

JAMA: What do you do to stay healthy?

DR MURTHY: I can tell you what I do, but I don't want people to think that's what they should do. I meditate every morning, and I practice yoga periodically. I do it [meditate] because for me it's an important part of my emotional and mental well-being. I see emotional and mental well-being as one of the

key pillars of a healthy lifestyle. Nutrition, physical activity, emotional and mental well-being, living a life that's drug- and tobacco-free—these are the pillars that I think are the ingredients for a healthy life. I don't drink dairy products. That doesn't mean other people shouldn't.

I try to incorporate activity into my life. That means not just working out on a

regular basis, but trying to build activity into work. Whenever possible, I like to convert my sitting meetings to walking meetings. I try to take the stairs. I walk around the building. When it comes to nutrition, I primarily eat a plant-based diet. I eat fish as well. I try to eat foods that are low in salt and don't have added sugar and consist [mostly] of fresh fruits and vegetables.

The JAMA Forum

Using Health Care Data to Track and Improve Public Health

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Each year, County Health Rankings (<http://bit.ly/1dmhoJm>) releases a report and an interactive website with detailed health data for every county in the United States. Most of the data available, however, are several years old. For example, for the 2014 report, measures for risk behaviors were based on data from 2006 through 2012, premature death on data from 2008-2010, and preventable hospitalization on data from 2011.

America's Health Rankings (<http://bit.ly/19C1Wkt>) publishes annual data for health in states. For the 2014 report, infant mortality rates were based on data from 2011 and 2012, premature death rates from 2012, and rates of insurance from 2012 and 2013.

These efforts are the best of their class and provide important benchmarks for health improvement over time. But neither of these is a day-to-day (or even a month-to-month) tool for management that is also able to help health leaders understand and respond to shifting trends in health.

That's where data from the health care system comes in.

Leveraging Health Care Data

As thousands of hospitals and physician offices adopt electronic health records, most of the attention has focused on "meaningful use," the exchange of clinical information and providing data to measure quality of care. Many health systems are now tracking patients across various settings, identifying high users in need of extra care coordination and other services, and responding to gaps in quality quickly. Such uses appear

to be improving care for many patients (<http://bit.ly/1Qc4Yns>).

Much less attention has focused on the emerging opportunity for these sources of data to help public health officials (and the public) understand the health of communities, cities, counties, and states.

Initial efforts to leverage health care data for public health include so-called syndromic surveillance, which aggregates data on chief complaints or diagnoses to identify (<http://1.usa.gov/1E49MpU>) possible surges of infectious disease or bioterrorism.

Much more is now possible. For example, data from hospitals could be used to track and map preventable admissions for asthma. Using this information in real time, public health officials could identify local hot spots of poor access to primary care and environmental causes of exacerbations. Ongoing surveillance of preventable admissions for asthma could then provide rapid feedback on initiatives to address underlying problems.

Similarly, data on admissions to neonatal intensive care units could provide timely insight into trends in low birthweight, diagnoses of falls among the elderly could provide a window into gaps in access to critical services, preventable readmissions for heart failure could identify areas in greatest need of social support, and emergency department visits for diabetes could help direct where community education programs will have the greatest value. Visits to emergency departments for drug-related complications could provide an early warning system for overdose.



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These uses of data could contribute to health improvement both by facilitating understanding through aggregate analyses and by identifying individuals who are likely to benefit from different types of services beyond usual medical care, such as addiction treatment, housing, social services, and education.

Barriers to Data Innovation for Public Health

Several barriers stand in the way of using health care data to support public health improvement.

First, there remains a large divide between health care systems and public health agencies in many communities. Many health care executives do not view community health outcomes as a core part of their job, and many public health officials focus on education, social determinants of health, and

community-based interventions. The emergence of new incentives to reward health care systems when patients are healthier provides a stimulus to both sides to bridge the gap.

Second, health care organizations are understandably prioritizing clinical quality and other immediate uses for electronic

monitoring of readmissions and coordination in addressing patients with high levels of use.

Third, in communities with multiple sources of health care, cooperation between competing entities is necessary in order to meet the needs of public health. Receiving notifications of all the emergency department visits for certain prevalent injuries is far better than receiving information about a quarter or a half of them. Getting hospitals or physician groups across town on the same page—

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health data. Increasingly, using data to connect clinicians and health care facilities and support effective care has become a “must have” in health care. Population health uses are “nice to have” or “not yet on the radar screen.” Nonetheless, addressing the core functions opens the door to low-cost uses for population health. For example, establishing connectivity between institutions for the purpose of tracking readmissions can create the opportunity for population-wide

even if there is mutual benefit—can be a major challenge.

Fourth, the privacy framework for using health care data for public health purposes, particularly individual-level data, is underdeveloped. The medical model is based upon the concept of consent for each clinical use of health information. Public health agencies are used to conducting surveillance without consent, such as for infectious disease reporting. A hybrid model that allows for

community-wide assessment without individual consent and that also provides for the concept of consent for individual-level interventions would provide a path forward.

These barriers are worth addressing. Even if making population health data available, immediate, and actionable is a secondary benefit of the shift to electronic health records, it may prove to be a primary way to move the health of communities across the country forward. ■

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Published online: March 25, 2015, at <http://newsatjama.jama.com/category/the-jama-forum/>.

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