Vaccines and the Trump Administration—Reasons for Optimism Amid Uncertainty

The election of President Donald Trump raised grave concerns for the future of vaccination in the United States. Trump had frequently embraced-both before and during his election campaignbaseless and discredited allegations linking childhood vaccines to autism.1 Shortly before his inauguration, he met with Robert F. Kennedy Jr, one of the most prominent and vocal critics of vaccine safety and current US vaccine policy, who announced after that meeting that he would lead a presidential "vaccine safety commission" charged with investigating these topics.

Despite these signals of a potential dramatic shift coming to US vaccine policy, none has occurred in the initial months of the Trump Administration. To the contrary, each of those appointed to lead the federal agencies responsible for developing, regulating, evaluating, and promoting vaccines has a record of words and actions that unambiguously supports the longstanding consensus regarding the benefits, safety, and value of vaccination. If the adage "personnel is policy" remains true in this unprecedented political climate, then vaccination in the United States is in steady, capable hands, even while many potential threats to the success of vaccination efforts loom.

SCIENCE, POLITICS, AND VACCINATION

The appointment of officials who hold mainstream views about the science of vaccines and embrace—rather than

undermine-the long-standing missions of the agencies they lead stands in contrast to the approach taken elsewhere in the federal government's science and medicine portfolios. From the Environmental Protection Agency to the White House Office of Science and Technology Policy, among other examples, scientific experts have been marginalized and scientific expertise devalued in the current administration. At the US Department of Health and Human Services (HHS), its most senior officials have focused the department's efforts on publicizing the weaknesses of the Affordable Care Act and calling for its repeal by Congress rather than working to support and strengthen the law through administrative and regulatory actions. Other HHS appointees endorse fringe views of reproduction and contraception unsupported by evidence and described by critics as "alternative science."2

Yet a starkly different pattern has emerged with respect to those selected to lead the HHS agencies responsible for vaccines and vaccination. At the Centers for Disease Control and Prevention (CDC), which develops recommended vaccination schedules and coordinates vaccine safety activities, its director, Brenda Fitzgerald, referred to the arguments against vaccination as "debunked," including the "supposed link-that we now know to be false-to autism," in her previous position as state public health commissioner in Georgia.³ In her first interview as CDC

director, she reaffirmed this view, describing herself as a "strong advocate for vaccines."⁴

At the time of Fitzgerald's appointment in July 2017, it was also announced that Anne Schuchat, the acting director at the time, would remain at CDC, returning to the position of principal deputy director she had held in the final years of the Obama Administration. Schuchat, a longtime CDC employee and uniformed officer in the Public Health Service Commissioned Corps, led the CDC's immunization division from 2006 to 2015. These senior appointments make it highly unlikely that the CDC will recast its vaccine safety programs and vaccine recommendations in the manner that some of its critics have called for.

At the US Food and Drug Administration-which reviews and approves new vaccines and collaborates in vaccine postlicensure safety surveillance-Commissioner Scott Gottlieb has been an outspoken and frequent champion of vaccines throughout his initial months in office, echoing views he had expressed before his nomination. At his Senate confirmation hearing in April 2017, he described the issue of vaccines and autism as "one of the most exhaustively studied questions in scientific history."5 "We need to come to the point where we can accept 'no' for

an answer around this question and come to a conclusion that there is no causal link between vaccination and autism," Gottlieb told the Senate. Since his confirmation, Gottlieb has regularly used social media to proactively affirm the safety, benefits, and value of vaccines for individuals and communities alike.

Joining these senior health officials is Jerome Adams, the recently confirmed surgeon general, a position that provides a prominent national platform for delivering public health messages. As state health commissioner in Indiana, Adams regularly promoted evidencebased approaches to vaccination in his public comments and policies. An endorsement of his nomination as surgeon general from the National Association of County and City Health Officials described him as a "staunch advocate for the importance of vaccines."6

THREATS TO US VACCINATION EFFORTS

This group of senior leadership at federal health agencies—along with Francis Collins and Anthony Fauci, remaining in their respective roles as director of the National Institutes of Health and director of the National Institute of Allergy and Infectious Diseases—signals that no imminent departure should be expected from vaccine policies that reflect the overwhelming consensus of the scientific, medical, and public health communities. However, these officials and the agencies they

ABOUT THE AUTHOR

The author is with the Department of Health Policy and Management, Yale School of Public Health, and Section of the History of Medicine, Yale School of Medicine, New Haven, CT. Correspondence should be sent to Jason L. Schwartz, PhD, MBE, Yale School of Public Health, 60 College St, PO Box 208034, New Haven, CT 06520 (e-mail: jason.l.schwartz@ yale.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link. This editorial was accepted August 26, 2017. doi: 10.2105/AJPH.2017.304111 lead will be tested in the months and years ahead by numerous challenges, some already occurring and others that reflect the unpredictable nature of infectious disease as well as the extraordinary current political environment.

Foremost among these challenges will be maintaining and expanding confidence in vaccination at a time when vaccine hesitancy represents a growing threat to the success of vaccination efforts. Sustaining vaccine confidence requires coordinated efforts from all those invested in the success of vaccination programs, with the federal government and its health agencies playing a critical leadership role in collecting evidence, developing evidence-based policies and recommendations, and disseminating insights from those activities to health departments, health care providers, and the public. This work is increasingly difficult already, but it would become immeasurably more so if the president were to express doubts again about vaccine safety via social media or other means or if he were to establish the "vaccine safety commission" led by vaccination critics that he considered but did not act on prior to his inauguration. Those actions or similar actions would legitimize long-rejected assertions about vaccine safety and greatly complicate the work of federal

health officials and their agencies in sending clear messages about the safety and value of vaccination.

Budget constraints could further hinder the work of those responsible for US vaccine regulation and policy. The president's budget for fiscal year 2018 called for major reductions in funding for the National Institutes of Health and CDC, including a 15% reduction in the budget for the CDC immunization program.7 To fund operations at the US Food and Drug Administration, the White House proposed relying to an unprecedented extent on user fees from sponsors of regulated products. Congressional leaders and committees responsible for approving government spending have signaled little enthusiasm for these proposals, but even more modest reductions in annual budgets would substantially impede government vaccination efforts and federal financial support for state and local vaccination activities.

Uncertainty regarding the commitment of the current administration—financial and otherwise—to foreign aid and global health, in particular, also poses a threat to future domestic vaccination activities. Recent examples of imported cases of vaccine-preventable diseases such as measles and the emergence of Ebola virus, Zika virus, and other diseases for which the development of vaccines is a priority underscore the global nature of infectious disease threats. A sustained, wellsupported, and coordinated global commitment to infectious disease threats can advance—and has advanced—domestic health priorities, including prevention through vaccination.

THE ROAD AHEAD

The challenges facing US vaccine policy and vaccine policymakers are many, all the more so given the past statements of the president about vaccine safety and the tenuous place of science and expertise throughout his administration. However, if provided with adequate funding and permitted to work free from political interference, the officials responsible for stewardship of national vaccination efforts should instill considerable confidence among the public that the federal government will continue to pursue a rigorous, science-based approach to sustaining and advancing vaccination programs and policies. AJPH

Jason L. Schwartz, PhD, MBE

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Evolution of Public Health Education in China

For more than 100 years, public health education in China has evolved through several stages: infancy and initial development, creation and stagnation, recovery and reconstruction, and opportunities and development. During these different stages, the name of the discipline has changed from "preventive medicine" to "public health and preventive medicine" as the number of students in and institutions offering public health degree programs have increased significantly. Numerous graduates have been working for China's public health system. The curriculum has evolved from mainly biomedicine to social science and biomedicine combined, and graduating students

ABOUT THE AUTHORS

Both authors are with the Department of Epidemiology and Biostatistics, Peking University School of Public Health, Beijing, China.

Correspondence should be sent to Liming Li, MD, Professor, Department of Epidemiology and Biostatistics, Peking University School of Public Health, 38 Xueyuan Rd, Beijing, China (e-mail: Imlee@vip.163.com). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

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have diverse career options. In the 21st century, public health education in China has established a well-structured and multilevel public health professional training system. Public health education in China has