Watch the AMA’s daily COVID-19 update, with insights from AMA leaders and experts about the pandemic.

Featured topic and speakers

AMA Chief Experience Officer Todd Unger speaks with JAMA Scientific Publications Editor-in-chief Howard Bauchner, MD, on updates regarding COVID-19 including what we know and don’t know about the virus, and what the future holds.

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Transcript

Unger: Hello. This is the American Medical Association’s COVID-19 Update. Today we’re talking with Dr. Howard Bauchner, editor in chief of JAMA and the JAMA Network in Chicago, about the latest research and what the future holds. I’m Todd Unger, AMA’s chief experience officer in Chicago.

Dr. Bauchner, you have been looking at the research since the beginning of this. Tell me, what have we learned so far?

Dr. Bauchner: Well, first Todd, best call me Howard. Only my kids call me Dr. Bauchner.

I think we've come a long way and then there's a lot of holes in our knowledge. To start, let's start with what we clearly know. Actually the virus has been very well defined. It's been very well defined since early January. The entire DNA sequence was laid out by the Chinese in the public domain, and that's
critically important so you can develop diagnostic tests and begin to do vaccine and other drug development.

So, that was a huge advance. Dr. Fauchi has said it's a key knowledge transfer that then allows vaccine development to begin.

We've learned that quarantine works, draconian approaches to quarantine. And that has been the case in China. We've learned from Korea, Singapore, Hong Kong and Taiwan that if you can identify people quickly, you can track them and you can quarantine them. You can prevent large spread within societies.

Now, three of those areas are smaller than the US. Korea is smaller, but certainly larger than Hong Kong or Singapore. So whether that type of approach would work in the United States is less clear.

We think the incubation period is about 14 to 21 days. Generally, most people believe 14 days. We're quite certain that there's asymptomatic spread. JAMA published a very, very important piece about that almost six weeks ago. And that asymptomatic spread has likely lead to substantial outbreaks in Paris, London and New York because you had people on a perfect vector—the subway, the underground, the Metro—and they were probably traveling while they had asymptomatic disease and of course they were spreading it. And those three cities have had very substantial disease.

We've learned that the US has tremendous capacity to expand resources when necessary. So, around the country, ICUs have doubled or tripled in size. And I think the early concerns about a tremendous ventilator shortage has not occurred, and that's in part because we were able to obtain more ventilators, but more importantly, people began to share them.

I think we have pretty good information now that social distancing is working. It probably has prevented tremendous increases in disease in some cities. It remains a bit uncertain, but the data are accumulating both from an observational standpoint and, actually, JAMA will be publishing a paper on Friday that really details what we believe is the best science about the gains from social distancing.

From a clinical standpoint, I think there remains more questions than answers. Effective treatments remain unclear. Obviously, a number of people have touted chloroquine, an anti-malaria drug. The data to date are inadequate, some would describe it as poor, and I think people are hopeful that there'll be data from clinical trials that clarify that issue.

Numerous antivirals are being investigated. But, again, no clear answer.

More recently I think based upon a hundred years of history and some research, some of which was published in JAMA, people are very interested in convalescent serum. That is serum from individuals who were sick, then being purified and then infused into patients who are sick.
The other interesting issue, and this really arose when I spoke with Derek Angus, who's our associate editor in Critical Care. This is not one disease, and that's not uncommon at all. It may be a single causative agent, but it's manifested in people very differently. So there's been very, very different reports from intensive care units around the world about the best approach to ventilating these individuals or providing respiratory support. So there I think it's unclear.

There's a lot of other issues I could talk about, but I'm afraid I'll go on too long, Todd.

**Unger:** Well, let me ask you, Howard, given everything that you've seen so far, is there anything that has particularly surprised you about the pandemic so far?

**Dr. Bauchner:** Yeah, there are a few things that have surprised me.

Either the lack of disease in children or the lack of testing and we don't know if they've been infected or not. I think everyone is struck by that. Children get influenza, so people believe this is like influenza. That children have not ended up being hospitalized is really, really of interest, because people want to understand if that represents a clue to potential therapies in the future. I think that's been a very substantial surprise.

I don't think the variation in case fatality rate, a low of one or 2% in some countries up to 10 or 12%, is a surprise. But on the other hand, I think people felt as we did more testing, the case fatality rate would come down, that you'd end up picking up people who were less sick or asymptomatic and the denominator in this numerator, the number of deaths, versus denominator, would change. But in fact in most countries, as the pandemic continues, even though they expand testing, the case fatality rate has gone up.

That's been true in South Korea. It's been true in Korea. It's been true in Sweden. And I think that surprised me. And I think it's surprising other people. The variation in the case fatality rate, its relationship to the elderly, to individuals with hypertension specifically, is a bit unusual. But the elderly always struggle whenever we have major infectious diseases, so I don't think that's a surprise.

**Unger:** As you look out into the future, which let's say is the summer and beyond, what is the prognosis from your angle?

**Dr. Bauchner:** So I think there's a few things. I'm not sure we'll be much further along with clinical treatment. And the reason I say that, an effective treatment will reduce mortality by 20 or 30%, but that would still mean that 70 or 80% of the people who were seriously ill, would die. So I think we will develop effective therapies, but it's not like there'll be a cure. So I think people really need to understand what an effective therapy means.
A vaccine may enter phase two trials as early as in the fall. Whether there'll be a good basis for them to be successful is uncertain. We need more data from phase one trials. I do think we need to sort out what we're going to do around public health.

We had virtually no high quality public health response other than what we've learned from a hundred years of infectious diseases. We were not able to test, we were not able to track and we were not able to quarantine, so we immediately moved from containment to mitigation in terms of social distancing. We don't want to have to do that again in the fall.

People need to go back to work, people need to go back to school and people need to go back to college. And if the pandemic wanes in the coming months, but then there's a recrudescence in the fall, as is often common with respiratory pathogens, this could be a huge struggle.

On the other hand, there's been uncertainty in the way the viruses behave. Most of the models have been largely incorrect, so I do think it remains unclear what will happen in the fall months. But I think it'd be better to be prepared with a public health response than not be prepared.

**Unger:** Well, last question for you. There are a lot of heroes so far in this pandemic. Who do you look to as the heroes from your end?

**Dr. Bauchner:** Three individuals and one group. Dr. Li Wenliang was, of all things, a Chinese ophthalmologist who, in late December, reports to the Chinese government that he's looking and seeing unusual pneumonias, and he was worried that it represented yet another type of coronavirus. He was censored by the government, and he died six weeks later from the disease.

Obviously, Dr. Anthony Fauci. I've had the privilege of doing four live streams with him. Tony's been active clinically at the NIH and in the United States for over 40 years. He's lived through every modern epidemic and pandemic. He's a world's expert in HIV/AIDS, and I think he's really tried to calm the country when we've been worried. I think he's really tried to insist that we need to make decisions based upon science and evidence. And I've said he belongs on the Mount Rushmore of the NIH.

The last person is Maurizio Cecconi. Maurizio was president-elect of the European Society of Critical Care Medicine. I did a live stream with them about two and a half weeks ago. He was in his scrubs. He had just come out of the ICU. He looked into the camera and, with just extraordinary emotion, told the world that as tsunami was coming. And because he was so well known, it totally galvanized the intensive care units in the United States because he's so well respected. That livestream has a million views. And I think along with Tony and some other people, really made the United States understand we had just an incredible problem coming.

And the last of the thousands to tens of thousands of healthcare workers around the world. Nursing, being a physician, being a respiratory therapist, being a custodian who cleans the rooms, they've
distinguished themselves. They’ve given up their time of threats to their own life, threats to their family life, and sadly, their own lives on occasions. And so to the healthcare workers around the world, I say thank you.

**Unger:** Well, thank you. And thanks to you and the JAMA and JAMA Network team for the incredible amount of publishing and research that you’ve undertaken over these last two months. That’s it for today’s COVID-19 Update.

Thank you again, Howard Bauchner, for being with us here today, and thank you all for tuning in.

**Dr. Bauchner:** Thanks, Todd. Everyone, stay healthy.

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