



Town of New Castle, NH  
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## Public Health and COVID Update May 7, 2021

### 1) Masks:

New Hampshire has ended its statewide mask mandate, but that doesn't mean there aren't still mandates in effect. Several communities have implemented their own mandates, and those rules are still in place. To make things more confusing, community mandates vary from place to place, so some might involve only certain types of businesses, while others have more blanket policies in effect.

Some communities are also in the process of figuring out what their policies should be in light of the state ending its mandate and with the coming transition from the Safer at Home guidelines for businesses to best practices, a transition that happens today.

The basic advice right now is to make sure you've got your mask with you. Businesses are well within their rights to require that masks be worn, and it's a simple matter to put one on before going into a store. Check for signs, too. Communities with mask mandates are using signs to communicate that fact, and many businesses place signs in the window if masks are required.

### 2) Vaccine availability to adolescents:

**US Food and Drug Administration set to expand Pfizer/BioNtech vaccine to adolescents ages 12-15.** It is reported that an Emergency Use Authorization may come next week that would open the vaccine to 12 to 15-year old persons. Look for this.

**Canada** has already expanded the vaccine to adolescents ages 12-15

**Moderna says early data show vaccine to be 96 percent effective in adolescents:** Cambridge biotech Moderna announced yesterday that early data show its vaccine to be 96 percent effective in adolescents ages 12 to 17 with no serious safety concerns.

### 3) Booster shots:

Also from Moderna this week: The company announced Wednesday that early study results show that booster shots of its coronavirus vaccine, one with half the dosage and one with a reworked version, are both showing encouraging signs of raising antibody levels. The second type, however, the reworked vaccine, seems to work best against the variant first identified in South Africa.

**4) For travel:** The E.U. recommended opening travel to foreigners.

## 5) Vaccination rates:

About 185 million Americans could be fully vaccinated by September, according to the latest vaccination models. That's roughly 88% of the adult population, but experts say it's a race against time to fend off a winter surge as virus variants like the one driving the crisis in India become more prominent. Booster shots may also be needed in the coming months to keep up immunity. India reported 414,188 new Covid-19 cases yesterday, a new daily high. Brazil has topped 15 million Covid-19 cases, but there's some hope on the horizon after the government announced it will buy an extra 100 million Pfizer vaccine doses.

The country has its speedy vaccination campaign to thank. More than half of American adults — 148 million people — have received at least one dose, which makes them less likely to contract or transmit the virus. Dr. Rochelle Walensky, the director of the C.D.C., recently put it this way: “We are not out of the woods yet, but we could be very close.”

But vaccination rates also bring a dose of realism. The pace is slowing, and experts now say they believe that herd immunity in the U.S. may not be attainable. States where vaccinations are falling behind — particularly in the South — could be especially prone to outbreaks.

More transmissible variants of the virus are also spreading, threatening the progress. The virus is surging in India, Brazil and other countries still scrambling for vaccines. If new, vaccine-resistant variants take hold, it could spell disaster for everybody. **So please, please get your vaccines. If you have concerns, please contact 211, look at the state's website, talk with your PCP, or contact me.**

## 6) Second doses

### **Brief 19- 'Four key takeaways including why the second dose matters.**

The United States has administered the highest number of coronavirus vaccines. Israel had vaccinated the second highest percentage of its population, trailing only Seychelles, the nation located in the Somali Sea

New data in *The Lancet* out Wednesday provides important updates and insights that go well beyond the usual expected results—i.e. that the Pfizer/BioNtech mRNA-based coronavirus vaccine works spectacularly well. Let's look at four key points in this new study out of Israel.

**First**, the data show that the “real world” data match the approximate findings of the data from the phase III clinical trials which first made headlines in November. The vaccine provides impressive protection against covid-19-related hospitalization and deaths across a wide spectrum of age groups. The news here is that the data remain impressive—with **97 percent reduction in hospitalizations—even in the face of SARS-CoV-2 variants**. The B.1.1.7 variant (the so-called “UK Variant”) accounted for 94.5 percent of all infections. This is incredibly important news.



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**Second**, the vaccine decreased both symptomatic infection (97 percent effective) and asymptomatic infection as well (91.5 percent effective). This means that **the over 9 in 10 people who are vaccinated have zero chance of spreading the virus to others.** Whether spread occurred from the few people who had “breakthrough infections” to other people remains unknown.

**Third**, the vaccine was effective across a wide array of ages. Some people mistakenly believe that covid-19 is harmless to adolescents and young adults. In Israel, 36 people aged 16-44 died of covid-19 during the 2.5 months that was studied. Every single one of those deaths occurred in unvaccinated individuals. Given that Israel’s population is approximately 36-times smaller than the United States, the equivalent number of deaths in the US would have recorded 1,300 deaths among persons age 16-44. This is a strong argument for vaccinating people in all approved age groups.

**Fourth**, the study provided granular data on the effectiveness of one dose. The researchers found that at day 21 (i.e. prior to a 2<sup>nd</sup> vaccination), the vaccine’s effectiveness was certainly notable but not nearly at its peak. **At day 21 (before the second dose), the effectiveness in protecting vaccine recipients from any-and-all infection was 57 percent; the effectiveness in protecting against asymptomatic infection was 49 percent.** This implies that in that weeks leading up to the 2<sup>nd</sup> dose and after, an important fraction of people could still get the virus, some of whom were hospitalized and died. Again, it remains unknown whether these partially vaccinated individuals were able to spread the virus to others still. In addition, we do not know how long the first dose confers immunity. So while one dose is certainly a large improvement over zero doses, these data suggest that, at least for now, the second dose is important. That said; the researchers did not follow outcomes of the relatively few persons who never received a second dose, so we do not know whether the numbers would have improved to the levels seen two weeks after the second dose. What is known, is that the second dose of the Pfizer/BioNtech vaccine boosts antibody levels impressively, a finding that is thought to help protect against coronavirus variants slip out of the antibody-virus chokehold more easily.’

—Jeremy Samuel Faust, MD MS

## 7) New Vaccines on the Horizon:

Several have potential: Novavax, based in Maryland, is expected to apply for U.S. authorization in the next few weeks. The Indian pharmaceutical company Biological E is testing a vaccine that was developed by researchers in Texas. And researchers in Brazil, Mexico, Thailand and Vietnam are starting trials for a Covid-19 shot that can be mass-produced in chicken eggs.

Experts are particularly curious about an RNA vaccine from a small German company called CureVac, which entered the RNA vaccine business before BioNTech and Moderna. CureVac could announce results from its late-stage vaccine trial as early as next week.

CureVac does have some differences in how it creates its RNA,” Carl said. “So we’ll have to see if those differences translate into how well the vaccine performs.”

If it works, CureVac’s shot would have an important advantage over the other RNA vaccines: While Pfizer and Moderna must be kept in a deep freezer, CureVac’s vaccine remains stable in a refrigerator and can sit for 24 hours at room temperature before it is used, properties that may make it easier to deliver to hard-hit places around the world.

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