



Viewpoint

Medicine's Role in Reimagining Public Health Reuniting Panacea and Hygeia

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In ancient Greece, physicians marked their entry into the profession by reciting the Hippocratic Oath, a ritual used to remind physicians of the standards and aspirations of the medical field. Notably, the original version began with an invocation to Panacea and Hygeia—divine siblings who embodied cures and prevention, respectively—reflecting an awareness that achieving health for all required physicians to integrate the practice of medicine with the principles of public health. While individual physicians have long been active supporters of public health (eg, via service on state health boards), a national strategy to guide collaboration across the professions remains lacking. As Nancy Dickey, former President of the American Medical Association, and Mohammad Akhter, Executive Director of the American Public Health Association wrote, “a framework that relate[s] medical and public health perspectives in practice” is needed.¹

This pairing of medicine and public health has been disparate during the century between the 1918 influenza pandemic and the COVID-19 pandemic. Medicine receives the lion's share of resources, while public health is blamed in crises. The COVID-19 pandemic has shed new light on this disparity and has also offered promising examples of how collaborations between public health and medicine can fill capacity gaps. For instance, the New York City (NYC) health department and public hospital system recently launched the NYC Public Health Corps, a community health worker program that builds on COVID-19 response efforts to advance population health, redress health inequities, and improve emergency preparedness.²

Leaders in medicine and public health seeking to convert similar pandemic-era partnerships into foundations for future collaboration may benefit from using the federal government's Public Health 3.0 framework.³ This 2016 framework is a national vision for modernizing the scope of local public health practice and includes 5 areas of focus: (1) leadership and workforce; (2) foundational infrastructure; (3) strategic partnerships; (4) data, analytics, and metrics; and (5) flexible and sustainable funding.³ We believe that each of these areas provides multiple avenues for future engagement between medicine and public health toward the common goal of individual and community well-being.

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Leadership and Workforce

Public health suffered from prepandemic staffing shortages, losing more than 56 000 jobs during the past decade.⁴ Pressure and polarization has led to further attrition, with more than 250 known departures among state and local health officials during the COVID-19 pandemic. Medicine can play a key role in training the next generation of public health leaders. Most medical schools offer both a Doctor of Medicine and a Master's in Public Health degree programs, with more than 200 dual-degree students graduating annually.⁵ Medical schools should consider requiring modules on governmental public health that describe the organization of public health policy and practice, while public health schools should consider incorporating coursework on health care financing and delivery. Pedagogical exchange should also include experiential opportunities, from including health departments as outpatient sites during medical school clerkships to offering public health students opportunities for clinical exposure (eg, at community-based clinics). Medical professional associations should offer public health-related continuing medical education credits at their annual

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meetings. Lastly, as residency programs increasingly include tracks for management and administration, program directors should consider developing public health-specific leadership development opportunities. The Public Health 3.0 vision of chief health strategists, who are interdisciplinary leaders focused on addressing the upstream drivers of health, can serve as a model for trainees, who could use their elective blocks to pursue project-based rotations with health departments and community partners.³

Foundational Infrastructure

Public health cannot be expected to manage once-in-a-lifetime pandemics if departments lack the resources needed to provide everyday essential services. For example, recent funding cuts are associated with record increases in the prevalence of sexually transmitted infections.⁶ While ensuring that adequate longitudinal funding is a foremost priority, collaborations with medicine can help close gaps by promoting models of shared services, from coordinating care delivery (eg, for HIV) to improving emergency preparedness (eg, for natural disasters). As policy makers work to improve health department capabilities, medicine can offer lessons from the Joint Commission for the Accreditation of Healthcare Organizations to advance the work of the Public Health Accreditation Board. Specifically, the Board could adapt the Joint Commission's toolkit for robust process improvement (eg, the high-reliability organizations model) to advance operational performance in public health.

Strategic Partnerships

Most health departments already collaborate at some level with medicine (eg, emergency responders and opioids). For example, health departments and nonprofit hospitals frequently partner to conduct community health needs assessments. However, the percentage of formal partnerships (eg, written agreements, shared resources) has declined substantially from 2008 to 2019.⁷ The COVID-19 pandemic provides a template for renewing collaborations between medicine and public health. For example, the partnership between Parkland Health & Hospital System and Dallas County Health and Human Services to organize testing, map social needs, and address vaccine hesitancy illustrates how collaborations can enhance the delivery of essential services and broaden the scope of public health practice.⁸ Additional opportunities for formal collaboration include the coordination of nonmedical services, regionalized planning for public health emergencies, and promotion of health behaviors (eg, tobacco cessation, nutritional guidance). Health departments may also consider appointing chief medical officers to create accountability for bridging public health and medicine, a step recently taken by the NYC health department.

Data, Analytics, and Metrics

Upgrading information technology for public health has become a national priority because outdated infrastructure and siloed data systems hindered the response to the COVID-19 pandemic. Medicine, which recently underwent a decade of digital transformation under the Health Information Technology for Clinical Health Act,⁹ can offer valuable lessons to guide public health data modernization. For example, the Meaningful Use prioritization of process measures (electronic health record adoption) over outcome measures (ability to exchange clinical data) illustrates the insufficiency of indexing on technology upgrades alone, and the importance of orienting incentives and partnerships around the goal of interoperability. Advancing health department capabilities to integrate diverse informational inputs and perform real-time data exchange across systems will require strategies for standards adoption, workforce development, and cultural change.

Flexible and Sustainable Funding

Public health is chronically underfunded, receiving less than 3% of per capita spending for medical care and falling 41% below the \$32 per-person spending threshold that experts estimate is needed to deliver foundational public health capabilities.¹⁰ Population-based payment arrangements in medicine offer a model for modernizing public health financing. The national Accountable Health Communities demonstration and state initiatives, such as North Carolina's Healthy Opportunities pilot, exemplify how policy makers can structure financing to better integrate care delivery and public health services. Bolder action may be required to insure that funding is allocated to public health rather than to the medical care system. Improved funding allocation should better align investments with drivers of health outcomes, from enabling health departments to share the savings generated by total-cost-of-care financing models to requiring nonprofit hospitals to allocate resources to health departments as part of their community benefit requirements. Beyond payment reforms, medicine's professional associations should continue to be allies in advocating for policies that address inequities in health department resources, such as the Public Health Infrastructure Fund.¹⁰

From antiquity to the present day, collaboration between medicine and public health has helped to enable forward movement for population health in US, from reducing the burden of tobacco to addressing epidemics, such as HIV/AIDS. Transforming the health care system in the aftermath of the COVID-19 pandemic will require that physicians and public health officials come together once again. Together they can leverage the power of collaboration to address the challenges of the 21st century.

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