

Report to the Boards of Health

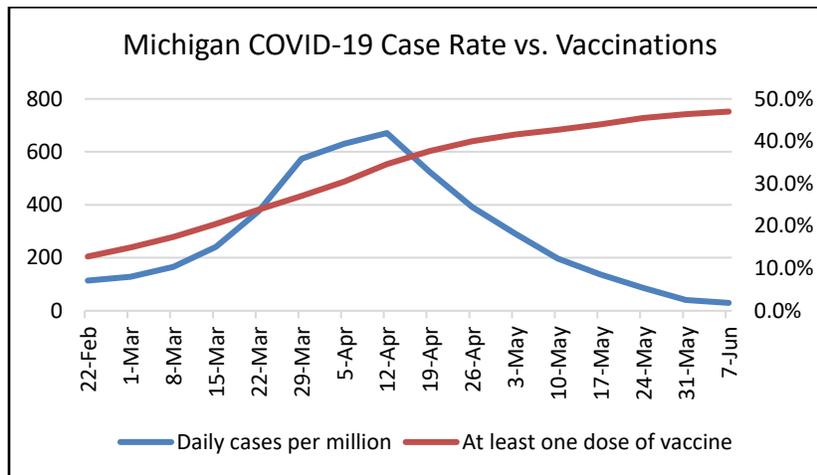
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Mid-Michigan District Health Department, Wednesday, June 23, 2021
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District Health Department 10, Friday, June 25, 2021



COVID-19: What Comes Next

In the past 6 months, amazing strides have been made in vaccination and control of COVID-19 in the United States. We have seen rates of infection decrease while rates of vaccination have increased. There is a sense that the pandemic is over, and life is returning to “normal”. Unfortunately, there is still great uncertainty what the coming months and years hold for us and COVID-19.



A survey of more than 100 immunologists, infectious-disease researchers and virologists working on COVID-19 found that almost 90% of them believe COVID-19 will become endemic, which means it will continue to circulate for years to come. It is expected that most adults will eventually have immunity from vaccination or surviving illness, which will help keep seasonal illness and deaths down, and limit the need for lockdowns, social distancing, masking, and other measures. With time, it will become an illness that most first encounter in childhood, when it causes mild infection, much like the four strains of coronaviruses that cause the common cold. This childhood illness will provide some but not complete immunity into adulthood, which should keep adults from getting as sick if they get reinfected later in life. Getting to this point could take years, depending on how quickly we develop immunity.

This scenario is like that of the 1918 influenza pandemic, which killed 50 million people. After that terrible pandemic, that strain of influenza has continued to change and circulate; nearly every case of influenza A that has occurred since that year has been caused by a direct ancestor to the virus that caused that pandemic.

Many states have or are considering “reopening” or discontinuing their COVID-19 prevention restrictions. Some are reopening based on vaccination levels, rates of positive COVID-19 tests, or rates of COVID-19 cases or hospitalizations. Some are reopening gradually, as vaccination rates increase. Others have no clear target, aiming only for a specific date, and have not defined what might cause measures to



Endemic: a disease or the level of a disease which is present in a population or area all the time, not as an exception to the rule.

Epidemic: the often-sudden rise in the number of cases of a particular disease above the normal endemic level. There is no specific number of cases, duration of disease, or geographical area affected for something to be deemed an epidemic. Seasonal influenza in people is a seasonal epidemic.

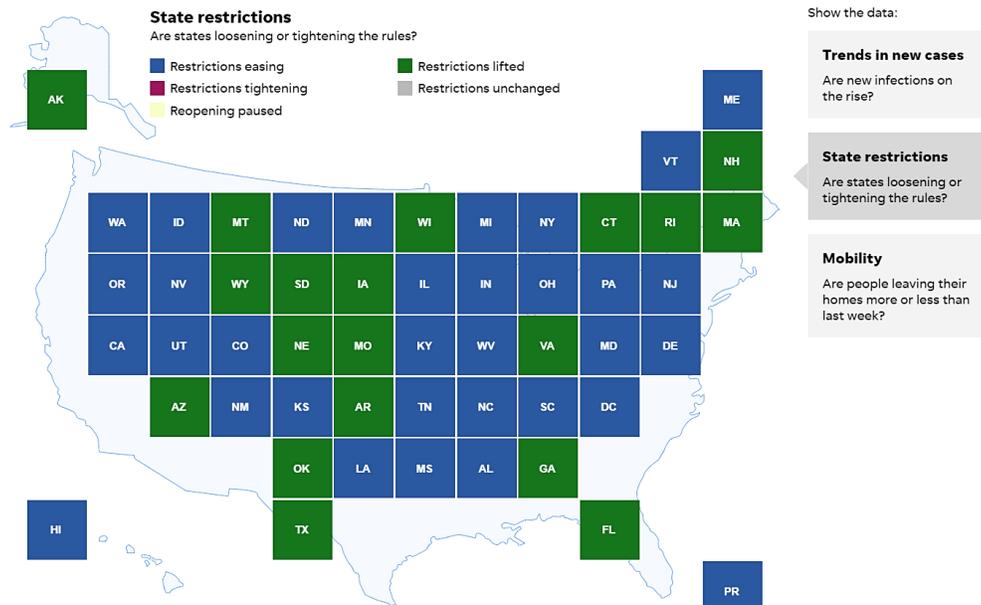
Pandemic: the worldwide spread of a new disease or a strain of an existing disease to which most of the population have no immunity.

Source:
<https://www.technologynetworks.com/immunology/articles/epidemic-vs-pandemic-323471>

be put back in place. Reopening too quickly, when too little of the community is vaccinated, could undo any gains they have made in COVID-19 control. New variants of the SARS-CoV-2 virus could also worsen reopening efforts. The worst-case scenario for reopening was demonstrated in Brazil in March, when as they started to relax restrictions, a new variant began circulating, vaccination was less effective against this variant, and their vaccination program was slow to get moving.

In most areas of the United States, mask use has been decreasing since mid-February. There continues to be a struggle to get people, especially those that are not vaccinated, to wear masks when the risk is highest. There is clear evidence that masks protect both the person wearing the mask and those around them from COVID-19 infection and death.

There have been several studies done using mathematic modeling that have shown that relaxing non-pharmaceutical interventions (NPI) that help prevent COVID-19 before enough of the population is immune will lead to large increases in cases, hospitalizations, and deaths. Nearly all these deaths would occur in the portion of the United States that is not vaccinated. These increases and outbreaks may force closures and lockdowns again, especially in areas with low vaccination rates. Some states and localities have dramatically different vaccination rates and those with lower rates will be disproportionately affected by surges, outbreaks, hospitalizations, deaths, and further shutdowns.

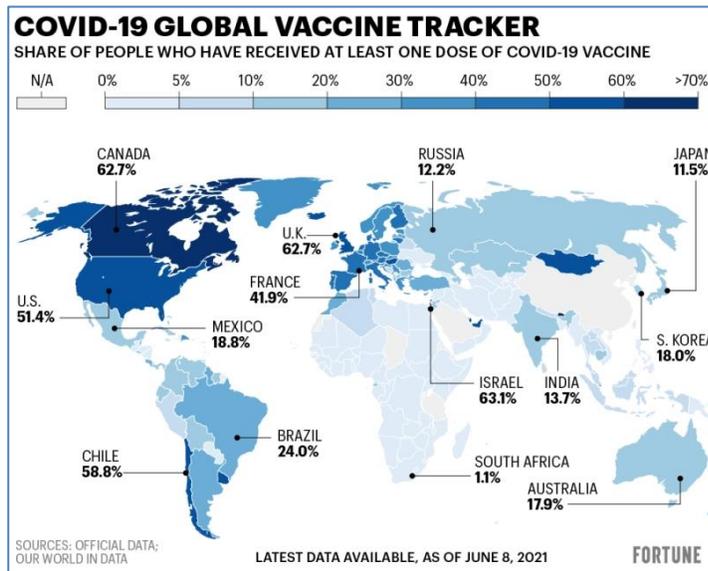


<https://www.usatoday.com/storytelling/coronavirus-reopening-america-map/#restrictions>

There is much discussion about the number of people that need to get vaccinated to stop the spread of COVID-19, known as herd immunity. Many see this number or percentage as a goal or ending point. Experts recommend the focus on this number stop. The amount of the population that needs to be immune to have herd immunity is different for different diseases, so we will not know what that level is for COVID-19 until we get there. New variants, dropping levels of immunity with time, colder weather that causes us to spend more time together indoors, and other factors can all cause changes in the amount of immunity a community need to keep COVID-19 under control. There can also be areas with high average vaccination rates that have pockets of low rates and at risk for outbreaks that reintroduce COVID-19 to the entire area. Some experts fear that we have a low likelihood of ever reaching herd immunity in the US because about 25% of those eligible to get vaccinated say they will never get vaccinated and not all people are eligible for vaccination (primarily children). Other issues they site are the decreased effectiveness of current vaccines against some variants, the potential for new variants, and the lack of 100% effectiveness of vaccination.

Currently, we have been most focused on getting our own communities vaccinated. However, no community or country can be safe until all countries are immune to COVID-19. Globally, only 12% of the population has received at least one dose of COVID-19 vaccine. SARS-CoV-2 will continue to spread and mutate, creating new variants until a high global vaccination rate is reached. COVID-19 will be easily re-introduced from international travel as travel is reinstated. Some experts expect it to take a few years to get COVID-19 under control worldwide.

An assessment of case investigation and contact tracing in 14 different health departments in the US between June and October 2020 found that no close contacts were reported for two-thirds of people with confirmed COVID-19 infections. This was because the cases were either not reached for an interview or they did not name any close contacts. This suggests that contact tracing was not sufficient to reduce the spread of COVID-19 during this time. Of the contacts that were identified and tested, they had a higher chance of testing positive for COVID-19 than the general population, supporting the importance of contact tracing.



As our cases of COVID-19 decrease, finding cases and close contacts of cases becomes more important. For many months, there were more cases and close contacts than public health could handle. Case investigation and contact tracing focused on those of highest risk to spreading COVID-19 to others, such as school aged children, healthcare workers, and residents of congregate settings and nursing homes. As there are fewer and fewer cases, we should do more surveillance testing, quickly isolate anyone that is positive, thoroughly trace all contacts, and quarantine anyone that could be contagious. By doing this, the spread of COVID-19 can quickly be stopped. Adding in backwards contact tracing, which is looking at contacts 2 to 6 days before someone developed symptoms to find the person that may have infected them, can further improve control of COVID-19.

Recommendations:

1. There is no known immunity level when COVID-19 will be controlled. Focus on getting as many people vaccinated as quickly as possible.
2. Vaccination efforts must be worldwide to have lasting effects on COVID-19.
3. Non-pharmaceutical interventions against COVID-19 should be stopped gradually, as vaccination rates increase, and should be reinitiated if needed.
4. Test-trace-isolate work should continue even when cases of COVID-19 are low.

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