

Bird flu: Things to know, not fear

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The avian flu virus has spread across much of Asia and is making its way across Europe. Though fewer than 200 human cases have been reported, the global health community is closely monitoring its path with hopes of preventing a catastrophic pandemic.

While only 1 in 3 Americans in a recent poll fear an infection from "bird flu," health officials in the USA are working under the assumption that the virus will reach our shores, though not necessarily with disastrous results. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health, discussed the bird flu with USA TODAY's editors and reporters. His comments were edited for length and clarity.

Question: Is bird flu likely to affect people in the United States? And if it does, how will it arrive?

Answer: I'm less worried about a massive bird infection that then infects people in the United States, than I am of an influenza coming over here on an airplane (carried by a human). We already know from Europe that if you have reasonably good controls, it is not impossible but unlikely that you're going to have massive contamination of chickens (from which the disease has spread to humans in poorer countries because of poor sanitation).

What is more likely is *if* there's a pandemic — and that's a big *if* — and *if* this virus is genetically capable of evolving, an outbreak would more likely occur in a population of people — such as in Africa, Southeast Asia or India — where you have a massive contamination of chicken flocks, exposure of people, and enough people infected to give the virus the chance to evolve and spread from human to human. And once that happens, then it's going to be spread the way you get influenza every year.

Q: How much warning would Americans likely have that a severe pandemic was going to affect them?

A: There's no way of knowing for sure, but it would probably be a matter of several weeks to months.

Q: What would happen then?

A: If the virus becomes more adaptable to humans and doesn't spread as rapidly as the seasonal flu, you'll see some doctors and health officials start to impose certain types of quarantines, restrictions on travel, and start vaccinating people around the country. These actions would be unlikely to stop the spread of the flu, but they could slow it down, which would give you weeks to months.

17. If we immediately started cranking out more pre-pandemic vaccine, which is not a perfect match, we would have some effect on slowing things down. Then we'd deploy that to the people who are on the priority list — people who make vaccines, health care workers, people with the highest risk with diseases.

Q: If initially there isn't enough vaccine for everyone, what else can be done?

A: There are other very good public health things you can do, including what we call social distancing, which really works. By social distancing we mean staying out of crowded places. When children get sick, you don't send them to school. When people are sick, they don't go to work.

Organizations like your own should have ways of saying we can't exist with a cumulative 40% workforce absence, so when people get sick, tell them to go home and do everything from home.

Q: Is it likely that the flu would be severe enough to require such extreme measures?

A: If you look historically, pandemic flu isn't necessarily all gloom and doom. There is an enormous spectrum of severity of pandemic flu. Pandemic means it's widespread, and it's a brand new virus to which you have had no contact. In 1918, which is the worst-case scenario, more than 50 million people died.

On the other end of the spectrum was 1968, which was a pandemic because it was the first time we had seen H3N2 (virus). The 1968 pandemic was not substantially more severe than the normal, run-of-the-mill seasonal flu. We can have a pandemic that is something much, much less severe than the 1918 and still have a pandemic.

Q: Is there any way someone could become sick from eating an infected bird?

A: It is unlikely to be gotten from eating chicken because it is clear that the virus is killed by cooking. If you cook chicken, it is going to kill the virus.

Q: What should people or companies be doing now, if anything?

A: Have a plan. Just get yourself a plan. Each family unit should have some degree of preparedness for any disaster that would interrupt the normal supply of things that you and your family needs. Now, that could mean a few weeks worth of water, a few weeks worth of non-spoilable foods. More important to me is the people who have chronic diseases who rely on daily medications. They should have a couple of weeks' supply of that around, just like when they go on vacation.

Q: Two years ago, we had a shortage of flu vaccine that resulted in many older people waiting in long lines. Has there been any progress creating a more orderly distribution?

A: We are not where we need to be for a widespread massive distribution of vaccine. Although the Centers for Disease Control and Prevention holds a reserve supply for an emergency, a relatively small proportion of the seasonal flu vaccine is distributed.

Each year, there's a perception that we don't have enough, and the reason is that the distribution of

Q: Why haven't we had a major health crisis with seasonal flu?

A: It changes every year. Not enough for us to have a public health catastrophe, but enough to warrant a change in the vaccine. That is because the virus is ever evolving slowly. The reason there will never be a catastrophe with seasonal flu is that there is enough background immunity, or pre-exposure, for all of us.

Even if you didn't get vaccinated, some of us may get sick, but there will not be a global public health catastrophe because there is enough background immunity.

Q: Why aren't flu vaccines developed and distributed as efficiently as prescription drugs are?

A: Companies tend to make just enough or maybe even a little bit less than they need. They don't like to make a surplus for the simple reason that unlike Lipitor, Crestor and Viagra, you can't make as much as you want, throw it in a warehouse, and it's good for many years. It's good for a couple of months and then it's gone. That's the real problem.

Q: Is part of the reason so few companies are in the vaccine business because of the economic uncertainty?

A: The vaccine industry is a tenuous enterprise because the incentive for companies who have a lot of money to invest in research and development and production is very low when you're dealing with a product that is not used every day and which the American culture views almost as an entitlement.

Americans are willing to pay \$3,600 a year for Lipitor and \$2,700 a year for Viagra, yet they become very concerned when they're asked to pay any more than \$20 for a one-time vaccine. This does not escape the companies' perception. Then add all of the other disincentives. So companies don't want to get involved a) in vaccine or b) in influenza vaccine.

Q: If you discover that there is evidence of person-to-person transmission, say, in Africa, and scores of people are dying, would you send our stockpiles of pre-pandemic vaccines over there to help them and isolate the virus? Or would we just hunker down?

A: Once the horse gets out of the barn, you are not going to stop it there. But if you have some (localized) clustering cases, we have agreed with the World Health Organization that we will participate in a common stockpile deployment with other countries.

When you are dealing with the number of doses that we have of pre-pandemic (vaccine), it is a drop in the bucket of what you'd need. So, if all of a sudden you have thousands of people in Africa who are infected, it doesn't make any difference what you do there. They are in serious trouble.

Q: What would it take for this virus to become highly efficient and spread from person to person?

A: The one thing I can say is that you often hear that we're one mutation away from having a pandemic that spreads everywhere. Well, yes and no. Let me concentrate on the "no." That implies that it's a very simple event to get a virus that is very poorly transmissible to become highly transmissible. No, a lot of different things have to happen to that virus for it to be able to go from very poorly efficient to highly

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By H. Darr Beiser, USA
TODAY

"When the American public gets up in the morning and goes to work, they should not be fixating that we're one mutation away from disaster," says Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Disease at the National Institutes of Health.

THE BIG PICTURE

Fauci suggested that the United States can prepare for a pandemic flu in the context of what we see every year with seasonal flu:

Seasonal flu

- 250,000-500,000 deaths per year worldwide.
- 36,000 deaths and more than 200,000 hospitalizations per year in the USA.
- \$37.5 billion in economic costs per year in the USA related to influenza and pneumonia.

Q: Why is the toll not greater?

Pandemics of the past century

- 1918 Spanish Flu killed 40 million-50 million 550,000 of those in the USA.
- 1957 Asian Flu killed 1 million-2 million people 70,000 in the USA.
- 1968 Hong Kong Flu killed 700,000 34,000 in the USA.

Q: Why can the toll vary so greatly? Depends on the virulence of the virus and how readily it can spread from human to human.

Q: Will the avian virus spread readily from human to human?
It's not known. The most deadly viruses evolve in a way that makes them highly contagious and easily spread from human to human. To date, the bird flu has not made this leap.

Sources: American Lung Association, Centers for Disease Control and Prevention, National Institutes of Health and the World Health Organization.