

## Chapter 1. Introduction

“Our nation is the leader in health care innovation and discovery. It’s critical that we share these triumphs so that all Americans benefit from improvements in modern medicine.”

*Senator Bill Frist (R-TN)  
November 4, 1999<sup>i</sup>*

In its reauthorization legislation, Congress directed AHRQ to produce an annual report on health care quality in the United States (Section 913(b)(2) of the Public Health Service Act as added by Public Law 106-129). The National Healthcare Quality Report (NHQR) was designed and produced by AHRQ, with support from the Department of Health and Human Services and private-sector partners, to respond to this legislative mandate.

This is the first national report by HHS on health care quality in America. The purpose of the report is to summarize the current state of the science of health care quality in terms that are understandable and relevant to a broad audience, including providers, consumers, researchers, and policymakers. This is the first national report to examine not only how effective health care is, but also how patient-centered, timely, and safe health care is in America. The report is built on a 3-year effort to identify appropriate measures with extensive input and agreement from stakeholders. The goal of this first edition is to provide a baseline view of the quality of health care in America; future editions of this report will help the Nation make improvements by tracking quality through a constantly evolving, science-based set of measures.

### Why Do We Need the NHQR?

The mandate for the report grew out of a confluence of activities, including a growing body of research and a series of reports from the Institute of Medicine highlighting the quality challenges facing the Nation and the interest and commitment of the new Administration to improving health care quality.<sup>1,2,3</sup> In his first appearance before Congress as Secretary of HHS, Tommy G. Thompson told the House Budget Committee, “The department’s goal must be to build a healthier America by improving the quality of health care, the quality of life for all Americans and reduce health care costs.” (U.S. House of Representatives Committee on the Budget, March 7, 2001)

The report is a resource that can help make sense out of this information by encouraging consensus-building on what is important to address and how to measure it and then to synthesize and summarize it in one document. This distilling of the data that really matter, and sorting out the data that may be redundant, means that the report can serve as a policy-level information management tool and as a vehicle to rationalize what is needed relative to the burden on providers and provider organizations.

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<sup>i</sup>From a statement made regarding passage of the bill mandating the *National Healthcare Quality Report*.

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### What We Mean By Quality of Care

Simply stated, “Quality health care means doing the right thing at the right time in the right way for the right person and having the best results possible.”<sup>4</sup> Quality health care means striking the right balance in the provision of health services by avoiding overuse (e.g., getting unnecessary tests), underuse (e.g., not being screened for high blood pressure), or misuse (e.g., being prescribed drugs that have dangerous interactions).<sup>5</sup>

Within the past 20 years, the health care system began to adopt the methods of quality improvement used in business and industry, particularly the use of data to assess performance. Businesses that employed such methods were able to successfully translate data and information into improvement in their products and bottom lines, producing higher quality for the same or less money. The broad use of data to track performance in health care came about for several reasons. One was a demand for value by purchasers because of rapidly increasing health care costs for purchasers and the Nation as a whole. By the early 1990s, health care accounted for 14% of the Gross Domestic Product, up from only 8.8% two decades earlier. In addition, the growth of managed care and the data processing developments provided the means to effectively and efficiently carry out performance measurement for large populations. These developments combined to move health care from an industry driven by anecdote to one driven by data. Purchasers and the Government demanded that the health system be held accountable and that performance be reported.

The quality of health care can be measured, monitored, and improved over time. By specifying clearly, based on current science, which services should be provided to patients who have or are at risk for certain conditions and finding out whether those services are being correctly provided at the right time, we can track the performance of our medical care system. Experts in a field can propose a measure of performance, then test, adopt, and implement it. For example, we know that it is important to check whether a person’s blood pressure is high because untreated high blood pressure can cause heart disease. One measure used in this report is the percentage of people over 18 years of age who know whether their blood pressure is normal or high. By using the information collected in the National Health Interview Survey (NHIS),<sup>ii</sup> which asks people over 18 if they know whether their blood pressure is high, we can determine whether people are in fact getting their blood pressure checked and furthermore, which are good candidates for medical intervention. Doctor’s notes of patient visits and individual medical records can also be used to determine whether a patient received the necessary medical care. For example, when a patient is admitted to a hospital for a heart attack, their medical record will reflect whether they received the recommended beta-blocker therapy within 24 hours of admission.

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<sup>ii</sup> The National Health Interview Survey is a nationally representative household survey conducted continuously since 1957 by the National Center for Health Statistics, Centers for Disease Control and Prevention (CDC).

### Process and Outcome Measures

Current efforts rely on a mix of process measures (i.e., was a certain service or procedure provided, like a foot exam for a person with diabetes) and outcomes (what was the result of the service? Did the patient avoid hospitalization? Live longer than patients who did not receive the service?). In general, process measures are viewed as being under the direct control of the health care system and therefore a fair measure of its performance, whereas outcomes can be affected by a variety of factors other than the medical care received (someone can die not of the heart disease for which they received treatment, but from another cause). However, because outcomes represent the results of health care treatment, patients and stakeholders are often more interested in these than in process measures. The Institute of Medicine, in its guidance to AHRQ on the development of the measures set for the report, advised that the report should include both process and outcome measures

## Data Source Issues

Data in this report come from many sources, including consumer surveys, reviews of medical records, administrative and claims data, and vital statistics. The different data sources provide different perspectives and give a more complete picture of the quality of care for each specific condition. For example, data from medical records provide the physician's report of what procedures were performed in the medical encounter, and while patient reported data can supplement the medical records with the experience of the encounter, this may or may not be helpful for diagnoses.

Significant data enhancements are expected with the diffusion of information technology; an electronic medical record, for example, eliminates many errors that might occur from abstraction of paper records or reliance on administrative data collected for billing and not quality of care purposes. In addition, use of health information technology will also provide the opportunity for more timely feedback on performance than is now possible.

## Purpose and Goals of the NHQR

This report is not a report on the latest research findings about quality of care. Instead, the report explicitly relies on existing measures. The report is built on measures focusing on the Nation's health care priorities as determined by associated morbidity, mortality, and opportunity for improvement. Also, the report tracks selected conditions using measures for which national data are available. It does not directly address facility or individual practitioner performance, consumer choice, or provider accountability.

The primary purpose for the compilation of this report is to present the current state of health care quality for the Nation as a whole. By doing so, the report brings disparate sources of data together—and builds on the best efforts of the public and private sectors—to form a coherent

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story that will advance our knowledge of health care quality nationally. This knowledge is the first step along a continuum that will lead to improved health care. A secondary goal of the report, therefore, is to highlight appropriate best practices from the public and private sectors relevant to the areas tracked in the report. The listings of opportunities for improvement and best practices are not exhaustive, and future reports will expand upon this presentation of best practices.

The report is intended as a tool for Federal and State policymakers, and therefore it tracks quality at the national and, wherever possible, the State level. The report is not intended as a prescription for how to fix the American health care system. Instead, it is intended as a tool for understanding the level of performance of the health care system across a broad spectrum of quality measures. By tracking a core set of measures over time, the report will begin to build consistent measures of success that will inform local improvement efforts. This first report is the foundation upon which we will build future annual health care quality reports to Congress. At the same time, through public and private input, the report will be revised annually.

Finally, in addition to tracking our improvements in health care quality over time, we also expect the report to reflect improved uses of information technology (IT) and more precise measures that incorporate the most recent scientific advances. Improvements in IT that make data more accessible will facilitate the use of data in monitoring process and outcomes of care by allowing data to be retrieved from one source without taxing an already overburdened health care system. We discuss some of these potential areas for improvement in the report within this first edition. We look forward to feedback on this first report to help shape subsequent editions.

## How the NHQR Was Created and Organized

On behalf of HHS, AHRQ has received ongoing input from numerous agencies and offices within the Department in an interagency workgroup formed to provide advice on the design of the report. The final measure set is the result of 3 years of development activities that began with the creation of a conceptual framework and ended with a set of measures that has been used as the basis for the first report.

The congressional mandate to produce the report did not specify the dimensions of quality and which conditions should be included in the report. As a first step, AHRQ contracted with the Institute of Medicine (IOM) to create a conceptual framework for the report. The conceptual framework (Figure 1) is a matrix including components of health care quality (e.g., effectiveness, safety, timeliness, patient centeredness, equity) and patient needs (e.g., staying healthy, getting better, living with illness or disability, coping with the end of life).

Figure 1. NHQR framework

National Healthcare Quality Report Framework				
Components of Healthcare Quality				
Health care needs	Effectiveness	Safety	Timeliness	Patient centeredness
Staying healthy				
Getting better				
Living with illness or disability				
End of life care				

In the *Envisioning the National Health Care Quality Report*, the IOM advised AHRQ to examine quality across different subpopulations within each of the major areas of the framework (effectiveness, safety, timeliness, and patient centeredness). In this way, the dimension of equity would be tracked in each of the “cells” of the report’s framework. Issues of equity will be explored in depth in a companion report, the National Healthcare Disparities Report (NHDR), which shares the same quality measures as this report.

An Interagency Workgroup populated the framework with priority conditions and with quality measures for those conditions. We have instead used *Healthy People 2010* as the basis for the priority conditions tracked here.<sup>iii</sup>

The process for selecting and adopting the measures took 3 years to complete and involved participation from every agency in the Department. It also involved considerable private sector input, through the National Committee on Vital and Health Statistics’ public hearing on the report. At the hearing, the American Medical Association, American Hospital Association, Joint Commission on Accreditation of Healthcare Organizations, Midwest Business Group on Health, and National Association of Health Data Organizations testified on the measure set, offering suggestions and encouraging our adoption of the measure set. The process for generating the measure set also involved extensive input from providers, hospitals and researchers through a *Federal Register* request for public comment between August 19, 2002 and September 18, 2002 (67 F.R. 53801, August 19, 2002). The measure set has been vetted with the IOM committees involved in providing guidance to AHRQ on the design of both the quality and disparity reports. Finally, the measure set was ratified by the two interagency workgroups for the two reports with

<sup>iii</sup> The IOM prepared recommendations to HHS for a set of priority conditions entitled, *Priority Areas for National Action: Transforming Health Care Quality*. This document was prepared concurrently with the first NHQR and was therefore unavailable for use in this report.

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membership from every agency in the Department. The measure set was then reviewed and ratified by AHRQ senior leadership.

### How to Read this Report

The NHQR consists of the report itself and appendixes to the report.<sup>iv</sup> It is organized into four main volumes:

- **National Healthcare Quality Report** – main body of the report summarizing the findings across the report’s quality of care framework.
- **Tables Appendix** – Detailed tables for each measure in the measure set.
- **Measure Specifications Appendix** – Specifications for all of the measures and data sources contained in the measure set.
- **Measures Background Appendix** – Detailed information and rationale for inclusion of measures in the measure set.

The report is divided into sections according to the components of health care quality. We have attempted to summarize the key findings in each chapter. Rather than discuss the results of each measure, we focus on the key findings across the measures for each area of the report. Within each section, the report presents five main topics related to that section:

- Background and impact (e.g., effectiveness of cancer care).
- How we measure quality of care in this topic.
- How the Nation is doing in this topic.
- What we don’t know about quality measurement in this topic.
- What can be done based on some selected best practices and promising research.

The report also contains four additional sections designed to help readers interpret our findings quickly and easily:

- **Executive Summary** – Synthesis of main themes and findings on health care quality in America.
- **Methods** – Major methodological steps taken in analysis and synthesis of data for the first quality report.

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<sup>iv</sup> The appendixes are available online through a link to the AHRQ Web site. Go to [www.ahrq.gov](http://www.ahrq.gov) to access and/or download the appendixes.

- **Conclusion** – Summary of main themes and description of the way forward following the publication of the report.

For additional information on the rationale for selection of the measures, readers are encouraged to consult the Tables Appendix and Measures Background Appendix. For information on the specifications for the measures and the data sources, readers are encouraged to consult the Measure Specifications Appendix.

For readers interested in replicating the analyses conducted for this report, there is additional information preceding the Tables Appendix where we summarize how we conducted statistical testing for the detailed tables.

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### References

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<sup>1</sup> Institute of Medicine. *To err is human: Building a Safer Health System*. Washington, DC; National Academy of Sciences. 1999.

<sup>2</sup> Institute of Medicine. *Crossing the quality chasm*. Washington, DC; 2001.

<sup>3</sup> Institute of Medicine. *Envisioning the National Healthcare Quality Report*. Washington, DC: National Academy of Sciences; 2001.

<sup>4</sup> Agency for Healthcare Research and Quality, *Your Guide to Choosing Quality Healthcare*  
[www.ahrq.gov/consumer/qntool/htm](http://www.ahrq.gov/consumer/qntool/htm).

<sup>5</sup> Chassin M. The urgent need to improve health care quality. *Institute of Medicine National Roundtable on Health Care Quality*. JAMA 1998 Sept 16;280(11):1000-5.