Health Plans' Use of Asthma Quality Improvement Projects to Meet NCQA Accreditation Standards

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Background: Managed care represents an important system of healthcare delivery in the United States and the primary source of care for many persons with asthma.

Objective: To characterize how US managed care health plans address the quality of asthma care through the use of disease-specific quality improvement (QI) programs complying with National Committee for Quality Assurance (NCQA) standards.

Methods: This study was a cross-sectional review of reports from all accreditation surveys conducted in 1996 and 1997 by the NCQA. Each accreditation report was reviewed for evidence of whether the health plan explored asthma care as a way to demonstrate compliance with NCQA accreditation standards. Asthma activity was examined with respect to health plan characteristics such as size of plan and Medicaid contracting. Types of asthma QI activity, use of guidelines, and application of different NCQA accreditation standards were also examined.

Results: Approximately 90% of 197 health plans undergoing NCQA accreditation surveys in 1996 and 1997 reported some form of asthma QI activity. There were no statistically significant differences in this activity in large vs small plans or in plans with vs without Medicaid members. Approximately two thirds of health plans used asthma QI activities to meet NCQA accreditation standards in health management systems, and three fifths monitored and evaluated important aspects of asthma care and service.

Conclusions: During the study period, many US health plans conducted asthma care QI activities. The recently released NCQA asthma performance measure may provide the next assessment of how well managed care is contributing to improving asthma care in the United States.

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The growth of managed care delivery systems offers the possibility of advantages and disadvantages for the quality of patient care. Managed care settings provide opportunities for quality improvement (QI) activities, and, because managed care theoretically is designed to coordinate and manage care, its infrastructure offers a potential mechanism for implementing QI interventions. In contrast, if managed care organizations (MCOs) focus primarily on short-term financial gains, patient care could be negatively affected as a result of cost-containment efforts. Too little is known about the quality of care provided in managed care settings and about MCOs' programmatic QI efforts for their members.

Care for persons with asthma represents an area in which health plans might seek to develop efforts in QI. Asthma is a common illness in the United States, affecting persons of all ages.[1] Care for asthma is shared among multiple primary care and specialty disciplines and represents a large economic burden to society.[2] The literature has demonstrated large variations in the care of persons with asthma.[3-5] Since 1991, there has been a set of widely disseminated national guidelines to assist in reducing the variations in care.[6] Yet, evidence suggests that although physi-

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cians are familiar with these guidelines, they are not implementing the recommended practices.[6-10]

Although the literature includes isolated examples of managed care QI interventions in asthma,[11,12] no study has ever been conducted that provides a systematic characterization of asthma QI interventions in managed care settings. The National Committee for Quality Assurance (NCQA) is an independent, not-for-profit organization that provides information on the quality of health plans, which is gathered in part through a rigorous accreditation program.[13] The purpose of this study is to characterize how US managed care health plans address the quality of asthma care through the use of disease-specific QI programs that meet NCQA standards.

··· METHODS ···

Overview of Study Design

The NCQA began to accredit health plans in 1991, a process that includes an on-site survey to evaluate the plan's commitment to quality of care. The survey used a variety of standards to assess 6 areas: QI and quality management, credentialing of providers, members' rights and responsibilities, health promotion, utilization management, and medical records. Beginning in 1999, the NCQA reorganized its accreditation categories and added a performance component. At present, one quarter of the health plan's accreditation score is derived from data reported on a set of standardized quality-of-care indicators that assess both clinical quality and plan member experiences with care.

This study was based on a cross-sectional review of all NCQA health plan accreditation surveys conducted during 1996 and 1997. The surveys were abstracted to assess the extent to which asthma care QI projects were used to demonstrate compliance with NCQA accreditation standards. Before 1999, the NCQA's accreditation survey process did not require health plans to address specific chronic conditions; rather, health plans could choose the clinical areas used to demonstrate QI and utilization management interventions.

Data Abstraction Process

Researchers electronically searched for the word "asthma" in every report of an NCQA accreditation survey conducted in 1996 and 1997. The report text for each reference to "asthma" was abstracted according to the section of the accreditation report (the reports are organized by the specific standards that fall into the 6 areas outlined previously). The abstractors created tables to summarize the prevalence of asthma references in each relevant accreditation standard. Therefore, researchers identified every aspect of the accreditation survey process in which health plans chose to report on asthma across all accreditation categories (eg, QI and utilization management).

Because the requirements of the 1996 and 1997 NCQA accreditation standards regarding chronic conditions do not prescribe which specific diseases or populations MCOs must address, the decision of MCOs to report on asthma represents health plans' proactive selection of that disease as an area of focus. Health plans were required to report on clinical QI interventions in at least 2 areas but were allowed to select those conditions based on their own populations. As seen from the following examples, many NCQA accreditation standards address issues that are important to care management and QI for any chronic disease.

- Does the MCO have an ongoing QI program designed to monitor and evaluate the quality and appropriateness of care and service in an objective and systematic way?
- Does the MCO pursue opportunities for improvement in those areas?
- Does the MCO monitor and evaluate critical aspects of care for high-volume, high-risk services?
- Does the MCO build health management systems and education programs designed to promote effective self-management for members with chronic illnesses?
- Does the MCO establish performance goals or a benchmarking process using objective, quantifiable indicators?
- Does the MCO take actions to improve quality of care and assess the effectiveness of those actions through systematic follow-up?
- Does the MCO use established, evidence-based guidelines in helping to improve care and educate providers in its network?

Asthma activity was defined as any of the following: use of any indicators to track asthma care or utilization (NCQA 1996-1997 accreditation standards 6.1 and 6.4), adoption of asthma guidelines (standard 6.2.3), establishment of asthma performance benchmarks (standard 9.1.1), actions taken to improve quality and assess effectiveness through systematic follow-up (standard 10.0), or implementation of an asthma QI intervention (standard 8.1).

For each survey, researchers reviewed and summarized the characteristics of all sections of the

reports that mentioned "asthma." Reports of asthma activity were examined with respect to a variety of health plan characteristics, including plan size (greater than median vs less than or equal to median plan size of 93,420 enrollees), Medicaid contracting (yes/no), geography (by 9 census regions), and model type (independent practice association network model vs group/staff model).

Statistical Analysis

Results are presented as descriptive statistics. For comparisons of health plans with different characteristics, statistical significance is evaluated using a χ^2 test of significance.

··· RESULTS ···

Selected General Health Plan Characteristics

The NCQA issued accreditation decisions and completed survey reports for 197 MCOs in 1996 and 1997. These MCOs represented a cross section of sizes, model types, and geographic regions. The median plan size was 93,420 members. Medicaid beneficiaries composed at least some portion of the membership for 32.4% of the plans.

Differences in Asthma Activity by Plan Characteristics

Nearly 9 of every 10 MCOs (89.7%) undergoing NCQA accreditation in 1996 or 1997 elected to describe some type of asthma QI activity in their accreditation survey. **Table 1** describes the

Table 1. Frequency of Managed Care Organization Asthma Quality Improvement Activity by Selected Health Plan Characteristics

Characteristic	Health Plans			*P*
	Total, No. (%)*	Asthma Activity, %	No Asthma Activity, %	
Medicaid provider				
Yes	63 (32.4)	90.5	9.5	.803
No	131 (67.6)	89.3	10.7	
Health plan size				
Larger	96 (49.7)	91.7	8.3	.370
Smaller	97 (50.3)	87.6	12.4	
Total	197	89.7	10.3	

*Totals by health plan characteristics do not equal 197 due to incomplete information.

Table 2. Frequency of Health Plans Reporting Various Types of Asthma-Related Quality Improvement (QI) Activities to Demonstrate Meeting the NCQA Standard

Type of QI/Quality Management Activity	1996-1997 Accreditation Standard No.	Health Plans, No. (%) (n = 197)
Health Management Systems: Program activities designed to promote effective health management among members with chronic illnesses	8.1	130 (66.0)
Important Aspects of Care and Service: Monitoring and evaluation of important aspects of care and service, such as high-volume, high-risk services, and the care of acute and chronic conditions	6.1	117 (59.3)
Scope and Content: Ongoing QI program designed to objectively and systematically monitor and evaluate the quality and appropriateness of care and service provided to members and to pursue opportunities for improvement	5.1	80 (40.6)
Action and Follow-up: Actions taken to improve quality and assess effectiveness through systematic follow-up	10.0	74 (37.6)
Performance Goals: Performance goals and/or a benchmarking process is established for objective, measurable quality indicators	9.1.1	57 (28.9)

NCQA = National Committee for Quality Assurance.

frequency of MCO asthma QI activity by health plan characteristics. There was no difference in the frequency of asthma QI activities in MCOs with Medicaid beneficiaries (90.5%) vs MCOs without Medicaid beneficiaries (89.3%) or in larger plans (91.7%) vs smaller plans (87.6%).

Types of Asthma QI Activities

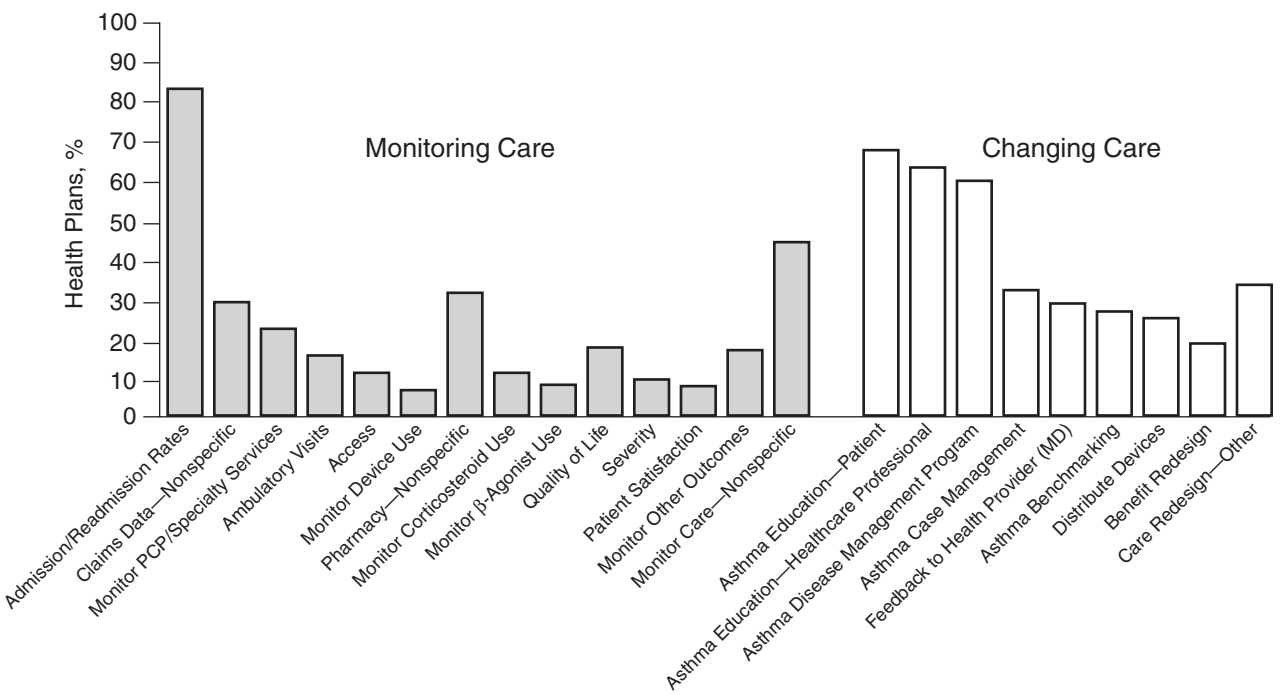
The NCQA accreditation standards require health plans to demonstrate QI and quality management activities, but they leave the specific areas of focus to the discretion of the plans. As seen in **Table 2**, more than half of all health plans voluntarily described asthma health management systems and programs (66.0%) and monitoring and evaluation of asthma care (59.3%). In addition, 40.6% provided details about ongoing asthma QI programs, 37.6% outlined actions and follow-up to improve asthma care, and 28.9% set asthma performance goals.

The following are some examples of "asthma health management systems and programs" (accreditation standard 8.1) in the review process. One health plan implemented a disease management program by identifying members with asthma through medical and pharmacy claims review. Elements of the program included member-directed educational interventions aimed at proper care, medication use, and symptom management strategies; health status monitoring through survey research; and case management programs for continuous monitoring and health management. Another health plan specifically targeted members with moderate-to-severe asthma and invited them to special educational sessions for different age groups. Session topics included inhaler technique, use of peak flow meters, and symptom awareness.

The **Figure** describes the frequency of use of the more common types of asthma-related monitoring activities and clinical programs. A majority of the health plans reported monitoring hospital admission or readmission rates (82.1%). Less frequent was the monitoring of pharmacotherapeutics, specifically use of corticosteroids (10.1%) and β-agonists (6.7%). Very few programs monitored patient outcomes such as improvements in symptom burden, quality of life, or asthma-related patient satisfaction.

As the Figure also illustrates, asthma education programs for patients (64.8%) and healthcare profes-

Figure. Frequency Distribution of Types of Asthma-Related Quality Improvement Efforts of 197 Health Plans Reporting to the NCQA in 1996 and 1997



NCQA = National Committee for Quality Assurance; PCP = primary care provider.

sionals (59.8%) were frequently reported. Fifty-six percent of health plans reported some type of asthma disease management program that involved more than education efforts. However, these efforts varied dramatically in scope, with most health plans providing little definition about program goals or activities. Only 28.5% of health plans indicated that asthma case management was part of their asthma care activities.

Types of Asthma Practice Guidelines Used

Of the 197 health plans, 84 (42.6%) reported that they used at least 1 asthma practice guideline. Many of the plans reported that they used more than 1 source of guideline in attempting to influence their network of providers. The National Heart, Lung, and Blood Institute's National Asthma Education and Prevention Program guidelines were used most frequently. Some health plans did not identify the source of their guidelines, suggesting that they were developed locally. Except for the National Heart, Lung, and Blood Institute, no other single source of asthma guidelines was mentioned by more than 4 health plans (**Table 3**).

··· DISCUSSION ···

Although a growing number of persons in the United States receive their healthcare from MCOs, little systematic evidence exists regarding the quality of care delivered in managed care settings, particularly with respect to people with chronic health conditions. This study sheds some light on this subject by demonstrating that MCOs do commit energy and resources to improving the quality of asthma care, although it does not address whether these QI activities have affected key process or outcome measures. In the future, the NCQA's revised accreditation standards and new performance measures should help provide information on this matter.

The NCQA was established as an independent organization in 1990 to provide information to consumers and purchasers about the quality of health plans. By doing so, the NCQA attempts to assist healthcare users in making informed health plan selection decisions. The NCQA continues to encourage QI within the US healthcare system through its 2 primary mechanisms. Its rigorous accreditation process evaluates the systems that make possible the delivery of quality healthcare, and its set of performance measures—the Health Plan Employer Data and Information Set (HEDIS)—provides quantitative information on a set of standardized quality-of-care indicators. Managed care organizations have been reporting HEDIS data to the NCQA since the mid-1990s. As evidence of the improvement that this process has generated, health plans that have publicly reported HEDIS data for 3 continuous years outperformed new HEDIS data reporters on virtually every indicator of clinical quality, access, and member satisfaction.[14]

The results of this study show that for 1996 and 1997, nearly all health plans that were surveyed by the NCQA reported that they had conducted interventions to improve the care of their members with asthma. Although the NCQA accreditation process evaluates effectiveness of MCOs' selected QI interventions, it did not at this time evaluate health plan performance on specific, standardized quality-of-care processes or outcomes. Therefore, it is not possible to characterize how these plans performed relative to other MCOs.

For that reason, in 1999 the NCQA changed its accreditation process from voluntary to mandatory reporting of HEDIS data collection and now bases one quarter of the accreditation score on audited results of HEDIS indicators. Between 1993 and 1995, as part of HEDIS 2.0, HEDIS included its first asthma-

Table 3. Reported Use of Asthma Guidelines, by Source, Among 84* US Health Plans Undergoing NCQA Accreditation During 1996 and 1997

Guideline Source	Health Plans, No. (%)
NIH/NHLBI National Asthma Education and Prevention Program	53 (52.0)
American Academy of Pediatrics	4 (3.9)
New England Journal of Medicine (1993)	3 (2.9)
Other medical literature	2 (2.0)
Unnamed sources	20 (19.6)
Others (mentioned only 1 time each)	20 (19.6)

NCQA = National Committee for Quality Assurance; NIH/NHLBI = National Institutes of Health/National Heart, Lung, and Blood Institute.
*Only 84 of the 197 health plans reported use of asthma practice guidelines; some plans reported using more than 1 set of guidelines (a total of 102 use incidences were reported).

related performance measure based on asthma hospitalization rates.[15] Because of a series of methodological shortcomings, the NCQA retired that measure from HEDIS and established a new performance-based asthma indicator related to the need for long-term controller medications as recommended by the National Asthma Education and Prevention Program national asthma guidelines.[6,16] The NCQA will begin to receive data on this new asthma performance measure in 2000 and will integrate the data into accreditation survey results by 2001.

The study results also indicate that less than half of the managed care plans used practice guidelines for asthma care. Of these, half mentioned the national guidelines—the rest seem to use various named or unnamed sources. The implications of this finding are troubling. Practice guidelines may be an important first line of response toward reducing undesirable variations in care. Yet, it seems from this survey that many health plans are seeking to improve the quality of asthma care without anchoring their efforts in well-accepted, standardized, clinical strategies.

This study has its limitations. First, the results are based on health plan self-reported data, which—unlike current HEDIS results—were unaudited. The NCQA accreditation survey evaluates standardization of methods, sampling strategies, and data sources, but there is no verification of the data itself. However, as a measure of quality assurance, each year approximately 100 health plans undergo an on-site survey. A second limitation is that there is no way to know whether this study's findings can be generalized to health plans outside of the NCQA accreditation process. Also, although nearly all health plans reported asthma projects, it is not possible from this study design to know if asthma is unique as a frequent focus of health plans' QI activities because the frequency of interventions for other chronic conditions was not examined.

Respective of these limitations, this study provides the first data that help characterize the degree to which US managed care health plans focus on asthma quality-of-care interventions. The survey results are encouraging and suggest that asthma has caught the attention of the QI programs of many health plans. However, the high proportion of health plans and physicians who have not adopted asthma guidelines is troubling.[7,8,17] The lack of common guidelines among health plans makes it more difficult for physicians and other providers to know whether they are providing optimal care. Much more information is needed to fully characterize the quality of care delivered to millions of persons with asthma in US MCOs.

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