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While COVID booster rates lag, studies show criticality for immunity

Week of January 9 - January 15, 2022

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COVID-19 Update

The Buzz This Week

As reported last week, new COVID cases from the Omicron variant are reaching levels never before seen during the pandemic. Hospitalizations thus far have been mostly of unvaccinated patients, but there are growing numbers of hospitalizations amongst those vaccinated but not yet boosted. Data released from the United Kingdom indicates waning protection from Omicron after two doses, with one study showing 10 percent effectiveness at preventing symptomatic infection 20 weeks after full vaccination. The same study indicated booster shots increase effectiveness to 75 percent.

A study released by The Ragon Institute last week presented similar findings. Full vaccination regimens without boosters did not produce necessary antibodies to neutralize the Omicron variant. Researchers compared blood samples of those fully vaccinated with one of the three U.S. approved COVID vaccines to those who had received a third booster vaccination. Alejandro Balazs, principal investigator, noted, "We detected very little neutralization of the Omicron variant pseudovirus when we used samples taken from people who were recently vaccinated with two doses of mRNA vaccine or one dose of Johnson & Johnson, but individuals who received three doses of mRNA vaccine had very significant neutralization against the Omicron variant."

Both Pfizer CEO Albert Bourla and Moderna CEO Stephane Bancel shared this week that the companies are working on boosters specifically targeting Omicron and Delta. Bourla indicated initial doses would be ready in March, though it remains unclear if a variant specific vaccination will be necessary. Bancel shared that government demand is high for an Omicron booster, and that the Moderna vaccine will enter clinical trials soon, with a target release of this fall.

Why It Matters

Thus far booster uptake rates have lagged initial vaccination rates. Many in the U.S. are tired and frustrated from mask and quarantine policy updates, and some are distrustful of initial recommendations, wary that they may change again. The point must be reinforced that vaccinations and now boosters remain a key tool to the fight against COVID.

In fact, according to a model released from the Commonwealth Fund, boosters could have a significant impact on the time until U.S. Omicron cases peak, hospitalizations, and deaths. In December boosters were administered at a rate of 770,000 doses per day. The model indicates that doubling the pace of booster administration could reduce peak daily cases by nearly 20 percent, and tripling booster rates could reduce peak cases by 30 percent. Importantly, tripling daily booster administration could also shorten the timeframe with over 20,000 daily hospitalizations from 6 weeks to 3 weeks, significantly reducing the taxing burden to the healthcare system.

Whether a fourth booster of the current vaccine will be necessary still remains to be seen. Data from the United Kingdom showed protection against severe illness was still significant 3 months after a third shot. Israel, alternatively, decided that a fourth dose for those with high exposure rates, like healthcare workers, and those most at-risk, including persons over 60 and the immunocompromised, was necessary. The World Health Organization (WHO) has pushed for increased vaccination efforts to the rest of the world first to help prevent additional variant progression and save lives. Dr. Anthony Fauci has noted that while a fourth vaccination is certainly conceivable, more data is still needed on the durability of protection and that the focus now should be on getting everyone who is able vaccinated and boosted, as “boosters are critical in getting our approach to Omicron to be optimal.”

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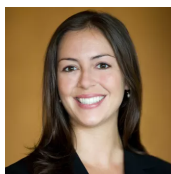
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