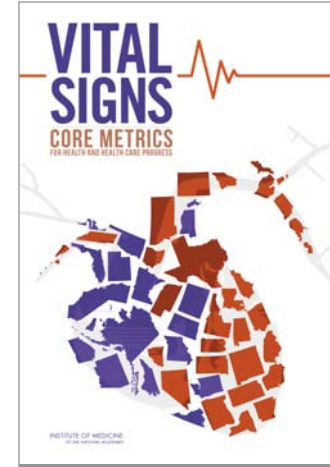


# Vital Signs

## Core Metrics for Health and Health Care Progress



**Thousands of measures are in use today** to assess health and health care in the United States. Although many of these measures provide useful information, their sheer number, as well as their lack of focus, consistency, and organization, limits their overall effectiveness in improving performance of the health system. To achieve better health at lower cost, all stakeholders—including health professionals, payers, policy makers, and members of the public—must be alert to which measures matter most. What are the core measures that will yield the clearest understanding and focus on better health and well-being for Americans?

With support from the Blue Shield of California Foundation, the California Healthcare Foundation, and the Robert Wood Johnson Foundation, the Institute of Medicine (IOM) convened a committee to identify core measures for health and health care. In *Vital Signs: Core Metrics for Health and Health Care Progress*, the committee uses a four-domain framework—healthy people, care quality, lower cost, and engaged people—to propose a streamlined set of 15 standardized measures, with recommendations for their application at every level and across sectors. Ultimately, the committee concludes that this streamlined set of measures could provide consistent benchmarks for health progress across the nation and improve system performance in the highest-priority areas.

**A streamlined set of measures could provide consistent benchmarks for health progress across the nation and improve system performance in the highest-priority areas.**

### The Measurement Landscape

Health measurements are requested or required by many organizations for many purposes, including efforts to track population, community, and individual health; assessments of health care quality and patient experience; transparency monitoring; public reporting and benchmarking; system or professional performance requirements; and funder reporting. Many of these measures are very similar, with only slight variations in terminology and methodology. However, their differences are often significant enough to prevent direct comparisons across states, institutions, and individuals. In addition, many measures focus on narrow or technical aspects of health care processes, rather than on overall health system perfor-

mance and health outcomes. According to the committee, the growing number of clinical measures, even those that provide valuable information, draws attention to narrow, specific elements and away from system capacity and effectiveness.

The necessity to collect, analyze, and store data for such a large number of measures also imposes a significant burden on providers, organizations, and the health care system as a whole. Preliminary research commissioned by the committee finds that the growth in measurement and reporting activities results in considerable expense and requires substantial time commitments—without a matching return on investment. The establishment of a core set of measures could improve efficiency and ensure a focus on the most important health outcomes.

### The Core Measure Set

To select a core measure set, the committee first considers each candidate measure’s importance for health, likelihood to contribute to progress, understandability, technical integrity, potential to have broader system impact, and utility at multiple levels. Next, in considering how the measures should

operate as a set, the committee selects 15 measures that together have systemic reach, are outcomes-oriented, are meaningful at the personal level, are representative of concerns facing the U.S. health system, and have use at many levels. The core measures proposed by the committee are as follows:

- 1. Life expectancy:** Life expectancy is a validated, readily available, and easily understandable measure for a critical health concept. Because life expectancy depends on a full range of individual and community influences on health—from cancer to homicide—it represents an inclusive, high-level measure for health.
- 2. Well-being:** Well-being captures the subjective dimensions of health related to quality of life. Furthermore, levels of well-being often predict utilization of and satisfaction with health care. Self-reported well-being is a reliable indicator.
- 3. Overweight and obesity:** More than two-thirds of Americans are overweight or obese, a fact that has causes and consequences that extend beyond the health system—including socioeconomic, cultural, political, and lifestyle factors.

### BOX Core Measure Set with Related Priority Measures

 <p><b>1. Life expectancy</b>            Infant mortality            Maternal mortality            Violence and injury mortality</p>	 <p><b>7. Preventive services</b>            Influenza immunization            Colorectal cancer screening            Breast cancer screening</p>	 <p><b>11. Care match with patient goals</b>            Patient experience            Shared decision making            End-of-life/advanced care planning</p>
 <p><b>2. Well-being</b>            Multiple chronic conditions            Depression</p>	 <p><b>8. Care access</b>            Usual source of care            Delay of needed care</p>	 <p><b>12. Personal spending burden</b>            Health care-related bankruptcies</p>
 <p><b>3. Overweight and obesity</b>            Activity levels            Healthy eating patterns</p>	 <p><b>9. Patient safety</b>            Wrong-site surgery            Pressure ulcers            Medication reconciliation</p>	 <p><b>13. Population spending burden</b>            Total cost of care            Health care spending growth</p>
 <p><b>4. Addictive behavior</b>            Tobacco use            Drug dependence/illicit use            Alcohol dependence/misuse</p>	 <p><b>10. Evidence-based care</b>            Cardiovascular risk reduction            Hypertension control            Diabetes control composite            Heart attack therapy protocol            Stroke therapy protocol            Unnecessary care composite</p>	 <p><b>14. Individual engagement</b>            Involvement in health initiatives</p>
 <p><b>5. Unintended pregnancy</b>            Contraceptive use</p>		 <p><b>15. Community engagement</b>            Availability of healthy food            Walkability            Community health benefit agenda</p>
 <p><b>6. Healthy communities</b>            Childhood poverty rate            Childhood asthma            Air quality index            Drinking water quality index</p>		

The necessity to collect, analyze, and store data for such a large number of measures imposes a significant burden on providers, organizations, and the health care system as a whole.

**4. Addictive behavior:** Addiction, including to nicotine, alcohol, and other drugs, is prevalent in the United States, representing a complex challenge for the health system, communities, and families. Every year, substance abuse and addiction cost the country more than \$500 billion.

**5. Unintended pregnancy:** Unintended pregnancy, a significant challenge for both individual and community health, is a measure that aggregates a variety of social, behavioral, cultural, and health factors—particularly women’s knowledge about and access to tools for family planning.

**6. Healthy communities:** Individual health is a function of a wide range of socioeconomic and community factors, from infrastructure to social connections. Community health includes critical elements of health that fall outside the care system, such as housing, employment, and environmental factors.

**7. Preventive services:** Preventive services (for example, screening for hearing loss or counseling for tobacco cessation) present a valuable opportunity for both improving health and reducing costs.

**8. Care access:** A person’s ability to access care when needed is a critical precondition for a high-quality health system. Factors that could hamper access to care include lack of health insurance, clinician shortages, lack of transportation, cultural and linguistic barriers, and physical limitations.

**9. Patient safety:** Avoiding harm is among the principal responsibilities of the health care system, yet adverse outcomes are common. Ensuring patient safety will require a culture that prioritizes and assesses safety through a reliable index of organizational results.

**10. Evidence-based care:** Ensuring that patients receive care supported by scientific evidence for appropriateness and effectiveness is a central challenge for the health care system. Currently, an estimated one-third of U.S. health care expenditures

do not contribute to improving health. Aggregating carefully selected and standardized clinical measures can provide a reliable composite index of system performance.

**11. Care match with patient goals:** Systematically assessing each patient’s individual goals and perspectives ensures that the health care system is focusing on the aspects of care that matter most to patients.

**12. Personal spending burden:** Care that is too expensive can limit access to care, lead people to avoid care, or prevent them from spending money in other areas of value to them—with far-reaching economic impacts.

**13. Population spending burden:** Health care spending consumes a large portion of the U.S. gross domestic product, dwarfing the health care spending of other nations. This burden can be measured at national, state, local, and institutional levels.

**14. Individual engagement:** Given the effects of personal choices on health, as well as the increasing use of personal health devices, it is critical for individuals to be aware of their options and responsibilities in caring for their own health and that of their families and communities.

**15. Community engagement:** Across the United States, communities have and utilize different levels of resources to support efforts to maintain and improve individual and family health—for example, addiction treatment programs, emergency medical facilities, and opportunities for social engagement.

The committee recognizes that these 15 measures will not be sufficient to meet every interest for each organization, nor are there established methods for measurement in each area. To begin to accommodate these challenges, the committee identifies 39 additional priority measures that can act as surrogates while refinement is under way (see Box).



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Refinement of the measures and methodology will require leadership from stakeholders across sectors.

**Implementation of the Core Measures**

Successful implementation of the core measures will depend on their relevance, reliability, and utility to stakeholders. Implementation challenges include multiple competing priorities for stakeholders, the sizable degree of change proposed, and the slow pace of change overall in the health system. Progress can be accelerated by ensuring that the core measurement set is applied by, and adds value to, existing measurement activities. The committee stresses that leadership will be required at nearly every level of the health system. CEOs of health care organizations, payers and employers, standards organizations, and public health agencies will have important roles in the uptake, use, and maintenance of the core measures as practical tools. The committee recommends that the Secretary of the Department of Health and Human Services, with support from the Executive Office of the President, lead the effort to refine, standardize, and implement core measures throughout the nation.

**Conclusion**

The set of core measures proposed by the committee is a tool for enhancing the efficiency and effectiveness of measurement. Ultimately, widespread application of a limited set of standardized measures could not only reduce the burden of unnecessary measurement but also align the incentives and actions of multiple organizations at multiple levels. *Vital Signs* lays the groundwork for the adoption of core measures that, if systematically applied, could yield better health at lower cost for all Americans. 



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