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Outcomes of Care for Iowa Medicaid Managed Care Enrollees. State Fiscal Year 2007. Final Report to the Iowa Department of Human Services

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Final Report to the
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State Fiscal Year 2007

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Introduction

In June, 2007, the Commonwealth Fund released a report entitled, "Aiming Higher: Results from a State Scorecard on Health System Performance." The report ranked states' health care performance based upon four areas: access, quality, potentially avoidable use of hospitals and costs of care, and healthy lives. Iowa was ranked second overall and was the only state to rank in the top 25 percent on each of the four measures.[1]

Coupling the HEDIS measures and CAHPS survey results with the Commonwealth report outcomes provides additional information for determining how the state performs with regard to the health care system, in general, and the Medicaid program specifically. For the past five years the results of eight outcome measures encompassing children and adults, and preventive, chronic and acute care have been reported by the University of Iowa Public Policy Center (PPC). The PPC is the independent evaluator for the Medicaid managed care programs and assists the state in an effort to understand the process of care within the Medicaid program. Seven of the eight measures are recommended by the Centers for Medicare and Medicaid, while the eighth, annual dental visit, is used in recognition of the challenges found in providing dental care to Medicaid-enrolled children and adults.

For the outcome assessment for SFY2007, we evaluated the following outcomes:

- Well-child visits in the first 15 months of life
- Well-child visits in the third, fourth, fifth and sixth years of life
- Annual dental visit
- 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

This report will incorporate the results from the past five years on selected measures. In addition, we will include any special analyses that have been performed over time. For example, this year we were

[1] http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=494551

able to include foster children in the dental visit measure. As we look across the results for the past five years, it is important to remember that the Medicaid managed care programs have been changing. At the end of state fiscal year (SFY) 2004, John Deere, a Medicaid HMO, ceased the enrollment of Medicaid eligible individuals, as did Iowa Health Solutions during SFY 2005. Shifts in enrollment to Coventry HMO, MediPASS and the traditional Fee-for-Service (FFS) program may have affected the rates over time in ways that we are unable to quantify.

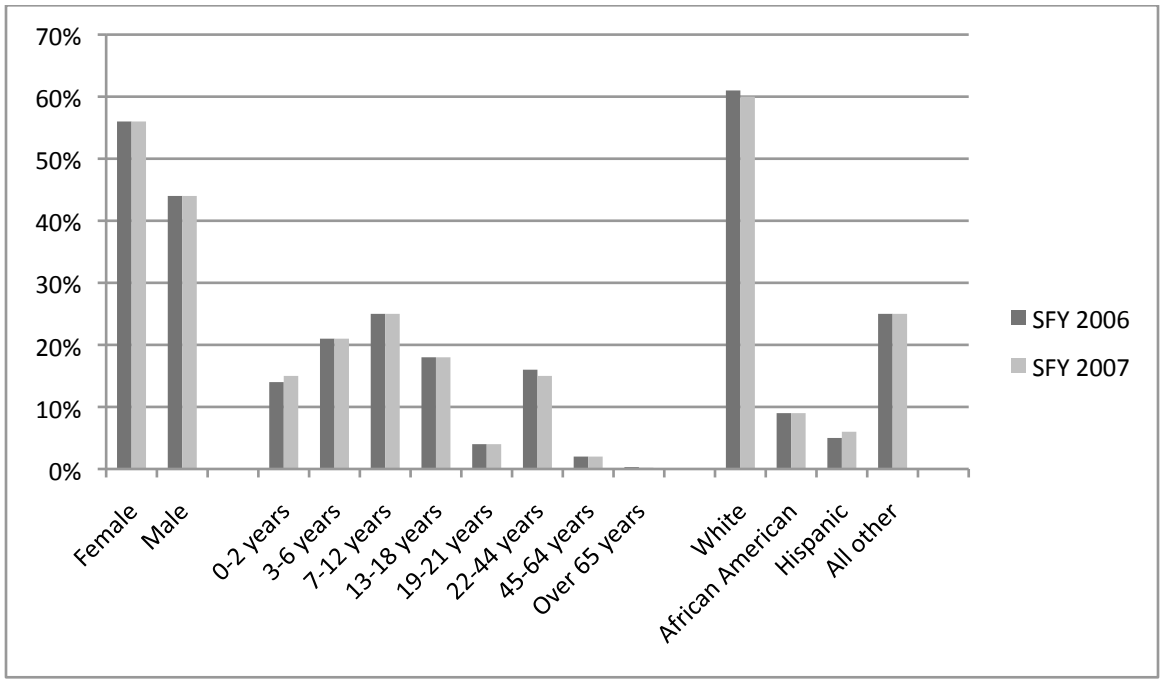
Despite the limitations of claims, encounter and enrollment data and the changes in the program over time, the results from the outcomes analyses provide a long-term view of specific measures within the Medicaid managed care programs. This long view allows us to determine whether the rates are remaining the same, decreasing or increasing, providing information that is critical to long-term program management and enrollee health.

Eligibility

The outcome measures evaluated in this report are computed for the population of Medicaid enrollees eligible for one of the managed care options, either MediPASS or Coventry HMO. Enrollees eligible for managed care are income eligible and live in a county containing one of these three options. Some counties do not have a managed care option available because providers will not participate in these programs. In addition, some counties may have a managed care option but it is not available to everyone within the county due to geographic constraints. In these cases, enrollees eligible for managed care are retained in the Fee for Service (FFS) option. Within our report, three groups, MediPASS, HMO, and FFS, are compared across the outcome measures. Enrollees are included in the measures in accordance with the protocols developed the National Committee on Quality Assurance (NCQA). The protocols vary by measure so that not all enrollees are included in all measures. Please see Appendix F for measure protocol specifications.

Figure 1 indicates the percent of enrollees by age, gender and race for SFY 2006 and SFY 2007 who were enrolled for at least 11 months in one of the three income-eligible programs. Of 303,398 enrollees who were income eligible during SFY 2007, 196,540 were eligible for at least 11 months. Because disclosing race is optional for Medicaid enrollees, it is difficult to determine the exact race distribution. The demographics of the Medicaid enrollees who are eligible for at least 11 months during the measurement year have remained unchanged from last year.

Figure 1 Comparisons of demographics for Medicaid enrollees who were eligible for at least 11 months in the measurement year, SFY 2006 and SFY 2007 in MediPASS, HMO or FFS



Outcome measures

Well-child visits in the first 15 months of life

Current recommendations from the American Academy of Pediatrics and the Iowa Department of Public Health Early Periodic Screening, Diagnosis and Treatment (EPSDT) schedules recommend that children have at least 8 visits during the first 15 months of life[2]. 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 2007 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

		FFS	MediPASS	HMO	Total
0 visits	Number	192	720	23	964
	%	9.7%	11.0%	8.3%	10.6%
1 visit	Number	113	311	15	439
	%	5.0%	4.8%	5.4%	4.8%
2 visits	Number	142	378	18	538
	%	6.3%	5.8%	6.5%	5.9%
3 visits	Number	202	548	30	780
	%	8.9%	8.4%	10.8%	8.6%
4 visits	Number	311	841	39	1191
	%	13.7%	12.9%	14.1%	13.1%
5 visits	Number	436	1334	52	1822
	%	19.2%	20.4%	18.8%	20.0%
6 or more visits	Number	845	2410	100	3355
	%	37.2%	36.8%	36.1%	36.9%
Total	Number	2270	6542	277	9089
	%	100.0%	100.0%	100.0%	100.0%

[2] 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 calculated the proportion of children who obtained each visit within a one month window on either side of the suggested visit time. For example, a child born on July 1, 2006 would be expected to have a 1 month visit on August 1, 2006. If a well-child visit occurred between July 16, 2006 and August 14, 2006 we considered the child to have had a 1 month well-child visit. Figure 2 indicates that the 2 week and 1 month visits are most likely provided as one visit for most children. In addition, the proportion of children receiving a visit falls as they age, indicating a role for reminders from providers to keep parents coming in for the visits. The HMO does have the highest proportion of children coming in for well-child visits during this timeframe, however, they have the lowest number of children enrolled within the Medicaid program.

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

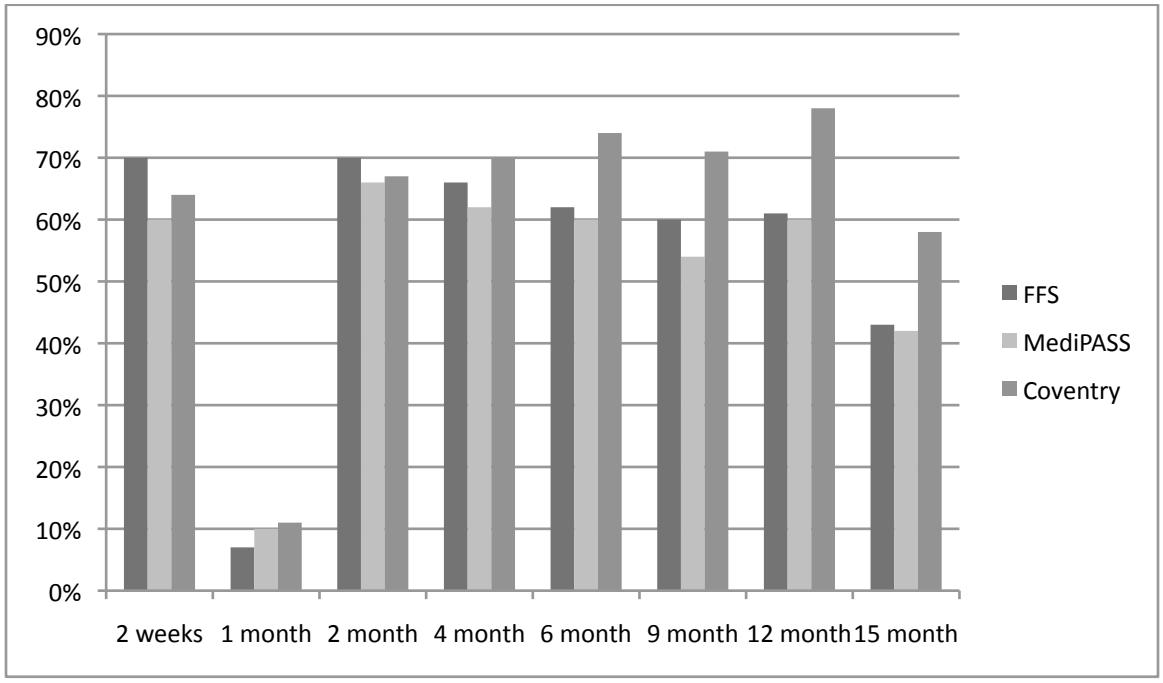
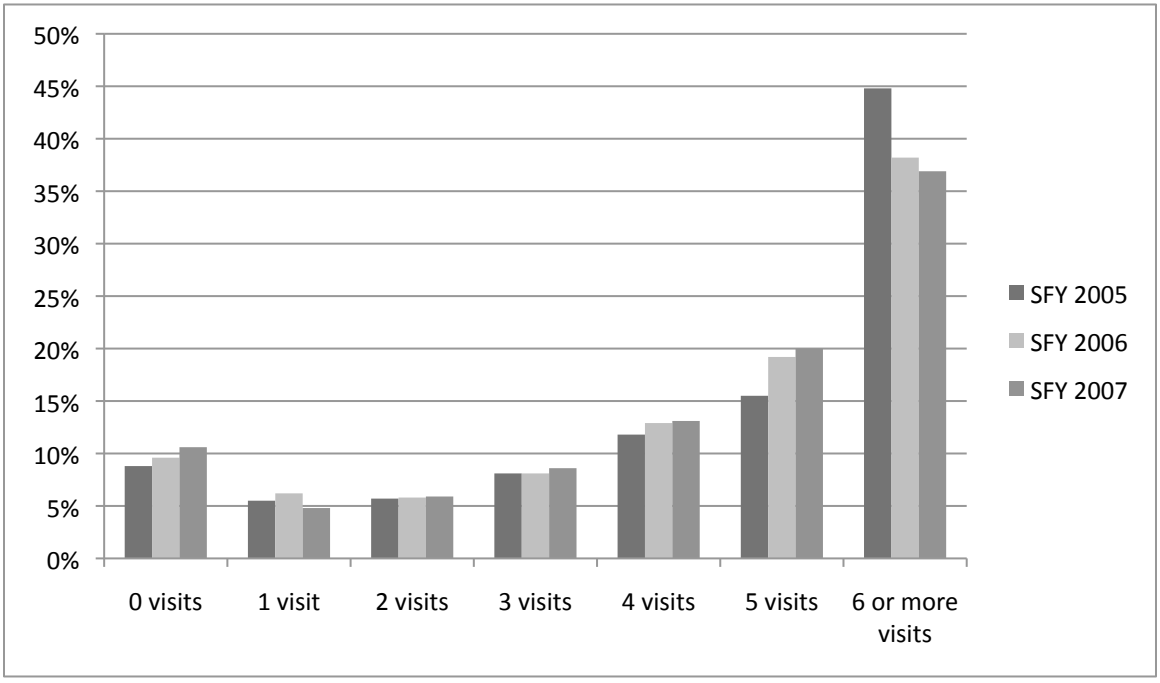


Figure 3 provides information regarding the 5 year trend for well-child visits in the first 15 months of life. For this figure, all the programs are combined to simplify the analysis. Though the proportion of children with six or more well-child visits is highest with regard to number of visits, this proportion has been falling over time, while the proportion of children with fewer than six visits has been rising. In particular, the proportion of children with zero well-child visits within our claims database has increased. This may reflect either an increase in the number of children who did not get a well-child visit or an increase in the number of children who received a visit at a facility, such as a community health clinic, that does not bill under a CPT code recognizable as a well-child visit under HEDIS protocols.

The recommended performance targets for this population are listed in Appendix A. The performance target for six or more visits should be set at 42%. Though the rate did not fall significantly from SFY 2006 to SFY 2007, the fact that it did not increase should provide an impetus for the state to redouble its attempts to find every child a medical home and communicate the importance of regular well-child visits to providers and parents alike.

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

During early childhood, three to six years of age, annual well-child visits are recommended to address issues of mobility, developmental milestones, added health risks, and anticipatory guidance.

We included all children who turned three, four, five, or six years of age during SFY 2007 and were enrolled for at least 11 months during this period in the denominator. Children who had a well-child visit as indicated by a procedure code or diagnosis code were included in the numerator. Table 3 indicates the proportion of children that got a well-child visit by program and age. Rates for SFY 2007 are lowest for the HMO with only 61% of all children three to six years of age receiving a well child visit annually.

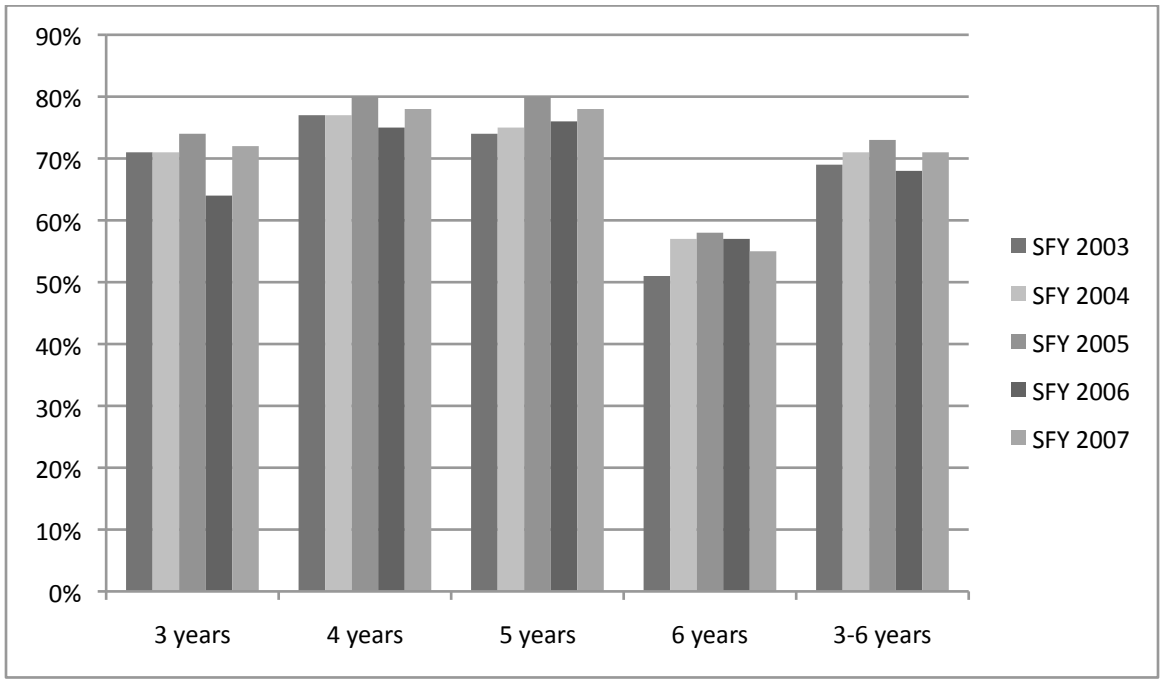
Table 2. Proportion of children receiving a well-child visit by program and age, SFY 2007

Age		FFS	MediPASS	HMO
3 years	Number	1499	4584	137
	%	71%	73%	59%
4 years	Number	1584	4589	135
	%	77%	78%	74%
5 years	Number	1480	4419	122
	%	78%	78%	66%
6 years	Number	1067	3026	95
	%	56%	55%	47%
3-6 years	Number	5630	16618	489
	%	71%	71%	61.0%

Figure 4 provides a visual representation of the rates over the last 5 years by age and year. The proportion of children receiving a well-child visit increased for all but six year olds from SFY 2006 to SFY 2007. However, the general pattern of fewer children having a well-child visit in the six year old group remained. The SFY 2007 combined rate for all children of 70.8% is only one percent below the rate for Wellmark (71.8%), leading us to conclude that children enrolled in Medicaid are receiving well-child care at rates comparable to privately insured children. The performance rate targets for children three to five years of age should be set at 75%, while the performance rate target for children six years of age should be set at 65%.

Over the past few years, rates have consistently shown that the proportion of children getting a well-child visit drops significantly for six year olds. Up until children enter the public school system they are required to have immunizations at various times, without these immunizations children are not allowed to enter public school. However, once they have entered public school it appears that the import of the well-child visit is reduced. Partnering with the schools to require well-child visits at regular intervals may be one method for increasing the well-child rates.

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



Annual dental visit

Regular dental visits are important, not just for oral health, but for the health of the whole body. Though it is recommended that children begin to see a dentist as early as age 6 months, most children will not access any dental services until they are at least three years old. Early access can ensure a proper understanding of oral hygiene, early identification of risks for decay, and counseling regarding nutrition and fluoridation. As children age, dental visits continue to provide an opportunity to monitor hygiene and treat oral disease, as well as, to provide anticipatory guidance. We have included foster children in this measure to help us understand how this vulnerable population compares to our Medicaid managed care population. Children in foster care may be at greater than normal risk for oral health problems due to abuse or neglect, making their access to dental services even more critical than for the general population.

All dental care in the Iowa Medicaid program is provided through the traditional fee-for-service approach, with care provided by any dentists with an Iowa Medicaid provider number, willing to provide services at Iowa Medicaid reimbursement rates. There is no managed dental care in Iowa, including enrollees in Coventry and MediPASS.

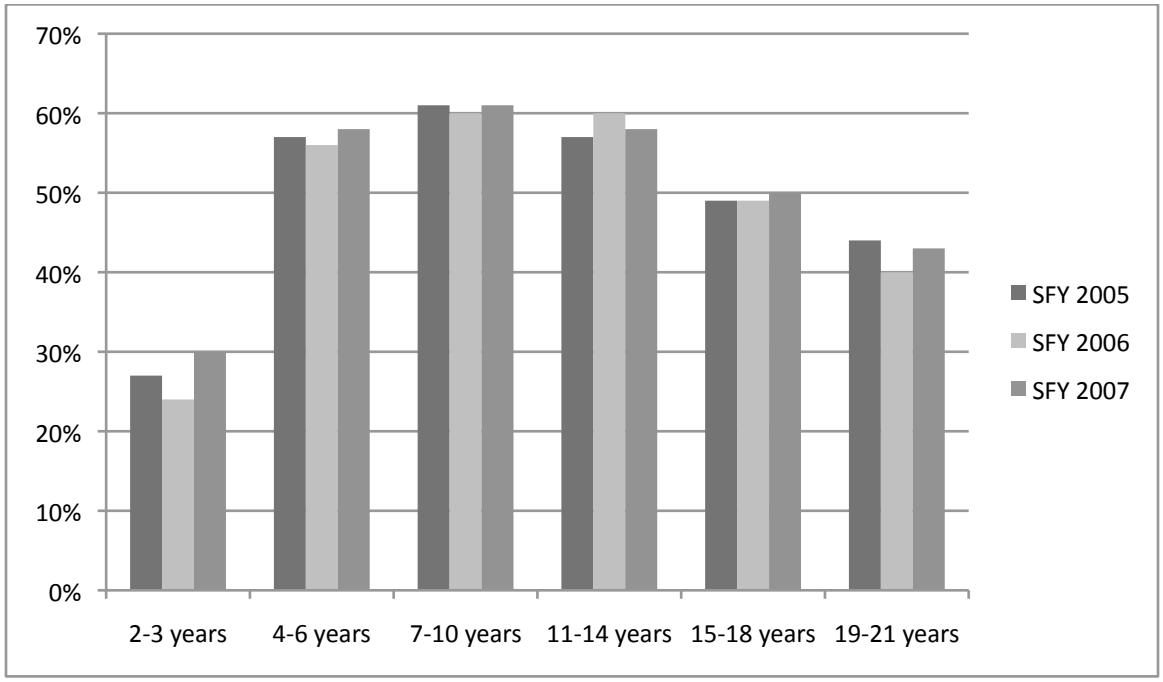
Within the Medicaid managed care population and the population of children in foster care, children ages two to three years have the lowest likelihood of having an annual dental visit. Within the HMO no age group has a proportion greater than 50% with an annual dental visit, while for MediPASS and FFS most of the age groups have over 50% of the children and adolescents accessing dental services. When comparing children in Medicaid managed care to foster children there are two different trends evident. For children in Medicaid managed care, the proportion with an annual dental visit falls as they age, whereas for children in foster care the proportion rises as they age.

Table 3. Proportion of children and adolescents with an annual dental visit by age and program, SFY 2007

Age		FFS	MediPASS	HMO	Foster Care
2-3 years	Number	1202	3795	81	81
	%	27%	30%	17%	23%
4-6 years	Number	3001	9916	279	103
	%	51%	58%	49%	66%
7-10 years	Number	3668	11618	313	229
	%	55%	61%	48%	76%
11-14 years	Number	2965	8888	235	336
	%	53%	58%	46%	82%
15-18 years	Number	2127	6113	173	728
	%	47%	50%	46%	83%
19-21 years	Number	717	1508	50	N/A
	%	43%	43%	39%	

Over the last three years, the rates have remained relatively stable. Figure 5 provides the rates over time for the MediPASS program, the program with the largest enrollment. The pattern of utilization across ages has not changed over time. Children 7-10 years old are the most likely to receive an annual dental visit, while children 2-3 years old are least likely. The performance targets must be set by age group: 35% for children 2-3 years old, 65% for children 4-6 years old and children 7-10 years old, 60% for adolescents 11-14 years old and adolescents 15-18 years old, and 45% for young adults 19-21 years old. The most effective method for increasing the rates would be the fulfillment of the goal of recent legislation that every child in the Medicaid program have a dental home.

Figure 5. Proportion of children within the MediPASS 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 access. Though the type of care received is not defined, the percentage of children and adolescents that had a practitioner available to see them when the need arose is available. This rate includes well-child visits as well as visits for acute or chronic sick 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 2007, while children and adolescents 7-19 years old had to be eligible for at least 11 months during SFY 2007 and at least 11 months during SFY 2006. We modify this measure to include not only visits to practitioners identified as primary care, but to any practitioner with the understanding that being able to access the system at any point, whether for specialty care or primary care provides an inlet to further services.

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 a overall rate of over 90%. 99% of children 12-24 months within all three programs had access to 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 2007

Age		FFS	MediPASS	HMO
12-24 months	Number	2928	8539	335
	%	99%	99%	99%
25 months-6 years	Number	7602	22550	776
	%	93%	95%	93%
7-11 years	Number	5953	17926	674
	%	91%	93%	92%
12-19 years	Number	6781	19759	652
	%	89%	91%	91%
Total	Number	23264	68774	2437
	%	92%	94%	93%

Use of appropriate medications for people with asthma

In determining the proportion of people who are placed on appropriate medications for their asthma we utilized the only disease specific measure in the current HEDIS set relevant to a Medicaid population. Though HEDIS has many disease specific measures, most are not appropriate for children or young women, the majority of the managed care population. This measure applies to young and old alike and is not gender specific, making it perfect for a snapshot on chronic care for Medicaid enrollees.

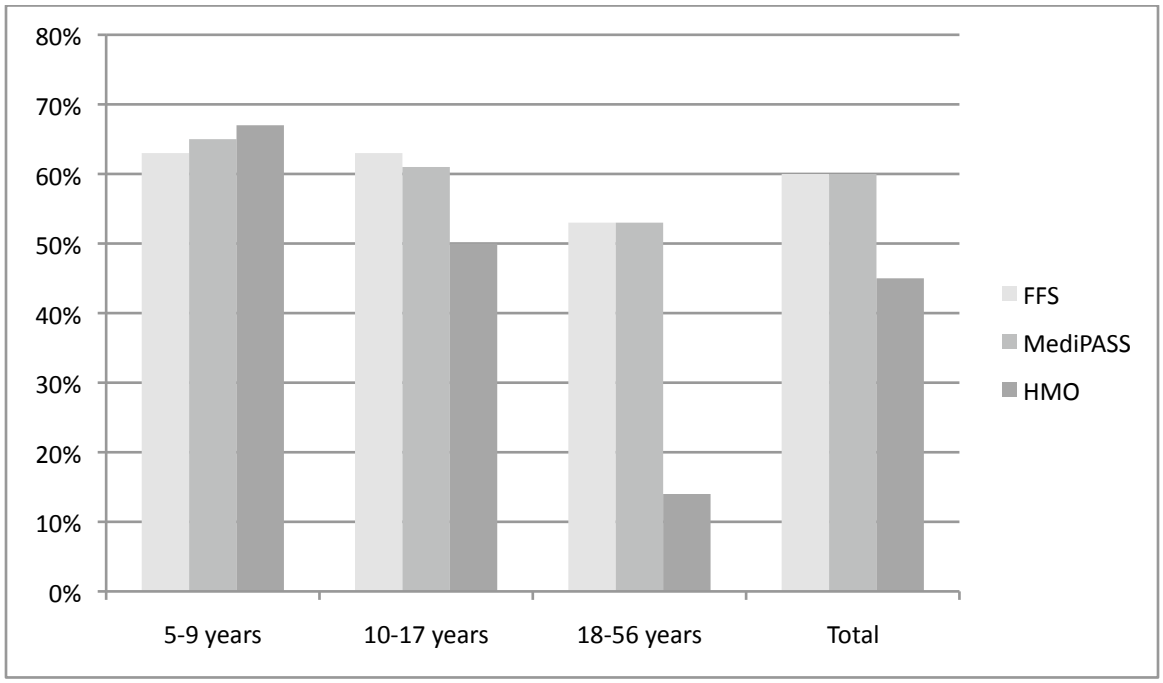
The denominator for this measure consists of individuals who have been enrolled for at least 11 months during SFY 2007 and at least 11 months during SFY 2006 and met the case finding criteria for persistent asthma (see Appendix F). The numerator consists of individuals within the denominator who were prescribed primary asthma therapy. Though we have calculated this measure for over five years, it changes every year due to changes in therapies. Therefore, though the rates for all five years are included in the appendices, comparison charts or graphs are not helpful. Table 5 provides the proportion of children and adults with persistent asthma by program. The rates were consistent across both program and age group with approximately 1% of enrollees having persistent asthma.

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

Age		FFS	MediPASS	HMO
5-9 years	Number	76	202	9
	%	1%	1%	1%
10-17 years	Number	72	199	4
	%	1%	1%	1%
18-56 years	Number	79	160	7
	%	1%	1%	1%
Total	Number	227	561	20
	%	1%	1%	1%

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 HMO who are receiving appropriate medications for asthma. Because the numbers of children and adults with asthma are quite low in the HMO group; less than 10 in each group, we need to interpret the results with great care. One or two individuals without record of the appropriate medications can change the proportion by over 12%, therefore, though the rates for the HMO are provided, they are not helpful for outcome purposes. Performance target rates for this measure may be set at 75% for all age groups, however, the HMO should not be held to these targets due to the small population of people with persistent asthma.

Figure 6. Proportion of children and adults using appropriate medications for asthma, SFY 2007



Adults' access to preventive/ambulatory health services

Though adults do not comprise a large share of the Medicaid managed care eligible population, they are still an important population to be considered. It is imperative that this population 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 2007. The numerators for the rates include the adults in the denominator who had at least one preventive or ambulatory visit during SFY 2007. Adults 65 years of age and older are not included in this report as they comprise less than 1% of the Medicaid managed care population. 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 2007

Age		FFS	MediPASS	HMO
20-44 years	Number	6012	10801	473
	%	87.0%	88.8%	94.0%
45-64 years	Number	698	1056	30
	%	77.4%	86.1%	78.9%

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, 2006 and May 5, 2007, 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 2006 and 5 May 2007 there were 12,732 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 68.9% in SFY 2007, compared with 68.6% in SFY 2006. Between 2005 and 2006 the HEDIS definition used to determine prenatal care changed slightly. The new definition expanded the code base used to identify a prenatal visit and also relaxed the conditions placed on the codes to qualify as a prenatal visit. The result of these changes increases the number of women classified as having received early prenatal care. Therefore rates in previous reports are no longer directly comparable to the current estimates.

Women who had bundled prenatal care codes were far more likely to have received early prenatal care than those without bundled care (78.9% c.f. 24.0%). 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 (81.1% c.f. 74.3%). 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 declined from SFY 2006 to SFY 2007 from 38.4% to 34.4%. 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 2007 would be 86.1% and the rate for 2006 would be 84.2%. 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 and SFY 2007

Enrollment period	Prenatal care not bundled	Bundled prenatal care	Total
Continuously enrolled for first trimester			
2007	36.9%	88.1%	81.1%
2006	45.7%	90.3%	81.4%
Last enrollment segment commenced on or between 219 and 279 days prior to the EDD			
2007	25.9%	83.8%	74.3%
2006	31.7%	86.1%	74.1%
Last enrollment segment commenced less than 219 days prior to the EDD			
2007	15.3%	61.5%	49.9%
2006	14.9%	65.6%	51.1%
Total			
2007	24.0%	78.9%	68.9%
2006	28.5%	81.1%	68.6%

Table 8. Rates of postpartum care, SFY 2006 and SFY 2007

Year	Postpartum care not bundled	Bundled Postpartum care	Total
2007†	33.3%	34.6%	34.4%
2006†	39.0%	38.2%	38.4%

† 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 group. Rates of prenatal care ranged from 66.2% among the fee-for-service group to 76.5% for the HMO group. Postpartum care rates ranged from 32.7% for MediPASS to 55.4% for the HMO group. The performance targets for prenatal and postpartum care should be set at 55% for all programs.

Table 9. Rates of prenatal care by program, SFY 2006 and SFY 2007

Program	2007	2006
HMO	76.5%	67.2%
MediPASS	69.9%	70.4%
Fee-for-service	66.2%	65.0%

Table 10. Rates of postpartum care by program, SFY 2006 and SFY 2007

Program	2007†	2006†
HMO	55.4%	42.4%
MediPASS	32.7%	36.1%
Fee-for-service	35.9%	46.8%

† 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 2007. The numerator consists of all enrollees in the denominator with hemoglobin A1c testing done during SFY 2007. The proportion of enrollees with diabetes that had hemoglobin A1c testing is shown in Table 11 by program. The proportion of adults with testing is highest in MediPASS and lowest in the HMO, however, due to the small numbers of enrollees identified with diabetes in the HMO population (38), the rate should be interpreted with great care.

Table 11. Proportion of adults with diabetes that had a Hemoglobin A1c test, SFY 2007

Age		FFS	MediPASS	HMO
18-75 years	Number	220	500	22
	%	61%	73%	58%

Appendix A: Summary of Outcomes by managed care plan, SFY 2007

Measure	Coventry	MediPASS	FFS	Performance Target
Well-child visits in the first 15 months of life				
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%
Well-child visits in the third, fourth, fifth and sixth year of life				
Visit in the 3rd year of life	58.5%	72.9%	71.3%	75.0%
Visit in the 4th year of life	73.8%	78.0%	76.7%	75.0%
Visit in the 5th year of life	65.6%	78.1%	77.7%	75.0%
Visit in the 6th year of life	47.0%	55.0%	55.7%	65.0%
Visit in 3rd-6th years of life	60.7%	71.2%	70.5%	68.0%
Annual dental visit				
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%
Children's and adolescents' access to primary care practitioners				
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%
Use of appropriate medications for people with asthma				
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%
Adult's access to preventive/ambulatory health services				
20–44 years old	94.0%	88.8%	87.0%	90.0%
45–64 years old	78.9%	86.1%	77.4%	90.0%
Prenatal and postpartum care				
Prenatal care	76.5%	69.9%	66.2%	75.0%
Postpartum care	55.4%	32.7%	35.9%	75.0%
Comprehensive diabetes care				
Hemoglobin A1c	57.9%	72.7%	60.9%	75.0%

Appendix B: Summary of Outcomes by managed care plan, SFY 2006

Measure	Coventry	MediPASS	FFS
Well-child visits in the first 15 months of life			
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%
Well-child visits in the third, fourth, fifth and sixth year of life			
Visit in the 3rd year of life	48.6%	65.3%	63.3%
Visit in the 4th year of life	55.6%	75.4%	74.1%
Visit in the 5th year of life	53.8%	77.6%	74.8%
Visit in the 6th year of life	35.6%	58.2%	55.6%
Visit in 3rd-6th years of life	48.3%	69.3%	67.0%
Annual dental visit (new categories)			
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%
Children's and adolescents' access to primary care practitioners			
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%
Use of appropriate medications for people with asthma			
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%
Adult's access to preventive/ambulatory health services			
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%

N/A-No rate provided in NCQA audited means, percentiles and ratios

Appendix C: Summary of Outcomes by managed care plan, SFY 2005

Measure	Coventry	MediPASS	FFS	IHS to MediPASS	IHS to FFS
Well-child visits in the first 15 months of life					
0 visits	2.1%	11.9%	8.1%	1.9%	2.0%
1 visit	3.8%	6.4%	5.0%	3.7%	2.6%
2 visits	4.3%	5.8%	6.7%	4.8%	5.1%
3 visits	9.0%	7.3%	8.3%	10.5%	7.5%
4 visits	14.5%	11.3%	12.0%	13.3%	11.4%
5 visits	21.8%	15.0%	15.2%	14.2%	19.1%
6 or more visits	44.4%	42.2%	44.7%	51.5%	52.3%
Well-child visits in the third, fourth, fifth and sixth year of life					
Visit in the 3rd year of life	73.2%	76.6%	74.2%	76.2%	82.7%
Visit in the 4th year of life	79.0%	80.1%	78.7%	79.9%	87.8%
Visit in the 5th year of life	79.7%	81.2%	77.3%	80.0%	85.2%
Visit in the 6th year of life	31.2%	63.5%	55.5%	54.5%	57.4%
Visit in 3rd-6th years of life	66.9%	74.8%	71.6%	73.1%	80.4%
Annual dental visit (new categories)					
2–3 years old	17.8%	26.6%	26.8%	28.9%	32.1%
4–6 years old	55.2%	57.4%	52.7%	56.9%	61.5%
7–10 years old	56.9%	61.1%	54.3%	58.8%	60.0%
11–14 years old	50.9%	56.9%	52.0%	54.2%	55.6%
15–18 years old	49.4%	49.4%	47.1%	45.0%	50.5%
19-21 years old	41.4%	43.5%	41.0%	38.8%	41.1%
Annual dental visit (old categories)					
1–3 years old	11.8%	19.0%	19.5%	20.3%	23.6%
4–6 years old	55.2%	57.4%	52.7%	56.9%	61.5%
7–11 years old	55.9%	60.8%	54.4%	58.7%	59.5%
12–15 years old	50.2%	54.6%	51.3%	51.0%	53.9%
16–18 years old	49.8%	49.3%	45.1%	45.0%	50.5%
Children's and adolescents' access to primary care practitioners					
12–24 months old	99.6%	99.2%	97.2%	99.2%	100.0%
2–6 years old	86.8%	93.9%	90.4%	92.6%	93.8%
7–11 years old	88.3%	91.2%	89.4%	91.7%	93.1%
12–19 years old	86.9%	91.9%	89.9%	91.4%	94.1%
Combined	89.2%	93.3%	90.7%	93.1%	94.7%
Use of appropriate medications for people with asthma					
5–9 years old	57.1%	92.4%	95.7%	76.9%	80.0%
10–17 years old	100.0%	95.1%	90.0%	78.4%	78.9%
18–56 years old	80.0%	85.2%	81.0%	84.8%	81.0%
Combined	77.3%	91.4%	88.1%	79.5%	80.0%
Adult's access to preventive/ambulatory health services					
20–44 years old	87.8%	85.1%	84.5%	84.3%	90.7%
45–64 years old	88.2%	85.3%	62.3%	84.9%	85.7%
Prenatal and postpartum care					
Prenatal care	43.1%	65.8%	58.1%	55.3%	52.4%
Postpartum care	52.7%	35.3%	36.1%	23.5%	25.2%
Comprehensive diabetes care					
Hemoglobin A1c	54.3%	33.9%	28.5%	40.6%	60.0%

Appendix D: Summary of Outcomes by managed care plan, SFY 2004

Measure	John Deere	Coventry	Iowa Health Solutions	MediPASS
Well-child visits in the first 15 months of life				
0 visits	3.1%	0.0%	1.0%	0.2%
1 visit	8.5%	0.0%	2.6%	0.7%
2 visits	6.3%	4.3%	7.1%	2.0%
3 visits	11.6%	14.9%	13.6%	2.6%
4 visits	15.9%	19.1%	23.3%	6.7%
5 visits	19.8%	38.3%	26.4%	10.1%
6 or more visits	34.8%	23.4%	26.0%	77.7%
Well-child visits in the third, fourth, fifth and sixth year of life				
Visit in the 3rd year of life	53.2%	72.5%	64.3%	76.4%
Visit in the 4th year of life	65.4%	80.2%	70.3%	80.8%
Visit in the 5th year of life	64.6%	82.8%	63.8%	80.8%
Visit in the 6th year of life	38.2%	20.1%	44.3%	63.5%
Visit in 3rd-6th years of life	56.2%	75.3%	61.3%	75.6%
Annual dental visit				
1–3 years old	28.0%	11.7%	21.2%	19.7%
4–6 years old	64.4%	55.4%	59.4%	60.9%
7–11 years old	62.3%	51.1%	59.6%	64.0%
12–15 years old	53.9%	52.4%	52.0%	58.1%
16–18 years old	46.4%	54.8%	45.1%	50.2%
Children's and adolescents' access to primary care practitioners				
12–24 months old	98.1%	100.0%	97.6%	92.4%
2–6 years old	87.1%	85.7%	88.7%	83.0%
7–11 years old	86.0%	88.8%	86.9%	82.6%
12–19 years old	89.7%	88.0%	84.6%	81.4%
Use of appropriate medications for people with asthma				
5–9 years old	40.6%	50.0%	63.3%	79.9%
10–17 years old	52.9%	75.0%	58.0%	70.6%
18–56 years old	50.0%	20.0%	55.3%	55.1%
Combined	47.8%	38.9%	57.8%	69.3%
Adult's access to preventive/ambulatory health services				
20–44 years old	85.1%	88.8%	88.7%	81.0%
45–64 years old	78.8%	81.3%	86.5%	85.5%
Prenatal and postpartum care				
Prenatal care	63.0%	55.5%	63.0%	63.8%
Postpartum care	—	—	—	—
Comprehensive diabetes care				
Hemoglobin A1c	84.8%	90.0%	20.0%	27.9%

Appendix E: Summary of Outcomes by managed care plan, SFY 2003

Measure	John Deere	Coventry	Iowa Health Solutions	MediPASS
Well-child visits in the first 15 months of life				
0 visits	1.5%	0.0%	0.2%	0.3%
1 visit	8.7%	1.1%	4.0%	1.8%
2 visits	9.0%	2.2%	5.2%	2.2%
3 visits	10.0%	9.7%	8.9%	4.3%
4 visits	12.6%	29.0%	12.6%	6.9%
5 visits	15.9%	24.7%	19.1%	11.6%
6 or more visits	42.2%	33.3%	50.1%	73.0%
Well-child visits in the third, fourth, fifth and sixth year of life				
Visit in the 3rd year of life	56.1%	89.4%	73.4%	77.6%
Visit in the 4th year of life	62.7%	85.3%	78.7%	82.8%
Visit in the 5th year of life	58.8%	73.6%	75.9%	81.7%
Visit in the 6th year of life	37.8%	55.7%	43.3%	61.2%
Visit in the 3rd-6th years of life	53.9%	76.7%	68.9%	76.2%
Annual dental visit				
1–3 years old	21.9%	18.0%	21.3%	18.7%
4–6 years old	62.7%	54.3%	57.2%	54.3%
7–11 years old	62.9%	50.9%	57.9%	63.5%
12–15 years old	56.2%	46.5%	51.3%	57.0%
16–18 years old	47.5%	47.0%	45.8%	51.2%
Children's and adolescents' access to primary care practitioners				
12–24 months old	71.9%	91.0%	90.0%	92.8%
2–6 years old	59.2%	69.7%	73.2%	83.6%
7–11 years old	75.2%	72.7%	76.9%	82.7%
12–19 years old	72.3%	77.1%	74.5%	82.1%
Use of appropriate medications for people with asthma				
5–9 years old	55.6%	33.3%	55.8%	58.4%
10–17 years old	51.5%	25.0%	62.7%	57.1%
18–56 years old	55.4%	42.9%	40.5%	56.9%
Combined	54.2%	33.3%	54.7%	57.5%
Adult's access to preventive/ambulatory health services				
20–44 years old	69.5%	88.8%	87.2%	84.6%
45–64 years old	63.6%	70.6%	87.7%	83.4%
Prenatal and postpartum care				
Prenatal care	60.4%	53.5%	63.5%	65.2%
Postpartum care	—	—	—	—
Comprehensive diabetes care				
Hemoglobin A1c	51.3%	46.2%	48.2%	28.7%

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 diabetes18–64 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.