COVID-19 Vaccines: Information to Empower Our Communities

Susana Morales, MD
Linnie Golightly, MD
Department of Medicine, Weill Cornell/NYP
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Dr. Golightly: has no financial relationships to disclose, and does not intend to discuss any unlabeled/unapproved use of drugs.

Dr. Morales: has no financial relationships to disclose, and does not intend to discuss any unlabeled/unapproved use of drugs.
Our Discussion Roadmap

- What is COVID-19?
- Why get vaccinated?
- How do vaccines work?
- How do I know the vaccines will protect me and are safe?
- Tell me about the different types of vaccines.
- How did these vaccines become available so quickly while ensuring safety?
- What about allergic reactions, pregnancy and breastfeeding?
- Vaccine confidence starts with you: the importance of information, communication & transparency
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As of today—3/2/21—NYC is at an extremely high COVID-19 risk level.
What is COVID-19?

SARS-COV-2 is the name of the virus

COVID-19 is the name of the illness that it causes

Droplet transmission
Coughs and sneezes can spread droplets of saliva and mucus

Airborne transmission
Tiny particles, possibly produced by talking, are suspended in the air for longer and travel further

Human hair: 60 - 120 microns wide

Source: World Health Organization, images from BBC
Why Should I Get Vaccinated?

To protect yourself

Patients with COVID-19 may have these symptoms:

- Congestion or runny nose
- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Diarrhea
- Muscle or body aches
- Headache
- New loss of taste or smell
- Loss of smell

Currently, over 1.6 million have been hospitalized with COVID-19 in U.S.

COVID-19 has resulted in over 500,000 deaths nationwide.
Why Should I Get Vaccinated?

COVID-19 might cause long-term problems that we don’t fully understand yet.

- Structural changes in the heart
- Cardiomyopathy or enlarged heart
- Heart failure
- Worsening kidney function
- Increased blood clots
- "Brain fog"
- Inflammation of the nerves causing weakness/paralysis, paraesthesias, e.g., painful pricking/tingling
- Difficulty breathing and permanent long-term damage, like fibrosis and lung scarring
- Complications from intubations

Reinfection can occur. Several case reports in the US and other countries; some with worse symptoms, others with less
Why Should I Get Vaccinated?

To protect your family and your community

A vaccine protects an individual...

Community vaccination protects the whole community, even those who can’t get the vaccine yet.

Source: Adapted from the World Health Organization
### Why Should I Get Vaccinated?

**To end the Pandemic**

<table>
<thead>
<tr>
<th>Disease</th>
<th>20th Century Annual Morbidity</th>
<th>2019 Reported Cases</th>
<th>% Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallpox</td>
<td>29,005</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>21,053</td>
<td>2</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Measles</td>
<td>530,217</td>
<td>1,287</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Mumps</td>
<td>162,344</td>
<td>3,509</td>
<td>98%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>200,752</td>
<td>15,662</td>
<td>92%</td>
</tr>
<tr>
<td>Polio (paralytic)</td>
<td>16,316</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Rubella</td>
<td>47,745</td>
<td>3</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Haemophilus influenza</td>
<td>20,000</td>
<td>14*</td>
<td>&gt;99%</td>
</tr>
</tbody>
</table>

### Coronavirus in the U.S.

- **26.5 million cases**
- **470,000 deaths**

Each vaccine has been tested in tens of thousands of people.

Vaccines are held to the same safety standards and testing phases as all vaccines.

60+ million people have had a COVID-19 vaccine in the US.
ALL the vaccines are VERY safe and effective at preventing COVID-19

- ALL the current vaccines are between 80%-95% effective at preventing severe disease.

- No significant safety concerns and mild side effects

- Vaccines cannot give someone COVID-19.
A vaccine works by showing your immune system what a piece of the coronavirus looks like, essentially a "mug shot" of the coronavirus.

If the real coronavirus tries to enter your body it will be recognized and attacked by immune cells and antibodies.
How Do Vaccines Work?

Messenger RNA (mRNA) vaccines create an instruction manual on how to make the spike protein on Sars-COV-2.
Viral Vector vaccines use DNA to tell your cells how to make copies of the spike protein found on Sars-COV-2.
Messenger RNA Vaccines: Pfizer and Moderna

- **Pfizer**
  - 2 doses, 21 days apart
  - Approved for ≥16 years old
  - 36,621 people tested
  - 95% protection against COVID-19 infection with symptoms

- **Moderna**
  - 2 doses, 28 days apart
  - Approved for ≥18 years old
  - 30,000 people tested
  - 94.5% protection against COVID-19 infection with symptoms

Viral Vector Vaccines: Johnson & Johnson

- 1 dose (2 doses are also under study)
- ≥ 18 years old

44,325 people tested

- 72% protection against moderate to severe COVID-19 disease in U.S.
  - 66% in Latin America and 57% in South Africa, likely due to different strains with some resistance
- 85% protection against severe disease

No one in clinical trials who got the vaccine was hospitalized, in ICU, or DIED 4 weeks after the vaccine

Clinical trial phases were overlapped

Manufacturing began **while clinical trials are still underway**.

FDA and CDC are **prioritizing review** and authorization of COVID-19 vaccines.

Thousands of people **volunteered**
Monitoring safety after the vaccine is approved

There is a strong post-approval monitoring system through four CDC systems including Vaccine Adverse Event Reporting System (VAERS) and the V-Safe App.

Safety data across all of the systems are analyzed and reported each week.
What about the new strains?

- If epidemics continue, viruses spread and mutate – forming strains.
- **Vaccination is our best tool** to stop mutation and new strains.
- Vaccines will help protect us against new strains, but may not be as effective. **But vaccines are still recommended!**
What else do I need to know about protection?

Q: I have already been infected with COVID-19 and have COVID-19 antibodies, should I still get the vaccine?

A: YES, because some people have become re-infected and the vaccines might provide better protection.

Q: If I get vaccinated do I still need to wear a mask and practice social distancing?

A: YES, because, at this time, we do not know if the vaccine prevents all infections (including infection without symptoms) and it is possible that you could still spread it to others.

Q: How long will the protection last?

A: We don’t know yet, but studies are ongoing to answer this question.
Everyone should stay in the hospital or clinic for 15 minutes in case you might be allergic to something in the vaccine.

Before getting vaccinated, be sure to document known allergies on your pre-vaccine checklist.

If you have had a serious allergic reaction to something other than the vaccine, you should stay in the immediate area for 30 minutes after the shot.

If you are allergic to something in the vaccine, you should not get vaccinated.

Discuss any concerns with vaccination team.
What about pregnancy and breastfeeding?

Pregnant women who get COVID-19 are at greater risk of being hospitalized, have an increased risk of death, and an even greater risk if they have another chronic condition.

The vaccine is recommended by ACOG for those planning to become pregnant to protect against COVID prior or during pregnancy.

If you are breast feeding you should go ahead and get the vaccine. There is no way for the vaccine to get into the breast milk or affect the baby. You should not stop breast feeding to get the vaccine.
Resources to Make a Vaccination Appointment

NY State Vaccination Hotline
833-NYS-4VAX
(833-697-4829)
covid19vaccine.health.ny.gov

NYC COVID-19 Vaccination Hotline
877-VAX-4NYC
(877-829-4692)
vaccinefinder.nyc.gov

SOMOS
833-SOMOSNY
(833-766-6769)
somosvaccination.mdland.com

The Armory at NewYork-Presbyterian
646-697-VACC
(646-697-8222)
vaccinetogetherny.org
It will take time for everyone to be vaccinated.

In the meantime, we must all keep doing what we know works:

- Wear a mask
- Wash your hands
- Watch your distance
Continue to find joy, peace, meaning, hope, and love every day
Thank You

This presentation was current on Feb 22nd, 2020. For the most up-to-date information on COVID-19 or COVID-19 vaccines please visit CDC.gov.
Importance of Communication, Transparency and Trust

Willingness to get a COVID-19 Vaccine is on the rise, but still about two-in-ten are “pretty certain” they won’t get a vaccine

% of US Adults who say they would definitely/probably get a vaccine for COVID-19 if one were available today

Importance of Communication, Transparency and Trust
Vaccine confidence starts with you

- Choose to get vaccinated yourself
- Start conversations early
- Engage in effective conversations
- Be prepared for questions

https://www.cdc.gov/vaccines/covid-19/health-systems-communication-toolkit.html#slides
Active safety monitoring for COVID-19 vaccines

- **V-safe** is a new CDC smart-phone based monitoring program for COVID-19 vaccine safety
  - uses text messaging and web surveys to check-in with vaccine recipients after vaccination
  - participants can report side effects and health impact events after COVID-19 vaccination
  - includes active telephone follow-up by CDC for reports of significant health impact
  - captures information on pregnancy status and enables follow-up on pregnant women