MEDDIC-MS Data Book

Medicaid Encounter Data Driven Improvement Core Measure Set

Vol. 2. 2002 HMO Performance Data Medicaid Program Data and BadgerCare Program Data Compared

Wisconsin Department of Health and Family Services
Division of Health Care Financing, Bureau of Managed Health Care Programs

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NOTE: Immunizations for children and maternity care measures do not appear due to very small numbers of enrollees meeting the denominator criteria for the measures.

Introduction and Background

Quality improvement pioneer W. Edwards Deming said, "You can't manage what you can't measure." His observation referring to data-driven quality improvement in manufacturing applies equally to health care.

In its 2002 book, ***Leadership by Example: Coordinating Government Roles in Improving Health Care Quality***, the Institute of Medicine (IOM) called for standardized, accurate, real-time performance measures for health care, particularly for publicly-funded programs. For example, it recommended:

- Measures "derived from computerized data and public reporting of comparative quality information."
- "Providers should not be burdened with reporting the same patient-specific performance data more than once to the same government agency."
- "Finally, effective performance measurement demands real-time access to sufficient clinical detail and accurate data. By the time retrospective performance measures reach decision-makers, it is too late for them to be useful. The current health information environment is far too fragmented, technologically primitive, and overly dependent on paper medical records."

In addition to being central to effective public health policy, as described by the Institute, standardized performance measures are required for all state Medicaid managed care programs by federal law. Specifically, 42 CFR §438.240(c) requires that states monitor HMO performance using standardized performance measures and that HMOs submit data necessary for the performance measures to operate.

MEDDIC-MS (Medicaid Encounter Data Driven Improvement Core Measure Set) is Wisconsin's set of standardized performance measures for Medicaid and BadgerCare (the State Children's Health Insurance Program, SCHIP) managed care. Use of MEDDIC-MS was approved by the Centers for Medicare and Medicaid Services (CMS) as part of its review of the state's quality improvement strategy in August 2003. In October 2003, the Agency for Healthcare Research and Quality (AHRQ) recognized MEDDIC-MS for inclusion in the National Quality Measures Clearinghouse (NQMC®). To view the measure summaries on the NQMC, see: http://www.qualitymeasures.ahrq.gov/resources/measureindex.aspx scroll down to "State of Wisconsin."

MEDDIC-MS

The ***Medicaid Encounter Data Driven Improvement Core Measure Set***, is a new performance measurement system for Wisconsin's Medicaid and BadgerCare (SCHIP) HMO programs. It consists of two sets of measures;

Targeted Performance Improvement Measures (TPIM), which focus on high priority areas identified by stakeholders and monitoring measures, most of which are utilization measures. The TPIMs are more detailed in structure than the monitoring measures, and include rationale, managed care reference data, and performance goals. They also include performance improvement requirements that apply when performance goals are not achieved.

Innovations in program-wide performance management include:

- ***Reporting:*** HMOs are no longer required to submit reports on performance measures. This allows participating HMOs to devote more resources to performance improvement initiatives and reduces administrative cost and complexity.
- ***Encounter data-driven measures:*** MEDDIC-MS is a fully automated system, utilizing HMO encounter data and other State-controlled electronic data sources. This significantly reduces costs associated with data acquisition and eliminates data contamination caused by inaccurate patient-supplied history. Medical record review is still used for data validity audits, ambulatory quality of care audits, for special audit functions and cases where HMOs wish to augment encounter data.
- ***Data extraction and measure calculation:*** The Department of Health and Family Services (DHFS) extracts data for each measure and calculates each HMO's performance on the measure through a third party data services vendor. This facilitates greater consistency, completeness and accuracy in calculation of the measures than having each HMO calculate its own rates.
- ***Customer/vendor relationship:*** Traditional managed care performance measurement allows each HMO (vendor) to report its own performance. MEDDIC-MS corrects this problem.
- ***Speed, relevance and trending:*** Measures can be calculated as needed and in time frames other than traditional calendar year reporting.
- ***Measure set flexibility:*** MEDDIC-MS can be adjusted quickly to meet changing program needs and to refine the measures.
- ***Accuracy:*** MEDDIC-MS specifications use validated encounter data and, in some measures, other state-controlled data sources such as lead screen and immunization data from the Division of Public Health.
- ***Performance improvement goals:*** Performance goal setting is designed to first establish baseline levels using MEDDIC-MS technical specifications and then through a collaborative process, establish realistic intermediate goals for subsequent years to "ramp up" program-wide performance on the TPIMs.
- ***Constancy of mission:*** MEDDIC-MS includes Targeted Performance Improvement Measure (TPIM) topics that have been in use for the past five years, but they have been modified to work in the automated encounter data environment and new topics have been added. The *monitoring measures* included in MEDDIC-MS are

consistent with the topics used in the past and they have been modified to work in the encounter data environment.

The data in this booklet presents performance rates for all HMOs combined on all MEDDIC-MS performance measures based on CY 2002 data, specific to the Medicaid and BadgerCare populations for easy comparison.

Complete technical specifications for the MEDDIC-MS measures are available upon request. Contact: Gary R. Ilminen, RN at (608) 261-7839 or ilmingr@dhfs.state.wi.us.

Care Analysis Projects

Since 2001, the Department has implemented an innovative program-wide proactive approach to performance improvement called Care Analysis Projects (CAP). Through CAP, enrollee-specific health care needs are identified and the data about those needs are shared with the enrollee's HMO. In this way, the Department seeks to assist in quality improvement by allowing HMOs and providers to focus outreach on individuals with unmet needs.

CAP focuses on several chronic conditions and on the provision of key preventive services. Chronic conditions included are congestive heart failure, asthma, and diabetes. Preventive health services include lead screening and prenatal risk assessment.

MEDDIC-MS and CAP work together. CAP provides data-driven targeted intervention and MEDDIC-MS allows accurate, data-driven performance assessment.

HMO Performance Improvement Projects

Since the early 1990's the HMO contract has required HMOs to complete at least two performance improvement projects in each calendar year and submit reports about them to the Department annually. Analysis of those reports revealed that between 1997 and 2000, 73 percent of HMO interventions on topics of performance improvement projects resulted in some degree of improvement.

Medicaid and BadgerCare Programs serve different populations

BadgerCare is a health insurance program for low-income families with children. Low-income families who are not eligible for Medicaid because their income is too high qualify for BadgerCare if family income is at or below 185 percent of the federal poverty level (FPL). Eligibility continues until income exceeds 200 percent of the FPL.

Younger children of families on BadgerCare are enrolled in Medicaid, while older siblings and parents are in BadgerCare. This fact affects the size of the denominator on measures applicable to young children.

Insight into some of the differences between the populations served by Medicaid and BadgerCare can be gained from demographic data reported by respondents to the Department's 2002 CAHPS® enrollee satisfaction survey. The table below summarizes the population represented by those who responded to the survey in 2002.

	Race				**Ethnicity**	**Language spoken in home**		
	African American	Asian	Native American	White	Latino	English	Spanish	Other
Medicaid	28.9%	4.2%	2.8%	63.8%	8.7%	94.2%	2.3%	3.5%
BadgerCare	15.0%	5.0%	1.0%	78.9%	3.4%	96.3%	0.8%	3.0%

The majority of survey respondents were under age 45 years.

Program	**Respondent age in years**						
	18-24	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**	**75+**
Medicaid	19.2%	38.4%	29.7%	9.0%	2.9%	0.6%	0.1%
BadgerCare	9.5%	36.2%	38.2%	13.3%	2.2%	0.1%	0.4%

In Medicaid, 91.5 percent of the respondents were female and overall, and in BadgerCare, 78.1 percent of respondents were female. Male respondents comprised 8.5 percent of the survey responses in Medicaid, while 21.9 percent were male in BadgerCare.

Other volumes in the MEDDIC-MS 2002 Data Book include:

Volume1--2002 HMO Aggregate Performance Data, Wisconsin Medicaid and BadgerCare Programs. This volume provides overall performance data for all HMOs combined and the Medicaid and BadgerCare programs combined.

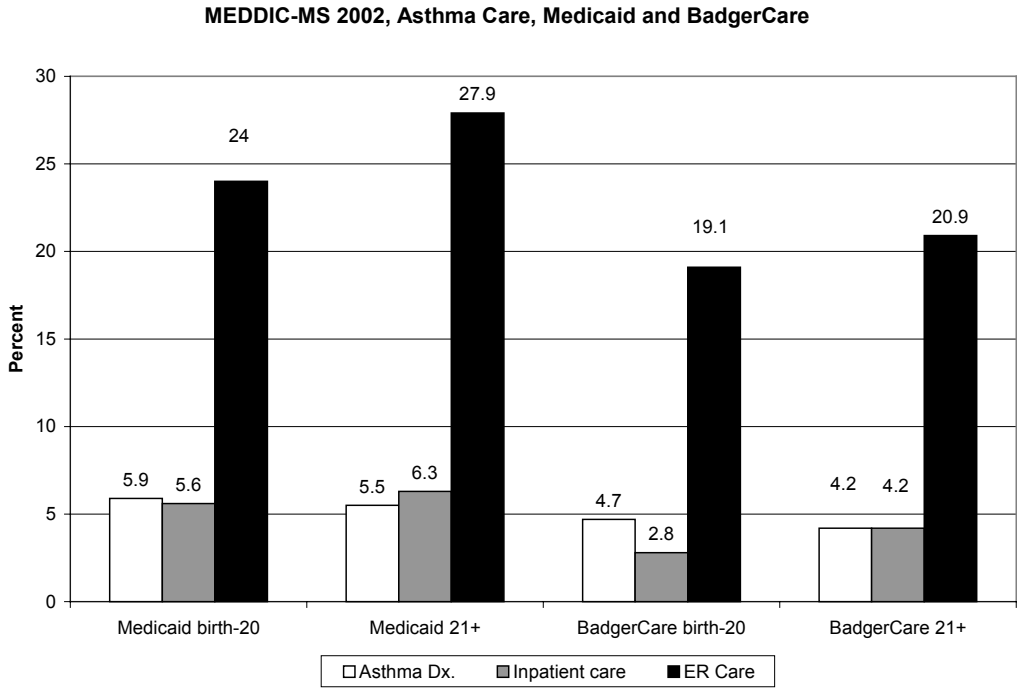
Volume 3--2002 HMO-specific Performance Data, Wisconsin Medicaid and BadgerCare Programs. This volume provides performance data on each measure on an HMO-by-HMO basis.

To obtain copies of those reports, see the contact information on page 24 or visit the Wisconsin Medicaid Managed Care website at: http://www.dhfs.state.wi.us/medicaid7/index.htm.

Results on Clinical Performance Measures

Asthma care

Monitoring measure



Asthma is a chronic respiratory condition affecting the lungs. People with asthma suffer episodes where airflow in and out of the lungs is reduced by constriction of the airways in the lungs and by excess mucous. Between 12 and 15 million Americans have asthma, including nearly 5 million children. Nationwide, in 1997, the disease caused 1.2 million emergency room visits, over 445,000 hospital days and has been fatal in some cases.

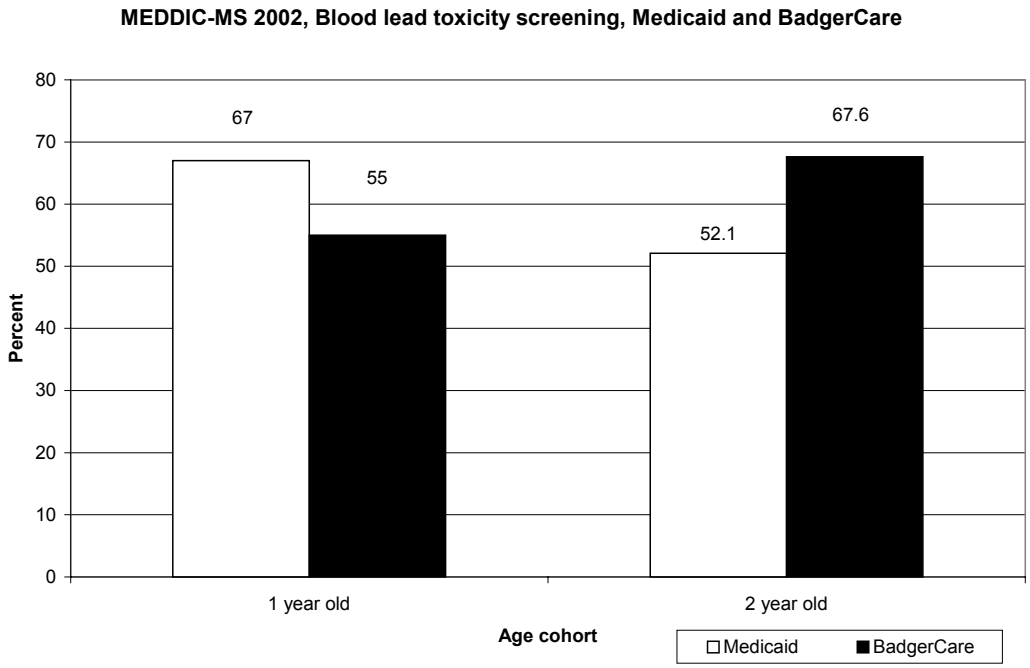
Episodes of asthma can be reduced with effective management and patient education. For these reasons, early diagnosis, patient/parent education and medical management are crucial to prevention of exacerbation and maintenance of good quality of life.

Prevalence--the percentage of enrollees with the diagnosis of asthma--was slightly higher among Medicaid enrollees than among BadgerCare enrollees. Similarly, use of inpatient care for the diagnosis of asthma was also somewhat higher in Medicaid than in BadgerCare. Emergency department/room (ED or ER) care for asthma was also used more frequently by Medicaid enrollees than BadgerCare enrollees.

Quality improvement activities in asthma care have included a number of interventions. For example, 9 of 13 HMOs responding to a recent survey of participating Medicaid/BadgerCare HMOs indicated that they had asthma disease management programs. In addition, 7 of 13 HMOs have conducted performance improvement projects on asthma care since 2000. The Department has operated a Care Analysis Project on asthma since 2001.

Blood lead toxicity screening

Targeted performance improvement measure



Children in Medicaid and BadgerCare are considered to be at risk for exposure to sources of lead poisoning in their living environment. For this reason, provision of blood lead toxicity testing is required for children at age one and two years and up to age six if elevated levels or risk factors have been identified.

In the Wisconsin Medicaid & BadgerCare HMO program, blood lead toxicity screening at age one and two years is required under the contract and is a Targeted Performance Improvement Measure in the MEDDIC-MS performance measure system.

MEDDIC-MS technical specifications allow lead screening data from the Division of Public Health to be merged with HMO encounter data. This has improved data completeness and improved accuracy of performance measurement.

Blood lead toxicity screening rates in Medicaid were higher for one year old children than in BadgerCare, but the difference in screening rates reversed for two year old children.

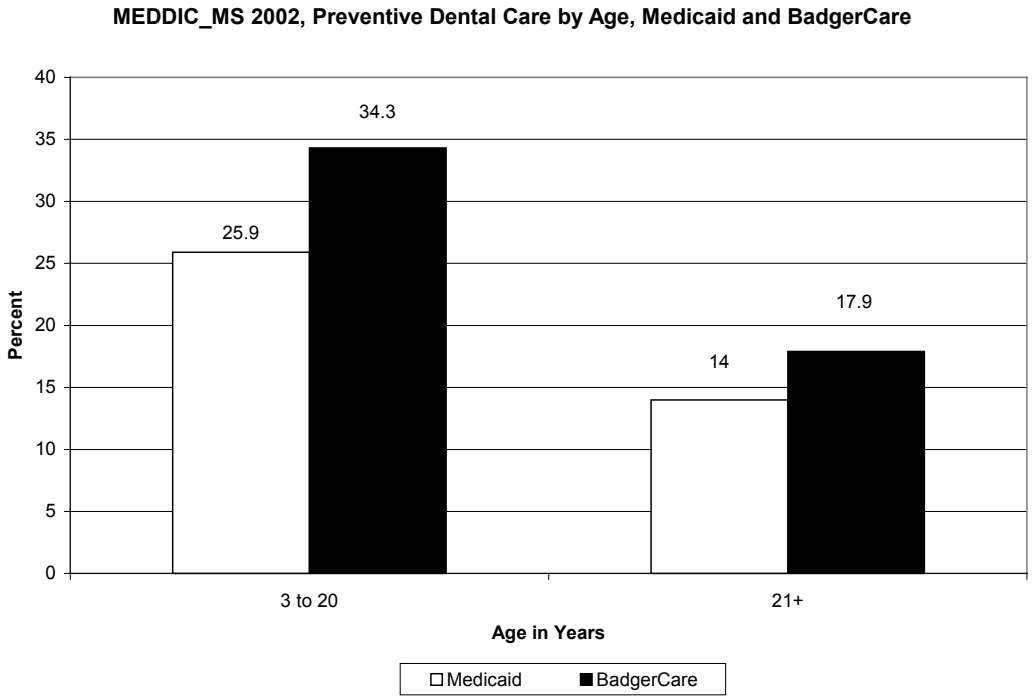
In 2001, the Department instituted the Care Analysis Project (CAP) on blood lead toxicity screening, whereby recipient-specific lead testing data is shared with the child's HMO in an effort to assist HMOs with identification of children in need of lead screening. This facilitates outreach and follow-up for children who have not received screening. In addition, 4 of 13 HMOs have conducted performance improvement projects on lead screening since 2000.

Dental (preventive) services

Targeted performance improvement measure

Preventive dental services include initial and comprehensive dental examinations, prophylaxis, topical application of fluoride and application of sealants.

Dental care can prevent development of dental caries, tooth loss, oral infections, abscesses and other problems. Preventive dental services are of particular value soon after the eruption of teeth for in young children. Teeth generally first erupt between age 6 and 28 months and emerge enough to benefit from preventive care between 1 and 3 years.



In CY 2002, three HMOs of 13 participating in Medicaid and BadgerCare offered dental services, primarily in the Milwaukee area. HMO enrollees in the rest of the state receive dental benefits on a fee-for-service basis; but 48.6 percent of all HMO enrollees receive dental benefits through their HMO.

Access to dental services has been a challenge in the Medicaid program for quite some time. Access to preventive dental care services through HMOs was higher in BadgerCare for children age 3 to 20 years. Access by BadgerCare enrollees was also higher for enrollees over 21 years of age, though by a smaller margin.

Access to dental services remains relatively low in both programs, suggesting that dental care remains a performance improvement opportunity in each.

Diabetes care

Targeted performance improvement measure

Diabetes mellitus is a chronic condition that can cause heart disease, kidney damage and blindness.

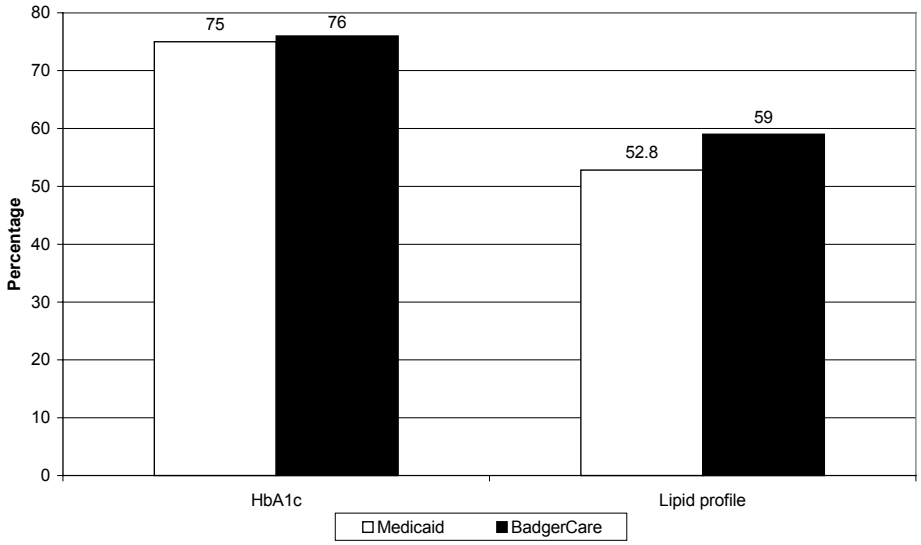
However, serious consequences can be reduced or prevented with proper management. Two important diabetes management tests are monitored in the MEDDIC-MS measure system.

One test is the hemoglobin A1c (HbA1c), which is a blood test that indicates the level of blood sugar control over time. The other test is the lipid profile, which is a blood test that monitors the levels of "fats" (lipids) in the blood stream. The charts reflect the percentage of HMO enrollees diagnosed with diabetes who received the tests.

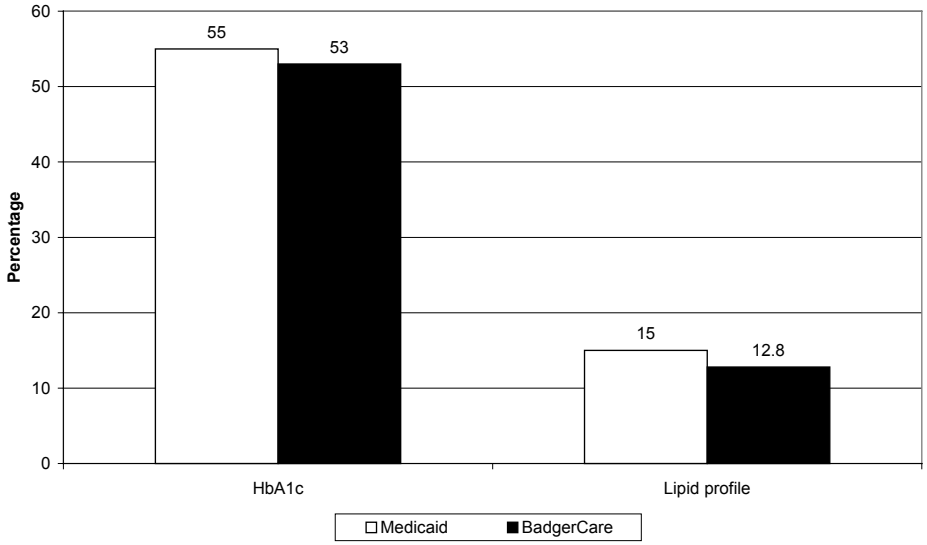
The HbA1c and lipid profile rates for 0-17 years of age were slightly higher in Medicaid than in BadgerCare. However, rates for both tests were slightly higher in BadgerCare for enrollees aged 18-75 years.

Four HMOs have conducted performance improvement projects since CY 2000 and diabetes has been a Care Analysis Project topic since 2001. In addition, 11 of 13 HMOs have disease management programs for diabetes.

MEDDIC-MS 2002--Diabetes care, Medicaid and BadgerCare Compared, Age 18-75



MEDDIC-MS 2002--Diabetes Care, Medicaid & BadgerCare Compared, Age 0-17 years



EPSDT (HealthCheck) comprehensive well-child exams

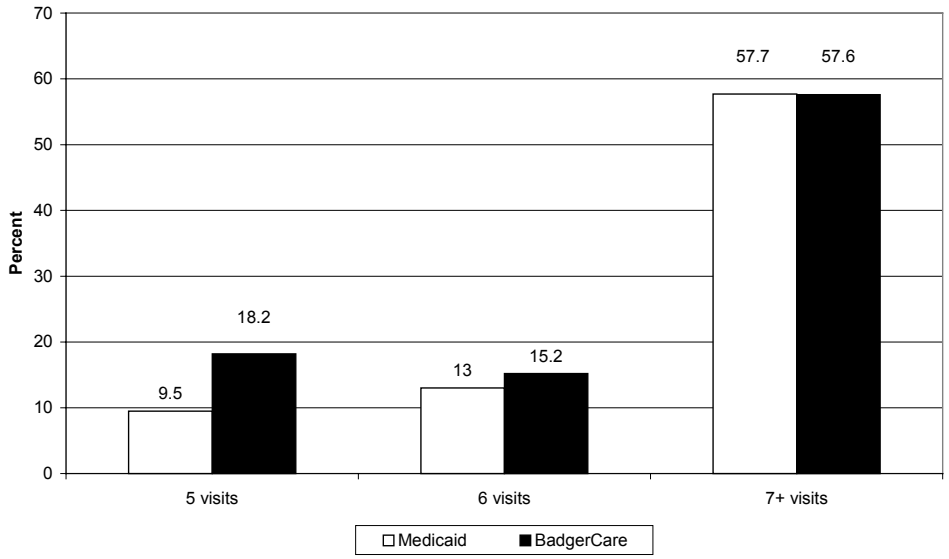
The federal mandate to state Medicaid programs includes provision of Early, Periodic Screening, Diagnosis and Treatment (EPSDT) services for children. Wisconsin's EPSDT services are called HealthCheck screens. HealthChecks include an unclothed physical exam, age appropriate immunizations, lab work, including blood lead toxicity tests, health and developmental history, vision and hearing tests, and oral assessment beginning at age 3.

Nine HealthCheck visits should be provided to each child by age two. The percentage of children receiving 7 or more visits was nearly 60 percent in both Medicaid and BadgerCare for children birth to age 2 years. Access to at least one EPSDT visit in the measure look-back period (CY 2002) in the older age groups was slightly higher in BadgerCare than in Medicaid, but generally decreased for both programs as children aged.

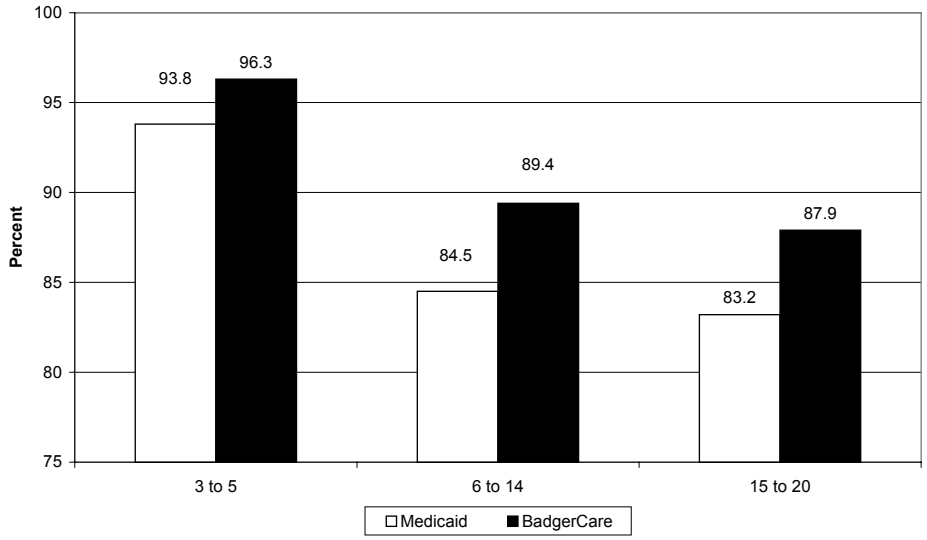
National data shows that older children receive EPSDT services less frequently. Wisconsin data exhibits a similar trend. Increasing the percentage of children that receive at least one EPSDT visit in each of the age groups beyond two years remains a performance improvement opportunity.

Eight of thirteen Medicaid/BadgerCare HMOs have conducted performance improvement projects on HealthCheck since 2000.

MEDDIC-MS 2002, EPSDT visits (HealthCheck), Birth to Age 2 years, Medicaid & BadgerCare



MEDDIC-MS 2002, EPSDT Visits (HealthCheck), Ages 3-20, Medicaid and BadgerCare



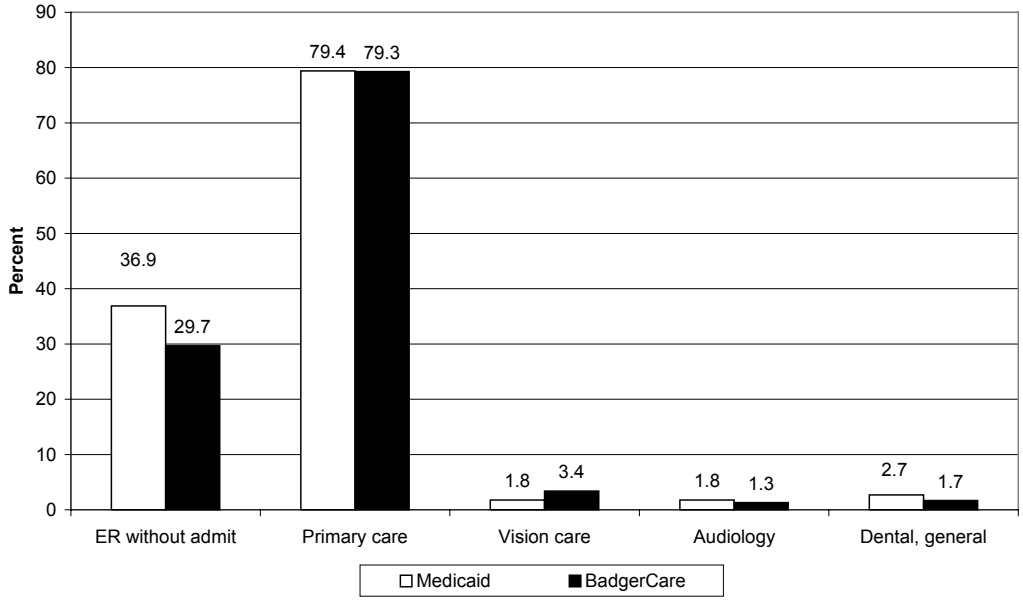
General and specialty care-outpatient

Monitoring measure

Access to outpatient or ambulatory care for a variety of health care needs is essential for overall health maintenance and improvement.

This MEDDIC-MS measure is designed to assess access to emergency department (ED) care that does not result in subsequent hospitalization, access to primary care, to vision care, audiology services and dental care. The measure tracks what percentage of Medicaid and BadgerCare HMO enrollees had access to those services on at least one occasion during the look-back period.

MEDDIC-MS 2002, General & Specialty Outpatient Care, Medicaid & BadgerCare



The measure shows that about one-third of all HMO enrollees in Medicaid and BadgerCare had at least one emergency department care encounter that did not result in subsequent hospitalization. The rate was higher in Medicaid than in BadgerCare. It also shows that primary care access for enrollees of all ages was good, with nearly 8 out of every 10 HMO enrollees in both programs having at least one primary care encounter in the look-back period. The percentage of enrollees utilizing vision and hearing services was relatively small in both programs.

Dental encounters appear small in proportion also, but only 3 participating HMOs provide dental care under their contract with the Department. This dental measure generated a smaller percentage of enrollees receiving services than the preventive care measure, because the number of enrollees included in the denominator is larger for this measure. Utilization of general dental services was lower among BadgerCare enrollees than in Medicaid. Improving access and utilization of dental services in Medicaid and BadgerCare remains a performance improvement opportunity. See also "Dental (preventive) care" on page 12 for further information.

General and specialty care-inpatient

Monitoring measure

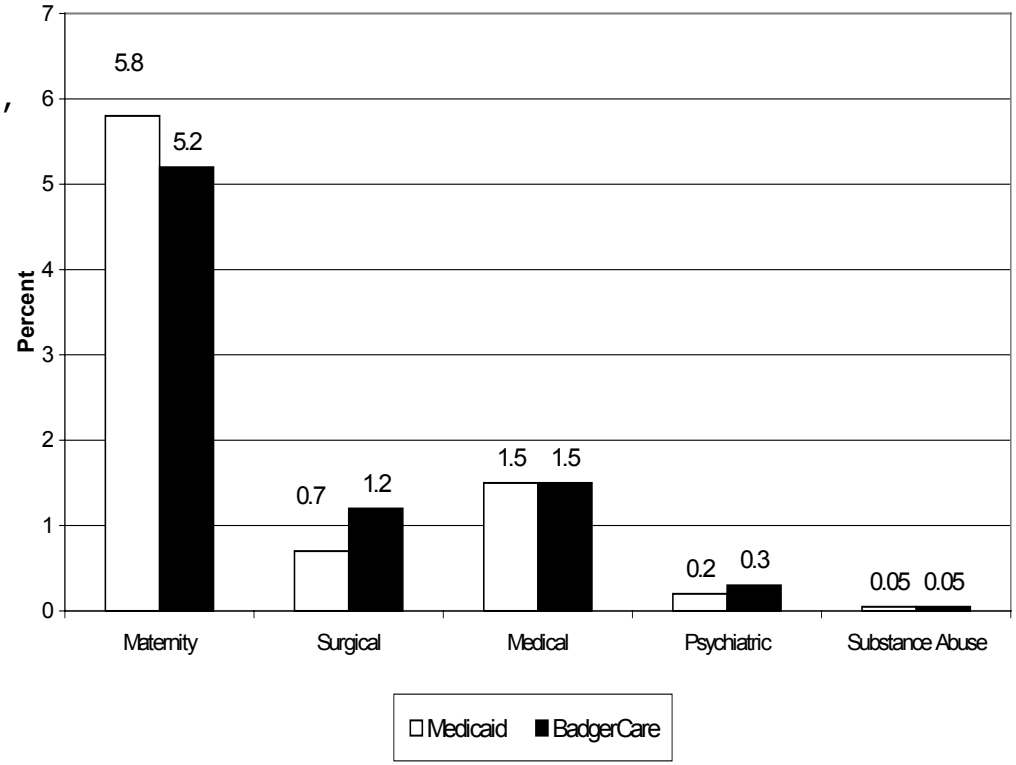
Some conditions may require care or services that cannot be provided on an ambulatory or outpatient basis. Those conditions may require hospitalization, referred to as inpatient care.

Inpatient care may be necessary for many different conditions. For the purposes of the Medicaid/BadgerCare HMO performance monitoring program, five general categories of care are used: maternity, surgery, medical, psychiatric and substance abuse.

This chart compares the use of inpatient care services by HMO enrollees in the Medicaid program with enrollees in the BadgerCare program.

The chart shows that in 2002, use of inpatient care services was nearly equal in each program.

MEDDIC-MS 2002 General and Specialty care-Inpatient, Medicaid and BadgerCare



Mammography (screening) and malignancy detection

Monitoring measure

Early detection of breast cancer improves outcomes of treatment and long-term survival.

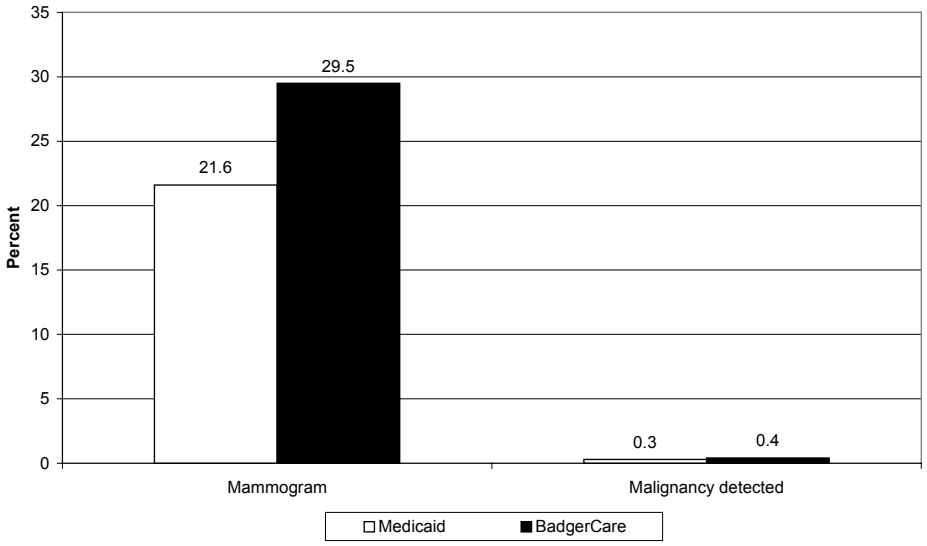
Mammography is recognized as a highly effective method for early detection of breast cancer.

The American Cancer Society and the National Cancer Institute each recommend that women over age 40 have regular screening mammograms.

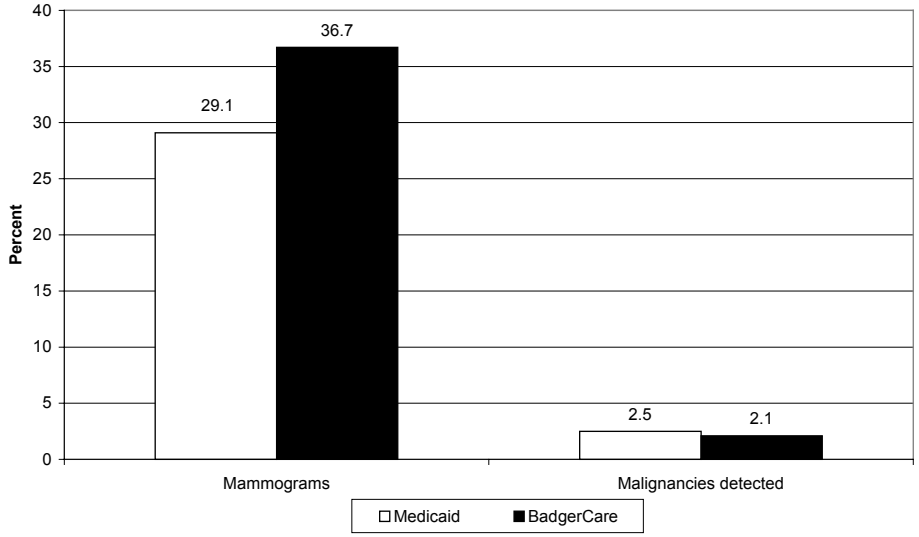
Though only a small portion of enrollees in Medicaid and BadgerCare are women over age 40, facilitating and tracking the provision of screening mammography is important because of the benefits of early detection and treatment.

The screening mammography rate for women in BadgerCare was somewhat higher than in Medicaid in 2002. This may be due, in part, to relatively more women over 40 years of age in BadgerCare. The outcome measure for this service, detection of breast malignancies, was nearly identical between the two programs.

MEDDIC-MS 2002, Mammograms & Malignancies Detected, Medicaid & BadgerCare, age 40-49 years

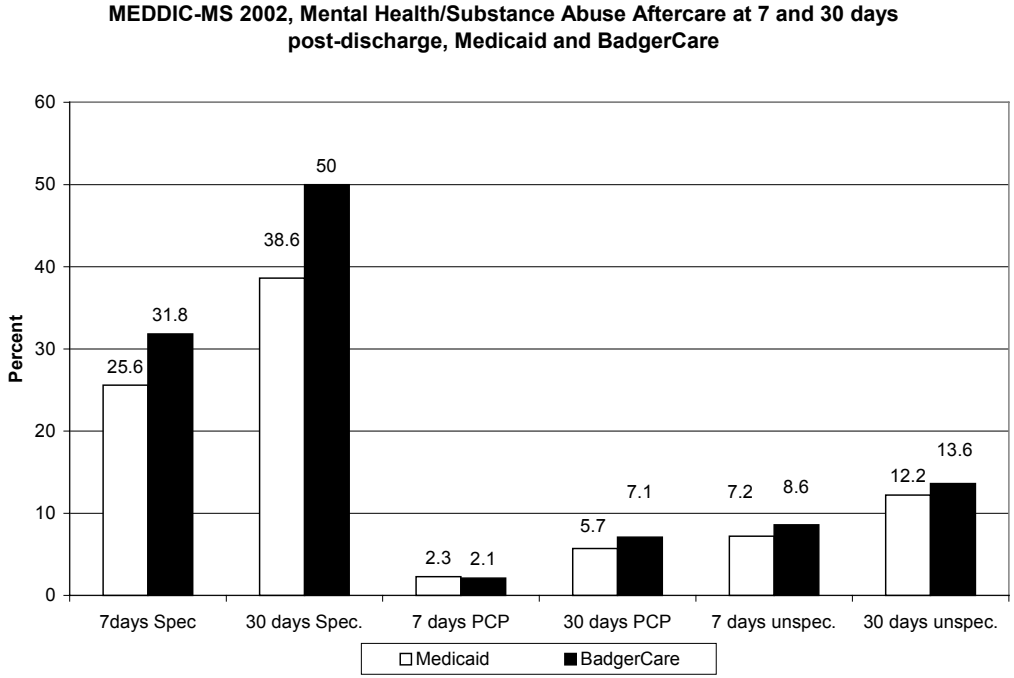


MEDDIC-MS 2002, Mammograms & Malignancies Detected, Medicaid & BadgerCare, age 50+ years



Mental Health/substance abuse (MH/SA) follow-up care within 7 and 30 days of inpatient discharge

Targeted Performance Improvement Measure



Research[1] has shown that follow-up care on an outpatient basis for individuals who have had inpatient care for mental illness or substance abuse is effective in reducing readmission to the inpatient setting for the same diagnosis.

The MEDDIC-MS measure set evaluates provision of follow-up care by both specialty care providers and primary care providers (PCP) as well as outpatient care provided within 7 days of discharge and within 30 days of discharge. Since appropriate service codes at times appear on encounter records, but the provider type is not specified, the measure set includes these encounters in the category of "unspecified" to prevent underreporting.

Access to follow-up care at both 7 and 30 days post-discharge by specialists was slightly higher in BadgerCare than it was in Medicaid. Follow-up care by primary care providers (PCP) was nearly equal at both 7 and 30 days post-discharge.

[1] *Evaluation and the Health Professions, Special Edition, State Medicaid Quality Programs*, "Outpatient Utilization Patterns and Quality Outcomes after First Acute Episode of Mental Health Hospitalization," Delmarva Foundation, December 2000.

Mental health/substance abuse (MH/SA) evaluations and outpatient care

Monitoring Measure

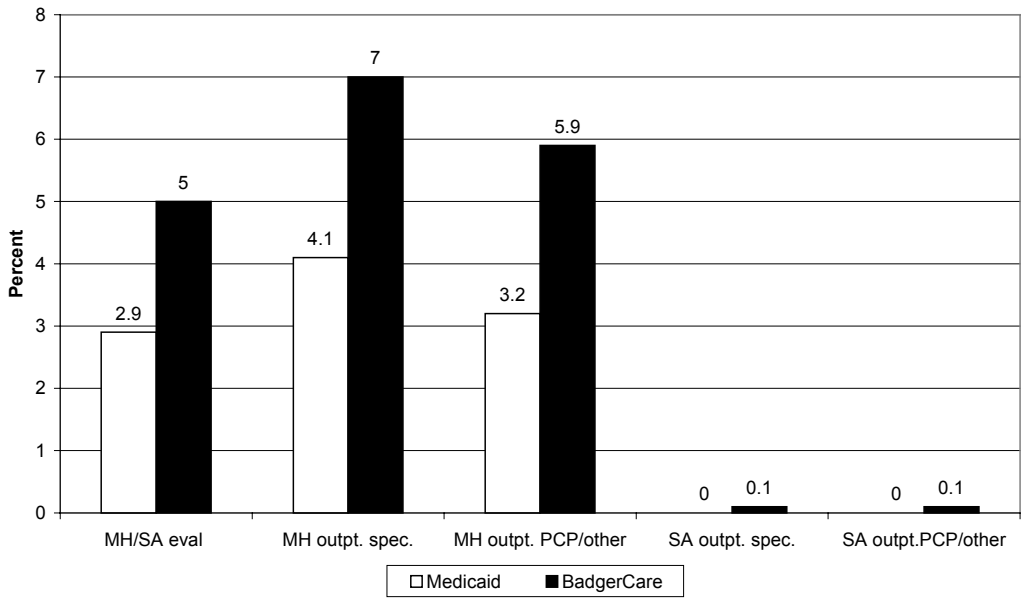
The first step in access to mental health and substance abuse (MH/SA) services is often an evaluation by a specialist in those areas. If a care need is identified, it is often possible to provide treatment on a day or outpatient care basis. This measure monitors the rate of evaluation and treatment services.

Tracking the provision of these services by provider type can provide insight into HMO network adequacy. In some cases, it may be necessary for primary care providers (PCP) or physician extenders to provide services, and enrollees may prefer that due to location and trust in the provider.

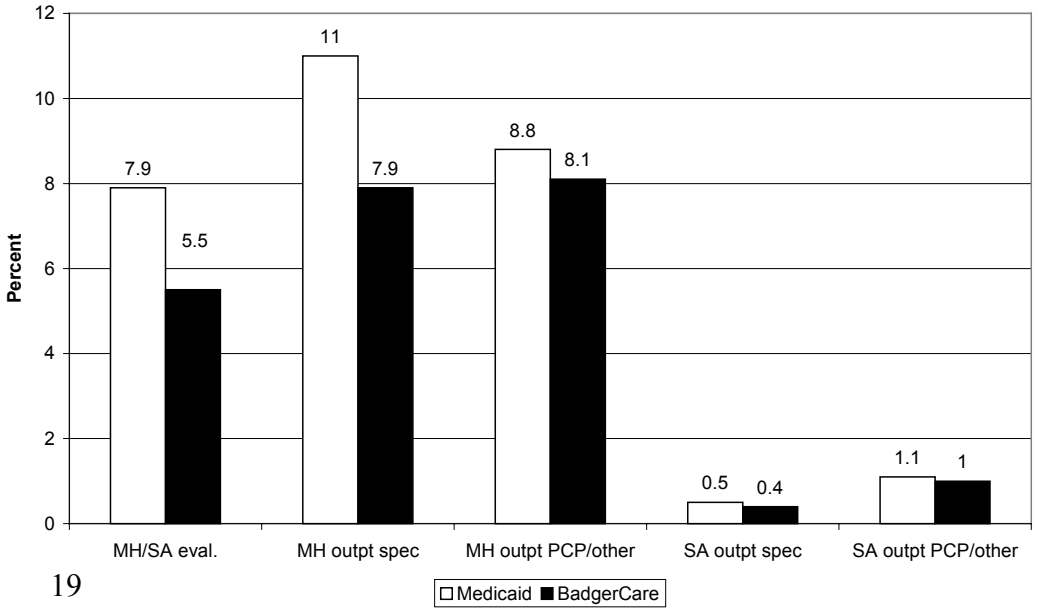
Use of MH/SA evaluations was higher in BadgerCare for enrollees age 18 years and under, but lower for enrollees 19 and over. The same pattern was noted in the use of mental health and substance abuse outpatient care by both specialists and primary care providers.

Utilization of substance abuse outpatient care was nearly the same for both age groups in each program.

MEDDIC-MS 2002-MH/SA Evaluations and Outpatient Care, Age Birth to 18 years, Medicaid and BadgerCare



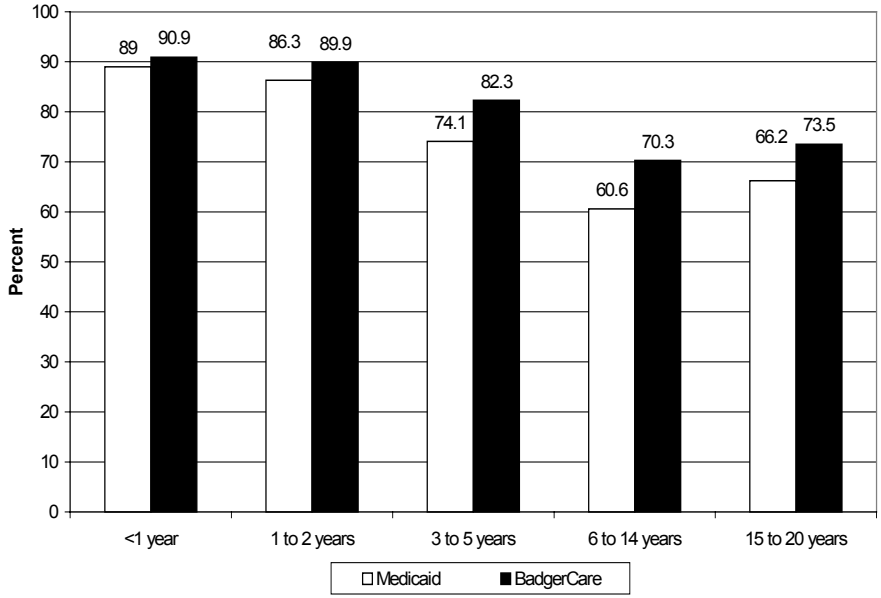
MEDDIC-MS 2002, MH/SA Evaluations and Outpatient Care, Age 19+ years, Medicaid and BadgerCare



Non-HealthCheck well-child care

Monitoring measure

MEDDIC-MS 2002, Non-HealthCheck Well-child visits, Medicaid and BadgerCare



Non-HealthCheck well-child visits are primary care visits that may be too limited in scope to qualify as "HealthCheck visits," but do result in delivery of some preventive or other health services. An example is a postnatal visit for a new mother that is timed to coincide with the due date for immunizations for the child, where the immunizations are given, but may not involve the full HealthCheck exam.

The positive health and economic effects of well-child services, particularly in early childhood have been demonstrated in a recent study.[2]

The study found:

- California had the highest percentage (30 percent) of children with five or more well-child visits in the two-year study period of the states included, and the lowest rate of avoidable hospitalizations (70/1,000).
- Michigan had the second highest percentage (22 percent) of children with five or more well-child visits in the study period, and the second lowest rate of preventable hospitalizations, (120/1,000).
- Georgia had the lowest percentage (15 percent) of children with five or more well-child visits in the study period and the highest rate of preventable hospitalizations (160.9/1,000).

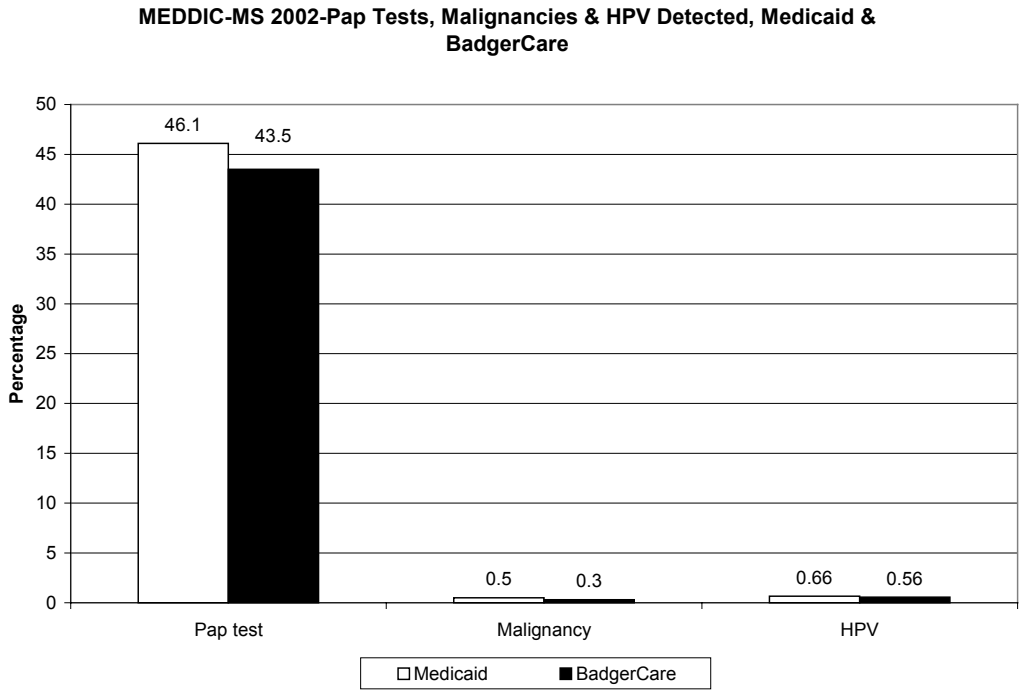
The authors of the study concluded that the "association between preventive care and a reduction in avoidable hospitalizations was robust and was consistent across the states and racial and ethnic groups."

MEDDIC-MS data for this measure shows that a relatively high percentage of children in both Medicaid and BadgerCare received at least one visit in the look-back period of the measure in each age group. Also, provision of well-child visits was somewhat higher in BadgerCare in each age group. For additional information on access to well-child care, see "EPSDT (HealthCheck) Comprehensive well-child exams," on page 14.

[2] *Effectiveness of compliance with pediatric preventive care guidelines among Medicaid beneficiaries*. Hakim RB, Bye BV. July 2001. PEDIATRICS, Vol. 108, No.1:90-97.

Pap tests-cervical cancer screening

Monitoring measure



The majority of Medicaid/BadgerCare enrollees are females and only about 29 percent of the females enrolled are 21 years of age or older. Consequently, women's health services are of particular significance to the Medicaid/BadgerCare program.

Cervical cancer is diagnosed in approximately 15,000 women in the United States each year. According to the Centers for Disease Control (CDC), cervical cancer remains a leading preventable cause of death among women and, after three decades of decline, the mortality rate has begun to rise. Early detection is relatively easy and is the key to a high probability of survival. The most common method for early detection is called the "Pap test."

In addition, human Papillomavirus (HPV) infection is believed to be a causal factor in many cases of cervical cancer. According to the CDC, more than 90 percent of cervical cancers are caused by HPV infections. This measure assesses not only the rate of Pap testing in Medicaid and BadgerCare, but also the detection rates for malignancy and HPV infection.

The Pap test is generally performed every three years, beginning when the woman becomes sexually active or by age 18 years. Thus, the Pap test is not required annually, and the MEDDIC-MS measure is designed to take this into account.

Provision of cervical cancer screening tests (Pap tests) is slightly higher in Medicaid than in BadgerCare for women age 18-65 years. Malignancy detection rates were nearly the same in each program (0.5 and 0.3 percent) as were HPV detection rates (0.66 and 0.56 percent).

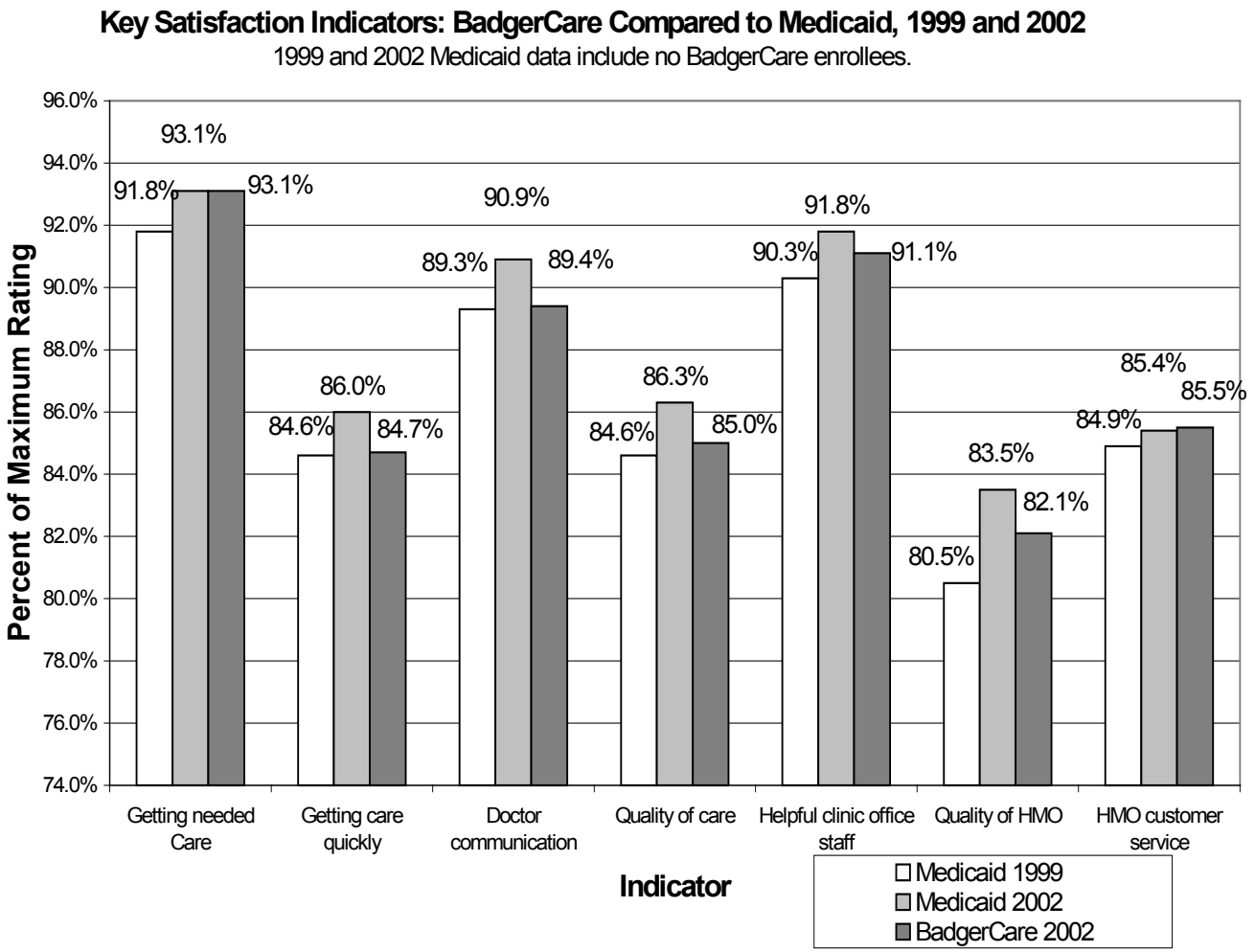
Results on Non-clinical Performance Measures

Enrollee satisfaction on key indicators--Medicaid and BadgerCare compared

(CAHPS® Enrollee Satisfaction Survey data, 2002)

CAHPS® (Consumer Assessment of Health Plans) is a standardized enrollee satisfaction survey for managed care. Wisconsin administers the survey to randomly selected Medicaid and BadgerCare enrollees through an independent third party.

This chart illustrates the overall satisfaction ratings on the 7 key indicators in the CAHPS® survey with the responses expressed as a percentage of the highest rating possible for each indicator.



Overall enrollee satisfaction was quite high in both Medicaid and BadgerCare across all seven indicators. In addition, overall satisfaction ratings improved for all seven indicators among Medicaid enrollees between 1999 and 2002.

BadgerCare enrollees expressed satisfaction levels nearly equal those of Medicaid enrollees on two indicators; getting needed care and HMO customer service. Satisfaction on five other indicators was somewhat lower among BadgerCare enrollees than among Medicaid program enrollees.

For additional information, contact:

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