all years.
- Women in the FAMIS MOMS and Medicaid for Pregnant Women programs in the study population had higher rates of adequate prenatal care than women in the comparison group.

#### *Overall Low Birth Weight Outcomes by Program*

- LBW rates for FAMIS MOMS improved during the three years and outperformed the CDC's national benchmark in all three years.
- Medicaid for Pregnant Women OLBW rates remained unfavorable when compared to the national CDC rates for all three years but are trending more favorable from 2009 to 2011.
- It should be noted that FAMIS MOMS is the higher income group of the two programs.
- LBW rates were higher (worse) for women in the comparison group than women in the study population.
- LBW rates for FAMIS MOMS in the comparison group were lower (better) than those of FAMIS MOMS in the study population.
- LBW rates for Medicaid for Pregnant Women in the comparison group were higher (worse) than those of Medicaid for Pregnant Women in the study population.

*Overall Low Birth Weight Outcomes by Delivery System*

- LBW rates for infants born to women in an MCO improved from 2009 to 2011 and outperformed the national benchmark in both 2010 and 2011.
- LBW rates for FFS enrollees were the least favorable of all delivery systems and when compared with the national benchmarks for all years.
- LBW rates were higher (worse) for MCO and PCCM enrollees in the comparison group than the study population. LBW rates for FFS enrollees in the comparison group were similar to those in the study population.

*Very Low Birth Weight Outcomes*

- Very Low Birth Weight (VLBW) rates were twice as high for women in the comparison group than women in the study population.
- VLBW rates for FAMIS MOMS in the comparison group are twice the rate for FAMIS MOMS in the study population.
- VLBW rates for Medicaid for Pregnant Women in the comparison group are also twice the rate of Medicaid for Pregnant Women in the study population.

*Preterm Infants (37 and 39 weeks)*

- 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.
- The rate of infants born prematurely (before 37 completed weeks of pregnancy) was higher (worse) for the comparison group than the study population.
- The rate of infants born before 39 completed weeks of pregnancy for the combined FAMIS MOMS and Medicaid for Pregnant Women programs for the study population was 33.7% in 2011.
- The rate of infants born before 39 completed weeks of pregnancy for the combined FAMIS MOMS and Medicaid for Pregnant Women programs for the comparison group was 37.2% in 2011.

## 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. According to a study by the Commonwealth Fund in August 2012 many risk factors, including hypertension, smoking, obesity, heavy alcohol use, and diabetes, are examples of conditions and risk factors that disproportionately affect low-income women.

Other considerations such as social determinants of health including preconception health, race, ethnicity, and socioeconomic factors related to poverty, housing and access to health services play a role in health outcomes.

The intendedness of pregnancy and the frequency of repeated pregnancies may also impact birth outcomes. Pregnancies which are not planned tend to have poorer birth outcomes. The ability to identify gaps in expected outcomes and analyze subpopulation variables can help to formulate effective, focused interventions to improve birth outcomes.

DMAS has the ability and the organizational structure to address identified results that do not meet optimal birth outcomes. The MCO Collaboration presents a statewide population forum for collaborative efforts and targeted interventions. DMAS should consider the following recommendations to improve the number of babies born too soon to the Medicaid mothers in Virginia:

- DMAS should continue to monitor, 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. For example, African American women continued a trend and presented the least favorable rates among all racial groups 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.
- Each MCO should conduct a root cause analysis to determine disparities and identify specific barriers in their prenatal populations. This analysis can be used for designing education, outreach, and other targeted interventions to reduce barriers.
- Specific successful strategies that the MCOs have demonstrated to improve birth outcomes should be explored for possible replication in the FFS populations.
- DMAS and the MCOs should evaluate program results and successful strategies of other states' Medicaid agencies.

- DMAS should review the initial results of infants born before 39 weeks of gestation to determine if collaborative efforts should join national initiatives that address elective deliveries between 37 and 39 weeks of gestation.

## APPENDIX 1

### Demographic Characteristics of Study Population and Comparison Group

#### 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 2009 through CY 2011.

Table A1-1. Racial Distribution by Specific Program Population for Study Population for births during CY 2009\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS <sup>†</sup>	49.0% (688) <sup>⊖</sup>	26.9% (377)	2.6% (37)	9.8% (138)	11.6% (163)	1,403
Medicaid for Pregnant Women <sup>⊗</sup>	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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>⊗</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>⊖</sup> Numerator

Table A1-2. Racial Distribution by Specific Program Population for Study Population for births during CY 2010\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS <sup>†</sup>	47.2% (706) <sup>⊖</sup>	28.6% (428)	3.3% (50)	8.3% (124)	12.6% (189)	1,497
Medicaid for Pregnant Women <sup>⊗</sup>	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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>⊗</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>⊖</sup> Numerator

Table A1-3A. Racial Distribution by Specific Program Population for Study Population for births during CY 2011\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS <sup>†</sup>	47.7% (718) <sup>⊖</sup>	25.6% (385)	3.8% (57)	9.6% (144)	13.4% (201)	1,505
Medicaid for Pregnant Women <sup>⊗</sup>	47.3% (8,224)	35.7% (6,211)	1.4% (240)	6.0% (1,048)	9.5% (1658)	17,381

\* Rates may not add correctly due to rounding

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>⊗</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>⊖</sup> Numerator

- The overall percentage of women enrolled in FAMIS MOMS and Medicaid for Pregnant Women who were White reversed a three year decline with a slight increase in enrollment for each program from 2010 to 2011.
- The overall percentage of African-American women in the FAMIS MOMS program increased from 2009 to 2010, but declined in 2011.
- The overall percentage of African-American women in the Medicaid for Pregnant Women program continued to decline in each of the three years.
- Continuing the trend, there was an increase in the percentage of total enrollment of Asian or “other” race women during this three year period, while the overall percentage of enrollees who were Hispanic decreased slightly in the same time period.

Table A1-3B. Racial Distribution by Specific Program Population for Comparison Group for births during CY 2011\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator
FAMIS MOMS <sup>†</sup>	44.0% (113) <sup>⊖</sup>	23.7% (61)	7.0% (18)	16.3% (42)	9.0% (23)	257
Medicaid for Pregnant Women <sup>⊗</sup>	34.2% (1,618)	33.4% (1,580)	5.5% (259)	16.4% (774)	10.5% (498)	4,729

\* Rates may not add correctly due to rounding

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>⊗</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>⊖</sup> Numerator

- The majority (78.2%) of women in the comparison group enrolled in FAMIS MOMS and Medicaid for Pregnant Women were White.
- The percentage of African-American women in the Medicaid for Pregnant Women program was only slightly less than the percentage of White women.
- The percentage of Asian, Hispanic and Other women in both programs were fairly evenly represented.

### Racial Group Analysis by Delivery System in CY 2009, 2010 and 2011

Table A1-4. Racial Distribution by Specific Program Population for Study Population for births during CY 2009\*

Delivery System	Race					
	White	African American	Asian	Hispanic	Other	
FFS <sup>♦</sup>	N	1,920	1,478	64	263	385
	%	46.7%	36.0%	1.6%	6.4%	9.4%
MCO <sup>△</sup>	N	6,127	5,532	252	931	1,043
	%	44.1%	39.8%	1.8%	6.47%	7.5%
PCCM <sup>●</sup>	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

♦ Fee for Service

△ Medallion II

● MEDALLION

⊙ Numerator

Table A1-5. Racial Distribution by Specific Program Population for Study Population for births during CY 2010\*

Delivery System	Race					
	White	African American	Asian	Hispanic	Other	
FFS <sup>♦</sup>	N	1,604	1,297	45	203	457
	%	44.5%	36.0%	1.3%	5.6%	12.7%
MCO <sup>△</sup>	N	6,190	5,452	257	998	1,280
	%	43.7%	38.5%	1.8%	7.0%	9.0%
PCCM <sup>●</sup>	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

♦ Fee for Service

△ Medallion II

● MEDALLION

⊙ Numerator

Table A1-6A. Racial Distribution by Specific Program Population for Study Population for births during CY 2011\*

Delivery System	Race					
	White	African American	Asian	Hispanic	Other	
FFS <sup>♦</sup>	N	2,473	1,529	48	256	569
	%	50.7%	31.4%	1.0%	5.3%	11.7%
MCO <sup>△</sup>	N	5,296	5,028	248	917	1,253
	%	41.6%	39.5%	2.0%	7.2%	9.8%
PCCM <sup>●</sup>	N	1,173	39	1	19	37
	%	92.4%	3.1%	0.1%	1.5%	2.9%

\* Rates may not add correctly due to rounding

♦ Fee for Service

△ Medallion II

● MEDALLION

⊖ Numerator

Table A1-6B. Racial Distribution by Specific Program Population for Comparison Group for births during CY 2011\*

Delivery System	Race					
	White	African American	Asian	Hispanic	Other	
FFS <sup>♦</sup>	N	902	741	235	654	316
	%	31.7%	26.0%	8.3%	23.0%	11.1%
MCO <sup>△</sup>	N	673	898	42	162	196
	%	34.2%	45.6%	2.1%	8.2%	9.9%
PCCM <sup>●</sup>	N	156	2	0	0	9
	%	93.4%	1.2%	0.0%	0.0%	5.4%

\* Rates may not add correctly due to rounding

♦ Fee for Service

△ Medallion II

● MEDALLION

⊖ Numerator

### Racial Group Analysis by Specific Indicators in CY 2009, 2010 and 2011

Table A1-7. Racial Group Analysis of Study Population 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) <sup>+</sup>	77.9% (5,499/7,060)	68.8% (218/317)	71.1% (860/1,210)
Moderately Low Birth Weight <sup>o□</sup>	6.7% (622/9,320)	10.0% (707/7,099)	5.6% (18/319)	5.3% (65/1,221)
Very Low Birth Weight <sup>o□</sup>	1.3% (117/9,320)	2.4% (169/7,099)	1.9% (6/319)	1.1% (13/1,221)
Overall Low Birth Weight <sup>o□</sup>	7.9% (739/9,320)	12.3% (876/7,099)	7.5% (24/319)	6.4% (78/1,221)

<sup>+</sup> Numerator/Denominator

<sup>o</sup> Rates may not add correctly due to rounding

<sup>□</sup> Rates calculated per 100 births

Table A1-8. Racial Group Analysis of Study Population 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) <sup>+</sup>	77.4% (5,215/6,737)	68.3% (207/303)	68.3% (830/1,215)
Moderately Low Birth Weight <sup>o□</sup>	6.3% (560/8,823)	9.1% (618/6,809)	5.0% (15/303)	5.0% (61/1,228)
Very Low Birth Weight <sup>o□</sup>	0.9% (81/8,823)	2.0% (135/6,809)	1.3% (4/303)	1.2% (15/1,228)
Overall Low Birth Weight <sup>o□</sup>	7.3% (641/8,823)	11.1% (753/6,809)	6.3% (19/303)	6.2% (76/1,228)

<sup>+</sup> Numerator/Denominator

<sup>o</sup> Rates may not add correctly due to rounding

<sup>□</sup> Rates calculated per 100 births

Table A1-9A. Racial Group Analysis of Study Population Recipients Who Gave Birth in CY 2011: 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	81.2% (6,831/8,411) <sup>+</sup>	77.3% (5,033/6,507)	67.1% (198/295)	72.2% (846/1,171)
Moderately Low Birth Weight <sup>o□</sup>	6.0% (534/8,942)	9.2% (607/6,608)	4.7% (14/298)	5.6% (67/1,193)
Very Low Birth Weight <sup>o□</sup>	0.8% (70/8,942)	1.9% (122/6,608)	0.7% (2/298)	0.7% (8/1,193)
Overall Low Birth Weight <sup>o□</sup>	6.8% (604/8,942)	11.1% (729/6,608)	5.4% (16/298)	6.3% (75/1,193)

<sup>+</sup> Numerator/Denominator

<sup>o</sup> Rates may not add correctly due to rounding

<sup>□</sup> 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.
- These results continue a trend prior to and in all three years from 2009 to 2011.

Table A1-9B. Racial Group Analysis of Comparison Group Recipients Who Gave Birth in CY 2011: 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	67.0% (1,107/1,652) <sup>+</sup>	65.0% (1,045/1,609)	59.3% (163/275)	62.2% (501/805)
Moderately Low Birth Weight <sup>o□</sup>	7.2% (124/1,732)	10.2% (168/1,646)	7.2% (20/277)	4.5% (37/817)
Very Low Birth Weight <sup>o□</sup>	2.9% (50/1,732)	4.3% (70/1,646)	1.1% (3/277)	2.0% (16/817)
Overall Low Birth Weight <sup>o□</sup>	10.0% (174/1,732)	14.5% (238/1,646)	8.3% (23/277)	6.5% (53/817)

<sup>+</sup> Numerator/Denominator

<sup>o</sup> Rates may not add correctly due to rounding

<sup>□</sup> Rates calculated per 100 births

- African American women in the comparison group 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 in 2011.
- These results are similar to the overall trend for prenatal care and birth outcomes for African American women in the study population prior to and in the 2009 through 2011 time period.

Table A1-10A. Trimester when Medicaid Eligibility Began for Study Population for CY 2009 through CY 2011

Trimester	CY 2009	CY 2010	CY 2011
1	77.2% (14,992/19,427)	79.6% (15,062/18,920)	79.4% (15,001/18,886)
2	17.2% (3,342/19,427)	15.7% (2,968/18,920)	15.4% (2,900/18,886)
3	5.6% (1,093/19,427)	4.7% (890/18,920)	5.2% (985/18,886)

+ Numerator/Denominator

Table A1-10B. Trimester when Medicaid Eligibility Began for Comparison Group for CY 2011<sup>◇</sup>

Trimester	CY 2009	CY 2010	CY 2011
1	N/A	N/A	31.2% (1,549/4,960)
2	N/A	N/A	18.6% (924/4,960)
3	N/A	N/A	50.1% (2,487/4,960)

+ Numerator/Denominator

◇ Results from the Comparison Group

Table A1-11. Trimester when Program\* Enrollment Began for Study Population for CY 2009\*\*

Trimester	FAMIS MOMS <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>
1	70.2% (985/1,403) <sup>†</sup>	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 A1-12. Trimester when Program\* Enrollment Began for Study Population for CY 2010\*\*

Trimester	FAMIS MOMS <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>
1	70.9% (1,061/1497) <sup>†</sup>	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 A1-13A. Trimester when Program\* Enrollment Began for Study Population for CY 2011\*\*

Trimester	FAMIS MOMS <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>
1	72.0% (1,084/1,505) <sup>†</sup>	68.0% (11,817/17,381)
2	22.7% (342/1,505)	23.7% (4,123/17,381)
3	5.2% (79/1,505)	8.3% (1,441/17,381)

\*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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A1-13B. Trimester when Program\* Enrollment Began Comparison Group for CY 2011\*\*

Trimester	FAMIS MOMS <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>
1	6.2% (16/257) <sup>†</sup>	15.7% (741/4,729)
2	22.2% (57/257)	21.1% (997/4,729)
3	71.6% (184/257)	63.3% (2,991/4,729)

\*Program of record is the most recent program in which the mother is enrolled prior to delivery

\*\*Rates may not add correctly due to rounding

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A1-14. Trimester when Delivery System\* Enrollment Began for Study Population for CY 2009\*\*

Trimester	Fee-for-Service (FFS)	MCO <sup>△</sup>	PCCM <sup>●</sup>
1	35.6% (1,464/4,110) <sup>†</sup>	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

<sup>†</sup> Numerator/Denominator

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-15. Trimester when Delivery System\* Enrollment Began for Study Population for CY 2010\*\*

Trimester	Fee-for-Service (FFS)	MCO <sup>△</sup>	PCCM <sup>●</sup>
1	39.0% (1,405/3,606) <sup>†</sup>	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

<sup>†</sup> Numerator/Denominator

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-16A. Trimester when Delivery System\* Enrollment Began for Study Population for CY 2011\*\*

Trimester	Fee-for-Service (FFS)	MCO <sup>△</sup>	PCCM <sup>●</sup>
1	48.0% (2,338/4,875) <sup>†</sup>	15.1% (1,927/12,742)	21.6% (274/1,269)
2	28.9% (1,408/4,875)	66.7% (8,498/12,742)	65.0% (825/1,269)
3	23.2% (1,129/4,875)	18.2% (2,317/12,742)	11.5% (170/1,269)

\*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

<sup>†</sup> Numerator/Denominator

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-16B. Trimester when Delivery System\* Enrollment Began for Comparison Group for CY 2011\*\*

Trimester	Fee-for-Service (FFS)	MCO <sup>△</sup>	PCCM <sup>●</sup>
1	2.4% (67/2,848) <sup>†</sup>	10.5% (206/1,971)	13.2% (22/167)
2	1.9% (53/2,848)	5.3% (105/1,971)	5.4% (9/167)
3	95.8% (2,728/2,848)	84.2% (1,660/1,971)	81.4% (136/167)

\*Delivery system of record is the most recent system in which the mother is enrolled prior to delivery

\*\*Rates may not add correctly due to rounding

<sup>†</sup> Numerator/Denominator

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-17A. Number/Rate of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women for Study Population for CY 2009 through CY 2011<sup>■</sup>

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
FAMIS MOMS & Medicaid for Pregnant Women <sup>○</sup>	9.7% (1,893/19,444) +	9.3% (1,757/18,934)	8.7% (1,653/18,895)	12.0%	11.7%

■ 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 2010

▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

Table A1-17B. Number/Rate of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women for Comparison Group for CY 2011<sup>■</sup>

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011
FAMIS MOMS & Medicaid for Pregnant Women <sup>○</sup>	N/A	N/A	11.7% (583/4,989) <sup>+</sup>

■ 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

Table A1-18A. Number/Rate of Infants Born Premature by Program Population for Study Population for CY 2009 through CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)<sup>■</sup>

Program Population	CY 2009	CY 2010	CY 2011	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
FAMIS MOMS <sup>†</sup>	8.8% (123/1,405)	8.7% (130/1,499)	8.2% (123/18,895)	12.0%	11.7%
Medicaid for Pregnant Women <sup>‡</sup>	9.8% (1,770/18,039)	9.3% (1,627/17,435)	8.8% (1,530/18,895)		

■ 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 2010

▲ CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

Table A1-18B. Number/Rate of Infants Born Premature by Program Population for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation) <sup>■</sup>

Program Population	CY 2009	CY 2010	CY 2011
FAMIS MOMS <sup>†</sup>	N/A	N/A	11.7% (30/257)
Medicaid for Pregnant Women <sup>‡</sup>	N/A	N/A	11.7% (553/4,732)

<sup>■</sup> Rates calculated per 100 births

<sup>†</sup> Numerator/Denominator

<sup>‡</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>§</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A1-19A. Number/Rate of Infants Born Premature by Delivery System for Study Population for CY 2009 through CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation) <sup>■</sup>

Program Population	CY 2009	CY 2010	CY 2011	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
Fee for Service (FFS)	13.2% (545/4,117)	13.5% (486/3,611)	10.4% (509/4,875)	12.0%	11.7%
MCO <sup>△</sup>	8.6% (1,196/13,898)	8.3% (1,184/14,185)	8.2% (1,044/12,754)		
PCCM <sup>●</sup>	10.6% (152/1,429)	7.7% (87/1,138)	7.9% (100/1,266)		

<sup>■</sup> Rates calculated per 100 births

<sup>†</sup> Numerator/Denominator

\*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup>CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-19B. Number/Rate of Infants Born Premature by Delivery System for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation) <sup>□</sup>

Program Population	CY 2009	CY 2010	CY 2011
Fee for Service (FFS)	N/A	N/A	11.2% (317/2,845)
MCO <sup>△</sup>	N/A	N/A	12.5% (247/1,978)
PCCM <sup>●</sup>	N/A	N/A	11.4% (19/166)

<sup>□</sup> Rates calculated per 100 births

<sup>+</sup> Numerator/Denominator

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A1-20A. Number/Rate of Infants Born Premature by Race for Study Population for CY 2009 through CY 2011 <sup>□</sup>

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2009	CY 2010	CY 2011	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
White	8.9% (827/9,318)	8.2% (725/8,821)	7.9% (708/8,942)	12.0%	11.7%
African American	11.5% (817/7,098)	10.7% (729/6,810)	10.3% (678/6,604)		
Asian	9.1% (29/319)	9.9% (30/303)	5.7% (17/298)		
Hispanic	8.4% (102/1,221)	9.0% (111/1,228)	7.6% (91/1,193)		

<sup>□</sup> Rates calculated per 100 births

<sup>+</sup> Numerator/Denominator

\*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup>CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

Table A1-20B. Number/Rate of Infants Born Premature by Race for Comparison Group for CY 2009 through CY 2011 <sup>□</sup>

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2009	CY 2010	CY 2011
White	N/A	N/A	11.2% (194/1,730)
African American	N/A	N/A	13.9% (229/1,644)
Asian	N/A	N/A	9.0% (25/277)
Hispanic	N/A	N/A	10.0% (82/817)

<sup>□</sup> Rates calculated per 100 births

<sup>+</sup> Numerator/Denominator

Table A1-21A. Number/Rate of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women for Study Population for CY 2009 through CY 2011 <sup>□</sup>

(Preterm birth rate: the number of births delivered at less than 39 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	CDC/NCHS NVSS Final Birth Data CY 2010*	CDC/NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
FAMIS MOMS & Medicaid for Pregnant Women <sup>○</sup>	N/A	N/A	33.7% (6,363/18,895) <sup>+</sup>	12.0%	11.7%

<sup>□</sup> Rates calculated per 100 births

<sup>○</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women is a Medicaid Title XIX program

<sup>+</sup> Numerator/Denominator

\*CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

Table A1-21B. Number/Rate of Infants Born Premature to FAMIS MOMS and Medicaid for Pregnant Women for Comparison Group for CY 2011 <sup>□</sup>

(Preterm birth rate: the number of births delivered at less than 39 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011
FAMIS MOMS & Medicaid for Pregnant Women <sup>○</sup>	N/A	N/A	37.2% (1,857/4,989) <sup>+</sup>

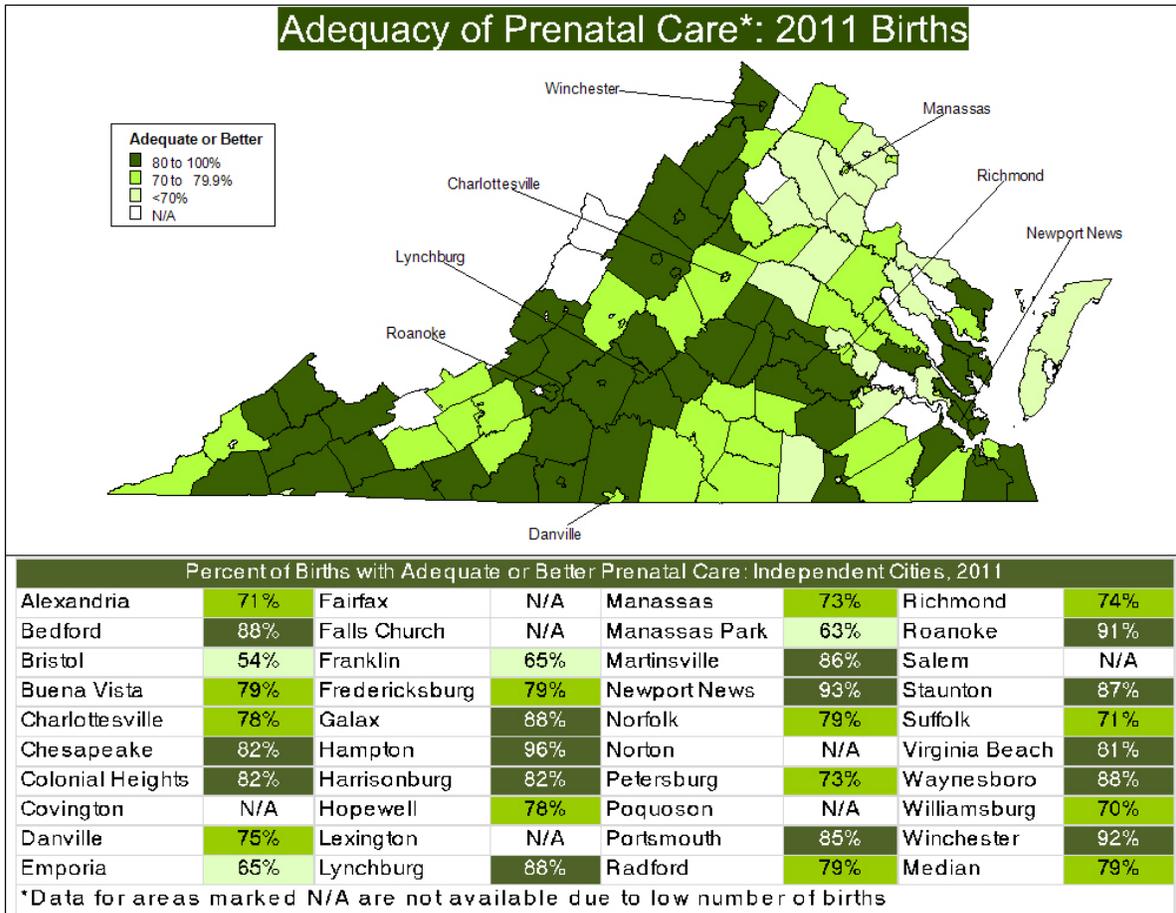
<sup>□</sup> Rates calculated per 100 births

<sup>○</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women is a Medicaid Title XIX program

<sup>+</sup> Numerator/Denominator

## APPENDIX 2

Map 1. Adequacy of Prenatal Care for Births in CY 2011



\* 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 2011 by City

City Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Alexandria	510	129	11	8.5%
Bedford	515	33	7	21.2%
Bristol	520	80	9	11.3%
Buena Vista	530	39	2	5.1%
Charlottesville	540	122	15	12.3%
Chesapeake	550	524	44	8.4%
Colonial Heights	570	50	9	18.0%
Covington	580	29	N/A	N/A
Danville	590	231	26	11.3%
Emporia	595	36	4	11.1%
Fairfax	600	N/A	N/A	N/A
Falls Church	610	N/A	N/A	N/A
Franklin	620	55	4	7.3%
Fredericksburg	630	85	11	12.9%
Galax	640	35	2	5.7%
Hampton	650	473	34	7.2%
Harrisonburg	660	134	9	6.7%
Hopewell	670	113	7	6.2%
Lexington	678	N/A	N/A	N/A
Lynchburg	680	314	28	8.9%
Manassas	683	77	7	9.1%
Manassas Park	685	28	3	10.7%
Martinsville	690	85	10	11.8%
Newport News	700	775	69	8.9%
Norfolk	710	867	93	10.7%
Norton	720	N/A	N/A	N/A
Petersburg	730	202	19	9.4%
Poquoson	735	N/A	N/A	N/A
Portsmouth	740	462	58	12.6%
Radford	750	52	6	11.5%
Richmond	760	691	74	10.7%
Roanoke	770	346	33	9.5%
Salem	775	N/A	N/A	N/A
Staunton	790	106	9	8.5%
Suffolk	800	264	23	8.7%
Virginia Beach	810	946	80	8.5%
Waynesboro	820	120	10	8.3%
Williamsburg	830	20	0	0.0%
Winchester	840	78	6	7.7%

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

Table A2-2. Adequacy of Prenatal Care for Births in CY 2011 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	151	93	61.6
Albemarle	3	148	111	75.0
Alleghany	5	29	27	93.1
Amelia	7	39	33	84.6
Amherst	9	123	117	95.1
Appomattox	11	64	61	95.3
Arlington	13	83	39	47.0
Augusta	15	199	165	82.9
Bath	17	N/A	N/A	N/A
Bedford	19	125	116	92.8
Bland	21	N/A	N/A	N/A
Botetourt	23	36	31	86.1
Brunswick	25	67	46	68.7
Buchanan	27	62	54	87.1
Buckingham	29	75	61	81.3
Campbell	31	213	199	93.4
Caroline	33	92	71	77.2
Carroll	35	82	68	82.9
Charles	36	N/A	N/A	N/A
Charlotte	37	48	38	79.2
Chesterfield	41	594	482	81.1
Clarke	43	N/A	N/A	N/A
Craig	45	20	18	90.0
Culpeper	47	149	99	66.4
Cumberland	49	50	40	80.0
Dickenson	51	81	66	81.5
Dinwiddie	53	87	77	88.5
Essex	57	43	30	69.8
Fairfax	59	811	525	64.7
Fauquier	61	144	100	69.4
Floyd	63	53	39	73.6
Fluvanna	65	48	40	83.3
Franklin	67	119	105	88.2
Frederick	69	236	219	92.8
Giles	71	68	50	73.5
Gloucester	73	92	79	85.9
Goochland	75	27	23	85.2
Grayson	77	62	58	93.5
Greene	79	60	48	80.0
Greensville	81	36	29	80.6

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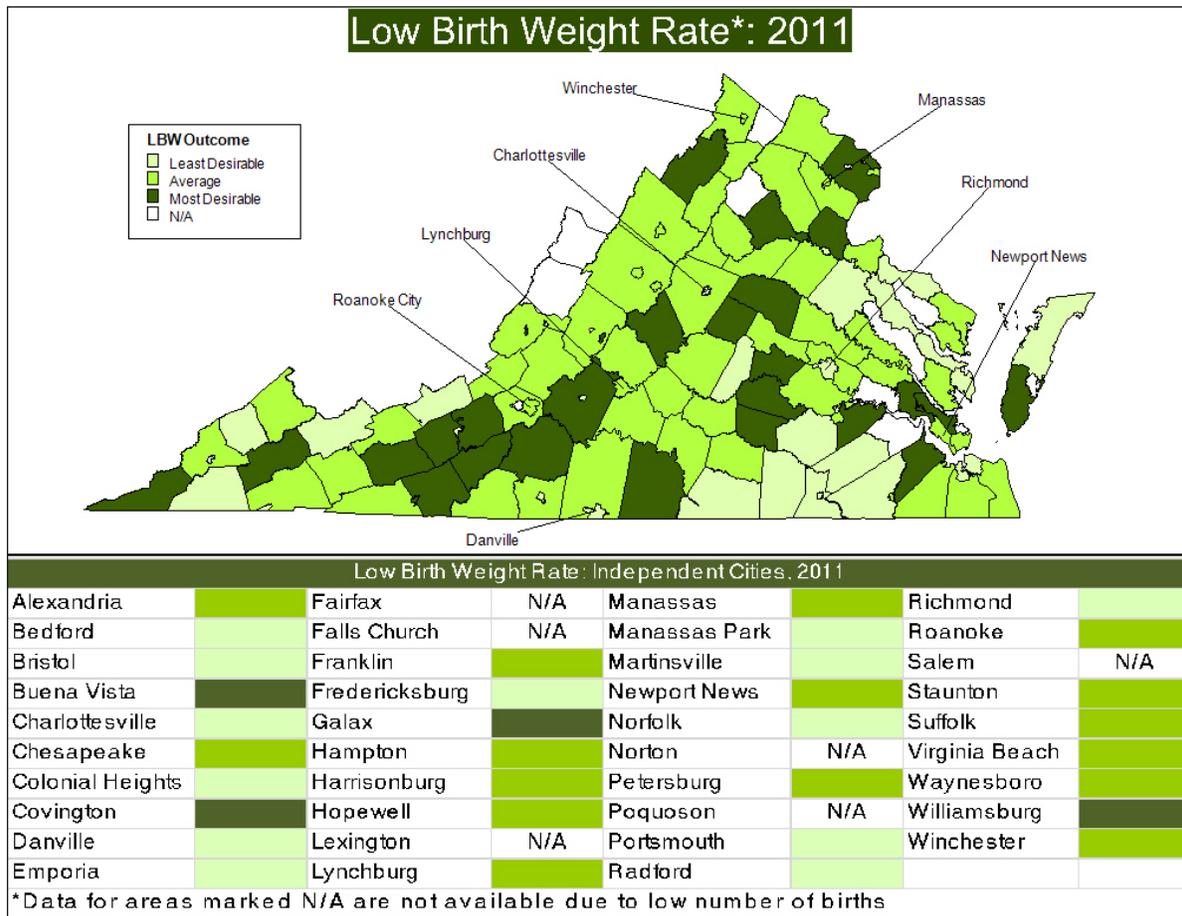
County Name	FIPS Code	Number of Births	Number with Adequate or Better Prenatal Care	Percent with Adequate or Better Prenatal Care
Halifax	83	133	102	76.7
Hanover	85	150	111	74.0
Henrico	87	711	495	69.6
Henry	89	174	148	85.1
Highland	91	N/A	N/A	N/A
Isle of Wight	93	75	62	82.7
James	95	126	85	67.5
King and Queen	97	N/A	N/A	N/A
King George	99	50	36	72.0
King William	101	35	26	74.3
Lancaster	103	44	32	72.7
Lee	105	89	66	74.2
Loudoun	107	156	110	70.5
Louisa	109	94	62	66.0
Lunenburg	111	50	37	74.0
Madison	113	46	36	78.3
Mathews	115	30	28	93.3
Mecklenburg	117	124	92	74.2
Middlesex	119	39	33	84.6
Montgomery	121	209	152	72.7
Nelson	125	47	36	76.6
New Kent	127	28	23	82.1
Northampton	131	56	29	51.8
Northumberland	133	40	33	82.5
Nottoway	135	61	45	73.8
Orange	137	95	68	71.6
Page	139	104	87	83.7
Patrick	141	37	30	81.1
Pittsylvania	143	169	147	87.0
Powhatan	145	50	42	84.0
Prince Edward	147	84	66	78.6
Prince George	149	53	35	66.0
Prince William	153	645	377	58.4
Pulaski	155	117	83	70.9
Rappahannock	157	N/A	N/A	N/A
Richmond	159	N/A	N/A	N/A
Roanoke	161	140	122	87.1
Rockbridge	163	69	54	78.3
Rockingham	165	174	146	83.9

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	105	93	88.6
Scott	169	25	21	84.0
Shenandoah	171	150	129	86.0
Smyth	173	135	128	94.8
Southampton	175	60	47	78.3
Spotsylvania	177	296	204	68.9
Stafford	179	230	152	66.1
Surry	181	N/A	N/A	N/A
Sussex	183	46	35	76.1
Tazewell	185	119	107	89.9
Warren	187	149	118	79.2
Washington	191	134	121	90.3
Westmoreland	193	55	37	67.3
Wise	195	134	98	73.1
Wythe	197	138	105	76.1
York	199	73	66	90.4

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

Map 2. Low Birth Weight Rates in CY 2011 rate per 100 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 2011 by City

City Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Alexandria	510	129	11	8.5%
Bedford	515	33	7	21.2%
Bristol	520	80	9	11.3%
Buena Vista	530	39	2	5.1%
Charlottesville	540	122	15	12.3%
Chesapeake	550	524	44	8.4%
Colonial Heights	570	50	9	18.0%
Danville	590	231	26	11.3%
Emporia	595	36	4	11.1%
Fairfax	600	N/A	N/A	N/A
Falls Church	610	N/A	N/A	N/A
Franklin	620	55	4	7.3%
Fredericksburg	630	85	11	12.9%
Galax	640	35	2	5.7%
Hampton	650	473	34	7.2%
Harrisonburg	660	134	9	6.7%
Hopewell	670	113	7	6.2%
Lexington	678	N/A	N/A	N/A
Lynchburg	680	314	28	8.9%
Manassas	683	77	7	9.1%
Manassas Park	685	28	3	10.7%
Martinsville	690	85	10	11.8%
Newport News	700	775	69	8.9%
Norfolk	710	867	93	10.7%
Norton	720	N/A	N/A	N/A
Petersburg	730	202	19	9.4%
Poquoson	735	N/A	N/A	N/A
Portsmouth	740	462	58	12.6%
Radford	750	52	6	11.5%
Richmond	760	691	74	10.7%
Roanoke	770	346	33	9.5%
Salem	775	N/A	N/A	N/A
Staunton	790	106	9	8.5%
Suffolk	800	264	23	8.7%
Virginia Beach	810	946	80	8.5%
Waynesboro	820	120	10	8.3%
Williamsburg	830	20	0	0.0%
Winchester	840	78	6	7.7%

◆ 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 2011 by County\*

County Name	FIPS Code	Number of Births	Number of Infants Born with LBW	Low Birth Weight Rate (%)
Accomack	1	155	16	10.3%
Albemarle	3	149	14	9.4%
Alleghany	5	60	5	8.3%
Amelia	7	39	N/A	N/A
Amherst	9	123	10	8.1%
Appomattox	11	64	4	6.3%
Arlington	13	85	4	4.7%
Augusta	15	200	14	7.0%
Bath	17	N/A	N/A	N/A
Bedford	19	127	4	3.1%
Bland	21	22	2	9.1%
Botetourt	23	36	3	8.3%
Brunswick	25	68	9	13.2%
Buchanan	27	72	7	9.7%
Buckingham	29	77	6	7.8%
Campbell	31	214	16	7.5%
Caroline	33	95	10	10.5%
Carroll	35	105	6	5.7%
Charles	36	N/A	N/A	N/A
Charlotte	37	48	4	8.3%
Chesterfield	41	596	52	8.7%
Clarke	43	N/A	N/A	N/A
Craig	45	20	2	10.0%
Culpeper	47	150	8	5.3%
Cumberland	49	50	6	12.0%
Dickenson	51	89	14	15.7%
Dinwiddie	53	87	9	10.3%
Essex	57	44	6	13.6%
Fairfax	59	822	50	6.1%
Fauquier	61	144	11	7.6%
Floyd	63	55	2	3.6%
Fluvanna	65	48	2	4.2%
Franklin	67	121	6	5.0%
Frederick	69	238	17	7.1%
Giles	71	69	7	10.1%
Gloucester	73	93	6	6.5%
Goochland	75	27	2	7.4%
Grayson	77	63	4	6.3%
Greene	79	61	6	9.8%
Greensville	81	39	5	12.8%
Halifax	83	135	6	4.4%

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	151	14	9.3%
Henrico	87	713	63	8.8%
Henry	89	251	16	6.4%
Highland	91	N/A	N/A	N/A
Isle of Wight	93	78	4	5.1%
James	95	125	7	5.6%
King and Queen	97	N/A	N/A	N/A
King George	99	50	5	10.0%
King William	101	35	3	8.6%
Lancaster	103	44	4	9.1%
Lee	105	132	8	6.1%
Loudoun	107	159	13	8.2%
Louisa	109	97	4	4.1%
Lunenburg	111	50	5	10.0%
Madison	113	47	4	8.5%
Mathews	115	30	4	13.3%
Mecklenburg	117	126	13	10.3%
Middlesex	119	39	5	12.8%
Montgomery	121	211	11	5.2%
Nelson	125	48	0	0.0%
New Kent	127	28	2	7.1%
Northampton	131	56	2	3.6%
Northumberland	133	40	3	7.5%
Nottoway	135	61	3	4.9%
Orange	137	95	7	7.4%
Page	139	105	8	7.6%
Patrick	141	79	6	7.6%
Pittsylvania	143	179	17	9.5%
Powhatan	145	50	2	4.0%
Prince Edward	147	84	7	8.3%
Prince George	149	53	3	5.7%
Prince William	153	650	44	6.8%
Pulaski	155	118	4	3.4%
Rappahannock	157	N/A	N/A	N/A
Richmond	159	N/A	N/A	N/A
Roanoke	161	145	12	8.3%
Rockbridge	163	70	5	7.1%
Rockingham	165	175	12	6.9%
Russell	167	114	5	4.4%
Scott	169	86	11	12.8%
Shenandoah	171	150	5	3.3%
Smyth	173	144	13	9.0%

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	61	8	13.1%
Spotsylvania	177	302	23	7.6%
Stafford	179	234	13	5.6%
Surry	181	N/A	N/A	N/A
Sussex	183	47	8	17.0%
Tazewell	185	166	22	13.3%
Warren	187	149	15	10.1%
Washington	191	179	15	8.4%
Westmoreland	193	58	9	15.5%
Wise	195	157	11	7.0%
Wythe	197	140	8	5.7%
York	199	73	3	4.1%

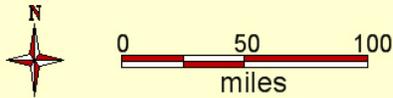
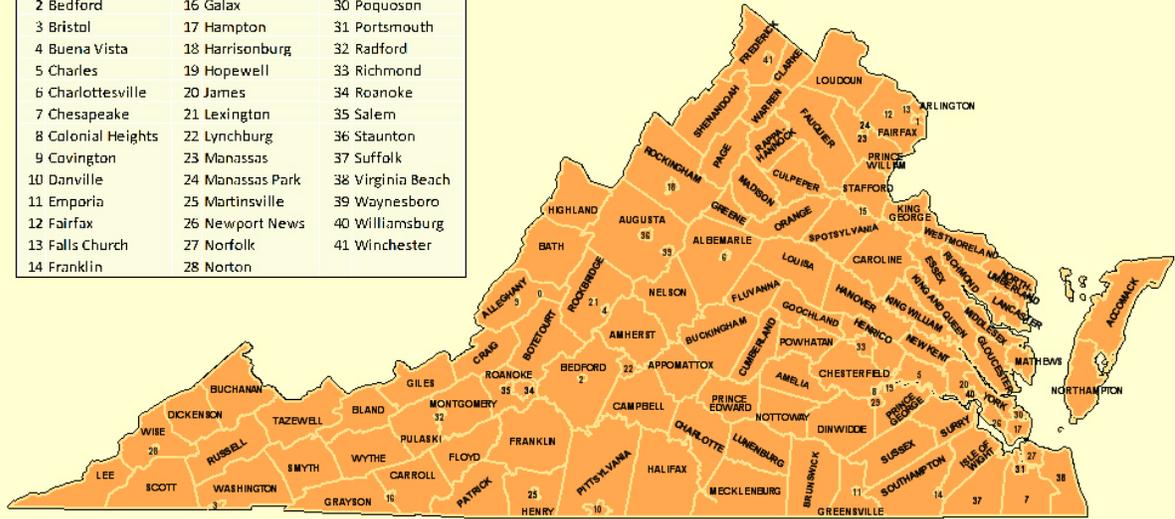
◆ The lowest (lower is better) quartile statewide is less than or equal to 6.88% and the top quartile (higher is least desirable) is greater than 11.35%.

\* 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 A3-1A. Program Populations for Study Population for CY 2009 through CY 2011

Program Population	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS <sup>†</sup>	5.7%	1,403	6.2%	1,497	6.3%	1,505
Medicaid for Pregnant Women <sup>**</sup>	72.8%	18,024	72.1%	17,423	72.3%	17,381
All Other Medicaid	21.6%	5,342	21.7%	5,247	21.4%	5,145

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>\*\*</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-1B. Program Populations for Comparison Group for CY 2009 through CY 2011<sup>◇</sup>

Program Population	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
FAMIS MOMS <sup>†</sup>	N/A	N/A	N/A	N/A	4.5%	257
Medicaid for Pregnant Women <sup>**</sup>	N/A	N/A	N/A	N/A	83.3%	4,729
All Other Medicaid	N/A	N/A	N/A	N/A	12.2%	693

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>\*\*</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>◇</sup> Results from the Comparison Group

Table A3-2A. Delivery System Populations for Study Population for CY 2009 through CY 2011

Delivery System	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
Fee for Service (FFS)	20.4%	5,057	18.5%	4,660	24.0%	5,771
MCO <sup>△</sup>	72.5%	17,947	75.7%	18,294	69.4%	16,678
PCCM <sup>●</sup>	7.1%	1,765	5.9%	1,413	6.6%	1,582

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-2B. Delivery System Populations for Comparison Group for CY 2009 through CY 2011<sup>◇</sup>

Delivery System	CY 2009		CY 2010		CY 2011	
	Percent	Count	Percent	Count	Percent	Count
Fee for Service (FFS)	N/A	N/A	N/A	N/A	57.4%	3,259
MCO <sup>△</sup>	N/A	N/A	N/A	N/A	39.4%	2,237
PCCM <sup>●</sup>	N/A	N/A	N/A	N/A	3.2%	183

△ Medallion II

● MEDALLION

◇ Results from the Comparison Group

Table A3-3A. Program by Delivery System Populations for Study Population for CY 2009 through CY 2011

Population	Fee-for-Service (FFS) CY 2009	Fee-for-Service (FFS) CY 2010	Fee-for-Service (FFS) CY 2011	MCO CY 2009	MCO CY 2010	MCO CY 2011	PCCM CY 2009	PCCM CY 2010	PCCM CY 2011
FAMIS MOMS <sup>†</sup>	12.7%	12.5%	15.3%	87.3%	87.5%	84.7%	0%	0%	0%
Medicaid for Pregnant Women <sup>‡</sup>	21.8%	19.6%	26.7%	70.2%	73.9%	66.0%	7.9%	6.5%	7.3%
All Other Medicaid Programs	17.7%	16.3%	17.4%	76.0%	78.5%	76.5%	6.2%	5.3%	6.1%

† FAMIS MOMS (a CHIP Title XXI waiver program)

‡ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-3B. Program by Delivery System Populations for Comparison Group for CY 2011<sup>◇</sup>

Population	Fee-for-Service (FFS) CY 2009	Fee-for-Service (FFS) CY 2010	Fee-for-Service (FFS) CY 2011	MCO CY 2009	MCO CY 2010	MCO CY 2011	PCCM CY 2009	PCCM CY 2010	PCCM CY 2011
FAMIS MOMS <sup>†</sup>	N/A	N/A	56.8%	N/A	N/A	43.2%	N/A	N/A	0%
Medicaid for Pregnant Women <sup>‡</sup>	N/A	N/A	57.1%	N/A	N/A	39.3%	N/A	N/A	3.5%
All Other Medicaid Programs	N/A	N/A	59.3%	N/A	N/A	38.4%	N/A	N/A	2.3%

† FAMIS MOMS (a CHIP Title XXI waiver program)

‡ Medicaid for Pregnant Women (a Medicaid Title XIX program)

◇ Results from the Comparison Group

Table A3-4A. Trends in Women Receiving Adequate Care – Specific Program Populations for Study Population for CY 2009 through CY 2011

Program Population	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Women Receiving Adequate Care CY 2011	Num./ Denom. CY 2009	Num./ Denom. CY 2010	Num./ Denom. CY 2011	HEDIS 2010 National Medicaid Managed Care Average CY 2009 <sup>■</sup>	HEDIS 2011 National Medicaid Managed Care Average CY 2010 <sup>*</sup>	HEDIS 2012 National Medicaid Managed Care Average CY 2011 <sup>†</sup>
FAMIS MOMS <sup>†</sup>	78.7%	78.0%	79.2%	1,093/1,389	1,155/1,480	1,152/1,454			
Medicaid for Pregnant Women <sup>⊗</sup>	78.4%	78.0%	78.7%	13,896/17,726	13,415/17,208	13,176/16,752	61.6%	61.1%	60.9%
All Other Medicaid Programs	71.3%	71.7%	73.7%	3,757/5,269	3724/5196	3,691/5,010			
Total	76.9%	76.6%	77.6%	18,746/24,384	18,294/23,884	18,019/23,216			

■ HEDIS 2010 rates are for CY 2009

\*HEDIS 2011 rates are for CY 2010

† HEDIS 2012 rates are for CY 2011

† FAMIS MOMS (a CHIP Title XXI waiver program)

⊗ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-4B. Trends in Women Receiving Adequate Care – Specific Program Populations for Comparison Group for CY 2011<sup>◇</sup>

Program Population	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Women Receiving Adequate Care CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS <sup>†</sup>	N/A	N/A	65.5%	N/A	N/A	167/255
Medicaid for Pregnant Women <sup>⊗</sup>	N/A	N/A	64.6%	N/A	N/A	2,966/4,593
All Other Medicaid Programs	N/A	N/A	64.6%	N/A	N/A	433/670
Total	N/A	N/A	64.6%	N/A	N/A	3,566/5,518

† FAMIS MOMS (a CHIP Title XXI waiver program)

⊗ Medicaid for Pregnant Women (a Medicaid Title XIX program)

◇ Results from the Comparison Group

Table A3-5A. Trends in Women Receiving Adequate Care - Specific Delivery Systems for Study Population for CY 2009 through CY 2011

Delivery System	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Women Receiving Adequate Care CY 2011	Num./ Denom. CY 2009	Num./ Denom. CY 2010	Num./ Denom. CY 2011	HEDIS 2010 National Medicaid Managed Care Average CY 2009*	HEDIS 2011 National Medicaid Managed Care Average CY 2010*	HEDIS 2012 National Medicaid Managed Care Average CY 2011 <sup>†</sup>
Fee-for-Service (FFS)	70.6%	70.5%	74.0%	3,497/4,953	3,099/4,395	4,072/5,501	61.6%	61.1%	60.9%
MCO <sup>Δ</sup>	78.0%	77.5%	78.4%	13,975/17,911	14,004/18,079	12,925/16,487			
PCCM <sup>●</sup>	83.8%	84.5%	83.2%	1,274/1,520	1,191/1,410	1,022/1,228			

\* HEDIS 2010 rates are for CY 2009

<sup>†</sup> HEDIS 2011 rates are for CY 2010

● HEDIS 2012 rates are for CY 2011

Δ Medallion II

● MEDALLION

Table A3-5B. Trends in Women Receiving Adequate Care - Specific Delivery Systems for Comparison Group for CY 2011<sup>◇</sup>

Delivery System	Women Receiving Adequate Care CY 2009	Women Receiving Adequate Care CY 2010	Women Receiving Adequate Care CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
Fee-for-Service (FFS)	N/A	N/A	63.9%	N/A	N/A	2,019/3,159
MCO <sup>Δ</sup>	N/A	N/A	64.6%	N/A	N/A	1,429/2,212
PCCM <sup>●</sup>	N/A	N/A	80.3%	N/A	N/A	118/147

Δ Medallion II

● MEDALLION

◇ Results from the Comparison Group

Table A3-6A. Trends in Overall Low Birth Weight Rates - Specific Program Populations for Study Population for CY 2009 through CY 2011 <sup>▲</sup> <sup>■</sup>

(LBW < 2,500 grams)

Program Population	Overall Low Birth Weight Rates CY 2009 <sup>▲</sup>	Overall Low Birth Weight Rates CY 2010 <sup>▲</sup>	Overall Low Birth Weight Rates CY 2011 <sup>▲</sup>	Num./ Denom. CY 2009	Num./ Denom. CY 2010	Num./ Denom. CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
FAMIS MOMS <sup>†</sup>	7.8%	7.4%	7.2%	109/ 1,405	111/ 1,499	108/ 1507		
Medicaid for Pregnant Women <sup>§</sup>	9.5%	8.7%	8.5%	1,721/ 18,042	1514/ 17,437	1471/ 17,393	8.2%	8.1%
All Other Medicaid Programs	13.2%	12.1%	12.0%	707/ 5,341	637/ 5,247	614/ 5,138		
Total	10.2%	9.4%	9.1%	2,537/ 24,788	2,262/ 24,183	2,193/ 24,038		

<sup>▲</sup> A lower score is more desirable for overall low birth weight rates

<sup>■</sup> Rates calculated per 100 births

<sup>○</sup> 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 2010

<sup>▲</sup> CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

Table A3-6B. Trends in Overall Low Birth Weight Rates - Specific Program Populations for Comparison Group for CY 2011 <sup>▲</sup> <sup>■</sup>

(LBW < 2,500 grams)

Program Population	Overall Low Birth Weight Rates CY 2009 <sup>▲</sup>	Overall Low Birth Weight Rates CY 2010 <sup>▲</sup>	Overall Low Birth Weight Rates CY 2011 <sup>▲</sup>	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS <sup>†</sup>	N/A	N/A	6.2%	N/A	N/A	16/ 257
Medicaid for Pregnant Women <sup>§</sup>	N/A	N/A	11.0%	N/A	N/A	520/ 4,736
All Other Medicaid Programs	N/A	N/A	11.5%	N/A	N/A	80/ 694
Total	N/A	N/A	10.8%	N/A	N/A	616/ 5,687

<sup>▲</sup> A lower score is more desirable for overall low birth weight rates

<sup>■</sup> Rates calculated per 100 births

<sup>○</sup> May differ from rates reported in the body of the report due to rounding

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

Table A3-7A. Trends in Overall Low Birth Weight Rates by Specific Delivery Systems for Study Population for CY 2009 through CY 2011 <sup>▲</sup> <sup>▣</sup> <sup>○</sup>  
(LBW < 2,500 grams)

Delivery System	Overall Low Birth Weight Rates CY 2009	Overall Low Birth Weight Rates CY 2010	Overall Low Birth Weight Rates CY 2011	Numerator/ Denom. CY 2009	Numerator/ Denom. CY 2010	Numerator/ Denom. CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>
Fee-for-Service (FFS)	12.3%	11.9%	10.4%	625/ 5,066	532/ 4,465	601/ 5,774		
MCO <sup>△</sup>	9.5%	8.9%	8.7%	1,712/ 17,959	1,622/ 18,303	1,452/ 16,684	8.2%	8.1%
PCCM <sup>●</sup>	11.3%	7.6%	8.9%	200/ 1,763	108/ 1,415	140/ 1,580		

<sup>▲</sup> A lower score is more desirable for overall low birth weight rates

<sup>▣</sup> Rates calculated per 100 births

\* CDC/NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>○</sup> May differ from rates reported in the body of the report due to rounding

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-7B. Trends in Overall Low Birth Weight Rates by Specific Delivery Systems for Comparison Group for CY 2011 <sup>▲</sup> <sup>▣</sup> <sup>○</sup>  
(LBW < 2,500 grams)

Delivery System	Overall Low Birth Weight Rates CY 2009	Overall Low Birth Weight Rates CY 2010	Overall Low Birth Weight Rates CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
Fee-for-Service (FFS)	N/A	N/A	9.8%	N/A	N/A	319/ 3,260
MCO <sup>△</sup>	N/A	N/A	12.3%	N/A	N/A	276/ 2,245
PCCM <sup>●</sup>	N/A	N/A	11.5%	N/A	N/A	21/ 182

<sup>▲</sup> A lower score is more desirable for overall low birth weight rates

<sup>▣</sup> Rates calculated per 100 births

<sup>○</sup> May differ from rates reported in the body of the report due to rounding

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-8. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for Study Population for CY 2009<sup>■</sup> (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 2009	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
FAMIS MOMS <sup>†</sup>	6.2%	1.6%	87/1,405	22/1,405	6.7%	1.5%
Medicaid for Pregnant Women <sup>‡</sup>	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 A3-9. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for Study Population 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 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*
FAMIS MOMS <sup>†</sup>	6.1%	1.3%	92/1,499	19/1,499	6.7%	1.5%
Medicaid for Pregnant Women <sup>‡</sup>	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 2010

† FAMIS MOMS (a CHIP Title XXI waiver program)

‡ Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-10A. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for Study Population for CY 2011 <sup>■</sup> (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)

Program Population	Moderately Low Birth Weight Rates CY 2011	Very Low Birth Weight Rates CY 2011	Moderately Low Birth Weight Numerator/Denominator CY 2011	Very Low Birth Weight Numerator/Denominator CY 2011	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
FAMIS MOMS <sup>†</sup>	5.6%	1.6%	84/1,507	24/1,507	7.6%	1.4%
Medicaid for Pregnant Women <sup>‡</sup>	7.2%	1.2%	1,256/17,393	215/17,393		
All Other Medicaid Programs	9.5%	2.4%	489/5,138	125/5,138		
Total	7.6%	1.5%	1,829/24,038	364/24,038		

<sup>■</sup> Rates calculated per 100 births

\* CDC/NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-10B. Moderately Low and Very Low Birth Weight Rates by Specific Program Populations for Comparison Group for CY 2011 <sup>■</sup> (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams)

Program Population	Moderately Low Birth Weight Rates CY 2011	Very Low Birth Weight Rates CY 2011	Moderately Low Birth Weight Numerator/Denominator CY 2011	Very Low Birth Weight Numerator/Denominator CY 2011
FAMIS MOMS <sup>†</sup>	2.7%	3.5%	7/257	9/257
Medicaid for Pregnant Women <sup>‡</sup>	8.0%	3.0%	380/4,736	140/4,736
All Other Medicaid Programs	9.5%	2.0%	66/694	14/694
Total	8.0%	2.9%	453/5,687	163/5,687

<sup>■</sup> Rates calculated per 100 births

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> 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 Study Population for CY 2009 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams) <sup>□</sup>

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 <sup>△</sup>	8.1%	1.5%	1,447/17,959	265/17,959		
PCCM <sup>●</sup>	8.5%	2.8%	150/1,763	50/1,763		

<sup>□</sup> Rates calculated per 100 births

\*CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2009

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-12. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for Study Population for CY 2010 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams) <sup>□</sup>

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 <sup>△</sup>	7.5%	1.4%	1,372/18,303	250/18,303		
PCCM <sup>●</sup>	6.5%	1.1%	92/1,415	16/1,415		

\*CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-13A. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for Study Population for CY 2011 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams) <sup>■</sup>

Delivery System	Moderately Low Birth Weight Rates CY 2011	Very Low Birth Weight Rate CY 2011	Moderately Low Birth Weight Numerator/Denominator CY 2011	Very Low Birth Weight Numerator/Denominator CY 2011	Moderately Low Birth Weight Average*	Very Low Birth Weight Average*
Fee-for-Service (FFS)	7.9%	2.5%	458/5,774	143/5,774		
MCO <sup>△</sup>	7.5%	1.2%	1,245/16,684	207/16,684	6.7%	1.4%
PCCM <sup>●</sup>	8.0%	0.9%	126/1,580	14/1,580		

<sup>■</sup> Rates calculated per 100 births

\*CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-13B. Moderately Low and Very Low Birth Weight Rates by Specific Delivery Systems for Comparison Group for CY 2011 (MLBW – 1,500 to 2,499 grams, VBLW < 1,500 grams) <sup>■</sup>

Delivery System	Moderately Low Birth Weight Rates CY 2011	Very Low Birth Weight Rate CY 2011	Moderately Low Birth Weight Numerator/Denominator CY 2011	Very Low Birth Weight Numerator/Denominator CY 2011
Fee-for-Service (FFS)	7.6%	2.2%	248/3,260	71/3,260
MCO <sup>△</sup>	8.6%	3.7%	192/2,245	84/2,245
PCCM <sup>●</sup>	7.1%	4.4%	13/182	8/182

<sup>■</sup> Rates calculated per 100 births

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-14. Racial Distribution for Study Population 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 A3-15. Racial Distribution for Study Population 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 A3-16A. Racial Distribution for Study Population by Specific Program Populations Who Gave Birth During CY 2011\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator CY 2011
FAMIS MOMS†	47.7% (718)▪	25.6% (385)	3.8% (57)	9.6% (144)	13.4% (201)	1,505
Medicaid for Pregnant Women‡	47.3% (8,224)	35.7% (6,211)	1.4% (240)	6.0% (1,048)	9.5% (1,658)	17,381
All Other Medicaid Programs	34.3% (1,766)	56.1% (2,888)	0.8% (43)	5.4% (276)	3.3% (172)	5,145
Total	44.6% (10,708)	39.5% (9,484)	1.4% (340)	6.1% (1,468)	8.5% (2,031)	24,031

\* 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 A3-16B. Racial Distribution for Comparison Group by Specific Program Populations Who Gave Birth During CY 2011\*

Program Population	White	African American	Asian	Hispanic	Other	Denominator CY 2011
FAMIS MOMS†	44.0% (113)▪	23.7% (61)	7.0% (18)	16.3% (42)	9.0% (23)	257
Medicaid for Pregnant Women‡	34.2% (1,618)	33.4% (1,580)	5.5% (259)	16.4% (774)	10.5% (498)	4,729
All Other Medicaid Programs	32.8% (227)	50.4% (349)	1.4% (10)	7.2% (50)	8.2% (57)	693
Total	34.5% (1,958)	35.0% (1,990)	5.1% (287)	15.3% (866)	10.2% (578)	5,679

\* 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 Study Population Recipients Who Gave Birth in CY 2009: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight\*<sup>‡</sup>

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

<sup>‡</sup> Numerator/Denominator

<sup>‡</sup> Rates calculated per 100 births

Table A3-18. Racial Group Analysis of Study Population Recipients Who Gave Birth in CY 2010: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight\*<sup>‡</sup>

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	79.7% (8,248/10,348) <sup>‡</sup>	75.0% (7,364/9,816)	69.3% (232/335)	67.1% (995/1,482)
Moderately Low Birth Weight <sup>‡</sup>	6.6% (692/10,502)	9.6% (955/9,911)	5.4% (18/336)	4.9% (73/1,500)
Very Low Birth Weight <sup>‡</sup>	1.1% (112/10,502)	2.4% (237/9,911)	2.1% (7/336)	1.1% (17/1,500)
Overall Low Birth Weight <sup>‡</sup>	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

<sup>‡</sup> Numerator/Denominator

<sup>‡</sup> Rates calculated per 100 births

Table A3-19A. Racial Group Analysis of Study Population Recipients Who Gave Birth in CY 2011: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight\*<sup>‡</sup>

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	80.4% (8,104/10,085) <sup>‡</sup>	76.0% (7,114/9,365)	68.5% (230/336)	70.7% (1,021/1,444)
Moderately Low Birth Weight <sup>‡</sup>	6.3% (678/10,704)	9.7% (919/9,492)	5.6% (19/341)	5.7% (83/1,470)
Very Low Birth Weight <sup>‡</sup>	0.8% (90/10,704)	2.2% (213/9,492)	1.2% (4/341)	0.9% (13/1,470)
Overall Low Birth Weight <sup>‡</sup>	7.2% (768/10,704)	11.9% (1132/9,492)	6.7% (23/341)	6.5% (96/1,470)

\* Rates may not add correctly due to rounding

<sup>‡</sup> Numerator/Denominator

<sup>‡</sup> Rates calculated per 100 births

Table A3-19B. Racial Group Analysis of Comparison Group Recipients Who Gave Birth in CY 2011: Adequacy of Care, Moderately Low, Very Low and Overall Low Birth Weight\*<sup>□</sup>

Indicator	White	African American	Asian	Hispanic
Adequacy of Care	66.9% (1,250/1,868) <sup>+</sup>	64.8% (1,265/1,951)	59.0% (168/285)	62.8% (536/854)
Moderately Low Birth Weight <sup>□</sup>	7.3% (142/1,959)	10.4% (208/1,995)	7.0% (20/287)	4.6% (40/868)
Very Low Birth Weight <sup>□</sup>	2.6% (51/1,959)	4.0% (80/1,995)	1.1% (3/287)	2.1% (18/868)
Overall Low Birth Weight <sup>□</sup>	9.9% (193/1,959)	14.4% (288/1,995)	8.0% (23/287)	6.7% (58/868)

\* Rates may not add correctly due to rounding

<sup>+</sup> Numerator/Denominator

<sup>□</sup> Rates calculated per 100 births

Table A3-20A. Trimester Eligibility Began for All Programs for Study Population in CY 2009 through CY 2011\*

Trimester	CY 2009	Numerator/ Denominator CY 2009	CY 2010	Numerator/ Denominator CY 2010	CY 2011	Numerator/ Denominator CY 2011
1	80.4%	19,925/ 24,769	82.5%	19,947/ 24,167	82.5%	19,826/ 24,031
2	14.7%	3,642/ 24,769	13.4%	3,230/ 24,167	13.0%	3,122/ 24,031
3	4.9%	1,202/ 24,769	4.1%	990/ 24,167	4.5%	1,083/ 24,031

\*Rates may not add correctly due to rounding

Table A3-20B. Trimester Eligibility Began for All Programs for Comparison Group in CY 2011\*

Trimester	CY 2009	Numerator/ Denominator CY 2009	CY 2010	Numerator/ Denominator CY 2010	CY 2011	Numerator/ Denominator CY 2011
1	N/A	N/A	N/A	N/A	33.6%	1,888/ 5,620
2	N/A	N/A	N/A	N/A	17.7%	996/ 5,620
3	N/A	N/A	N/A	N/A	48.7%	2,736/ 5,620

\*Rates may not add correctly due to rounding

Table A3-21. Trimester Specific Program\* Enrollment Began for CY 2009\*\* by Program Population for Study Population

Trimester	FAMIS Moms <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>	All Other Medicaid Programs
1	70.2% (985/1,403) <sup>†</sup>	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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A3-22. Trimester Program\* Enrollment Began for CY 2010 by Program Population for Study Population\*\*

Trimester	FAMIS Moms <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>	All Other Medicaid Programs
1	70.9% (1,061/1,497) <sup>†</sup>	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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A3-23A. Trimester Program\* Enrollment Began for CY 2011 by Program Population for Study Population\*\*

Trimester	FAMIS Moms <sup>†</sup>	Medicaid for Pregnant Women <sup>‡</sup>	All Other Medicaid Programs
1	72.0% (1,084/1,505) <sup>†</sup>	68.0% (11,817/17,381)	92.9% (4,782/5,145)
2	22.7% (342/1,505)	23.7% (4,123/17,381)	4.8% (248/5,145)
3	5.2% (79/1,505)	8.3% (1,441/17,381)	2.2% (115/5,145)

\* 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

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A3-23B. Trimester Program\* Enrollment Began for Recipients with at Least One Day of Enrollment Prior to Delivery for CY 2011 by Program Population for Comparison Group\*\*

Trimester	FAMIS Moms <sup>†</sup>	Medicaid for Pregnant Women <sup>⊗</sup>	All Other Medicaid Programs
1	6.2% (16/257) <sup>†</sup>	15.7% (741/4,729)	48.5% (336/693)
2	22.2% (57/257)	21.1% (997/4,729)	9.5% (66/693)
3	71.6% (184/257)	63.3% (2,991/4,729)	42.0% (291/693)

\* Program of record is the most recent program in which the mother was enrolled prior to delivery

\*\* Rates may not add correctly due to rounding

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>⊗</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

<sup>†</sup> Numerator/Denominator

Table A3-24. Trimester Delivery System\* Enrollment Began for Study Population for CY 2009\*\*

Trimester	Fee-for-Service (FFS)	MCO	PCCM
1	44.1% (1,965/4,460) <sup>†</sup>	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

<sup>†</sup> Numerator/Denominator

Table A3-25. Trimester Delivery System\* Enrollment Began for Study Population for CY 2010\*\*

Trimester	FFS	MCO	PCCM
1	44.1% (1,965/4,460) <sup>†</sup>	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

<sup>†</sup> Numerator/Denominator

Table A3-26A. Trimester Delivery System\* Enrollment Began for Study Population for CY 2011\*\*

Trimester	FFS	MCO	PCCM
1	50.6% (2,922/5,771) <sup>+</sup>	30.2% (5,038/16,678)	32.7% (517/1,582)
2	27.1% (1,564/5,771)	54.2% (9,043/16,678)	55.4% (877/1,582)
3	22.3% (1,285/5,771)	15.6% (2,597/16,678)	11.9% (188/1,582)

\*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

<sup>+</sup> Numerator/Denominator

Table A3-26B. Trimester Delivery System\* Enrollment Began for Comparison Group for CY 2011\*\*

Trimester	FFS	MCO	PCCM
1	2.4% (77/3,259) <sup>+</sup>	10.2% (229/2,237)	13.1% (24/183)
2	2.0% (66/3,259)	5.4% (120/2,237)	4.9% (9/183)
3	95.6% (3,116/3,259)	84.4% (1,888/2,237)	82.0% (150/183)

\*Delivery system of record is the most recent system in which the mother was enrolled prior to delivery

\*\*Rates may not add correctly due to rounding

<sup>+</sup> Numerator/Denominator

Table A3-27A. Percentage of infants born premature to FAMIS MOMS, Medicaid for Pregnant Women (MA for PW), and Other MA for Study Population for CY 2009 through CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>	Numerator/ Denom. CY 2009	Numerator/ Denom. CY 2010	Numerator/ Denom. CY 2011
FAMIS MOMS, Medicaid for Pregnant Women & Other MA <sup>⊙</sup>	10.5%	10.2%	9.7%	12.0%	11.7%	2,590/ 24,784	2,473/ 24,179	2,326/ 24,029

\* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>⊙</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women (MA for PW) is a Medicaid Title XIX program

Table A3-27B. Percentage of infants born premature to FAMIS MOMS, Medicaid for Pregnant Women (MA for PW), and Other MA for Comparison Group for CY 2011  
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS, Medicaid for Pregnant Women & Other MA <sup>o</sup>	N/A	N/A	11.6%	N/A	N/A	661/ 5,683

<sup>o</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women (MA for PW) is a Medicaid Title XIX program

Table A3-28A. Percentage of Infants Born Premature by Program Population for Study Population for CY 2009 through CY 2011  
(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS <sup>†</sup>	8.8%	8.7%	8.2%			123/ 1,405	130/ 1,499	123/ 1,506
Medicaid for Pregnant Women <sup>‡</sup>	9.8%	9.3%	8.8%	12.0%	11.7%	1,770/ 18,039	1,627/ 17,435	1,530/ 17,389
All Other Medicaid Programs	13.1%	13.7%	13.1%			697/ 5,340	716/ 5,245	673/ 5,134
Total	10.5%	10.2%	9.7%			2,590/ 24,784	2,473/ 24,179	2,326/ 24,029

\* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>†</sup> FAMIS MOMS (a CHIP Title XXI waiver program)

<sup>‡</sup> Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-28B. Percentage of Infants Born Premature by Program Population for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS*	N/A	N/A	11.7%	N/A	N/A	30/ 257
Medicaid for Pregnant Women*	N/A	N/A	11.7%	N/A	N/A	553/ 4,732
All Other Medicaid Programs	N/A	N/A	11.2%	N/A	N/A	78/ 694
Total	N/A	N/A	11.6%	N/A	N/A	661/ 5,683

\* FAMIS MOMS (a CHIP Title XXI waiver program)

\* Medicaid for Pregnant Women (a Medicaid Title XIX program)

Table A3-29A. Percentage of Infants Born Premature by Delivery System for Study Population for CY 2009 through CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Delivery System	CY 2009	CY 2010	CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Preliminary Birth Data CY 2011 <sup>▲</sup>	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
Fee for Service (FFS)	13.6%	13.6%	11.2%			690/5,066	608/4,464	649/5,771
MCO <sup>△</sup>	9.5%	9.6%	9.2%	12.0%	11.7%	1,714/17,957	1,746/18,300	1,540/16,679
PCCM <sup>●</sup>	10.6%	8.5%	8.7%			186/1,761	119/1,415	137/1,579

\* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-29B. Percentage of Infants Born Premature by Delivery System for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Delivery System	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
Fee for Service (FFS)	N/A	N/A	11.1%	N/A	N/A	362/3,256
MCO <sup>△</sup>	N/A	N/A	12.4%	N/A	N/A	279/2,245
PCCM <sup>●</sup>	N/A	N/A	11.0%	N/A	N/A	20/182

<sup>△</sup> Medallion II

<sup>●</sup> MEDALLION

Table A3-30A. Percentage of Infants Born Premature by Race for Study Population for CY 2009 through CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2009	CY 2010	CY 2011	CDC/ NCHS NVSS Final Birth Data CY 2010*	CDC/ NCHS NVSS Prelim. Birth Data CY 2011 <sup>▲</sup>	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
White	9.3%	8.7%	8.7%	12.0%	11.7%	1,023/11,042	920/10,499	929/10,703
African American	12.3%	12.2%	11.3%			1,267/10,285	1,207/9,912	1075/9,487
Asian	9.1%	10.7%	5.9%			32/350	36/336	20/341
Hispanic	9.1%	9.0%	8.4%			137/1,507	136/1,500	123/1,470

\* CDC NCHS National Vital Statistics Systems (NVSS) Final Birth Data CY 2010

<sup>▲</sup> CDC NCHS National Vital Statistics Systems (NVSS) Preliminary Birth Data CY 2011

Table A3-30B. Percentage of Infants Born Premature by Race for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 37 completed weeks of gestation)

Race	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
White	N/A	N/A	11.1%	N/A	N/A	217/1,957
African American	N/A	N/A	13.7%	N/A	N/A	272/1,993
Asian	N/A	N/A	9.4%	N/A	N/A	27/287
Hispanic	N/A	N/A	10.1%	N/A	N/A	88/868

Table A3-31A. Percentage of infants born premature to FAMIS MOMS, Medicaid for Pregnant Women (MA for PW), and Other MA for Study Population for CY 2011

(Preterm birth rate: the number of births delivered at less than 39 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS, Medicaid for Pregnant Women & Other MA <sup>°</sup>	N/A	N/A	35.3%	N/A	N/A	8,479/ 24,029

<sup>°</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women (MA for PW) is a Medicaid Title XIX program

Table A3-31B. Percentage of infants born premature to FAMIS MOMS, Medicaid for Pregnant Women (MA for PW), and Other MA for Comparison Group for CY 2011

(Preterm birth rate: the number of births delivered at less than 39 completed weeks of gestation)

Program Population	CY 2009	CY 2010	CY 2011	Numerator/ Denominator CY 2009	Numerator/ Denominator CY 2010	Numerator/ Denominator CY 2011
FAMIS MOMS, Medicaid for Pregnant Women & Other MA <sup>⊙</sup>	N/A	N/A	37.6%	N/A	N/A	2,134/ 5,683

<sup>⊙</sup> FAMIS MOMS is a CHIP Title XXI waiver program and Medicaid for Pregnant Women (MA for PW) is a Medicaid Title XIX program