

MAKING MEASUREMENT MATTER IN HEALTH CARE

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Jeannette is a 37-year-old woman living with her three young children in Riverside, CA. Her husband recently returned from his third tour of duty in Afghanistan as a staff sergeant in the U.S. Air Force Reserves. Jeannette was diagnosed with type 2 diabetes three years ago and participates in the local YMCA Diabetes Prevention Program. In her most recent visit to her primary care provider, Jeannette revealed that her husband has begun to psychologically and physically abuse her and threaten their children over the past month, coinciding with a significant increase in his alcohol consumption. This situation has worsened, and she had to call 911 last week to have the police restrain him. She is feeling anxious and concerned about her and her children's safety. Her primary care doctor refers her to the local domestic violence organization for further evaluation, counseling, and support services.

Today, many organizations are collecting partial information about the health and wellbeing of Jeannette and her family related to her diabetes and family violence situation. These wide-ranging organizations include her primary care provider, her health insurance plan, the Department of Defense, the YMCA, the children's school and daycare providers, law enforcement and judicial systems, the local child welfare agency, and the domestic violence organization. No one institution has a complete picture of the family's wellbeing, and Jeannette does not have the formal training or the perspective to interpret all of the complex information on her own. Although these organizations may share fragments of information over time upon request and as legally permissible, no one is analyzing and aggregating Jeannette's overall journey to determine if there are emerging patterns. As a result, although each individual institution believes that it is doing a great job, the health care and social service system is sub-optimizing its solutions to address Jeannette's underlying concerns and help her family achieve their full potential. Jeannette's situation happens millions of times every day in communities across the United States. It provides some insights into why

the United States spends significantly more on health care than any other nation while producing mediocre health outcomes. The current dysfunctional state of U.S. health outcomes measurement represents an important barrier to Jeannette's pursuit of health and wellbeing.

The two major strands of work on health outcome measurement in the United States have different goals, underlying infrastructures, and audiences. Since the Civil War, federal, state, and local governments have been regularly collecting and reporting vital health statistics, such as birth rates, infant mortality rates, and infectious disease prevalence, to monitor population health.¹ In the 1980s, the U.S. Department of Health and Human Services furthered this work when it led a collaborative process to set ten-year evidence-based, measurable national health promotion and disease prevention objectives known as the "Healthy People" series. These objectives have the potential to serve as a call to action for state and local authorities because they are issued by the federal government and are linked to national health statistics. In reality, however, assessments have often revealed a lack of progress toward many targets and a widening of health disparities in relation to many health indicators.² Finally, there has been a proliferation of "Healthy People" indicators and priorities over the past few decades, growing from 319 measures to more than 1,200.

Separately, for the past 50 years within the U.S. health care system, there have been systematic efforts to measure the quality of care provided, based on a conceptual framework described by Avedis Donabedian, which looks at the structure (where the care was delivered), care process (how the care was delivered), and outcomes (the effects of the care on the patient).³ Health care outcome measures have been used to rate the quality of individual interactions and activities inside the medical care system. They also have been used to help consumers, payers, regulators, and providers assess the quality of care delivered, determine bonus payments to providers, evaluate health plan performance, and, more

1 A.M. Hetzel, "History and Organization of the Vital Statistics System," National Center for Health Statistics (1997), available at <http://www.cdc.gov/nchs/data/misc/usvss.pdf>.

2 L.W. Green and J. Fielding, "The US Healthy People Initiative: Its Genesis and Its Sustainability," *Annual Review of Public Health* 32 (2011): 451–470.

3 Avedis Donabedian, "Evaluating the Quality of Medical Care," *The Milbank Quarterly* 83(4) (2005): 691–729, available at <http://doi.org/10.1111/j.1468-0009.2005.00397.x>.

recently, inform consumer choices about certain medical procedures. A proliferation of health care measures in recent decades has significantly burdened health care providers and caused confusion among patients and frustration among other stakeholders.⁴ As of February 2016, the Centers for Medicare & Medicaid Services (CMS) have approved 1,513 measures for use, the National Quality Forum (NQF) lists 615 approved measures, and 83 measures are approved for use in the National Committee for Quality Assurance's Healthcare Effectiveness Data and Information Set (HEDIS) 2015 tool.⁵ These narrowly targeted health care measures are not coordinated with one another nor tied to patients' ultimate health outcome over time.⁶ Further, very few health care payments are actually tied to these outcome measures.⁷

As a result, there is growing recognition in both the medical and public health fields that we need to streamline and align these two important strands of health outcomes work if we want to achieve better health outcomes as a population, lower total health care costs, and produce a better care experience, often referred to as the Triple Aim.⁸ Today, important efforts are underway in both the public and private sectors to more effectively use population health measures to guide action and rationalize health care measures to focus on fewer, more meaningful indicators that use standard definitions, data sources, and calculation methods. These incremental efforts in isolation may be able to reverse the current negative trends, but they are unlikely to address the root causes of the dysfunction and significantly improve health outcomes.

4 Institute of Medicine, "Vital Signs: Core Metrics for Health and Health Care Progress," The National Academies Press (2015).

5 CMS Measures Inventory [Microsoft Excel]. Retrieved April 15, 2016 from <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/CMS-Measures-Inventory.html>; NQF: Quality Positioning System. Retrieved April 15, 2016 from <http://www.qualityforum.org/qps/>; HEDIS Measures. Retrieved April 29, 2016 from <http://www.ncqa.org/hedis-quality-measurement/hedis-measures>.

6 Kate Bazinsky and Michael Bailit, "The Significant Lack of Alignment Across State and Regional Health Measure Sets," Bailit Health Purchasing (September 10, 2013).

7 Suzanne Delbanco, François de Brantes, and Tom Valuck, "The Payment Reform Landscape: Which Quality Measures Matter?" *Health Affairs Blog* (October 15, 2015), available at <http://healthaffairs.org/blog/2015/10/15/the-payment-reform-landscape-which-quality-measures-matter/>.

8 Donald M. Berwick et al., "The Triple Aim: Care, Health, And Cost," *Health Affairs* 27(3) (2008) 759–769, available at <http://content.healthaffairs.org/content/27/3/759>.

Effective measurement of health outcomes lies at the heart of producing good health at the individual, community, and population levels. The goals of a highly functional health outcome measurement system should be to: 1) focus the broader health system on improving the health of individuals, communities, and society, and 2) promote meaningful collaboration among health care providers and across other sectors to address complex health issues.

The fundamental cause of the misaligned, low-value, and burdensome state of U.S. health outcome measures is the lack of a clear vision for the U.S. health care system. As a nation, we have not engaged in a systematic conversation about our health care values and priorities. The recent proliferation of health care measures reflects a pervasive lack of trust among various actors in the health care system in the absence of a broader vision. Stakeholders use a multitude of narrowly focused measures to manage the behaviors of other actors.

The recently announced United Nations Sustainable Development Goals (SDG) provide a comprehensive global framework to encourage and assess progress toward sustainable human development over the next 15 years, providing tangible 2030 targets for poverty, health, employment, education, equity, and environmental issues.⁹ Consistent with the goals of the SDG framework, my colleagues and I developed the 3.0 Transformation Framework to stimulate thinking and support the planning and development of the new roadmap for the next generation of the U.S. health care system.¹⁰ Beyond medical care, it focuses on optimizing population health over the life span and suggests how the current health care system could evolve into a system designed to enhance population health.¹¹ With the recent release of *Vital Signs: Core Metrics for Health and Health Care Progress*, the Institute of Medicine (IOM) initiated a dialogue about possible health outcome measures consistent with a 3.0 health system in the United States. *Vital Signs* proposed 15 broad domains and corresponding measures and recommendations for their application

9 United Nations, "Sustainable Development Goals," available at <https://sustainabledevelopment.un.org/sdgs>.

10 Neal Halfon et al., "Applying a 3.0 Transformation Framework to Guide Large-Scale Health System Reform," *Health Affairs* 33(11) (2014) 2003–2011, available at <http://dx.doi.org/10.1377/hlthaff.2014.0485>.

11 Ibid.

at every level and across sectors. Ultimately, the IOM consensus committee concluded 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.¹²

Beyond the lack of a clear vision, there is also a lack of a national infrastructure to support a health outcome measurement system. Significant progress has been made over the past two decades with the widespread adoption of electronic health records, the development of health information exchanges, and a national focus on interoperability.¹³ Despite these ongoing efforts in the public and private sectors, it appears that we are building a measurement system that resembles the Winchester Mystery House in San Jose, CA, which contains hundreds of rooms, designed individually without relation to one another, and many staircases that lead to dead ends. Building the digital health infrastructure to support an effective learning health care system requires a shared vision derived from multiple competing perspectives.¹⁴ Without a robust infrastructure, outcome measurement generates a tremendous amount of work but produces very little value.

Here the United States can learn from other countries to develop the basic infrastructure for outcome measurements, such as standardized definitions, agreement on data sources, common assessment, and evaluation approaches. For example, Cuba's robust health information infrastructure is key to its positive population health status relative to income and health care spending. The infrastructure creates the capacity to demonstrate how advances in community health status are central to distributing financial incentives to providers who successfully reduce costs and improve population health outcomes.¹⁵

12 Institute of Medicine, *Vital Signs: Core Metrics for Health and Health Care Progress*, The National Academies Press (2015).

13 David Blumenthal and John Glaser, "Information Technology Comes to Medicine," *New England Journal of Medicine* 356:24 (June 14, 2007).

14 Institute of Medicine, *Digital Infrastructure for the Learning Health System: The Foundation for Continuous Improvement in Health and Health Care: Workshop Series Summary*, Washington, DC: The National Academies Press (2011), available at <https://www.nap.edu/catalog/12912/digital-infrastructure-for-the-learning-health-system-the-foundation-for>.

15 C. William Keck and Gail A. Reed, "The Curious Case of Cuba," *American Journal of Public Health*, 102(8) (2012), available at doi:[10.2105/ajph.2012.300822](https://doi.org/10.2105/ajph.2012.300822).

Once outcome measures are identified and data infrastructure are developed, additional work will be needed to meet the additional population health assessment, improvement, and innovation requirements of a 3.0 health system that promotes health. To optimize population health, an information system will need to measure population health trajectories and calculate the health impacts of investments to health, social, community, and economic outcomes. It will need to link outcomes over time to measure the impact of longitudinal integration on health trajectories and to measure how multisector interventions affect health determinants. Finally, it must link individual, population, and systems measures to gauge overall system progress and performance.¹⁶

Nothing less than a fundamental rethinking of our approach to health outcome measurement is required to produce substantially better results. Streamlining the existing approaches alone or focusing only on technical fixes will limit the potential to improve health outcomes while reducing health care spending. In the current political environment, however, it will be incredibly challenging to have a candid conversation about our national health values and priorities. Despite the inherent risks and challenges, now is the moment to summon our courage to ask and answer these critical questions. If we are successful, Jeannette, her husband, and their children will receive the information, support, and services they need to manage her diabetes, stop the violence and address substance use and trauma so that they can all be healthy and safe. Further, the various institutions and systems that support them will learn what works and what doesn't so they can they improve the health of the entire community over time. That is a vision worth pursuing.

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16 Halfon, "Applying a 3.0 Transformation Framework" (2014).

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