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Evaluating the Iowa Medicaid Managed Care Program: Outcome of Care. Final Report to the Iowa Department of Human Services. January 1, 1999-December 31, 2000

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Background

Preface

Over the last five years the Iowa Department of Human Services (IDHS) has incorporated outcome measures from the Healthplan Employer Data and Information Set (HEDIS)[1] as part of the quality assurance activities within the Iowa Medicaid program. The University of Iowa Public Policy Center has helped to identify, adapt, and determine the rates for these HEDIS outcomes measures annually. This report provides information regarding annual Medicaid outcomes for the period 1998-2000. There are 14 measures across the three years, although not necessarily in each year. Measures that were used in more than one year allow for year-to-year comparisons. By comparing rates over time we should be able to determine whether the outcomes of care are improving for the Medicaid population. In particular, with intra-HMO comparisons we can determine whether the managed care plans are improving their care over time.

For some measures we also have national level data for comparison. The American Public Human Services Association (APHSA) undertook a project funded by the Commonwealth Fund to analyze data within the National Committee for Quality Assurance to determine rates for specific HEDIS measures for the Medicaid population. These analyses provide national benchmarking data that allow Iowa insights into how the state's Medicaid program compares with programs in other states. The APHSA Medicaid HEDIS Database Project, Report for the Third year by Lee Partridge was released in December 2001.Over the last five years the Iowa Department of Human Services (IDHS) has incorporated outcome measures from the Healthplan Employer Data and Information Set (HEDIS)[2] as part of the quality assurance activities within the Iowa Medicaid program. The University of Iowa Public Policy Center has helped to identify, adapt, and determine the rates for these HEDIS outcomes measures annually. This report provides information regarding Medicaid rates for the following HEDIS measures, ages and calendar years:

Information and conclusions presented in this report are the responsibility of the authors and do not represent the views of the Iowa Department of Human Services, The CMS, the health plans or the University of Iowa.

Methods

Following established HEDIS criteria, only those enrollees eligible for at least 11 months of the year are included in these analyses. It is expected that enrollees eligible for the entire year have the greatest opportunity to utilize services as compared with those

[1] National Committee on Quality Assurance. The Healthplan Employer Data and Information Set (HEDIS). http://www.ncqa.org/Programs/HEDIS/. Most recently accessed November 15, 2002. Internet.
[2] National Committee on Quality Assurance. The Healthplan Employer Data and Information Set (HEDIS). http://www.ncqa.org/Programs/HEDIS/. Most recently accessed November 15, 2002. Internet.

eligible for only part of the year. It is also expected that we will be capturing the entire health care utilization experience for those who were eligible for at least 11 months. Those who were eligible for a shorter time period may have sought and received care that was not recorded in the claims and encounter databases during the months they were not enrolled in the program. From a performance measurement and quality assurance perspective, this provides utilization rates that are most fair when holding health plans accountable for the care provided to their covered populations.

Children and adolescents

1) Complex Newborns – 2000
2) Newborn discharges – 2000
3) Newborn length of stay – 1998, 2000
4) Well child and adolescent visits
    - 3-6 years – 2000, National
    - 3,4,5,6 years – 2000
    - 7-11 years – 2000
    - 12-19 years – 2000, National
5) Child and adolescent ambulatory care visits
    - 1 year old – 1999
    - 2-6 years –1999
    - 7-11 years –1999
    - 12-15 years –1999
    - 16-18 years –1999
6) Child and adolescent dental visits
    - 0-3 years – 2000
    - 4-6 years – 2000
    - 7-11 years – 2000
    - 12-15 years – 2000
    - 16-18 years – 2000
7) Tonsillectomy rate
    - 0-9 years – 1999
    - 10-19 years – 1999
8) Myringotomy rate
    - 0-4 years – 1999
    - 5-19 years – 1999

Adults

9) Maternal length of stay
10) Cesarean section rate, 2000
11) Well adult visits
    - 19-24 years – 2000
    - 25-34 years – 2000
    - 35-44 years – 2000
    - 45-54 years – 2000
    - 55-64 years – 2000
12) Breast cancer screening
    - 32-41 years – 1999, 2000
    - 42-51 years – 1999, 2000
    - 52-69 years – 1999, 2000
13) Cervical cancer screening
    - 21-64 years –1999, 2000
14) Adult dental visits
    - 19-24 years – 2000
    - 25-34 years – 2000
    - 35-44 years – 2000
    - 45-54 years – 2000
    - 55-64 years – 2000

Measures that were used in both years allow for year-to-year comparisons. By comparing rates over time we should be able to determine whether the outcome of care is improving for the Medicaid population. In particular, with intra-HMO comparisons we can determine whether the managed care plans are improving their care over time.

For some measures we also have national level data for comparison. The American Public Human Services Association (APHSA) undertook a project funded by the

Commonwealth Fund to analyze data within the National Committee for Quality Assurance to determine rates for specific HEDIS measures for the Medicaid population. These analyses provide national benchmarking data that allow Iowa insights into how the state's Medicaid program compares with programs in other states. The APHSA Medicaid HEDIS Database Project, Report for the Third year by Lee Partridge was released in December 2001.[3] The measures within the report that can be used for comparisons are:

- Adolescent well care visits
- Well child visits, 3-6 years

These national benchmarks allow us to determine how Iowa's Medicaid outcomes compare to other states. However, before Iowa is compared to national benchmarks the populations that are included in the benchmarking data must be understood. The national benchmarks for the HEDIS data contain a more urban population than Iowa, making comparisons difficult. Also, should Iowa rates for HEDIS outcomes be more favorable than national benchmarks, it is not reasonable to assume that the desired rate as been reached. For example, the national benchmark for well child visits in children three to six years old within Medicaid programs was 52%. Iowa's rate is higher, however, programmatically100% of Iowa's children in Medicaid should obtain a well child visit annually between the ages of three and six.

Although the outcome measures utilized for this report are based on the HEDIS measures adopted nationally for quantifying the outcomes of care in managed care plans, some are modified for use with the data available through the Iowa Medicaid program. The use of administrative data and the need for adjustment to the measures leads us to outline the limitations of the information contained within this report. Since we have access to administrative data only and are not able to augment this data with chart review, we are unable to adjust some measures for information that would be contained within medical charts. For example, HEDIS allows for the exclusion of some enrollees based on prior medical information (e.g., women who have had a double mastectomy may be excluded from the breast cancer screening rates). For the outcome analyses, these enrollees are included in the rates because we are unable to review the chart to determine whether a mastectomy has been performed. In addition, due to varying lengths of time enrolled in the Medicaid program, the administrative data available for each person often does not cover a sufficient period of an individual's health service experience (in this example, the time when a woman may have had a double mastectomy) to exclude such enrollees from the analyses.

There are other limitations inherent in using claims and encounter data for outcomes based research. First, the health services data from the HMOs (encounter records) have a significant lag time between the date of service and the date they are paid. Generally, 95% of claims are adjudicated and paid within 3 months; however, Iowa Health Solutions adjudicates and pays only 90% of claims within 3 months of the date of service. Second,

[3] APHSA report citation

all administrative data contains coding errors and may not have procedure codes or diagnoses that correctly reflect what happened during a given contact with the health system. However, this problem should be minimized as the measures within the HEDIS set utilize widely accepted, well-defined protocols. Finally, HMOs may have differing code sets for the data that we are unable to interpret. In analyzing data for this report we have had problems locating over 2,000 claims for newborn care within specific HMOs. This may be related to individual HMOs coding tendencies that are unknown to both the IDHS and to us as we analyzed this data. Future investigation into this issue by the state is encouraged.

The administrative data, encounter, claims and eligibility files, are furnished to the Public Policy Center under contract with the Iowa Department of Human Services (IDHS) for the completion of these analyses. The University of Iowa houses over 10 years of Medicaid data within a readily accessible dataset. All research has been approved by the University of Iowa Institutional Review Board to ensure that the privacy of all involved is maintained

Newborn Measures

Within this report we provide four outcome measures related to the health of newborn infants and their utilization of services during calendar year 2000: 1) average length of stay, 2) rate of complex newborns 3) the number of newborn discharges per 1,000 member months for female enrollees age 10 through 49 and 4) the number of newborn discharges per 1,000 member months for all adults.

Though we tried to mirror the HEDIS protocol when conducting these analyses, there are differences that should be noted prior to presenting the results. Within the HEDIS measures, newborns are identified by either having a diagnosis code of V30 through V39 or a DRG of 385 through 391. This protocol was followed for the claims data, but encounter data did not include a DRG. Therefore, only the diagnosis codes were used for the encounter data. Also, though there were 12,991 newborns in the Medicaid program in 2000 according to the eligibility files, only 9,869 had independent claims or encounters within the database provided by the managed care plans. Another 1,079 were included in the claim or encounter for the mother. Unfortunately, the rate of missing claims and encounters varies across the plans as indicated in Table 1 making it difficult to assume that the data used to compute rates across plans is comparable.

Table 1. Number of newborns and the rates of missing claims and encounters, 2000

Medical Plan	Total number of newborns	Number of newborns with a claim/encounter (%)	Number of newborns missing claim/encounter (%)
John Deere	2,347	1,966 (84%)	381 (16%)
Iowa Health Solutions	1,557	1,032 (66%)	525 (34%)
United Health Care	177	51 (29%)	126 (71%)
Coventry	126	51 (40%)	75 (60%)
Non-HMO	8,784	7,848 (89%)	936 (11%)
Total	12,991	10,948 (76%)	2,043 (24%)

It is not clear why the rate of missing encounters is so high; however, it is currently being investigated. It may be that plans have not been successful in transmitting this data to the fiscal intermediary, that the fiscal intermediary was unable to read and transmit some of the encounters to the University, or that the protocol for selecting the newborn claims/encounters does not work with this data due to coding differences. Due to these

limitations, the measures are not calculated for United Health Care, Coventry or Iowa Health Solutions.

It was also not possible to calculate a rate for enrollees in the MediPASS program due to the method in which newborns are assigned to the MediPASS program. Newborns are assigned to the fee-for-service program initially and then later placed into MediPASS. We have elected to combine all newborns within the TANF program but not in an HMO (i.e., MediPASS or fee-for-service Medicaid) at birth into a 'non-HMO group'. Since 85% of the newborns within the Medicaid program were born within the John Deere managed care plan or outside the HMOs, we will limit the outcome measures to these two groups. The rate of missing claims/encounters for these two groups is 18%.

Well and complex newborns

For the HEDIS measures, newborns are categorized as either 'well' or 'complex'. Complex newborns are those who have a hospital length of stay of five days or more, are transferred to another hospital or other facility and are unable to be tracked, or those who have expired. Table 2 shows that the percent of complex newborns is the same within the two groups, while Table 3 shows that the rate of newborns per 1,000 female member months is higher in the non-HMO group than in John Deere. These two tables taken together suggest that though the birth rate is higher within the non-HMO group, the percent of complex births is the same.

Table 2. Number and percent of well and complex newborns in John Deere and the non-HMO group, 2000

	Well Newborns (%)	Complex Newborns (%)	Total Newborns
John Deere	1,793 (90%)	173 (9%)	1,966
Non-HMO	7,069 (90%)	779 (10%)	7,848

Table 3. HEDIS newborn discharge rates, 2000

	Newborn Discharges		Newborn Discharges/ 1,000 Adult Female Member Months (10-49)		Newborn Discharges/ 1,000 Adult Member Months (Males and Females)	
	John Deere	Non-HMO	John Deere	Non-HMO	John Deere	Non-HMO
Well	1,793	7,069	11.0	16.1	3.9	5.5
Complex	173	779	1.4	1.9	0.5	0.1
Total	1,966	7,848	12.4	18.1	4.4	6.2

Newborn length of stay

Table 4, showing the average length of stay of newborns suggests that while well newborns have the same average length of stay within John Deere as in the non-HMO group, the average length of stay for complex newborns within John Deere is two days shorter than in the non-HMO group. The decreased length of stay in the HMO group is important because it raises a flag regarding the possible early discharge of sick infants. However, when we look more closely we find that within the HMO, the longest length of stay is 66 days, while within the non-HMO group there are 31 newborns with stays in excess of 66 days. These newborns constitute only 4% of complex newborns with the non-HMO group, but account for 24% of the days that complex newborns spent in the hospital. Once these newborns are removed, the average length of stay for complex newborns within the non-HMO group is 11.89, one day less than for complex newborns in John Deere.

Table 4. HEDIS newborn average length of stay rates, 2000

	Newborn Days		Newborn Days/ 1,000 Adult Member Months (Males and Females)		Average Length of Stay	
	John Deere	Non-HMO	John Deere	Non-HMO	John Deere	Non-HMO
Well	3,766	14,862	8.0	11.5	1.8	1.9
Complex	2,194	11,639	6.3	9.8	12.7	14.9
Total	5,337	25,478	14.3	21.3	2.8	3.3

Newborn length of stay was also computed for the 1998 report. At that time the average length of stay for newborns in John Deere was 2.9 days, while the average length of stay for newborns in the MediPASS program was 3.0. Though the MediPASS population does not coincide completely with the non-HMO group used this year, it does provide us with an estimate of the average length of stay for the non-HMO group at that time. Newborns within the John Deere program had essentially no change in average length of stay when compared with newborns in John Deere in 1998 (2.8 and 2.9 respectively). Newborns within the non-HMO group did experience an increased length of stay when compared to the non-HMO group 2 years ago (3.3 and 3.0 respectively).

Some of the most important measures within HEDIS assess the outcome for newborns. The health of newborns is an indicator of the start that health care plans provide their

young enrollees. Poor birth outcomes may be traced to poor access to prenatal care, inadequate supervision of the mother during pregnancy, or poor counseling for the mother. These areas may be addressed by the plan should the outcome warrant intervention.

Child and Adolescent Measures

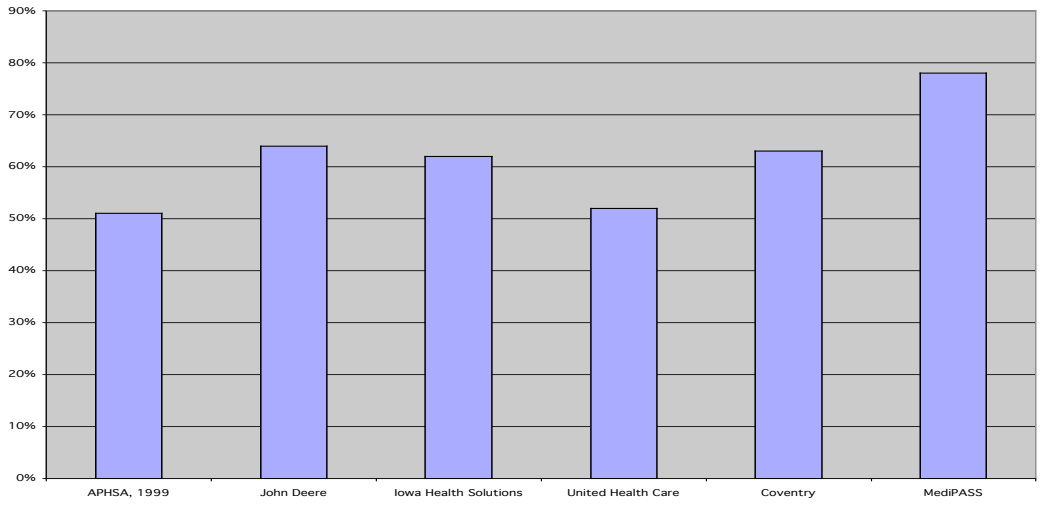
Well child visits

The HEDIS measure for rates of children with a well child visit are divided into three age categories: children ages 3-6, 7-11 and 12-19. According to the Iowa Early and Periodic Screening Diagnosis and Treatment (EPSDT) program periodicity schedule, children should receive seven well child visits by the time they reach one year of age, three visits up to age two, annual visits from age three through six and biannual visits up to age 20.[4] Well child visits are defined as those children who had a diagnosis code of well child exam (V20.2, V70.3, V70.5, V70.6, V70.8, V70.9) or a procedure code indicating a preventive exam (99382-99383, 99392-99393, W0052).

Children ages 3-6

Chart 1 shows the percentage of children ages three through six with at least one well child visit across the Iowa managed care plans and the APHSA national average for Medicaid programs. From this chart we see that all Iowa plans meet or exceed the national average for the rate of children with a well child visit with children in MediPASS most likely and those in UHC least likely to have had a well child visit.

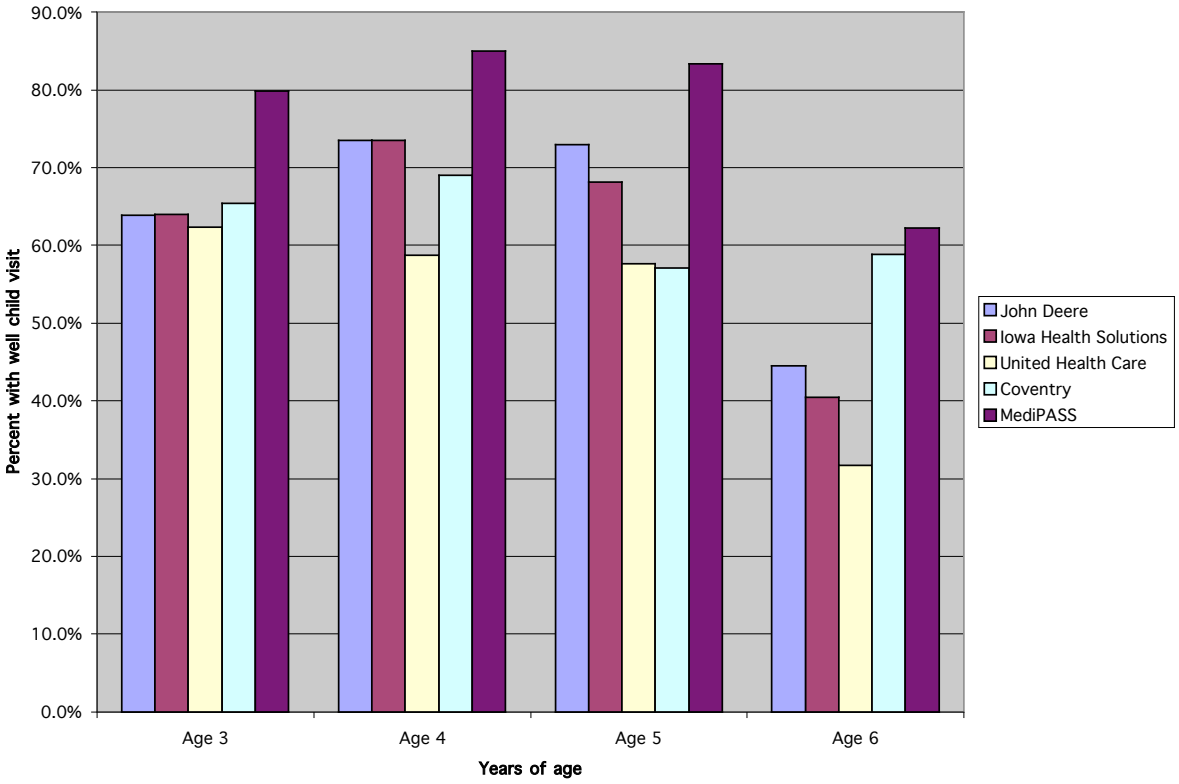
Chart 1. Percent children ages three through six with at least one well child visit in 2000 by managed care plan and compared to national benchmark



[4] Iowa Department of Human Services. Provider Manual, Screening Center. *Screening Components by Age*. Pg. 7. http://www.dhs.state.ia.us/policyanalysis/PolicyManualPages/MedProvider.htm. Most recently accessed November 19, 2002. Internet.

Chart 2 indicates the rates of well child visits broken out by age for this group. The rate of well child visits varies by plan by age with children in the MediPASS program most likely to have a well child or adolescent visit and children in United Health Care least likely to have a well child or adolescent visit for all four age categories. In addition, it appears that once children enter school, age 6, they are much less likely to obtain a well child visit.

Chart 2. Percent of children with at least one well child visit by managed care plan, 2000.



Children ages 7-11

Table 5 lists the percent of children ages seven through eleven who had a well child visit in calendar year 2000. On average, less than one-third of children within the Medicaid managed care plans ages seven through eleven received a well child visit during 2000. This is much lower than for the younger children and continues the decline found in the six year olds.

Table 5. Percent of children ages seven through eleven with at least one well child visit, 2000.

Managed care plan	Percent with well child visit
John Deere	29.6%
Iowa Health Solutions	28.5%
United Health Care	24.7%
Coventry	31.9%
MediPASS	42.5%

Children ages 12-19

As children become adolescents there are many issues such as drugs, smoking, and sexuality that need to be addressed. Many of these issues may be addressed and discussed within the preventive visit. Though it may be difficult for an adolescent to talk with parents about their problems or concerns, a medical provider is in a unique position to listen and advise adolescents. Therefore, the adolescent preventive visit is an important component of medical care. Table 6 indicates the rate of adolescent preventive visits across the managed care plan.

Table 6. Rate of adolescents ages 12 through 19 with at least one preventive visit, 2000.

Managed care plan	Percent with well adolescent visit
John Deere	40.3%
Iowa Health Solutions	39.9%
United Health Care	37.2%
Coventry	43.7%
MediPASS	53.2%

The rate of adolescents with at least one preventive visit during 2000 is higher for every managed care plan than it was for children ages seven through eleven. This increased rate of preventive care among adolescents is most likely due to the requirement of the schools that adolescents participating in sports must have a sports physical. Just as in the younger children we see a drop off in the rate of preventive visits after the required pre-school physical, so also we see an increase in the rate as soon as the school requires a preventive visit for participation in sports. School required health care does increase the rate of preventive care in children. It may be useful to consider other time points within the school career at which a preventive visit should be required in order to participate in school activities.

Though it may be difficult to imagine that all children would be able to obtain an annual or biannual preventive visit, it does seem that a higher rate is attainable. It may be prudent for the IDHS and/or the health plans to educate parents on the importance of the preventive visit, especially as children approach adolescence. Preventive visits do not just address the medical needs of the child, but can also provide an opportunity for anticipatory guidance to parents and children.

Ambulatory care visits for children and adolescents

Table 7 indicates the percent of children within each plan and MediPASS who had at least one ambulatory care visit during 1999. Within the HEDIS measures, this rate is designed to determine the percent of children who saw their primary care provider (PCP) at least once, however this had to be modified for these analyses. The administrative data does not allow us to determine whether the child saw their PCP or some other health care provider. Therefore, we have calculated the percent with an ambulatory care visit, regardless of provider. An ambulatory care visit is defined as any visit with the following procedure codes: 99201-99205, 99211-99215, 99241-99245, 99341-99353, 99381-99385, 99391-99395, W0051, 99401-99404, 99411, 99412, 99420, 99429, 99499, 99432 *or* the following diagnosis codes: V20.2, V70.3, V70.5, V70.6, V70.8, V70.9.

Table 7. Number and percent of children and adolescents with at least one ambulatory care visit, 1999

	MediPASS	John Deere	Iowa Health Solutions	Coventry	United Health Care
Children one year old with an ambulatory visit	1,923	1,446	525	50	60
Number (%)	(95.7%)	(97.8%)	(97.2%)	(96.2%)	(98.4%)
Total children one year old	2,009	1,478	540	52	61
Children ages 2-6 with an ambulatory visit	7,024	4,738	1,514	217	207
Number (%)	(79.7%)	(86.7%)	(84.9%)	(80.7%)	(82.8%)
Total children ages 2-6	8,817	5,463	1,784	269	250
Children ages 7-11 with an ambulatory visit	4,959	3,156	1,061	123	181
Number (%)	(60.8%)	(70.7%)	(69.2%)	(60.6%)	(66.1%)
Total children ages 7-11	8,150	4,463	1,533	203	274
Adolescents ages 12-15 with an ambulatory visit	2,751	1,734	562	83	115
Number (%)	(57.8%)	(71.7%)	(70.0%)	(62.9%)	(71.0%)
Total adolescents ages 12-15	4,763	2,418	803	132	162
Adolescents ages 16-18 with an ambulatory visit	1,413	904	323	45	69
Number (%)	(62.0%)	(73.1%)	(73.9%)	(60.0%)	(73.4%)
Total adolescents ages 16-18	2,278	1,236	437	75	94

Children one year of age were most likely to have had an ambulatory care visit, while those between the ages of 12 and 15 were least likely. All plans performed similarly with the younger children however children in MediPASS and Coventry were less likely to have had an ambulatory visit as they reached age seven, and continuing through the adolescents and young adults.

The decline in visits as the children age parallels the results found for well child visits. The decline in age can in part be related to changes in the periodicity schedule for

preventive visits, with biannual check-ups scheduled for children over age six. Though the percent of children receiving at least one ambulatory care visit is not below 50% in any age category, the low rates raise concerns about possible access to care problems. The lower rate among adolescents may also be a concern since it is during this period of time that adolescents require evaluation and counseling regarding tobacco abuse, substance abuse and sexual activity. Policies need to be developed that encourage anticipatory guidance activities with adolescents. These may also provide incentives for timely preventive visits.

Comparison to calendar year 1998

Findings for the percentage of children and adolescents with an ambulatory care visit in 1999 are similar to those found for this measure in calendar year 1998 analyses (Table 8). The age decline is more pronounced in the 1999 data. Overall, rates for children and adolescents in 1998 are somewhat higher across all ages and plans. To ensure that this is not an ongoing trend toward reduced utilization of ambulatory care services, ambulatory care visit rates should be reassessed in 2001.

Table 8. Percent of children and adolescents with at least one ambulatory care visit, 1998

	MediPASS	John Deere	Iowa Health Solutions	Coventry	United Health Care
Children one year old	97.6%	95.1%	94.5%	94.0%	92.3%
Children ages 2-6	88.3%	86.9%	89.2%	76.8%	79.9%
Children ages 7-11	76.8%	74.6%	74.4%	57.6%	72.1%
Adolescents ages 12-15	78.0%	74.2%	80.2%	75.0%	60.8%

Preventive dental visits for children

In addition to regular preventive medical visits, children are recommended to have regular preventive dental visits. According to the Iowa EPSDT periodicity schedule, children should see a dentist annually at ages one and two and every six months up to age 20.[5] Within the Medicaid managed care program, dental care is considered a "carve out", a service that is not provided within the managed care contract, but rather on a fee-for-service basis through the general Medicaid program. The health plans are thus not held

[5] Iowa Department of Human Services. Provider Manual, Screening Center. *Screening Components by Age*. Pg. 7. http://www.dhs.state.ia.us/policyanalysis/PolicyManualPages/MedProvider.htm. Most recently accessed November 19, 2002. Internet.

accountable for dental utilization. Providing dental care through the same system, regardless of which managed care plan an enrollee chooses, should reduce the disparity in rates of use between plans.

Children ages 1-11

Table 9 shows the rates of preventive dental visits for children during 2000 by managed care plan. A preventive dental visit is defined as a visit with procedure one of the following procedure codes: 00120, 00140, 00150, 00160, 00210-00340, 00415-00999, and 01110-01550.

Table 9. Number and percent of children with a preventive dental visit by managed care plan, 2000

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
1-3 years	413 (12%)	177 (9%)	18 (9%)	10 (5%)	439 (9%)
4-6 years	1,663 (55%)	705 (47%)	79 (45%)	127 (60%)	2,628 (53%)
7-11 years	2,456 (55%)	1,074 (48%)	146 (50%)	140 (50%)	4,427 (56%)

Though at least yearly preventive dental visits are recommended for children by the Iowa EPSDT periodicity schedule and the American Academy of Pediatric Dentists beginning at age one, only 12% of children one to three had such a visit. There are likely many factors that play into this statistic including parental lack of knowledge regarding this guideline, the reluctance of general dentists to see very young children, and the general perception that young teeth will be replaced with permanent and are, therefore, expendable. The percentage of children with a visit rises dramatically in the four to six year-old category with over half of children ages four through 11 seeing a dentist during 2000.

Adolescents ages 12-19

Annual dental visits are expected for children ages 12-19 according to the Iowa EPSDT periodicity schedule. The percent of adolescents receiving at least one preventive dental visit begins at about 50% and falls over time. It is interesting to note however, that they are more likely to have gotten a preventive dental care visit than a preventive medical care visit. This may be accounted for by the guidelines for these two types of care: preventive medical visits are recommended every other year, while preventive dental visits are recommended every six months.

Table 10. Number and percent of adolescents with a preventive dental visit managed care plan, 2000

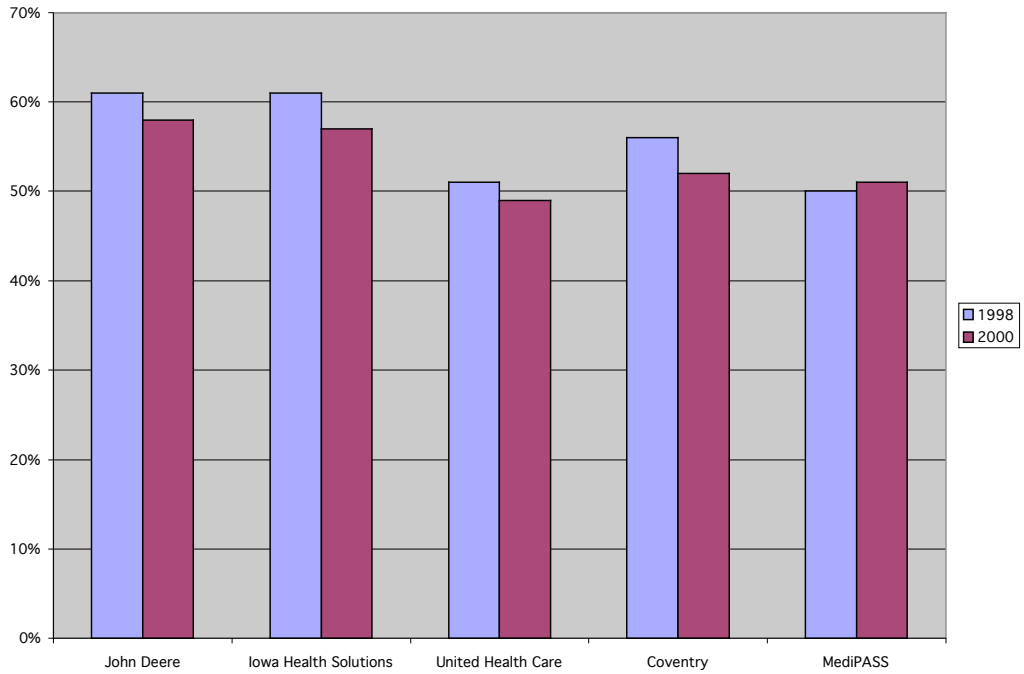
	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
12-15 years	1,303 (50%)	589 (45%)	90 (51%)	72 (46%)	2,656 (54%)
16-18 years	599 (44%)	257 (37%)	46 (45%)	28 (33%)	1,279 (47%)

Consistent dental care for adolescents is very important. Adolescents are likely to be drinking beverages such as soda high in sugar that will increase the risk of caries. In addition, in adolescence many individuals begin to experiment with smoking or smokeless tobacco. Routine dental screening and the opportunity for a dentist to discuss these activities and their effects on oral health are crucial.

Comparison with calendar year 1998

Chart 3 provides an illustration of how the rates of children and adolescents with a preventive dental visit changed between 1998 and 2000. Though it appears to have decreased some over the two-year time span, there is very little change within any of the managed care plans.

Chart 3. Percentage of children and adolescents with a preventive dental visit by managed care plan, 1998 and 2000.



Tonsillectomy and Myringotomy Rates

Surgical rates can be indicators of access to specialty services. Table 11 indicates rates per 1000 enrollees for each of the managed care plans and MediPASS within each age group for tonsillectomy procedures. Rates varied widely, ranging from eight to 15 per 1,000 enrollees. Rates of tonsillectomy are based on very small numbers of surgeries making it difficult to determine what a reasonable range of rates might be. In addition, Coventry and United Health Care have small numbers of children (less than 1,000) within each of the categories. With small numbers a difference of one or two surgeries can result in large differences once the calculation is performed on a "per 1,000" basis. Due to this, results should primarily be drawn from a comparison of MediPASS, John Deere, and Iowa Health Solutions. This comparison reveals that MediPASS had the highest rate of tonsillectomy while Iowa Health Solutions had the lowest rate for children ages 0 to nine. For children and adolescents 10 through 19 years of age the three plans did not vary in the tonsillectomy rate.

Table 11: Tonsillectomy rate by managed care plan and age per 1,000 enrollees, 1999

Program	Tonsillectomies per 1,000 enrollees 0-19 years of age	Tonsillectomies per 1,000 enrollees 0-9 years of age	Tonsillectomies per 1,000 enrollees 10-19 years of age
MediPASS	15	19	9
John Deere	12	14	8
Iowa Health Solutions	9	9	7
Coventry	10	9	12
United Health Care	8	12	3
Total	**14**	**17**	**9**

Comparison with calendar year 1998

Table 12 provides the tonsillectomy rate by managed care plan for calendar year 1998. Comparing 1998 to 1999 for MediPASS, John Deere and Iowa Health Solutions reveals that rates increased from one year to the next. Though the rates stayed virtually the same for enrollees 10 to 19 years of age, they increased by at least 20% for enrollees 0 to nine years of age. Increases in surgical rates should be carefully followed to ensure that they do not continue to rise over time without adequate explanation. If the rates continue to rise investigations should be undertaken to determine the explanation for these increases.

Table 12: Tonsillectomy rate by managed care plan and age per 1,000 enrollees, 1998

Program	Tonsillectomies per 1,000 enrollees 0-19 years of age	Tonsillectomies per 1,000 enrollees 0-9 years of age	Tonsillectomies per 1,000 enrollees 10-19 years of age
MediPASS	14	16	9
John Deere	9	10	6
Iowa Health Solutions	3	3	3
Coventry	19	24	8
United Health Care	12	17	5
Total	**11**	**13**	**7**

Table 13 shows rates of myringotomy tube placement. There were wide variations in myringotomy rates among the plans, varying from 14 to 29 procedures per 1,000 enrollees. MediPASS and John Deere had the highest rates across both age groups.

Table 13: Myringotomy rate by managed care plan and age per 1,000 enrollees, 1999

Program	Myringotomies per 1,000 enrollees 0-19 years of age	Myringotomies per 1,000 enrollees 0-4 years of age	Myringotomies per 1,000 enrollees 5-19 years of age
MediPASS	24	54	13
John Deere	29	62	14
Iowa Health Solutions	20	40	9
Coventry	14	28	8
United Health Care	17	40	3
Total	**28**	**59**	**13**

Although benchmark rates for tonsillectomies and myringotomy tube placement are not established, there is an assumption that the need for surgery is similar across the plans. Variance among the plans may indicate under utilization due to lack of access or over-utilization due to unnecessary surgery. The numbers of surgeries is very low, however, and small variances result in large rate differences that may not be clinically significant.

Summary of child measures

The Medicaid program has children as its primary enrollee group: over 60% of Medicaid eligible persons are under 19 and the majority of these are under 12. The health outcomes for this group are extremely important in assessing the quality of care provided. Most particularly these data allow us to determine whether children have equal access to services across plans.

From an overall perspective, children within the Medicaid program utilize services at rates that appear higher than those seen nationally, however they are not utilizing preventive services at a rate consistent with the established Iowa Medicaid EPSDT guidelines.

From a plan perspective, service utilization varies by plan. United Health Care consistently scores more poorly on most measures. This result would normally point to the need for change within the plan. This is not necessary; however, since United Health Care is no longer participating in the Medicaid managed care program.

Adult measures

Maternal length of stay

The length of time a mother spends in the hospital following the delivery of a newborn varies. Within the context of measuring quality we would not want to see an average length of stay that is either too long or too short. Long lengths of stay may indicate that deliveries were more complex or had more complications. This in turn could indicate a lack of prenatal care or poor management of the pregnancy through the provider network within the managed care plan. Short lengths of stay may indicate that the managed care plans are discharging the mother too soon following the delivery. Early discharge could lead to complications later increasing the cost of care. It has become widely accepted that maternal length of stay should average at least 2 days. This allows for the mother to recover from the delivery, the mother and father to obtain patient education regarding care of an infant at home, and the family to prepare for their return home. To date, the encounter data for maternal length of stay has not been easily available. Within the medical claims and encounter data there are 6,659 women within the managed care programs who have delivered a child during 2000. However, the inpatient data yields claims and encounters for only 4,835 of these. Table 14 provides a comparison of the number of women with a medical claim/encounter indicating a delivery and the number of women with an inpatient claim/encounter indicating a delivery by managed care program.

The percent of women with a medical claim/encounter who also have an inpatient claim/encounter varies greatly by managed care program. United Health Care has the highest rate of missing inpatient data at 78%, while MediPASS has the lowest percentage of women with missing inpatient data at 9%. Varying rates of missing inpatient data and the level of missing inpatient data make it inappropriate to calculate the maternal length of stay at this time. Work is continuing to identify why inpatient data cannot be readily identified in the encounter files used for outcome research at the University of Iowa Public Policy Center. At the time of this report, the HMOs are working to determine whether the missing inpatient data is resident on their systems. Should the data be present, efforts will be made to determine whether the data is lost during transfer of information to ACS or the University of Iowa.

Table 14. Number of women with a medical and/or inpatient claim or encounter indicating a delivery, 2000

Medical Plan	Total number of women with medical claim/encounter	Total number of women with inpatient claim/encounter	Number of women missing inpatient delivery claim/encounter
John Deere	2,134	1,288	846 (40%)
Iowa Health Solutions	1,300	761	539 (42%)
United Health Care	152	34	118 (78%)
Coventry	106	56	50 (47%)
MediPASS	2,967	2,696	271 (9%)
Total	6,659	4,835	1,824 (27%)

Cesarean section rate

The rate of Cesarean sections (C-sections) is used to determine the complexity of deliveries within the plans. If this rate is high within a plan and remains high over time it may indicate that action should be taken to determine why C-sections are being performed and lower the rate. Table 15 indicates the rate of C-sections across plans in calendar year 2000 (Coventry and United Health Care are removed from these analyses due to high rates of missing data). MediPASS has the highest rate at 22% of women delivering a child by C-section, while John Deere has the lowest rate with only 17% of women delivering a child by C-section. This 5% spread between the managed care plan with the highest and lowest rates of C-section does seem to be large. Though variance is expected, the rate in MediPASS is 30% greater than that in John Deere. C-section rates should continue to be monitored.

Table 15: C-section rate by managed care plan, 2000

Program	Number (percent) of women with a vaginal delivery	Number (percent) of women with delivery by C-section (N,%)	Total deliveries
MediPASS	2,311 (78%)	656 (22%)	2,967
John Deere	1,767 (83%)	367 (17%)	2,134
Iowa Health Solutions	1,054 (81%)	246 (19%)	1,300
Total	**5,328 (80%)**	**1,331 (20%)**	**6,659**

Comparison to calendar year 1998

Table 16 provides the C-section rate by managed care plan for calendar year 1998. The C-section rates for MediPASS and Iowa Health Solutions increased by 16% and 58% respectively during the period 1998 to 2000. In comparing this to a 6% increase for John Deere, it is important to consider why these two plans had a more pronounced increase. MediPASS and Iowa Health Solutions may have enrollees that are more at risk for C-section than those in John Deere. Another explanation may be that the provider panel for John Deere is significantly different than that for MediPASS or Iowa Health Solutions, resulting in a different practice style. Finally, it may be that John Deere has systems in place to monitor and reduce the use of C-sections for enrollees within the plan. Further research to determine why these differences exist may be worthwhile, particularly if the results provide for reductions in other plans.

Table 16: C-section rate by managed care plan, 1998

Program	Number (percent) of women with a vaginal delivery	Number (percent) of women with delivery by C-section (N,%)	Total deliveries
MediPASS	3,173 (81%)	766 (19%)	3,939
John Deere	2,265 (84%)	439 (16%)	2,704
Iowa Health Solutions	433 (88%)	57 (12%)	490
Total	**4,826 (82%)**	**1,297 (18%)**	**6,123**

Well adult visits

Table 17 presents the rate for preventive visits among adults within the Medicaid program, without regard for managed care plan. There are no established periodicity schedules for the receipt of well adult examinations after the age of 20 by the Iowa Medicaid program. Similar codes were used to determine the rates of well adult exams as were used for well child exams for children.

Enrollees between the ages of 19 and 24 have the highest proportion of well visits. In fact, this age group has a higher proportion of well visits than children ages seven through 11 years, the group with the lowest rate for well child visits.

Table 17. Proportion of Medicaid eligible adults with a well visit in 2000.

	Total enrollees	Number with well visit	Percent with well visit
19-24 years	6,153	2,615	43%
25-34 years	7,643	2,197	29%
35-44 years	4,849	1,225	25%
45-54 years	1,329	284	21%
55-64 years	516	48	9%

Chart 4 compares the well visit rate by age and gender. Chart 4 clearly indicates that men are far less likely to have a well visit than women, particularly between the ages of 25 and 54 years. During this time period women may be more likely to be required to see a physician due to the use of contraceptives or determination and supervision of pregnancy. In particular, the use of contraceptives requires a well visit yearly, thereby forcing women to make time to visit the doctor. No such incentive exists for men.

Chart 4. Proportion of Medicaid eligible adults with a well visit in 2000 by gender

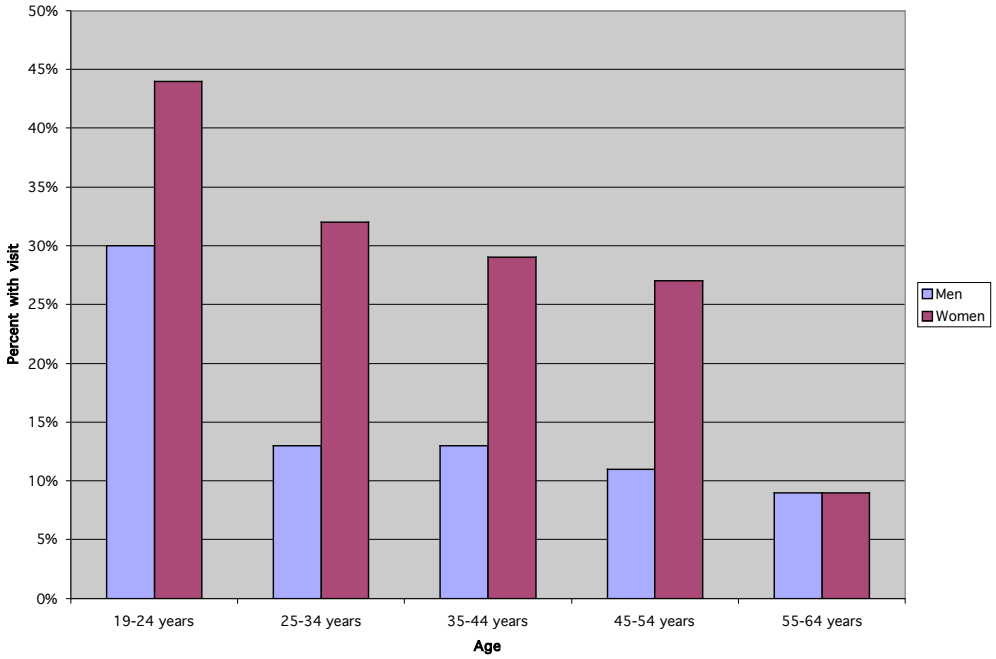


Table 18 provides the breakdown of well adult visits by managed care plan. The rate of well visits varies by age and managed care plan. The rate generally decreases as age increases with the exception of increases in the rate from 35-44 years to 45-54 years in John Deere, Iowa Health Solutions, and Coventry. When looking at the table by plan, MediPASS has the best rates for adult well visits for all age groups, except those age 45-54 years. For this group Coventry had the best rate at 39%. Also, MediPASS did not have the best rate for those age 55-64 years (there were no enrollees in this group within United Health Care and Coventry).

Table 18. Number and percent of adults with a well visit by managed care plan, 2000

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
19-24 years	655 (40%)	334 (35%)	34 (39%)	54 (45%)	1,031 (48%)
25-34 years	600 (29%)	239 (22%)	30 (21%)	40 (33%)	933 (37%)
35-44 years	259 (25%)	107 (19%)	16 (18%)	27 (31%)	597 (31%)
45-54 years	54 (27%)	27 (26%)	2 (15%)	5 (39%)	125 (29%)
55-64 years	4 (16%)	2 (12%)	*	*	12 (23%)

*No adults within this plan met the criteria for inclusion in the proportion.

Adult cancer screening

Two cancer screening procedures are being evaluated: cervical cancer screening and breast cancer screening. The predominance of women in the adult Medicaid population makes these measures particularly appropriate for evaluation.

Breast cancer screening

Breast cancer screening guidelines suggest that women between ages 52 and 65 should have a screening mammography with manual exam every three years. The breast cancer screening measure for HEDIS determines the proportion of women who are eligible for at least 22 months within a two year span that have had a screening mammography within the two year period. For these analyses, we have evaluated mammography rates for the population, as well as the proportion for women with a screening mammography for two additional age groups: 32-41 years and 42-51 years.

Table 19 indicates the number of women who were eligible for at least 11 months in both 1999 and 2000 who had a screening mammography during 1999 or 2000. The rates vary widely by plan with John Deere having the highest proportion of women with a mammogram.

Table 19. Number and percent of women with a screening mammogram by managed care plan, 1999 and 2000

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
32-41 years	66 (11%)	27 (11%)	7 (20%)	1 (3%)	112 (12%)
42-51 years	81 (46%)	20 (25%)	4 (50%)	3 (25%)	124 (33%)
52-65 years	17 (53%)	5 (46%)	*	*	16 (32%)

*No women within this plan that meet the criteria for inclusion in the table.

In past reports, we have only been able to compute the proportion on an annual basis. Thus to allow for comparison to past reports, the annual rate for 2000 is included in Table 20. Comparing the two tables allows us to conclude that some women may be obtaining a mammogram every other year, however, the rates are still low.

Table 20. Number and percent of women with a screening mammogram by managed care plan, 2000

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
32-41 years	83 (8%)	39 (8%)	8 (10%)	3 (4%)	122 (7%)
42-51 years	61 (24%)	30 (22%)	4 (31%)	5 (24%)	127 (25%)
52-65 years	14 (40%)	5 (23%)	*	*	18 (29%)

*No women within this plan that meet the criteria for inclusion in the proportion.

Cervical cancer screening

The rates for cervical cancer screening (Table 21) are somewhat low. Guidelines indicate that this screening should occur at least once every three years. Plans with a rate of 30% or greater may be considered to be in compliance with this guideline. During the period 1998 through 2000 approximately one-third of women received the screening exams. Iowa Health Solutions, United Health Care and Coventry appear to have extremely low rates during 1999, while United Health Care and Coventry have very low rates during 1998. This may be due to missing claims or low utilization of this screening procedure. During 2000 more women within these plans are reflected as having had a screening exam, however the rates are still lower than those in John Deere and MediPASS. Future outcome analyses should include women who have been eligible for at least three years in this measure.

Table 21. Number and percent of women 21-64 years of age with a cervical cancer screening by managed care plan, 1998, 1999, 2000 and National

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
1998	1,086 (31%)	184 (30%)	24 (21%)	11 (11%)	1,762 (34%)
1999	1,655 (34%)	337 (22%)	36 (16%)	16 (8%)	1,606 (30%)
2000	1,487 (39%)	736 (37%)	74 (32%)	81 (31%)	2,136 (39%)

Obtaining cervical cancer screening and/or mammography screening requires a well visit with the doctor. Cervical cancer screening is normally performed during the well visit and mammogram referrals are normally made in tandem with the well visits and a manual breast exam. Therefore, the rate of cervical cancer screening and mammography will not exceed the rate for well visits. Additional research linking preventive visits with screening activities, in particular focusing upon the timing of screening, would be useful.

Adult dental visits

In addition to well person visits, preventive dental visits play an important role in the over all health of individuals within the Medicaid program. The Iowa Medicaid program provided for comprehensive adult dental services during calendar year 2000. Table 22 indicates that the rate for adult preventive dental visits is fairly consistent across age groups and plans. Though there are wide variations within United Health Care and Coventry, these variations are most likely attributable to the small numbers of adults in each category. Small numbers allow the percentages to vary greatly with the addition or subtraction of only one person to the rate. For example, since there are only 36 adults ages 35-44 years in Coventry, if one extra person has a visit it increases the rate by almost 3%. For the larger managed care plans the rates are very stable, remaining about 40%. This does drop in all three plans for the 55 through 64 age group, but this drop may also be due to small numbers.

Table 22. Number and percent of adults with a preventive dental visit by managed care plan, 2000

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
19-24 years	700 (43%)	364 (38%)	40 (46%)	48 (40%)	940 (43%)
25-34 years	885 (43%)	411 (38%)	62 (43%)	62 (52%)	1,175 (42%)
35-44 years	431 (42%)	213 (38%)	40 (44%)	36 (41%)	825 (43%)
45-54 years	86 (43%)	37 (36%)	4 (31%)	6 (46%)	169 (40%)
55-64 years	6 (24%)	2 (12%)	*	*	15 (29%)

*No adults within this plan met the criteria for inclusion in the table.

Comparison to calendar year 1998

The percent of adults who were able to obtain a preventive dental visit changed little between 1998 and 2000 (Tables 22 and 23). Within both years the percent of adults with a preventive visit remained at about 40% for all age groups except those 45-54 years old and those 55-64 years old. Little can be said about the 55-64 years old age group because there are very few people within this group for either year. For those age 45-54 years in the two largest plans, MediPASS and John Deere, the rate increased for MediPASS, from 35% in 1998 to 40% in 2000, while it remained about the same in John Deere, 44% in 1998 and 43% in 2000.

Table 23. Number and percent of adults with a preventive dental visit by managed care plan, 1998

	John Deere	Iowa Health Solutions	United Health Care	Coventry	MediPASS
19-24 years	609 (42%)	130 (43%)	14 (40%)	13 (40%)	771 (45%)
25-34 years	854 (43%)	130 (39%)	34 (44%)	31 (47%)	1,256 (45%)
35-44 years	423 (41%)	75 (39%)	27 (55%)	13 (41%)	880 (45%)
45-54 years	72 (44%)	10 (33%)	1 (14%)	*	144 (35%)
55-64 years	5 (22%)	*	*	*	15 (24%)

*No adults within this plan met the criteria for inclusion in the table.

Summary of adult measures

In computing the adult outcome measures, questions have arisen concerning the lack of birth encounters for both mothers and newborns. Dialogue with the plans revealed that payment for newborns and, therefore, the encounter forms for newborns are lumped with the mother in many situations, particularly when the mother and newborn are discharged together. Though this does help to solve the problem of missing newborn encounters, it does not address missing encounters for mothers who delivered babies within the plans.

Young adults within the Medicaid managed care program utilize services to a greater extent than older adults and women are more likely to utilize services than men. In particular, women utilize adult preventive visits far more often than men even after age 45 when most women are not accessing services for pregnancy supervision. However, even women are not utilizing preventive services at the desired level. At least 50% of women and men should have a preventive visit yearly. In addition, higher levels of breast cancer and cervical cancer screening would also be preferred.

Outcomes for children in the Medicaid expansion program (M-SCHIP)

Introduction

During FY 1999, Iowa's State Child Health Insurance Program (SCHIP) began. This program has 2 components, a Medicaid expansion program (M-SCHIP) and a separate program (S-SCHIP) called the Healthy and Well Kids in Iowa Program (***hawk-i***) (Figure 1). For the M-SCHIP program, eligibility for the Iowa Medicaid program was expanded to include all children under 133% of the federal poverty level (FPL) beginning in September 1998.

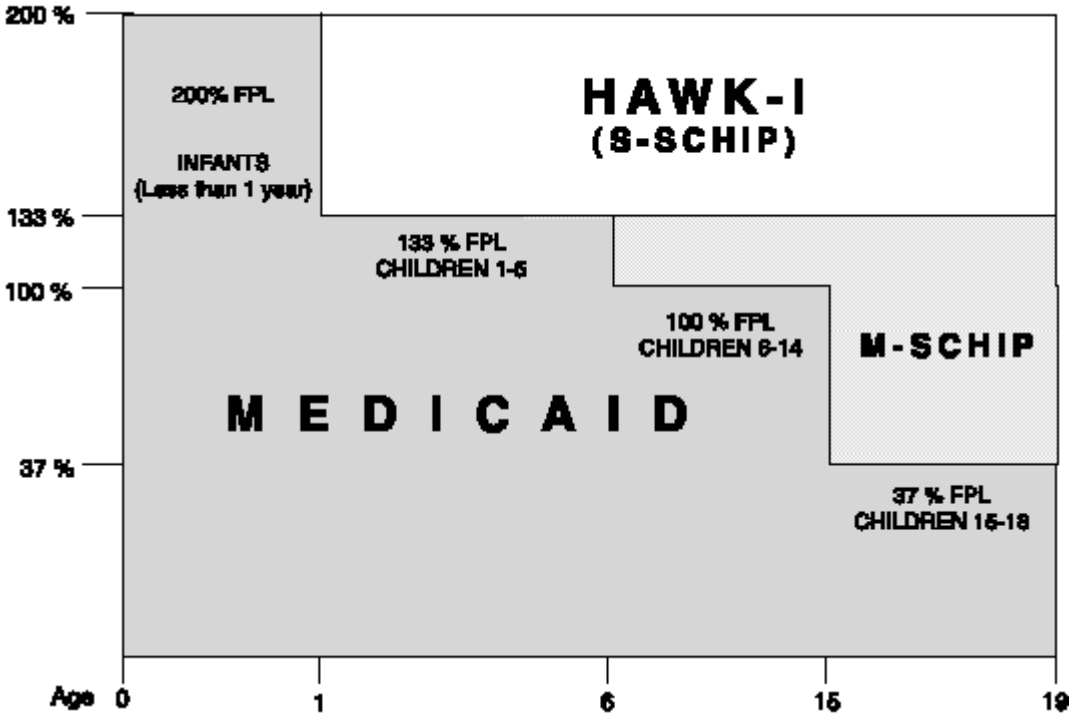


Figure 1. The Iowa State Child Health Insurance Program

Prior to September 1998, children under age six were included at this level, however, children from six to 14 years of age were included if they resided in a family with an income less than 133% of FPL and adolescents 15 to 18 years of age were included if they resided in a family with an income less than 37% of FPL. This new M-SCHIP pattern of eligibility is evident in Table 24. For the purposes of the following analyses, non-M-SCHIP refers to children within the TANF program who are not eligible through the M-SCHIP program.

Table 24. Number of children in Medicaid at any time by M-SCHIP eligibility and age, 1999

Age	Non-M-SCHIP Number in age group	Non-M-SCHIP % Total in age group	M-SCHIP Number in age group	M-SCHIP % Total in age group
1-5 years of age	47,723	100%	0	0
6-14 years of age	45,433	77.6%	13,128	22.4%
15-18 years of age	11,576	64.0%	6,513	36.0%
Total	104,732	84.2%	19,641	15.8%

Almost 20,000 children were enrolled in Medicaid as a result of the expanded M-SCHIP eligibility guidelines in calendar year 1999. An advantage of M-SCHIP is that all children in a family can now be eligible for Medicaid, rather than potentially splitting eligibility up within a family dependent on the age of the children. Also children that in the past would have had to leave the program at age six are now able to remain in the Medicaid program longer. Adolescents ages 15-18 comprise over 33% of the M-SCHIP population compared to 14.5% of the Medicaid population. This increase in enrollment of adolescents has a great potential to affect the access to care for adolescents in Iowa.

Dual Medicaid/M-SCHIP eligibility

The number of children in Medicaid can increase as a result of M-SCHIP in two ways. First, children currently in Medicaid who would have lost their eligibility as the family percent FPL increases could now remain eligible as a result of the higher income eligibility from the M-SCHIP program. Second, children who would not have been eligible for Medicaid in the past can enter the program due to the higher percent FPL allowances. The data presented in Table 25 indicates that over 70% of children who were eligible for the M-SCHIP program for at least one month during calendar year 1999 also spent some months within the non-M-SCHIP portion of the Medicaid program during the same year.

Table 25. Number and percent of children eligible for M-SCHIP for at least one month by number of months eligible in the non-M-SCHIP portion of the Medicaid program, 1999

Months on non-M-SCHIP portion of Medicaid	Number of children in M-SCHIP	Percent of children in M-SCHIP
0 months	5,488	27.9%
1-3 months	4,499	22.9%
4-6 months	3,797	19.3%
7-11 months	5,858	29.9%

Table 26 indicates the number of children by the age in the Medicaid program by whether or not they were eligible through M-SCHIP at any time during the year. Though there were a large number of children eligible for services through the Medicaid program throughout calendar year 1999, we see from Table 27 that only a small percentage were eligible for at least 11 months. Outcome measures dictate that only children eligible for at least 11 months be included in the measures, therefore, only this small number can be included.

Table 26. Number of children in Medicaid enrolled at any time by M-SCHIP eligibility and age, 1999

Age	Non-M-SCHIP	M-SCHIP
1 year old	12,513	
2-6 years of age	41,963	1,192
7-11 years of age	26,637	8,326
12-15 years of age	15,729	4,616
16-18 years of age	7,890	5,507
Total	115,787	19,642

Table 27. Number of children in Medicaid enrolled for at least 11 months by M-SCHIP eligibility and age, 1999

Age	Non-M-SCHIP	M-SCHIP
1 year old	6,122	
2-6 years of age	20,032	87
7-11 years of age	16,591	1,240
12-15 years of age	9,279	673
16-18 years of age	3,529	1,394
Total	55,553	3,394

Outcome analyses

A subset of the HEDIS outcome analyses presented previously was used to compare children within the M-SCHIP program to those eligible through the traditional Medicaid income guidelines. Since the M-SCHIP program increased eligibility for children age six through eighteen, our analyses are limited to only outcomes appropriate to this age group. With these limitations in place the following outcome measures were analyzed: number and percent of children with at least one ambulatory visit for ages seven through18, tonsillectomy rates, and myringotomy rates. Tonsillectomy and myringotomy rates are very low for children in these age ranges, leaving the number and percent of children with at least one ambulatory care visit as the primary comparison measure. We aggregated the results from the comparison of outcomes for the Medicaid managed care plans to determine outcomes for non-MSCHIP enrolled children for these comparisons.

Table 28. Number and Percent of Children and Adolescents with at Least One Ambulatory Visit in Calendar Year 1999

	M-SCHIP	Non-M-SCHIP
Children ages 7-11 with an ambulatory visit (number/%)	587 (47.3%)	8,893 (65.0%)
Total children ages 7-11	1,240	13,685
Adolescents ages 12-15 with an ambulatory visit (number/%)	343 (51.0%)	4,902 (63.1%)
Total adolescents ages 12-15	673	7,765
Adolescents ages 16-18 with an ambulatory visit (number/%)	764 (54.8%)	1,990 (66.6%)
Total adolescents ages 16-18	1,394	2,989

Table 28 indicates that children and adolescents eligible through the M-SCHIP program were less likely to have had an ambulatory care visit in the past year than non-MSCHIP children. About half of all M-SCHIP enrolled children had an ambulatory care visit in the previous year compared with about two-thirds of non M-SCHIP enrolled children in Medicaid. Adolescents in M-SCHIP were also not as likely to have an ambulatory care visit as adolescents not within the program. These results are difficult to explain. We have always assumed that children coming into the program would have greater need for ambulatory care due to the lack of this care when there was no insurance. This "pent-up" demand would lead to greater utilization of services once the child or adolescent is in the M-SCHIP program. However, one could also postulate that having not had any coverage for some time, parents are not familiar with the system, and have a difficult time accessing care at first. If this holds true, we would not expect an increase in use of services until they had been in the program for some time, perhaps six months to one year. The results in Table 28 certainly indicate that for whatever reason M-SCHIP children and adolescents are not accessing ambulatory care services at the same rate as children and adolescents not in this program.

Tonsillectomy

The rate of tonsillectomy for children ages seven to fourteen varied by M-SCHIP status as well (see Table 29). Children who are eligible for Medicaid through M-SCHIP have a rate of 18 tonsillectomies per 1,000 enrollees whereas those not eligible through M-SCHIP have a rate of 14 per 1,000 enrollees. This needs to be closely scrutinized, however, because the number of enrollees within M-SCHIP ages seven to seven through 14 and eligible for at least eleven months is quite small (n=1,337). Such a small number in the denominator may artificially inflate the rate of tonsillectomy.

Table 29. Tonsillectomy Rate by M-SCHIP Status and Age per 1,000 Enrollees, 1999

Program	Tonsillectomies per 1,000 enrollees 7-14 years of age
M-SCHIP	18
Non-M-SCHIP	14
Total	**14**

Myringotomy

Myringotomy rates do not vary by M-SCHIP status (see Table 30), with the overall myringotomy rate comparable to that for all children ages five through 19.

Table 30. Myringotomy Rate by M-SCHIP Status and Age per 1,000 Enrollees, 1999

Program	Myringotomies per 1,000 enrollees 7-10 years of age
M-SCHIP	10
Non-M-SCHIP	12
Total	**12**