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# Outcomes of Care for Iowa Medicaid Enrollees: State Fiscal Year 2008. Final Report to the Iowa Department of Human Services

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Human Services*

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State Fiscal Year 2008**

**Elizabeth T. Momany  
Peter C. Damiano  
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*July 15, 2009*

# **Outcomes of care for Iowa Medicaid enrollees**

## **State Fiscal Year 2008**

### **Final Report to the Iowa Department of Human Services**

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## Table of Contents

Introduction .....	3
Eligibility .....	3
Outcome measures .....	5
Well-child visits in the first 15 months of life .....	5
Well-child visits in the third, fourth, fifth, and sixth years of life .....	8
Annual dental visit .....	10
Children and adolescents' access to primary care practitioners .....	11
Use of appropriate medications for people with asthma .....	12
Adults' access to preventive/ambulatory health services .....	14
Prenatal and Postpartum Care .....	14
Comprehensive diabetes care: Hemoglobin A1c testing .....	17
Appendix A: Summary of Outcomes by Medicaid eligibility Program, SFY 2008 .....	19
Appendix B: Summary of Outcomes by managed care plan, SFY 2007 .....	21
Appendix C: Summary of Outcomes by managed care plan, SFY 2006 .....	23
Appendix D: Summary of Outcomes by managed care plan, SFY 2005 .....	25
Appendix E: Summary of Outcomes by managed care plan, SFY 2004 .....	26
Appendix F: Summary of Outcomes by managed care plan, SFY 2003 .....	27
Appendix F: Technical specifications for outcome measures .....	28
Well-child visits in the first 15 months of life .....	28
Well-child visits in the third, fourth, fifth, and sixth year of life .....	28
Annual dental visit .....	28
Children's and adolescent's access to primary care practitioners .....	28
Use of appropriate medications for people with asthma .....	29
Adult access to preventive/ambulatory health services .....	29
Prenatal and postpartum care .....	30
Comprehensive diabetes care .....	30

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## INTRODUCTION

As health care reform continues to move forward in the national arena, attention has focused more heavily on US health care system performance. The NCQA HEDIS has been adopted by many plans and programs to help monitor health system performance. This set encompasses outcome and process measures covering chronic and acute illness, plan performance and patient satisfaction.

The University of Iowa Public Policy Center has provided the Iowa Department of Human Services (IDHS) with outcome measures related to the Medicaid program for over 15 years. For the past six years the PPC has provided a consistent set of measures as recommended by CMMS that include:

- Well-child visits in the first 15 months of life
- Well-child visits in the third, fourth, fifth and sixth years of life
- Children and adolescents' access to primary care practitioners
- Use of appropriate medications for people with asthma
- Adults' access to preventive/ambulatory health services
- Prenatal and postpartum care
- Comprehensive diabetes care: Hemoglobin A1c testing

In addition, Annual Dental Visit has also been included due to the dental disparities within Iowa.

Though recent reports have included target performance rates for the IDHS this report will not include targets. Targets can be important goals to guide policy and action, however, they should most likely be set by a group of providers, policy makers and program administrators. More importantly, as it is unrealistic to imagine meeting targets across all measures, measures need to be prioritized to focus efforts on improving results. From this report we would suggest that IDHS consider focusing on well-child visits in the first 15 months of life, well-child visits for children over 5 years old, dental visits for children under 4 years old, and Hemoglobin A1c testing for diabetics.

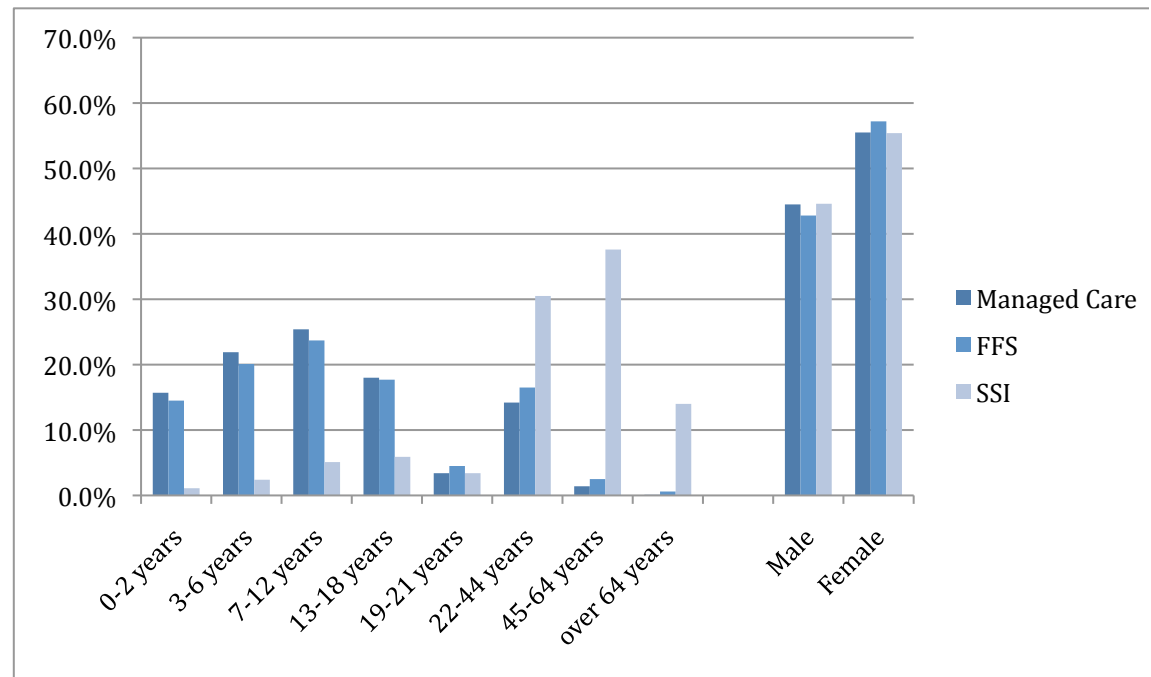
## ELIGIBILITY

Eligibility measures are calculated for three groups: people in managed care (Medipass or Coventry), people in the traditional fee-for-service program (FFS), and people enrolled through Supplemental Security Income program (SSI). Enrollees eligible for managed care are income eligible and live in a county containing one of the

options, either MediPASS (primary care case management) or Coventry (HMO). Enrollees included in the FFS measures live in counties do not have a managed care option available because providers are not willing to participate or counties that may have a managed care option that is not available to everyone due to geographic constraints. The SSI population is included to provide additional information regarding their care process and outcomes.

Figure 1 indicates the percent of enrollees by age and gender enrolled for at least 11 months in one of the three programs during SFY 2008. Of 351,446 enrollees who were eligible during SFY 2008, 193,971 were eligible for at least 11 months. Because disclosing race is optional for Medicaid enrollees, we did not include the distribution by race and/or ethnicity (at least 30% of enrollees are listed as unknown). As we are including people enrolled through the SSI program, the distribution varies from recent outcome reports. As can be seen from Figure 1, The SSI program enrolls older people, with very few children as compared to the other programs.

Figure 1. Comparisons of demographics for Medicaid enrollees who were eligible for at least 11 months in the measurement year, SFY 2008 by program



## OUTCOME MEASURES

### Well-child visits in the first 15 months of life

Recommendations from the American Academy of Pediatrics and the Iowa Department of Public Health Early Periodic Screening, Diagnosis and Treatment (EPSDT ) schedules continue to indicate that children have at least 8 visits during the first 15 months of life<sup>1</sup>. A child following the schedule will experience well-child visits at 2-3 days, 1 month, 2 months, 4 months, 6 months, 9 months, 12 months, and 15 months of age. These visits are to assess and address developmental issues, provide anticipatory guidance to parents, and determine the health of the child. Often the visits are used to provide needed immunizations for children, though immunizations are not required at all scheduled visits. For the HEDIS measures we indicate the proportion of children who turned 15 months of age during SFY 2008 and had 0 visits, 1 visit, 2 visits, 3 visits, 4 visits, 5 visits, and 6 or more visits. To be included in the measure children had to be eligible for at least 14 of the first 15 months of life. Table 1 provides the rates for each of the three groups.

Table 1 Number and proportion of children receiving from zero to six or more well-child visits in the first 15 months of life, SFY 2007

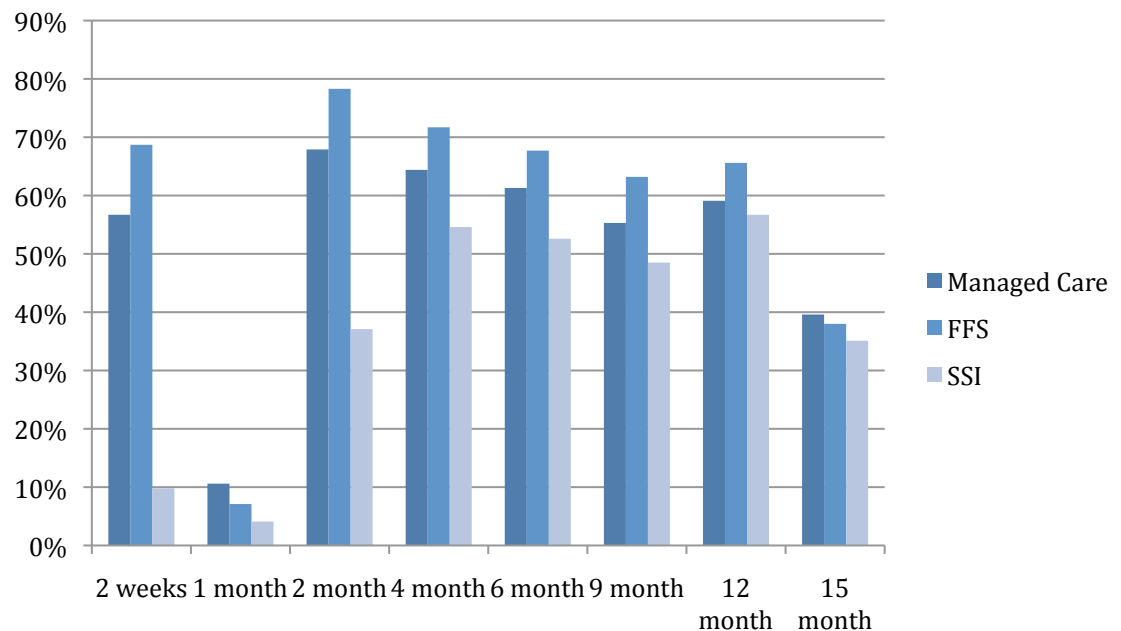
		Managed Care	FFS	SSI	Total
0 visits	Number	1054	224	37	1315
	%	13.9%	8.9%	19.1%	12.8%
1 visit	Number	506	93	24	623
	%	6.7%	3.7%	12.4%	6.0%
2 visits	Number	447	121	23	591
	%	5.9%	4.8%	11.9%	5.7%
3 visits	Number	593	194	21	808
	%	4.8%	7.7%	10.8%	7.8%
4 visits	Number	882	320	34	1236
	%	11.6%	12.7%	17.5%	12.0%
5 visits	Number	1257	462	30	1749
	%	16.6%	18.4%	15.5%	17.0%
6 or more visits	Number	2854	1103	25	3982
	%	37.6%	43.8%	12.9%	38.6%
Total	Number	7593	2517	194	10304
	%	100.0%	100.0%	100.0%	100.0%

<sup>1</sup> <http://iowaepsdt.org/ScreeningResources/IowaScrRecs05.pdf>

In an attempt to determine which well-child visits are most likely to be missed by Medicaid enrolled children, we began to calculate the proportion of children who were documented at each visit within a one month window on either side of the suggested visit time with the SFY 2007 outcome report. For example, a child born on July 1, 2007 would be expected to have a 1 month visit on August 1, 2007. If a well-child visit occurred between July 16, 2007 and August 14, 2007 we considered the child to have had a 1 month well-child visit. The pattern of care for SFY 2008 mirrors that of SFY 2007. We continue to find that the 2 week and 1 month visits are most likely provided as one visit for most children. Last year we suggested that, since as children age they are less likely to get a visit, providers should consider a reminder system. However, it may be much more efficient for the Medicaid program to require a provider reminder system or for the Medicaid program to provide the reminder. During these early months of life, visits to a provider and the information and guidance provided along with the developmental assessments leading to early detection of disease and delays may be so critical that case managers should be responsible for coordinating the visits in a timely manner.

Children in the SSI program are the least likely to get a well-child visit at any time. Though we do not understand the reasons for this, it may be that children in SSI are provided care through appointments with specialists or teams of providers that are not coded as well-child despite the inclusion of assessment, assurance, and anticipatory guidance.

Figure 2 Proportion of children with a well-child visit at each recommended time by managed care program, SFY 2007

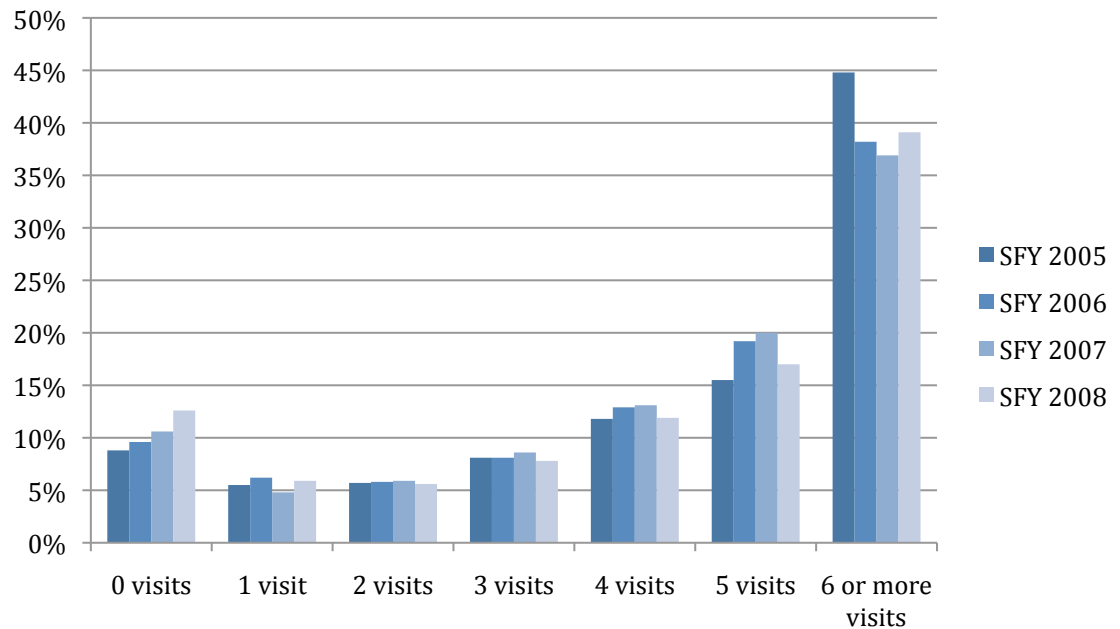




In Figure 3 we show the trend for visits in the first 15 months of life across all groups over the last 4 years. For SFY 2008 we used only children that were in managed care or FFS to avoid the bias created by the low proportion of children with visits in the SSI population. The figure shows a disturbing trend upwards in the number of children that had no well-child visits in the first 15 months of life.

Over 42% of children within the FFS program were able to access 6 or more well-child visits in the first 15 months of life. However, the rates for children in managed care or SSI did not meet this target. We would recommend a performance target of 53% for SFY 2010. This rate matches the Medicaid average for all plans reporting to NCQA in 2008. Though this increase may seem difficult to achieve, California was able to raise their average from 43% to 57% in one year. Both Massachusetts and Illinois provide online references and schedules for parents, embracing efforts to inform parents and increase the number of children with at least 6 well-child visits in the first 15 months of life.

Figure 3 Proportion of children by number of well-child visits in the first 15 months of life and measurement year



## Well-child visits in the third, fourth, fifth, and sixth years of life

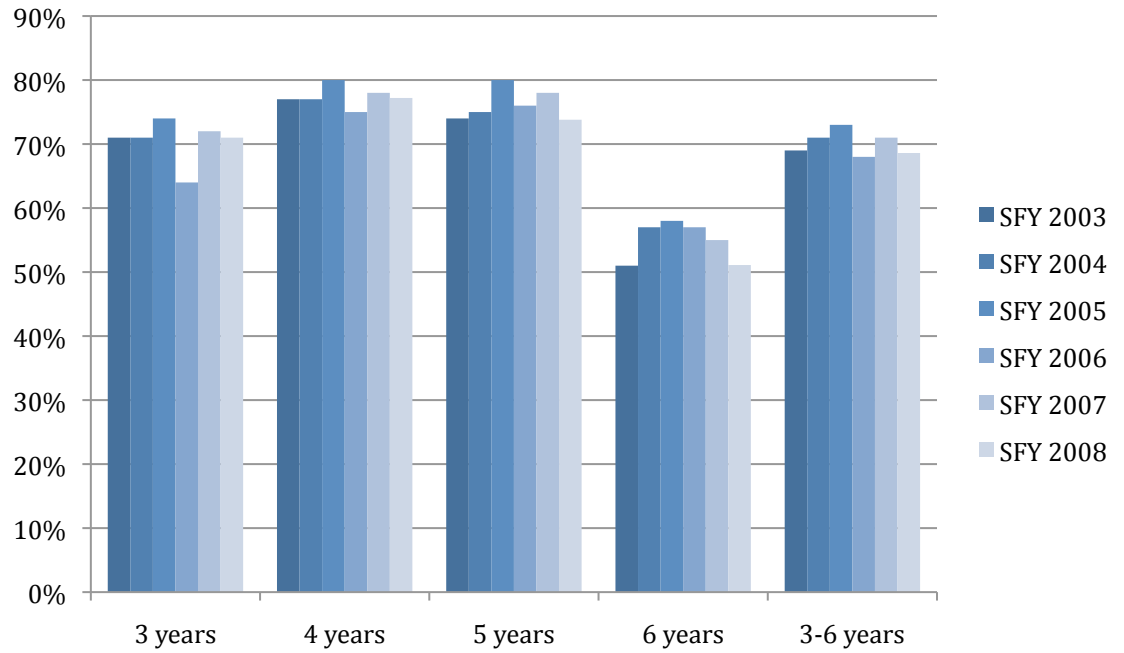
This measure includes children who turned from three through six years of age by June 30, 2008 and were enrolled for at least 11 months in SFY 2008. Table 2 indicates the rates by age and across three to six year olds. In general, a higher proportion of children in the managed care program had well-child visits than in the other two programs, regardless of age. The one exception is children six years of age in the SSI program. A higher proportion of these children had well-child visits than the other two programs. Over time the proportion of children receiving well-child visits remains fairly stable (Figure 4). As we have seen over and over again, the rate for well-child visits drops after 5 years old. The 5-year check is required to administer immunizations required to enter the public school system in Iowa. Once a child enters school parents seem much less likely to schedule a well-child visit.

The managed care rate of 70% is above the mean performance for Medicaid HMOs nationally. The target rate for managed care could be set at 73% in an effort to continue increasing the proportion of children with a well-child visit in this program. The target rates for FFS and SSI could be set at 70% in an effort to at least equal the proportion of children with a well-child visit in the managed care program. Linking the well-child visit to school attendance is one method for increasing the proportion having a visit every year.

Table 2 Proportion of children receiving a well-child visit by program and age, SFY 2008

Age		Managed Care	FFS	SSI
3 years	Number	4849	1593	140
	%	72%	70%	69%
4 years	Number	5053	1598	138
	%	78%	74%	73%
5 years	Number	4457	1449	146
	%	75%	71%	69%
6 years	Number	3082	901	158
	%	52%	47%	55%
3-6 years	Number	17441	5541	582
	%	70%	66%	65%

Figure 4 Proportion of children with a well-child visit by age and year



## Annual dental visit

Annual dental visits are encouraged for all children beginning at 6 months of age. Though tooth development is not complete until much later, early visits are useful for establishing good cleaning habits, understanding tooth development and providing guidance on nutrition for healthy teeth. Within Iowa, it may be difficult for parents to find a dentist who will see a child before three years of age. Difficulty in managing the child in the dental chair and lack of experience with young children may make general dentists unwilling to schedule visits for them. Though pediatric dentists may be more likely to see young children, the number of pediatric dentists in Iowa is limited.

Table 3 Proportion of children and adolescents with an annual dental visit by age and program, SFY 2008

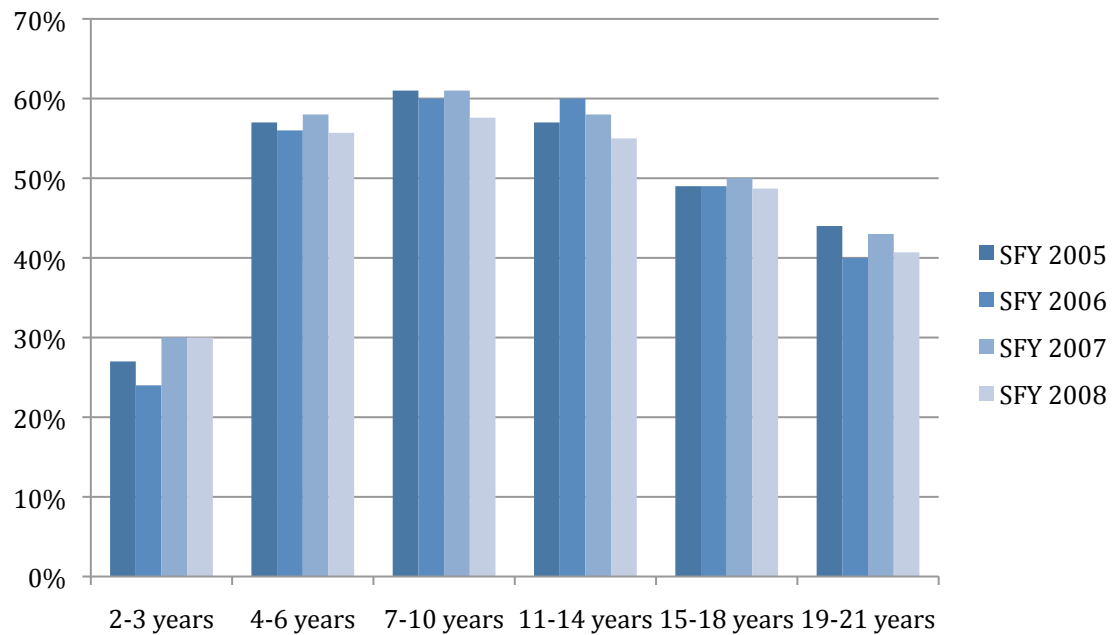
Age		Managed Care	FFS	SSI
2-3 years	Number	4229	1423	101
	%	30%	30%	26%
4-6 years	Number	10585	3067	323
	%	58%	50%	47%
7-10 years	Number	12275	3690	611
	%	60%	53%	49%
11-14 years	Number	9203	2916	634
	%	57%	51%	46%
15-18 years	Number	6639	2138	553
	%	51%	46%	37%
19-21 years	Number	1651	753	459
	%	42%	40%	36%

The proportion of children receiving an annual dental visit by age has remained stable for the past four years. Rates continue to be low among all programs for children two or three years of age. The rates increase for children in the elementary school ages and then decrease again as children become adolescents and young adults. Helping parents to understand the importance of an early visit and increasing the number of dentists that will exam and treatment young children may increase the proportion of young children receiving an annual dental visit. Reduced rates for adolescents and teens may indicate a decrease in the need for care, a lack of time and/or opportunity for care, or poor understanding of the advantages of preventive dental care.

The proportion of children who get an annual dental visit is above the mean for Medicaid nationally in all age groups (NCQA does not provide a mean for the 2-3 year olds). It may be most advantageous for Iowa to focus on increasing the target rates for

children 2-3 years of age from 30% to 40%. Though increasing the proportion of children receiving a dental visit in all groups is desirable, increasing the rate in the youngest children should translate to an increase in every age group over time.

Figure 1 Proportion of children within the managed care program with an annual dental visit by age and measurement year



## Children and adolescents' access to primary care practitioners

Rates of access to primary care practitioners provide a very general measure of the ability of children and adolescents to obtain health care when needed. This rate includes well-child visits as well as visits for acute or chronic illness care. The denominator consists of children who turned 12-24 months, 25 months to six years, seven to eleven years, and 12-19 years during the measurement year. Children 12 months to six years had to be eligible for at least 11 months during SFY 2008, while children and adolescents 7-19 years old had to be eligible for at least 11 months during SFY 2008 and at least 11 months during SFY 2007. In past reports, this measure has included any provider, however, this year we included only physicians with a primary care specialty (general practice, family practice, pediatrics, OB-Gyn, and internal medicine) or visits to the hospital indicating a family practice clinic or general medicine clinic, or a visit to a rural health clinic or FQHC. Adding these new constraints brought the measure protocols closer to the NCQA specifications and reduced the rates.

The proportions of children and adolescents with access to primary care practitioners are listed in Table 4. The rates are high with every age group within each program achieving an overall rate of over 75%. Nearly 90% of children 12-24 months within all three programs had access to primary care practitioners. These rates are reassuring, given the proportion of children who do not receive any well-child visits in the first 15 months of life. Though preventive care is important, these rates indicate that a lack of well care does not translate into a complete avoidance of needed ambulatory care.

Table 4 Proportion of children and adolescents' with access to primary care practitioners, SFY 2008

Age		Managed care	FFS	SSI
12-24 months	Number	8010	2805	202
	%	87%	92%	91%
25 months-6 years	Number	20342	7082	661
	%	78%	80%	85%
7-11 years	Number	16702	5669	1188
	%	81%	82%	87%
12-19 years	Number	17443	6430	2052
	%	77%	80%	79%
<b>Total</b>	<b>Number</b>	<b>62497</b>	<b>21986</b>	<b>4103</b>
	<b>%</b>	<b>79%</b>	<b>82%</b>	<b>82%</b>

## Use of appropriate medications for people with asthma

This outcome measure is particularly salient for the managed care population. Asthma is prevalent in young and old alike, regardless of gender. It is a measure that provides information regarding chronic disease management in a population that may find it difficult to access care on a regular basis.

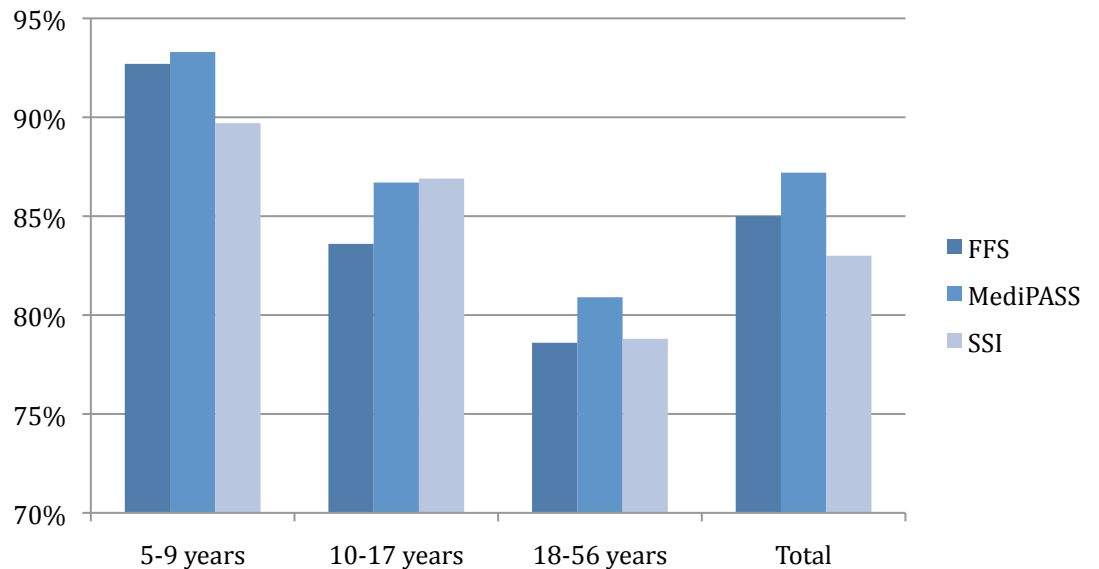
The denominator for this measure consists of individuals who have been enrolled for at least 11 months during SFY 2008 and at least 11 months during SFY 2007 and met the case finding criteria for persistent asthma (see Appendix F), but had no evidence of COPD or emphysema. The numerator consists of individuals with persistent asthma who were prescribed primary asthma therapy. Changes in the measure over time make it very difficult to compare the rates from year to year. In addition, there are small numbers of people with persistent asthma in some programs, making proportions with adequate therapy vary widely over time.

Table 5 Proportion of children and adults with persistent asthma, SFY 2007

Age		Managed care	FFS	SSI
5-9 years	Number	717	274	252
	%	3.3%	3.7%	6.0%
10-17 years	Number	946	330	420
	%	3.8%	3.6%	4.8%
18-56 years	Number	606	262	812
	%	3.6%	3.3%	1.8%
<b>Total</b>	<b>Number</b>	<b>2269</b>	<b>866</b>	<b>1484</b>
	<b>%</b>	<b>3.6%</b>	<b>3.5%</b>	<b>2.5%</b>

The proportions of children and adults using the appropriate medication for asthma are shown in Figure 6. The most surprising finding within the figure is the low rate for adults 18-56 years old in the SSI and FFS who are receiving appropriate medications for asthma. The rate of persistent asthma within this age group is comparable to others, however, it may be that enrollees with additional problems are unable to take advantage of preferred therapies, or physicians may be reticent to change medications regimes that are adequately addressing the problem.

Figure 2 Proportion of children and adults using appropriate medications for asthma, SFY 2008



## Adults' access to preventive/ambulatory health services

Though adults do not comprise a large share of the Medicaid managed care eligible population, they do comprise the largest share of the SSI population. It is imperative that adults, particularly those with chronic illness and/or disability, have adequate access to medical services to ensure the rapid diagnosis and proper treatment for not only acute problems, but chronic illnesses that may be emerging. The denominators for these rates include all adults who turned 20-44 years of age or 45-64 years of age during SFY 2008. The numerators for the rates include the adults in these age groups who had at least one preventive or ambulatory visit during SFY 2008. The rates for adults' access to preventive/ambulatory health services are given in Table 6. Rates are over 75% for the 45-64 year olds regardless of the program and over 85% for the 20-44 year olds. These rates indicate that access to medical care is high. Performance targets should be set at 90% for both age groups across all three programs.

Table 6 Adults' access to preventive/ambulatory health services by program and age, SFY 2008

Age		MediPASS	FFS	SSI
20-44 years	Number	15429	6640	6658
	%	83%	82%	54%
45-64 years	Number	1310	780	8034
	%	80%	75%	57%

## Prenatal and Postpartum Care

The prenatal care rate is the proportion of women with a delivery who received a prenatal care visit within the first trimester or within 42 days of enrollment. The postpartum care rate is the proportion of women with a delivery who had a postpartum visit on or between 21 and 56 days of delivery. The denominator for both rates is the number of women with a live delivery between May 6, 2007 and May 5, 2008, who were continuously enrolled for 43 days prior to delivery through 56 days after delivery. The numerator for the prenatal care rate is the number of women in the denominator who had a prenatal care visit in the first trimester of care or within 42 days of becoming eligible. The numerator for the postpartum care rate is the number of women in the denominator who had a postpartum care visit between 21 and 56 days after delivery.

Between 6 May 2007 and 5 May 2008 there were 12,797 live birth deliveries identified for which the mother was continuously enrolled between 43 days prior to the delivery and 56 days after the delivery.






Table 7 provides the rate of prenatal care based on the time for which the woman was enrolled in Medicaid. The overall rate of prenatal care was 66.1% in SFY 2008, compared with 68.9% in SFY 2007.

Women who had bundled prenatal care codes were far more likely to have received early prenatal care than those without bundled care (79.0% c.f. 29.0%). Women continuously enrolled for the first trimester were more likely to have received early prenatal care than women whose enrollment commenced during the first trimester (76.4% c.f. 71.7%). Approximately 50% of women who were not enrolled until after the first trimester received timely prenatal care.

Rates of postpartum care are presented in Table 8. The rate of postpartum care increased slightly from SFY 2007 to SFY 2008 from 34.4% to 35.4%. A number of women have Healthcare Common Procedure Coding System (HCPCS) codes indicative of postpartum care received at a maternal health center or a rural health center. These codes have been included to be indicative of postpartum care in Table 8. Furthermore, if all women with a bundled postpartum code were assumed to have received a postpartum visit then the rate for 2008 would be 81.4% and the rate for 2007 would be 86.1%. HCPCS are not used to in the HEDIS definitions and are, therefore, not routinely used in these outcome analyses. It seems reasonable to modify the HEDIS outcome measures for prenatal and postpartum care to reflect the care received at maternal health centers and rural health centers by including HCPCS codes.

Table 7: Rates of early prenatal care, SFY 2006 to SFY 2008

Enrollment period	Prenatal care not bundled	Bundled prenatal care	Total
Continuously enrolled for first trimester			
2008	41.3%	87.1%	<b>76.4%</b>
2007	36.9%	88.1%	<b>81.1%</b>
2006	45.7%	90.3%	<b>81.4%</b>
Last enrollment segment commenced on or between 219 and 279 days prior to the EDD			
2008	31.5%	84.4%	<b>71.7%</b>
2007	25.9%	83.8%	<b>74.3%</b>
2006	31.7%	86.1%	<b>74.1%</b>
Last enrollment segment commenced less than 219 days prior to the EDD			
2008	15.5%	61.6%	<b>47.3%</b>
2007	15.3%	61.5%	<b>49.9%</b>
2006	14.9%	65.6%	<b>51.1%</b>
<b>Total</b>			
<b>2008</b>	<b>29.0%</b>	<b>79.0%</b>	<b>66.1%</b>
<b>2007</b>	<b>24.0%</b>	<b>78.9%</b>	<b>68.9%</b>
<b>2006</b>	<b>28.5%</b>	<b>81.1%</b>	<b>68.6%</b>

Table 8: Rates of postpartum care SFY 2006 to SFY 2008<sup>†</sup>

Year	Postpartum care not bundled	Bundled Postpartum care	Total
2008	34.7%	35.7%	35.4%
2007	33.3%	34.6%	34.4%
2006	39.0%	38.2%	38.4%

<sup>†</sup> Using an expanded definition that includes codes indicative of postpartum care received at a maternal health center or a rural health center.

Tables 9 and 10 list the rates of prenatal and postpartum care by year and Medicaid program. Rates of prenatal care were 61.7% among the FFS program and 68.1% for managed care. Postpartum care rates were 35.7% for managed care and 34.8% for the FFS program.

Table 9: Rates of prenatal care by program, SFY 2006 to SFY 2008

Program	2008	2007	2006
SSI	–	76.5%	67.2%
Managed care	68.1%	69.9%	70.4%
Fee-for-service	61.7%	66.2%	65.0%

Table 10: Rates of postpartum care<sup>†</sup> by program, SFY 2006 to SFY 2008

Program	2008	2007	2006
SSI	–	55.4%	42.4%
Managed care	35.7%	32.7%	36.1%
Fee-for-service	34.8%	35.9%	46.8%

<sup>†</sup> Using an expanded definition that includes codes indicative of postpartum care received at a maternal health center or a rural health center.

## Comprehensive diabetes care: Hemoglobin A1c testing

The HEDIS measure for comprehensive diabetes care includes Hemoglobin A1c testing, HbA1c poor control, HbA1c good control, eye exam, LDL-C screening performed, LDL-C control, medical attention for nephropathy, and blood pressure control. Many of these components are available primarily through chart review and are not designed to be calculated from administrative data. We have chosen Hemoglobin A1c testing as an easy, effective method to determine whether proper monitoring of diabetes is occurring. The denominator for this measure includes all enrollees 18 to 75 years old identified as having diabetes and enrolled for at least 11 months during SFY 2008. The numerator consists of all enrollees in the denominator with Hemoglobin A1c testing done during SFY 2008. The proportion of enrollees with diabetes that had hemoglobin A1c testing are shown in Table 11 by program. The proportion of adults with testing is highest in FFS and lowest in managed care. For reasons that are unclear, these rates vary widely over time. The rates were much higher last year with 73% of those in managed care being tested. Though it is difficult to determine why the rates vary, it may be the result of testing every other year, bundling of the test into some other code of which we are unaware, or reluctance on the part of enrollees to be tested or physicians to order the test. For whatever reason, monitoring is not occurring in the preferred manner.

Table 7 Proportion of adults with diabetes that had a Hemoglobin A1c test, SFY 2007

Age		MediPASS	FFS	SSI
18-75 years	Number	309	185	1185
	%	36%	46%	43%

## APPENDIX A: SUMMARY OF OUTCOMES BY MEDICAID ELIGIBILITY PROGRAM, SFY 2008

Measure	MediPASS	FFS	SSI	Performance Target
<b>Well-child visits in the first 15 months of life</b>				
0 visits	13.9%	8.9%	19.1%	7.5%
1 visit	6.7%	3.7%	12.4%	4.5%
2 visits	5.9%	4.8%	11.9%	5.0%
3 visits	7.8%	7.7%	10.8%	8.0%
4 visits	11.6%	12.7%	17.5%	13.0%
5 visits	16.6%	18.4%	15.5%	20.0%
6 or more visits	37.6%	43.8%	12.9%	42.0%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>				
Visit in the 3 <sup>rd</sup> year of life	71.4%	70.1%	68.6%	75.0%
Visit in the 4 <sup>th</sup> year of life	78.3%	74.3%	73.0%	75.0%
Visit in the 5 <sup>th</sup> year of life	75.2%	70.5%	68.5%	75.0%
Visit in the 6 <sup>th</sup> year of life	52.4%	46.7%	55.4%	65.0%
Visit in 3 <sup>rd</sup> -6 <sup>th</sup> years of life	69.6%	65.9%	65.3%	68.0%
<b>Annual dental visit</b>				
2–3 years old	29.7%	29.6%	25.6%	35.0%
4–6 years old	57.9%	50.0%	47.0%	65.0%
7–10 years old	59.6%	53.0%	49.0%	65.0%
11–14 years old	57.2%	51.0%	45.5%	60.0%
15–18 years old	51.0%	45.9%	37.3%	60.0%
19-21 years old	42.4%	40.1%	36.1%	45.0%
<b>Children’s and adolescents’ access to primary care practitioners</b>				
12–24 months old	86.5%	91.9%	90.6%	99.0%
2–6 years old	78.4%	80.4%	85.0%	95.0%
7–11 years old	80.8%	82.4%	86.5%	95.0%
12–19 years old	46.5%	79.5%	78.6%	95.0%
Combined	79.4%	82.0%	82.3%	95.0%
<b>Use of appropriate medications for people with asthma</b>				
5–9 years old	93.3%	92.7%	89.7%	75.0%
10–17 years old	86.7%	83.6%	86.9%	75.0%
18–56 years old	80.9%	78.6%	78.8%	75.0%
Combined	87.2%	85.0%	83.0%	75.0%
<b>Adult’s access to preventive/ambulatory health services</b>				
20–44 years old	82.9%	82.7%	54.3%	90.0%
45–64 years old	80.3%	74.6%	57.0%	90.0%



**Prenatal and postpartum care**

Prenatal care	68.1%	61.7%	-	75.0%
Postpartum care	35.7%	34.8%	-	75.0%

**Comprehensive diabetes care**

Hemoglobin A1c	36.2%	45.9%	43.4%	75.0%
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## APPENDIX B: SUMMARY OF OUTCOMES BY MANAGED CARE PLAN, SFY 2007

Measure	Coventry	MediPASS	FFS	Performance Target
<b>Well-child visits in the first 15 months of life</b>				
0 visits	9.3%	9.9%	8.4%	7.5%
1 visit	6.3%	5.2%	5.0%	4.5%
2 visits	7.4%	5.9%	6.2%	5.0%
3 visits	12.1%	8.8%	9.0%	8.0%
4 visits	14.2%	12.6%	14.1%	13.0%
5 visits	17.9%	20.5%	19.4%	20.0%
6 or more visits	33.7%	37.0%	37.1%	42.0%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>				
Visit in the 3 <sup>rd</sup> year of life	58.5%	72.9%	71.3%	75.0%
Visit in the 4 <sup>th</sup> year of life	73.8%	78.0%	76.7%	75.0%
Visit in the 5 <sup>th</sup> year of life	65.6%	78.1%	77.7%	75.0%
Visit in the 6 <sup>th</sup> year of life	47.0%	55.0%	55.7%	65.0%
Visit in 3 <sup>rd</sup> -6 <sup>th</sup> years of life	60.7%	71.2%	70.5%	68.0%
<b>Annual dental visit</b>				
2–3 years old	16.6%	29.6%	27.1%	35.0%
4–6 years old	48.9%	58.2%	51.0%	65.0%
7–10 years old	47.5%	61.0%	55.1%	65.0%
11–14 years old	45.7%	58.0%	52.9%	60.0%
15–18 years old	46.0%	50.2%	47.3%	60.0%
19-21 years old	38.8%	42.8%	42.9%	45.0%
<b>Children's and adolescents' access to primary care practitioners</b>				
12–24 months old	99.1%	99.4%	98.9%	99.0%
2–6 years old	93.0%	94.6%	92.5%	95.0%
7–11 years old	92.2%	93.2%	90.9%	95.0%
12–19 years old	91.3%	91.2%	88.6%	95.0%
Combined	93.1%	93.8%	91.6%	95.0%
<b>Use of appropriate medications for people with asthma</b>				
5–9 years old	66.7%	65.3%	63.2%	75.0%
10–17 years old	50.0%	61.3%	62.5%	75.0%
18–56 years old	14.3%	53.1%	53.2%	75.0%
Combined	45.0%	60.4%	59.5%	75.0%
<b>Adult's access to preventive/ambulatory health services</b>				
20–44 years old	94.0%	88.8%	87.0%	90.0%



45–64 years old	78.9%	86.1%	77.4%	90.0%
<b>Prenatal and postpartum care</b>				
Prenatal care	76.5%	69.9%	66.2%	75.0%
Postpartum care	55.4%	32.7%	35.9%	75.0%
<b>Comprehensive diabetes care</b>				
Hemoglobin A1c	57.9%	72.7%	60.9%	75.0%

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## APPENDIX C: SUMMARY OF OUTCOMES BY MANAGED CARE PLAN, SFY 2006

Measure	Coventry	MediPASS	FFS
<b>Well-child visits in the first 15 months of life</b>			
0 visits	1.7%	10.0%	9.4%
1 visit	3.7%	6.5%	5.5%
2 visits	9.4%	5.5%	6.1%
3 visits	12.7%	7.7%	8.8%
4 visits	13.7%	12.5%	13.9%
5 visits	21.7%	18.7%	20.3%
6 or more visits	37.1%	39.0%	36.1%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>			
Visit in the 3 <sup>rd</sup> year of life	48.6%	65.3%	63.3%
Visit in the 4 <sup>th</sup> year of life	55.6%	75.4%	74.1%
Visit in the 5 <sup>th</sup> year of life	53.8%	77.6%	74.8%
Visit in the 6 <sup>th</sup> year of life	35.6%	58.2%	55.6%
Visit in 3 <sup>rd</sup> -6 <sup>th</sup> years of life	48.3%	69.3%	67.0%
<b>Annual dental visit (new categories)</b>			
2–3 years old	15.5%	24.2%	23.9%
4–6 years old	46.3%	55.6%	51.2%
7–10 years old	50.8%	59.2%	53.5%
11–14 years old	46.4%	55.5%	49.7%
15–18 years old	46.0%	48.7%	45.2%
19–21 years old	40.4%	39.9%	42.7%
<b>Children’s and adolescents’ access to primary care practitioners</b>			
12–24 months old	97.5%	81.2%	84.5%
2–6 years old	83.9%	67.0%	64.3%
7–11 years old	87.4%	78.4%	79.5%
12–19 years old	89.8%	77.5%	79.0%
Combined	87.8%	73.7%	73.4%
<b>Use of appropriate medications for people with asthma</b>			
5–9 years old	83.3%	84.7%	78.3%
10–17 years old	63.6%	84.6%	80.9%
18–56 years old	61.1%	80.9%	75.8%
Combined	68.3%	83.5%	78.3%
<b>Adult’s access to preventive/ambulatory health services</b>			
20–44 years old	87.3%	85.0%	83.9%
45–64 years old	88.4%	84.6%	76.4%

**Prenatal and postpartum care**

Prenatal care	67.2%	70.4%	65.0%
Postpartum care	42.4%	36.1%	46.8%

**Comprehensive diabetes care**

Hemoglobin A1c	57.5%	70.3%	61.9%
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N/A-No rate provided in NCQA audited means, percentiles and ratios

## APPENDIX D: SUMMARY OF OUTCOMES BY MANAGED CARE PLAN, SFY 2005

Measure	Coventry	MediPASS	FFS	IHS to MediPASS
<b>Well-child visits in the first 15 months of life</b>				
0 visits	2.1%	11.9%	8.1%	1.9%
1 visit	3.8%	6.4%	5.0%	3.7%
2 visits	4.3%	5.8%	6.7%	4.8%
3 visits	9.0%	7.3%	8.3%	10.5%
4 visits	14.5%	11.3%	12.0%	13.3%
5 visits	21.8%	15.0%	15.2%	14.2%
6 or more visits	44.4%	42.2%	44.7%	51.5%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>				
Visit in the 3 <sup>rd</sup> year of life	73.2%	76.6%	74.2%	76.2%
Visit in the 4 <sup>th</sup> year of life	79.0%	80.1%	78.7%	79.9%
Visit in the 5 <sup>th</sup> year of life	79.7%	81.2%	77.3%	80.0%
Visit in the 6 <sup>th</sup> year of life	31.2%	63.5%	55.5%	54.5%
Visit in 3 <sup>rd</sup> -6 <sup>th</sup> years of life	66.9%	74.8%	71.6%	73.1%
<b>Annual dental visit (new categories)</b>				
2–3 years old	17.8%	26.6%	26.8%	28.9%
4–6 years old	55.2%	57.4%	52.7%	56.9%
7–10 years old	56.9%	61.1%	54.3%	58.8%
11–14 years old	50.9%	56.9%	52.0%	54.2%
15–18 years old	49.4%	49.4%	47.1%	45.0%
19-21 years old	41.4%	43.5%	41.0%	38.8%
<b>Annual dental visit (old categories)</b>				
1–3 years old	11.8%	19.0%	19.5%	20.3%
4–6 years old	55.2%	57.4%	52.7%	56.9%
7–11 years old	55.9%	60.8%	54.4%	58.7%
12–15 years old	50.2%	54.6%	51.3%	51.0%
16–18 years old	49.8%	49.3%	45.1%	45.0%
<b>Children’s and adolescents’ access to primary care practitioners</b>				
12–24 months old	99.6%	99.2%	97.2%	99.2%
2–6 years old	86.8%	93.9%	90.4%	92.6%
7–11 years old	88.3%	91.2%	89.4%	91.7%
12–19 years old	86.9%	91.9%	89.9%	91.4%
Combined	89.2%	93.3%	90.7%	93.1%
<b>Use of appropriate medications for people with asthma</b>				
5–9 years old	57.1%	92.4%	95.7%	76.9%
10–17 years old	100.0%	95.1%	90.0%	78.4%
18–56 years old	80.0%	85.2%	81.0%	84.8%
Combined	77.3%	91.4%	88.1%	79.5%
<b>Adult’s access to preventive/ambulatory health services</b>				
20–44 years old	87.8%	85.1%	84.5%	84.3%
45–64 years old	88.2%	85.3%	62.3%	84.9%
<b>Prenatal and postpartum care</b>				
Prenatal care	43.1%	65.8%	58.1%	55.3%
Postpartum care	52.7%	35.3%	36.1%	23.5%
<b>Comprehensive diabetes care</b>				
Hemoglobin A1c	54.3%	33.9%	28.5%	40.6%

## APPENDIX E: SUMMARY OF OUTCOMES BY MANAGED CARE PLAN, SFY 2004

Measure	John Deere	Coventry	Iowa Health Solutions
<b>Well-child visits in the first 15 months of life</b>			
0 visits	3.1%	0.0%	1.0%
1 visit	8.5%	0.0%	2.6%
2 visits	6.3%	4.3%	7.1%
3 visits	11.6%	14.9%	13.6%
4 visits	15.9%	19.1%	23.3%
5 visits	19.8%	38.3%	26.4%
6 or more visits	34.8%	23.4%	26.0%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>			
Visit in the 3 <sup>rd</sup> year of life	53.2%	72.5%	64.3%
Visit in the 4 <sup>th</sup> year of life	65.4%	80.2%	70.3%
Visit in the 5 <sup>th</sup> year of life	64.6%	82.8%	63.8%
Visit in the 6 <sup>th</sup> year of life	38.2%	20.1%	44.3%
Visit in 3 <sup>rd</sup> -6 <sup>th</sup> years of life	56.2%	75.3%	61.3%
<b>Annual dental visit</b>			
1–3 years old	28.0%	11.7%	21.2%
4–6 years old	64.4%	55.4%	59.4%
7–11 years old	62.3%	51.1%	59.6%
12–15 years old	53.9%	52.4%	52.0%
16–18 years old	46.4%	54.8%	45.1%
<b>Children’s and adolescents’ access to primary care practitioners</b>			
12–24 months old	98.1%	100.0%	97.6%
2–6 years old	87.1%	85.7%	88.7%
7–11 years old	86.0%	88.8%	86.9%
12–19 years old	89.7%	88.0%	84.6%
<b>Use of appropriate medications for people with asthma</b>			
5–9 years old	40.6%	50.0%	63.3%
10–17 years old	52.9%	75.0%	58.0%
18–56 years old	50.0%	20.0%	55.3%
Combined	47.8%	38.9%	57.8%
<b>Adult’s access to preventive/ambulatory health services</b>			
20–44 years old	85.1%	88.8%	88.7%
45–64 years old	78.8%	81.3%	86.5%
<b>Prenatal and postpartum care</b>			
Prenatal care	63.0%	55.5%	63.0%
Postpartum care	—	—	—
<b>Comprehensive diabetes care</b>			
Hemoglobin A1c	84.8%	90.0%	20.0%

## APPENDIX F: SUMMARY OF OUTCOMES BY MANAGED CARE PLAN, SFY 2003

Measure	John Deere	Coventry	Iowa Health Solutions
<b>Well-child visits in the first 15 months of life</b>			
0 visits	1.5%	0.0%	0.2%
1 visit	8.7%	1.1%	4.0%
2 visits	9.0%	2.2%	5.2%
3 visits	10.0%	9.7%	8.9%
4 visits	12.6%	29.0%	12.6%
5 visits	15.9%	24.7%	19.1%
6 or more visits	42.2%	33.3%	50.1%
<b>Well-child visits in the third, fourth, fifth and sixth year of life</b>			
Visit in the 3 <sup>rd</sup> year of life	56.1%	89.4%	73.4%
Visit in the 4 <sup>th</sup> year of life	62.7%	85.3%	78.7%
Visit in the 5 <sup>th</sup> year of life	58.8%	73.6%	75.9%
Visit in the 6 <sup>th</sup> year of life	37.8%	55.7%	43.3%
Visit in the 3 <sup>rd</sup> -6 <sup>th</sup> years of life	53.9%	76.7%	68.9%
<b>Annual dental visit</b>			
1-3 years old	21.9%	18.0%	21.3%
4-6 years old	62.7%	54.3%	57.2%
7-11 years old	62.9%	50.9%	57.9%
12-15 years old	56.2%	46.5%	51.3%
16-18 years old	47.5%	47.0%	45.8%
<b>Children's and adolescents' access to primary care practitioners</b>			
12-24 months old	71.9%	91.0%	90.0%
2-6 years old	59.2%	69.7%	73.2%
7-11 years old	75.2%	72.7%	76.9%
12-19 years old	72.3%	77.1%	74.5%
<b>Use of appropriate medications for people with asthma</b>			
5-9 years old	55.6%	33.3%	55.8%
10-17 years old	51.5%	25.0%	62.7%
18-56 years old	55.4%	42.9%	40.5%
Combined	54.2%	33.3%	54.7%
<b>Adult's access to preventive/ambulatory health services</b>			
20-44 years old	69.5%	88.8%	87.2%
45-64 years old	63.6%	70.6%	87.7%
<b>Prenatal and postpartum care</b>			
Prenatal care	60.4%	53.5%	63.5%
Postpartum care	—	—	—
<b>Comprehensive diabetes care</b>			
Hemoglobin A1c	51.3%	46.2%	48.2%

## **APPENDIX F: TECHNICAL SPECIFICATIONS FOR OUTCOME MEASURES**

### **Well-child visits in the first 15 months of life**

Denominator: Children who turn 15 months of age during the measurement year and are continuously eligible for the period from 31 days of age through 15 months of age with no more than a 1-month gap. Whether children are 31 days of age is calculated by adding 31 days to the date of birth and whether they are 15 months is calculated as the date of the first birthday plus 90 days.

Numerator: Children within the denominator who had a well-child visit defined by any one of the procedure codes: 99381, 99382, 99391, 99392, 99432 or one of the diagnosis codes: V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9.

Rates: Seven rates are computed for this measure. These rates encompass the proportion of children that had 0, 1, 2, 3, 4, 5, or 6 or more well visits during the 15-month period.

### **Well-child visits in the third, fourth, fifth, and sixth year of life**

Denominator: Children who turn three through six years of age during the measurement year and are eligible for at least 11 months during the measurement year.

Numerator: Children within the denominator who had a well-child visit defined by any one of the procedure codes: 99382, 99383, 99392, 99393 or one of the diagnosis codes: V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9.

Rates: Five rates are calculated, one for each year of age and one combined.

### **Annual dental visit**

Denominator: Children 2–21 years of age who are eligible for at least 11 months during the measurement year.

Numerator: Children within the denominator who had a visit with a dental provider during the measurement year.

Rates: The rate is calculated for six age groups: 2–3 years old, 4–6 years old, 7–10 years old, 11–14 years old, 15–18 years old, and 19–21 years old.

### **Children’s and adolescent’s access to primary care practitioners**

Denominator: Children who turn 12 months–6 years of age during the measurement year and who are eligible for at least 11 months during the measurement year *and* children 7 years of age to adolescents 19 years of age who are eligible for at least 11 months during the measurement year and 11 months during the year prior to the measurement year.

Numerator: Children 12 months–6 years of age who have had a primary care visit during the measurement year *and* children 7 years of age through adolescents 19 years of age who have had a primary care visit during the measurement year or the year prior to the measurement year. A primary care visit was defined as any visit with one of the procedure codes: 99201-99205, 99211-99215, 99241-99245, 99341-99350, 99401-99404, 99411, 99412, 99420, 99429, 99381-99385 or 99391-99395 or one of the diagnosis codes: V20.2, V70.0, V70.3, V70.5, V70.6, V70.8, V70.9.

Rates: This rate is calculated for four different age groups: 12–24 months, 25 months–6 years, 7–11 years, and 12–19 years.

### **Use of appropriate medications for people with asthma**

Denominator: People ages 5–56 years old who are eligible for at least 11 months during the measurement year and 11 months during the year prior to the measurement year with persistent asthma. People are considered to have persistent asthma if they meet one of the four protocols listed below during both the year *prior* to the measurement year and the measurement year.

At least one emergency visit defined by one of the procedure codes: 99281-99285 or one of the revenue codes: 450-459, 981 and with a principal diagnosis of asthma (ICD-9-CM 493).

At least one hospital discharge defined by one of the procedure codes: 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, or 99291 or one of the revenue codes: 100-149, 119, 120-124, 129, 150-154, 159, 160-169, 200-229, 720-729, or 987 and with a principal diagnosis of asthma (ICD-9-CM 493).

Have at least 4 outpatient/physician visits defined by one of the procedure codes: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99341-99345, 99347-99350, 99382-99386, 99392-99396, 99401-99404, 99411, 99412, 99420, 99429 or 99499 or one of the revenue codes: 510-519, 520-523, 529, 570-599, 770-779, 982 or 983 and with any diagnosis of asthma (ICD-9-CM 493).

Have at least four asthma medicine dispensing events. A list of asthma medications is found on the NCQA website.

Numerator: The numerator consists of those people in the denominator who had at least one medication prescribing event for a long-term control medication during the measurement year. A list of these medications is found on the NCQA website.

Rates: This rate is calculated for four different age groups: 5–9 years olds, 10–17 year olds, 18–56 year olds, and a combined rate containing everyone 5–56 years old.

### **Adult access to preventive/ambulatory health services**

Denominator: Adults 20-64 years of age who are eligible for at least 11 months in the measurement year.

Numerator: Adults within the denominator who had a preventive/ambulatory visit within the measurement year. Preventive/ambulatory visits are defined as a visit with one of the procedure codes: 99210-99205, 99211-99215, 99241-99245, 99341-99350, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99385-99387, 99395-99397,

99401-99404, 99411-99412, 99420, 99429, 99499, 92002, 92004, 92012, 92014 or one of the revenue codes: 770, 771, 779, 510-529, 982, 983.

Rates: This rate is calculated for two age groups: 20–44 year olds and 45–64 year olds.

## **Prenatal and postpartum care**

Denominator: Women with a live birth during the year ending 56 days before the end of the measurement year and who were eligible for the period 43 days prior to delivery through 56 days after delivery.

Live births were defined by one of the diagnosis codes: 72.0-73.99, 74.0-74.2, 74.4, 74.99, 640.01-640.91, 641.01-641.91, 642.01-642.91, 643.01-643.91, 644.21, 645.11, 645.21, 646.01-646.91, 646.12, 646.22, 646.42, 646.52, 646.62, 646.82, 647.01-647.92, 648.01-648.92, 651.01-652.91, 653.01-653.91, 654.01-654.91, 654.02, 654.12, 654.32, 654.42, 654.52, 654.62, 654.72, 654.82, 654.92, 655.01-655.91, 656.01, 656.11, 656.21, 656.31, 656.51, 656.61, 656.71, 656.81, 656.91, 657.01, 658.01-658.91, 659.01-659.91, 660.01-660.91, 661.01-661.91, 662.01-662.91, 663.01-663.91, 664.01-664.91, 665.01, 665.11, 665.22, 665.31, 665.41, 665.51, 665.61, 665.71, 665.72, 665.81, 665.82, 665.91, 665.92, 666.02-666.92, 667.02-667.92, 668.01-668.91, 668.02-668.92, 669.01, 669.02, 669.11, 669.12, 669.21, 669.22, 669.32, 669.41, 669.42, 669.51, 669.61, 669.71, 669.81, 669.82, 669.91, 669.92, 670.02, 671.01, 671.02, 671.11, 671.12, 671.21, 671.22, 671.31, 671.42, 671.51, 671.52, 671.81, 671.82, 671.92, 671.92, 672.02, 673.01-673.91, 673.02-673.92, 674.01, 674.02-674.92, 675.01-675.91, 675.02-675.92, 676.01-676.91, 676.02-676.92 or one of the procedure codes 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, 59622 or one of the DRG codes: 370-375. Any claim with one of the diagnosis codes 630-637, 656.4, 768.0, 768.1, V27.1, V27.4, or V27.7 is considered *not* to represent a live birth.

Numerator: Women within the denominator who had a prenatal care visit in the first trimester or within 42 days of becoming eligible. See HEDIS 2004, Volume 2, Technical Specifications for greater detail. A prenatal visit is defined by one of the procedure codes: 59400, 59510, 59610, 59618, 59425, 59426 with a date indicating first prenatal visit or one of the procedure codes: 99201-99205, 99211-99215 or revenue code 514 in combination with one of the procedure codes or procedure code combinations: 76801, 76802, 76805, 76811, 76812, 76815, 76816, 76817, 76818, 80055, 80090, 86762 and 86900 or 86762 and 86901 or in combination with one of the diagnosis codes: 640.x3, 641.x3, 642.x3, 643.x3, 644.x3, 645.x3, 646.x3, 647.x3, 648.x3, 651.x3, 652.x3, 653.x3, 654.x3, 655.x3, 656.x3, 657.x3, 658.x3, 659.x3, V22-V23. Postpartum care was defined by one of the procedure codes: 57170, 58300, 59400, 59410, 59430, 59510, 59515, 59610, 59614, 59618, 59622, 88141-88145, 88147, 88148, 88150-88155, 88164-88167, 88174, 88175 or one of the diagnosis codes: 91.46, V24.1, V24.2, V25.1, V72.3, V76.2 or revenue code 923.

Rates: Two rates are calculated, one for prenatal care and one for postpartum care.

## **Comprehensive diabetes care**



Denominator: Adults with diabetes 18–64 years of age who were eligible for at least 11 months in the measurement year *and* who met one of the following protocols during the measurement year or the year prior to the measurement year.

At least one emergency visit defined by one of the procedure codes: 99281-99288 or one of the revenue codes: 450-459, 981 and with a principal diagnosis of diabetes (ICD-9-CM 250.00-250.99, 357.2, 362.0, 366.41, 648.0 or DRG 205 or 294) or one hospital discharge defined by one of the procedure codes: 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, or 99291 or one of the revenue codes: 100-149, 119, 120-124, 129, 150-154, 159, 160-169, 200-229, 720-729, or 987 or DRG 462 and with a principal diagnosis of diabetes (ICD-9-CM 250.00-250.99, 357.2, 362.0, 366.41, 648.0 or DRG 205 or 294).

At least 2 outpatient/physician/non-acute inpatient visits defined by one of the procedure codes: 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99289, 99290, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99341-99355, 99384-99387, 99394-99397, 99410-99404, 99411, 99412, 99420, 99429, 99499 or one of the revenue codes: 118, 128, 138, 148, 158, 190-199, 510-529, 550-559, 570-599, 660-669, 770-779, 820-859, 880-889, 982 or 983 and with a diagnosis of diabetes (ICD-9-CM 250.00-250.99, 357.2, 362.0, 366.41, 648.0).

Have at least one diabetes medication dispensing event. A list of insulin and oral hypoglycemic medications is found on the NCQA website.

Numerator: Adults within the denominator who had a hemoglobin A1c test (procedure code 83036) during the measurement year.

Rates: One rate, including all adults, is calculated for this measure.