Transcript Details

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Comparing COVID-19 Vaccine Strategies: What Projections Reveal

ReachMD Announcer:
You're listening to *Clinician's Roundtable* on ReachMD. On this episode, we'll hear from Dr. Sara Loo, who's an Assistant Scientist in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health and a member of the coordination team of the US Scenario Modeling Hub. She'll be discussing her research on scenario projections of COVID-19 burden and implications for vaccination recommendations.

Here's Dr. Loo now.

Dr. Loo:
In this particular study, for which the timeframe was between April 2024 and April 2025, we were aiming for this work to be a contributing piece of modeling evidence for those setting immunization policy in the US. The main question we were trying to answer was to compare the burden averted under different levels of vaccination strategies and different levels of immune escape. So, the question really was, how many hospitalizations and deaths could be averted if the recommendation was to either vaccinate all individuals—a very broad recommendation—compared to just vaccinating or recommending for high-risk groups, or under a more pessimistic scenario of no recommendation at all? On top of that, there's, of course, also uncertainty in the future regarding how COVID might evolve, so we also compared scenarios with either a high level of immune escape, so faster evolution, compared to a slower rate of evolution.

So, essentially, this combination gives us six scenarios to compare. We had nine teams contribute to this round, so that's nine different university groups or organizations that contributed their projections. As a hub, we take these projections and combine them in a statistical manner to produce an ensemble of what we can say is the probable burden of the disease under each of these scenarios.

So, our key finding for this study for the projection period of April 2024 to April 2025 was that the burden of COVID-19 hospitalizations and deaths was expected to remain similar to the prior year, which was still quite a high burden. Comparing across the different vaccine recommendation levels, if we start at the base—no vaccine recommendation—if we increased that to vaccinating high-risk groups, we expected that to reduce the hospitalization burden by about 75,000 and deaths by about 7,000.

If we then consider expanding that to a broader universal recommendation for everyone, the burden would be even further reduced, which seems intuitive. But, importantly, what we found was that this would not only reduce the direct benefits for individuals, but it would also provide indirect benefits to all ages and risk groups, so expanding that broadly would reduce the burden in all groups. In particular, if we focus on just the older groups—so 65 years and older—increasing the recommendation to a broad universal recommendation could prevent a further 10,000 hospitalizations and over 1,000 deaths in that older age group.

So, all in all, our ensemble projections suggested that vaccinating high-risk groups had substantial benefit in reducing disease burden and that maintaining that recommendation for all—a universal broad recommendation—could save thousands more lives.

ReachMD Announcer:
That was Dr. Sara Loo talking about scenario projections of COVID-19 and their implications for vaccination policy. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!