

## HEDIS 3.0: Advancing the State of the Art in Health Plan Performance Measurement

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### **Abstract**

**The National Committee for Quality Assurance (NCQA) has recently released a draft of the latest version of its Health Plan Employer Data and Information Set, HEDIS 3.0. We believe that HEDIS 3.0 gives the public unprecedented opportunity to evaluate the performance of managed care plans and to assess the relative value of the choices that they have. Even so, it is clear to us that HEDIS 3.0 represents only the next step on a long path. In this paper, we summarize some of the challenges that faced those who developed HEDIS 3.0; how we addressed them; and what we are doing to assure that HEDIS continues to evolve toward the fully mature instrument that the public requires.**

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**T**he National Committee for Quality Assurance (NCQA) is an independent, not-for-profit organization whose mission is to evaluate and report on the quality and performance of managed care organizations (MCOs). We have learned from the primary stakeholders to our work—the consumers of healthcare, and the corporations and public sector programs (Medicare and Medicaid) that purchase health benefits—that they want to choose their healthcare plan based on demonstrated value. We observe a market that is operating imperfectly at present, because there is little information (except price information) available to inform value judgments. Our objective has been to try to create—and to move into public view—information about quality and performance to help to correct that. With valid and reliable information about quality as well as price, purchasers and consumers will be able to choose health plans that

represent the best value to them. With such information, we believe that healthy competition will drive managed care plans to produce continually higher value care and service for their customers.

HEDIS, the Health Plan Employer Data and Information Set, is one critical component to NCQA's efforts to provide performance information to support value-based purchasing. HEDIS is a set of precisely defined measures intended to provide users with information about the results that health plans achieve across the broad range of domains where health plan performance matters. In combination with the results of NCQA's Accreditation program—a rigorous, standards-based evaluation of how health plans are organized and how effectively they operate—this performance information provides an increasingly comprehensive view of health plan quality.<sup>1</sup>

HEDIS 3.0 is the third HEDIS set NCQA has produced. Our first effort—HEDIS 2.0—was built from a prior initiative undertaken by a consortium of health plans and corporate purchasers. HEDIS 2.0 was released in November of 1993;<sup>2</sup> since its release, it has moved rapidly into use. An Interstudy survey indicates that over 87% of health maintenance organizations (HMOs) are producing some HEDIS results,<sup>3</sup> and we have obtained nearly complete data from over 200. More than that, both anecdotal reports (from organizations such as Xerox, GTE, PepsiCo and the California Public Employees' Retirement System [CalPERS])<sup>4</sup> and survey data<sup>5</sup> indicate that corporations—especially larger corporations—are using HEDIS data to help define the set of health plans that are offered to employees, and to help employees assess the quality of the health plans that are offered to them.

The release of HEDIS 2.0 was accompanied by considerable pressure for a set of measures to create the same sort of accountability for publicly insured enrollees. In collaboration with the American Public Welfare Association (APWA) and the Health Care Financing Administration (HCFA), NCQA organized a large and broadly representative committee of state

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Medicaid directors, Medicaid advocates, health plans, and others, and spent nearly 2 years adapting HEDIS 2.0 for the Medicaid population. The product of this work—Medicaid HEDIS<sup>6</sup>—was released earlier this year, and is currently being integrated into oversight processes in a number of states.

As far as we had come, though, it was clear from the outset that HEDIS 2.0 (or its technical update, 2.5) and Medicaid HEDIS were not enough to meet the public's need for information. On the one hand, there were obvious gaps in the measurement sets: the first versions of HEDIS focused on health plan success at providing preventive care, with far less attention to the care delivered to members who were acutely or

chronically ill; neither version addressed the needs of the Medicare beneficiary nor the Medicare program; and standardization had not been achieved in the area of member satisfaction assessment. On the other hand, there were deeper issues—what we might call “gaps in the measurement infrastructure”—that needed to be addressed.

The clear need to advance the state of the art in health plan performance assessment prompted the creation of a new committee in June of last year. This committee—NCQA's Committee on Performance Measurement (CPM)—was constituted to bring the key stakeholders (especially purchasers and consumers) for this work together. The members of the CPM

**Table 1.** Members of the Committee on Performance Measurement (CPM)

<b>Wade M. Aubry, MD</b> Senior Vice President and Corporate Medical Director Blue Shield of California San Francisco, CA	<b>Joyce Dubow</b> Senior Analyst American Association of Retired Persons Washington, DC	<b>Patricia MacTaggart</b> Director, Health Care Delivery State of Minnesota Dept. of Human Services St Paul, MN	<b>Sara Rosenbaum</b> Co-Director George Washington Center for Health Policy Research Washington, DC
<b>Bruce Bradley, MBA</b> Director, Managed Care Health Care Initiatives General Motors Corporation Detroit, MI	<b>David Eddy, MD, PhD</b> Senior Advisor for Health Policy and Management Kaiser Permanente Pasadena, CA	<b>Arnold Milstein, MD, MPH</b> Managing Director Wm. M. Mercer and Company San Francisco, CA	<b>Cary Sennett, MD, PhD</b> Vice President for Performance Measurement National Committee for Quality Assurance Washington, DC
<b>Kathryn Coltin</b> Director of Clinical Measurement Systems and External Affairs Harvard Pilgrim Health Care Brookline, MA	<b>Jeffrey R. Harris, MD, MPH</b> Acting Director of the Office of Program Planning Centers for Disease Control and Prevention Atlanta, GA	<b>Don M. Nielsen, MD</b> Quality Consultant Kaiser Permanente Oakland, CA	<b>Dean Smart</b> Research Program Specialist California Public Employees' Retirement System Sacramento, CA
<b>Marguerite Connerton, PhD</b> Director of Public Policy Service Employee International Union Washington, DC	<b>George J. Isham, MD Chairperson</b> Chief Health Officer HealthPartners Bloomington, MN	<b>Louise Novotny</b> Research Economist Communications Workers of America Washington, DC	<b>Mark Smith, MD</b> Executive Vice President Kaiser Family Foundation Menlo Park, CA
<b>Carol Cronin</b> Senior Vice President Health Pages Annapolis, MD	<b>Jeff Kang, MD, MPH</b> Chief Medical Officer Office of Managed Care, HCFA Baltimore, MD	<b>Alan Peres</b> Manager of Health Care Policy Ameritech Chicago, IL	<b>Mike Tarre</b> Director of Benefits IBM Corporation Armonk, NY
<b>Helen Darling, Chairperson</b> Manager, Health Care Strategy and Programs Xerox Stamford, CT	<b>Robert Krughoff, JD</b> Washington Consumers' <i>Checkbook</i> Magazine Center for Studying Services Washington, DC	<b>William L. Roper, MD, MPH</b> Senior Vice President and Chief Medical Officer The Prudential Insurance Company of America Roseland, NJ	<b>Richard E. Ward, MD, MBA</b> Director, Center for Clinical Effectiveness Henry Ford Health System Detroit, MI
<u>Liaisons to the CPM</u>			
<b>Carmella Bocchino, RN, MBA</b> Vice President of Medical Affairs American Association of Health Plans Washington, DC	<b>Lisa Simpson, MB, BCH</b> Acting Deputy Administrator Agency for Health Care Policy & Research Rockville, MD		
<u>Senior Staff to the Committee</u>			
<b>Carolyn Cocotas, RT, MPA</b> Assistant Vice President, New Measurement Development Staff Director-CPM Washington, DC			

are identified in Table 1. The committee was designed to bring those with a broad range of points of view together, so there are a number of members who come from managed care organizations, or who have special knowledge in other important areas (measurement, public health, and so on).

The CPM's charge was more than to develop HEDIS 3.0. NCQA's desire was not only that the state of the art move forward with the next version of HEDIS, but also that the Committee lay out a strategy for assuring that HEDIS would continue to move the state of the art beyond HEDIS 3.0. Thus, the CPM was asked not only to produce HEDIS 3.0, but also to map out a process that assured that HEDIS would continue to evolve, as medical science changes our notion of what constitutes quality care, and as information systems create new opportunities for measurement.

The challenge before the CPM was a broad one. There were three distinct elements to it:

- The CPM had to assure that HEDIS 3.0—and the generations of HEDIS sets that would follow it—included measures that provided the information that purchasers and consumers needed to help them choose between health plans. To do so meant that HEDIS measures needed to respond to the issues that matter to purchasers and consumers, but also needed to be useful for distinguishing between health plans with different levels of quality.
- The CPM had to assure that HEDIS was a high value set—that is, that the set was organized and constituted in a manner that produced the best possible information at the lowest cost. To do so meant the Committee needed to find ways to eliminate redundancy and duplication from the measurement set, and needed to consider not only comprehensiveness but also parsimony as an important design criterion.
- Finally, the CPM needed to think about how the construction of HEDIS could take place in a dynamic healthcare and information systems environment. The challenge here is to keep HEDIS current in an environment of rapid change; and to do so in a way that provides some stability and predictability to the set.

How the CPM dealt with each of these challenges provides an important window into the HEDIS development process.

### **Information that is Useful to Purchasers and Consumers**

The CPM began its work in September 1995. At its first meeting, the Committee began to map out a

strategy to develop the additional measures—not only for HEDIS 3.0, but for future generations of HEDIS as well—that would make HEDIS a progressively richer and more complete resource both for purchasers and consumers.

The Committee recognized that to do so, it needed to accomplish three things:

- In order to provide useful information, the CPM needed to have a deep understanding of the information requirements of purchasers and consumers—both private and public.
- The CPM needed to understand what constituted a useful measure. While it was clear that measures needed to be relevant to purchasers and consumers, relevance alone does not assure that a measure will help inform choice. If HEDIS measures were going to provide purchasers and consumers with the ability to distinguish between health plans based on performance, then the CPM needed to consider what scientific and operational characteristics would be required.
- Finally, the CPM needed to have a process for developing measures that would be useful—simply understanding what was needed was only the first step. More than that, given the timelines for HEDIS 3.0 development, that process needed to move quickly and confidently for HEDIS 3.0 to be completed in time for implementation in 1997.

### **Understanding Information Needs**

The CPM itself included a number of individuals with considerable knowledge and experience relevant to understanding the information requirements of purchasers and consumers. Even so, the Committee sought every opportunity to expand its knowledge, through the solicitation of expert input.

To help define the information needs of purchasers and consumers, the CPM began by synthesizing and reviewing available information. The CPM commissioned syntheses of current knowledge of how consumers make choices about health plans,<sup>7,8</sup> and dedicated a full day meeting to discussions with experts in this field. It reviewed the history of HEDIS 2.0 and the work of the Medicaid workgroup that had built Medicaid HEDIS, and turned to an expert subcommittee to prepare a report on the information needs of the Medicare program and its beneficiaries. This subcommittee—which continued to provide input and feedback to the CPM throughout the 3.0 development process—provided a long and detailed set of recommendations, which significantly influenced the CPM's approach.<sup>9</sup> Finally, the CPM commissioned focus groups with Medicaid and Medicare

beneficiaries, to complement focus groups NCQA had already completed with privately insured beneficiaries,<sup>10</sup> to bring their perspective in directly and to assess their reactions to some of the measures that had been proposed for possible inclusion in HEDIS 3.0.<sup>11</sup>

### The Characteristics of HEDIS Measures

To help members define the characteristics—or attributes—of measures that would make information useful for choice, the Committee organized a Technical Advisory Committee (TAC; see Table 2), and commissioned papers by leading experts in the field. These papers<sup>12-16</sup> helped the CPM to understand the scientific and real world issues that underlie the development of performance measures, to understand what are the current limits to the possible (as well as what are the factors that represent the constraints), and to understand what characteristics measures need to have in order to be good HEDIS measures. The latter fell into three major categories: relevance (importance), scientific soundness, and feasibility (including measurement cost). Ultimately, it was the extent to which Committee members were convinced that measures had these attributes that determined which ones would be included in HEDIS 3.0, and which would not.\*

### The Process for Obtaining Measures

Having a sense of the range and complexity of issues that future HEDIS measures would have to address, the CPM recognized that the task of expanding HEDIS could best be accomplished by taking advantage of the collective knowledge and expertise of clinical and measurement experts across the country. As a result, it laid out an open process for developing measures: one that began with a broad-based solicitation of input from those experts. This solicitation—a “Public Call for Measures”—was mailed to

more than 1,700 organizations in December 1995 (we believe that several hundred others downloaded it from NCQA’s Internet Homepage); by March 1996, 826 measures (in various stages of development) had come to the CPM for consideration.

Over the next 3 months, these measures were evaluated for the attributes required of measures, by NCQA staff, by a multidisciplinary review team (including members of the CPM and TAC, but also individuals involved in the development of earlier versions of HEDIS, and experts from outside the process), and by the CPM itself. The review team used multi-voting processes to choose subsets of the most promising measures.

These relatively smaller sets of measures were exhaustively “worked up” by experts in the fields relevant to their analysis. The CPM was fortunate to be able to draw upon the very best scientific resources: the RAND Corporation provided extraordinary support, as did the Centers for Disease Control and Prevention (CDC), the Agency for Health Care Policy and Research (AHCPR), the Health Care Financing Administration (HCFA), and a number of others who are unquestionably among the leaders in their fields. In addition, the HEDIS Users Group—primarily a group of health plans that have worked with NCQA to improve earlier HEDIS measures—provided invaluable assistance developing the detailed specifications for potential measures. Work-ups analyzed available evidence relevant to each of the attributes important to the CPM; these analyses were summarized in papers that informed CPM discussions about the measures.<sup>†</sup> In the last analysis, decisions about measures were made by majority vote. Levels of agreement were high, and there was no consistent pattern of disagreement among members.

### Assuring the HEDIS Set Is Efficient

Given the breadth and depth of information required to respond to the needs of purchasers and consumers—and the CPM’s commitment to address the needs of

**Table 2.** The Technical Advisory Committee (TAC) of the CPM

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<b>Beth McGlynn, PhD</b> Rand Corporation Santa Monica, CA	<b>Al Siu, MD</b> Mount Sinai Medical Center New York, NY	<b>Sheldon Greenfield, MD</b> Primary Care Outcomes Research Institute Boston, MA
<b>Jim Murray, PhD</b> Merck & Co West Point, PA	<b>Vic Hasselblad, PhD</b> Center for Health Policy Duke University Durham, NC	<b>A. Stuart Hanson, MD</b> Park Nicollet Medical Foundation Minneapolis, MN

\*These attributes are discussed more completely in the text of HEDIS 3.0. A draft of HEDIS 3.0 is available via the Internet (<http://ncqa.org>), or from NCQA for the cost of reproduction and shipping.

groups as diverse as workers (those privately insured), the poor and disadvantaged (those insured through Medicaid), and the senior population (those insured through Medicare)—the CPM had to think about ways to limit the burden associated with HEDIS 3.0. While a number of strategies for implementation are under consideration (the CPM is seeking comment on these as well as other issues during the 45 day review-and-comment period that followed the July 16, 1996, release of the draft), two strategies were employed to assure that the design of the set was parsimonious as well as comprehensive.

First, a commitment was made at the beginning to make HEDIS 3.0 a set of measures that was integrated across populations—that is, one set of specifications that could be applied to commercial, Medicaid, and Medicare populations (as appropriate). While there are many reasons why this strategy is preferred over the alternative (multiple, customized sets for each population), many of them relate to the intrinsic efficiency that a single set of measures creates. Not only will uniform measurement standards reduce the complexity (and the cost) of information production across populations, it will also create opportunities for valuable intra-plan (inter-population) comparisons without additional cost. Furthermore, health plan efforts to improve performance for one covered population should lead to measurable improvements across all populations.

Second, decisions about measures were made not only based on the importance of a particular issue, but also with consideration given to whether there were other measures that addressed a closely related issue. Clearly, the Committee's objective was to produce as little overlap among measures as possible. As a result, certain measures did not move forward because there were other measures that were deemed sufficient. Sometimes this common measurement theme was a clinical condition (there were measures of heart disease, for example, that are not in the final set, because several other measures of heart disease care are included). Sometimes the theme was a clinical process (there were additional measures of preventive care, for example, that were unquestionably important, but seemed less critical to the set given the number of preventive care measures that are included). And in a small number of cases (asthma hospitalization rate and cholesterol screening), a previous HEDIS meas-

ure was eliminated from the set completely, when a measure that was felt to be better came to light.

Finally, the CPM strove to minimize redundancy by attempting to link its work to the work of other organizations producing health plan performance measures. Our collaboration with the Foundation for Accountability (FACct) is of particular note; FACct was structurally linked to the CPM (two companies represented on the FACct Board of Directors—Ameritech and GTE Laboratories—were invited to nominate individuals to join the CPM, and David Lansky [FACct's president] served on the CPM's TAC). More than that, the CPM and FACct worked together to assure that those FACct measures that were available by March were brought to the CPM for evaluation, and several of those measures are among the 3.0 set.

### Creating A Dynamic Set

The rapidity with which there is change in this decade means that HEDIS needs to be dynamic. On the other hand, there is a need for stability if there is to be comparison over time as well as comparison across plans at one point in time, and there is a need for predictability if health plans are to be able to initiate improvement in a structured and orderly manner. The CPM dealt with these issues in several ways.

First, there was a commitment going into the work to build HEDIS 3.0 upon its predecessors. This seemed the obvious place to begin, given experience with these measures and their already widespread use. Future generations of HEDIS will similarly begin with the same starting point; from here on, change should be more clearly incremental.

It should be more predictable, as well. An important effort to accomplish this was the CPM's inclusion in HEDIS 3.0 of a set of measures for testing and evaluation. There were a number of measures brought to the CPM that addressed very important issues, but for which available evidence and expert judgment raised concerns about the measures' validity or feasibility. The Committee elected to bring these measures into HEDIS, but on an elective and non-reporting basis. In particular, the CPM felt it could accelerate the refinement of these measures (and therefore expedite their incorporation into subsequent versions of HEDIS)—and send a signal to the industry as to what future versions would include—by including these as a HEDIS 3.0 "testing set," and stimulating researchers and health plans to work together to test and refine them. Future versions of HEDIS will similarly include a testing set, so the evolution of HEDIS becomes both rapid and predictable.

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†Thirty-three such papers were produced as supporting documents for the CPM. Each paper reviewed available evidence relevant to each of the attributes; papers were typically 10 to 15 pages (single spaced), and extensively documented with references to the scientific literature.

Finally, the CPM is very concerned about the possibility that information systems may develop reactively and chaotically, as health plans respond to new HEDIS measures with little advance notice. Given the importance of better information systems to the measurement process—and the costs associated with significant changes in information systems—the Committee would like to provide managed care plans with more lead time, to permit changes in information systems to be planned (and costs spread) over longer and more reasonable time. As a result, the CPM has commissioned an analysis of the current barriers to performance measurement, and of the changes in information systems functionality that will be required to prepare the industry for the types of HEDIS measures the CPM expects to produce over the next 3 to 5 (as well as 10 to 20) years. This analysis—which will be produced as a companion document to the final draft of HEDIS 3.0—is intended to help managed care organizations prepare for a future in which performance measures are not constrained by the availability of data or the systems required to manage it.

### Summary

HEDIS 3.0 represents a significant step forward in NCQA's efforts to create a system that supports value-based competition in managed care. HEDIS 3.0 is the product of a process that has involved an unprecedented number of individuals and organizations, and that has brought unparalleled levels of science and rigor to national performance measurement efforts.

The work of advancing the state of the art is not yet over; new HEDIS measures will need to be evaluated in use, and many will need to be formally tested. Gaps—areas where information is needed, and for which there are not yet measures even for testing—remain, and new work will need to begin to close them. And the infrastructure required for measurement (and for management) is still weak in many managed care organizations.

Yet we are optimistic that progress will be rapid. Certainly, we believe that the HEDIS process is well designed, both to stimulate positive change and to capitalize on it when it takes place. This should move us quickly to even better measurement. And that, in the end, will make it easier for health plans that are better to prove that they are so, and for consumers and purchasers to reward them with their business.

### ... REFERENCES ...

1. Henry LA. NCQA: It's not just another acronym. *Fam Pract Man* 1996;3:43-50.
2. National Committee for Quality Assurance. HEDIS 2.0. 1993.
3. Interstudy. *The Interstudy Competitive Edge 6.1—Part III: Regional Market Analysis*. St. Paul, MN: Interstudy Publications, 1996.
4. National Committee for Quality Assurance. *Health Plan Performance Data: Are Purchasers Providing the Results to Consumers?* Washington, DC: NCQA, July 1995.
5. Watson Wyatt Worldwide and the Washington Business Group on Health. *Is Cost Everything? Getting Value for Your Health Care Dollar*. Washington, DC: Watson Wyatt Worldwide and the Washington Business Group on Health, 1996.
6. National Committee for Quality Assurance. *Medicaid HEDIS*. Washington, DC: NCQA, 1996.
7. Billson JM. *What kinds of information do consumers need in selecting a health plan? A research synthesis*. Unpublished manuscript for the National Committee for Quality Assurance. January 1996.
8. McGee J. *Information interests, needs, and concerns of Medicaid beneficiaries: A preliminary report on the Medicaid Consumer Information Project*. Unpublished manuscript for the National Committee for Quality Assurance. April 1996.
9. Report of the Medicare Subcommittee to the HEDIS 3.0 Committee on Performance Measurement. November 20, 1995.
10. National Committee for Quality Assurance. *NCQA Consumer Information Project: Focus Group Report*. Washington, DC: NCQA, 1995.
11. Kreling B, Sofaer S, McGee J. Findings from focus groups conducted for the NCQA Medicare and Medicaid Consumer Information Projects. Unpublished manuscript for the National Committee for Quality Assurance. April 1996.
12. Murray JF, Hasselblad V, Sands E. Sources of variation and risk adjustment for HEDIS performance measures. Unpublished manuscript for the National Committee for Quality Assurance. October 1995.
13. McGlynn EA. Overview of methodological issues in quality assessment. Unpublished manuscript for the National Committee for Quality Assurance. October 1995.
14. McGlynn EA. Data sources and data collection. Unpublished manuscript for the National Committee for Quality Assurance. November 1995.
15. McGlynn EA, Keeler E, Tseng CW, et al. Health benefits and cost effectiveness of attaining the goals set by the HEDIS 2.5 quality indicators. Unpublished manuscript for the National Committee for Quality Assurance. November 1995.
16. Epstein AM, Cleary PC. Use of patient reported health status measures for quality monitoring: Current issues and future directions. Unpublished manuscript for the National Committee for Quality Assurance. November 1995.