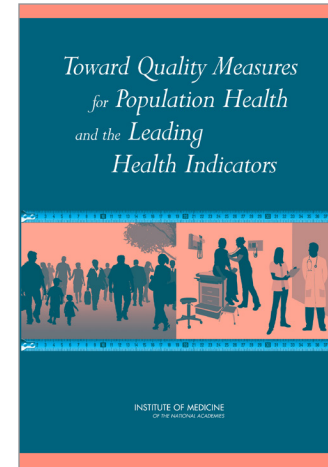


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# Toward Quality Measures for Population Health and the Leading Health Indicators



**Public health practice** and health care delivery in the United States share a common goal: longer, healthier lives for all. Quality in health care is essential for achieving this goal and is a central focus of implementing the Affordable Care Act, but the notion of quality in the public health system and more broadly in the multisectoral health system—public health, health care, and other partners—has received less attention. Identifying measures of quality for the health system just described is essential to the work of assessment and quality improvement, and for demonstrating accountability throughout the system.

The U.S. Department of Health and Human Services (HHS), and specifically the Assistant Secretary for Health, asked the Institute of Medicine (IOM) to convene a committee to look at the intersection of HHS's public health quality effort and the Leading Health Indicators (LHIs)—a subset selected from a much larger range of objectives—in Healthy People 2020, the nation's 10-year agenda for advancing toward long, healthy lives for all. The LHIs include indicators for some of the chief causes of preventable deaths and major illnesses.

In response to the request from HHS, the IOM convened a committee of experts to identify measures of quality for the LHIs, with particular attention to the use of metrics that help integrate the realms of clinical care and public health. In its report, *Toward Quality Measures for Population Health and the Leading Health Indicators*, the IOM committee finds that every community should use measures of quality to monitor progress on the LHIs. The IOM committee also recommends criteria for selecting measures of quality and recommends that HHS ensure the implementation of a systematic approach to develop and manage a portfolio of measures of quality for the multisectoral health system.

**The IOM committee finds that every community should use measures of quality to monitor progress on the LHIs.**

## Defining quality and population

HHS defines quality in public health as “the degree to which policies, programs, services, and research for the population increase desired health outcomes and conditions in which the population can be healthy.” Health outcomes—for example, life expectancy—are apparent. Conditions, however, include social and economic factors that influence health, such as unemployment and high school graduation rates, as well as aspects of the built environment including access to public transportation.

Whereas most previous HHS and IOM work related to quality has focused on the health care delivery system or government public health programs separately, the IOM committee used the LHIs to describe a vision of quality in the multisectoral health system. The IOM committee uses a broad definition of population as well. Within the health care delivery system, population typically refers to a panel of patients or the number of covered lives; in contrast, the IOM committee used the concept of total population health, referring to the health of all persons living in a specified geopolitical area.

In keeping with the overarching goals of Healthy People 2020—longer, healthier lives; health equity; health-promoting environments for all; and health across the life span—the IOM committee focused on population health outcomes and on healthy conditions as the essential categories

of measures of quality. The IOM committee recommends that all partners in the multisectoral health system should adopt as their explicit purpose to continually improve health outcomes of the entire population and the conditions in which people can be healthy. Measures of quality serve as tools toward this end.

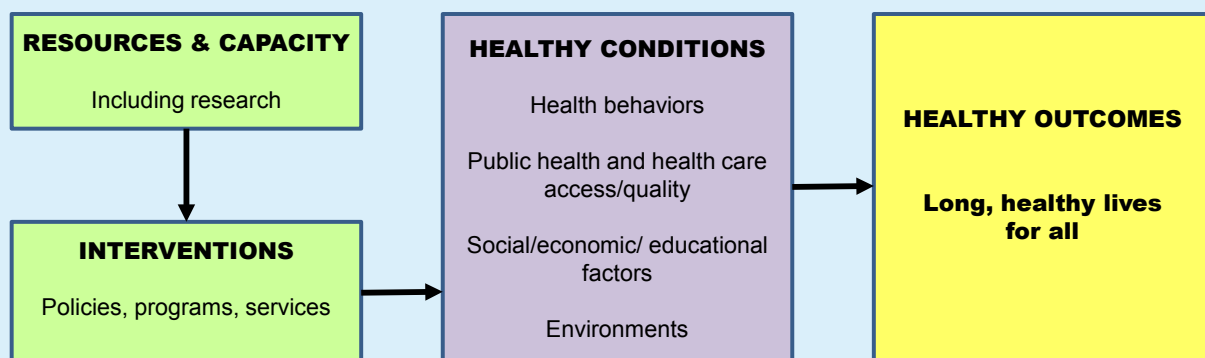
## From systems to healthy outcomes: a logic model

To guide the development of quality measures, the IOM committee developed a logic model highlighting factors and behaviors that lead to healthy outcomes. The model accounts for resources and capacity, interventions, healthy conditions, and healthy outcomes.

The committee offers the logic model as a way to help categorize the LHIs and select measures of quality related to them. For example, the LHI Air Quality Index and other measures related to it are classified as healthy conditions, and the associated healthy outcome is the reduction in illness and deaths caused by cardiovascular and respiratory problems, which air pollution aggravates. Other measures of quality relating to healthy conditions include rates of smoking and obesity; measures of healthy outcomes include chronic disease rates and infant mortality.

The logic model should serve as a basis for building a consistent approach to measuring

FIGURE: The Health Outcome Logic Model



**Improving quality in the multisectoral health care system is crucial in every aspect of working toward longer, healthier lives for all people, and common measures of quality are needed to collaborate and to measure progress—beginning with health care organizations and public health agencies.**

quality across sectors. The IOM committee recommends that HHS and its partners in population health improvement adopt a manageable yet comprehensive portfolio of measures of the quality of the multisectoral health system.

Having laid out this approach, the IOM committee explores four case studies showing how the logic model can be used to guide the development of quality measures for tobacco use; maternal, infant and child health; environmental quality; and nutrition, physical activity and obesity. The report provides detailed logic models for each of the case studies, illustrating the complex pathways from structure and process to outcomes, and provides lists of sample measures of quality.

### **Selecting and endorsing measures**

In its report, the IOM committee also recommends criteria for selecting measures of quality. What distinguishes the criteria from other such guides to measure selection is that they bring together requirements that apply to the range of measures needed to assess and improve quality in the multisectoral system, not just in the health care delivery setting. The measures associated with conditions and outcomes should be reflective of a high preventable burden—referring to preventable health problems responsible for the largest proportion of disease and death in the population, and actionable at the appropriate level for intervention. The measures should also be: timely, usable for assessing various populations, understandable, methodologically rigorous, and accepted and harmonized.

The committee also recommends that HHS establish or designate a non-governmental and appropriately-equipped entity to oversee measures of quality. Such an entity should have or be able to create a process that is specifically established for the endorsement of health measures for the population's overall health—a purpose that differs from endorsement of measures pertinent to the health care or clinical setting.

### **Using the measures of quality**

An important framework for health care in the United States, and one that is central to all HHS efforts to improve quality in health care, is the Three-Part Aim: better care, healthy people and communities, and reduced cost of care. Evidence-based measures of quality are needed to support the implementation of the Three-Part Aim, and although a great deal of effort is expended to do so in the health care delivery realm, increased recognition of and action on non-clinical factors or conditions that influence health outcomes call for greater attention to measures related to the “healthy people and communities” component of the aim. The IOM committee's approach to developing quality measures and using them consistently can help bring the efforts of stakeholders into alignment and spur progress toward achieving the “healthy people and communities” component of the Three-Part Aim.

The IOM committee finds that the concept of a Three-Part Aim aligns well with establishing population health as an essential area of focus in transforming health care and health in the



## Committee on Quality Measures for the Healthy People Leading Health Indicators

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**Steven Teutsch** (Chair)  
Chief Science Officer, Los Angeles County Department of Public Health, CA

**Kevin Grumbach**  
Professor and Chair, University of California, San Francisco Department of Family and Community Medicine, University of California, San Francisco

**Romana Hasnain-Wynia**  
Director, Addressing Disparities, Patient Centered Outcomes Research Institute, Washington, DC

**Jewel Mullen**  
Commissioner of Health, Connecticut Department of Health, Hartford

**John Oswald**  
Adjunct Assistant Professor, School of Public Health, University of Minnesota

**R. Gibson Parrish**  
Independent Consultant, Public Health Informatics Institute, Decatur, GA

**Greg Randolph**  
Director, Center for Public Health Quality and Professor of Pediatrics and Adjunct Professor of Public Health, University of North Carolina at Chapel Hill

**Patrick Remington**  
Professor and Associate Dean for Public Health, School of Medicine and Public Health, University of Wisconsin-Madison

**Jane E. Sisk**  
Scholar in Residence, Institute of Medicine, Washington, DC

**Pierre Vigilance**  
Associate Dean for Public Health Practice and Associate Professor of Global Health, School of Public Health and Health Services, George Washington University, Washington, DC

### Study Staff

---

**Alina Baciu**  
Study Director

**Andrés Gaviria**  
Research Associate

**Colin F. Fink**  
Senior Program Assistant

**Doris Romero**  
Financial Officer

**Hope Hare**  
Administrative Assistant

**Rose Marie Martinez**  
Director, Board on Population Health and Health Practices

### Study Sponsor

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The Assistant Secretary for Health

United States. It recommends that the Secretary of HHS ensure that measures of quality pertinent to the health system broadly conceived are integrated into the department's activities under the Three-Part Aim with a special emphasis on measures representing social and environmental determinants, equity and the concept of total population health.

## Conclusion

Improving quality in the multisectoral health care system is crucial in every aspect of working toward longer, healthier lives for all people, and common measures of quality are needed to collaborate and to measure progress—beginning with health care organizations and public health agencies.

As broad efforts directed at the nation's entire health enterprise, Healthy People 2020 and the Affordable Care Act offer evolving opportunities for use of measures of quality both separately and jointly by health care delivery organizations, community-based organizations involved in health improvement, the business community, government agencies working in areas relevant to health—such as transportation and education—and many others in addition to government public health agencies.

The IOM committee's recommendations are designed to inform and support the development, endorsement, promotion, and use of a unified and coherent set of quality measures across a range of settings. Ultimately, this effort could contribute to improved health for the nation. 

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500 Fifth Street, NW  
Washington, DC 20001  
TEL 202.334.2352  
FAX 202.334.1412

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