COVID-19 Community Outreach Webinar Series

Gilead US Medical Affairs COVID Cares Team

July 2023
COVID-19

Objective

To provide scientific information on COVID-19 in a simple format to assist your community educational efforts

Pre-Survey

https://www.surveymonkey.com/r/PreSurveyCommunityWebinar
At the end of this presentation, you will be able to:

1. Describe the current impact of COVID-19 in the USA, including patients at highest risk for severe disease and the impact of long-COVID disease
2. Describe how to slow the spread with simple measures
3. Explain when and why to get tested
4. Explain what treatment options are available
5. Describe clinical trials and why diversity in trials is important
Content

COVID-19: Current Impact  Slowing the Spread  Symptoms and Testing  Treatment for Patients  Clinical Trials
COVID-19

Current Impact

A snapshot of COVID-19 in the USA
COVID-19 has impacted everyone - most of all minorities

Total US COVID-19 Statistics

- **103M+ Cases**
- **1.1M+ Deaths**

As of March 10, 2023

Minority Risk Compared to Whites

<table>
<thead>
<tr>
<th>Rate ratios compared to White, Non-Hispanic</th>
<th>American Indian or Alaska Native</th>
<th>Asian</th>
<th>Black or African American</th>
<th>Hispanic or LatinX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>1.6x</td>
<td>0.8x</td>
<td>1.1x</td>
<td>1.5x</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>2.5x</td>
<td>0.7x</td>
<td>2.1x</td>
<td>1.8x</td>
</tr>
<tr>
<td>Death</td>
<td>2.0x</td>
<td>0.7x</td>
<td>1.6x</td>
<td>1.7x</td>
</tr>
</tbody>
</table>

As of April 24, 2023

Some minorities are disproportionately impacted by COVID-19 cases, hospitalizations, and death compared to Whites

For example, Hispanic or LatinX persons are ~1.5 times more likely to contract COVID-19 and ~2 times more likely to be hospitalized compared to Whites


Minorities include: American Indian or Alaska Native, Asian, Black or African American, and Hispanic/LatinX persons
COVID-19 continues to carry a heavier burden compared to Flu and RSV

<table>
<thead>
<tr>
<th></th>
<th>RSV¹</th>
<th>Influenza²</th>
<th>COVID-19³-⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases</strong></td>
<td>2.1 million</td>
<td>6.2 million to 14 million</td>
<td>51.6 million³</td>
</tr>
<tr>
<td><strong>Hospitalizations</strong></td>
<td>118,000 to 200,000</td>
<td>53,000 to 110,000</td>
<td>1.9 million⁴</td>
</tr>
<tr>
<td><strong>Deaths</strong></td>
<td>6,100-10,300</td>
<td>2,900 to 8,400</td>
<td>314,830³</td>
</tr>
</tbody>
</table>

Some patients are at a higher-risk of progression to severe COVID-19

Factors that Raise Risk of Getting Very Sick from COVID-19

- Older age
- Weakened Immune System
- People with Preexisting Health Conditions
- Pregnant People
- Unvaccinated or Under-vaccinated People

Preexisting Medical Conditions that Place a Person at Higher Risk of Severe COVID-19

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
</tr>
<tr>
<td>Chronic liver disease</td>
</tr>
<tr>
<td>Chronic lung disease, including asthma</td>
</tr>
<tr>
<td>Cystic fibrosis</td>
</tr>
<tr>
<td>Dementia or other neurologic condition</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Heart conditions</td>
</tr>
<tr>
<td>HIV</td>
</tr>
<tr>
<td>Immunocompromised condition</td>
</tr>
<tr>
<td>Mental health conditions</td>
</tr>
<tr>
<td>Sickle cell disease or thalassemia</td>
</tr>
<tr>
<td>Smoking</td>
</tr>
<tr>
<td>Solid organ or blood stem cell transplant</td>
</tr>
<tr>
<td>Stroke or cerebrovascular disease</td>
</tr>
<tr>
<td>Substance use disorders</td>
</tr>
<tr>
<td>Tuberculosis</td>
</tr>
</tbody>
</table>

Long-term impact from COVID-19: Post-COVID

Potential Post-COVID Conditions:


Long COVID Symptoms:

- Cardiovascular
  - Heart palpitations
  - Chest pain

- Musculoskeletal
  - Fatigue
  - Joint or muscle pain

- Neurological
  - Brain fog
  - Headache
  - Dizziness

- Respiratory
  - Cough
  - Shortness of breath

Multiorgan Effects:

- Heart muscle & lung damage
- Multisystem Inflammatory Syndrome (MIS)
- Kidney injury
- Mental health
- Skin abnormalities
- Autoimmune conditions

- Post-COVID conditions: wide range of new, returning, or ongoing health problems people can experience 4+ weeks after first being infected with the virus that causes COVID-19

- Long COVID: a range of symptoms that can last weeks or months after first being infected with the virus that causes COVID-19

*This list is not all inclusive and represents some potential long COVID symptoms and multiorgan effects

Long-COVID symptoms have led to reduced ability to work and loss of income for many workers.

Based on a survey of 3762 adults with confirmed or suspected COVID-19, from 56 countries, with illness lasting over 28 days:

- 45% of workers reduced their work hours due to long COVID.
- 22% were out of work at the time of survey due to long COVID.

Based on a survey of 2550 UK-based adults who had confirmed or suspected COVID-19 and self-reported long COVID:

- 38% of adults reported a loss of income due to long COVID illness.

*Included being on sick leave, disability leave, being fired, quitting, and being unable to find a job that would accommodate them.

Company- and government-level policies supporting workers suffering from long COVID are needed.
Racial/ethnic minority groups may experience a higher overall burden of long COVID

Analysis of data on long COVID from the Household Pulse Survey* (N=74,314) as of February 13, 2023, as reported by the Centers for Disease Control and Prevention (CDC)

Hispanic adults have been disproportionately affected by long COVID

| Percentage of adults ever experiencing long COVID, by race/ethnicity: |
|-----------------|---|
| Hispanic        | 18% |
| White           | 14% |
| Black           | 12% |
| Asian           | 9%  |

Long COVID rates are higher in people with lower levels of education

| Percentage of adults ever experiencing long COVID, by education level: |
|-----------------|---|
| No 4-year college degree:          | 15-17% |
| Bachelor’s degree or higher        | 13% |

The relationship between education and income is well established, so it is likely that rates of long COVID are higher among people with lower incomes

*An experimental survey created by the Centers for Disease Control and Prevention (CDC) in partnership with the Census Bureau and the National Center for Health Statistics (NCHS) to assess the prevalence of post-COVID-19 conditions (long COVID). Respondents were asked whether they had any COVID symptoms that lasted for longer than 3 months, including "tiredness or fatigue, difficulty thinking, concentrating, forgetfulness, or memory problems, difficulty breathing or shortness of breath, joint or muscle pain, fast-beating or pounding heart (also known as heart palpitations), chest pain, dizziness on standing, menstrual changes, changes to taste/smell, or inability to exercise."

Racial/ethnic minority groups may experience differences in long COVID symptoms and conditions

Retrospective cohort study assessing racial/ethnic disparities among 62,339 adults who received a positive COVID-19 test in New York City between March 2020 and October 2021 vs COVID-negative controls (n=247,881); symptoms were assessed 31-180 days post-COVID diagnosis*

Of the 13,106 hospitalized adults who had long COVID, Black and Hispanic adults were disproportionately represented

<table>
<thead>
<tr>
<th>Black adults</th>
<th>Hispanic adults</th>
<th>White adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x more likely to be diagnosed with diabetes</td>
<td>more likely than White adults to have</td>
<td>more likely than Black and Hispanic adults to have</td>
</tr>
<tr>
<td>and more likely to have headaches, chest pain, and joint pain compared with White adults</td>
<td>headaches, shortness of breath, joint pain, and chest pain</td>
<td>sleep disorders, cognitive problems, and fatigue</td>
</tr>
</tbody>
</table>

*Using electronic health record (EHR) data from the INSIGHT network, which collects data from five academic health systems in New York City. The COVID-19 database included 5,346,357 patients with one or more inpatient or outpatient visit for any reason within these health systems since January 1, 2020.

COVID-19

Slowing the Spread

How to slow COVID-19 transmission
Slowing the spread: Things to think about

Get Vaccinated!

How is COVID-19 spread?

1. Respiratory droplets
2. High touch surfaces
3. Airborne transmission

Steps to take to slow the spread

1. Wash your hands often
2. Avoid crowds†
3. Stay 6 feet apart*
4. Clean & disinfect high touch surfaces
5. Wear a mask

Some people without symptoms may be able to spread the virus

*The longer you are in contact with an individual who is infected, the more likely you are to become infected yourself - 15 minutes or more of exposure to the same individual within a 24-hour period is all it takes to become infected with COVID-19

†Smaller, enclosed spaces with poor ventilation significantly increase your risk of exposure, as respiratory droplets are more concentrated in these settings

Centers for Disease Control (CDC): Stay Up to Date with Preventative Vaccines Including Boosters

**Immunizations are not just for children**¹

All adults need immunizations to help them prevent getting and spreading serious diseases that could result in poor health, missed work, medical bills, and not being able to care for family.

---

### Annual Adult Vaccinations or Boosters ²

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID-19</td>
<td>Bivalent mRNA primary series and booster</td>
</tr>
<tr>
<td>Seasonal flu (Influenza)</td>
<td>1 dose annually</td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis</td>
<td>1 dose and then booster every 10 years</td>
</tr>
<tr>
<td>Shingles (Zoster)</td>
<td>2 doses</td>
</tr>
<tr>
<td>Pneumococcal</td>
<td>After complete initial series, booster after 5 years</td>
</tr>
</tbody>
</table>

Healthcare workers also require chickenpox vaccine, hepatitis B vaccine, meningococcal vaccine, MMR vaccine, and may also need the HPV vaccine¹

---

Viruses are constantly changing and new types of the virus, called variants, occur.

New variants of the virus that causes COVID-19 are spreading in the United States and in other parts of the world.

- Research shows that the COVID-19 vaccines used in the United States protect against severe disease, hospitalization, and death from known circulating variants.

The updated (bivalent) boosters are called “bivalent” because they protect against both the original virus that causes COVID-19 and the Omicron variant BA.4 and BA.5.

CDC monitors to see if variants have any impact on how well COVID-19 vaccines work.
COVID-19 vaccine clinical trials include minorities

COVID-19 clinical trials include people from diverse racial/ethnic backgrounds

<table>
<thead>
<tr>
<th>Total US Population(^1)</th>
<th>Pfizer - BioNTech(^2)</th>
<th>Moderna(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>258 million</td>
<td>36,621</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>73.6%</td>
<td>82.8%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>12.3%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>5.9%</td>
<td>4.5%</td>
</tr>
<tr>
<td>American Indian/Alaska Native + Native Hawaiian/ Pacific Islander</td>
<td>1.0%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/LatinX</td>
<td>17.6%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>82.4%</td>
<td>72.7%</td>
</tr>
</tbody>
</table>

As of May 22, 2023

Possible COVID-19 vaccine side effects explained

Side effects may be normal signs that the body is building protection against the virus causing COVID-19.

On the arm where you got the shot:

• Pain
• Redness
• Swelling

Throughout the rest of your body:

• Tiredness
• Headache
• Muscle Pain
• Chills
• Fever
• Nausea

When to contact your healthcare provider if you have side effects:

• If the redness or tenderness where you got the shot gets worse after 24 hours
• If your side effects are worrying you or do not go away after a few days

In rare cases, severe allergic reactions can occur.

Why get the COVID-19 vaccine?

We Are In This Together

• **COVID-19 may affect anyone:** 103M+ cases in US, 676M+ cases globally*¹

• **Prevent severe illness or death:** People of any age, even healthy young adults and children, can get COVID-19, however, some groups of people are higher risk²

• **Prevent spreading to others:** Even if you get COVID-19 and don’t feel sick, you can still get other people sick³

• **Protect loved ones:** Especially those who are the most vulnerable²,⁴

---

The most vulnerable

- Elderly²

- Pregnant women⁴

---

People with other health conditions⁴

- Diabetes
- Obesity
- Heart conditions
- Cancer
- + other diseases

---

*As of March 10, 2023
**Myth-busting: Addressing COVID-19 vaccine misinformation**

>- You **don’t need a vaccine** if you’ve previously had COVID-19 and recovered
>- A COVID-19 vaccine will **make you sick** with COVID-19
>- A COVID-19 vaccine will **alter** your DNA
>- Vaccines are **likely to affect** fertility
>- COVID-19 vaccines **contain microchips**

**True**

- A COVID-19 vaccine **helps keep you** from getting seriously ill even if you get COVID-19
- COVID-19 vaccine reactions may range from mild to severe, and **often resolve on their own**
- Getting vaccinated yourself may also protect **people around you**, particularly people at increased risk for severe illness from COVID-19
- It is recommended to **get a COVID-19 vaccine if you are trying to become pregnant now, are pregnant, or want to get pregnant in the future**

*If you have questions about getting vaccinated, a conversation with your healthcare provider might help, but is not required for vaccination*

COVID-19

Symptoms and Testing

What to look for and when to test
Have COVID-19 symptoms?

Common COVID-19 Symptoms*¹

Neurological
- Headache
- Loss of Taste/Smell

Respiratory
- Cough
- Shortness of Breath

Gastrointestinal
- Nausea or Vomiting
- Diarrhea

Musculoskeletal
- Fatigue
- Muscle/BODY Aches

Other
- Fever or Chills
- MIS (Multisystem Inflammatory Syndrome)²
- Congestion or Runny Nose
- Sore Throat

--- Some patients who get infected with COVID-19 will not show symptoms³ ---

What do I do next? ⁴

1. Get tested
2. Stay home and separate from others
3. Improve air flow at home to prevent spread
4. Monitor symptoms and follow healthcare provider instructions
5. Wear high-quality mask when around other people
6. Practice every day hygiene and avoid sharing personal household items

Unable to quarantine due to shared space? Wear a mask when you are around others!

Seek medical care immediately if your symptoms worsen

*Not all inclusive of all COVID-19 symptoms

---

Preexisting conditions increase the risk of severe COVID-19

A person’s risk of severe illness from COVID-19 increases with the number of underlying medical conditions.

Patients with one or more medical conditions who get COVID-19 are more likely to:

- Be hospitalized
- Need intensive care
- Require a ventilator to help them breathe
- Die

The risk of death increases with the number of preexisting conditions:

- None: 1
- 1-2: 1.5
- 3-5: 2.6
- 6-10: 3.3
- ≥10: 3.8

Actions to be taken if patients have medical conditions:

- Stay up to date with COVID-19 vaccines
- Get tested if you have symptoms

Now that the test results are back, what do they mean?

**Negative COVID-19 test**

- You were likely not infected when your test sample was collected
- If you have symptoms of COVID-19
  - Isolate from others
  - You may have received a false negative result and still have COVID-19
- If you do not have symptoms of COVID-19 and you were exposed to a person with COVID-19
  - You are likely not infected, but you may still get sick
  - Contact your doctor about your symptoms, follow-up testing, and how long to isolate

**Positive COVID-19 test**

**Take steps to Help Prevent the Spread**

**Stay Home**
- Isolate at home for at least 10 days and stay away from other people in your home

**Get Rest & Stay Hydrated**
- Take over-the-counter medicines to help you feel better

**Stay in Touch with Your Doctor or Healthcare Provider**
- Seek care right away if any symptoms worsen

**Seek immediate medical care if someone has Emergency Warning Signs of COVID-19 (listed below)**

- Trouble breathing
- Chest pain
- New confusion
- Inability to wake or stay awake
- Pale, gray, or blue-colored skin, lips, or nail beds

---

*Your healthcare provider might recommend medications, like acetaminophen or ibuprofen, to relieve symptoms and support your body’s natural defenses
† This list is not all possible symptoms. Please call your medical provider for any other symptoms that are severe or concerning to you

---

Myth-busting: Addressing COVID-19 misinformation

False

- Vitamins and mineral supplements can cure COVID-19
- Mosquitoes can give you COVID-19
- Self-tests will tell you if you have antibodies for COVID-19
- Sunny or hot weather will stop the spread of COVID-19

True

- Cases of reinfection with COVID-19 do occur, but most will have some protection from repeat infections
- COVID-19 risk increases steadily as you age, and it's not just those over the age of 65 who are at increased risk for severe illness

COVID-19

Treatment for Patients

Therapeutic options for infected persons
Possible COVID-19 therapeutic options†**
For the most up-to-date information, please visit the National Institute of Health at NIH.gov

Drug Therapies¹

Monoclonal Antibodies
Lab made and help block the virus from getting into cells

Antivirals
Fight against viruses in your body

Immunomodulators
Lessens overactive immune system

Oxygen Therapies ²,³

Non-Invasive Oxygen Therapy ²
Oxygen delivery through a mask or tube in the nose

Invasive Ventilation Therapy ³
Oxygen delivery via endotracheal or tracheostomy tube
OR
Through a ventilator which delivers oxygen directly to the lungs

†This list is not all inclusive of potential COVID-19 therapeutic options - Current November 2022

Myth-busting: Addressing COVID-19 misinformation

False

× People who get COVID-19 will have their health information made public

× Supplements can cure you of COVID-19

× Hydroxychloroquine helps prevent or treat COVID-19

True

✓ Steroids are recommended for severe and critically ill patients with COVID-19

✓ Antibiotics do not treat COVID-19

✓ Adding pepper to your soup or other meals does not prevent or cure COVID-19

✓ Doctors may recommend fever-reducing medicine, rest and hydration to relieve symptoms

What is a Clinical Trial?
Why do they matter?
Clinical trials are part of research and at the heart of all medical advances.

Prevent Disease • New Interventions • Improve Quality of Life

Treat Disease • Safer medicines • More effective medicines

Detect Disease • Earlier • New Diseases

Clinical trials are part of research and at the heart of all medical advances.

Why diversity is important in clinical trials?

People may experience the same disease differently

It’s essential that clinical trials include a diversity of people

• Age
• Biological sex
• Race and ethnicity
• Genetic variation and geographic ancestry
• Underlying medical problems
• Sexual orientation
• Pregnancy status
• Life experiences (such as lack of basic resources, education, employment)
• Environmental conditions
• Unhealthy behaviors (such as substance use, overeating)

This is important because if done well, all communities benefit from scientific advances

New FDA Race and Ethnicity Diversity Plan

The FDA has new requirements for companies to provide a **Race and Ethnicity Diversity Plan** to enroll representative numbers of participants from historically underrepresented racial and ethnic populations.

Adequate representation of these populations in clinical trials helps ensure that the data generated in the development program reflect the racial and ethnic diversity of the population expected to use the medical product if approved.

---

Thank you

Post-Survey

https://www.surveymonkey.com/r/PostSurveyCommunityWebinar
Importance of inclusion and convenience in COVID-19 vaccination

Attitudes and Beliefs

- **73%** of vaccinated people are confident that vaccines were *adequately tested* for safety and effectiveness in Black and Latino people.

- **88%** of vaccinated people say convenience in *where you get vaccinated* is very important.

Preferences for Location of Vaccinations

- Community events: 88% (Latino), 54% (Black)
- At-home services: 12% (Latino), 35% (Black)

Inclusion of different racial and ethnic groups leads to confidence in the vaccination process.

---

Racial and ethnic disparities in COVID-19 treatment

Equitable use of COVID-19 treatments by race and ethnicity is essential to lower inequities in COVID-19 outcomes

Type of insurance affects COVID-19 outcomes

Worse Outcomes in Patients Without Insurance

- **Respiratory failure**: 67% (No insurance) vs. 41% (Medicaid)
- **Intensive care unit**: 56% (No insurance) vs. 45% (Medicaid)
- **Death**: 11% (No insurance) vs. 8% (Medicaid)

Worse Outcomes in Patients With Medicaid

- **30-day non-COVID readmission**: 2% (No insurance) vs. 6% (Medicaid)
- **30-day COVID readmission**: 3% (No insurance) vs. 5% (Medicaid)
- **Renal failure**: 3% (No insurance) vs. 5% (Medicaid)

Patients without insurance had a higher risk of respiratory failure and ICU admissions, and a larger number of in-hospital deaths compared to Medicaid.

Patients on Medicaid were at higher risk for renal failure and 30-day readmission (COVID or non-COVID related).

Insurance status affects hospital outcomes

Jain, et al. ID Week 2022, presentation #1397.
Race and type of insurance affects COVID-19 outcomes

Blacks and Hispanic Medicaid patients had higher risk of hospitalization compared to uninsured Blacks and Hispanics

Medicaid patients were at higher risk for 30-day COVID-19 related readmission regardless of race/ethnicity

Insurance status affects hospital outcomes