

# Moving on Upstream

## The Role of Health Departments in Addressing Socioecologic Determinants of Disease

F. Douglas Scutchfield, MD, Alex F. Howard, MPH

The publication in 1993 of McGinnis and Foege's manuscript on the actual causes of death in the U.S. was a key document in examining the problem behind the problem.<sup>1</sup> Heart disease, cancer, and stroke became less important than those etiologic factors responsible for the disease: tobacco, diet, exercise, and drug misuse. Simultaneously with that work, Berkman<sup>2</sup> and Kawachi<sup>3</sup> began to develop our understanding of the nature of even more distal disease determinants. Through the use of social epidemiology they illustrated the relationship between health status and factors not in the immediate sphere of health. The work of Marmot and the Whitehall study in the UK also began to plow new ground in our understanding of disease etiology.<sup>4</sup> In addition, the publication of *Bowling Alone* by Robert Putnam gave credence to the notion that our relationships to each other and sense of community are important determinants of health, affecting both our physical and mental well-being.<sup>5</sup>

The 2003 publication of the IOM report "The Future of the Public's Health" highlighted many of these elements, building on previous research on socioecologic determinants of health, and brought these notions to the attention of the public health community.<sup>6</sup> That report also stressed the need, given this broader understanding of the antecedents of disease, to involve multiple sectors in approaching health problems. This, of course, was not new to the international community, which had articulated the UN Millennium Development Goals.<sup>7</sup> As a result of these developments, the interrelationships of education, housing, jobs, income, and racial and ethnic discrimination with health are now well accepted.

There are problems with this new paradigm. Some of these problems are vividly illustrated in the papers in this

supplement to the *American Journal of Preventive Medicine*.<sup>8-13</sup> As strong advocates for evidence-based public health, we acknowledge the difficulty in establishing the logic model and evidence base relating some of these more distal factors to health outcomes. Moreover, since such determinants are particularly powerful in disadvantaged groups, the epidemiologic paradigm that directs us to focus on lowering the risk for disease in all members of the population, rather than focusing our efforts on those at high risk for disease, is problematic.<sup>7,14</sup> This epidemiologic framework is not readily suitable for addressing the disproportionate disease burdens in disadvantaged populations. Further, intervention research needs to address effectiveness in the actual life circumstances of diverse populations if health outcomes are to be improved.<sup>15</sup>

We take our charge in this commentary to examine the role of public health in dealing with the findings and recommendations of the Robert Wood Johnson Foundation (RWJF) Commission to Build a Healthier America (the commission).<sup>16,17</sup> An important distinction to draw at the outset is that between the public health department and the public health system. The 1988 IOM publication, *The Future of Public Health*, made the first pass at this distinction by pointing out that the mission of public health is "creating conditions in which people can be healthy" and that this is a shared mission among a number of community actors, not just the health department.<sup>18</sup> A decade later, *The Future of the Public's Health* amplified this point by examining and making recommendations regarding the contributions of additional community actors to the broader system of public health.<sup>6</sup>

In the interest of brevity, we restrict our comments here to the public health **department**. The question: What is the role of the public health department in implementing the commission's recommendations? This is shorthand for asking how the health department goes about moving further upstream to disease determinants that seemingly are outside its sphere of authority. To start with, the health department is responsible for ameliorating unhealthful conditions, regardless of where they exist in the web of causation. Further, as the antecedents of poor health are identified, they become the purview of

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From the Department of Preventive Medicine and Environmental Health (Scutchfield), Center for Public Health Systems and Services Research (Howard), College of Public Health, University of Kentucky, Lexington, Kentucky

Address correspondence to: F. Douglas Scutchfield, MD, University of Kentucky College of Public Health, 121 Washington Avenue, Suite 212, Lexington KY 40536-0003. E-mail: [scutch@email.uky.edu](mailto:scutch@email.uky.edu).

0749-3797/\$17.00

doi: 10.1016/j.amepre.2010.10.003

health departments, no matter how distal to the development of disease. The first responsibility of the health department is not to provide medical care, but rather to create conditions in the community that support good health.

The mission of public health—creating conditions in which people can be healthy—clearly cannot be achieved if major determinants of such conditions are not a part of the health department's mission and responsibility. Others in the public health system—education, housing, employment services, business, and media—all have a role in this, but none of these other constituents of the public health system has the statutory and fiduciary responsibility for the health of the people. That role is reserved for public health.

This responsibility requires public health departments to identify and address these broader health issues, even ones that appear to be outside the immediate domain of public health but powerfully influence the health of the community. They must move further upstream from more proximal risk factors for disease, tobacco, diet, and exercise and begin to address issues of social justice such as housing and the built environment; the siting of landfills and industrial plants; adequate educational programs, including early childhood development; food deserts; and neighborhood safety.

There are many obstacles to accomplishing the task of addressing health from a social-determinants perspective. Some are fairly easy to address, others are much more difficult. First, most health department funding is categorical. It has been difficult to persuade those who provide categorical funding that public health infrastructure is vital for programs. If funders are loath to pay for infrastructure, then they certainly are not going to be enthusiastic about paying for activities that they cannot see as even remotely linked to their particular program concerns. For example, the CDC cancer control programs may have a hard time seeing the connection between the failing school system in a neighborhood and its elevated rate of cancer. Again, there exists a need for logic diagrams that lead you from these very distal causes to the disease or at least the proximal risk factors, such as poor schools associated with increased tobacco use, which is in turn linked to increased cancer rates.

Such use of logic models and “linked knowledge” are advocated by Braveman and her colleagues in this supplement.<sup>10</sup> These authors make the case that the use of this linked knowledge will be critical in both the identification and application of knowledge regarding social elements and health outcomes. New funding for community prevention efforts in the Patient Protection and Affordable

Care Act should be used for these more upstream social ecological determinants, and those responsible for both grant guidance and review need to understand the relevance of this approach if these programs are to be successful.

The preparation and training of public health professionals present additional challenges to incorporating social determinants within health department agendas. Few leaders of local health departments are likely to have the knowledge, much less skills, to address these broader issues in their communities.<sup>19</sup> It is heartening to note that the core competencies specified by the council on linkages include a number that relate to socioecologic determinants of health.<sup>20</sup> Schools and programs of public health should use these competencies, focused on distal determinants, to frame course material for public health professionals.

Public health is the nexus of science and politics. It is impossible to avoid the political dimension of making health policy, particularly if the policies are not seen as being intrinsically related to health. In general, it is difficult for the planning and zoning board to understand why someone from the health department is attending meetings and working with a community group to actively participate in decisions about their community's zoning designation. The health department can, however, provide valuable insights regarding the need for bike paths and sidewalks or the exclusion of businesses such as liquor stores from certain areas. In this supplement Woolf and colleagues' citizen-centered model calls for a coordinated community-wide health promotion strategy.<sup>8</sup> These authors emphasize the importance of collaborations between multiple sectors of society—education, business, clinical practitioners, public health, and general government—to create environments conducive to sustainable health improvements. The planning and zoning commission may well complain about public health interjecting itself into issues that are not its business; again a reason to make sure homework is done to demonstrate the health relevance of the decisions and policies at stake.

This suggests a relatively new tool that is gaining in popularity, the health impact assessment (HIA). The notion of examining issues and policies for their likely impact on health before a decision is made has become increasingly common. Cole and colleagues have identified that the HIA is growing in use—frequently but not exclusively by public health agencies—yet questions still remain about its potential to make a difference in public health decision making.<sup>21,22</sup> Further thinking and clarification as to the best formulation and uses of the HIA are needed.

These problems are the tip of the iceberg, as many other considerations impede health departments' progress in moving upstream. Nevertheless, in some jurisdictions the local health department has taken on this challenge. *Tackling Health Inequities through Public Health Practice* offers a series of vignettes illustrating the use of some of these approaches in communities.<sup>23</sup> In Alameda County, for example, the former Health Officer, Antony Iton, successfully created a unit within the health department to address these broader issues and established principles to help the public health practitioners identify strategies for dealing with upstream determinants of health.

Public health departments have assessment, policy development, and assurance roles. Examining and addressing the impact of socioecologic impacts on disease and disparities engages all three of these imperatives. Public health departments also should function as a convener, bringing together diverse segments of the community to address health and how all citizens may help make the community better. Community-based participatory research provides a good model for how to engage the community and its citizens in identifying and solving community health problems.<sup>24</sup> As the nature of public health changes, the methods of intervention must also change. This shift in intervention strategies constitutes a transition to the third revolution in public health (following Terris, who identified the second revolution as the shift from infectious to chronic disease).<sup>25</sup> This third revolution, we would hold, is moving from the proximal risk factors for disease and the interventions appropriate to those to the more distal risk factors and interventions. These distal factors encompass health disparities as well as those educational, social, and economic factors that are responsible for the health of communities. This is nothing short of a major paradigm shift, but a necessary one if public health departments are to achieve their mission.

Local health departments can and should address any and all factors in the community that are responsible for affecting health status. A factor's distal position in the causal chain of death and disability does not excuse us from our responsibility to protect and preserve the health of our community. To reiterate, the health department is the only entity that has statutory and fiduciary responsibility for the health of the community it serves. If the health department doesn't assume responsibility and intervene to improve the communities' health, who will?

If not us, who? If not now, when?

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No financial disclosures were reported by the authors of this paper.

Publication of this article was supported by the Robert Wood Johnson Foundation and the Department of Health Policy, George Washington University School of Public Health and Health Services, as part of a supplement to the American Journal of Preventive Medicine (Am J Prev Med 2011;40[1S1]).

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