

## Public Health 3.0: Time for an Upgrade

It is time to boldly expand the scope and reach of public health to address all factors that promote health and well-being, including those related to economic development, education, transportation, food, environment, and housing. Despite nearly \$3.0 trillion in annual health care spending, the United States ranks 27th in the world in life expectancy, and relatively low in many other measures of health and well-being.<sup>1,2</sup> Worse yet, for the poor in this country, life expectancy is actually decreasing.<sup>3</sup> Given these trends, and persistent gaps in health status, it's time for a major upgrade to Public Health 3.0.

### PUBLIC HEALTH 1.0

The public health system in its modern sense began to take shape after the industrial revolution in the late 19th century. During the 20th century, public health was empowered by extraordinary scientific advances in our understanding of disease, powerful new prevention and treatment tools such as vaccines and antibiotics, and expanded capability in areas such as epidemiology and laboratory science. We refer to this period as Public Health 1.0.

Yet, by late in the century, the capacity and effectiveness of public health agencies varied enormously across the country, with little consensus about what should be expected of public health. In 1988, the Institute of

Medicine (IOM) declared in *The Future of Public Health* that “this nation has lost sight of its public health goals and has allowed the system of public health activities to fall into disarray.”<sup>4</sup>

### PUBLIC HEALTH 2.0

We conceive of Public Health 2.0 as beginning with this IOM report and continuing to the present day. The IOM Committee characterized the mission of public health as fulfilling society's interest in assuring conditions in which people can be healthy, and defined the core functions of governmental public health agencies as assessment, policy development, and assurance. This seminal report was enormously influential in shaping and reenergizing public health (e.g., by spurring national deliberations leading to the clear articulation of the essential services of public health). However, there was little emphasis on how public health leaders might work across sectors to address social, environmental, or economic determinants of health.

### A CHANGING LANDSCAPE FOR PUBLIC HEALTH

Several developments are driving the need to re-envision public health practice once again. Health trends in the last 30 years are such that the leading causes of death and illness are now

attributable to behaviors (e.g., smoking, sedentary lifestyle, and eating patterns) that are powerfully driven by the social and physical environments in which people live, learn, work, and play.

Today, the largest part of many state and local agency budgets are federal grants, giving state and local public health departments limited flexibility in how best to meet local needs.<sup>5</sup> Most health departments have not seen their budgets or functional capacity fully restored since the sharp and sustained budget cuts to public health at every level which followed the Great Recession in the United States (2007–2009).

The Affordable Care Act (ACA) improved access to health care for all. Today, 17.6 million people have access to affordable health care that did not have access before. This development is facilitating public health's transition away from clinical care provider of last resort to primary prevention and health promotion.

The ACA also catalyzed movement away from fee-for-service to

value-based payments, potentiating innovative prevention and health-promoting care models.<sup>6</sup> The ACA's requirement that nonprofit hospitals must do community health needs assessments has increased collaboration between medicine and public health.

In the past decade, there has been a widening embrace of health department accreditation as one strategy to improve public health agency performance. As of November 2015, 33 states plus the District of Columbia have a health department accredited by the Public Health Accreditation Board (PHAB), reaching 45% of the US population.

Finally, there has been increasing recognition in recent years that we—in public health and beyond—must find ways to directly address the broad social and environmental determinants of health, through collaborative, cross-sector efforts. Elected and civic leaders have also become more aware of the importance of community health, realizing that a healthy community is one with a strong educational system, safe streets, effective public transportation, and affordable, high-quality food and housing.

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This editorial was accepted December 16, 2015.

doi: 10.2105/AJPH.2016.303063

## PUBLIC HEALTH 3.0

In this context, we submit that it is time for a major upgrade to Public Health 3.0: a modern version that emphasizes cross-sector collaboration and environmental, policy, and systems-level actions that directly affect the social determinants of health. Several pioneering US communities are already experimenting with this expansive approach to community health. It is time to position *all* local and state public health authorities as leaders in building communities that, by their nature, promote the public's health and wellness.

What are the key components of Public Health 3.0?

## Enhanced Leadership and Workforce

An exciting evolving model is one in which local and state public health leaders see themselves not only as the director of their governmental agency but also more broadly as the chief health strategist for their communities, capable of mobilizing community action to affect health determinants beyond the direct reach of their agencies.<sup>7</sup>

## New Partners

Broad engagement with partners across multiple sectors is inherent to the Public Health 3.0 vision. It is especially important to engage elected leaders, by sharing our vision that health is a fundamental driver of community development. The business community is another key partner, with much to gain and give to this effort. Members of the general public—including those from the subpopulations at greatest risk of poor health—must also be brought into the process of identifying and deciding how best to respond to community needs.

## Accreditation

The Public Health Accreditation Board accreditation process institutionalizes a culture of improvement, innovation and transparency, which fosters public trust and support. We encourage continued evolution and improvement of the PHAB process to incorporate Public Health 3.0 elements.

## Technology, Tools, and Data That Matter

We need to develop timely, locally relevant health information systems instead of relying on data that are outdated, merged across years to improve sample size, and not actionable at the neighborhood level.

## New Metrics of Success

We need to define what constitutes a healthy, sustainable, thriving community and, thus, how to measure success. A limited number of domains should be identified that collectively encompass the conditions and outcomes relevant to measuring the health of a community.

## Funding

Adequate, flexible funding is necessary for a broadly engaged Public Health 3.0 organization. At the federal level, we need to explore ways of funding state and local public agencies to promote an expansive approach to assuring community health. New financial and other support for public health should be developed from state and local sources as well.

## REALIZING THE VISION

To accomplish this upgrade to Public Health 3.0, we need to engage a broad spectrum of thought leaders to better define

the vision and identify likely challenges to its implementation.

We at the federal level must also consider how we can help catalyze progress. It is time once again for the public health community to step up our game: to recognize the changing landscape of health in our country, and to develop and embrace dramatically enhanced, community-wide approaches to assuring the conditions in which all people can be healthy. **AJPH**

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## REFERENCES

1. National Research Council (US). *US Health in International Perspective: Shorter Lives, Poorer Health*. Washington, DC: US: National Academies Press; 2013.
2. David Squires and Chloe Anderson. *US Health Care from a Global Perspective: Spending, Use of Services, Prices, and Health in 13 Countries*. Commonwealth Fund pub. 1819 (15). The Commonwealth Fund Web site. October 2015. Available at: <http://www.commonwealthfund.org/publications/issue-briefs/2015/oct/us-health-care-from-a-global-perspective>. Accessed November 9, 2015.
3. National Academies of Sciences, Engineering, and Medicine. *The Growing Gap in Life Expectancy by Income: Implications for Federal Programs and Policy Responses*. Committee on the Long-Run Macroeconomic Effects of the Aging US Population-Phase II. *Committee on Population, Division of Behavioral and Social Sciences and Education. Board on Mathematical Sciences and Their Applications, Division on Engineering and Physical Sciences*. Washington, DC: The National Academies Press; 2015.
4. US Institute of Medicine. *Committee for the Study of the Future of Public Health. The Future of Public Health*. Washington, DC: National Academy Press; 1988.
5. US Institute of Medicine. *For the Public's Health. Investing in a Healthier Future*. Washington, DC: The National Academies Press; 2012.
6. Burwell SM. Setting value-based payment goals—HHS efforts to improve US health care. *N Engl J Med*. 2015;372(10): 897–899.
7. Public Health Leadership Forum. *The High Achieving Governmental Health Department in 2020 as the Community Chief Health Strategist*. RESOLVE Health Web site. May 2014. Available at: <http://www.resolve.org/site-healthleadershipforum/hd2020/>. Accessed November 17, 2015.

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