U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Opening Statement

Chairwoman Eddie Bernice Johnson (D-TX)

Full Committee Hearing:
Fighting Flu, Saving Lives: Vaccine Innovation and Science

Wednesday, November 20, 2019

Good morning and welcome to today's hearing on vaccine science and innovation.

Smallpox once plagued the world's population, killing approximately 300 million people in the 20th century alone. Smallpox is the only human disease to be eradicated, thanks to the development of the vaccine. Another devastating disease, polio, had just 33 cases reported worldwide in 2018, compared to 350,000 cases in 1988. Every day, vaccines are saving lives, especially the lives of children and other vulnerable populations. There is no such thing as healthy skepticism when it comes to vaccines.

Unfortunately, there is a well-funded disinformation campaign targeting the public and weakening public health laws. School vaccination requirements have been commonplace in the U.S. for generations, and exemptions were granted only for legitimate medical reasons. However, in my home state of Texas, the number of unvaccinated children has spiked since 2003, when the Texas Legislature expanded the exemptions to include non-medical reasons. The number of exemptions rose from 2,000 in the year 2003 to 57,000 last year. We are seeing this replayed across the country, and innocent children are falling ill. Health officials have confirmed 21 measles cases in Texas this year, and 1,261 nationwide, 61 of which led to serious complications.

As the first nurse elected to Congress, I have been dedicated to the improvement of public health my entire career. The Science Committee may not have jurisdiction over the Health and Human Services agencies, but we have long had a role in supporting improved public health through good science.

This morning, we will explore the science and innovation challenges for vaccine development through the lens of influenza. For the healthiest among us, the flu just lays us out for several days, with no lasting side effects. However, for the very young, the elderly, pregnant women, and other vulnerable groups, the flu can be deadly. The Centers for Disease Control recorded an estimated 48.8 million illnesses and 79,000 deaths during the 2017-2018 flu season. Approximately 600 of those deaths were children.

Each year, influenza vaccine production begins with the collection and analysis of data many months before the beginning of the flu season. The challenge with influenza is that the viruses change constantly, and by the time flu season begins, the vaccine may not fully match the circulating viruses. Scientists are working to develop viable and more effective alternatives to the current egg-based vaccine, as well as a universal vaccine that will not require annual update. Yet another scientific challenge for influenza and many other infectious diseases is incomplete data and antiquated data systems. Through modernization of data systems and data analytic tools across the federal and state levels, we will be able to accelerate vaccine research and development for many diseases.

We have two expert panels that will help us understand the full cycle from basic research to vaccine development, production, deployment, and surveillance. The witnesses will also describe the role of federal agencies, state agencies, and the private sector, including the partnerships among all of the stakeholders.

I want to extend a warm welcome to all of you this morning. And I want to thank the Vice-Chair Dr. Bera for his leadership on this issue. I look forward to today's important discussion.