waning immunity. Data on the frequency of reinfection with seasonal coronaviruses may not be relevant, but they suggest that protection is relatively short term even after natural infection.[5] Revaccination frequency and consequences will need to be determined.

Let us hope that certain problems with the influenza vaccine — such as the failure of vaccination, in some years, to produce the desired increase in protection in previously vaccinated people — do not occur with the SARS-CoV-2 vaccines. Other issues, such as the variant to be targeted by vaccines, will need to be addressed. The successful public–private collaboration in selecting influenza strains offers a model for dealing with such issues. SARS-CoV-2 vaccines will be used globally, and the strain or strains contained in future vaccines will need to be chosen globally, in consultation with the manufacturers.

Most predictions about the shape of the post–Covid-19 world have been inaccurate — a reflection of rapid changes in knowledge. But we can now see a picture emerging in which use of effective vaccines will continue to be critical over the long term. Increases in asymptomatic infections and mild illnesses in vaccinated people will nonetheless continue to be possible, as variants continue to emerge. Counts of hospitalizations and deaths may be more important in monitoring the overall impact than numbers of cases, as long as the vaccines continue to be largely effective at preventing severe illness. The possibility of severe illnesses in a small proportion of vaccinated people does emphasize one of the greatest unmet needs we currently face: continued emphasis on better therapeutics and antiviral agents, which will not be affected by molecular changes in the virus as much as vaccines are.

The future timing and composition of booster vaccine doses will need to be determined on the basis of observational studies. We currently have few data on non-mRNA vaccines, particularly protein-based vaccines, which may have characteristics different from those of mRNA vaccines, especially in terms of duration of immunity.

Overall, the situation will be fluid, but we will require the continuing use of vaccines to avert severe consequences, even if milder illnesses still occur at a low frequency. We need to learn to live with these illnesses, just as we have learned to live with influenza.

Disclosure forms provided by the author are available at NEJM.org.

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HISTORY OF MEDICINE

When Women and Children Made the Policy Agenda — The Sheppard–Towner Act, 100 Years Later

Jeffrey P. Baker, M.D., Ph.D.

On November 23, 1921, President Warren Harding signed into law the Sheppard–Towner Maternity and Infancy Protection Act, which marked the first time in American history that the federal government asserted responsibility for the health of mothers and children. Passed thanks to intensive lobbying by women, who had newly acquired the right to vote, the Act launched a 7-year policy experiment that continues to pose an intriguing "what if" question: How might health and welfare policy have evolved in the United States had this remarkable program not been defeated by organized medicine and states-rights conservatives?

Sheppard–Towner represented the culmination of the Progressive Era crusade to reduce infant mortality.[1] In 1900, at least 10 of every 100 newborns in American cities didn't live to see their first birthday. Reducing infant mortality became the first mission of the U.S. Children's Bureau after its creation in 1912. The first

Women's Suffrage Poster, 1915.
From the Missouri Historical Society.

federal agency led by women, the Bureau tirelessly promoted maternal education, championing the use of public health nurses and preventive health examinations to promote knowledge about breastfeeding and infant hygiene. Many of its members came from urban settlements such as Jane Addams's Hull House, which was part of the movement that gave rise to the profession of social work. Though small in size, the agency cooperated with a vast network of women's associations to promote its programs in eastern cities. The Bureau also conducted a series of fine-grained studies in 10 U.S. cities that demonstrated the close relationship between infant mortality and low income.

As the United States entered World War I in 1917, the Children's Bureau's first director, Julia Lathrop, sensed that the time was ripe for direct federal involvement in children's health. The rejection of nearly 30% of U.S. army recruits because of physical infirmities,[1] many of which had originated in childhood, fueled a national sense of urgency. Lathrop proposed an initiative under which the federal government would provide matching funds to state and local education programs targeting women and children. She made a pragmatic decision not to include European-style economic benefits, such as compensation for maternity leave or health care costs. A conservative tide swept the country at the end of the war, and the first bills proposing the new program met with considerable hostility in successive Congresses. One senator derisively suggested that the 1920 bill, sponsored by Democrat Morris Sheppard and Republican Horace Mann Towner, be titled, "A Bill to Organize a Board of Spinsters to Teach Mothers How to Raise Babies."[2]

But in 1920, the rules of politics were turned on their head. The ratification of the 19th Amendment gave women the right to vote. Suffragists had long argued that the health of mothers and babies would never be addressed until politicians had to listen to women (see image). Now women throughout the country acted through their associations and magazines, deluging Congress with letters and editorials demanding that the Maternity and Infancy Protection Bill be passed. Facing the prospect of a united women's voting bloc, Congress blinked, and the unthinkable became a reality.

The Sheppard–Towner Act adapted the maternal education strategies developed primarily in eastern cities and extended them throughout the country, particularly in the rural South and West. Over the next 7 years, the law supported more than 180,000 child health "consultations," in which teams of nurses accompanied by a physician ran demonstration clinics, often in remote locations, promoting breastfeeding, dispensing advice, and performing examinations. Some of these consultations marked the first government-sponsored outreach to Black or Native American mothers. Initially held in schoolhouses, churches, or mobile vans, many of these events were followed by the establishment of permanent clinics and visiting-nurse programs. Sheppard–Towner nurses visited more than 3 million homes and distributed more than 22 million pieces of literature.[3]

Historians' verdicts on Sheppard–Towner have been mixed. Some have underscored the program's deficiencies — its failure to provide for medical treatment or maternity leave, its marginalization of midwifery, and most of all, its complicity with the segregated health care system of the South.[4] But comparative analysis using data from various states suggests that, despite such limitations, Sheppard–Towner initiatives — particularly the home-visitation programs — probably accounted for 9 to 21% of the national decline in infant mortality between 1921 and 1929.[5]

Historians agree, however, that the program triggered a powerful backlash. Heading the opposition was organized medicine. From the start, the American Medical Association had regarded the program as a step toward socialized medicine that undermined private practice, even though the Act provided no funding for medical treatment. The political climate of the 1920s continued to shift to the right, and

politicians had lost their fear that women would vote as a united bloc. In 1926, after a fierce political battle, Congress agreed to extend the program for only 2 more years, on the condition that it be mandated to expire in 1929. The new president, Herbert Hoover, offered no support. Hoover agreed with the medical profession that all federal health programs — including the Children's Bureau — should be amalgamated into the U.S. Public Health Service.

What followed wasn't the end of preventive health care for mothers and infants but the rise of a two-tiered system. On the one hand, private physicians began offering prenatal and well-child care in their offices for families who could pay. The Maternity and Infancy Protection Act played an important role in promoting the value of "scientific motherhood" and encouraged mothers to seek the counsel of medical experts on matters once considered the domain of grandparents and neighbors. Pediatricians and obstetricians took advantage of this demand, although most were male and all had been trained in hospital-based residency programs that provided little experience in preventive health care. In contrast, families who were unable to see a private physician were left to rely on health departments and hospital outpatient clinics. Even when Title V of the 1935 Social Security Act later restored some maternal and child health services, these programs were limited to rural and economically distressed areas.

An audio interview with Dr. Baker is available at NEJM.org

Despite its shortcomings, the Sheppard–Towner Act was a striking experiment in preventive health policy. It was rooted in Lathrop's conviction that children were a national resource whose welfare should be promoted by a single system, run by professional women and funded by the government. Just as the Children's Bureau was independent of the Public Health Service, Sheppard–Towner interventions were not centered around physicians. Nurses, working closely with public health professionals, were the heart of the program. Much of their educational work took place in homes, rather than in busy doctors' offices. All these efforts revolved around an understanding of children's welfare as a collective responsibility, too important to be subordinated to the marketplace. Had the program survived, the United States a century ago might have developed a model for promoting child health that integrated preventive medical care with social services, which could have been a powerful engine for addressing the social determinants of health.

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WINNER OF THE 2021 NEJM MEDICAL FICTION CONTEST

The Billboard

Rachel H. Kowalsky, M.D., M.P.H.

The Call to Glory

Dr. Oscar Velázquez had never been on a billboard. His patients had asthma action plans, they were vaccinated, and they knew his position on juice: it was an affliction. But this had never won him any glory.

Patients and doctors from the Mercy Hospital System were selected for billboards every year — transplant surgeons, oncologists, sometimes an orthopedist — but during Oscar's 4 years on staff, no pediatrician had ever loomed above Broadway in black and white, regarding the people on the avenue with wisdom and gravitas. He dreamed of this.

The email blast came June 24: *We are delighted to announce our 2021 billboard campaign, honoring our patients and providers. If you recently cared for a patient with an extraordinary story, please let us know by July 1.*

It was signed by Rosemary, from Communications.