To: [redacted]
From: [redacted]
Sent: Fri 2/12/2021 9:17:25 PM
Subject: FW: Time artikel: Covid-19 in 2021/2022
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Interessant artikel over scenarios

[redacted]
Ministerie van VWS

[redacted]

Van: [redacted]
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Aan: [redacted]
Onderwerp: Time artikel: Covid-19 in 2021/2022

Voor als jullie nog wat leesvoer zochten voor tijdens het weekend. Interessant artikel in Time Magazine over Covid-19 en mogelijke scenario's voor 2021/2022. Ter inspiratie.

https://time.com/5936034/life-after-covid-19-vaccine/

Mocht link niet werken, bij deze de volledige tekst hieronder.

Fijn weekend.

Groet,
[redacted]

When does a pandemic end? Is it when life regains a semblance of normality?

Is it when the world reaches herd immunity, the benchmark at which enough people are immune to an infectious disease to stop its widespread circulation? Or is it when the disease is defeated, the last patient cured and the pathogen retired to the history books?

The last scenario, in the case of COVID-19, is likely a ways off, if it ever arrives. The virus has infected more than 100 million people worldwide and killed more than 2 million. New viral variants even more contagious than those that started the pandemic are spreading across the world. And though highly effective vaccines were developed and deployed in record time, it will be a mammoth undertaking to inoculate enough of the world's population to achieve herd immunity, especially with the new variants in hot pursuit. Already, in many countries with access to vaccines, logistical hurdles and vaccine hesitancy have proved to be formidable adversaries; meanwhile, many nations in the

developing world don't have access to vaccines at all.

There have been, and will continue to be, global success stories. Israel has vaccinated a significant chunk of its population, enough to begin feasibly planning for a post-herd-immunity reality. New Zealand has effectively eliminated COVID-19 through a combination of domestic lockdowns and border-control measures, and Australia and multiple Asian countries have used similar tactics to dramatically tamp down the virus's spread. But in places like the U.S., where the virus continues to spread widely, elimination is at this point a far less attainable goal than management. In the U.S., as in many parts of the world, experts say COVID-19 is likely, at least for the foreseeable future, to become endemic–a disease that circulates regularly, if not as catastrophically as it has over the past year. That doesn't mean it will be everywhere, all the time, but it may not disappear completely, either.

Our challenge in the U.S., then, may not be vanquishing the virus that has dominated the past year of our lives. It may be learning to live with it.

Imagine today's date is Sept. 1, 2021. You've received both of your vaccine doses. Your neighbors have been fully vaccinated too, so you're having them over for dinner tonight. COVID-19 cases have become rare in your town. You'll wear a mask when you go out to pick up groceries, just to be safe, and there are still signs up at the pharmacy counter advertising COVID-19 vaccination. For the most part, though, life feels pretty normal.

Your brother, who lives a few states away, is living in a different reality. Several clusters of cases related to a new viral variant have emerged in his area, prompting schools to delay their start dates. Masks are required in public, and restaurants are asking patrons to leave their information in case they need to start contact tracing. The health department is setting up public testing and vaccination sites, and health officials are on the news each night encouraging unvaccinated people to get their shots. You were planning to visit your brother for Thanksgiving, but you may scrap those plans if things get much worse in his area.

That's a hypothetical scenario, of course. COVID-19 is a new disease, and there's no road map for predicting its future. No one knows how long it will take the U.S. to reach herd immunity or whether we'll get there at all—if the virus mutates faster than vaccines can be administered, or if a significant share of the population opts not to get vaccinated, the window may slam shut. Scientists don't know how many people need to get vaccinated to reach that threshold even if everything goes well, though recent estimates put the figure at well above 70% of the population. That's a daunting goal, since only about 8% of people in the U.S. have been vaccinated so far.

What does seem safe to say is that COVID-19 will become increasingly manageable as more people get vaccinated, slowing—if not stopping—the virus's spread through communities. Despite the sluggish start to vaccine distribution in the U.S., "if we [vaccinate] efficiently in April, May, June, July, August, we should have that degree of protection that could get us back to some form of normality" by fall, Dr. 5.1.2e 5.1.2e, director of the National Institute of Allergy and Infectious Diseases, said in January.

Even assuming the U.S. picks up the pace on vaccinations, there will still be gaps in protection. The two COVID-19 vaccines currently authorized in the U.S., made by Pfizer-BioNTech and Moderna, are both about 95% effective at preventing disease, but there is a small subset of people for whom they will not work. It's also unclear whether being vaccinated means you cannot transmit the virus to others. And there will always be people who choose not to or are unable to get vaccinated. Plus, children younger than 16 are not currently eligible for vaccination, which means the virus may keep spreading among young people until vaccinemakers complete studies on children, hopefully sometime this year.

All that means the U.S. is unlikely to eliminate COVID-19 in the near future, says Saskia Popescu, an assistant professor of biodefense at George Mason University. A country like New Zealand–an island nation with about 5 million residents–will have an easier time stamping out a virus than a global travel hub with 330 million citizens living across more than 50 states and territories. But even if elimination is far off, "I think we'll enter a phase of low-level prevalence," says Dr. Sandro Galea, dean of the Boston University School of Public Health. "Yes, there [will be] a disease among us, but there are many diseases among us."

Some current precautions, like wearing masks in public, will likely remain widespread throughout 2021, while more drastic measures–like school closures or stay-at-home orders–will hopefully become temporary and targeted, based on where case clusters emerge. If case counts in an area begin to tick upward, public-health departments should be ready to respond quickly with vaccination and testing campaigns, Popescu says.

Viral variants only complicate the equation. It's standard for viruses to mutate the longer they spread. As more people gain immunity to a virus, it adapts to the changing conditions, sometimes becoming more contagious–or even more virulent–in the process. Already, more-infectious variants of SARS-CoV-2, the virus that causes COVID-19, have begun to spread around the world. Research suggests currently authorized vaccines will work against them, but there is always the frightening possibility that the virus will mutate enough that that's no longer true.

Jonna Mazet, a professor of epidemiology and disease ecology at the University of California, Davis, says the U.S. will need to set up a robust surveillance system to watch for new variants of the virus. That might mean future international travelers will also have to get tested upon arrival in the U.S., or that large employers and hospitals will have to regularly test their employees or patients to watch for new variants emerging in the population.

To enable this kind of surveillance, the World Health Organization (WHO) is working with countries around the world to strengthen their genetic-sequencing abilities. Maria Van Kerkhove, the WHO's technical lead on COVID-19, says that may mean leveraging labs already set up to detect the flu, HIV, tuberculosis and other diseases, and setting guidelines for which samples need genetic sequencing–prioritizing, for example, those that come from unusual case clusters or from patients with abnormal symptoms.

If concerning mutations do pop up, vaccinemakers may have to tweak their shots and offer new versions as boosters. Luckily, the mRNA technology used to develop both Pfizer-BioNTech and Moderna's shots enables them to make this kind of adjustment in weeks. The shots use the virus's genetic sequence to teach the body how to make proteins that trigger an immune response, so scientists could just sub in the new genetic information where relevant. Van Kerkhove says it's possible vaccines will be tailor-made for certain geographical regions depending on how and where the virus mutates, but global travel means new strains won't stay contained for long.

That underscores wealthy countries' responsibility to help developing nations get access to vaccines, Mazet says–for the benefit of the people who live there, of course, but also for the rest of the world. Even if one country achieves herd immunity, that status could be threatened by new viral mutations emerging from areas without broad vaccine coverage.

The good news is we already know how to live with viruses, like seasonal influenza and the coronaviruses that cause the common cold. These diseases aren't harmless–the flu infects millions of people in the U.S. each year and kills tens of thousands–but we have learned to minimize their damage.

Flu shots are neither perfectly protective nor universally used, but the U.S. has honed the art of administering them. Each year, pharmacies, medical offices, workplaces and public clinics vaccinate millions of people, often for free. The U.S. Centers for Disease Control and Prevention also has a surveillance system designed to track where and how widely influenza strains are circulating–research that occasionally leads to targeted precautions, like temporary school closures. People also know to take extra disease-prevention precautions during flu season.

COVID-19 prevention may ultimately look similar. It's possible that COVID-19 vaccines will need to be administered yearly, like flu shots. A surveillance network will also be necessary, to watch for new variants or areas where case counts are creeping upward. But if countries stay vigilant about precautions like masking, and if coronavirus vaccines turn out to be fairly long-lasting and almost universally used, our approach to COVID-19 may someday mirror that of nearly eliminated diseases like measles.

The measles, mumps and rubella vaccine is required for most schoolchildren, and its protection usually lasts a lifetime. About 85% of the world's children have had at least one dose of the measles vaccine; in the U.S., about 92% of adolescents have received both recommended shots. That's an aspirational target when designing COVID-19 vaccination campaigns. Still, measles outbreaks do occasionally occur in the U.S., particularly among children who live in communities with high levels of vaccine skepticism. But because measles vaccination is so widespread and effective, such incidents are rare. Even in 2019, one of the worst years for measles in recent history, only about 1,300 people in the U.S. got sick.

It may never be possible to drive COVID-19 case counts down that low, especially since immunity from COVID-19, unlike measles, may not be lifelong. But Ralph Baric, a coronavirus researcher at the University of North Carolina, says he can envision a future in which, thanks to widespread vaccination, COVID-19 also becomes primarily a disease of childhood, and probably a mild one at that. Kids rarely develop severe cases of COVID-19, and such cases may become increasingly rare with time: as with other coronaviruses, children may be exposed to SARS-CoV-2 early in life and progressively build up immunity to it, taking it from a fearsome pathogen to a routine part of life. Of course, Baric cautions, predictions can be wrong.

Containing the virus is difficult enough from a scientific and logistical perspective. But recovering from a pandemic also raises a number of ethical issues. What would the world look like, for example, if eligibility to work, socialize and generally live a public life were contingent on vaccination status?

About 50% of executives said in a recent poll they plan to require nonremote employees to get vaccinated, and vaccine-mandatory weddings and parties will almost certainly pop up on social calendars. Some countries, including the U.K., are already experimenting with "immunity passports," which essentially mark those who are protected from COVID-19 infection and allow them to live and travel freely.

On their face, such systems make sense–but Nicholas Evans, an assistant philosophy professor at the University of Massachusetts, Lowell, says they're a slippery slope. "An immunity passport

constitutes a regulation on someone's freedom of movement or freedom of association," he says. Beyond that, immunity passports are not always productive, he says. Requiring such proof to travel internationally could encourage people to game the vaccine-prioritization system or, more dangerously, try to get sick to gain natural immunity.

A better solution, many experts believe, is investing in the public-health infrastructure that went neglected before the COVID-19 pandemic, thus improving our ability to contain, respond to and monitor coronaviruses and other pathogens. "We need to invest in creating a healthier country, so when there is another virus, we will not be as unprepared as we were for this one," Galea says.

In COVID-specific terms, that could mean funding a network of free testing centers around the country, so experts can pick up on and respond to case clusters and new variants early. It could mean ramping up the U.S. biodefense program so that it is able to respond more nimbly to emerging pathogens. It could mean streamlining the vaccine production and distribution pipeline, so people are able to easily get not only their first round of COVID-19 vaccinations but also any boosters that become necessary in the future. As part of a proposed $1.9 trillion relief bill, the Biden Administration has already asked for $50 billion in funding for testing and $20 billion for improved vaccine distribution. President Joe Biden in January also issued an Executive Order to establish a COVID-19 response coordinator and help prepare the U.S. for "future biological and pandemic threats."

Recovering from the pandemic must also involve better science communication, to improve understanding of what must be done to curtail disease spread–and to persuade Americans to actually do it.

Part of coexisting with COVID-19 may mean recognizing the need for cooperation, whether it's getting vaccinated to contribute to herd immunity; wearing a mask to prevent spreading the virus; consenting to regular testing or contact tracing to help with monitoring; or adhering to the guidelines set out by local health authorities if an outbreak emerges. Steven Taylor, author of The Psychology of Pandemics, says it's possible for humans to adjust to such a scenario. Wearing masks felt bizarre to many in the Western world less than a year ago; now it's second nature for most. "The virus will adapt to its host," he says, "and we will adapt to the virus."

Elected officials, scientists and public-health experts must continue pushing out clear, trustworthy guidance that will help people tailor their behavior moving forward. If U.S. leaders communicate the best science-backed information available, and transparently explain why certain precautions are required, that could go a long way, Taylor says.

Whenever the U.S. emerges from the pandemic, “normal” may not look like it did in 2019. But if we heed the lessons the pandemic has taught, it could set us up for a healthier world moving forward.

—With reporting by ALICE PARK/NEW YORK

This appears in the February 15, 2021 issue of TIME.