Preparing for the next pandemic, bird flu outbreak, measles cases and years of life lost statistics

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Featured topic and speakers

Is there a vaccine for bird flu? Can pets get bird flu? Is America prepared for another pandemic? What is an example of a DALY? Why is global health security important?

Our guest is AMA's Vice President of Science, Medicine and Public Health, Andrea Garcia, JD, MPH. AMA Chief Experience Officer Todd Unger hosts.

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Speaker

- Andrea Garcia, JD, MPH, vice president, science, medicine & public health, American Medical Association

Transcript

Unger: Hello and welcome to the AMA Update video and podcast. Today, we have our weekly look at the headlines with the AMA's Vice President of Science, Medicine and Public Health, Andrea Garcia. I'm Todd Unger, AMA's chief experience officer. Andrea, good to see you.

Garcia: Good to see you too. Thanks for having me.

Unger: Well, we're going to start today's journey with where we kind of left off last week. And that's with bird flu. This past week the World Health Organization weighed in on that. Andrea, tell us more about what we need to know there?

Garcia: Yeah, well, last Thursday there was an article by *CNN*. And in that piece, Dr. Jeremy Farrar, who's the chief scientist of the WHO, called bird flu an enormous concern and he really urged more tracking and preparation for the virus. While so far, we don't have evidence that the virus can spread from person-to-person, in the last two years an increasing number of mammals, as we've discussed before, have tested positive for that disease. And that could indicate that the virus is looking for new hosts, and of course, moving closer to people.

Dr. Farrar said that the great concern is that the virus now evolves and then develops the ability to infect humans and then critically the ability to go from human-to-human transmission. He told a group of reporters in Geneva that we have to make sure that if H5N1 did come across to humans with human-to-human transmission, that we are in a position to immediately respond with access equitably to vaccines, therapeutics, and diagnostics. And unfortunately, we still have some work to do to be in that position.

Unger: Yes, and you mentioned this before, there is a vaccine. The question is if we're prepared for this possible eventuality. Tell us more about it?

Garcia: Well, right now the U.S. government has said about a fifth of the population could be vaccinated inside of about four months if the current bird flu outbreak crossed over to people and began to spread. The CDC has said it's created a candidate vaccine virus that can be used as a template to make additional vaccine if needed. That candidate vaccine virus has been shared with vaccine manufacturers.

We also know that the Assistant Secretary for Preparedness and Response or ASPR has industry partners which have H5N1 vaccines licensed for use in the U.S. Some of these manufacturers have indicated that they are developing vaccines that better match the circulating subtype like as a precautionary measure. And others have really indicated that they're standing by ready to begin production if needed.

How effective that vaccine would be in protecting against infection and whether those doses would do enough to stop a human pandemic is not clear. The risk to the public is still low. U.S. officials have said they don't have plans to roll out emergency vaccinations just yet. That would require halting

production of seasonal flu vaccine.

But the U.S. has said the country is ready to ramp up vaccine production if that risk arises. And we know Lawrence Gostin, who's a professor of public health law at Georgetown and a leading expert in global health said that it's too early to press that panic button just yet.

Unger: So Andrea, the United States may be in a quote "better situation," but there is still a global concern here as well. How does a potential vaccine in terms of accessibility track on a global scale?

Garcia: Yeah, the world really lacks the capacity to ramp up hundreds of millions or billions of vaccines for a pandemic with bird flu. And that, of course, raises concerns about equitable access to vaccines. Even if the vaccine initially matches the virus strains, there are concerns that this virus mutates quickly.

The other problem is that both here and worldwide, we really lack that ability for early detection and testing of bird flu and we really have to get better at that. In addition to vaccines, we also need to consider treatments. In an update posted to its situation summary last Thursday, the CDC said it's been studying the virus isolated from the recent human case in the U.S. and found it to be susceptible to antiviral medications, which, of course, is good news.

Unger: That is good news. Andrea, the *New York Times* also covered bird flu in an in-depth article this week that really outlined kind of origins in North America, so to speak. What do you think the key takeaways from that article were?

Garcia: Yeah, that article provided context through a timeline dating back to December 21 of 2021 when H5N1 virus was detected on a farm in Newfoundland. And that was in a sick wild gull nearby. Hundreds of birds on that farm died. The rest were culled. It was the first detection of the virus in North America.

Then in January 2022, that virus was detected in the U.S. in wild birds in North and South Carolina. In the U.S. alone, we've seen more than 90 million birds culled in attempt to really deter that virus. But obviously, that hasn't worked. Typically, avian flu viruses are picky about their hosts and tend to stick

to one kind of wild bird.

But as we've seen, this one has infected a surprisingly wide array of birds and mammals. I think coupled with the fact that flu viruses are adept at picking up new mutations, when two types of flu virus infect the same animal, they can shuffle their genetic material, generate new versions. And this is something we're going to have to keep an eye on.

Unger: And we'll continue to report on any new developments on this front. Andrea, given this backdrop, the Biden administration recently launched a new effort to improve the ability of the U.S. to prevent, detect, and respond to the spread of infectious diseases. Tell us more about that effort?

Garcia: Yeah, there was an article in *NPR* about this recently. And while the U.S. has long been a global leader in health security, the White House's new global health security strategy really is striving to make the country even better prepared for future pandemics, outbreaks and biological threats. And that's regardless of where they occur.

As a part of that new strategy, the U.S. is expanding its health security partnerships from 19 countries to 50 countries in Africa, Asia, the Caribbean, Eastern Europe, Latin America and the Middle East. And the idea is to help these countries bolster their capacity to identify and respond to diseases that's through improved testing and surveillance, lab capacity and immunizations. That strategy really aims to better coordinate also across the U.S. government, as well as to convince other countries and international bodies to make serious financial and political commitments to pandemic preparedness.

Now, some experts in the field have cautioned that the strategy doesn't go far enough and financial realities may impact these efforts. However, that new plan is expected to roll out over the next five years. And it really is based on lessons learned from the COVID pandemic.

Unger: Indeed. Having experienced what we did during the pandemic, it's good that we're getting out in front of this in preparing for possibilities. And there's also been a similar effort by the World Health Organization to increase pandemic preparedness. Where does that stand?

Garcia: Yeah, I think it's important to point out that senior administration officials have said the U.S. new global health security strategy is not meant to undermine this WHO effort but demonstrate the U.S. is committed to preventing the next pandemic irrespective of what happens globally. The WHO has been trying to develop a worldwide agreement around pandemic preparedness, but it's been difficult to gain consensus. And May has been the deadline for getting a final agreement in place and the negotiations have been ongoing.

The primary hurdle revolves around access to critical information about new threats that may emerge, as well as vaccines and treatment that could contain them. There was an article in the *Washington Post* and it mentioned that high income countries are pressing for guarantees that samples and genetic data about any new pathogen will be quickly shared and that will allow for development of

tests, vaccines, and treatments. And developing nations are seeking guarantees of benefits, such as equal access to vaccines and collaboration with local scientists.

We know the U.S. has signaled its support for a binding agreement. There's been a lot of misinformation surrounding this, including an agreement where somehow they will give WHO authority to enforce lockdowns or mask mandates within individual countries. The WHO director general has said this is utterly, completely and categorically false. A new draft agreement was recently shared and meetings are set to resume on that April 29.

Unger: All right, well, thank you for that update. A new study published this past week highlights just how critical this ongoing work is by outlining the huge toll that infectious diseases take on global health. Andrea, tell us more about that?

Garcia: Yeah, that study was published last week in the *Lancet Infectious Diseases*. Researchers analyzed data from 204 countries. They estimated that in 2019, 85 pathogens accounted for 704 million disability-adjusted life years or DALYs, which is the number of years lost from ill health, disability, or early death. According to the WHO, one DALY represents the loss of equivalent of one year of full health.

Infectious diseases accounted for 28% of all DALYs in 2019. And that impact of these pathogens was disproportionately seen in children. Nearly 44% of the DALYs attributed to pathogens occurred in children under the age of five. And the three pathogens with the largest observed impact were tuberculosis, malaria and HIV/AIDs.

Now, the study authors say that their approach captures the full impact of pathogens on mortality and disability. It's the most inclusive approach used to date. They believe that their estimates, which highlight some pathogens that are being overlooked, can help health leaders target areas where more research funding and action are needed. There was an accompanying commentary by infectious disease experts from South Africa and Tanzania. And they said defining the burden of infectious diseases is just the first step and the next step is to understand how to sustainably reduce that burden, particularly in the places that are hardest hit.

Measles on the Rise

Measles has recently experienced a resurgence in many parts of the world. Learn about this significant public health challenge and what physicians need to know.

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Unger: All right, well, for our final topic today, back to measles. Andrea, any news on that front. Are we getting better this week?

Garcia: Well, as of April 18, there have been 125 cases across 18 jurisdictions based on the CDC data. However, this week West Virginia reported their first measles case since 2009. As a reminder, last year there were only 58 cases total. And generally, we see about 72 cases per year.

So we've far exceeded that already. Certainly, something to continue to watch, and of course, keep stressing that importance of MMR vaccination, including in advance of traveling internationally.

Unger: Absolutely. And that seems like a good place to leave off for today. Andrea, thanks so much for being here and keeping us informed. If you found this discussion valuable, support more programming like it by becoming an AMA member at ama-assn.org/join. We'll be back soon with another AMA Update. In the meantime, you can find all our videos and podcasts at ama-assn.org/podcasts. Thanks for joining us today. Please take care.

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