



# HHS Public Access

Author manuscript

*N Engl J Med.* Author manuscript; available in PMC 2024 May 14.

Published in final edited form as:

*N Engl J Med.* 2024 May 16; 390(19): 1739–1742. doi:10.1056/NEJMp2403274.

## Integrating Public Health and Health Care — Protecting Health as a Team Sport

**Charlene A. Wong, M.D., M.S.H.P.,**

**Debra Houry, M.D., M.P.H.,**

**Mandy K. Cohen, M.D., M.P.H.**

Centers for Disease Control and Prevention, Atlanta.

Public health’s mission is to put data into action to protect health and improve lives. Fulfilling this mission has been challenging in the United States, even though the field now has more ways to protect health than ever. In the face of escalating chronic-disease and behavioral health crises and emerging infectious diseases, several public health indicators, such as life expectancy<sup>1</sup>, drug-overdose deaths, and unacceptable maternal mortality highlight how much work we still need to do.<sup>2</sup>

Protecting health is a team sport – yet, the systems meant to protect health have been siloed for too long. The United States needs an integrated system that protects the public’s health — one that goes well beyond the reach of the Centers for Disease Control and Prevention (CDC), health departments, and “traditional” public health. The health care sector is on the front lines when it comes to preventing and treating acute and chronic conditions. Clinicians have trusted relationships with individual patients and use clinical findings to address current and future health issues, whereas the public health field provides data and promotes evidence-based interventions for protecting and promoting health in communities. Public health monitoring of health threats also permits early detection and containment of outbreaks.

The U.S. mpox response exemplified the public health and health care team-based approach that is needed in responding to health threats. The CDC worked with the Food and Drug Administration and commercial laboratories to expand the availability of diagnostic tests within weeks after the first case was reported in the United States. The tests were modified for high-throughput instruments and distributed by means of existing provider-to-lab networks so that physicians could immediately test patients with mpox symptoms, and in turn provide more rapid treatment. Testing capacity increased from 6000 to 80,000 specimens per week, data were shared by means of electronic reporting from labs to CDC and state public health agencies, and the number of patient cases decreased with effective testing, behavior change, and treatment.<sup>3</sup>

Public health–health care partnerships can also improve routine care delivery. For example, perinatal quality collaboratives are a critical form of public health infrastructure in many

states and contribute to quality-improvement efforts in obstetrics by providing maternal health data to health systems and supporting systems-level collaborative changes. These partnerships have improved the timeliness of treatment for severe maternal hypertension in Illinois and increased the proportion of babies born at full-term by reducing scheduled early inductions and c-sections in New York.<sup>4</sup>

Investing in three foundational components for public health and health care integration can lead to more shared successes.

First, real-time bidirectional sharing and use of public health and health care data is critical for facilitating readiness and responses to emerging health concerns. Substantial progress was made during the Covid-19 pandemic. Now, 88% of emergency departments (EDs) are sending real-time respiratory illness syndromic data, such as influenza-like illness, which allows the CDC to monitor for unusual domestic trends — as we did in the fall of 2023 for *Mycoplasma pneumoniae*, after cases were reported internationally.

Despite this progress, there are important gaps in bidirectional data exchange and use at the national level. Only 25% of health care facilities send automated electronic case reports, which are automated, real-time exchange of cases for reportable conditions, to public health agencies. CDC efforts are under way to further standardize and streamline this work for all health care facilities. Crucial efforts that could accelerate this work have been launched; for example, the Trusted Exchange Framework and Common Agreement (TEFCA) for secure national health information sharing was implemented by the Department of Health and Human Services and Office of the National Coordinator for Health Information Technology in 2023. For earlier health threat detection and being response ready, more health care facilities need to participate in data exchange by sending electronic case reports, sharing ED syndromic data and utilizing TEFCA.

Second, the public health and health care sectors will need to identify aligned priorities and make shared investments. Covid-19 was a singular common enemy and a generational challenge that accelerated the formation of public-private partnerships and led to substantial investments in infrastructure. COVID-19 is now just one of many major health threats our sectors will respond to together. Robust integration of public health and health care data can inform priorities for shared investments in prevention, management, and control efforts at all levels of the health system. For the CDC, we are prioritizing overall readiness and response to health threats with investments in critical data, lab, workforce and response infrastructure; combating the U.S. overdose and mental health crises; and supporting young families. Our agency is leading multiple collaborative efforts with health care partners in these areas (Table).

Third, working as a team to protect health requires clear roles and responsibilities and shared accountability. The table outlines the roles and responsibilities for the public health and health care sectors in addressing major public health threats. Multiple pathways exist for sharing accountability, starting with agreeing on metrics of success. Implementing prevention-oriented quality measures (e.g., screening for cervical cancer, lead exposure, or clinical depression) is one mechanism for supporting shared accountability. Offering

incentives or enacting requirements for participating in data-integration activities is another. Finally, new payment arrangements and flexibilities can unite sectors by covering community-based prevention programs (e.g., school-based mental health supports) or rewarding improvements in population-level outcomes (e.g., Medicare's Shared Savings Program ACOs or the Advanced Research Projects Agency for Health's Healthcare Rewards to Achieve Improved Outcomes program).<sup>5</sup>

Working as a team would also be easier with a cross-trained workforce. Curricula in medical and allied health training could include fundamental public health tenets (e.g., approaches to preventing chronic diseases and injuries and using public health data in patient care). Similarly, public health practitioners should understand the value of clinical data from electronic health records or claims and the ways in which clinical care can support prevention (e.g., by means of preventive screenings, standing vaccine orders, and financial incentives in payment models). Cross-training or experiential learning through rotational opportunities for staff in health departments and hospital systems could help address situations where public health and medical concerns overlap (e.g., screening a person for hepatitis C and endocarditis after an overdose).

Public health and health care partnerships must become the norm to effectively protect health in the United States. Building stronger relationships and trust among team members is essential. Clinicians and health care organizations can reach out to their local and state public health agencies, and vice versa. Together, they can identify and launch on one or two tactical initiatives that address a shared health issue in their communities – just as CDC is doing with health care partners (Table 1).

An integrated system to protect health also requires policymakers and appropriators to adequately authorize and resource a strong public health infrastructure that is embedded in, not siloed from, the health delivery system. Policymakers also need to ensure that payments and authorities support evidence-based prevention services (e.g., vaccines) and shared accountability and collaboration.

Protecting the health of every person in every community of the United States will require action now and a sustained focus across public health and clinical care. Beyond more extensive public health–health care partnerships, a team-based approach to support the health of communities and address broader drivers of health could also include social services, academia, industry (e.g., employers, technology, media), and global partners. Investing in strong relationships and taking action together to protect health now will better prepare an integrated health system to respond to the next major health emergency and improve the day-to-day health and well-being of the population.

## References

1. Arias E, Tejada-Vera B, Kochanek KD, Ahmad FB. Provisional life expectancy estimates for 2021. Vital Statistics Rapid Release; no 23. Hyattsville, MD: National Center for Health Statistics, August 2022.
2. Leider JP, Castrucci BC, Robins M, et al. The exodus of state and local public health employees: separations started before and continued throughout Covid-19. *Health Aff (Millwood)* 2023;42:338–48. [PubMed: 36877909]

3. Aden TA, Blevins P, York SW, et al. Rapid diagnostic testing for response to the monkeypox outbreak – Laboratory response network, United States, May 17-June 30, 2022. *MMWR Morb Mortal Wkly Rep* 2022;71:904–7. [PubMed: 35834423]
4. Perinatal quality collaboratives. Centers for Disease Control and Prevention. (<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm>).
5. Sanghavi D, Alley D. Transforming population health — ARPA-H’s new program targeting broken incentives. *N Engl J Med* 2024;390:295–8. [PubMed: 38198532]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Examples of High-Priority Health Threats, with Roles and Responsibilities for the Public Health and Health Care Sectors.

Addressing Priority Health Threats	Public Health's Role	Health Care's Role
<p>Protecting the public in the fall and winter respiratory virus season, such as by maximizing the use of vaccines, testing, and treatment for Covid-19, influenza, and respiratory syncytial virus</p>	<p>Monitoring viral activity and disease Providing guidance on vaccines, testing, and treatment Communicating with the public, clinicians, and other partners</p>	<p>Counseling patients on the benefits and risks associated with vaccines, testing, and treatment Developing, manufacturing, and administering vaccines, testing, and treatments Reimbursing for preventive and acute care</p>
<p>Preventing overdoses, such as by supporting linkage to care and warm handoffs from public health teams to clinical care teams for patients at risk for overdose</p>	<p>Tracking trends in overdoses and emerging substances Communicating with the public (e.g., implementing a fentanyl-awareness campaign), clinicians (e.g., releasing prescribing guidelines), and other partners Supporting primary prevention by means of community interventions (preventing adverse childhood experiences, supporting Drug-Free Communities)</p>	<p>Initiating medication for opioid use disorder in health care settings Checking prescription drug monitoring program databases Prescribing naloxone for patients or family members of patients using opioids or with a substance use disorder Screening for and treating related medical conditions, such as hepatitis C and HIV</p>
<p>Addressing the crisis and disparities in maternal health, such as by using public health data and infrastructure to reduce maternal morbidity and mortality</p>	<p>Systematically reviewing data on maternal deaths and developing strategies for reducing preventable complications and deaths and racial disparities by means of perinatal quality collaboratives (PQCs) and maternal mortality review committees (MMRCs) Implementing communication campaigns (e.g., Hear Her) to raise public awareness</p>	<p>State and health systems implementing quality-improvement initiatives informed by local PQC and MMRC data (e.g., processes for treating severe hypertension more rapidly) Aligning incentives for health systems using the "birthing-friendly" hospital designation Screening for and treating medical conditions (e.g., syphilis)</p>