



NARRAGANSETT INDIAN HEALTH CENTER

Improving health in our community

March 2, 2021

Dear Tribal Member,

COVID-19 has disproportionately affected Native communities, in part because of long-standing social inequalities that have put American Indian and Alaskan Natives at higher risk for contracting the virus.

A CDC study found that among 23 states with data on race, **American Indian and Alaskan Native people were 3.5 times more likely to be diagnosed with the coronavirus than white people and four times as likely to be hospitalized.**

Our tribal community already faces significant day to day challenges and COVID-19 has added yet another concern. Many of our patients have diabetes, high blood pressure, heart disease, asthma and other health conditions which make them at higher risk and more vulnerable to the virus.

According to the CDC, they “don’t know how long protection lasts for those who are vaccinated. What [they] do know is that COVID-19 has caused very serious illness and death for a lot of people. If you get COVID-19, you also risk giving it to loved ones who may get very sick. Getting a COVID-19 vaccine is a safer choice.”

Among our tribe, we are seeing the virus affecting more and more of our tribal members and our tribal leaders are working to ensure you have access to the vaccine and to help you feel comfortable with taking it. They and we at NIHC want to help you to understand that the vaccine is safe for most people.

Though we understand how past injustices against Native Americans and Alaskan Natives have created doubt and suspicion for some in our tribal community, the Narragansett Indian Health Center and Narragansett Indian Tribal Government are encouraging our patients to receive the COVID-19 vaccine when it is available to them. We all know our elders hold our history and have knowledge to share with us that we cannot replace. Nor can we replace our elders.



Therefore, like many leaders our Chief went first in getting the vaccine with the hope that his getting the vaccine would help our tribal community members follow, as taking the vaccine can help us to protect our elders and other more vulnerable tribal members.

He has received both Moderna vaccine doses and reports no problems other than those expected following the vaccine.

We have just recently received 100 doses of the Johnson & Johnson’s Janssen vaccine from IHS; however, we do not yet have all the required paperwork from IHS or the software access needed to allow us to begin administering this vaccine. We will begin taking names for those interested in this vaccine now, so please call us at the number provided below.

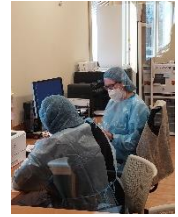




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Administration of the Moderna vaccine is still currently being provided at NIHC. If you want to schedule for the Moderna or Janssen vaccine, please call 401.364.1263 ext. 154 and, speaking slowly and clearly, state your name, date of birth, address, and telephone number and if you think you work in a high-risk job, please leave your job title. We will put your name on our list and we will call you back as soon as possible to schedule an appointment.



Some people have asked if they still need to get the vaccine if they have already had COVID and recovered from it. CDC answers, “Yes, you should be vaccinated regardless of whether you already had COVID-19. That’s because experts do not yet know how long you are protected from getting sick again after recovering from COVID-19. Even if you have already recovered from COVID-19, it is possible—although rare—that you could be infected with the virus that causes COVID-19 again. Learn more about [why getting vaccinated is a safer way to build protection](#) than getting infected.

If you were treated for COVID-19 with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting a COVID-19 vaccine. Talk to your doctor if you are unsure what treatments you received or if you have more questions about getting a COVID-19 vaccine.

Experts are still learning more about how long vaccines protect against COVID-19 in real-world conditions. CDC will keep the public informed as new evidence becomes available.”

The following information is from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html#mask>

Do I need to wear a mask and avoid close contact with others if I have gotten 2 doses of the vaccine?

Yes. To protect yourself and others, follow these recommendations:

- Wear a mask over your nose and mouth
- Stay at least 6 feet away from others
- Avoid crowds
- Avoid poorly ventilated spaces
- Wash your hands often

It’s important for everyone to continue using all the tools available to help stop this pandemic as we learn more about how COVID-19 vaccines work in real-world conditions. Experts are also looking at how many people get vaccinated and how the virus is spreading in communities. We also don’t yet know whether getting a COVID-19 vaccine will prevent you from spreading the virus that causes COVID-19 to other people, even if you don’t get sick yourself. CDC will continue to update this page as we learn more.

Together, COVID-19 vaccination and following CDC’s recommendations for [how to protect yourself and others](#) will offer the best protection from getting and spreading COVID-19. Additional information can be found at key things to know about the COVID-19 vaccine. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/keythingstoknow.html>.



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NIHC staff have been working diligently to provide the COVID-19 vaccine for our tribal elders and other vulnerable tribal members. If there is an elder or high-risk tribal member residing in a household, we will offer the vaccine to all members of the household regardless of age or race in an effort to protect our tribal community and the communities we live in.

Per the CDC, “Experts are working to learn more about both natural immunity and vaccine-induced immunity. CDC will keep the public informed as new evidence becomes available.” We will continue to provide the vaccine, however, how long we can continue depends on whether the US can continue to provide vaccines to meet the demand at which they are needed. We have already seen this become a challenge that is slowing down efforts for counties and states around the country.

The President recently rolled out a series of measures to ramp up vaccination efforts, including purchasing 200 million more vaccine doses and increasing distribution to states by millions of doses. However, we encourage you to schedule to get your vaccine now and as long as vaccines are available, we will continue to administer them.

We understand some of you may be hesitant to receive the vaccine. Therefore, we would like to share the following information from the CDC website to help you make your decision:

A New Approach to Vaccines

mRNA vaccines [like the Moderna vaccine, we offer at NIHC] take advantage of the process that cells use to make proteins in order to trigger an immune response and build immunity to SARS-CoV-2, the virus that causes COVID-19. In contrast, most vaccines use weakened or inactivated versions or components of the disease-causing pathogen to stimulate the body’s immune response to create antibodies.

mRNA Vaccines Are New, But Not Unknown

There are currently no licensed mRNA vaccines in the United States. However, researchers have been studying them for decades.

Early-stage clinical trials using mRNA vaccines have been carried out for influenza, Zika, rabies, and cytomegalovirus (CMV). Challenges encountered in these early trials included the instability of free RNA in the body, unintended inflammatory outcomes, and modest immune responses. Recent technological advancements in RNA biology and chemistry, as well as delivery systems, have mitigated these challenges and improved their stability, safety, and effectiveness.

Benefits of mRNA Vaccines

mRNA vaccines have several benefits compared to other types of vaccines including use of a non-infectious element, shorter manufacturing times, and potential for targeting of multiple diseases. mRNA vaccines can be developed in a laboratory using a DNA template and readily available materials. This means the process can be standardized and scaled up, making vaccine development faster than traditional methods. In addition, DNA and RNA vaccines typically can be moved most rapidly into the clinic for initial testing. In the future, mRNA vaccine technology may allow for one vaccine to target multiple diseases.



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- Like all vaccines, COVID-19 mRNA vaccines have been rigorously tested for safety before being authorized for use in the United States.
- mRNA technology is new, but not unknown. They have been studied for more than a decade.
- mRNA vaccines do not contain a live virus and do not carry a risk of causing disease in the vaccinated person.
- mRNA from the vaccine never enters the nucleus of the cell and does not affect or interact with a person's DNA.

COVID-19 vaccination will help keep you from getting COVID-19

- All COVID-19 vaccines currently available in the United States have been shown to be highly effective at preventing COVID-19. [Learn more about the different COVID-19 vaccines.](#)
- All COVID-19 vaccines that are in development are being carefully evaluated in clinical trials and will be authorized or approved only if they make it substantially less likely you'll get COVID-19. [Learn more about how federal partners are ensuring COVID-19 vaccines work.](#)
- Based on what we know about vaccines for other diseases and early data from clinical trials, experts believe that getting a COVID-19 vaccine may also help keep you from getting seriously ill even if you do get COVID-19.
- Getting vaccinated yourself may also protect people around you, [particularly people at increased risk for severe illness from COVID-19.](#)
- Experts continue to conduct more studies about the effect of COVID-19 vaccination on severity of illness from COVID-19, as well as its ability to keep people from spreading the virus that causes COVID-19.

COVID-19 vaccination is a safer way to help build protection

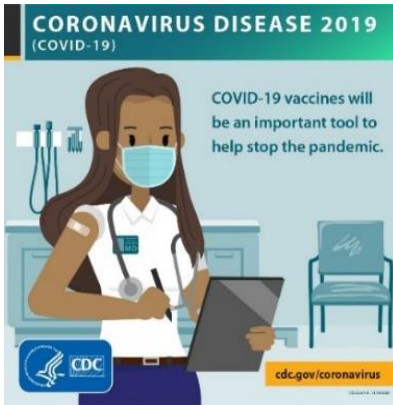
- COVID-19 can have [serious, life-threatening complications](#), and there is no way to know how COVID-19 will affect you. And if you get sick, you could spread the disease to friends, family, and others around you.
- Clinical trials of all vaccines must first show they are safe and effective before any vaccine can be authorized or approved for use, including COVID-19 vaccines. The known and potential benefits of a COVID-19 vaccine must outweigh the known and potential risks of the vaccine for use under what is known as an Emergency Use Authorization (EUA). [Watch a video on what an EUA is.](#)
- Getting COVID-19 may offer some natural protection, known as immunity. Current evidence suggests that reinfection with the virus that causes COVID-19 is uncommon in the 90 days after initial infection. However, experts don't know for sure how long this protection lasts, and the risk of severe illness and death from COVID-19 far outweighs any benefits of natural immunity.
- COVID-19 vaccination will help protect you by creating an antibody (immune system) response without having to experience sickness.
- Both natural immunity and immunity produced by a vaccine are important parts of COVID-19 disease that experts are trying to learn more about, and CDC will keep the public informed as new evidence becomes available.



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COVID-19 vaccination will be an important tool to help stop the pandemic



- Wearing masks and social distancing help reduce your chance of being exposed to the virus or spreading it to others, but these measures are not enough. Vaccines will work with your immune system so it will be ready to fight the virus if you are exposed.
- The combination of getting vaccinated and following CDC's recommendations [to protect yourself and others](#) will offer the best protection from COVID-19.
- Stopping a pandemic requires using all the tools we have available. As experts learn more about how COVID-19 vaccination may help reduce spread of the disease in communities, CDC will continue to update the recommendations to protect communities using the latest science.

Facts about COVID-19 mRNA Vaccines

They cannot give someone COVID-19.

- mRNA vaccines do not use the live virus that causes COVID-19.

They do not affect or interact with our DNA in any way.

- mRNA never enters the nucleus of the cell, which is where our DNA (genetic material) is kept.
- The cell breaks down and gets rid of the mRNA soon after it is finished using the instructions.



In addition, we would like you to know:

- **Stopping this pandemic is going to require all our tools: handwashing, masks, social distancing, and vaccines.** Together, these tools offer the only way we can get back to our normal routines.
- **Taking the vaccine is one of several things you can do to protect yourself and your household.** The vaccine will help protect you from getting COVID-19.
- **The COVID-19 vaccine is safe.**
 - All COVID-19 vaccines were tested in clinical trials involving tens of thousands of people to make sure they meet safety standards and protect adults of different ages, races, and ethnicities.
 - There were no serious safety concerns. CDC and the FDA will keep monitoring the vaccines to look for safety issues after they are authorized and in use.
- **No steps involving safety were skipped during the COVID-19 vaccine development process.**
 - COVID-19 vaccines were held to the same rigorous safety standards as other vaccines.



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Researchers around the globe came together to develop a vaccine quickly, because so many lives were at stake. But this speed did not compromise safety or scientific integrity.

- The government began producing doses of certain COVID-19 vaccines already in phase 3 trials, which speed up availability. Scientific advances over the last decade have also helped us learn a lot about the body and how it responds to vaccines.
- Vaccines often cause our immune systems to respond in a way that shows the vaccine is working.
 - This is healthy, normal, and expected.
 - You may experience a sore arm, headache, fever, or body aches, but they should go away within a few days.
 - The effects of COVID-19 are much worse than these mild to moderate reactions that people sometimes have to the vaccine.

For the most up-to-date information about receiving the vaccine, please go to [CDC's COVID-19 mRNA vaccine webpage](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html). <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>

In clinical trials, Pfizer and Moderna showed that their shots prevent severe COVID-19, but they didn't test whether their vaccines prevent asymptomatic cases. Without curtailing these symptom-less infections, it's difficult to stop the coronavirus' transmission from person to person. But evidence is [coming together] around the idea that people who get these vaccines don't spread the virus after all.

"There have been some studies that are pointing into a very favorable direction," Dr. Anthony Fauci, director of the National Institute for Allergy and Infectious Diseases, said in a briefing last week.

A preliminary study from Israel, for example, found that starting 12 days after vaccination, the people who got COVID-19 despite getting Pfizer's shots had four times less virus in their bodies. Reduced viral loads are linked to lower transmission rates.

YouTube videos:

○ (:30 seconds): <https://www.youtube.com/watch?v=xW4aN9FccqU>

[youtube.com] [health.us2.list-manage.com]

○ (:15 seconds): https://www.youtube.com/watch?v=kwLZi10uS_g

[youtube.com] [health.us2.list-manage.com]

Rhode Island Department of Health COVID-19 Information:

https://covid.ri.gov/vaccination?mc_cid=cc5eca443c&mc_eid=f2a70cdd1a

Johns Hopkins Bloomberg School of Public Health

https://www.youtube.com/channel/UC_AK324Za3GR5O55EhKGSMA

<https://www.jhsph.edu/covid-19/>



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Boston Children's response to COVID-19

<https://bchmedia.org/sites/default/files/video/import/6154708192001.mp4>

<https://bchmedia.org/sites/default/files/video/import/6156334598001.mp4>

We include additional information along with this letter and hope all information provided is helpful in making your decision about getting the vaccine. We look forward to hearing from you soon, to schedule your vaccine visits.

BOSTON CHILDREN'S CHECKLIST

Match the symptoms with the illness



Until next time, please remember the three W's: Wash your hands, Wear a Mask, Watch your distance.

Sincerely,

Your NIHC Team



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After I get a COVID-19 vaccine, is it safe to visit in person with friends and family?

Answer From Daniel C. DeSimone, M.D.

After getting a COVID-19 vaccine, it's still important to take safety precautions, such as avoiding close contact with others, to prevent the spread of the virus that causes coronavirus disease 2019 (COVID-19). Further research is needed to understand the immunity that a COVID-19 vaccine provides and how long protection lasts before experts will consider changing current safety recommendations.

After you get both doses of a COVID-19 vaccine, it takes about two weeks for your body to build up protection. But even then you could become infected with the virus that causes COVID-19. Keep in mind that the Pfizer-BioNTech COVID-19 vaccine is 95% effective in preventing the COVID-19 virus. The Moderna COVID-19 vaccine is 94.1% effective in preventing the COVID-19 virus. While your risk of getting the COVID-19 virus after being vaccinated is low, it is possible.

It's also not clear if the COVID-19 vaccines reduce the spread of the COVID-19 virus. As a result, it's not known if a person who is vaccinated could be a carrier of the COVID-19 virus and spread it to others, even if he or she doesn't become sick. More research is needed to determine if you are still contagious after being vaccinated.

Because of these factors, even once you're vaccinated you could still pose a health risk to unvaccinated family and friends by visiting with them in person. The risks of serious illness from COVID-19 are highest for people who are older. Nursing home residents are at high risk because they often have multiple underlying health problems, combined with advanced age.

Even after getting the COVID-19 vaccine, continue to follow safety precautions and consider avoiding in-person visits with friends and family until more is known about the immunity the vaccines provide. If you choose to have in-person visits, remember to keep distance between yourself and others (within about 6 feet, or 2 meters). Wear a mask. Visit outdoors, when possible, or open windows and doors to make sure the space is well-ventilated. And wash your hands often.

With

Daniel C. DeSimone, M.D.

<https://www.mayoclinic.org/visits-after-covid-19-vaccination/expert-answers/faq-20506463#:~:text=Even%20after%20getting%20the%20COVID,the%20immunity%20the%20vaccines%20provide.>



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December 23, 2020 / [Infectious Disease](#) <https://health.clevelandclinic.org/8-common-covid-19-vaccine-myths-explained/>

9 Common COVID-19 Vaccine Myths Explained

No, the vaccine will not alter your DNA or give you COVID-19

Even if you understand the scientific process, trust medical experts and know how important vaccines are for fighting infectious diseases, you might still have some questions or concerns about the new COVID-19 vaccines – especially with so many rumors floating around online.

It's normal and healthy to have questions, says [Thaddeus Stappenbeck, MD, PhD](#), Chairman of the Department of Inflammation and Immunity at Cleveland Clinic's Lerner Research Institute.

"These are new therapeutics and it's totally reasonable to be asking constructive questions with an open mind," he reassures.

That said, it's also important to seek out trusted sources of information. Here, Dr. Stappenbeck helps set the record straight on some common questions, concerns and myths that have emerged about COVID-19 vaccines.

Myth 1: We can't trust COVID-19 vaccines because they were rushed.

The first vaccines for COVID-19 do involve new technology, and they were developed in record time. But it's not because there were shortcuts in the process.

The new technology at the center of Pfizer's and Moderna's COVID-19 vaccines is called messenger RNA, or mRNA. While this is the first time it's being widely used in a vaccine for the public, researchers have actually been working on this vaccine strategy for more than [three decades](#).

"It was a lucky thing that the technology has been robustly developed quite well over the last few years and tested in several animal models of infection, so we knew that it was safe and worked quite well in these animal models," Dr. Stappenbeck says.

"When COVID-19 came around, this was an obvious opportunity to use this novel technology, and vaccine developers were poised to do it."

The companies put their vaccines through rigorous clinical trials involving tens of thousands of volunteers. In the U.S., the Food and Drug Administration requires them to follow up with volunteers for up to two years after receiving the vaccines to make sure they are safe and effective. Because of how prevalent COVID-19 is, it only took a few months for the clinical trials to collect enough data to make an initial evaluation. The FDA, as well as an independent panel of vaccine experts, closely scrutinized the data from those trials and deemed Pfizer's and Moderna's vaccines [safe and effective](#) for emergency use. Similar independent panels in several other countries are in agreement.



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Myth 2: The vaccine will give me COVID-19.

Vaccines [prime your immune system](#) to recognize and fight off a disease, but they don't actually cause an infection.

The first two COVID-19 vaccines that are available in the U.S. contain a strand of genetic material called mRNA. When the mRNA enters your cells, it instructs them to make a piece of the "spike" protein that's present on the coronavirus that causes COVID-19. Those protein pieces don't actually harm your body, but they do trigger your immune system to mount a response to fight them off.

You might have some fatigue, muscle aches, a headache or a fever after you get the vaccine. That's normal with any vaccine – it's a sign that your immune system is responding.

Myth 3: We don't know what's in these vaccines.

Both Pfizer and Moderna have published the ingredient lists for their vaccines. In addition to the star ingredient, the COVID-19 mRNA for the spike protein, both vaccines contain lipids (fats) that help deliver the mRNA into your cells and a few other common ingredients that help maintain the pH and stability of the vaccine. Despite theories circulated on social media, they do not contain microchips or any form of tracking device.

Myth 4: These vaccines will alter my DNA.

The vaccines use mRNA to instruct our cells to make a piece of the coronavirus's hallmark spike protein in order to spark an immune system response. Once the mRNA does that, our cells break it down and get rid of it.

"Messenger RNA is something that's made from DNA, but it's not designed to integrate with our DNA, and it doesn't permanently change our genome and who we are in any way," Dr. Stappenbeck says.

Myth 5: I already had COVID-19, so I won't benefit from the vaccine.

We don't yet know how long natural immunity to COVID-19 lasts, Dr. Stappenbeck says. Right now, it seems that [getting COVID-19 more than once](#) is not common, but there are still many questions that remain unanswered. Experts say that, even if you've had COVID-19, it would still be appropriate for you to get the vaccine to make sure you're protected.

Myth 6: Since COVID-19's survival rate is so high, I don't need a vaccine.

It's true that most people who get COVID-19 are able to recover. But it's also true that some people develop severe complications. So far, more than 1.7 million people around the world have died from COVID-19 – and that doesn't account for people who survived but needed to be hospitalized. Because the disease can damage the lungs, heart and brain, it may also cause long-term health problems that experts are still working to understand.



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There's another reason to consider getting the vaccine: It protects those around you. Even if COVID-19 doesn't make you very sick, you could pass it on to someone else who might be more severely affected. Widespread vaccination protects populations, including those who are most at risk and those who can't be vaccinated. It will be important for ending the pandemic.

Myth 7: Once I get the vaccine, I won't have to wear a mask or worry about social distancing.

Even if you get the vaccine, you should continue to wear a mask around others, wash your hands and practice physical distancing. There are a few reasons for this. The first is that both of the authorized vaccines require two doses given three to four weeks apart to achieve the best possible immunity.

When you get your first shot, you don't become immediately immune. "It takes at least a week to 10 days for your body to begin to develop antibodies, and then those antibodies continue to increase over the next several weeks," Dr. Stappenbeck says.

The second is that these vaccines were developed and tested for their ability to prevent severe illness and death from COVID-19. It's not clear whether they also protect against [asymptomatic infection](#) and spread.

"There will be ongoing studies to evaluate this question, but it will be some time before we actually know," Dr. Stappenbeck says. "So after you get the vaccine, you should still take steps to protect other people who haven't been vaccinated yet."

Myth 8: Now that we have vaccines, the pandemic will be over very soon.

"I would love to say that we're going to flip a switch and everything's going to be back to normal, but it's actually going to take a long time for us to be able to vaccinate an adequate number of people to where we'll start to see the cases really dropping," Dr. Stappenbeck explains.

In order to achieve what's called herd immunity – the point at which the disease is no longer likely to spread – about 70% of the population will need to have been vaccinated or infected, he says. But the companies that make these vaccines can only make so many at a time. [So the vaccines will be distributed](#) in phases, with priority given to people with greatest need. They may not be widely available to the general public until several months into 2021.

For now, we should all continue to do our part to help slow the spread of the virus, including wearing a mask, washing our hands and physical distancing.

If you have more questions about the vaccine, talk with your trusted healthcare provider or look to reliable sources like the [Centers for Disease Control and Prevention](#) or the [World Health Organization](#).

Myth 9: The vaccine will cause infertility.

Because the COVID-19 vaccines do not contain the live virus (remember, it's an mRNA vaccine), they are not thought to cause increased risk of [infertility](#), first or second trimester loss, still birth or congenital anomalies. Additionally, there is no evidence to suggest that the vaccine is a risk to a breastfeeding baby.



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COVID-19 | SCHOOL OF PUBLIC HEALTH EXPERT INSIGHTS

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COVID-19 Vaccines: Verifying Safety and Identifying Misinformation

How do we know COVID-19 vaccines are safe?

A Q&A WITH [MONICA SCHOCH-SPANNA](#) AND [GIGI GRONVALL](#) | JANUARY 7, 2021

Facebook Live Q&A

This article has been adapted from a November 25 Facebook Live Q&A

See More Like This

With vaccines starting to roll out across the US, what can we expect to see in the coming weeks and months? How do we know that these vaccines are safe? And, with so much misinformation circulating, how can the average person separate fact from falsity?

Medical anthropologist [Monica Shoch-Spanna](#), PhD, MA, and immunology expert [GiGi Gronvall](#), PhD, from the [Johns Hopkins Center for Health Security](#) answer questions about COVID-19 vaccines.

Pfizer and Moderna vaccines have been cleared for emergency use authorization, and there are other promising vaccines in the works. What can we expect to see in the coming weeks and months with those other candidates?

Gigi Gronvall: There are so many vaccine candidates in some stage of development—over a dozen, actually, that are in phase 3 trials—but only a few are going to be for the U.S. market. I think we'll continue to see more data released and some more emergency use authorization requests.

I think that's when we're going to start being able to compare some of the vaccine candidates. All of them have had higher efficacy rates than we were expecting. So it's been mostly an all good news story. But the timetable depends on when the companies get enough data to support an application to the FDA.

We've already seen health care workers and some priority groups get vaccinated. What will happen next?

Monica Schoch-Spanna: You may have a safe and effective vaccine, but the question still remains, Who gets it, and in what order? The Advisory Committee on Immunization Practices is charged with recommending to the CDC an answer to that very question.



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Health care personnel already started getting access [to vaccines] in mid- to late-December. On their heels will be essential workers outside of the health sector, persons with high-risk underlying medical conditions, and elderly individuals.

It's important to understand who constitutes "health care personnel." The advisory committee is defining health care personnel as all paid and unpaid persons serving in health care sectors who have the potential for either direct or indirect exposure to patients or infectious materials. Right now that category is approximately 20 million people, and it includes personnel at hospitals, long-term care facilities, pharmacies, emergency medical services systems, and also outpatient facility staff. All of these folks are essential for the ongoing COVID response, and they are also at a higher risk for exposure to the novel coronavirus.

How do we know that the vaccines that may get emergency use authorization from the FDA are safe?

GG: There are different phases of conducting a clinical trial. I referred to these vaccines as being in phase 3 trials. This is the last phase where people are looking at safety and efficacy. The first phase is purely [for] safety. It's [tested on] a small group of people to make sure that the vaccine [is] well tolerated. And in the second phase, they get a little bit more into the safety part and what kind of doses are required.

It's really only in the third phase that we're looking at whether the vaccine actually does the job that we're hoping it will do, which is to prevent people from getting sick. Thousands of people have gotten these vaccines—at this point, some of the trials have had 30,000 people. That is not enough. There is still a need for more data because this is a vaccine that will go to millions of people. So the FDA will still be requiring the collection of safety data as we go forward. But right now, amongst the thousands of people who have had the vaccines, [they've] had a good safety record.

"Vaccine efficacy" refers to how well a vaccine performs in a trial setting. Some of the vaccines are showing 95% efficacy. Does that mean that 5% of people who are vaccinated would still get COVID?

GG: There's a lot of different ways that people calculate efficacy. Think about it as if you were vaccinated and your friend was not vaccinated, and you were both exposed to the same amount of virus. Your risk of coming down with COVID is 95% reduced compared to your unvaccinated friend.

Some other vaccines offer 50% efficacy. When you think of it in those terms—if you have a 50% reduced risk of coming down with disease [compared to] an unvaccinated person exposed to the same amount of virus—it's still a pretty good risk calculation for yourself.

But 95% is amazing. That's more like the efficacy that we see for childhood vaccines—diphtheria, MMR, tetanus, or measles.

Since it may take some time to get a large percentage of the population vaccinated, will we continue to be using some precautions like masks and social distancing into this summer and possibly the fall of next year?



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MSS: That's a great question because it points to the need for all of us to be both hopeful about the promise of vaccines, but also realistic about the time-consuming efforts that are going to be involved with distribution and administration. We need to, all of us, set realistic expectations, while not losing a sense of resilience and hope.

In order to enable a full recovery from the pandemic, we have to think about all the tools in our prevention toolkit. That includes vaccines, but it's not limited to vaccines. All of us have been doing a good job with washing hands, wearing masks, and physically distancing ourselves from others, while also assessing indoor air quality and how well ventilation is working.

We need to use all of those tools even once a vaccine becomes available. The vaccination enterprise [is] a large system with a lot of players, a lot of steps, and a lot of responsibilities that are distributed from national levels all the way down to local municipalities.

We are looking at an ongoing rollout from manufacturers as their capacity allows, and we will face ongoing rollout as far as distributing that product. And then ongoing administration where vaccinators are actually administering the vaccine to individuals and groups of individuals. Each aspect of that system takes time. So it's important that all of us pitch in with every tool in our tool kit. While vaccination is unfolding across the nation, we should all be prepared to continue to wear masks to continue to wash hands and to continue to physically distance ourselves and avoid larger gatherings.

There is misinformation circulating that COVID-19 vaccines contain mercury, anti-freeze, animal blood, or even formaldehyde. What's behind these claims?

GG: COVID vaccines are new, but these kinds of concerns about vaccines go back for a long time. These are often intentionally a misconstruction of information by people who are anti-vaccine.

Do they include animal blood? Do they include formaldehyde? No, they don't. There are some chemicals that sound similar to some of these. There's a mercury cousin called thimerosal that was used in vaccines in the past but that's barely used in vaccines now—not because of any safety concerns from the data, but mostly because of concerns that were raised by misinformation. Some [vaccines] do have preservatives, but all of them have been tested many times and have a good safety record, particularly in the quantities that are in the vaccine. A lot of times, people forget that we ourselves are made up of chemicals, and some of these things in the vaccine, there are sometimes more of them in your own body naturally. It's important to be aware of your sources of information about the vaccine and also to recognize that there are groups—and some of them are nation-state funded—that are intentionally poisoning the information atmosphere with things that are not true about the vaccine. Some of the nation-state actors don't really care about vaccines and are not really “anti-vaccine.” They're just really trying to sow discord.

A good hint of whether the information comes from a source that's intending to sow discord is if it makes you angry, if it inspires a powerful emotion. Just take the next step and look at your source. See if [the information] is coming from a place where there are people who are experts in that topic, who can address the concerns but without trying to manipulate you.



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I've even heard [the claim] that there was some sort of chip in the vaccine—that is not possible and not something that is in these vaccines.

How do we know that what we're seeing now is an alarming increase in the spread of the coronavirus and not just a result of better testing?

GG: Testing to see if somebody is currently infected with COVID is one tool that we have. When a place is doing a lot of tests, you can look to see what the test positivity rate is.

If 60% of all the tests that a particular state is doing are positive, that's an indicator that there are [a lot more] cases out there that they're not detecting, [and] they're not doing enough testing. A test positivity rate of under 5% [means] you're capturing most of the people who are positive.

Another indicator that COVID is increasing in most parts of the country is that we're seeing a big increase in hospitalizations and increases in deaths. We're getting better at treating patients, but nonetheless, you're seeing increases [in deaths].

There's a myth that injecting an RNA vaccine into your body could alter your DNA. Can you explain why this is not possible?

GG: The way that things work in your body is that you have DNA, which is your [genetic] blueprint, and then you have proteins that are made from RNA. When you inject an RNA vaccine, proteins will be made from that RNA, but it doesn't do anything to your DNA.

What are the side effects associated with COVID-19 vaccines?

MSS: When you get vaccinated, your immune system is responding to the introduction of materials and learning how to deal with the pathogen of concern—in this case, the SARS-CoV-2 virus that causes COVID-19 disease.

Some common side effects are fever, sore arms, and muscle ache. Those are typical signs that our bodies are reacting to the vaccine, and, rather than a sign of sickness, they are a good signal that our immune system is beefing itself up.

It's important that people be prepared for some potential soreness, maybe a little fever, maybe some muscle ache, maybe some fatigue. This is really important because, at least right now, the vaccines are two-dose vaccines. Some people may hesitate to come back for a second dose if they have a negative experience with that initial vaccine. So, we need to recognize that there are some normal side effects, and they mean that our immune systems are thankfully being turned on and learning what they should learn.

People will have to be sure to follow up with the second dose, because that's what's really going to secure the level of protection needed.



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Why does this vaccine have what sounds like more notable side effects than the flu or other vaccines?

GG: The flu vaccine is very well tolerated—more than many other vaccines, I think. COVID vaccines are described as being a little bit more like the shingles vaccine. All of [the vaccines for different viruses] have a little bit more of these side effects than the flu vaccine does.

There will be some follow-up after you get the vaccines to make sure that you're doing well. We will need to make sure that medical providers are prepared to address any concerns after you get a vaccine.

There's also something called the Vaccine Adverse Event Reporting System, which is one of several reporting systems that you can take advantage of to make sure that if you're concerned about your symptoms, it's brought to somebody's attention. There are a lot of different systems in place to try to capture this information.

Is it possible that COVID-19 vaccines will be made mandatory by the federal government?

MSS: No. Vaccines will not be made mandatory by the federal government.

This is another opportunity to implore that people make sure that they are checking on the sources of their information and verifying the truth of what they're hearing. It's important for people to understand that public health is best served by the behaviors of all members of society, and public health as a practice is driven by respect for people's autonomy and their individual rights. That means providing for high levels of health literacy and providing meaningful information so people can make informed decisions, and then allowing people to opt out of an intervention after they've gotten the information they need.

In the United States, there's a history of a sense of rugged individualism. I think we're all primed to get a little anxious around the sort of public health declarations about an intervention to curtail the pandemic. That's just part of our social fabric in the United States.

But again, some groups are interested in taking advantage of that ethos in our country and sowing misinformation about vaccines [being] mandated by the federal government because they are trying to drive a wedge between citizens and the government that is trying to protect their health and well-being.

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