Introduction
Almost 100 years have passed since E. A. Codman advocated evaluation of care provided to patients. Donebedian provided a set of criteria for measuring quality, and the Institute of Medicine provided a definition of quality.

Quality of care measurement has different parameters for patient, provider, and purchaser. Physicians are interested in evidence-based knowledge to drive patient care; patients are interested in access, waiting times, and the ability of the physician to communicate accurate information to them. HMOs are interested in patient satisfaction and cost-effective health care delivery. The cost effectiveness of quality remains a concern in a fragmented health care system where the patient can move among providers, payers, and employers and improvement in outcomes is measured in the long term.

The Institute of Medicine definition of quality, the “degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge,” brings the concept of outcomes forward as one indicator of quality in health care service delivery. Donebedian’s previously defined components of quality—consisting of structural features, processes of care, and outcomes—were discussed by Adams, et al., and further defined by the National Roundtable on Health Care Quality. This paradigm of quality measurement implies the need for an extensive database to assure a complete and accurate measurement of quality by whatever means is selected.

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An overview of Wisconsin Medicaid quality

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Managed Care Quality Improvement
Prior to 1996, FFS was the predominant system of health care delivery in Wisconsin Medicaid. In late 1996 and early 1997, Medicaid managed care became available in the majority of Wisconsin counties and enrollment in it increased. Currently, over half of those eligible for Medicaid in Wisconsin are enrolled in managed care.

Wisconsin Medicaid managed care QI is achieved through contract requirements with participating managed care organizations (MCO), through review in selected
areas by an independent external quality review organization (EQRO), and DHCF oversight activity.

In 1997, the DHCF began development of a five-part Quality Improvement Initiative for managed care. Its components are as follows:

1. The database, built upon submission of encounter data according to DHCF established specifications.
2. The data validity audit, used to evaluate the HMO’s resource commitment to data capture and reporting, and the completeness and accuracy of the HMO’s data storage and retrieval process.
3. The Medicaid Encounter Data Driven Improvement Core Measure Set (MEDDIC-MS) system for reporting Targeted Performance Improvement Measures and Performance Measures.
4. The contractual requirement that each HMO complete two Performance Improvement Projects annually. These projects evaluate an HMO’s ability to analyze health services data, identify significant areas in which health care outcomes might be improved, develop an appropriate intervention, and conduct follow-up measurements of progress.
5. Care analysis projects (CAPs), which analyze encounter data in specific areas of interest, such as managing diabetes mellitus and asthma, increasing lead screening rates and supporting tobacco cessation efforts. CAPs allow the DHCF to provide HMOs with specific information regarding service utilization so that resources can be targeted to provide the maximum improvement in health care outcomes.

Fee-For-Service Quality Improvement

QI review in Wisconsin Medicaid FFS health care delivery is achieved through review in selected areas by the contracted EQRO and by direct DHCF oversight activities. All EQRO reviews are conducted using explicit DHCF approved criteria, and include a quality-of-care review and follow-up when quality issues are identified.

External Quality Review Organization Reviews

As part of its comprehensive QI program, Wisconsin Medicaid works with an EQRO to conduct health care reviews designed to identify and eliminate unreasonable, unnecessary, or inappropriate care provided to recipients. On an annual basis, the EQRO conducts an average of 15,500 inpatient hospital reviews to determine the medical necessity of Medicaid-covered medical/surgical, mental health, and substance abuse services. Examples of EQRO reviews include short-term stays of less than three days, re-admissions within 31 days, and certificate of need for admission to a mental health facility for recipients less than 21 years of age.

Wisconsin Medicaid also conducts retrospective chart reviews annually to assure that the ambulatory care provided is complete, timely, medically necessary, and consistent with generally accepted standards of care. Examples of ambulatory reviews include Health-Check services, targeted emergency room services, prenatal services, targeted chronic conditions, and targeted physician services. Approximately 8000 reviews will be conducted by the EQRO during the 2004-2005 review period.

Physicians review nurse-identified potential quality concerns. If the first level of physician review determines that a quality concern has the potential to cause, or has caused an adverse outcome, a notice of potential concern is sent to the provider. Upon receipt of the provider response, another physician review is completed. If the quality concern is upheld, a notice of determination is sent to the provider. The provider is given the opportunity to request a re-review. If this re-review upholds the quality concern, a notice of final determination is sent to the provider.

On a quarterly basis, the EQRO provides the Medicaid program with a profile of provider quality concerns. Follow-up actions taken by the Medicaid program may include, but are not limited to, a face-to-face meeting between the provider and the EQRO’s physician advisory panel, required submission of a corrective action plan, receipt of continuing education, or referral to the facility’s/clinic’s quality committee.

Pharmacy Management

Wisconsin Medicaid operates a number of pharmacy QI activities. The Prospective Drug Utilization Review system interacts with pharmacists; the Retrospective Drug Utilization Review (Retro-DUR) system interacts with physicians; and the Recipient Lock-in Program (RLP) interacts with recipients, pharmacists, and providers.

Prospective drug utilization review has been operational through a point-of-sale (POS) system in real-time on-line claims processing since February 2001. It provides an important quality assurance mechanism for providers by notifying pharmacists in real time of potential concerns associated with filling a prescription. Medicaid recipients’ prescriptions are monitored using selected alerts, such as drug/drug interaction, therapeutic duplication, late refill, early refill, and drug-age precaution. The pharma-
cist must respond to the alert before authorization for payment is granted.

Alert criteria are reviewed and approved by physicians and pharmacists serving on the Wisconsin Medicaid Drug Utilization Review (DUR) Board. The criteria are applied to the paid pharmacy claims on a monthly basis and generate approximately 650 individual patient cases involving 1000 potential drug problems. Pharmacists then review each of the individual cases, resulting in approximately 120 cases warranting intervention and 200 letters and response forms sent to prescribers on a monthly basis. Responses from individual prescribers are recorded and tracked.

The Retro-DUR system is used for detecting repeated occurrences of drug problems and for detecting drug use patterns for targeted interventions. In place since 1995, there are currently 64 DUR Board-approved criteria. Most criteria are screened for on a monthly basis. On average, 700 reviews are conducted monthly with approximately 200 letters being sent to prescribers regarding specific drug-related issues.

Reviews of the prospective drug utilization and Retro-DUR systems are used to develop provider- and/or prescriber-specific interventions. After clinical review by a pharmacist, select providers and/or prescribers receive an intervention letter describing the particular drug problem or pattern of responses and alerts detected. The packet includes a medication profile, current practice guideline information, a response form, and a postage-paid envelope.

The RLP monitors FFS paid claims data on a monthly basis to detect abuse or misuse of Medicaid pharmacy benefits. Many recipients have significant medical conditions in addition to being addicted to controlled substance medications. Other recipients are diverting drugs to street use. Coordination of recipient health care services is intended to improve the quality of care for the recipient and reduce unnecessary physician and pharmacy utilization while ensuring appropriate access to necessary Medicaid services.

Recipients are referred to the RLP through Retro-DUR and automated surveillance methods, as well as by physicians, pharmacists, and other providers. Once a referral is received, a pharmacist uses an automated decision support tool (DST) to review six months of pharmacy claims and diagnoses data. The DST allows for a review of claims in as short a time as two weeks from the date services are provided, discriminates between the types and level of abuse behavior exhibited by the recipient, and gives a preliminary recommendation for the type of intervention indicated for the specific behavior.

Medicaid recipients with evidence of controlled substance abuse and/or forgery of prescriptions are “locked-in” to a single provider and a single pharmacy for a period of two years. Warning letters may be sent to recipients who have some evidence of abuse or misuse of controlled substances but have not received any type of intervention from previous reviews.

On a monthly basis, an average of 129 recipient profiles are reviewed, resulting in recommendations for approximately nine enrollments, 18 warning letters, 47 physician alert letters, 14 re-reviews, and 59 no further action recommendations. On average, 218 letters are sent and 94 provider and 49 recipient phone calls are received per month.

Over the last six years, the RLP has grown from 62 enrollees to a peak of over 250 enrollees. Ongoing quality assurance and improvement activities for the RLP have included tracking physician responses to alert letters and a cost benefit analysis for the interventions performed by the RLP. The physician response rate to the alert letters is 71%, with 87% of physicians rating the information received as very useful or useful. In 1997, the cost benefit analysis demonstrated that the RLP saves $6.16 per dollar spent. This analysis also demonstrated a 24% decrease in drug expenditures, a 21% decrease in hospitalizations, and a 26% decrease in emergency room visits compared to baseline services provided to recipients included in the analysis.

Targeted Interventions
Wisconsin Medicaid uses FFS paid claims data to identify gaps between recommended “best practice” care and actual care. Targeted interventions are implemented to promote changes in recipient and/or provider behavior resulting in the delivery of quality health care in the most cost-effective manner. Targeted interventions are designed to address the unique challenges present in the Medicaid population, notably, fiscal constraint and complex medical and psychosocial needs in a hard-to-reach population. There are currently four interventions at different stages of development and implementation.

Asthma Targeted Intervention—
The goal of the Asthma Targeted Intervention is to identify and intervene with recipients who have identified treatment gaps. Recipients with an over reliance on rescue medication and/or an emergency room visit or hospital stay without an outpatient visit for asthma +/- 60 days after the secondary care event are said to have gaps in treatment. The most recent
targeted intervention was conducted in May 2003 and included 110 recipients. Of the recipients included in the intervention, 110 recipients were included in the mailed targeted intervention. According to a February 2004 analysis, the mailed intervention closed 88% of the gaps, a very impressive result.

**Diabetes Targeted Intervention**

The Diabetes Targeted Intervention goal is to improve the rate at which recipients with diabetes receive an HbA1c and LDL to better manage their disease. The targeted intervention has been completed three times, most recently in June 2003. The June 2003 intervention targeted providers and recipients and included a comparison group who did not receive the intervention. Preliminary results indicate that the intervention resulted in marginal increases in the percent of recipients who received recommended services. Recipients with an identified provider, regardless of inclusion in the intervention, were more likely to receive an HbA1c and/or LDL.

**Acute Myocardial Infarction Targeted Intervention**

The Acute Myocardial Infarction (AMI) Targeted Intervention promotes the appropriate use of medication therapies for recipients following an AMI. The intervention consists of identifying six potential gaps in treatment and sending gap-specific personalized letters to providers for deviations from specialty-approved treatment guidelines.

Recipients with an initial episode of care for an AMI for one year were identified using paid claims data. Medication profiles were extracted for continuously FFS-eligible recipients for the year and rates of use of beta-blockers (BB), angiotensin converting enzyme inhibitor (ACEI), and aspirin were determined. Recipients not receiving the recommended drug regimens were selected for intervention. In July 2003, 124 recipient-specific intervention packets were mailed to FFS providers. Each intervention packet included an individualized cover letter identifying the recipient, a summary of clinical practice guidelines for secondary prevention of AMI, a recipient-specific medication profile, and a provider response form.

Preliminary evaluation results indicate that Wisconsin Medicaid compares favorably to national averages for adherence to American Heart Association/American College of Cardiology (AHA/ACC) treatment guidelines for secondary prevention of AMI. The intervention resulted in marginal net increases in adherence to the guidelines for ACEIs and BBs and in utilization of ACEI, BBs, and aspirin in the post-intervention period. Analysis of prescriptions and emergency room visits three months pre-intervention and three months post-intervention indicate a 39% increase in ACEI prescriptions, a 44% increase in BB prescriptions, and a 22% increase in aspirin prescriptions, with a 32% reduction in emergency room visits.

**Quarterly Lead Screening Report Intervention**

The Lead Screening Report intervention goal is to increase the rate at which recipients receive required lead screening tests and follow-up. Quarterly reports identify Medicaid eligible children between 1 and 5 years of age who are in need of blood lead testing. Reports have been disseminated to 80 Medicaid certified HealthCheck Outreach agencies and 13 HMOs since September 2001. HMO and HealthCheck Outreach Agency follow-up rates continue to be twice as high as rates for children not included in a report.

**Care Management**

Targeted interventions are relatively inexpensive to conduct and do have a positive impact on care received by recipients. In response to educational letters, some treatment gaps are closed and actual care approaches were identified as “best practice.” Equally clear, however, is that not all identified gaps are closed. Obviously, a lack of information is not the only barrier to receiving optimal care, but is, perhaps, the easiest to remove. The failing of targeted interventions to close all identified gaps begs the question, “What more is needed?”

In response to this question, the DHCF implemented an asthma program in April 2003 and expanded it to diabetes in March 2004. Wisconsin Medicaid prefers the term “care management” in recognition of the common, yet significant, medical comorbidities and psycho-social issues that serve as barriers to optimal care for this population. Thus, even though Medicaid recipients with asthma are targeted for enrollment, asthma may not be the focus of care management. Rather, general barriers to receiving optimal care for any health need are addressed.

The Wisconsin Medicaid care management program has been built upon the targeted interventions. That is, those recipients for whom a letter did not close the treatment gap are considered for inclusion. This is an effective way to drill down to those recipients who need more than a letter to affect a change in care.

Identified recipients are sent a letter informing them of the voluntary program. Recipients are contacted by Medicaid staff, typically nurses, who establish a rapport with the recipient, work to identify barriers to optimal care, and problem solve barrier removal with the recipient.

Due to its recent implementation and small size, an evaluation of the
care management program is not yet available. However, lessons learned to date include the following:

- Enrolled recipients have not been well served by the fragmented FFS health care delivery system.
- As expected, enrolled recipients have complicated medical comorbidities. For asthma, these include diabetes, congestive heart failure, joint pain, and hypertension.
- Behavioral health is also a common comorbidity and includes depression, developmental disabilities, low IQ, substance abuse, and personality disorders.
- “Life style” problems are often present, notably smoking, obesity, and lack of exercise.
- Most recipients are receptive and appreciate the 1:1 assistance.
- Barriers to care are complex and can be difficult to address. Often, health care needs are secondary to more pressing issues such as eviction, loss of utilities, domestic violence, and the needs of loved ones.
- In response to the targeted intervention letters, some physicians are eager to refer their more difficult patients into the pilot program in order to improve care.

The DHCF has been encouraged by the results of the care management pilot program and is exploring opportunities to expand its size and scope.

Summary
 Wisconsin Medicaid takes an active role in FFS and HMO quality improvement, targeting recipients with complex medical and psychosocial needs. Wisconsin Medicaid’s QI program identifies gaps in treatment, eliminates duplication of service, and intervenes for recipients whose health care outcomes may benefit from change.

Data systems have been enhanced to measure health care outcomes as well as quality processes. The DHCF is able to provide meaningful and timely quality information to Medicaid HMOs and FFS providers. Using DHCF approved explicit criteria, the EQRO conducts inpatient hospital and ambulatory reviews, which include a quality of care component and follow-up on identified issues. Wisconsin Medicaid’s focus on quality includes the Recipient Lock-in Program, Prospective DUR, Retrospective DUR, and the Nursing Facility Drug Summary Report. In addition, the Medicaid program implements targeted interventions to promote changes in recipient and/or provider behavior to ensure the delivery of quality health care in the most cost-effective manner.

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References
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