

# COUNCIL ON FOREIGN RELATIONS

---

58 EAST 68TH STREET • NEW YORK • NEW YORK 10021  
Tel 212 434 9888 Fax 212 434 9832 Website [www.cfr.org](http://www.cfr.org)

## Summary: A Conference on the Global Threat of Pandemic Influenza

On November 16, 2005 the Council on Foreign Relations held a day-long conference on the global threat of pandemic influenza, bringing together leaders in the public health, business, and nonprofit sectors to assess the planning and priorities for an emergency that could be as close as a year or as distant as decades away.

Sessions at the conference covered the current state of global efforts to contain and control the virus, the U.S. government's role in preparing for a pandemic, the business community's role, and scenarios for the world in the aftermath of a bird flu pandemic.

At least 132 people worldwide have contracted the H5N1 avian influenza virus, sixty-eight fatally, according to the November 25 situation report of the World Health Organization. There have been only a few cases of suspected person to person transmission. The virus has a transmission rate of nearly zero percent and a mortality rate of more than 50 percent. How and whether those rates change as the virus mutates over time will determine much of the impact of a potential H5N1 pandemic on the human population. While international attention is currently focused on the spread of H5N1, it is not assured that this will be the virus that causes the next influenza pandemic.

### **Among the main points raised by participants at the conference:**

- Public health experts agreed that the probability of an influenza pandemic is high, but its timing, region of origin, and severity cannot be predicted.
- While the impact of a possible influenza pandemic is unknown, many participants said it would be severe in terms of loss of life, global economic disruption, social upheaval and political instability. This would be the first pandemic in the age of globalization. Its spread would be aided by international trade and travel, and attempts to mitigate it would be hobbled by the failure of the international supply chains that provide basic medicines and medical supplies.
- Several conference participants cited the significant economic impact of the relatively minor 2003 SARS epidemic, which infected more than 8,000 people and killed at least 774, in describing the possible economic effects of an influenza pandemic. Another participant was less dire in his predictions, noting the resiliency of the U.S. economy and the flexibility of its manufacturing sector.

- Governments, international organizations, the business community, and the nonprofit sector are currently unprepared for a virulent influenza pandemic. While many panelists praised the U.S. government's \$7.1 billion pandemic influenza plan for its commitment to new vaccine technologies, they were critical of U.S. funding priorities at the state level and internationally.
- Much of the public debate over bird flu is of limited relevance in efforts to contain and mitigate an outbreak. The antiviral drug Tamiflu could have little or no effect in defending against or treating avian influenza. Quarantines, which made headlines in October as a possible U.S. response, would have limited efficacy in containing influenza. Even bird culls, part of the basic avian influenza protocol, would do little to slow the spread of bird flu from wild fowl to domestic poultry without aggressive and sustained vaccination of farm birds.
- Business leaders said they believed they were on track in developing contingency plans for a human avian flu outbreak. Public health experts said they found business leaders inadequately concerned about the possible effects of a pandemic on their businesses and the world economy, and too narrow in their focus on Asia.

**The prescriptions included:**

- Recommendations for the United States and other governments highlighted the fact that countries at the center of the spread of bird flu lack sufficient resources to battle its spread and will require significant Western help to fund local-level programs for education, poultry vaccination, and compensation for farmers whose birds are culled. In the event of a pandemic, the West must use its capacity to produce vaccines for the people of the developing world.
- Participants said the United States and other vaccine-producing nations must in the near term prepare for large-scale production of emergency vaccines. Here, public health authorities face a dilemma. Vaccines created now for the H5N1 virus would be less effective against a later H5N1 pandemic, because the virus continues to mutate. Vaccines created for the specific virus that causes a pandemic would be more effective, but could become available only after the first wave of a pandemic is under way. Several panelists discussed the need to indemnify manufacturers of emergency vaccines, as such vaccines would by necessity be rushed into production and distribution, bypassing some conventional testing and trials. One participant said any law indemnifying vaccine makers should include a provision to compensate people injured by the vaccine.
- Panelists focused many of their recommendations on middle- and long-term preparedness. The vaccine production, budgeting, consequence planning, and rehearsals required to mitigate a pandemic will take time and cannot be meaningfully organized in a matter of months. Nations should begin work now on detailed influenza plans that are audited by peer states or international organizations, regularly rehearsed and revised as necessary. In the short term, the United States should devote significant attention and resources to slowing the spread of H5N1 in Asia through partnerships with individual states.

## **SESSION ONE: Avian Flu: Where Do We Stand?**

The conference's first session brought together Amin Soebandrio, assistant deputy for health & medical sciences at the Indonesian Ministry of Research & Technology; Robert Webster, professor in the division of virology at St. Jude Children's Research Hospital; Stephen Wolinsky, chief of the division of infectious diseases at the Feinberg School of Medicine, Northwestern University; and moderator Ray Suarez, senior correspondent for "The NewsHour with Jim Lehrer."

Their discussion focused on efforts to control the spread of avian flu among poultry stocks in Southeast Asia and on the possible effects of avian influenza on Africa's HIV-positive populations.

Soebandrio described an ineffective and distrusted central government in Indonesia acting in good faith to convince its poultry farmers to participate in efforts against bird flu. Those efforts are hampered by limited resources and a top-down approach, he said.

For example, small farmers have no incentive to report the presence of sick birds in their flocks. Reporting means the farmer's entire flock will be culled, usually with limited or no compensation, which is a problem throughout the region, including in China. Surveillance suffers for want of money. Indonesia has confirmed seven deaths from H5N1 influenza [WHO, November 25].

Because of sparse resources, authorities have been culling only the immediate flock where sick birds are found, Soebandrio said, not those within the World Organization for Animal Health's recommended "kill zone" of three square kilometers. "We should have killed more than ten million" farm birds by now, Soebandrio said.

Culling itself has a limited effect on the spread of the virus because every chicken or duck killed is replaced by another bird that, if not vaccinated, is susceptible to infection from contact with wild birds. Thailand "killed and killed and killed, and they had nearly a year almost free of bird flu, but it's back. And there are human cases," Webster said. Culling, combined with "tough vaccination" of poultry "is the only way forward at the agricultural level," he explained.

Larger farms throughout the region have begun vaccinating their flocks, but many have used counterfeit, diluted, or inferior vaccine. In cases where Indonesian farmers were convinced to keep their birds at home in infected areas, rather than take them to market, they continued to transport and sell chicken feces as fertilizer, Soebandrio said, due to an apparent omission by Indonesian public health authorities. Contact with chicken droppings is the primary vector for H5N1 transmission to other animals and plays a role in the transmission of H5N1 to humans.

Financial aid, coupled with a village-level approach using local leaders as the face of bird flu control, is required to turn the good faith of Indonesia and other regional countries into effective action against bird flu, Soebandrio said.

As Indonesia and other countries work to keep their poultry stocks and people free of H5N1, migratory birds continue to carry the virus west. “It’s sitting on the knife edge for spreading to Africa,” Webster said, and it will appear in the Americas next year.

For the large number of people in Africa with HIV, H5N1 flu presents two grim scenarios. If the virus combines with human flu in the manner of the 1956 and 1968 flu pandemics, infection would mean a quick death for people with suppressed immune systems. “It can be quite staggering in terms of the potential for death toll and disability that it will have on those populations,” Wolinsky said.

Webster revealed that flu researchers have now identified the fourteen key point mutations that the 1918 influenza virus went through to make the leap from a benign animal virus to a mass killer of human beings. Webster said he expects the H5N1 avian influenza to follow a similar pattern, meaning researchers may be better equipped to spot a dangerous strain as it emerges. The 1918 flu pandemic killed between 50 million and 100 million people, more than 550,000 of them in the United States.

If the virus mutates to the point of human lethality and transmissibility, people with HIV might not show symptoms. The 1918 flu was so novel to humans that it provoked a massive immune response, which in turn destroyed the lungs of those infected. Without that immune response, people with HIV could become carriers and incubators for avian influenza, transmitting it to those around them.

## **SESSION TWO: Containment and Control**

Can a pandemic be contained? Can it even be controlled? Session two highlighted the vulnerabilities of the global economy, global public health, and governments large and small in the face of a bird flu pandemic. Panelists were David Fedson, former medical director at Aventis Pasteur MSD; David Nabarro, senior system coordinator for avian and human influenza at the United Nations; Michael Osterholm, director of the Center for Infectious Disease Research and Policy at the University of Minnesota; and moderator Robert Bazell, chief science correspondent at NBC News.

Bazell began by asking if public health experts were being too alarmist. Do we have to scare people to make governments pay attention? And how long will they pay attention?

Osterholm said the current spate of news reports about bird flu would come back to haunt the public health community. “If we don’t see a pandemic in six to eight weeks, we’re going to see blowback,” he said. Recent weeks have seen “the media on steroids,” Osterholm said.

Nabarro replied that that decision-makers “have suddenly realized this is a serious issue....I don’t think there will be blowback.”

Fedson said that if the 1918 pandemic happened today, it would kill between 175 and 300 million people. “The case fatality rate for avian flu is much higher” than the 1918 strain of influenza, he said. “Now, how many deaths do you need to talk about before you start getting the attention of politicians and get them to start saying, ‘we ought to do something about this’?”

Osterholm, in this panel and as an audience member at subsequent panels, described in detail the possible effects of a pandemic on the global economy and public health. If trade stops, he said, the United States will lack basic medicines and necessities like syringes, surgical masks, and IV bags, all of which are manufactured overseas. Such a pandemic couldn’t be contained, he said, noting that that influenza crossed continents during the Middle Ages, when few people traveled beyond their immediate towns.

Fedson and Osterholm agreed that the antiviral drug Tamiflu would be of limited use in preventing or treating cases of avian influenza. The United States and other governments are devoting resources towards the stockpiling of antivirals including Tamiflu. Current assumptions are that someone with H5N1 or a similar virulent flu would need to take Tamiflu within two or three hours to shorten the course of the disease.

However, early symptoms of virulent bird flu are exactly the same as the symptoms of regular flu and share indications with more than a dozen other diseases. Tamiflu is “an expression of hope,” Fedson said. “Do I think it will work? I think it’s extraordinarily unlikely.”

In the interim, Nabarro said, each country must have a pandemic plan that is reviewed and revised by peer nations or international organizations—and regularly rehearsed. Even then, it would only mitigate the effects of a pandemic.

The business community and the nonprofit sector also represent key actors that, so far, are largely absent from planning at the federal level, though they would certainly have a role in maintaining critical services, panelists said.

The conversation turned to vaccines and vaccine production. If Tamiflu and other antivirals are of little help against avian influenza, what about vaccines?

Fedson said there was global capacity to produce enough vaccine for 3.5 billion people if needed, “more than global public health has the capacity to deliver,” he explained. “I think it’s doable. It’s a matter of human organization and logistics and, of course, doing the necessary clinical trials with an H5N1 virus, which we have not done.” Bazell added, “I hope he’s right, but I wouldn’t want anybody to walk out of here today thinking we’ve got three billion doses of vaccine tomorrow.”

Any influenza containment strategy would rely on transparency. Nabarro said China, which initially covered up the 2003 SARS outbreak, was taking a responsible approach to avian influenza. “The dialogue between China and WHO has been a dialogue of two responsible parties,” he said.

### **SESSION THREE: The U.S. Government's Role**

How will U.S. authorities respond to a pandemic? What are the U.S. government's responsibilities to the fifty states? What are its responsibilities to the world? The conference's third session included Jeffrey Levi, senior policy adviser at the Trust for America's Health; Susan Blumenthal, former assistant surgeon general, U.S. Department of Health and Human Services; William Winkenwerder Jr., assistant secretary for health affairs, U.S. Department of Defense; and moderator Brian Ross, chief investigative correspondent at ABC News.

Ross began by asking if President Bush's \$7.1 billion plan for pandemic influenza was adequate. Blumenthal said the plan was "a skeleton, but we need to put the flesh on it in terms of adding the initiatives that will make a life-saving difference to people in America and around the world." This issue, she said, is where the funds are going.

Not to the states, said Levi, who noted that only \$100 million of the president's pandemic funding was earmarked for the states. States would have to provide \$550 million for vaccine development under the president's plan. "To ask the state of Louisiana, in its current financial situation, to be paying 75 percent of the cost of antivirals for their state, well, that's just not going to happen," Levi said.

Winkenwerder said spending was an indicator of a state's priorities. "And this ought to move up the priority list, and so that means states are spending billions and billions of dollars in their Medicaid programs and other health programs," he said. "If they can't manage to move a few million dollars around to do some of these things, then how important is it?"

Levi and others noted that many states have balanced budget laws that prohibit deficits. Money for bird flu would likely come out of other public health funding. "We have to be careful about robbing Peter to pay Paul," he said.

Winkenwerder, echoing comments by previous panelists, said large-scale quarantines would have "limited effectiveness" in slowing an influenza pandemic.

Levi raised a theme that recurred throughout the conference, saying the U.S. defense against bird flu should begin not in America, but overseas. He called on the United States to produce vaccines for the entire world. "The more vaccine that's out there, the less likely Americans are going to be to become sick," he said.

Winkenwerder was asked about the military's role in stockpiling medicines. He said the Pentagon had ordered 2.7 million doses of H5N1 vaccine, which could potentially be shared with the civilian population.

“Why do you get it first?” Ross asked.

“We are a critical national security asset,” Winkenwerder explained. Military doctors and nurses as well as troops in Iraq and Afghanistan would have to be inoculated.

Several panelists during the course of the conference mentioned the need for a law indemnifying manufacturers of emergency vaccines. “The reason industry wants liability protection is they recognize there may well be side-effects,” Levi said. “And in the context of a pandemic vaccine we will probably not have tested it as well. We may be doing it somewhat differently, and there may be injuries to people, and we need to assure that people get compensation as well.”

#### **SESSION FOUR: The Business Community’s Role**

Session four brought together Richard Foster, managing partner, Foster Health Partners LLC; Gerald Komisar, senior vice president for global risk assessments at American International Group; William Kinane, vice president of the international division at Guardsmark LLC; and moderator Kathryn Pilgrim, an anchor and correspondent at CNN.

Large U.S. companies are preparing for a bird flu pandemic, Foster, Komisar, and Kinane said, with a focus on protecting their employees in Asia. “We felt we needed a plan and the SARS plan wouldn’t do,” said Komisar, whose company employs 92,000 people worldwide.

American corporations will rely on chief medical officers to advise on when to restrict corporate travel to infected areas or areas that threaten infection. The decisions of individual medical officers would be informed by communications from the Centers for Disease Control and Prevention and by the decisions of other corporate medical officers.

Foster said companies he had surveyed had decided against purchasing Tamiflu for their workforces. First, they doubted they could obtain sufficient quantities. “If they do get enough, they’re quite concerned that if the pandemic occurs the government will confiscate the Tamiflu that they have,” Foster said. Even if sufficient Tamiflu could be obtained to treat employees, Foster continued, there surely would not be enough for their families.

Pilgrim asked panelists to talk about the financial costs of a pandemic. Kinane said it would be impossible to estimate the potential economic damage.

Foster said large corporations were aware of the broad range of issues facing industry in the event of an influenza pandemic and were working on contingencies to address them. Audience members noted that smaller corporations and businesses did not have the resource to initiate such plans for their workforces.

## **SESSION FIVE: What Would the World Look Like After a Pandemic?**

Session five was devoted to the worst case scenario. The panel consisted of Laurie Garrett, the Council's senior fellow for global health; Yanzhong Huang, assistant professor at the John C. Whitehead School of Diplomacy and International Relations at Seton Hall University; David Malpass, chief economist at Bear, Stearns Co. & Inc.; and moderator Sheryl WuDunn, industry and international business editor at the *New York Times*.

How, WuDunn asked, might an influenza pandemic initiate and spread?

Start with surveillance, Garrett said. The first signs of a pandemic would be discrete, like a run on bottled vinegar, a reputed barrier to infectious disease, in China's Hunan Province. By the time scattered illnesses were analyzed and identified as avian flu, travelers would have spread it to other provinces and to other countries. "Escape has happened by the time you know about the first case," Garrett said.

At that, unions for airline and air freight companies would likely prevent their members from flying to affected states. Trade would slow and then stop, but not in time to contain the virus.

As the pandemic spread via air and trade routes, it would shake strong governments and destroy weak ones, Huang and Garrett said. In China, the Communist Party would lose much legitimacy. In Africa, where weak states have high numbers of HIV-positive citizens and poor public health facilities, governance would crumble and "a Hobbesian world of everyone against everyone" would emerge, Huang said. "The pandemic is going to play into the hands of jihadists, terrorists, and rebels."

WuDunn asked about the economic costs of a pandemic. Malpass, the conference's quiet skeptic, noted the resiliency of Russia and China during periods of mass death. In a day marked by talk of infection, transmission, and morbidity rates, Malpass added another variable, the "flexibility of economic systems and human nature."

When Garrett questioned the ability of the U.S. economy to function without Chinese goods, Malpass replied that the United States was the world's largest manufacturer. When the topic turned to panic, he noted the fortitude of Britons during the V2 rocket attacks of World War II. "We are dealing with a low probability" of a devastating pandemic, he said.

Osterholm, speaking as a member of the audience in this session, disagreed. "The probability of a pandemic is 100 percent," Osterholm, said. "We don't know where it will occur, when it will start, and how severe it would be."

Malpass reiterated his position. "One hundred percent probability speaks for itself," he said. "Can the U.S. produce if there is an interruption in global trade? We have the most flexible, by far, national economy." Banks and markets could weather a pandemic, Malpass said. The economic weak points would be distribution and "daily security issues."

Estimates of the economic cost, as William Kinane noted in the fourth session, are fruitless. The Asian Development Bank has estimated a pandemic would cost Asia \$400 billion, Garrett said. The World Bank has said \$800 billion for Asia and \$550 billion for the countries of the Organization for Economic Co-operation and Development. “It’s all guessing,” Garrett said.

In the face of an eighteen- to twenty-four-month estimated pandemic period, what other societal changes could be expected? Malpass said new leaders could emerge as well as new technologies to address the pandemic.

Technical innovation could save lives, the panelists agreed, noting they would likely be the lives of residents of the nine wealthiest countries. What, Garrett asked, will Mexicans think of Americans when the distribution of new treatments and vaccines stops at the Rio Grande? “It could be that the role of the U.S. military is to form a great wall on the Mexican border.”

Reprising a theme that ran throughout the conference, Huang and Garrett were critical of the small percentage of U.S. pandemic flu funding that is earmarked for international efforts. The allocation “reflects our fortress mentality,” Huang said. “Helping them is also helping us.”

\*\*\*\*\*

Nearly 300 people attended the conference, which was video-linked to the Council’s Washington, DC office. The sessions were also webcast on [cfr.org](http://cfr.org). Approximately 300 additional individuals and organizations viewed the conference, including the American Public Health Association, the Texas Department of State Health Services, the Bill & Melinda Gates Foundation, the Carnegie Mellon University in Qatar, the Virginia Department of Public Health, and several student health and wellness centers across the country.

Transcripts, audio files, and video of the sessions are posted on [www.cfr.org](http://www.cfr.org).

The pandemic flu conference was made possible through the generosity of the Leonard and Evelyn Lauder Foundation.

Founded in 1921, the Council on Foreign Relations is an independent national membership organization and a nonpartisan center for scholars dedicated to producing and disseminating ideas so that members, students, interested citizens, and government officials in the United States and other countries can better understand the world and the foreign policy choices facing the United States and other governments.

**For more information go to [www.cfr.org](http://www.cfr.org)**