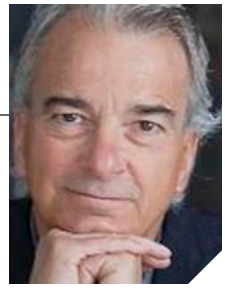

Public Health Expertise Cannot Be Improvised

Ignoring public health expertise, the White House has chosen to bypass the Centers for Disease Control and Prevention (CDC), both as the provider of the data needed to track the COVID-19 pandemic and as the lead agency of the institutional response to this pandemic. This dismissal of the expertise of public health professionals when it is needed the most is baffling.

Public health leadership and practice requires specific training, expertise, and experience. Consider the current pandemic. To track the evolution of the epidemic curve, we need data showing how the infection rate is progressing. These data need to be comparable across time and place and representative of what is really going on in the population. Otherwise, we end up with numbers obtained from skewed samples that provide a biased picture of the state of the pandemic.

Sampling, representativeness, selection, and misclassification errors apply to populations, not to individuals. Public health experts acquire a mode of thinking about health issues in which the basic unit is a group or a population and not an individual. This is unlike anything intelligent individuals encounter in their usual interactions with the world. Public health experts are population thinkers. History tells us that no one can understand or has ever understood population thinking without having analyzed population data or having been specifically trained in it.

For probably 4000 years, human societies were defenseless against severe pandemics because they did not suspect that studying populations could answer questions about the causes of diseases, their evolution, and their management, as studying the care of individual patients could not. But then, in the 17th century, John Graunt, a young British merchant, discovered population thinking by analyzing data about deaths in London over several decades. Graunt's work made public health possible.

In the 19th century, public health professionals in Europe and the United States established collecting and standardizing data about illness in populations as a governmental function. They developed methods to use such data, to study outbreaks of diseases by comparing observed rates with those expected based on past data and sought to make generalizations about the causes of differences among these rates. In the early 20th century, governments and philanthropic organizations, such as the Rockefeller Foundation, created schools of public health to do research on public health practice and teach its methods and findings precisely because it did not suffice to be a physician or a surgeon to be a public health expert.

When the 1918 flu pandemic occurred, the CDC did not yet exist, but Rupert Blue, surgeon general of the US Public Health Service, appointed a public health task force that recommended and implemented a national survey based on the canvassing of randomly selected houses. They collected standardized and representative infection and mortality data on 146 203 people in the fall and winter of 1918, a huge endeavor for that time but an indispensable one.

In 2020, this public health leadership seems to have been lost. Six months into the pandemic, the data available about COVID-19 infection and mortality are obviously flawed because they are based on skewed samples of people at high risk who were screened using tests of varying or unknown accuracy. The sudden channeling of hospital data away from the CDC introduced a technical artifact that will further opacify the tracking of the pandemic even though the wrong move was later corrected.

In this issue of *AJPH*, we have assembled a collection of articles and comments attempting to reimagine what could be a new, post–COVID-19 public health (pp. 1605–1623). However, a central component of the reconstruction of public health is the recognition that public health leadership and practice requires specific training, expertise, and experience that cannot be improvised by persons appointed mainly for their political activities or contributions or by for-profit companies that receive contracts from the federal government. AJPH

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3 Years Ago

Transformational Ethics

Public health practitioners have been inculcated with concepts of transformational leadership during the past two decades, and greater attention has been focused on the ethics of public health. . . . It will not be enough for the public health leader to understand, facilitate, translate, and create the evidence base for public health; every action must be amplified, ameliorated, and contextualized through transformational ethics. . . . Another way of framing this is simply that population health improvements may be accompanied by worsening health inequities unless the public health practitioner of the future conceptualizes public health (writ large) as social justice.

From AJPH, *August 2017, p. 1229–1230.6*

6 Years Ago

System Science in Reimagining Obesity Policy

The IOM [US Institute of Medicine] reimagined and extended the role of players in the obesity system as health care professionals acting as community advocates. The PHSA [Provincial Health Services Authority in British Columbia, Canada] similarly extended the boundaries of subsystem activity by seeking to broaden the research base informing obesity policy to steer away from a biomedical paradigm. Theorists have argued that changes in the obesity system will ultimately be grounded in shifting social norms and cultures; improving the dissemination of knowledge and innovation throughout system networks through activities targeting the system structure level may contribute to this shift.

From AJPH, *July 2014, p. 1277.*