

Q&A: HAMISH DOUGLASS TALKS WITH DR MICHAEL OSTERHOLM, A LEADING US EPIDEMIOLOGIST



Hamish Douglass,
Magellan Chairman
& CIO



Dr Michael
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Hamish Douglass, the Chairman and CIO at Magellan, talks with Dr Michael Osterholm, a Regents Professor and the Director of the Centre for Infectious Disease Research and Policy at the University of Minnesota, who is one of the world's foremost experts in disease control and immunology. The pair spoke about the new covid-19-related variant dubbed Omicron, the efficiency of vaccines against this new challenge, and how far the covid-19 saga might have to run.

Q1. **Douglass:** How concerned are you about the new Omicron strain?

Osterholm: I'm very concerned. While the data shows the new variant might not have the same punch as the Delta variant, the greater numbers of cases combined with the punch it does have could equal that of Delta, if not more.

The challenge is that the transmission of the new virus is so dynamic that many of these cases are going to occur all at once. What we're concerned about is that over the next three to seven weeks we could see a global blizzard from Omicron that will challenge health services.

Q2. **Douglass:** Some of the countries where Omicron is spreading have high vaccination rates. How worrying is the virus if it's spreading in these countries?

Osterholm: First, I assume this virus is in every country right now. If it hasn't been documented, it's just because health authorities haven't found it yet. Where the virus has been found, it is spreading rapidly. It doesn't matter which continent, and it doesn't matter what location or what event, we're seeing rapid transmission.

In the surveys we're doing in the US and they are doing in Europe, the numbers are doubling about every one-and-a-half to two-and-a-half days, which is a remarkable number. When you're doubling 1,000 to 2,000 to 4,000, these are big numbers. It's just a matter of time until we see that happening around the world.

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Q3. Douglass: Some people are saying, this is the same movie, we've seen this before, and therefore we've got nothing really to worry about. Is this a different movie?

Osterholm: This is a different movie. When we look at variants we ask three questions. One, is the new strain more transmissible? Two, does it cause more severe illness? And three, can it evade immune protection and defence?

We know this variant is highly transmissible, much more so than Delta. It's causing serious illness but not necessarily in a higher proportion than Delta. We can see that the protection from vaccines or previous infection are not holding up against Omicron.

Now, it's best to be vaccinated. We have evidence there's less severe illness, fewer hospitalisations and fewer deaths among those who are fully vaccinated, particularly

those who have the booster for the mRNA vaccines. The concern is that being fully vaccinated, even with a booster, doesn't mean you're not going to get infected. Many of the outbreaks we've had, a large proportion of people who got sick were vaccinated.

Q4. Douglass: Just to be clear, should double-vaccinated people be taking care?

“What we're finding is that even with full vaccination, we may only be preventing 75% of the severe illness from Omicron...”

Osterholm: It's important that we come to some understanding that, all along, the covid-19 mRNA vaccines were a three-dose vaccine. What happened early on in the pandemic is that we needed vaccines as fast as possible. To do that, we needed to obtain information in two areas. One was safety and we have a good handle on that. But we never figured out exactly how best to use these vaccines. How many doses? How should they be spaced out? How much antigen should be in each dose?

Q5. Douglass: How much do we know about the other immune responses we are getting from these vaccinations?

Osterholm: First, we do not have what we call a correlate of protection. We don't know exactly what it is in the immune response that is most important in protecting us. We have ideas, but we don't have a place of measurement where we can say, “If you have this much antibody or these kinds of immune responses, you're protected.”

We go on the premise the more antibody you have the better. But what's important is the clinical data. We undertake what we call vaccine effectiveness studies, where we look at people who are vaccinated and people who are not vaccinated. We compare and contrast and conclude, say, that the vaccine is preventing 75% of severe illness or it's preventing 50% or 100%.

What we're finding is that even with full vaccination, we may only be preventing 75% of the severe illness from Omicron and that hopefully people are getting more protection from a booster. What's important now is to get data from the field to give us a sense of how protected people are.

Second, if you look at hospitalisations, the climb in hospitalisations for Beta and Delta were similar to what we're seeing with Omicron right now.

Number three is death rates are similar. At 15 to 30 days into Omicron, we're seeing deaths at the same level we saw when Delta took over.

The one piece of good news today is that case numbers are slowing in South Africa where Omicron first appeared. That might mean that the rest of us are in a six- to eight-week viral blizzard that will slow.



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Q6. Douglass: Even if Omicron is milder in terms of severe disease and hospitalisations, could the world be overwhelmed?

Osterholm: That is a big concern for us right now in the US at least. In many parts of the country, our healthcare systems are hanging by a thread. We have had major challenges with Delta that boosted our case numbers precipitously.

One of the unknowns is what will happen between the Delta versus Omicron battle. Will they be co-victors? Will one dominate over the other? Right now, it looks like Omicron will take over. If it does,

and it's transmitted six times more frequently than the Delta variant, but three times less likely to create severe disease, you've got yourself a net increase in the number of people presenting to hospital.

One problem we might have is what will happen if lots of healthcare workers get infected at once. Even though health workers are vaccinated, they have a high likelihood of getting infected.



Q7. Douglass: Society has covid-19 fatigue. If healthcare systems might be overwhelmed, will politicians be forced to shut down society? Or do you think it's too late?

Osterholm: In the US, we're overwhelmed now in some locations but we're not seeing the governments do much because there's not much they can do. The public, even though they're losing loved ones to covid-19, has not wanted to see restrictions enforced. State governors and the federal government have said no lockdowns, no restriction of movements, no mandates beyond for vaccines, which have been challenged in the courts.

US society is basically over this pandemic but it's not done with us. That's one of the reasons we're paying the high price we are in the US right now in terms of case numbers. Other countries may be able to better enforce public health restrictions that would slow transmissions. But even in Australia, there is pushback against limiting activities or requiring people to take preventative measures.

Q8. Douglass: What do you think are the best- and worst-case scenarios?

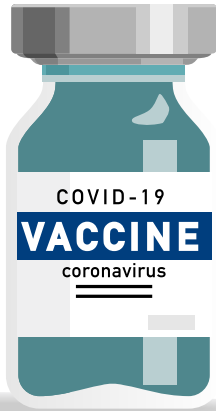
Osterholm: I've been saying for almost 10 months now that some of the darkest days of the pandemic are ahead of us. That was not a popular thing to be saying last April, in the US at least, when case numbers were plunging and vaccines were flowing widely. But we know what variants can do.

We have seen covid-19 variants emerge that evaded immune protection, in what was a big evolutionary effort by this virus. There are going to be more variants and they are likely going to be more complicated. This is why we must work hard on what we call a pan-coronavirus vaccine, one that could cover all the eventualities that might emerge from these mutations.

If Omicron is the last potent variant, then in a few months it will have infected most people around the world and we would have a lot of short-term protection from serious illness and maybe even mild illness. But then, over time, similar to influenza, it probably would reappear as immunity waned.

Even with the vaccines, we are already seeing the problem of waning immunity. We have evidence now that even the third dose begins to wane after three or four months. I don't see a world ahead where everyone gets vaccinated every six months. Somehow, we need to design better vaccines or we will have to accept that every year a certain proportion of our society will be infected by a covid virus.

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“So I’m not optimistic that covid-19 is suddenly going to disappear tomorrow. The best solution is a pan-coronavirus vaccine. That’s what we need.”

Q9. Douglass: Pfizer recently announced what appeared to be encouraging news about an antiviral treatment. What’s your take?

Osterholm: From a science standpoint, this drug is an important step forward. I do believe we can reduce by 80 to 85% the number of people who go on and require hospitalisation, and so I think it could be a game changer. We will have to address the issue of testing and ready access availability of the drug. One of the challenges we have right now is in many parts of the world, we don’t have either testing or the drug in such a way that somebody could be found to be positive and then take the drug. And as you pointed out, they have to do it quickly, within several days of their onset, to have maximal impact. So, there’s logistical issues we have to work out. There are clearly social and political issues we have to work out. But from a science standpoint, I think this drug is really a very important step forward.

Q10. Douglass: How far are we through the covid-19 saga?

Osterholm: I still remain cautious. This is all about variants and how they arrive. We have many, many millions and millions of people in this world who have yet to be infected or protected through vaccines. We have a lot of wood for this coronavirus forest fire to burn. On top of this, we’ve learned there might be great challenges with the animal world. In the US, studies show white-tailed deer frequently become infected with the same virus infecting people. Who’s to say the next mutation isn’t going to spin out of the animal world.

So I’m not optimistic that covid-19 is suddenly going to disappear tomorrow. The best solution is a pan-coronavirus vaccine. That’s what we need.

Q11. Douglass: What personal health advice would you give to people exposed to Omicron?

Osterholm: Number one and most importantly is this virus will find you if you’re not vaccinated. Number two, the next six or seven weeks will be eventful, but don’t think such worries will last forever. We just have to get through it and hopefully we can develop even better vaccines. Number three, we can develop immunity from a mild infection. Lots of mild cases will give society more protection than we have now.

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