



Town of New Castle, NH
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COVID Update February 26, 2021

There is some really good news this week. Also, I have included a couple of citations at the end for interested scientists.

1. Numbers:

Nationally and statewide, coronavirus cases and hospitalizations are dropping. The reason for this could be a number of things, from you masking up, avoiding gatherings, the effectiveness of the vaccine, time since the holidays, to the potentially seasonal nature of the virus. But regardless of the reason, It's not time to let our guards down. **Please keep social distancing, frequent hand washing, avoiding gatherings, and wearing masks.**

The latest COVID-19 numbers in New Hampshire show the state has a great opportunity to really put the virus in check while the vaccination program continues. There has been a big drop in cases and hospitalizations. Part of this is due to the state's vaccination program, which began in New Hampshire's long-term care facilities, where many of its most vulnerable residents live. Widespread administration of the vaccine in those settings has helped prevent hospitalizations and deaths.

State officials said **the next phase of the vaccination program, focused on teachers and child care workers, could begin as early as late March.** Manufacturers say they have been able to increase their production, and if the number of doses shipped to New Hampshire and other states continue to rise, it looks increasingly likely that the general population will have access to vaccines this summer.

2. A third vaccine in the pipeline!

The single shot Johnson and Johnson vaccine is up for emergency use authorization (EUA) as early as Friday or Saturday February 26 or 27.

New analyses found that the Johnson & Johnson vaccine provided strong protection against severe disease and death from Covid-19 and may also reduce the spread of the coronavirus by vaccinated people. It had an efficacy rate of about 72% in moderate to severe COVID cases in the US.

Some people may get tripped up on the vaccine's slightly lower efficacy rate compared with 95% for the Pfizer and Moderna shots and wonder whether they should pass on the Johnson & Johnson vaccine and hold out for the other doses. That would be short sighted. Here are some things to keep in mind.

It prevents severe disease. The vaccine works well where it really matters, showing 86 percent efficacy against severe forms of Covid-19 in the United States, and 82 percent against severe disease in South Africa. **The research showed that while a somewhat higher proportion of people might still get sick from COVID-19 with the J&J vaccine, no one in the studies needed hospitalization or died.** A vaccine that prevents hospitalization and death is a highly effective vaccine, even if some people still get sick.

It's easier to take. In some ways, the Johnson & Johnson vaccine has an edge. Its one-dose shot is easier to take and has noticeably milder side effects than vaccines from Pfizer and Moderna, without any reports of severe allergic reactions like anaphylaxis.

It's easier to distribute. Unlike vaccines from Pfizer and Moderna, which must be stored at ultracold temperatures, Johnson & Johnson's vaccine can be stored at normal refrigeration temperatures for at least three months, making its considerably easier to distribute to rural areas and far-flung places across the globe.

Americans may not be able to pick and choose vaccines in the early stages of the rollout, and medical experts, including Dr. Anthony Fauci, have made the point that it's important to take whichever vaccine is offered.

'When the pandemic ends, the virus will still be around. It will just be more under control and much less likely to kill people or to disrupt the health care system. It might be considered no worse than the flu (which still kills tens of thousands of Americans in a typical year), or even a cold. But to get there, people will need to get vaccinated, and the more vaccines that are available, the faster the end of the pandemic will arrive.' We all need to get to point B (end of pandemic); we simply will use different vehicles to get there. Please use whichever vehicle you are offered.

3. Variants (again)

As expected, more and more variants are being found. From the British variant, to the South African Variant, to the Brazilian variant, to even novel variants in California and New York, they have some things in common. They are tracked because they may be more contagious, cause more serious disease, they may be more efficient at avoiding vaccines and treatments, and they happen more commonly in areas with a spike in numbers of cases. The more cases there are, the more potential for variants to emerge that can cause more suffering. The US has had more coronavirus cases (28 million) than any other country.

As a reminder, viruses mutate all the time. The more people who are infected, and the longer they are infected, the more chance the viruses have to change. A single patient's body will be loaded with billions of copies of a virus and some copies may be slightly changed, or mutated. Most changes will come and go.

But sometimes a mutation or pattern of mutations takes hold and gets passed along. If viruses with such patterns become more common, they're called variants. It's not unusual for variants to arise if they give the virus better transmissibility or the ability to evade treatments and vaccines.

For more detail:



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Epidemiologists have been warning for months that more contagious and deadly coronavirus variants have been bubbling just beneath the surface in the U.S. and could soon lead to another powerful surge of the virus — just as many places are easing up on restrictions.

And yet, there have been a number of signs in the U.S., and across the world, that the pandemic is in decline. During the last month, new cases globally have dropped to half their peak while hospitalizations in the U.S. have reached their lowest point since November. Recorded deaths around the world are also falling, declining roughly 50 percent since late January.

However, in the U.S., we just don't know exactly what the variants are doing. While the Centers for Disease Control and Prevention has ramped up its sequencing of genomes, to about 9,000 cases per week, when it comes to our ability to watch the variants, Carl said, "Our eyesight is not great."

Denmark, however, has 20/20 virus vision, and its experience may act as a warning to the U.S. The country sequences the genome of the vast majority of its coronavirus cases, and has found that even as a national lockdown drove down cases over the last few months, the virus variant B.1.1.7., first discovered in Britain, has continued to gain steam.

Camilla Holten Moller of the Statens Serum Institute, which models the epidemic for the Danish government, thinks the variant could make up as much as 80 percent of cases in the country, possibly by the end of this month. If that happens, she expects a sudden rise in infections and hospitalizations.

"And with B.1.1.7, it's like speeding in a car," she said. "Your reaction time is shorter."

4. Vaccine distribution:

As New Hampshire makes its way through the second COVID-19 vaccination group, the state is trying to keep pace with slowly increasing vaccine shipments and surplus doses from pharmacies while it reschedules appointments for earlier dates and prepares to open more local vaccination sites.

Although supply is still tight after two months, the state is receiving more doses (about 40,000 per week instead of 20,000). That means those in the 1B group are having their April and May appointments moved up to February and March.

The state still is primarily using drive-through vaccination sites, though officials expect soon to call on hospitals, doctors' offices and urgent care clinics to vaccinate patients.

Another small cache of vaccines may become available in the coming weeks, as the program to vaccinate residents and staff of nursing homes and assisted-living facilities winds down. The

state is working on securing several thousand doses that were allocated to CVS, the pharmacy chain that held vaccine clinics for most of the state's nursing homes and assisted-living facilities that were not used. CVS, under a federal contract, was given enough doses to vaccinate every resident and worker in long-term care facilities, but not everyone decided to be vaccinated.

Walgreens, the other pharmacy contracted by the federal government to vaccinate nursing homes, is using its 6,800 leftover doses to move up the appointments of about 3,400 people in the 1B category.

Eventually, Plummer said, he wants to see the state's drive-through clinics wind down, with the vaccination effort taken up by other health-care providers. The state has signed about 100 agreements with hospitals, clinics, urgent care centers and other health care providers to potentially become vaccination sites. The limiting factor is the speed at which doses reach the state and are sent to the sites available.

5. For the scientists on the Island:

SIREN study includes data suggesting Pfizer/BioNtech vaccine prevents many infections.

Just over two months removed from the US Food and Drug Administration's Emergency Use Authorization approvals of both the Pfizer/BioNtech and Moderna vaccines, promising new data on vaccine effectiveness has been made public. Published Monday as a preprint in [*The Lancet*](#), researchers involved in the SIREN study evaluated the efficacy of the Pfizer vaccine among healthcare workers (HCW) receiving frequent asymptomatic testing. SIREN is a multicenter prospective cohort study that took place in publicly funded hospitals in the United Kingdom.

Over 20,000 HCW and staff from 104 hospitals were followed between December 8th and February 5th. Thirty-five percent of the vaccine recipients had a previously documented SARS-CoV-2 infection by PCR or antibody testing. Notably, an overwhelming majority of the participants were female and white (84 and 89 percent, respectively). A documented 5,874 had prior medical conditions, most commonly asthma, obesity, or diabetes. By the end of the study period, 89 percent of the participants had received at least one vaccine dose, while just eight percent had received both.

Promisingly, the data showed that after 21 days, just a single dose of the Pfizer/BioNtech vaccine was 72 percent effective at preventing not just covid-19 but SARS-CoV-2 infection itself; the vaccine was 86 percent effective in decreasing infection seven days after the second dose. These data are specific to the individuals who had *not* gotten sick before. At the time of the preprint, no data was available for those with previously documented infections. More good news: this cohort of patients was vaccinated when the B.1.1.7 variant of SARS-CoV-2 was dominant throughout the UK; it seems that the vaccine is highly effective against that more infectious strain as well.

One discouraging piece of data did come out of this study too, however, with respect to those who were less likely to receive a vaccine. Individuals less likely to get a shot were noted to be female, under 35 years old, self-identified as Black or Asian and living in socio-economically



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depressed areas. This is a reflection of systemic disparities, which reflect some of the same inequalities seen among those that have been more affected by covid-19 around the globe.

Nevertheless, these data add to the mounting evidence that the vaccines not just prevent symptomatic disease, but also infection, and therefore contagion. What remains unknown is whether the 86 decrease is the ceiling for decreasing infection, or whether further out, the number may rise. Also unknown is whether the vaccines decrease the degree to which those who become infected are contagious. If the vaccines also limit contagion, the end of this crisis could be within our grasp, were enough vaccines to be available, and enough people were willing to take them.

Antibodies to SARS-CoV-2 are highly protective against future infection, but not perfect.

Since the covid-19 pandemic broke out, many have worried and wondered whether those who have recovered from infection might be able to be re-infected. While there have been reports of repeat infections, they appear to be unusual and so far, most re-infections have caused milder illnesses the second time around. New data in [*JAMA Internal Medicine*](#) quantifies this.

Patients found to have antibodies against SARS-CoV-2 at the start of the study were rechecked for signs of an active infection by way of genetic tests that detect the genetic material of the virus at various time points. In the first 30 days, over 11 percent of patients with antibodies were found to have positive tests for active infection, meaning that those patients still had not cleared the virus entirely (though that does not mean they were contagious or symptomatic). Over the next month, only 2.7 percent were found to be positive. After 90 days, 0.3 percent of those who were found to have antibodies at first (or one in 333) were found to have signs of an active infection.

Meanwhile, among those with antibodies at the outset, some did lose those antibodies over time. After 60 days, over 18 percent of those with detectable antibodies at the outset no longer were found to have them. This means that the antibody levels of these patients fell below detectable limits.

All of this implies that re-infection is possible, though in a small minority of patients. The fact 18 percent of the subjects had antibody levels fall below detectable levels two and three months after the study began *but* only 0.3 percent were found to have acquired an active infection after three months implies that people may remain immune despite having antibody levels below the detection limits.

The good news is that the coronavirus vaccines currently available to the public have been shown to provide higher levels of antibodies than natural infection. It's possible then that any

effects described in this study may be the worst-case scenario, with vaccines providing a safer path forward.

—*Jeremy Samuel Faust MD, MS*

And:

Expanded guidance for monoclonal antibody treatment for COVID-19

Several monoclonal antibody (mAb) treatment options have been authorized for emergency use (EUA) by the Food and Drug Administration (FDA) for eligible people who are high risk for developing severe COVID-19 and who have not been admitted to the hospital. The therapeutics are administered by intravenous infusion. These antibodies include: bamlanivimab and etesevimab, or casirivimab and imdevimab (REGEN-CoV2). Portsmouth Regional Hospital is a potential source for these through your health care provider.

Yours In Health,

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