

Experts Question Denmark's Vaccine Program as a Model for the U.S.

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COPENHAGEN — The United States, a nation of 343 million people with a complex and overburdened health care system, is poised to adopt the childhood vaccine recommendations used in Denmark, a country of six million with universal health care. The decision has alarmed public health experts in both countries.

Robert F. Kennedy Jr., the U.S. health secretary, is expected to announce the move in the new year. It would reduce the number of immunizations required for American children to 10 from 17, radically changing the recommended vaccines without the deliberative process that the United States has relied on for decades.

Instead, Mr. Kennedy is following a presidential directive issued on Dec. 5 by President Trump, which said the United States was an "outlier" in the number of vaccines children receive, pointing to Denmark, Germany and Japan as peer countries that recommend fewer.

But public health experts have questioned the comparison to Denmark, and the assumptions underlying the expected U.S. move.

"We're using the information from a country that is the size of one of our states to dictate what should happen to children. And that is just wrong," said Dr. Kathryn Edwards, a professor emerita of pediatrics at Vanderbilt University Medical Center and a

Apoorva Mandavilli contributed reporting.

prominent vaccine expert.

"The Danish approach to vaccination is relevant to the Danish population," said Dr. Edwards, who was a member of the committee that recommends vaccines for Americans in the 1990s. "The U.S. approach is appropriate for the U.S."

Why does the U.S. say it chose Denmark as its model?

Reducing the number of childhood vaccinations has been a longtime goal for Mr. Kennedy, who has a deep skepticism of vaccines.

In a memo in early December, Mr. Trump directed Mr. Kennedy to align U.S. vaccine recommendations with "best practices from peer, developed countries."

Vaccine experts say that is already the case. "We are already in line with our peer nations," the Vaccine Integrity Project at the University of Minnesota said in a statement. The United States is on the upper end of recommending vaccinations, but its schedule is closely aligned with those of Canada, Britain, Australia and Germany.

The presidential memorandum on childhood vaccines notes that Denmark "recommends vaccinations for just 10 diseases with serious morbidity or mortality risks."

That makes Denmark a rarity. Data from the Vaccine Integrity Project shows that Denmark recommends fewer shots than many of its European peers, including other Nordic nations, according to country comparisons on the European Vaccination Information Portal.

Kristian G. Andersen, a Danish-



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A researcher in Copenhagen working on a Covid vaccine in 2020. The U.S. is expected to adopt Denmark's vaccine schedule.

American professor in the immunology and microbiology department at the Scripps Research Institute in California, said the United States already has one of the best standards for vaccine recommendations.

"Their childhood vaccine program covers almost everything it should," Dr. Andersen said.

"The Danish program does not," he added, noting that the Nordic country "has one of the most minimal vaccine programs among wealthy nations."

"Denmark is the outlier," Dr. Andersen said. "Not the United States."

Why does Denmark require fewer vaccines?

Some of the differences in vaccine schedules, Dr. Andersen said, came down to how the different

countries weigh the costs of care.

"They are economic decisions," he said. "Authorities look at how many children get sick, how many are hospitalized, how many die, and then they calculate the cost of vaccination versus the cost of illness."

Different cost analyses are one factor. Another is the difference in countries' "burden of disease," which is the overall impact of any health problem. Both are heavily influenced by their approaches to health care.

Denmark has universal health care; that means Danes can get treated more easily for diseases and often seek medical help earlier. Its people do not pay for most doctors' appointments.

In the United States, about 8 percent of the population is uninsured. Even with health insur-

ance, some American families need to decide whether a child is sick enough to justify the potential cost of a doctor's visit.

"The United States is not the same as Denmark," Dr. Jennifer B. Nuzzo, the director of the Pandemic Center at the Brown University School of Public Health, wrote in an email. "The U.S. doesn't have guaranteed, free health care that ensures every pregnant woman and baby gets appropriate medical care on a regular schedule."

Danish parents have no financial reason to wait and see if their child is sick enough to justify a trip to the doctor, experts said. That means children can get seen earlier, which could protect them from dangerous complications.

"The risk of severe consequences of an infection in the United States is much higher than in Denmark," said Dr. Lone Graff Stensballe, a professor of pediatric vaccinology at the University of Copenhagen. "That is why, on average, the Americans would need more vaccines," she said.

"If not everyone has free access to hospitals, vaccines are even more important," said Dr. Stensballe, who is also an expert in pediatric infectious diseases at the Danish National University Hospital. "It would be such a risk and such a potential waste of life not to be immunized if you don't have free access to health care."

Why do different countries require vaccines for different diseases?

It is not unusual for different countries to require vaccinations for a different set of diseases.

Consider Japan. Its vaccination schedule includes a shot against the Japanese encephalitis virus, which can cause severe illness and is spread by mosquitoes in parts of Asia and the Western Pacific.

Many people who are infected with the virus do not have symptoms, but some develop encephalitis, a dangerous inflammation of the brain. Up to 30 percent of people who get encephalitis will die, according to the Centers for Disease Control and Prevention. Most cases occur in children, the World Health Organization said.

But the virus is not a significant threat in the United States. So the C.D.C. recommends the Japanese encephalitis vaccine only for some travelers to the region.

Denmark's approach to vaccines for hepatitis B, a serious liver infection, is different from that of many other countries, including the United States.

The disease can spread through unprotected sex, sharing needles and other ways people share blood and fluids. Pregnant women with hepatitis B can also pass it to their children while giving birth.

Until recently, the United States required that all newborns be immunized at birth against hepatitis B. It still requires the shot for babies whose mothers are known to be infected, or whose status is not known.

Denmark recommends the vaccine only for newborns of infected women. But nearly all pregnant women in Denmark are screened for the disease, compared with about 80 percent, Dr. Edwards said.