U.S. Public Health: Successes, Challenges, and Lessons

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Introduction

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Patricia A. Gabow, MD, has had a long and successful career caring for patients, teaching, training future physicians, and successfully leading a public safety net hospital. She retired in 2012 after 20 years as CEO of Denver Health and Hospital Authority (DHHA), an integrated health care system serving one of the poorest populations in the state of Colorado. She is professor emerita of the University of Colorado School of Medicine and a master of the American College of Physicians.

In the following editorial, she describes how the United States responded to the historical challenges in medicine and public health with at least two systems which developed in differing ways. For generations, personal health care was provided in doctors' offices and hospitals and was not a primary concern of government. During most of the 20th century there was progress in understanding infectious disease transmission and the use of quarantine and immunizations. In addition, the need for clean water and sewage systems identified a societal and public responsibility. As Gabow describes, cities and counties developed public health departments and boards of health to care for communities and mitigate widespread health concerns. A U.S. Public Health Service was developed and implemented, and the Centers for Disease Control and Prevention(CDC) was established as a key part of the public health care system.

However, the U.S. does not have a true health care system to care for all of its citizens. It is the only developed country that does not provide/guarantee health care for all.

The U.S. developed from a small new country with 13 colonies and established a Constitution, which contained priorities to prevent having a king/monarchy and included split sovereignty with two political capacities—states and federalism. Theoretically, this was done to preserve liberty while allowing the people of this new country to be involved more closely with its governance.

With 13 states and about 2.5 million people—mostly European immigrants—this seemed feasible for the time. However, the U.S. now has 50 states, 14 territories, more than 341 million people,[1] and a budget of more than $6.2 trillion dollars.[2] Unfortunately, the original federalist system does not comport with a modern response to health care. Rather than having governmental units working in unison to respond and deal with medical and public health issues, there is a non-system with both the states and federal government unable to respond effectively to meet complex and dangerous health threats. There is inadequate funding and no unified system to meet the needs of the public and individuals. The federal government authority is limited by what is detailed in the Constitution, which was written more than 200 years ago. The result is divergent measures by states, and the limited authority of the federal government to intervene.

This fragmented system has resulted in divergent health policies and messaging by states; i.e., 50 different ways of delivering and regulating health care and public health. There have often been battles between neighboring states resulting in inconsistent health policies and people suffering or dying. The overall result is an inadequate capacity to respond to medical and public health issues, which adversely affects health care providers and public health agencies and workers.

The U.S. does not have a health care system; it has a hodgepodge patchwork of health care services that varies from state to state. There is no central agency to govern health care delivery, unequal access to health care services, and a lack of health insurance and medical coverage for all. Myriad organizations, providers, and individuals are involved in health care, including those involved in primary, subacute, acute, general, specialty, auxiliary, rehabilitative, prevention, and public health, working in medical practices, medical organizations, educational and research institutions, insurers, administrators, and pharmaceutical and device companies, among many more.

In 2022, this disorganized, non-system employed 14.7 million people, which is 9.3 percent of the total employment in the U.S.[3] There are 6,120 hospitals,[4] 15,300 nursing homes,[5] and 11,647 mental health facilities.[6] Health care professionals are trained in 192 allopathic and osteopathic medical schools,[7] 73 dental schools,[8] 142 pharmacy schools,[9] and more than 2,600 nursing programs

throughout the U.S.[10] Employment-based insurance is the most common type of insurance in the U.S. (54.5 percent); followed by governmental funded Medicaid (18.8 percent), Medicare (18.7 percent). This leaves 26 million people (7.9 percent) without any type of health care coverage.[11,12] Medicine in the U.S. is big business.

In each of these systems, prices are determined by the insurance carriers, and not by the providers or recipients of the care. Most hospitals and physician clinics are private businesses, independent of government. No central agency monitors budgets and/or the availability and utilization of services. There is no consistent and coordinating network of interrelated components to organize and coherently work together to provide the best medical and health care. This is the result of the federalist approach to health care in the U.S. which is cumbersome, and lacking in uniformity and consistency, especially when it comes to access, quality of care, and cost of care.

There are options to develop, operate, and manage a U.S. health care system that provides excellent and nearly universal coverage while having multiple payors, including employer-based health insurance. This would be through the development of a quasi-independent apolitical National Health Reserve System (NHRS) modeled after the long standing and useful Federal Reserve System. The role of the NHRS would be to govern, integrate, coordinate, and manage a nationwide health care system. It would be led, governed, and managed by experts, including physicians, nurses, health professionals, patients, and others, using data, experience, evidence, and planning to operate a national health care system independently with transparency.[13]

Dr. Gabow also notes the enormous difference and lack of support and spending on public health and prevention. Despite the marked differences in funding and investment, public health has had a profound and positive influence on the health of Americans. She focuses on the important and sobering lessons to be learned from the COVID-19 pandemic. She also emphasizes the importance of leading and leadership based on integrity, courage, humility, trust, and the importance of doing the right thing, even when doing the right thing is the hardest decision. She advocates for providing adequate, predictable, sustainable funding for public health at the local, state, and federal level.

In addition to the points Dr. Gabow enumerates, the pandemic also taught us that, in public health and in health care, excellent, honest, and reliable communication is critically important, and that the messengers and messages matter. Some messages and pubic reviews in the press, online, and on social media can be very harmful and create a lack of trust.

The medical profession needs to create new trustworthy voices of medicine and health to rapidly, reliably, and honestly communicate the most currently available information. This would be accomplished through a national network of physicians and other health professionals to communicate on various topics such as health, illness, epidemics, pandemics, etc. This group would be able to directly confront the barrage of misinformation in the media and social media.

In 2018, the American College of Physicians (ACP) developed a coalition of influential medical professionals known as the "Group of Six" to become a stronger voice for health care needs, and to provide advocacy and policy news for internists and other physicians (the ACP represents more than 152,000 physicians, residents, and medical students.)[14] Then, in 2020, the ACP Health and Policy Committee published a series of policy papers titled, "Better is Possible: The American College of Physicians Vision for the U.S. Health Care System."[15] In the policy options of this paper was, "Envisioning a Better U.S. Health Care System for All: Coverage and Cost of Care."[15] In this system, all U.S. citizens would have access to affordable coverage with a package of essential benefits, without concerns for preexisting conditions, or unaffordable, out-of-pocket costs. Patients would not face surprise billing or the inability to afford prescription medications, diagnostic tests, or medical/surgical procedures. Major illness would no longer produce bankruptcy due to gaps in insurance coverage.

In the proposed system, primary care physicians would work in a health care system where primary care is supported with a greater investment of resources, and where payment levels between complex cognitive care and procedural care are equitable. There would be a system where patients and physicians are freed of inefficient administrative and billing tasks, documentation requirements, and payments and charges would be more transparent and predictable. Physicians would provide care in a system where health information technologies enhance the patient-physician relationship, facilitate communication across the care continuum, and support improvements in patient care.[15]

Three groups of physicians should be included in the ACP proposed organization—the Society of General Internal Medicine, the American Academy of Pediatrics, and the American Geriatrics Society. This way, everyone

would have a generalist physician to provide care, health promotion, and referral, as needed. This could begin with the current generation of pregnant mothers choosing or being assigned to a family physician or obstetrician, and children choosing or being assigned a pediatrician or family physician. At age 18, young adults would be assigned to an internist or family physician, and the elderly to a family physician, internist, or geriatrician. The health system would be a National Health Reserve System, as previously described, with the model of the Federal Reserve System with regional geographic state participation and an independent National Health Reserve Board and Regional Boards of physicians, nurses, other health professionals, and the public determining policy, financing, oversight, and regulation of health care systems and financing. This could be the process for implementation of universal health care for all Americans.

The problems Dr. Gabow has encountered and written about must be recognized and addressed responsibly to improve the health of all Americans.

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Recently, I had the opportunity to give the convocation address for the Colorado School of Public Health. This allowed me to reflect on the state of public health in the United States, and the journey on which these new graduates were embarking. Given the importance of public health yesterday, today, and tomorrow, it seems worthwhile to share some of those reflections and related thoughts with a broader group of physicians.

In 2024, we can think about public health in America in two time frames—public health before COVID, and public health after COVID. These are highly asymmetric time periods: the first one covering more than three centuries, and the latter less than half a decade. But to many of us, physicians, public health practitioners, and the public, they are also asymmetric in their impact, with the latter taking priority in our thoughts. This article could not, nor is it intended to, provide a detailed or exhaustive history of the first period, or an in-depth expose of the second period, but rather its intent is to provide some brief reflections on both periods, providing context for where we have been, and where we may be heading.

Looking back, areas of traditional public health like epidemics, infectious diseases, maternal health, environmental toxic exposures, and clean water faced the country from the time of its earliest days. Epidemics of cholera, yellow fever, smallpox, malaria, and influenza hit the crowded urban hubs and did not spare villages or the communities of indigenous people. Tuberculosis was a scourge of the rich and poor alike. Women's lives were cut short by childbirth. Many workers fell sick from toxic exposures. Water supplies were often from the same source as sewage disposal sites.

The early days of public health

In response to the array of maladies afflicting the country, two systems of care arose: personal health care and population health care. The venues and the responsibility of the care within the two systems evolved in different ways. Personal healthcare was provided in doctors' offices and hospitals. The first hospitals were Bellevue in New York City and Charity in New Orleans, both established in 1736, and Pennsylvania Hospital in Philadelphia in 1752.[1] Many others followed across the American landscape. Although some hospitals, like Bellevue were operated by cities, most of the personal care delivery was privately operated and not deemed a primary responsibility of government.

The growing understanding of disease transmission, the use of quarantine, and most important, the need for water and sewage sanitation systems, produced a system that was deemed to be a societal and public responsibility.[2] Cities established the first public health departments and boards of health, but there are differing claims as to who was first—Petersburg, Virgina in 1780,[3] Baltimore in 1793,[4] and Boston in 1799 not only claiming first place but identifying Paul Revere as the nation's first public health officer.[5]

Shortly thereafter, counties, states, and the federal government developed public health departments. In 1798, the Marine Hospital Services was established to treat injured and sick seamen.[6] Its work evolved into managing the spread of contagious disease, and in 1902, it was renamed the Public Health and Marine Hospital, reflecting this broader role.[6]

A decade later in 1912, the U.S. Public Health Service was officially created, cementing population health as a public obligation.[6] More than three decades later, in 1947, the CDC (then standing for Communicable Disease Center; now known as the Centers for Disease Control and Prevention) was established, becoming the nation's premier public health agency.[7]

A paucity of funding

In a curious turn of events, although population health was seen as a public, governmental responsibility, over time, the governmental dollars flowing to public health have become substantially fewer than those filling the coffers of the personal health system. In 2022, total health care spending in the U.S. reached $4.5 trillion, with personal health spending comprising more than 83 percent of that, and public health and prevention spending equaling about three percent.[8,9,10] The government insurance programs of Medicare, Medicaid, the Child Health Plan, the Affordable Care Act marketplace plans, and private insurance have created a strikingly profitable personal health care system while the public health care system struggles with underfunding.[9] To provide some perspective on this difference in support, the 2022 CDC budget was approximately $8.5 billion, and the combined expenditure for Medicare and Medicaid that same year was more than $1.7 trillion.[8,11]

Despite these marked differences in investment, public health has had a profound, perhaps a disproportionate, influence on the life of Americans. Much of the increase in life span from the late 1700s to the 20th century can be

credited to quarantine, vaccines, sewage systems, fluoridation of water, pasteurizing milk, food safety, clean water, and tobacco cessation efforts—all public health endeavors.

A new chapter in public health

COVID-19 created a new chapter in public health with new challenges and, hopefully, new opportunities for public health and the nation. Almost 1.2 million Americans died from COVID-19—many needlessly.[12] As health care professionals, we continue to grieve for them and their families, and repeat the often-used phrase, "never again." This is not to say there will never be such challenges again. Surely, some are at the door even now: the crises of opioid and stimulant use, violence, alcohol use, mental illness, maternal mortality, and climate change. And there will be new ones in the future. A new epidemic could be around the corner.

I often quote my wise, Italian grandfather who said, "Not everything bad happens to harm you." He meant that we can learn much from things that befall us—some good can come tomorrow from what is bad today. But we must learn from these bad things. The public health community, all health care, and the nation learned some important lessons from COVID-19 that could prepare us for future challenges:

- We relearned that becoming a victim of disease and its outcome depended not just on medical care, but perhaps even more so on the community you live in, your social circumstances, and your race. All of us must acknowledge and work to improve the well-known social and economic factors that have a major impact on health such as education, income, physical environment and community, and work to end racism and its consequences.
- We learned from the rapid development of a new type of vaccine that as a country we can quickly muster our science for good. We must always advocate for science and its adoption for good, and in this global community, we must share freely what we develop.
- We learned that simply having a vaccine does not enable mass vaccination.
- We relearned that while mass vaccination is a population tool, it happens one person at a time requiring access, communication, and trust. This requires creating partners and building bridges.
- We learned that having data is necessary, but not sufficient, to provide leadership in times of crisis. The data must be easily garnered, be real-time, be integrated from multiple sources, collected by race and ethnicity, and be translated in meaningful ways.
- We learned that both the messengers and the messages matter. We should commit to always being truthful and trusted messengers.
- We learned the painful lesson that the ease and speed of communication with social media can immediately spread both helpful and harmful information.
- We learned that long held principles of public health that focus on the common good are not embraced by everyone, and that our social solidarity is fragile.
- We learned that there is a tension between public health powers and individual liberty, requiring clarifying the boundaries of both.[13]
- We learned that there can be conflicting risks for population health and economic health in times of crises requiring wise assessment and informed judgment.
- We relearned that there is not always alignment between federal and state governments, and state and local governments, regarding what serves the common good.[13]
- We learned that we need better linkages between public health and personal health, and between providers and payers, and with the human services systems, the educational systems, and the correctional/judicial systems every day, but especially in a health crisis. For health care professionals staying in our own lane will not work for guaranteeing health.
- We learned that in a polarized society, public health and its leaders can become targets for criticism, harassment, and even threats of violence.
- We learned that health care professionals are not immune to the diseases they treat, or their many social consequences. These impacts have created a significant exodus from the ranks of personal and public health care professionals: About 117,000 physicians, along with 100,000 nurses, and 53,000 nurse practitioners left the health care profession during and since COVID.[14,15] A study of the state and local public health workforce estimated that nearly half of them left between 2017 and 2021.[16]

These are sobering lessons. They have come at a great cost—financial and human—and therefore, must not be wasted.

There is hope

In May, as I looked out at the audience and saw the new graduates in public health joining the graduates from the other schools of public health across the country,

I had hope. This is the new generation who will come forward and apply the old truths and the new learnings. They are well-trained; they have directly experienced many of the challenges of the COVID-19 epidemic, and are now ready and willing to take up these challenges.

Leadership

As future leaders, and for those currently in the field, the most important arrows in the public health quiver enabling them to face these challenges are integrity, courage, and humility. Without integrity there is no trust, and without trust you cannot lead.[17] You cannot lead a team and you certainly cannot lead society.

Today, we see this truth in many ways. As with other leaders in the past whose role was to apply their own learnings, new professionals will need the courage that operationalizes integrity, allowing them to make the right decision when the right decision may be the hardest decision.[17] They will need humility—not thinking less of themselves, but thinking of themselves less (credited to CS Lewis). This mark of humility has been in the health professions for centuries as practitioners put themselves in harm's way.

As these medical professionals embrace integrity, courage, and humility, they should not forget a sprinkle of humor. Senator Alan Simpson said, "Humor is the universal solvent against the abrasive elements of life."[18] It is not making fun of others or minimizing the importance of an issue; it is creating space in places of tension.

This year's new graduates, in all areas of medicine, have started a meaningful and worthy journey of a lifetime, but as with all journeys, there will be boulders in the road, and there may be detours. They will be helped on that journey by embracing role models, having mentors who can guide them, and sponsors who move boulders and show them the path. Those of us who are established practitioners must share the stories of those who have built America's public health system and work to become the new role models.

One of my role models, Dr. Florence Sabin (ΑΩΑ, The Johns Hopkins University School of Medicine, 1909, Alumnus) was a woman with Colorado roots and whose position as CEO of Denver Health was one that I filled some 40 years later, following her transitioning from an academic physician to an administrator of a public health care system.

A role model for all physicians

She was born in Colorado but spent most of her life in the East. She was one of the first women medical students at Johns Hopkins University, graduating first in her class, the first woman professor at Hopkins, the first woman director of the Rockefeller Institute, and the first woman lifetime member of the National Academy of Sciences.[19]

Clearly, she was tenacious and a remarkable scientist. In 1938, at age 67, she returned to Colorado thinking she was retiring, but there was more work ahead for her.[19] In 1944, Governor John Vivian began forming committees to address many post-war issues.[19] A local woman reporter pointed out to him that he forgot health and he had no women involved. The reporter suggested Florence Sabin for a new health committee.[19] The Governor's advisors assured him that Florence was a little old woman who wore her hair in a bun, had spent all her life in a lab, and would not rock the boat.[19]

Like any good public health practitioner, Sabin did rock the boat. In fact, she rocked many boats. She wanted data; she visited every county in Colorado, a difficult task in those days. She talked to, and listened to, people in all walks of life. She translated data into information and created a set of new, far-reaching public health proposals. Reminiscent of what public health faces today there was pushback from many sides. When the newly elected governor was asked how he was going to get those laws passed he said, "Brother when it comes to those bills...I will have the little old lady on my side. There isn't a man in the legislature who wants to tangle with her…She is a dynamo."[19]

Her public health proposals became the Sabin Laws that governed public health in Colorado until 2008.[19] Like Dr. Sabin, today's graduates need to be where the action is—in the cities and towns, and in halls of government.

Following her work with the Governor, Sabin did not retire. She became head of Denver Health, then called the department of Health and Charity, integrating public health and personal health as one continuum of care.[19] This union was decades ahead of its time, and one that should be a model for today. This ideal union between personal health and public health lasted until 2018 when the Denver city officials unwound it.

Florence Sabin was a model for every health professional. She reminds us that we must be in the communities and have a presence at the legislative bodies, we must be led by data, and most important, we must be fearless dynamos.

Role models are necessary but not sufficient in today's environment. Those starting their journey need mentors and sponsors. Those of us who are far into that journey must remember we will never be too old to learn from, or to be helped by, others and those starting their career must remember that they are never too young to mentor others.[19]

Good news and bad news

Those who have chosen the public health professions have chosen the part of medicine—perhaps the only part—which is not driven by profit. It has not been privatized or taken over by venture capital. Its practitioners are not being paid exorbitant salaries or being lured by pharmaceutical or device companies. They are not on bonus plans that often reward overuse of expensive services. This is good news, but the bad news is that public health is underfunded. While the U.S. outspends other countries on medical care, it woefully underfunds public health. This should be remedied. We should be advocates for adequate, predictable, sustainable funding at the local, state, and federal level.

There will surely be times when these new graduates will wish there are more dollars in their budgets, but this lack of a profit focus will save them from many a moral dilemma. Another woman health care pioneer, Mother Francis Cabrini, whose shrine is in Colorado, said, "We must be aware of two temptations, that of failure and that of success; and often prosperity will be more dangerous than adversity."[20] The personal healthcare system has not avoided the temptation of prosperity; hopefully, public health can avoid both the failure and prosperity, funding adequately what supports the needs, but avoids excesses, focusing on delivering well-being to all Americans.

Public health both in the past, today, and for many tomorrows has the task of identifying those issues that keep all from achieving health, of developing the new knowledge and expertise to solve those problems, and most challenging of all, to rally the political and societal support and resources to operationalize those solutions.[2] It would be difficult to imagine a more rewarding profession or a higher calling or one with greater impact.

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