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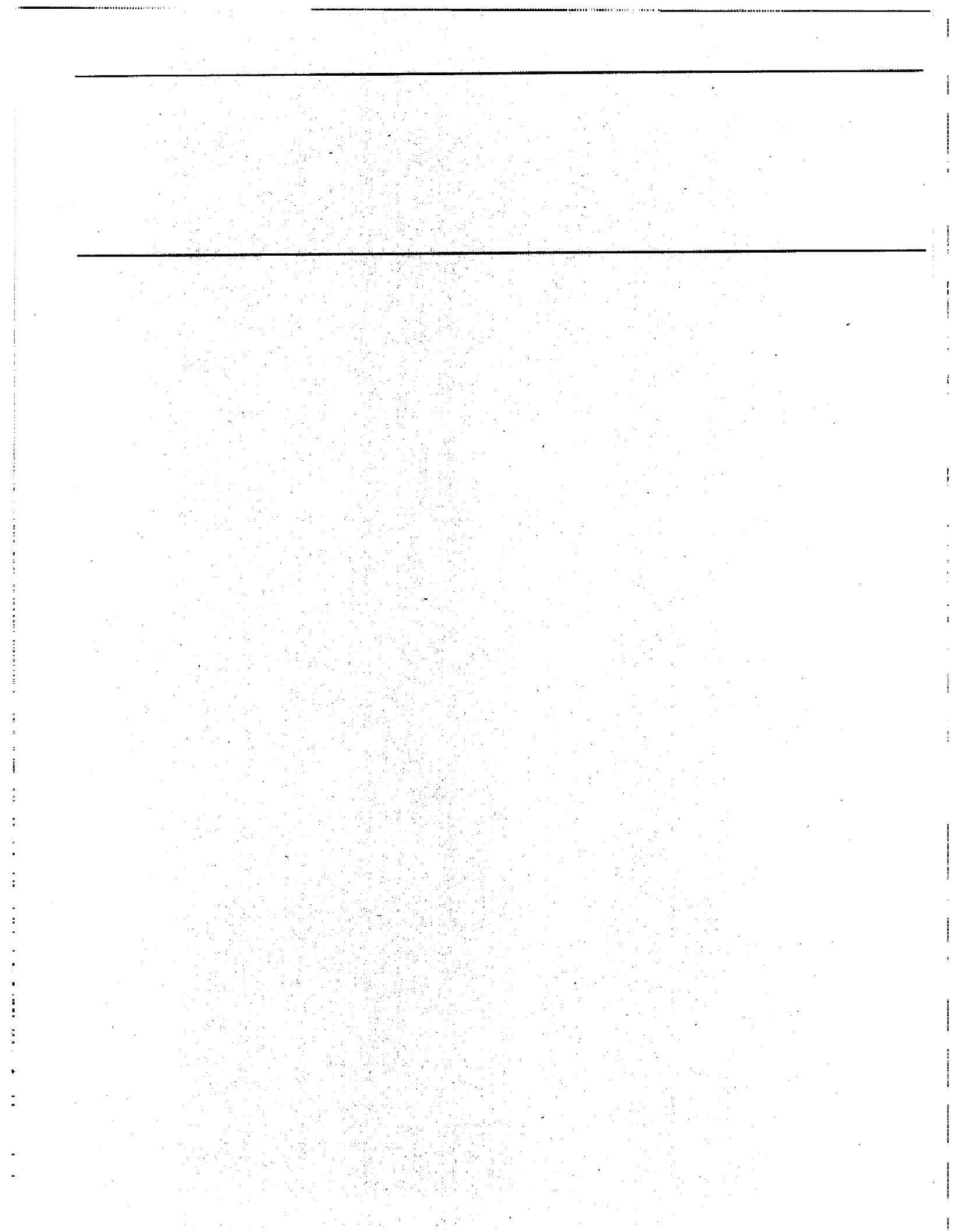
Report to the Chairman, Committee on  
Labor and Human Resources,  
U.S. Senate

September 1994

**HEALTH CARE  
REFORM**

**“Report Cards” Are  
Useful but Significant  
Issues Need to Be  
Addressed**







United States  
General Accounting Office  
Washington, D.C. 20548

Health, Education, and  
Human Services Division

B-255717

September 29, 1994

The Honorable Edward M. Kennedy  
Chairman, Committee  
on Labor and Human Resources  
United States Senate

Dear Mr. Chairman:

In response to your request, we have conducted a study of health care performance measures and how they should be developed so that quality of care "report card" comparisons can be made between various health care plans. We found that most experts believe measures comparing health plan performance should be published. However, inaccurate and misleading data sources as well as the lack of agreed-upon indicators and formulas for calculating results might hinder the report cards' usefulness.

Some experts recommend delaying publication of measures until the problems are resolved. Other experts believe that selected indicators thought to be reliable and valid should be published immediately, otherwise the associated problems might never be overcome. Regardless of their point of view, most experts recommended that (1) an independent third party verify data before publication and (2) the federal government play a role in standardizing indicators and the formulas for calculating results.

To conduct our study, we performed an extensive literature search and interviewed over 30 health care experts (see pp. 14-15).

We are sending copies of this report to appropriate congressional committees and other interested parties. We will also make copies available to others upon request.

This report was prepared under the direction of David P. Baine, Director, Federal Health Care Delivery Issues. If you have any questions, please call him at (202) 512-7101. Other major contributors to this report are listed in appendix II.

Sincerely yours,

Janet L. Shikles  
Assistant Comptroller General

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# Executive Summary

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## Purpose

Health reform proposals the Congress is considering include provisions requiring health plans to collect and report to prospective purchasers information about the quality of care they furnish. Presumably, purchasers will use such "report cards" to compare health plans and select one that provides the desired level of quality and price. Assessing health care quality is not an innovative concept. But evaluating the quality of care using certain indicators and publishing the information in a manner that allows consumers to compare health plans is new. If report card development is not approached thoughtfully and carefully, individual consumers, corporate purchasers, health plans, and individual providers might be misled by inaccurate information.

In January 1994, the Chairman of the Senate Committee on Labor and Human Resources asked GAO to undertake a study of health performance measures and how they should be developed so that quality of care comparisons can be made between various health care plans. The Chairman asked GAO to report on (1) approaches presently being taken; (2) opportunities to misrepresent or misreport the data; and (3) potential uses of report cards by consumers, providers, and health plans.

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## Background

Health care quality assessment efforts have been under way for several decades. These assessments have been performed by state and federal inspectors, private accrediting agencies, and health care organizations themselves. But specific results of these activities have been kept confidential. Other than personal attestations or knowing that an organization was accredited or licensed, corporate and individual health care purchasers had no method for determining which organization provided the best health care.

The first widespread public disclosure of quality assessment information took place in 1987 when the Health Care Financing Administration (HCFA) released its report on the observed and expected mortality rates in each hospital that performed coronary artery bypass graft (CABG) surgery. Newspapers published the data and ranked hospitals according to the "best" and the "worst." HCFA continued to publish yearly CABG mortality figures through 1992.

In the mid-1980s, health policy experts advised corporate purchasers that health care costs could be contained if purchasers considered both cost and quality of care information when they made their health care purchases. Corporate purchasers took this advice and began seeking ways

to evaluate health care quality to ensure they were getting the most value for their dollars. These early efforts led to corporate purchaser coalitions working with health care organizations, primarily managed care plans, to develop utilization and quality of care information purchasers believed they needed to make informed purchasing decisions. However, these efforts progressed slowly as providers and purchasers tried to agree on what performance indicators would be useful.

Recently state and federal officials have determined that publishing quality of care results could contain health care expenditures. This conclusion has resulted in health care reform proposals that require reporting of this information. Published summaries of health plan performance indicators are being called report cards. As a result of state legislative mandates, several states have begun publishing hospital report cards. Being proactive, several health plans have released report cards about care provided in their organizations. Indicators that have been included are items such as mammography rates, immunization rates, lung cancer survival rates, results of patient satisfaction surveys, and claims turnaround time. (See ch. 2 for report card examples.)

## Results in Brief

Report cards can be a useful tool to educate stakeholders about the health care provided by a health plan. Most experts believe that publishing the results of cost and quality indicators as well as other descriptive information comparing the performance of competing health plans is a positive step toward preserving the quality while lowering the cost of health care. However, experts disagree about the type and amount of information to be published in a report card because the data sources and indicators used may not be reliable or valid. Furthermore, the report cards being developed may not reflect the needs of some users, and few cost estimates for publishing report cards are available.

Some experts believe that usable report cards can be produced within 2 to 5 years if the indicators are limited to those known to be valid and reliable. Furthermore, they believe that data sources will become more accurate if the information is used for reporting. Other experts disagree. These experts believe that it will be 10 to 15 years before highly reliable and valid measures are developed.

Several states such as New York, Pennsylvania, and California and organizations such as United HealthCare Corporation, Kaiser Permanente Northern California Region, and U.S. Healthcare have released report

cards on the care they furnish. But no evaluative studies have been conducted to determine the report cards' validity or reliability. Current obstacles to using health care report cards include (1) inaccurate, misleading, or incomplete information sources; (2) indicators that may not measure quality; (3) little agreement on formulas for calculating performance results; and (4) no verification mechanisms in place to ensure the accuracy of reported results. To address these obstacles, most experts recommended that (1) the federal government play a role in standardizing indicators and the formulas for calculating results and (2) an independent third party verify data before they are published.

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## Principal Findings

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### Various Stakeholders Are Developing Report Cards

Several health plans and governmental entities have released or plan to release report cards to employers, the general public, or both. Initial responses from corporate purchasers have been positive. However, little information is available on how useful the report cards are to other possible audiences. (Ch. 2 summarizes some of the most publicized report card efforts.) GAO did not evaluate the reliability and validity of these report cards nor did GAO find evidence that others have conducted such evaluative studies.

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### Experts Disagree About What a Report Card Should Include

Experts differ about how much information a report card should include. This situation exists because providers, researchers, and other experts have differing opinions about whether data sources are accurate and which indicators measure quality. Some experts think publishing data that might later prove to be incorrect will destroy public confidence in report cards. These experts predict that it will take from 10 to 15 years to produce a reliable and valid report card. Other experts stated that the problems with report cards will never be overcome unless health plans begin to publish report cards now. These experts believe that good report cards can be produced within 2 to 5 years.

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### Report Cards May Be Based on Inaccurate, Misleading, or Incomplete Information

Information used to evaluate performance is generally obtained from computerized administrative databases or medical records. But these sources may contain incorrect, misleading, or incomplete data. Because few studies have been done to determine the accuracy of data sources, no

one knows the magnitude of the problem. If the accuracy problems are extensive, the deficiencies will make report card results unreliable.

Administrative databases can be created using encounter forms providers submit to the health plan. However, in a health maintenance organization (HMO) little incentive exists to submit these forms; because HMOs are prepaid health care plans, payment for services is not dependent on submitting encounter forms. As a result, the databases in those organizations may be incomplete. Administrative databases also are created using information from non-HMO claim forms physicians submit to health plans and other insurers for payment of services rendered. Organizations that pay providers based on claims submitted for services rendered use coding systems to record diagnoses, conditions, procedures, and treatments. However, the clinical definitions of these terms may not be clear and coding errors result. Thus, information in the database can be incorrect or misleading.

Medical records usually are a good source for clinical information. However, it costs approximately \$16 to retrieve data from one medical record. Furthermore, some experts believe that medical records may not always be accurate and complete for report card purposes because (1) physicians sometimes err in their diagnoses or interpretations and test results may be inaccurate, (2) providers do not always remember to note all findings or care rendered, and (3) providers may exaggerate medical record notations to justify a hospital stay or satisfy insurance benefit requirements for an outpatient test or procedure.

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### Measures Selected May Not Reflect Quality

Report cards may not be measuring what they are intended to measure. For example, one measure of quality used by many health plans and included in report cards is the number of board-certified physicians on staff.<sup>1</sup> Presumably, the more board-certified physicians a plan has on its staff, the better the health care will be. But research has not shown conclusively that board-certified physicians furnish better care.

Although efforts to agree on which indicators measure quality have been ongoing, no consensus has been reached. Many experts believe that only indicators measuring the outcome of services rendered should be included in report cards. However, these outcomes must be adjusted to ensure that patient characteristics (for example, age, concurrent diseases) do not

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<sup>1</sup>To become board certified, a physician must pass a test in the specialty area and meet other requirements established by experts in that medical specialty.

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affect the outcomes. Although a number of adjustment systems are in use, experts have not yet proven them to be highly valid and reliable.

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**Standardized Formulas for Calculating Results Have Not Been Developed**

No uniform standards exist for collecting and computing the indicator results used in report cards. However, if report card comparisons are to be meaningful, uniform information must be obtained from data sources. Currently, the developers of the Health Plan Employer Data and Information Set (HEDIS) 2.0 are the only group that has created uniform criteria and formulas for calculating results. Until uniform standards for data gathering and reporting are accepted generally by all report card developers, report card results cannot be compared. Thus, purchasers will not be able to determine which plan provides the care that meets their needs. Some experts believe that the federal government could contribute in this area by establishing consistent collection and calculation standards.

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**Report Card Results Are Not Verified**

To ensure that health plan administrators are reporting accurate and uniform data, most experts agree that report card information should be verified by an independent party. Currently, however, independent verification is planned or is done in only a few instances. No consensus has been reached about who should perform that task and who should pay for the service. Possibilities suggested include independent audits performed by private organizations or state or federal entities. The costs of these services might be borne by the health plan or passed along to the consumer.

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**Different Stakeholders Gain Different Benefits From Report Cards**

Various stakeholders can derive different benefits from report cards if the report cards reflect their areas of interest. Corporate purchasers could select health plans offering the greatest value. Public health officials could realize greater progress toward meeting national public health goals. Providers could determine which health plans they want to associate with. Health plan administrators and researchers could identify areas for improvement. And individual consumers could select health plans that meet their needs. However, individual consumers have had minimal input into selecting report card indicators and little is known about their needs or interests. As a result, their needs may not be met.

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**Recommendations**

This report was intended to describe the report card development process and thus contains no recommendations.





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# Contents

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<b>Executive Summary</b>		<b>2</b>
<b>Chapter 1</b>		<b>12</b>
<b>Introduction</b>	Evolution of the Report Card Concept	12
	Quality of Care Is Difficult to Define	13
	Scope and Methodology	14
<b>Chapter 2</b>		<b>16</b>
<b>Various Health Care Stakeholders Are Developing Report Cards</b>	Report Cards Are Available in Three States on Selected Hospital Services	16
	An Effort Is Under Way to Develop Uniform Report Card Indicators	22
	Some Major Health Plans Are Publishing Report Cards	23
	Florida Is Developing Report Cards for Selected Health Plans	31
	HCFA Is Developing HMO Report Cards for PROs to Use	33
<b>Chapter 3</b>		<b>34</b>
<b>Many Barriers Impede Report Card Development</b>	Disagreement Exists About Which Indicators Should Be Made Public	34
	Information Sources May Be Incomplete, Inaccurate, or Misleading	35
	Report Card Indicators May Not Be Valid Measures of Quality	39
	Report Card Indicators May Not Be Comparable	43
	Report Card Results Are Not Being Verified	47
<b>Chapter 4</b>		<b>48</b>
<b>Report Cards Might Benefit Different Health Care Stakeholders</b>	Employers Expect Report Cards to Provide Benefits	48
	Public Health Officials Foresee Meeting National Health Care Goals	49
	Individual Providers Could Join Plans That Meet Their Practice Styles	49
	Health Plan Administrators, Providers, and Researchers Could Target Areas for Further Study	50
	Consumers Might Benefit If the Indicators Reflect Their Concerns	51
	Report Cards Might Have Some Unintended Adverse Consequences	55

---

Contents

---

<b>Chapter 5</b>		56
<b>Conclusions</b>		
<b>Appendixes</b>	Appendix I: Sources of Indicators Florida's CHPA Advisory Committee Considered and Its Recommendations	58
	Appendix II: Major Contributors to This Report	62
<b>Table</b>	Table 2.1: Estimates of 1989 Total Hospital Expenses to Comply With Data Submission Requirements	21
<b>Figures</b>	Figure 2.1: Excerpt From a Report Card Published by the Pennsylvania Health Care Cost Containment Council	18
	Figure 2.2: Example of Report Card Data Published by the Pennsylvania Health Care Cost Containment Council	20
	Figure 2.3: Example of Information in a Medica Report Card	25
	Figure 2.4: Example of Information in a Kaiser Permanente Report Card	27
	Figure 2.5: U.S. Healthcare's 1992 Quality Report Card	29
	Figure 2.6: Example of Information in the Massachusetts Healthcare Purchaser Group Report Card	31
	Figure 4.1: Example of Health Pages' HMO Report Card	54

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**Abbreviations**

AHCA	Agency for Health Care Administration
CABG	coronary artery bypass graft
CHPA	Community Health Purchasing Alliances
CPT-4	Current Procedural Terminal Coding System, Fourth Edition
DPT	diphtheria/pertussis/tetanus
DRG	diagnostic related groups
DSM-III	Diagnostic and Statistics Manual, Third Edition
GHAA	Group Health Association of America
HAP	Hospital Association of Pennsylvania
HEDIS	Health Plan Employer Data and Information Set
HCFA	Health Care Financing Administration
HMO	health maintenance organization
ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
NCQA	National Committee on Quality Assurance
NICU	neonatal intensive care unit
PRO	peer review organization
OTA	Office of Technology Assessment
UHC	United HealthCare Corporation
VA	Department of Veterans Affairs



# Introduction

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In January 1994, the Chairman of the Senate Committee on Labor and Human Resources requested that we study health care performance measures and how they should be developed so that quality of care can be compared among various health care plans. The Chairman requested that specific areas of discussion be included in this report: (1) approaches presently being taken; (2) opportunities to misrepresent or misreport data; and (3) potential uses of report cards by consumers, providers, and health plans.

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## Evolution of the Report Card Concept

Most health care reform proposals being considered by the Congress and various state legislatures include provisions requiring health plans to publish information about the quality of care they provide. These publications are referred to in the news media as "report cards." Report cards can include both clinical and administrative performance measures such as the mortality rates for patients who had coronary artery bypass graft (CABG) surgery, childhood immunization rates, cancer survival rates, results of patient satisfaction surveys, and claims turnaround time. Presumably, purchasers will use these report cards to choose the health plan with the best performance for the least cost. (See ch. 2 for examples of current report cards.)

Widespread professional interest in monitoring the quality of health care services began after World War II and was focused primarily on hospitals. Passage of federal Medicare legislation in 1965 and the Joint Commission on Accreditation of Healthcare Organizations<sup>2</sup> mandate in the early 1970s that hospitals operate an internal quality assurance program to be accredited focused further attention on the area. But the results of these quality assessment efforts were usually considered confidential and only for the use of government regulators, accreditors, and internal quality management personnel. Information was rarely distributed to the public.

In 1987, hospital mortality data were released nationwide. In 1986, as part of its Medicare oversight responsibilities, the Health Care Financing Administration (HCFA) analyzed data from all hospitals about the number of deaths that occurred within 180 days of hospital admission after Medicare beneficiaries had CABG surgery. This information was to be used only by peer review organizations (PRO) and hospitals for quality

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<sup>2</sup>The Joint Commission is a national, private, not-for-profit accrediting organization with expertise in establishing quality assurance standards.

assessment purposes.<sup>3</sup> HCFA assumed that a quality of care problem might be present if a hospital's observed mortality rate was higher than expected when considering the patients' conditions. However, the news media obtained the results of the individual hospitals' performance by filing a Freedom of Information Act request. The media ranked hospitals from "best" to "worst" on the basis of observed and expected mortality rates even though HCFA advised against doing so. HCFA officials continued to release CABG mortality rates until 1993 when they discontinued the practice citing problems with the reliability of their methods for adjusting the data to account for the influence of patient characteristics on the outcomes.

Since the mid-1980s, corporate purchasers have been the driving force behind efforts to obtain information from hospitals and health plans about the quality of care they furnish. Before that time, large corporate health care purchasers simply paid the bills submitted to them from health care providers without evaluating the quality of the services received. However, as health care costs began to escalate, purchasers—primarily corporate leaders—started to think about value, that is, the quality of health care services in relation to price. Furthermore, purchasers and patients became concerned that health care organizations might withhold needed services to hold down costs. As a result, corporate efforts focused on obtaining quality of care and utilization information from hospitals and health maintenance organizations (HMO). Many hospitals were ambivalent about releasing the information because they believed it might be misinterpreted. HMOs were unable to provide the information because they did not have the data readily accessible. However, corporate purchasers continued their efforts and convinced state and federal legislators that publishing comparative information would be beneficial. As a result, state legislation exists mandating publication of such information, and other provisions requiring publication of data are being considered nationwide at both the state and federal levels.

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## Quality of Care Is Difficult to Define

Quality health care has been difficult for experts to define. Most experts now agree that quality includes measuring attributes related to appropriateness—providers giving the right care at the right time; accessibility—patients being able to obtain care when needed; and acceptability—patients being satisfied with the care. These attributes are measured using indicators that represent the (1) structure of

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<sup>3</sup>PROs were created by the Congress to ensure that services rendered through Medicare are necessary, appropriate, and of high quality (Peer Review Improvement Act, title I, subtitle C of the Tax Equity and Fiscal Responsibility Act of 1982 [P.L. 97-248]). They are private, generally statewide organizations that must be composed of at least 10 percent of the licensed physicians practicing in the area.

care—resources and organizational arrangements in place to deliver care; (2) process of care—physician and other provider activities carried out to deliver the care; and (3) outcomes of care—the results of physician and provider activities. Although most experts believe that outcomes are the best measure of quality, outcomes are the most difficult to interpret because patient characteristics such as age or prior health status might affect them significantly. Unless outcomes are adjusted to determine whether patient characteristics or quality of care affected the results, conclusions about quality based on an evaluation of outcomes might be erroneous.<sup>4</sup>

Indicators used to measure quality must be reliable, valid, or comparable if they are to be useful. If an indicator is reliable, the same result should be obtained regardless of who measures the result or when the measurement is taken. If an indicator is valid, it should measure what is intended. If indicators are comparable with one another, both indicators should measure identical attributes.

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## Scope and Methodology

In conducting our study of report card development, we undertook an extensive review of the literature on performance measures and ensuring quality health care. In addition to many journal publications, we reviewed documents prepared by the Agency for Health Care Policy and Research, California Office of Statewide Health Planning and Development, HCFA, Institute of Medicine, Jackson Hole Group, John A. Hartford Foundation, Massachusetts Healthcare Purchaser Group, Michigan Peer Review Organization, National Committee for Quality Assurance, and the Office of Technology Assessment.

We also interviewed health care experts representing the following organizations: the American Association of Retired Persons, American Medical Association, Assurqual, Inc., Beth Israel Hospital, Brandeis University, Center for Health Care Policy and Evaluation (a subsidiary of United HealthCare Corporation of Minneapolis), Codman Research Group, Inc., Consumers' Checkbook, Florida Agency for Health Care Administration, Foundation for Health Care Quality, George Washington University Medical Center, Group Health Cooperative of Puget Sound, Harvard School of Public Health, HCFA, Health Institute of the New

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<sup>4</sup>These adjustments are referred to as risk adjustments, a term that can refer to two concepts. It can be used to describe methods for (1) determining whether patient characteristics or poor quality are responsible for undesirable patient outcomes and (2) predicting resource consumption and cost based on patient characteristics. Generally, when using the term "risk adjustment," we will be referring to the former. However, some experts have attempted to use the latter methods to predict patient outcomes.



England Medical Center Hospitals, Health Pages, Jefferson Medical College, Joint Commission on Accreditation of Healthcare Organizations, Kaiser Permanente Northern California Region, Managed Health Care Association, Maryland Health Care Access and Cost Commission, Minneapolis Citizens League, National Association of Health Data Organizations, National Committee for Quality Assurance, Pennsylvania Health Care Cost Containment Council, U.S. Algorithms (a subsidiary of U.S. Healthcare of Pennsylvania), and U.S. Department of Health and Human Services.

Additionally, we reviewed a sample of proposed and distributed report cards from many states and organizations, including the states of California, Florida, Minnesota, New York, and Pennsylvania, and from Kaiser Permanente Northern California Region, the Massachusetts Healthcare Purchaser Group, Michigan PRO, U.S. Healthcare of Pennsylvania, and United HealthCare Corporation of Minneapolis. However, we did not evaluate the validity, reliability, or readability of those report cards.

Developments related to report cards are being reported daily. Most of our work was performed between November 1993 and July 1994 in accordance with generally accepted government auditing standards. The report was updated to reflect more recent happenings as appropriate.

# Various Health Care Stakeholders Are Developing Report Cards

Health plans and governmental entities have undertaken initiatives to inform the public about the quality of care hospitals and health plans furnish. Pennsylvania, New York, and California have published report cards about certain services provided by hospitals in their states. The National Committee for Quality Assurance (NCQA), an organization that accredits HMOs, is coordinating a 1-year pilot study in which 21 health plans are collecting data according to specifications developed by a committee of health plan representatives and corporate purchasers. At the conclusion of this effort in December 1994, a report card will be distributed for consumer use. In addition, some health plans have created and distributed their own report cards. Florida is developing a report card for health plans providing services to certain health plan enrollees as part of its health reform initiative. Furthermore, HCFA is in the process of developing performance measures it expects PROs to use for quality assessment purposes. Although this effort is not intended to result in a report card released to the public, HCFA's efforts will result in a report card to be used by the PROs.

## Report Cards Are Available in Three States on Selected Hospital Services

Since 1991, three states—New York, Pennsylvania, and California—have released report cards to the general public about certain hospital services provided in their states. In 1993 and 1994, Pennsylvania released report cards on the care furnished in 175 hospitals to patients grouped into 53 diagnostic categories.<sup>5</sup> Additionally, in 1990 and 1992, New York<sup>6</sup> and Pennsylvania, respectively, released report cards on hospitals and physicians in their states performing CABG surgery. In 1993, California published information about the outcomes of patients admitted with acute myocardial infarctions and those who underwent back surgery. The states collected this information because of concerns about the quality of health care being provided. Pennsylvania also was concerned about the cost of care. The following discussion focuses on how Pennsylvania developed its report card system.

In the early 1980s, Pennsylvania employers were considering cutting back employee health care benefits because of their rising costs. Labor unions,

<sup>5</sup>Examples of the diagnostic categories reported on include DRG 87—pulmonary edema and respiratory failure, DRG 148—major small and large bowel procedures with complication/comorbidity, DRG 324—urinary stones without complication/comorbidity, and DRG 370—cesarean section with complication/comorbidity. DRG, a classification system adopted by HCFA, stands for diagnostic related groups. It sorts all medical conditions and surgical procedures into 492 categories based on the patients' diagnoses.

<sup>6</sup>In 1990, New York released information to a medical journal and the news media. The state did not release a consumer guide until 1992.

a strong and influential force in Pennsylvania, were fighting this action and sometimes went on strike to prevent these cutbacks. To resolve the problem, corporate purchasers and labor union officials began discussing with state officials the concept of cost controls. Health providers resisted the idea. As a compromise, each of the stakeholders agreed to support legislation intended to encourage health care competition based on the principles of cost and quality. This legislation, the Health Care Cost Containment Act, passed in 1986.

As a result of the 1986 legislation, the Pennsylvania Health Care Cost Containment Council was created to promote cost containment and to identify appropriate utilization practices. Council membership consists primarily of representatives from the business community and organized labor. However, a consumer, a hospital administrator, insurers, providers, and state appointees are also members. Through quarterly reports published by the Council, current and accurate data and information on both the cost and quality of certain health care services are to be made available to all purchasers and consumers of health care. However, because its resources are limited, the Council is concentrating its efforts on hospital inpatient care.

In 1993, the Council published the Hospital Effectiveness Report on care provided in 175 Pennsylvania hospitals for each of 53 diagnostic categories during 1991.<sup>7</sup> A second report about care provided in 1992 was published in 1994. For each of the 175 hospitals, data were provided about the number of patients admitted, the average severity of illness of those patients when admitted, the percentage of patients aged 65 and older, the actual and expected number of deaths and complications, the average length of stay, and the hospital's average charge per patient. (See fig. 2.1.) Consumers were encouraged to take the report with them when visiting their health care providers and to ask questions about the information in it.

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<sup>7</sup>The Council chose to report only on care furnished in Pennsylvania hospitals having at least 100 beds.

Chapter 2  
 Various Health Care Stakeholders Are  
 Developing Report Cards

Figure 2.1: Excerpt From a Report Card Published by the Pennsylvania Health Care Cost Containment Council

DRG 127 HEART FAILURE AND SHOCK												
Hospital	Comments	Number of Patients	Average Admission Severity Score	Age 65 and Over (%)	Deaths			Medically Unstable during first week (Major Morbidity)			Average Stay (Days)	Average Charge (\$)
					Actual Number	Expected Number	Statistical Rating *	Actual Number	Expected Number	Statistical Rating *		
Albert Einstein Medical Center		427	2.3	70.7	22	26.40		26	34.62		8.4	16,025
Chestnut Hill Hospital		318	2.4	86.8	11	24.55	+	21	28.67		7.0	9,314
Episcopal Hospital		149	2.4	60.4	5	9.37		11	13.68		8.2	11,743
Frankford Hospital of Philadelphia		400	2.4	80.3	20	26.80		36	35.20		8.9	19,949
Franklin Square Hospital		74	2.1	75.7	5	4.16		3	5.37		10.7	16,606

\*Statistical Rating:  
 + fewer deaths or fewer patients who were medically unstable than hospitals in Comparative Database  
 - more deaths or more patients who were medically unstable than hospitals in Comparative Database  
 0 single occurrence of a death or major morbidity in a DRG where death or major morbidity is very rare  
 No Symbol actual number of deaths or actual number of patients who were medically unstable are not statistically significantly different from hospitals in Comparative Database

Notes: For the purposes of illustration, this excerpt provides information for only five Pennsylvania hospitals. The Council has published this same information for all hospitals in the state that admitted patients classified in this DRG as well as 52 other DRGs.

If the "Comments" column were checked, it would mean that the hospital elected to comment on the information. These comments are available to the public upon request.

"Admission Severity," rated on a scale of 0 to 4, is a measure of the degree of risk of heart, lung, or kidney failure during a patient's first 2 hospital days. The "average" admission severity is the average of all patients admitted to a particular hospital. A score of 4 does not mean that patients are twice as sick as those at a hospital with a score of 2. It does mean that on average, the first hospital's patients are sicker when admitted than the second hospital's.

Source: Pennsylvania Health Care Cost Containment Council, Hospital Effectiveness Report, HE 9-91 Volume 4, September 1993.

Information included in the Hospital Effectiveness Report is derived from quarterly statements hospitals submit to the Council according to Council-defined data requirements. Upon receipt, Council staff review the

information to ensure that obvious errors have not been made. Any discrepancies are called to the hospital's attention and all information is returned to the hospital for correction and validation. The Council's first report, published in 1993, was released 7 months after the hospitals submitted corrected data. However, the second report, released in 1994, was published 14 months after the Council obtained corrected hospital information. A Council spokesperson said that the delay in issuing the 1994 report was the result of budget cuts<sup>8</sup> and priority given to the CABG report discussed in the next paragraph.

The Council released a Consumer Guide to Coronary Artery Bypass Graft Surgery in November 1992 and February 1994. The 1994 report provides information about hospital charges and mortality rates in 1991 as well as surgeon-specific mortality statistics. For example, it revealed that of the 35 hospitals performing CABG surgery in Pennsylvania, 3 had fewer deaths than expected and 32 had deaths similar to the expected number. In addition, for each hospital a chart lists the total number of patients having CABG surgery, the number who died, the expected range of patients who might die, and the hospital's average charge. (See fig. 2.2.) This information, excluding charges, also is provided for the physician practice groups and individual surgeons affiliated with each hospital. As of May 1994, approximately 12,000 copies of the 1992 report and 3,000 copies of the 1994 report had been distributed.

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<sup>8</sup>The Council's budget was \$2.6 million for fiscal year 1991, \$1.6 million for fiscal year 1992, and \$1.4 million for fiscal year 1993. However, it received a \$3 million budget for fiscal year 1994—an increase of \$1.6 million.

Chapter 2  
 Various Health Care Stakeholders Are  
 Developing Report Cards

Figure 2.2: Example of Report Card Data Published by the Pennsylvania Health Care Cost Containment Council

Hospitals Performing Coronary Artery Bypass Graft Surgery Treatment Effectiveness & Average Charge					
Hospital	Total Patients	Patients Who Died			Average Charge
		Actual Number	Expected Range	Statistical Finding	
<i>Hospitals with Fewer Number of Deaths than Expected</i>					
Allegheny General Hospital	1,010	30	31.4 - 52.5	+	\$49,449
Shadyside Hospital	915	24	24.2 - 44.3	+	\$62,842
Wilkes-Barre General Hospital /WVHCS	363	5	5.1 - 16.9	+	\$28,700
<i>Hospitals with Similar Number of Deaths as Expected</i>					
Albert Einstein Medical Center	615	23	15.4 - 32.4	Δ	\$71,051
Altoona Hospital	403	4	2.2 - 12.7	Δ	\$31,054
Bryn Mawr Hospital	323	12	4.4 - 15.3	Δ	\$58,329
Conemaugh Valley Memorial Hospital	243	8	2.9 - 13.1	Δ	\$46,568
Episcopal Hospital	269	9	3.3 - 14.1	Δ	\$46,110
Geisinger Medical Center /Danville	393	15	7.3 - 20.3	Δ	\$34,294
Graduate Hospital	283	11	3.4 - 13.7	Δ	\$89,236
Hahnemann University Hospital	885	41	28.6 - 49.6	Δ	\$73,500
Hamol Medical Center	498	24	11.7 - 26.1	Δ	\$42,201
Harrisburg Hospital	458	22	8.6 - 22.1	Δ	\$47,833
Hospital of the University of Pennsylvania	348	22	10.0 - 23.4	Δ	\$79,544
Lancaster General Hospital	680	12	11.0 - 26.8	Δ	\$25,219
Lankenau Hospital	594	19	9.6 - 24.2	Δ	\$52,262
Lehigh Valley Hospital	903	33	26.3 - 48.4	Δ	\$44,619
Medical College Hospital /Main Clinical Campus	182	8	1.1 - 9.3	Δ	\$61,951
Mercy Hospital of Pittsburgh	725	17	15.8 - 33.7	Δ	\$41,340
Mercy Hospital of Scranton	377	15	7.1 - 19.6	Δ	\$28,293
Penn State University Hospital (Hershey)	195	8	3.3 - 12.5	Δ	\$36,753
Pennsylvania Hospital	157	16	6.4 - 17.1	Δ	\$58,785
Polyclinic Medical Center	401	14	4.0 - 15.9	Δ	\$43,403
Presbyterian Medical Center of Philadelphia	562	22	11.5 - 26.7	Δ	\$45,850
Presbyterian University Hospital /Pittsburgh	268	12	4.0 - 14.8	Δ	\$83,219
Reading Hospital and Medical Center	817	17	8.8 - 23.4	Δ	\$23,205
Robert Packer Hospital	348	8	4.8 - 16.1	Δ	\$23,523
Saint Francis Central Hospital	294	7	4.1 - 14.5	Δ	\$46,774
Saint Francis Medical Center	463	17	10.2 - 23.9	Δ	\$50,185
Saint Luke's Hospital of Bethlehem	427	18	7.7 - 21.5	Δ	\$34,415
Saint Vincent Health Center	365	12	7.3 - 19.6	Δ	\$57,933
Temple University Hospital	253	10	3.3 - 14.0	Δ	\$72,171
Thomas Jefferson University Hospital	329	11	4.9 - 16.3	Δ	\$61,974
Western Pennsylvania Hospital	781	27	18.6 - 34.4	Δ	\$58,467
York Hospital	339	15	4.6 - 15.5	Δ	\$30,113
<b>Statewide Total</b>	<b>16,266</b>	<b>568</b>			<b>\$49,104</b>

- (+) The hospital had significantly fewer deaths than expected.
- (Δ) The hospital's number of deaths was within the expected range.

(Figure notes on next page)

**Chapter 2  
Various Health Care Stakeholders Are  
Developing Report Cards**

Note: In its November 1992 report of the 35 hospitals that performed CABG surgery in Pennsylvania during 1990, 4 hospitals had fewer deaths than expected, 7 had more deaths than expected, and the remaining 24 hospitals had a number of deaths in the expected range. However, the Council did not provide information to allow comparison between years.

Source: Pennsylvania Health Care Cost Containment Council, A Consumer Guide to Coronary Artery Bypass Graft Surgery, Volume II, 1994.

Two organizations have estimated the hospital costs associated with reporting data to the Council. The Hospital Association of Pennsylvania (HAP) estimated that in 1991 hospitals spent \$26.5 million, or \$14.20 per patient discharge, to collect and report data. These costs varied according to hospital size, teaching status, and type of admission and were associated with labor, computer software and hardware, licensing fees, training, data retrieval, and data validation. Although hospitals expressed concern about the expense, a HAP survey found that about 37 percent of hospitals would continue to collect the data for internal quality assessment regardless of the legislative mandate. The Pennsylvania State University Center for Health Policy Research estimated that the average hospital incurred a cost of approximately \$17.43 per discharge because of the legislated reporting mandates. (See table 2.1 for estimates as they relate to total dollars, cost per hospital patient day, and cost per hospital discharge.) Regardless of whether they were in rural or urban areas, large hospitals spent approximately half the amount per discharge smaller institutions did because larger hospitals could spread the costs over more discharges.

**Table 2.1: Estimates of 1989 Total Hospital Expenses to Comply With Data Submission Requirements**

<b>Expenses</b>	<b>Total</b>	<b>Small rural</b>	<b>Small urban</b>	<b>Large rural</b>	<b>Large urban</b>
Total dollars	\$110,000	\$70,000	\$67,000	\$102,000	\$134,000
Per patient day	\$2.75	\$3.87	\$4.87	\$2.01	\$1.98
Per patient discharge	\$17.43	\$22.95	\$26.65	\$12.76	\$14.15
Percent of total hospital expenditures	0.36%	0.58%	0.55%	0.31%	0.27%

Source: Pennsylvania State University Center for Health Policy Research.

## An Effort Is Under Way to Develop Uniform Report Card Indicators

Health plans, providers, and corporate purchasers working under the auspices of NCQA published a set of performance measures in November 1993. Efforts to refine these measures are continuing. NCQA also is coordinating a 1-year pilot study of 21 health plans' ability to collect data and the related costs. At the completion of the study in December 1994, a report card for consumer use comparing the 21 plans' performance will be published.

NCQA has been coordinating efforts to create a standardized set of performance indicators. In 1989, a committee of health plan administrators, health plan physicians, and corporate purchasers set out to develop a consensus list of performance measures that could be used by corporate purchasers to assess health plan value. This led to the development in November 1993 of what commonly is referred to today as HEDIS 2.0—the Health Plan Employer Data and Information Set.<sup>9</sup> When selecting the indicators, the developers considered (1) the indicators' relevance and value to the employer community, (2) the ability of health plans to develop and provide the requested data in a specified manner, and (3) the indicators' potential to improve the processes of health care delivery. HEDIS 2.0 indicators are measures of health plans' structure and process. Developers did not include indicators that directly measure the long-term results or outcomes of care. They believe that (1) outcomes measurement is not yet an established field of study and (2) many outcomes may not be meaningful until a lengthy period has elapsed after an intervention. However, HEDIS developers expect to include outcomes measures in future revisions.

Over 60 indicators are included in HEDIS 2.0 that describe performance in 5 areas: quality, access and patient satisfaction,<sup>10</sup> membership and utilization, finance, and health plan management activities. These indicators include items such as

- childhood immunization rates, low birth-weight rates, and asthma inpatient admission rates;

<sup>9</sup>Initial development efforts were organized by The HMO Group, a coalition of group and staff model HMOs. The resulting draft document, HEDIS 1.0, was released in September 1991. In October 1992, NCQA assumed responsibility for that document's revision.

<sup>10</sup>Other than health plan reports about the percentage of surveyed members who indicated that they were "satisfied with the health plan," standardized patient satisfaction measures were not included in HEDIS 2.0. The measures were omitted because of a lack of consensus regarding an appropriate instrument that could be used across all types of health plans. However, health plans are encouraged to display and explain the results of their own patient satisfaction surveys.



- the number and percentage of primary care physicians accepting new patients and percentage of members who are “satisfied” with the plan according to health plan survey information;
- membership enrollment and disenrollment information, inpatient utilization rates, and frequency and average cost of certain high-occurrence, high-cost procedures;
- financial liquidity, compliance with statutory requirements, and premium trend information; and
- descriptive information about provider recredentialing.

Information needed for HEDIS 2.0 performance measures can be obtained from either administrative databases or medical records. Guidelines and specifications have been developed for collecting the data and calculating performance so that the results of one health plan can be compared with the results of another. However, the committee recognizes that the information in administrative databases and medical records—the primary sources of data for the report card—may be incomplete or inaccurate. They also know that newly developed indicator definitions may be unclear. For these reasons, the HEDIS User Group, comprising approximately 200 organizations, is reviewing the capability of health plans to collect data that conform to HEDIS specifications. As a result of this review, several revisions have been made to HEDIS measures and others have been clarified.

NCQA also is coordinating the efforts of 21 health plans that are conducting a 1-year pilot study of their ability to collect complete, accurate data to calculate report card results and the cost associated with this effort. These health plans selected 21 HEDIS measures they believe will be of interest to the public. Some of these measures were clarified and modified when data could not be collected as specified in HEDIS.<sup>11</sup> In December 1994, at the conclusion of the study, a report comparing the performance of the 21 health plans and a technical report describing the project will be published.

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## Some Major Health Plans Are Publishing Report Cards

In 1993, three health plans published report cards on various aspects of their plans. All three organizations were involved in the development of HEDIS 2.0, but two of the organizations did not collect all of their data in accordance with HEDIS 2.0 specifications. Thus, their report card results cannot be compared with one another. In addition, in 1994, 16 Massachusetts insurers jointly issued a report card on 6 measures they

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<sup>11</sup>Modifications were communicated to the HEDIS User Group for their consideration as well.

mutually agreed on. Developers of this report card, however, urged purchasers not to compare the results of one plan with another's because little is known about what constitutes good performance.

In March 1993, United HealthCare Corporation (UHC), an organization that manages 20 health plans in cities throughout the nation, released a sample report card that it ultimately issued in final form on each of its plans in September 1993. (See fig. 2.3.) Indicators used in UHC's report card are similar to those in HEDIS 2.0 and were selected by UHC managers based on their interpretation of (1) public, group purchaser, and government interests; (2) areas where the data would be scientifically valid and reliable; and (3) areas where there was clinical agreement regarding treatment. The 28 measures in the report represent 4 areas of performance: health care quality, consumer satisfaction, administrative efficiencies, and controlling costs. Data for these measures were obtained from administrative data sets, medical records, and patient surveys. Also in the report card are data to allow comparisons with other reference values such as national immunization rates published by the Children's Defense Fund, state pap smear rates for cervical cancer detection published by the state of Minnesota, and national cesarean section rates published by the National Center for Health Statistics.

Developers of UHC's report card did not provide an estimate of their development costs. However, a UHC representative said information for their report was derived from a previously established internal quality monitoring system.<sup>12</sup> Using this system, the annual production of the report card that covers 12 clinical conditions for each of UHC's health plans requires approximately 8 to 10 weeks. The UHC representative also stated that the cost of collecting information for report card development could run into millions of dollars depending on the computer resources and personnel expertise within the plan.

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<sup>12</sup>Most managed care programs have a quality assurance program. However, the extent to which information is maintained in a computerized database or otherwise stored in a way that is easily retrieved or summarized varies considerably.

Chapter 2  
 Various Health Care Stakeholders Are  
 Developing Report Cards

Figure 2.3: Example of Information in a  
 Medica Report Card

KEY INDICATORS	MEDICA DATA	COMPARATIVE DATA
<b>a. Desired High Incidence</b>		
• Pediatric Immunizations (2-6 mo. DTP/Polio, 5 separate doses)	74.4%	61% <sup>12</sup>
• Mammography Rate – Annual for Women 50-74	51.5%	51.7% <sup>13</sup>
• Eye Exams for Diabetics	55.5%	NA
• Pap Smears – Annual	50.0%	49.8% <sup>14</sup>
• Liver Transplant – Survival Rate	86%	74.5% <sup>15</sup>
<b>b. Desired Low Incidence</b>		
• C-section Rate	17.0%	21.8% <sup>16</sup>
• Hospitalization Rate for Pediatric Asthma	4.6%	NA
• Low Birth Weight	4.0%	5.5% <sup>17</sup>

<sup>12</sup> Children's Defense Fund. *Health of America's Children*. 1992.

<sup>13</sup> Minnesota Supplement to the 1992 HMO Annual Statement filed with the Minnesota Department of Health, Reports 5 and 7A. Comparative data represents the average mammography rate for women ages 50 to 74 as reported by the following six HMOs: Medica Choice, Medica Primary, Blue Plus, Group Health, Group Care and MedCenters.

<sup>14</sup> Minnesota Supplement to the 1992 HMO Annual Statement filed with the Minnesota Department of Health, Reports 5 and 7A. Comparative data represents the average pap smear rate for women ages 15 to 64 as reported by the following six HMOs: Medica Choice, Medica Primary, Blue Plus, Group Health, Group Care and MedCenters.

<sup>15</sup> United Network for Organ Sharing. June 1991.

<sup>16</sup> National Center for Health Statistics, Centers for Disease Control. *1991 Hospital Discharge Survey*.

<sup>17</sup> National Center for Health Statistics, Centers for Disease Control. *1991 Hospital Discharge Survey*.

(Figure notes on next page)

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**Chapter 2**  
**Various Health Care Stakeholders Are**  
**Developing Report Cards**

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Notes: Medica is a health plan managed by UHC.

All of the Medica data shown here, with the exception of organ transplant survival rates, reflect 1992 performance and are derived from UHC's Center for Health Care Policy and Evaluation quality screening and management software, and/or Medica's decision support software, both of which use computerized databases as their sources.

Source: The Center for Health Care Policy and Evaluation (a division of United HealthCare Corp.), Medica Report Card on Health Care, September 1993.

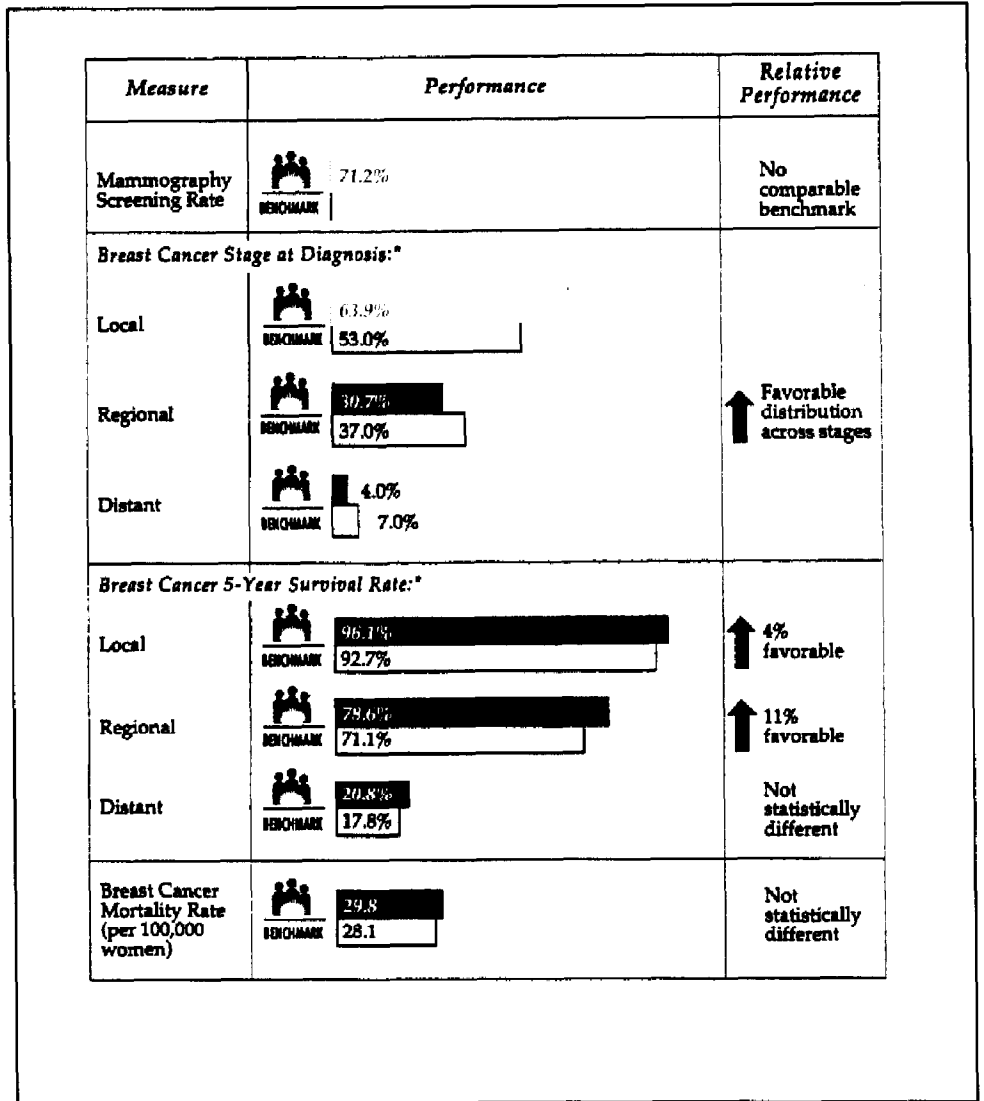
Kaiser Permanente Northern California Region and U.S. Healthcare published report cards in October 1993 and November 1993, respectively. Kaiser's report card includes over 100 performance measures, some of which follow HEDIS methodology. (See fig. 2.4.) Kaiser did not include utilization and financial measures because Kaiser management did not view them as important quality issues. Instead, Kaiser chose to measure areas it believes its providers could influence given the current state of medical knowledge. In addition to drawing upon HEDIS 2.0, Kaiser reviewed the work of the RAND Corporation, the Healthy People 2000 report,<sup>13</sup> and other leaders in quality assessment. Data about provider activities or the process of care, as well as measures representing the results or outcomes of care, were included. For example, in addition to reporting its mammography screening rate, Kaiser reported its rate for diagnosing breast cancer at various stages of development. According to Kaiser officials, the stage of cancer at diagnosis indicates the effectiveness of the screening efforts. Kaiser chose to collect all of its information from existing quality assessment databases rather than perform medical record reviews they believe are expensive. Kaiser also compared its performance to published national and state reference values. However, Kaiser officials avoided comparing performance on preventive measures with the self-reported results of other plans because they believed that the results of these measures "are usually inflated" when compared with rates derived from patient records.

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<sup>13</sup>Healthy People 2000: National Health Promotion and Disease Prevention Objectives was compiled by the Public Health Service after 3 years of study and submitted to the Secretary of Health and Human Services in 1990. The document contains a national strategy for improving the nation's health over a 10-year period. The report presents over 300 objectives in 22 priority areas grouped into 3 broad categories: health promotion, health protection, and preventive services.

Chapter 2  
 Various Health Care Stakeholders Are  
 Developing Report Cards

Figure 2.4: Example of Information in a Kaiser Permanente Report Card



Source: Kaiser Permanente Northern California Region, 1993 Quality Report Card.

The development of the Kaiser report card took approximately 9 months from the time data were collected until publication. The cost of development was approximately \$200,000. This amount represents consulting fees and printing costs but not administrative costs.<sup>14</sup>

<sup>14</sup>Kaiser prepared its report card in collaboration with Arthur Andersen & Co., S.C.

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**Chapter 2  
Various Health Care Stakeholders Are  
Developing Report Cards**

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U.S. Healthcare chose to publish information on 11 HEDIS 2.0 measures using HEDIS 2.0 specifications for preventive services (childhood immunizations, cholesterol screening, mammography screening, and cervical cancer screening), prenatal care (low birth-weight and prenatal care in the first trimester), acute and chronic disease (asthma inpatient admission rate and diabetic retinal exam), mental health (ambulatory follow-up after hospitalization), and member access and satisfaction.<sup>15</sup> (See fig. 2.5.) Results for 1992 were compiled over a 2-month period using information from existing administrative data sets and medical records. No reference values from other sources were provided for comparative purposes. U.S. Healthcare has not estimated its costs to produce this report. However, officials did indicate that many of the data were available through the corporation's ongoing quality assessment program.

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<sup>15</sup>In August 1994, U.S. Healthcare released a report card containing results for 1993.

Figure 2.5: U.S. Healthcare's 1992  
 Quality Report Card

<b>U.S. Healthcare 1992 Quality Report Card</b>		
<b>HMO of Pennsylvania</b>		
National Committee for Quality Assurance Health Plan Employer Data and Information Set (HEDIS) 2.0		
<i>Quality of Care Measure</i>	<i>Description</i>	<b>HMO-PA</b>
<b>PREVENTIVE SERVICES</b>		
<b>1. Childhood Immunization</b>	children age two years immunized according to the schedule below:	<b>76.7</b>
Mumps - Measles - Rubella (MMR)	children receiving an MMR between ages one and two years	<b>91.0</b>
Diphtheria - Pertussis - Tetanus (DPT)	children receiving four DPTs by age two years	<b>90.5</b>
Oral Polio Vaccine (OPV)	children receiving three OPVs by age two years	<b>92.1</b>
Hemophilus Influenzae (Hib)	children receiving one Hib between ages one and two years	<b>84.0</b>
<b>2. Cholesterol Screening</b>	adults 40 - 64 with a cholesterol measured during previous 5 years	<b>79.9</b>
<b>3. Mammography Screening</b>	women 50 - 64 who received a mammogram during previous 2 years	<b>74.2</b>
<b>4. Cervical Cancer Screening</b>	women 18 - 64 recorded as having a pap test during previous 3 years	<b>71.0</b>
<b>PRENATAL CARE</b>		
<b>5. Low Birthweight</b>	live births:	<b>1.0</b>
	1. less than 1500 gm 2. less than 2500 gm	<b>6.3</b>
<b>6. Prenatal Care in First Trimester</b>	women receiving prenatal care in the first trimester	<b>84.5</b>
<b>ACUTE and CHRONIC DISEASE</b>		
<b>7. Asthma Inpatient Admission Rate</b>	members aged 1 to 39 with 1 or more admissions for asthma	<b>0.148</b>
<b>8. Diabetic Retinal Exam</b>	diabetics aged 30 to 64 who received an annual eye exam	<b>32.9</b>
<b>MENTAL HEALTH</b>		
<b>9. Ambulatory Follow-up after Hospitalization</b>	ambulatory follow-up of patients with major affective disorder	<b>83.1</b>
<b>MEMBER ACCESS and SATISFACTION</b>		
<b>10. Access</b>	members who visited a plan health care provider (3 years):	<b>93.7</b>
	1. aged 23 - 39 2. aged 40 - 64	<b>94.8</b>
<b>11. Satisfaction</b>	responses of good or higher to survey question concerning "overall medical care"	<b>93.3</b>

All statistics are expressed as percentages.

Copyright 1993 U.S. Quality Algorithms

Source: U.S. Quality Algorithms (a subsidiary of U.S. Healthcare Corporation), 1993.

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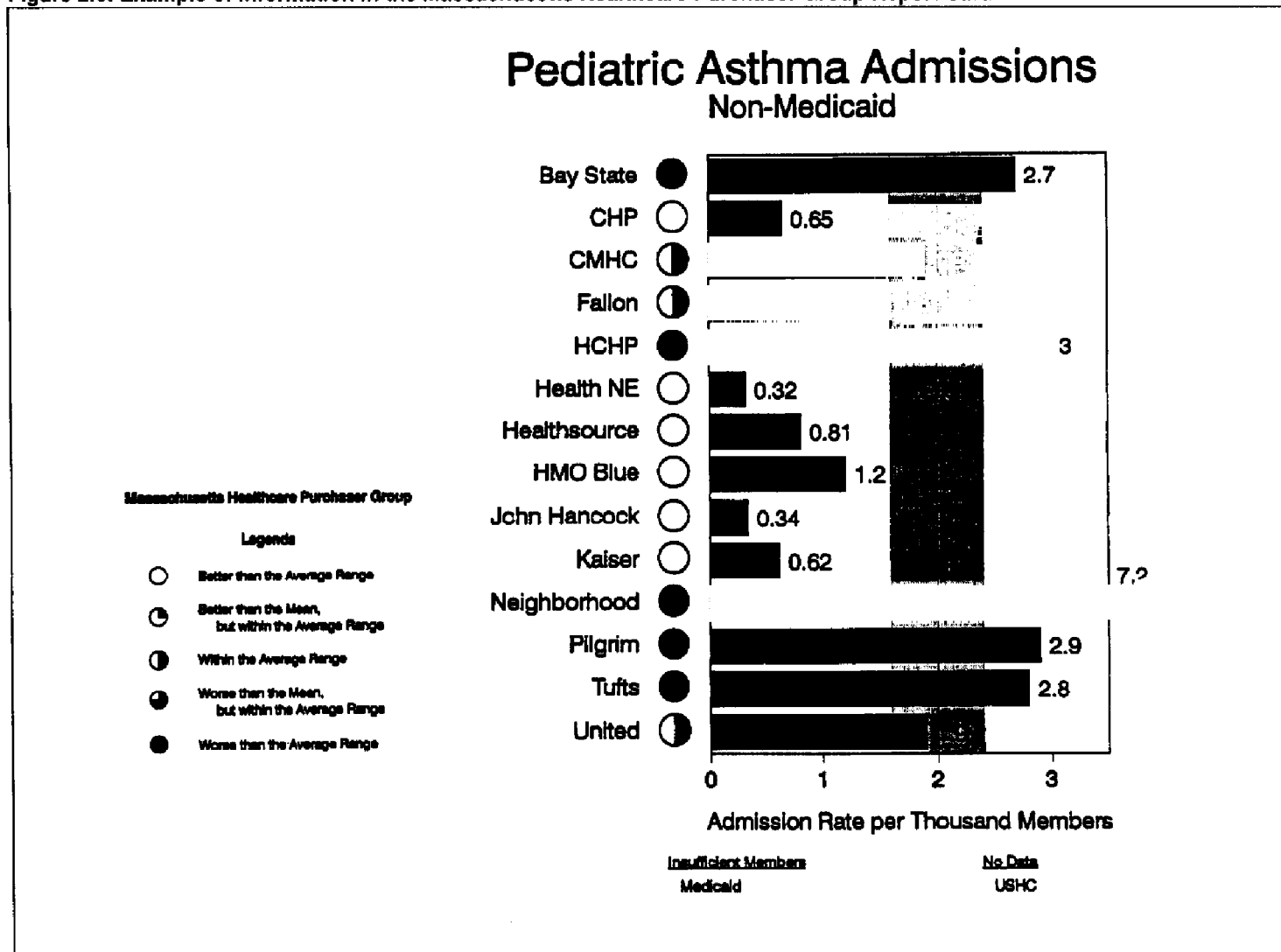
**Chapter 2**  
**Various Health Care Stakeholders Are**  
**Developing Report Cards**

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In March 1994, the 41-member Massachusetts Healthcare Purchaser Group requested that local insurers restrict annual premium growth and report on clinical quality indicators. As a result, 14 HMOs, 1 indemnity plan, and the Massachusetts Division of Medical Assistance agreed to issue a report card on 6 performance measures—adult and pediatric asthma inpatient admissions, mental health inpatient readmissions, prenatal care furnished during the first 3 months of pregnancy, mammography screening, the cesarean section rate, and high blood pressure screening. These indicators were selected because they were related to the areas of highest cost for purchasers and the Group believed there was substantial evidence to support the indicators' validity. Although each plan's performance on each measure was published, these measures were not intended to be compared with national or regional reference values because the developers believed that the indicators had not been widely used and there was little knowledge about what constitutes good performance. In fact, purchasers were advised against comparing the rate achieved in one plan against the rate achieved in another. Instead, developers calculated the average performance of the plans and urged purchasers to compare each plan with that average. (See fig. 2.6.)



Figure 2.6: Example of information in the Massachusetts Healthcare Purchaser Group Report Card



Note: Pie circles are statistically adjusted while bar graphs are not.

Source: Massachusetts Healthcare Purchaser Group, *The Cost/Quality Challenge*, March 1994.

## Florida Is Developing Report Cards for Selected Health Plans

In 1993, Florida legislatively mandated that health plans publish report card information. To implement this requirement, an advisory committee of employers, medical providers, hospitals, HMOs, indemnity insurers, and consumers recommended that information on 41 indicators be included initially in a report card. However, the state Agency for Health Care

Administration (AHCA) could not determine a precise definition for each indicator, and some health plans stated that they would be unable to provide information about others. State officials have delayed writing regulations implementing this proposal. However, they plan to issue a report card in May or June 1995 using other data currently reported to the state.

As part of its health care reform legislation, the Florida legislature required that an advisory data committee be established to make recommendations to state officials about the types of data to be collected and distributed to health care purchasers. Shortly after its formation, the committee recognized that the various stakeholders on the committee had different data needs and priorities. Thus, the committee divided into five subgroups to consider various indicators for inclusion in Florida's report card as well as to identify and discuss other factors related to performance measurement development and dissemination. The subgroups were (1) Community Health Purchasing Alliance (CHPA)<sup>16</sup> members—small business representatives, state employees, and Medicaid recipients purchasing insurance through the CHPAs; (2) CHPA board members and staff—paid CHPA member representatives responsible for selecting health plans that will be offered to alliance members; (3) state government and health care researchers—persons responsible for evaluating health care reform; (4) accountable health plans—HMOs, insurance companies, and some of the larger Florida hospitals that form the health plans to be offered; and (5) health care providers—individual physicians, small hospitals, and other types of health care professionals.

Each subgroup reviewed a total of 62 different indicators:<sup>17</sup> 14 indicators were in the Institute of Medicine's data model,<sup>18</sup> 26 indicators were in the Jackson Hole Group's data model,<sup>19</sup> and 41 indicators were in the HEDIS 2.0 data model. Then the subgroups ranked each indicator based on what they believed to be the most important. Florida officials tallied the subgroups' choices, and 41 of the 62 indicators were recommended for publication in

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<sup>16</sup>CHPAs were established by the Florida legislature to help certain health care purchasers to buy health insurance.

<sup>17</sup>Twenty-two of the 62 indicators were recommended by more than 1 organization.

<sup>18</sup>Institute of Medicine, Access to Health Care in America, National Academy Press, 1993.

<sup>19</sup>The Jackson Hole Group is a health policy organization whose purpose is to promote reform in the American health care system. Their recommended indicators are described in a discussion paper released in April 1993, "Health Outcomes Accountability: Methods for Demonstrating and Improving Health Care Quality."

the first year.<sup>20</sup> An additional 11 were recommended to be phased in subject to further review. (See app. I.) However, when the state proposed regulations for data collection, it was discovered that clear definitions were not available for each indicator and some health plans could not produce the required data. AHCA then proposed that all of the information on HEDIS 2.0 indicators plus one other recommended by the Institute of Medicine be collected. But state officials have delayed writing regulations implementing this proposal until other matters related to state health care reform have been resolved. Meanwhile, they plan to issue a report card in May or June 1995 using information obtained by (1) linking health plan enrollment data to existing state databases and (2) conducting a patient satisfaction survey.

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## **HCFA Is Developing HMO Report Cards for PROs to Use**

HCFA is identifying performance measures it will incorporate in report cards for PROs to use in assessing the health care HMOs provide to Medicare beneficiaries. Although these measures are not being designed to assist beneficiaries to make choices among HMOs, developers expect the results to become public information.

In September 1993, HCFA contracted with the Delmarva PRO to develop performance measures and determine the minimum data needed to generate the desired results.<sup>21</sup> To accomplish this task, Delmarva convened an expert panel to rate 268 separate measures. On the basis of this panel's rating, Delmarva recommended in its February 1994 interim report collecting data on 10 permanent or core measures that are primarily measures of access to preventive and chronic disease care. Delmarva also recommended that data about other diagnostically related measures be collected on a rotating annual bases. For example, indicator results on diabetes may be requested one year, indicator results on heart disease may be requested the second year, and indicator results on cancer the third year. Delmarva submitted a draft final report for comment to 17 organizations representing stakeholders such as the American Medical Association, Group Health Association of America, and Blue Cross Blue Shield Associations. The organizations' comments were considered and a final report was submitted to HCFA in mid-August 1994.

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<sup>20</sup>Thirty-one of the 41 HEDIS 2.0 indicators were recommended, 10 of the 14 Institute of Medicine indicators were recommended, and 17 of the 26 Jackson Hole Group indicators were recommended for publication the first year. Thirteen of the 41 indicators were recommended by more than 1 organization.

<sup>21</sup>Delmarva's project was the result of extensive collaboration with many experts and organizations.

# Many Barriers Impede Report Card Development

Many obstacles are hindering report card development. Experts disagree about which quality of care indicators should be included in report cards because data sources may be inaccurate and result in misinformation. Even if these problems can be resolved, some experts believe that good measures of quality do not exist. Furthermore, no consensus has been reached about methods for calculating report card results so that performance can be compared. Most experts also believe that health care purchasers will be skeptical of report card results unless results are verified by an independent third party.

## Disagreement Exists About Which Indicators Should Be Made Public

Experts have varying beliefs about what information should be included in a report card because of acknowledged difficulties with the reliability and validity of data sources and measurement systems. At one extreme are those who believe that little information should be released because the data sources are inaccurate and the indicators may not measure quality. These experts caution that public confidence in report cards may be lost if the early report cards are found to contain erroneous information. Although most experts agree that the current public demand for information about health care quality must be met, some think that little information should be furnished until it is proven to be highly reliable and valid. If this course of action is taken, report cards will not be available for 10 to 15 years. Several providers have suggested collecting only a very minimal amount of information by focusing on limited data elements. One has cautioned against taking report card results at face value, pointing out that if data are poor, the results will be poor. This provider also expressed the belief that good measures of quality do not exist. The provider also stated that no one knows how to interpret variations in a plan's performance on any one or all the indicators. Another expert stated that report cards might be used as a screening tool only. However, as that expert pointed out, no one knows whether report card results can predict the level of quality furnished in a plan.

Other experts are anxious to publish performance data because they believe that distribution of any data is better than no data being published. Furthermore, these experts believe that preparers will improve the quality of data once it becomes known that the information will be published. These experts believe that report cards could be available within 2 to 5 years if only selected reliable and valid indicators are published. In this group's opinion, other indicators can be added after problems with information sources and other factors are resolved.

Researchers currently are using administrative databases, medical records, and patient surveys in their studies even though they are aware that these sources may have data limitations. They explain these limitations when information is published. Report card information could include similar language warning consumers of data and indicator problems. Furthermore, one expert thinks that progress with indicator development and data source improvement will not occur unless an incentive is provided. For example, financial incentives might be given to providers for submitting specified information to the health plan. Additionally, automated and integrated medical records might be developed so that providers find the information they or others document useful during the normal course of their work.

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### Information Sources May Be Incomplete, Inaccurate, or Misleading

Data sources for report cards range from large computerized administrative databases maintained in health plans to individual patient medical records kept in providers' offices. But these sources might be inaccurate, incomplete, or misleading for report card purposes because (1) most administrative databases were designed for financial purposes rather than clinical purposes and (2) providers may knowingly or unknowingly place incorrect information in medical records or not document certain interventions.

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### Current Administrative Databases Are Not Well Suited for Report Cards

Most administrative databases are designed to facilitate accurate and timely payment to providers. Although administrative databases are good sources of patient demographic information and utilization data, they have limitations for use as source material for report cards. Specifically, these databases may be (1) incomplete because information about a patient's condition or the results of services rendered needed for some report card indicators are not collected; (2) misleading because they use numerical codes that represent undefined diagnoses, procedures, and treatments; and (3) inaccurate because they are based on carelessly entered data.

All insurers and health plans have their own administrative databases. Information in these databases is obtained from (1) patients at the time they enroll in the health plan and (2) providers who submit claim forms citing the services rendered or providers who submit encounter forms required by some HMOs notifying them of specific services provided.<sup>22</sup> A database might include demographic information about members enrolled

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<sup>22</sup>Many HMOs pay providers either a fixed salary or a capitated rate—a fixed, prepaid, monthly payment based on the number of patients enrolled in a program or assigned to a provider. As a result, providers do not have to submit claim forms to be reimbursed for services rendered.

in the plan and the services provided to them such as hospital admissions, outpatient visits, and utilization of services such as laboratory testing and pharmacy services.

Administrative databases use abbreviated numerical codes in lieu of narrative diagnoses, procedures, and treatments. The most common coding systems are (1) the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), a list of over 10,000 medical and surgical diagnoses or conditions; (2) the Diagnostic and Statistics Manual, third edition (DSM-III), a list of over 290 mental health disorders; (3) the Current Procedural Terminal, fourth edition (CPT-4), a list of about 7,200 procedures and treatments; and (4) the HCFA Common Procedure Coding System. Hospital medical records personnel or billing clerks in outpatient centers and provider offices enter these codes on the appropriate claim/encounter form or, after examining a patient, the provider simply checks off on a preprinted form those items that apply. These forms are either sent to the insurer or health plan where the information is entered into the administrative database by claims or clerical personnel or they are sent electronically to the insurer or health plan where the information is automatically entered into the administrative database.

HMO administrative databases usually are incomplete sources of information for report cards because providers are not required to submit claim forms.<sup>23</sup> In some instances, HMOs ask physicians to supply encounter data documenting the care rendered to a patient. But only a few HMOs furnish incentives to providers for performing this task. As a result, HMO databases frequently contain only demographic information supplied by the patient and do not include information about the services the provider renders. This information is insufficient for determining performance results used in report cards.

Experts also believe that administrative databases derived from claim forms and used for payment purposes are incomplete for report card purposes because (1) they do not capture clinical characteristics about patients such as blood pressure readings or test results and (2) they do not include the outcome of the care provided. For example, a health plan might be able to count patients being treated for hypertension using the diagnosis code for hypertension recorded in its administrative database. But the health plan could not report on the outcome of the patients' treatment based on these data alone because changes in patients' blood pressure as a result of care are not noted in the database.

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<sup>23</sup>HMOs constitute about 32 percent of managed care organizations.

Administrative databases also may be misleading or inaccurate. Although coding makes it easier to store and retrieve information, it hampers report card development because a code may not represent a clearly defined diagnosis, condition, or treatment. As a result, when codes are used to formulate report cards, the results may be unreliable. For example, the ICD-9-CM code for diabetes, 250.0, does not differentiate among patients whose conditions are controlled through insulin injection, oral medication, or diet alone. As a result, indicators that measure the outcome from certain medical interventions might be inaccurate if this code alone is used to identify diabetic patients enrolled in a plan. To be useful for report cards, codes should differentiate between such conditions.

Not only are the codes poorly defined for report card purposes, but the wrong codes may be entered mistakenly into the database. Researchers studying obstetrics care in Washington State found data in state administrative databases related to maternal and infant outcomes to be poorly coded. Specifically, eclampsia, blood transfusion, labor induction, neonatal seizures, and admissions to a neonatal intensive care unit (NICU) had high error rates. Such errors could have significant impact on report card results. For example, only 65 percent of 211 reported admissions to NICUS were actual admissions. If NICU admission rates were a report card indicator, report card users would be led to believe that NICU admissions were much greater than they actually were.

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### **Medical Records Hold Important Clinical Detail but Obtaining It Is Difficult and Costly**

Data found in medical records are rich in clinical information. However, obtaining that information is expensive because trained personnel are needed to retrieve it from numerous medical record pages. Furthermore, medical records can include misleading or inaccurate information. Thus, experts believe that medical records should not be used as the sole source for report card results.

Medical records contain information about a patient's medical history; current symptoms; test, procedure, and treatment results; medication use; and other relevant clinical data. Providers make their notations when they have seen or communicated with the patient. Clerks usually file laboratory and other test results in the medical record. Although hospitals have prescribed policies and procedures regarding the types of information that must be included in a medical record, most providers' offices have less formal systems and their medical records are less inclusive. (These providers do not have to comply with accreditation standards.)

The West Virginia Medical Institute estimates that it costs approximately \$16 to find and retrieve information from one medical record.<sup>24</sup> Most medical records are kept in voluminous paper files located in doctors' offices, hospitals, or other provider sites. These records may be located in several areas within the site or misfiled in the file room. Furthermore, retrieving the information frequently requires a highly trained person to search through the medical record's many pages to locate and interpret the data needed. Although medical records may be a better clinical source for report cards, some experts believe that the high cost of collecting information from medical records is forcing report card developers to rely on administrative databases—a less reliable but more cost-effective source of information.

For report card purposes, relying totally on medical records data is discouraged because the records might include incorrect, incomplete, or imprecise information. For example, one expert reported that physicians may err in conducting the physical examination or interpreting tests or other personnel may make faulty clinical observations. Additionally, providers frequently do not document items they believe to be unimportant. Although test results and physician impressions of the patient's clinical condition usually are noted in the medical record, the records often do not contain information of lesser importance to the provider's continuing care such as nutritional or other counseling services. Also, providers sometimes document a diagnosis, treatment, or condition to ensure insurance coverage or protect patient interests. As a result, notes within the medical record may imply that the patient's condition is somewhat different than it actually is. For example, when a physician orders a mammogram, a woman's previous medical history might be described in a way that would meet a specific insurance company's standards for performing the mammogram. In other instances, a physician might record a less specific diagnosis because the precise diagnosis could harm the patient if it were brought to public view. Acquired immunodeficiency syndrome, asthma, alcoholism, and mental illness are examples of some diagnoses that carry social stigmas.

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<sup>24</sup>The Institute has a contract with the Department of Veterans Affairs (VA) to conduct medical reviews in VA hospitals nationwide. The estimate cited includes retrieval of the medical record, personal computer set-up and breakdown time, abstracting the information, as well as administrative time such as the abstractor discussing problems with a supervisor. The estimate does not include other overhead costs.



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## Report Card Indicators May Not Be Valid Measures of Quality

Indicators currently used in report cards may not be good measures for making decisions about a health plan's ability to provide quality care. Indicators measure either organizational arrangements (structure) or activities carried out by providers (process). However, research has demonstrated that these indicators may not measure quality. Although these indicators measure arrangements or activities that experts think are related to quality, some experts believe that measuring outcomes or the results of care is the best and perhaps only way to evaluate quality. However, outcomes need to be adjusted to ensure that the effects of structure and process and not the effects of patient characteristics are being measured. Experts have not agreed upon an acceptable risk adjustment methodology.

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## Some Indicators Have No Basis in Research

Structure and process indicators are used frequently when assessing quality because it is relatively easy to measure them. But research has not clearly demonstrated correlations between some commonly used structure and process measures and desirable outcomes. Hence, measures that have not been proven to be comprehensive indicators of quality are being used in report card comparisons.

The following example illustrates how the health care community uses quality indicators that have not been proven to be valid measures of quality. It is commonly accepted by health care experts that a board-certified physician provides better care than a physician who is not board certified.<sup>25</sup> In fact, HEDIS 2.0 developers recommend including as performance indicators the "percent of primary care physicians board-certified" and the "percent of physician specialists board-certified in the specialty in which they practice predominantly." Other released report cards also have used this measure. However, no one has proven that the patients of board-certified physicians have better results than other patients. In fact, in five of seven studies reviewed by the Office of Technology Assessment (OTA), physician board certification showed no effect on performance.<sup>26</sup> OTA provided several explanations for these results, including the possibility that the studies may have been flawed—the sample size too small, adjustments for patient characteristics absent, or the tool used to measure quality not reliable or valid.

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<sup>25</sup>Board certification is a method of formally identifying a physician who has completed a specified amount of training and a certain set of requirements, and passed an examination required by a medical specialty board.

<sup>26</sup>U.S. Congress, Office of Technology Assessment, The Quality of Medical Care: Information for Consumers, OTA-H-386 (Washington, D.C.: U.S. Government Printing Office, June 1988).

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Additionally, the certification process may be invalid—written and oral tests used to evaluate physician performance may not measure success in clinical practice.

Some performance measures are selected for reporting because experts believe the indicator represents a concept that is difficult to measure directly. For example, barriers to care is a concept that may be difficult to measure. As a result, several experts recommend monitoring infant mortality rates. These rates explicitly measure the quality of medical care given to pregnant women and to children 1 year old or younger. However, they also might implicitly measure a health plan's success with reducing barriers to care experienced by certain groups.

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### Risk Adjustment Systems May Not Be Reliable

Risk adjustment systems have not been perfected, and tests of systems that are in place indicate that they may not be reliable. As a result, experts advise against mandating a national system. Outcome measures should be adjusted so that differences in outcomes can be attributed to either the quality of care furnished or to patient characteristics. If adjustments are not made, providers or health plans may contend that poor outcomes are due to their caring for sicker patients. At least 15 risk adjustment systems<sup>27</sup> have been identified in the literature.<sup>28</sup> The results of the few reviews that have been done have found that risk adjustment systems may not be able to predict whether patient characteristics or poor quality of care is the reason for a poor outcome. Additionally, experts believe that risk adjustments might obscure valuable information such as the number of persons within a certain age range who experienced specific outcomes.

All risk adjustment systems assume that certain patient characteristics contribute to adverse outcomes such as increased resource consumption (a substitute for severe illness), death, or complication. At least 10 patient characteristics have been identified that might influence the outcome of health care: age; acute clinical stability; principal diagnosis; severity of principal diagnosis; extent and severity of comorbidities;<sup>29</sup> physical functional status; psychological, cognitive, and psychosocial functioning; nonclinical attributes such as socioeconomic status, race, substance

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<sup>27</sup>Initially, these systems were developed to predict resource consumption so hospital payment rates could be established. Some experts believe that these same methods can be used to predict quality of care. More recently, however, systems have been developed for the sole purpose of predicting quality.

<sup>28</sup>Our forthcoming report, GAO/HEHS-95-1, discusses specific performance data systems.

<sup>29</sup>Comorbidities are diseases or conditions present at the same time as the principal condition of a patient.

abuse, and culture; health status and quality of life; and patient attributes and preferences. Using complex statistical modeling techniques, researchers look for a positive or negative relationship between these patient characteristics and the observed outcome or results of care. To the extent that patient characteristics are associated statistically with the adverse outcome, then differences in outcomes may be attributed to factors other than differences in quality of care. Conversely, if patient characteristics are not associated statistically with the adverse outcome, then differences in outcomes are more likely to be the result of differences in quality of care. But research has shown that some techniques used to adjust for differences in patient characteristics may not be predictive of the outcome observed. The following two examples illustrate that conclusion.

One study evaluated age as a predictor of outcome. Age is a patient characteristic frequently used for risk adjustment. However, a system that relies heavily on age may not be appropriate in all instances. In a 1990 study of persons 65 years of age and older 30 days after they were admitted to a hospital, age accounted for only a 1-percent variation in outcome for congestive heart failure and hip fracture patients, only a 2-percent variation in outcome for acute myocardial infarction patients, and only a 3-percent variation in outcome for pneumonia patients.<sup>30</sup> Age may be an important factor when analyzing the results of care furnished to patients in broad age ranges but not as important a factor when analyzing outcomes in narrower age ranges.

The second study evaluated the ability of six different risk adjustment systems to predict mortality across five high-mortality conditions: stroke, lung cancer, pneumonia, acute myocardial infarction, and congestive heart failure.<sup>31</sup> One of the systems used standard information such as age, sex, principal diagnosis, and comorbidities found in hospital discharge summaries to adjust for risk. Two of the systems used standard clinical information found in the medical record that might adversely affect the outcome of any illness. Three of the systems used specific clinical factors that physicians believe affect the actual conditions being studied. The first system based on discharge summary information was the least predictive

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<sup>30</sup>E. B. Keeler, K. L. Kahn, D. Draper, et al., "Changes in Sickness at Admission Following the Introduction of the Prospective Payment System," Journal of the American Medical Association, 1990:1962-1968.

<sup>31</sup>L. I. Iezzoni, A. S. Ash, G. A. Coffman, and M. A. Moskowitz, "Predicting In-Hospital Mortality: A Comparison of Severity Measurement Approaches," Medical Care, April 1992:347-359.

of death and the latter three systems based on condition-specific information were most predictive.<sup>32</sup>

The reliability of any risk adjustment system depends on the accuracy, completeness, and credibility of the information it uses. Risk adjustment systems use coded information from coded discharge summaries or administrative databases, clinical information from medical records, or functional status and satisfaction data obtained through patient surveys. The advantages and disadvantages of collecting and using data from these sources are discussed on pages 35-38 and pages 44-46. These factors equally affect the reliability of risk adjustments.

An additional concern expressed by several experts was that risk adjustments inadvertently hide valuable information. In its draft proposal submitted to HCFA, the Delmarva PRO did not recommend adjusting data for certain patient characteristics because it might obscure otherwise important information, preventing HMOs from identifying population groups needing improved care. Therefore, they recommended categorizing results into various subgroups based on nonclinical and clinical patient factors. For example, as previously discussed, age differences is a patient characteristic that might be important to analyze. But if age is an adjustment factor, the outcomes of care furnished to people within different age ranges will not be determined. Consumers, government officials, and others might want to know how successful different health plans are at treating people in different age groups.

The experts we interviewed thought that creating one national risk adjustment system would be undesirable.<sup>33</sup> Three reasons were given. First, adjustment systems are in their infancy and establishing one preferred system might reduce the competition to create more reliable and valid systems. Second, many states, business coalitions, and other organizations developing report cards have invested in specific systems they believe meet their needs. Duplication and added expense would result if another system were mandated. Third, each performance indicator may need its own separate adjustment because patient characteristics have a unique effect on every condition and disease. Separate indicators have been used in some instances. For example, California officials are developing risk adjustment methods specific to

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<sup>32</sup>The system based on discharge summary information that was least predictive was designed originally to predict resource consumption. Therefore, experts were not surprised that it was the poorest predictor of death.

<sup>33</sup>We asked experts if they believed that one national risk adjustment system should be mandated. Experts did not raise that subject independent of our question.

particular outcomes, conditions, and procedures. This approach was adopted after a 1991 state legislative committee concluded that (1) constructing and validating outcome measures may be as important a factor in improving the quality of care in California hospitals as any report ranking hospitals by risk-adjusted mortality and morbidity; (2) no "best" risk adjustment system was available commercially; and (3) none of the commercial systems was designed to make interhospital comparisons of outcomes at a statewide level.<sup>34</sup>

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## Report Card Indicators May Not Be Comparable

Current report cards may not be comparable and their usefulness may be diminished because health plans have not agreed on the measurements to be used. While relying to some extent on HEDIS 2.0 measures, most individual health plans that have published report cards are using their own criteria for collecting data and computing results. Additionally, these health plans have developed their own patient surveys to determine how consumers view the services they receive. Furthermore, little mention is made in any of the report cards about the plan's benefit structure and the effect these benefits may have on patients' utilization of services.

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## National Standards for Calculating Results Do Not Exist

Nationwide standards for calculating indicator results have not been established. However, individual states such as Florida and Maryland are working toward mandating statewide standards. Although HEDIS 2.0 developers are working toward standardizing calculations, their efforts are voluntary only and health plans are not required to follow their guidance. As a result, health plans can continue to collect and compute report card results using their own criteria and purchasers will be unable to compare plans to determine which one meets their needs.

The following example illustrates how two organizations have used different standards to collect and compute data for their report cards. Both methods may be accurate. However, the methods may not meet the needs of the purchaser because the results cannot be compared.

Administering childhood immunizations is an indicator found in many report cards. The results Kaiser Permanente included in its report card were based on the number of children between birth and 2 years of age who received at least four diphtheria/pertussis/tetanus (DPT) immunizations. But Medica, a health plan managed by UHC, showed in its

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<sup>34</sup>L. Johns, "State Report: Measuring Quality in California," *Health Affairs*, Spring 1992:266-270.

report card the number of children between the ages of 2 and 6 months who received at least three DPT immunizations.

In addition to counting the number of events differently, these two organizations counted the population on which the results are based differently. Kaiser noted that its results were based on (1) a sample of 601 members born in the same year, (2) who utilized health plan services at least once, and (3) who were continuously enrolled in their plan for the designated 2-year period. UHC noted that its results were based only on the total population of children who were members of the health plan during the reporting period. Furthermore, both plans were unclear about whether they also counted only those children who were immunized by providers in their plan or whether they also counted children enrolled in their plan who were immunized by other providers.

Several experts believe that the federal government could assume the role of establishing uniform collection and calculation standards. They contend that this strategy will ensure that health plans do not collect and compute indicator results to their own advantage rather than the public's.

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### Methods for Measuring Patients' Views About Care Have Not Been Agreed On

Most providers and health plan administrators are recognizing that measuring patients' perceptions of the quality of care they receive is as valid and important as measuring the technical quality of services rendered. Asking patients about their satisfaction with the care furnished, their own health status, their own health behavior, and the care they were provided is the best, and sometimes only way, to obtain some of the information sought by report card developers. Researchers have developed several methods for obtaining patients' views about the care they have received. But no standardized method has been agreed to. Thus, health plans are administering their own surveys, and the results obtained by individual plans cannot be compared.

Health plans that are obtaining patient views usually collect information through written questionnaires or telephone surveys administered by the health plan or an independent third party. Generally, patients are asked if they are satisfied with the services they received. In some instances, members have been asked specific questions about their health status and their ability to perform daily activities such as walking or bathing. If a written questionnaire is used, frequently it is distributed to randomly selected members. Telephone calls may be made to members who do not

return the questionnaires. In other instances, the survey is conducted only by telephone.

Neither administrative databases nor medical records contain information about how satisfied patients are with the services they received. And as pointed out previously, these sources may not include information providers neglected to document or believe is unimportant. However, undocumented information, such as whether counseling was provided or whether the patient can climb stairs more easily after hip replacement surgery, might provide valuable information for a report card about the outcome of services provided. Researchers have shown that patients are reliable sources for this type of information and, in fact, sometimes better sources than administrative databases or medical records.

Various patient survey tools are being developed. Funded by the Xerox Corporation, GTE Corporation, and Digital Equipment Corporation, researchers at the Health Institute of the New England Medical Center have developed a survey to gather employees' perceptions of the quality of care given by health plans their employers offer. In this instance, participating employers are interested in comparing and ranking plans. Health Institute researchers developed a 154-item survey that was sent to over 35,000 employees enrolled in 31 different health plans offered nationwide by the participating employers. More than 25,000 employees responded. The survey questions were based on other accepted surveys such as the Group Health Association of America's (GHAA) Consumer Satisfaction survey and the Medical Outcomes Study team's SF-36 Short Form Health Status Survey.<sup>36</sup> Many of the questions in the Health Institute's survey required the respondent to answer on a five-point rating scale ranging from poor to excellent, definitely true to definitely false, or all of the time to none of the time. Other questions called for a yes/no response, while others required a specific answer to a specific question.

Researchers at Beth Israel Hospital are taking a different approach to patient surveys. In 1988, the Picker/Commonwealth Fund gave Beth Israel researchers a grant to develop a hospital patient satisfaction survey that hospitals can use to improve services. Although this survey applies only to hospital patients, researchers at Beth Israel said the concept can be applied in health plans. Using patient input, the Beth Israel researchers identified aspects of patient care that most affect patients' hospital

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<sup>36</sup>GHAA is a membership organization that represents HMOs nationwide. Its survey was designed to assess health care delivery and health plan administration. The SF-36 was designed by researchers at the RAND Corporation and the Health Institute to assess patients' functional status, well-being, and general health perceptions.

experiences.<sup>36</sup> The resulting patient survey questions focused on specific actions that might be taken by hospital staff that affect these dimensions. For example, one question asks whether the patient usually got help in time with eating, bathing, or getting to the bathroom. The percentage of patients who responded that they did not receive this assistance is reported to the hospital. Survey responses are obtained by telephoning patients and their families. Results are sent only to hospitals who participate in the study, although researchers say they could be published.

Although health reform proposals call for patient surveys, not all health plans are enthusiastic about allowing independent surveyors to canvas their members and publish the results of their efforts. The following example illustrates this point. Federal Employee Health Benefit Program officials entered an agreement to cooperate with the Center for the Study of Services<sup>37</sup> to provide comparative information about health plans providing care to federal employees. But only 272 (approximately 75 percent of plans with appropriate sized enrollment counts) of participating health plans have agreed to participate in the study. Some health plans and industry representatives objected to the questions and the size of the sample selected to answer the questions. Others would rather conduct the survey themselves rather than contract with an independent organization. One health plan executive expressed concern that his organization was being required to participate in a survey it had no say in designing. Another wanted the right to veto disclosing the results after reviewing the responses.

### **Benefit Structures Might Affect Report Card Results**

Differences in health plan benefit structures may complicate report card comparisons because both the cost of services covered by a plan and the range of those services may affect patients' utilization. Presumably, the plan with the more generous benefit structure might appear to supply the better care because patient utilization of services is higher than for another plan with lesser benefits.

Consider the example of two asthmatic patients who experience mild flare-ups. The patients and their conditions are identical. But patient A is

<sup>36</sup>The aspects of care identified include (1) respect for patients' values, preferences, and expressed needs; (2) coordination of care and integration of services within an institutional setting; (3) communication between patient and providers; (4) physician care, comfort, and the alleviation of pain; (5) emotional support and alleviation of fears and anxiety; (6) involvement of family and friends; and (7) transition and continuity from one site of care to another.

<sup>37</sup>The Center for the Study of Services publishes Consumers' Checkbook, a consumer guide that rates products and services, including health care.



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enrolled in a plan that requires a \$20 copayment for each visit to a doctor while patient B pays nothing to see a doctor. Because patient A does not want to pay \$20, he unsuccessfully attempts self-medication, his condition deteriorates, and he is admitted to a hospital. Because patient B pays nothing, he immediately sees his physician and his condition improves. Patient A's health plan will show a higher hospital admission rate than patient B's health plan. Without benefits information, these results could be interpreted as meaning patient A's health plan provides poorer quality care than patient B's plan.

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## **Report Card Results Are Not Being Verified**

Most experts agree that there is a need to have an independent third party verify the information contained in report cards. However, no consensus exists regarding who should do the verification or what information should be included. Although the possibility exists that health plans may purposely alter their performance results, experts believe that there is a greater probability that innocent errors will be made because data collection is a complex task.

Currently, few organizations are requesting that objective third parties to verify their data. NCQA has contracted with an independent agent to verify data gathered by the 21 health plans participating in its report card project. The state of Maryland is also planning to verify information gathered as a part of its newly mandated report card project. But few other organizations are taking similar steps.

Several experts suggested that organizations similar to those conducting financial audits could perform data audits. Administrative database information could be cross-referenced to medical record information to verify accuracy. Others suggested that audits be performed on a random basis or that audits be required only in situations where a designated authority has reason to believe that misreporting may have occurred. No agreement exists about whether the federal government should play a role in auditing.

# Report Cards Might Benefit Different Health Care Stakeholders

Many different groups can potentially benefit from the information contained in report cards. Employers could select better plans for their employees; public health officials could determine whether health care goals for the nation are being met; health plan administrators and researchers could improve services; and consumers could select health plans that meet their specific needs. While the needs of employers, public health officials, providers, health plan administrators, and researchers are generally known, the needs of individual consumers have not been well communicated to report card developers. As a result, report cards may not contain all the information consumers need to make purchasing decisions. Additionally, publishing performance results may have unintended adverse consequences such as health plans using the information to avoid enrolling very sick and costly patients or putting their resources into areas being measured to the detriment of areas not measured.

## Employers Expect Report Cards to Provide Benefits

Employers expect report cards to help them (1) select a health plan that provides value (that is, necessary health care at affordable prices); (2) improve employee relations because employers can give employees information about the quality of health care furnished by company-selected health plans; (3) select health plans that keep their employees healthy and working; and (4) perform oversight functions of health care quality in company-selected plans. Early indications reveal that report cards are achieving some of these goals.

Officials of Hershey Foods, Inc., believe their company has benefited from using cost and quality information published by the Pennsylvania Health Care Cost Containment Council. Hershey officials have used this information to negotiate contracts with primary care physicians, specialists, and hospitals, according to a progress report published by the Council.<sup>38</sup> This report also noted that Hershey estimates that these negotiations will have at least a 10-percent positive impact on its profits. Additionally, Hershey has redesigned its employee benefit plans using the Council's data to shop for health care. Furthermore, the report states, other companies are using the information for employee education and to select health care providers.

Another Pennsylvania company, Accutrex, is part of an alliance of businesses in the state that saved a total of \$1 million in 6 months using the Council's reports. According to the company's president, Accutrex experienced a 13-percent reduction in its health care expenditures. In

<sup>38</sup>Pennsylvania Health Care Cost Containment Council, A Progress Report, 1991-93.

addition, the manufacturer managed to expand coverage for some health care services for its employees.

## Public Health Officials Foresee Meeting National Health Care Goals

Public health officials believe that national health policy goals are more likely to be met if report card indicators include public health goals such as those identified in a 1990 Department of Health and Human Services publication, Healthy People 2000. Public health and health plan officials we interviewed said that health plan administrators would make every effort to meet those goals if they were included in a public performance measurement system.

The report card U.S. Healthcare published in 1993 illustrates how including public health goals in the reporting system might encourage health plan administrators to focus on meeting those goals. The company's November 1993 press release announcing the report card's publication clearly called attention to U.S. Healthcare's performance in comparison with goals in Healthy People 2000. In an instance where U.S. Healthcare exceeded the national goal, company officials stated, "The U.S. Department of Health and Human Services, in the publication Healthy People 2000 . . . sets a goal for the year 2000 of at least 60% of women over age 50 to receive mammography within the preceding one to two years. U.S. Healthcare has already exceeded this ambitious goal" (emphasis added). U.S. Healthcare also reported that its immunization rate and cholesterol screening rate exceeded Healthy People 2000 goals.<sup>39</sup>

## Individual Providers Could Join Plans That Meet Their Practice Styles

Providers might benefit personally from reviewing published performance data before deciding to contract with a specific health plan to provide services to its enrollees. Providers, particularly primary care physicians, are being actively recruited by health plans in various communities. These health plans have different policies about utilization review, reimbursement, and specialty referrals that could affect the provider's practice style. If the outcome of these policies is reflected in report card results, the provider could make an informed decision about affiliating with a particular health plan.

The state of Maryland has recognized that providers have unique interests and plans to conduct a survey that addresses those interests. After conducting patient satisfaction surveys and collecting HEDIS-like indicator

<sup>39</sup>U.S. Healthcare cited these reference values in a press release. As discussed on pp. 28-29, the company did not include reference values in the actual report card.

information, the state is planning to conduct a provider survey to solicit their opinions about health plan performance. Providers have recommended that the latter survey address attitudes and opinions of physicians working in a managed care environment, the accessibility of diagnostic testing, the after-hours availability of diagnostic testing, timeliness of test reports, and the availability of qualified subspecialty consultants. At this time, Maryland does not intend to identify providers' opinions of individual health plans because some physicians fear retribution from health plans if they respond negatively about any one health plan.

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## Health Plan Administrators, Providers, and Researchers Could Target Areas for Further Study

Health plan administrators and providers should be well aware of their own organization's quality assurance efforts and their plan's performance on specific indicators. According to experts, report cards could allow administrators and providers to measure their plan's relative performance against other health plans'. This information will help those responsible for providing care to determine if their plan is providing optimum care and, if not, make necessary changes in areas needing improvement. Researchers, like administrators and providers, could use report cards to study why one health plan performs better than another. Additionally, both groups might find report cards useful in determining compliance with established clinical practice guidelines.

The Massachusetts Healthcare Purchaser Group listed several ways insurers or health plan administrators can use information contained in its report to improve their operations. One use is monitoring comparative performance to foster communication between health plans and promote diffusion of best practices. For example, Neighborhood Health Plan's pediatric asthma admission rate was 7.2 children per 1,000 members while Health New England, Inc.'s rate was 0.32 children per 1,000 members. The average rate for the participants in the Purchaser Group was 2.0 children per 1,000 members.<sup>40</sup> Neighborhood Health Plan can use this information as the basis for evaluating its performance in this area (for example, to

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<sup>40</sup>These measures were not risk adjusted. Additionally, they do not incorporate the factors of prevalence of disease in a plan's population or patient compliance with outpatient treatments. As previously discussed, the Massachusetts Healthcare Purchaser Group advises against comparing one plan with another and suggests that results be compared with the average of all plans in the group.

determine why its admission rate was so much higher) and, if necessary, take corrective action to improve its performance.<sup>41</sup>

Report cards also might be used by researchers to determine if providers are complying with clinical practice guidelines. Performance measures selected for reporting might reflect the treatment processes included in the practice guidelines. For example, if one of the practice guidelines for breast cancer prevention were that women over 50 should receive mammograms, the number of women over 50 who have received mammograms would be a measure of success in meeting that guideline.<sup>42</sup>

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## Consumers Might Benefit If the Indicators Reflect Their Concerns

Health care experts and policymakers expect consumers to use report cards to select a health plan that meets their needs. However, experts doubt that report cards will be useful to consumers unless they include information consumers want. Although consumers are being surveyed about their satisfaction with care they received from a health plan, they have rarely been asked what performance measures they would be interested in evaluating. Furthermore, some providers and experts believe that consumers will not understand report card information. No evaluations have been done on how consumers have used published report cards.

Some newspapers and magazines are publishing comparative health plan data for consumers. One is Consumers' Checkbook, which is published by a nonprofit organization that provides comparative information about a variety of subjects on the basis of consumer surveys. Checkbook consumer surveys are sent to its lists of subscribers who number approximately 50,000 in the Washington, D.C., area and to Consumer Reports subscriber lists. Although Consumers' Checkbook has been publishing health plan information for consumers for 15 years, the publisher is not sure what specific information is of interest to consumers. Checkbook has received little specific consumer feedback, such as letters to the editor or other such communication, on which to judge how well the information it is publishing is being received. Thus, Checkbook reports may not be addressing the right issues. According to its publisher,

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<sup>41</sup>One expert expressed concern that publishing report card results could hinder information sharing among health plans. If one health plan's performance on an indicator is better than another's, financial incentives might stop the better performing plan from sharing information that might help to improve its competitor's performance.

<sup>42</sup>However, a low rate only indicates a possible problem. Report cards may not give researchers clinical information necessary to determine how, why, and when care can be improved. More information would be needed to determine if a problem actually exists, what the problem is, and how to improve performance.

Checkbook prints publicly available information or information its staff develop themselves. Checkbook receives very little cooperation from health plans. As a result, it reports on what consumers say about their physicians in response to Checkbook survey questions even though the consumers might be more interested in other factors pertaining to health care quality. Even though Checkbook may not be publishing exactly what consumers want, the publisher believes that consumers will be interested in meaningful information. If consumers see things they do not find interesting, they ignore them.

After collecting information about health care services, Checkbook ranks those they believe to be the best. They also report on all information gathered even when it is voluminous or contradictory. The publisher believes that the sometimes contradictory statements from different sources highlight the level of uncertainty inherent in current evaluations.

In 1993, Checkbook published information provided by three Washington, D.C., metropolitan area health plans using HEDIS measures. This approach was taken only to give consumers an example of the types of information they might see in the future and was not intended to be a report card about the plans. All of the data reported were footnoted to explain collection methodology or other data gathering facts.

Checkbook's publisher is concerned that some employer-motivated performance systems may divert attention from items of interest to consumers. For example, employers probably do not have an interest in individual physician ratings because they realize that one plan cannot furnish the very best provider to all patients. Therefore, the measures developed will gauge plan performance and not provider performance. Yet patients are interested in measures that allow them to choose the very best provider.

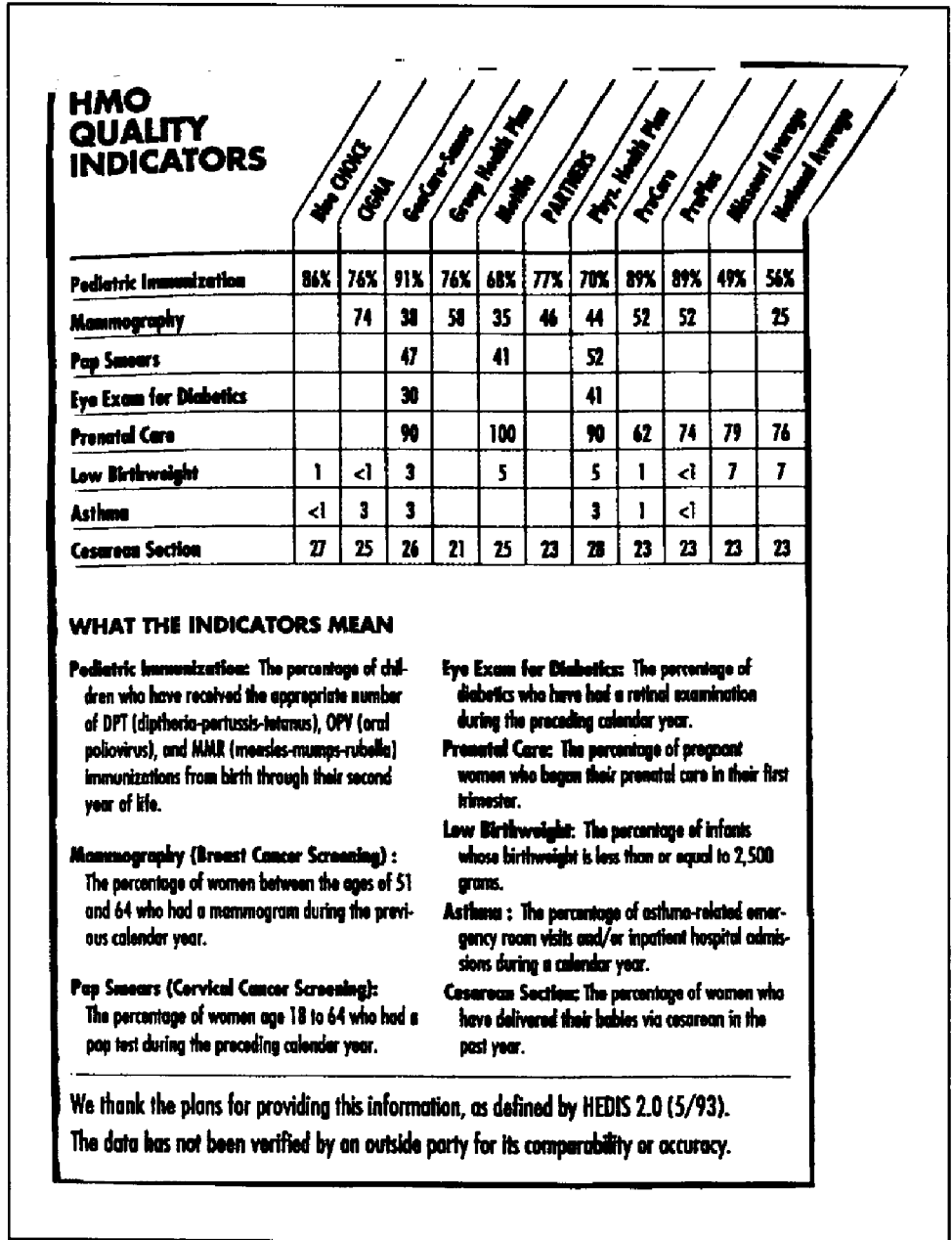
Another magazine that is publishing comparative information for consumers is Health Pages. This magazine's mission, in part, is to help educate and empower consumers so that they will create additional demands for health care information. In its winter 1993 St. Louis issue, Health Pages published background information about various St. Louis physicians, including oncologists, surgeons, and urologists. In addition to whether these physicians were board certified, the magazine provided information about charges for various treatments and procedures. Health Pages also published general information on breast cancer, mammography facilities, and prostate cancer.

That edition of Health Pages also included a report card on 11 St. Louis HMOs. (See fig. 4.1.) These HMOs were asked to submit information on eight indicators using HEDIS 2.0 definitions and formulas. Consumers were asked to evaluate the information Health Pages presented. The St. Louis Area Business Health Coalition, which includes large companies such as McDonnell Douglas, distributed over 60,000 copies of Health Pages to employees and retirees. In addition, McDonnell Douglas sent its personnel a questionnaire asking them to evaluate the magazine. Fifty-four percent of the approximately 1,200 respondents indicated that the feature on managed care was of interest to them. Comments received included the following:

- “I was disappointed that St. Louis University hospitals did not participate. Our local hospital is affiliated with them. I intend to contact the administrator.”
- “I liked the comparison of plan statistics.”
- “Congrats [sic] on fees and physicians—keep them in future editions. We’ve needed something like Health Pages for years.”

Chapter 4  
 Report Cards Might Benefit Different Health  
 Care Stakeholders

Figure 4.1: Example of Health Pages' HMO Report Card



Source: Health Pages, Winter 1993, St. Louis Edition.



Although organizations releasing report cards provide some technical information to consumers on how to evaluate the quality of health care, some providers and experts continue to believe that consumers should not be given information because they will not understand it. But consumers have a broader outlook than providers might expect. Of the 62 indicators presented for evaluation to Florida's CHPA Advisory Committee, only 1 was not recommended at all by consumers who participated in the development process. This compares with 9 that were not recommended by providers, 11 that were not recommended by state government officials and researchers, 20 that were not recommended by CHPA board members and staff, and 21 that were not recommended by accountable health plans. (See app. I.) In addition to illustrating that consumers have a broader interest and understanding than some providers believe, this illustrates how consumers' interests might be overlooked if their opinions are not sought.

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## Report Cards Might Have Some Unintended Adverse Consequences

Although most experts said that there are significant benefits to publishing performance measurement results, some cautioned that distributing this information may result in unintended adverse consequences. Some plans might use the information to avoid enrolling very sick and costly patients, intentionally deciding to represent themselves unfavorably in selected areas to discourage enrollment of patients suffering specific illnesses. For example, breast cancer patients may need expensive and ongoing treatment. A plan that has a low 5-year breast cancer survival rate (that is, few of its breast cancer patients lived for 5 years or more) might not improve performance in this area to avoid attracting more "undesirable" patients.

Some experts also are concerned that administrators will place all their organizations' resources in areas that are being measured. Areas that are not highlighted in report cards will be ignored. One way to prevent that is to alternate report card indicators so the same areas are not always highlighted. However, this suggested solution might be costly.

# Conclusions

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Report cards can be a useful tool to educate stakeholders about the care provided by a health plan. We support the report card concept and encourage continued development in the field. However, current indicators chosen for publication reflect only selected aspects of the care furnished by a plan—mammograms, immunization, mortality from a certain procedure, and so on. These indicators may not be a good measure of the quality of health care being provided. Furthermore, the data sources on which these indicators are based frequently are inaccurate. Thus, no conclusion about the overall quality of care provided by a health plan can be drawn from these measures.

Purchasers of health care rightfully expect to receive reliable and valid information. Individual consumers, particularly, may be making significant decisions based on the information found in report cards. Given that report card indicators may not be based on good data, today's health care purchasers and other users of the information should be warned about the data's limitations and the conclusions that can be drawn. This warning could take the form of a prominently displayed cautionary notation on report cards.

We also strongly support the current dialogue among public officials, health care researchers, providers, health plan administrators, and purchasers—including individual consumers—on what information should be collected and how it should be collected. In our opinion, this dialogue should be expanded to incorporate discussions about third party verification of reported data.

Report cards can provide stakeholders with important information if the indicators are about pertinent subjects. Although different stakeholders have different interests and uses for the information, the majority of report cards being developed are directed toward one type of audience—corporate purchasers. We do not believe that this type of report card will be adequate for all users and, particularly, for individual consumers. Therefore, we believe that health plans should be encouraged to explore the feasibility of developing report cards for individual consumers.



# Sources of Indicators Florida's CHPA Advisory Committee Considered and Its Recommendations

**Table 1**  
**AHP Data Models, Committee, and Sub-Committee Recommendations**

Statistical Indicators	Data Models				Sub-Committees						Recs.	
	HEDIS (5/93 Draft)	Jackson Hole	Institute of Medicine	Currently Available	CHPA Members	CHPA Board of Directors	Government and Research	AHPs	Providers	Total	Recommended First Year Data Set	Recommended Phase-In Data Set
<b>Cost / Efficiency Indicators</b>												
Premiums and premium trend	X				1	1	1	1	1	5	X	
Out of Pocket Expenses (Deductibles, Co-payments, and Non-covered items)	X				1	1	1		1	4	X	
Waiting time for non-urgent, symptomatic office visit	X				1	1		1	1	4	X	
Waiting time for routine physicals	X				0.5	1		1	1	3.5		X
Waiting time for urgent care visits	X				1	1		1	1	4	X	
Waiting time for emergency care	X				1	1		1	1	4	X	
<b>Satisfaction / Health Status Indicators</b>												
Enrollment Rate	X				1	1	1	1	1	5	X	
Disenrollment Rate	X				1	1	1	1	1	5	X	
Satisfaction with plan benefits, access, service cost	X	X			1	1	1	1	1	5	X	
Patient satisfaction with hospitalization	X	X			1	1	1	1	1	5	X	
Patient satisfaction with office visit	X	X			1	1	1	1	1	5	X	
Population health status (by survey)	X	X			1	1	1	1	1	5	X	
Incidence of vaccine preventable childhood communicable diseases		X	X		1	1	1		1	4	X	
Disease Incidence Rates (Sexually Transmitted Diseases, Cancer, Cardiovascular, Tuberculosis)		X			1	1	1		1	4	X	
Public health indices		X			1		1			2		

Data Model Coding:  
 X = Included in Model;  
 Blank = Not Included in Model.

Sub-Committee Coding:  
 1 = Data Element Strongly Recommended;  
 5 = Data Element Moderately Recommended;  
 Blank = Data Element Not Recommended.

**Appendix I**  
**Sources of Indicators Florida's CHPA**  
**Advisory Committee Considered and Its**  
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<b>Utilization Measures</b>												
High Occurrence/High Cost DRGs	X			X	1	1	1		1	4	X	
Frequency Count of Five Selected Procedures (Laminectomy, Hysterectomy, CABG, PTCA, and Cath)	X			X	1	1	1	1	1	5	X	
Inpatient Acute Care	X			X	1	1	1	1	1	5	X	
Ambulatory Care	X			X	1	1	1	1	1	5	X	
Non-Acute Care (hospice, rehab, SNF, transitional & respite)	X				1	1	1	1	1	5	X	
Maternity Care	X			X	1	1	1	1	1	5	X	
Newborns	X			X	1	1	1	1	1	5	X	
Mental Health Inpatient	X				1		1	1	1	4	X	
Mental Health Outpatient and Day/Night Care	X				1		1	1	1	4	X	
Chemical Dependency Inpatient	X				0.5		1	1	1	3.5		X
Chemical Dependency Outpatient and Day/Night Care	X				0.5		1	1	1	3.5		X
Outpatient Drug Utilization	X				0.5	1	1	1	1	4.5	X	
<b>Other Plan Information</b>												
Accreditation by appropriate self-regulating organization		X			0.5	1	1	1		3.5		X
Documentation of quality improvement activities	X	X			1	1	1	1	1	5	X	
Board Certification of Providers	X				0.5		1	1	1	3.5		X
Turnover in Provider Network	X				0.5	1	1	1	1	4.5	X	
Provider Compensation Methods	X				0.5	1	1	1	1	4.5	X	

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<b>Quality Indicators</b>												
<i>Process Measures</i>												
Prenatal Care in First Trimester Rate	X	X	X		1	1	1	1	1	5	X	
Childhood Immunization Rates	X	X	X		1	1	1	1	1	5	X	
Cholesterol Screening Rate	X				0.5		1		1	2.5		
Mammography Screening Rate	X	X	X		0.5	1	1		1	3.5	X	
Pap Smears for Cervical Cancer Rate	X		X		0.5	0.5	1		1	3	X	
Diabetic Eye Disease Exam Rate	X				0.5		0.5		1	2		
Treatment following Myocardial Infarction Rate	X				1		1		1	3		X
Percentage of patients with hypertension under going medical therapy		X			0.5	0.5				1		
Elderly Flu Vaccination Rate		X			0.5	0.5	1		1	3		X
Chronic Disease Follow-up Rates			X		1		1		1	3	X	
<i>Outcomes Measures</i>												
Infant Mortality Rate			X	X	1		1			2		
Low Birthweight Rate	X	X	X	X	1	1	1	1	1	5	X	
Congenital Syphilis Rate			X		1					1		
Incidence of late-stage breast and cervical cancers		X	X		1	1	1	1	1	5	X	
Readmission for Treatment of Major Affective Disorders	X				1			1	1	3		X
Substance Abuse Readmission Rate	X				1			1	1	3		X
Population Mortality Rates		X			1		1		1	3		X
Hospital mortality in select DRGs		X		X	1	0.5	1	1	1	4.5	X	
Functional status following hip replacement surgery		X			1	0.5	1	1	1	4.5	X	
Functional status at one year after CABG, PTCA, or under medical management following diagnostic cardiac catheterization		X			1	0.5	1	1	1	4.5	X	
Rate of new nursing home admissions post-hip fracture		X			0.5					0.5		

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Score on Mental Health Index following diagnosis of depression		X			0.5		1			1.5		
Post-operative wound infection rate		X			1	1	1	1	1	5	X	
Unscheduled return to OR rate		X			1	1	1	1	1	5	X	
<b>Access Indicators</b>												
<i>Process Measures</i>												
Percentage of enrollees who visited a health plan practitioner within the last year	X				0.5		1	1	1	3.5		X
Number and Percent of Primary Care Providers accepting additional members	X				1	1		1	1	4	X	
Percentage of acutely ill with no provider contact			X							0		
<i>Outcomes Measures</i>												
Admission Rates for Ambulatory Care Sensitive Conditions (acute, chronic)	X	X	X	X	1	1	1	1	1	5	X	
Referral Sensitive Surgery Rates		X	X	X	1	1	1		1	4	X	
Access-related excess mortality			X		0.5		0.5			1		

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Source: State of Florida Agency for Health Care Administration, "Health Plan Performance Evaluation: A Data Based Approach for Florida," Report of the CHPA Data Advisory Committee, December 1993.

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