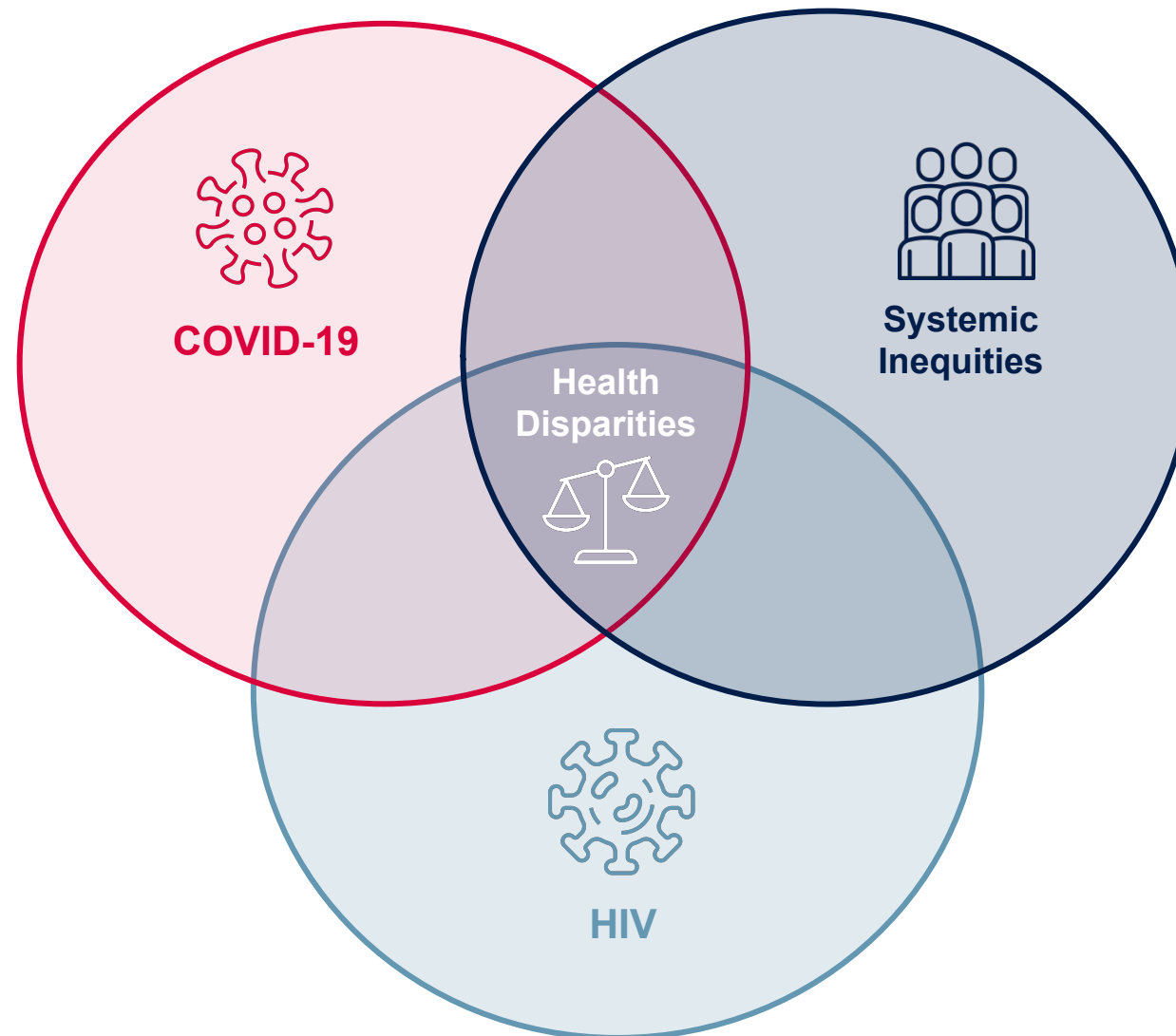


COVID-19

State of Affairs

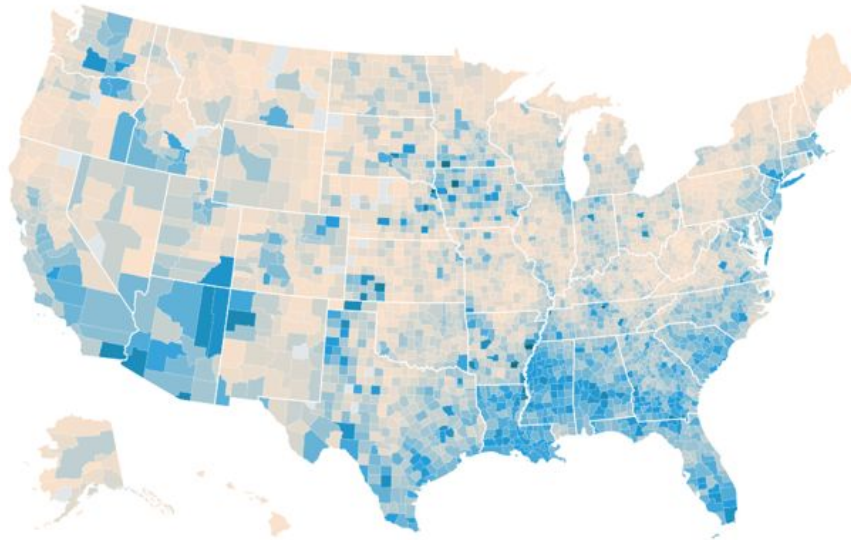


2020: Health Disparities at the Convergence of 3 Pandemics

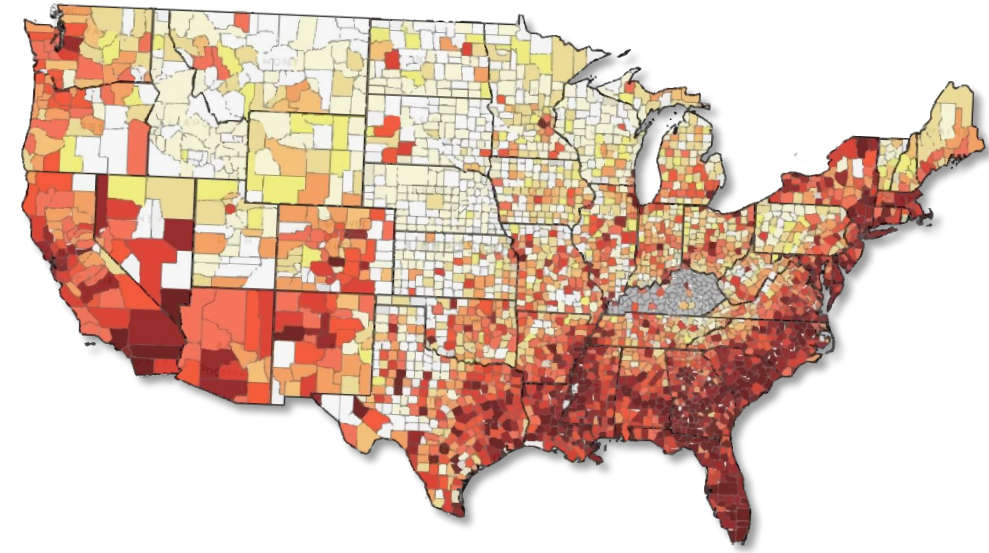


COVID-19 and HIV: A Tale of Two Pandemics

COVID-19 Cases per 100K, 07/30/20⁴



HIV Prevalence Rate, 2018⁵



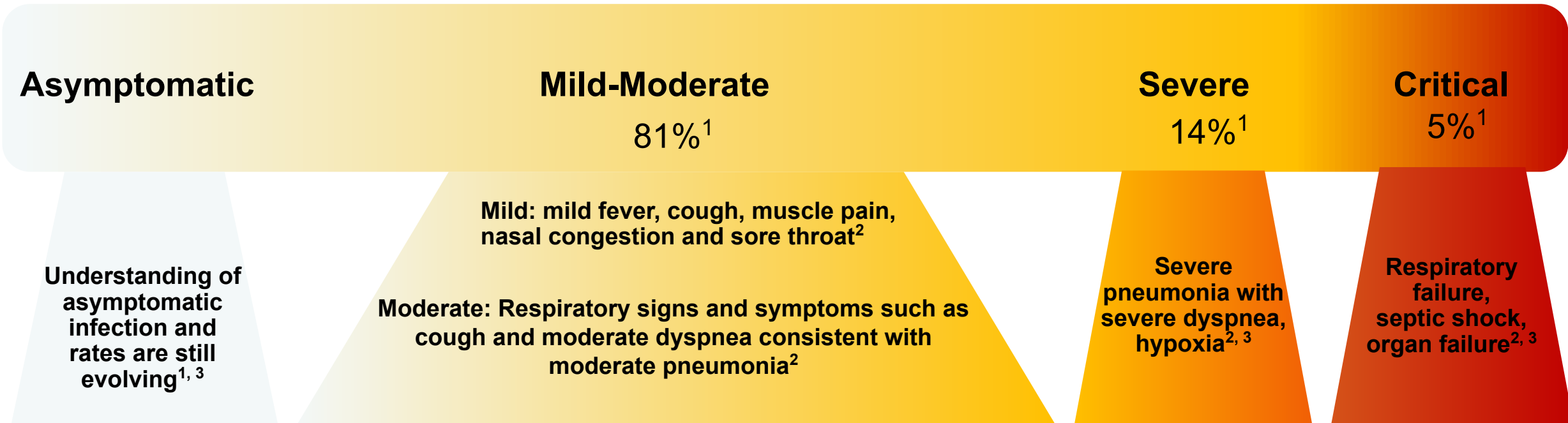
Potential impacts of COVID-19 pandemic in low- and middle-income countries around the world

- Disruptions to service delivery have affected 85% of HIV programs in 106 countries¹
- Lockdowns and border closures may impact production of generic ARV medicines and their distribution (10%-25% higher cost of exported ARV medicines from India)²
- WHO predicts a six-month disruption of ART could lead to more than 500,000 extra deaths from AIDS-related illness²

COVID-19 has drawn attention to long-standing issues influencing exclusion from health services³

- In the US, coronavirus hot spots overlap with areas of higher incidence and prevalence for HIV
- Role of social determinants of health (access to care, education, employment, housing, discrimination, cultural competency, quality of care, etc.)

Disease Spectrum Overview



Majority have mild-moderate COVID-19 disease however morbidity and mortality associated with illness and progression of disease contribute to high healthcare burden across the globe

1. US CDC <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html>
2. Cascella et al, Features, Evaluation and Treatment Coronavirus (COVID-19). StatPearls Publishing, Treasure Island, FL; 2020.
3. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)

Have COVID-19 symptoms?

Common COVID-19 Symptoms*¹



Neurological

- Headache
- Loss of Taste/Smell



Musculoskeletal

- Fatigue
- Muscle/Body Aches



Respiratory

- Cough
- Shortness of Breath



Other

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



Gastrointestinal

- Nausea or Vomiting
- Diarrhea

What do I do next?^{†3}



Call ahead before visiting your healthcare provider, state, tribal, local, or territorial health department



Stay home except to get medical care



When possible, distance yourself from other people as much as possible



Get tested

Unable to quarantine due to shared space? Wear a mask when you are around others!⁴



Seek medical care immediately if your symptoms worsen⁵

**Not all inclusive of all COVID-19 symptoms*

[†]Spread mitigation practices

1. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>. Accessed May 4, 2021; 2. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects.html>. Accessed May 4, 2021; 3. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html>. Accessed May 4, 2021; 4. Centers for Disease Control and Prevention. https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/scientific-brief-options-to-reduce-quarantine.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fmore%2Fscientific-brief-options-to-reduce-quarantine.html. Accessed May 4, 2021; 5. Virginia County Department of Health. <https://www.vdh.virginia.gov/coronavirus/coronavirus/what-to-do-if-you-have-confirmed-or-suspected-coronavirus-disease-covid-19/>. Accessed May 4, 2021



Extrapulmonary Manifestations in COVID-19 Patients

Specific Neurological Manifestations:

- Guillain-Barre syndrome (5 cases)¹
- Ischemic stroke (5.7%)²
- Neurological inflammations (5 cases)³

Unspecific Neurological Manifestations³:

- Fatigue (33.2%)
- Dyspnea (26.9%)
- Myalgia (16%)
- Headache (9.2%)
- Nausea/vomiting (5.2%)
- Anorexia (30%)
- Dizziness (10%)
- Confusion (5.2%)

Liver Manifestations¹⁰:

- Elevated serum aspartate aminotransferase (AT) level: 15%
- Elevated serum alanine aminotransferase (ALT) level: 15%
- Elevated serum total bilirubin level: 16.7%

Ocular Manifestations:

- conjunctivitis (16.7%)⁴

Cardiovascular Manifestations:

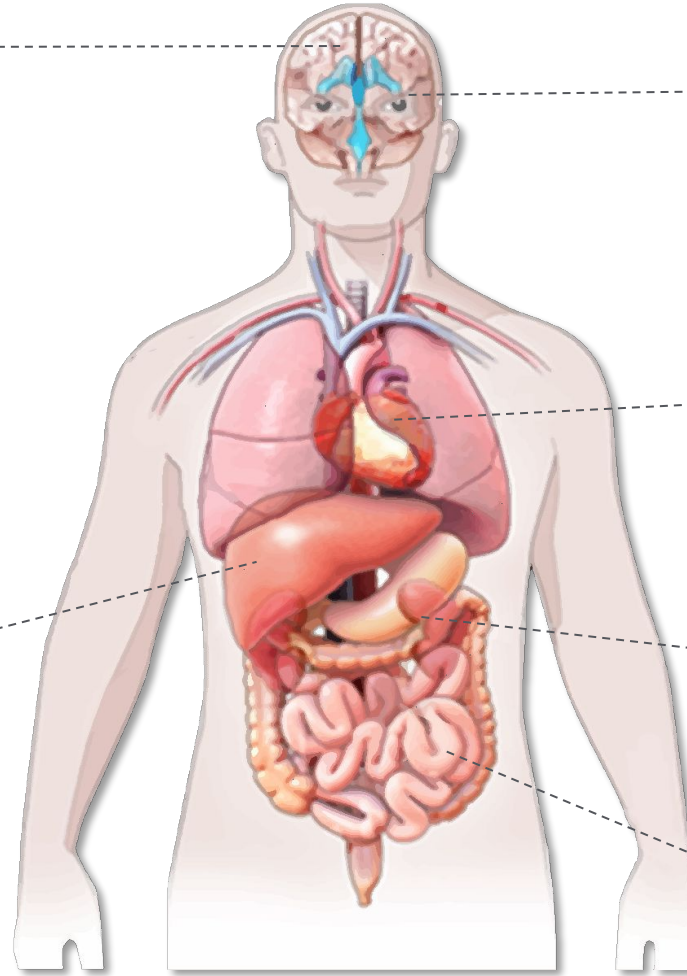
- Heart failure (23%)⁵
- Acute cardiac injury (17%)⁵
- Myocardial Injury (20%)⁶
- Dysrhythmias 17% in hospitalized and 44% in ICU patients⁷
- Venous thromboembolic event⁸

Renal Manifestations:

- Acute Kidney Injury (range 0.1-29%)⁶
- Proteinuria and hematuria (44 %); 26.9% hematuria alone, 15.5% elevated serum creatinine and 14.1% had elevated urea nitrogen levels⁹

GI Manifestations:

- Loss of appetite: 81 (78.6%)⁹
- Abdominal pain: 3.6%, diarrhea: 7.7% and nausea/vomiting: 7.8%¹⁰



1. Toscano et al., NEJM 2020
2. Mao et al., Jama, 2020
3. Wang et al Journal of Neurology 2020
4. Wu et al, Jama Ophatamology 2020
5. Zhou et al Lancet 2020
6. Zheng et al., J.Medicine Virology 2020

Long-term impact from COVID-19

Potential Post-COVID Conditions¹

Long COVID Symptoms*



Cardiovascular
• Heart palpitations
• Chest pain



Neurological
• Brain fog
• Headache
• Dizziness



Musculoskeletal
• Fatigue
• Joint or muscle pain



Respiratory
• Cough
• Shortness of breath

Multiorgan Effects*



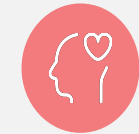
**Heart muscle
& lung damage**



**Multisystem Inflammatory
Syndrome (MIS)**



Kidney injury



Mental health

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*

Lasting Pandemic Impact:^{2,3}

The pandemic has caused direct and indirect loss across economic, health, and social support systems

\$ 7.6 Trillion

**Economic Loss
(Lost GDP)**

GDP = Gross Domestic Product

\$ 4.4 Trillion

**Premature
death**

\$ 2.6 Trillion

**Long-term health
impairment**

\$ 1.6 Trillion

**Mental health
impairment**

1. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects.html>. Accessed May 4, 2021; 2. Centers for Disease Control and Prevention. https://www.cdc.gov/library/covid19/pdf/2020_10_23_Science-Update_Final_Public.pdf. Accessed May 4, 2021; 3. US Census Bureau. <https://www.census.gov/library/stories/2021/02/indirect-impact-of-covid-19-results-in-higher-pandemic-death-toll.html>. Accessed May 4, 2021



COVID-19

Slowing the Spread



Getting tested and the different types of tests for people who are not fully vaccinated^{1,9}

Suspected COVID-19 Symptoms
OR
No Symptoms* but POSSIBLE exposure to the 2019 coronavirus¹

Test & Quarantine until results received and confirmed negative for COVID-19*^{2,3,4}

Types of Tests (Samples Collected)	Test Detects?	When to Test?		How Long to Get Results?	
Antibody (Blood) ⁵	Past Infection	After COVID-19 Recovery 1-3 Weeks after		Rapid Blood Tests ⁶ 15 minutes	Standard Lab ⁷ ~few days
Viral (Nasal / Saliva) ⁸	Current Infection	Have Symptoms ASAP	Exposed but No Symptoms* ASAP + if negative, test again ⁹ in 5-7 days after last exposure	Rapid Tests 15-30 minutes	Standard Swab/Saliva 1-3 days

**This is not all inclusive - Other circumstances may warrant quarantine, testing and/or other remedies; please consult your healthcare provider for more questions. People who have tested positive for COVID-19 within the past 3 months and recovered do not need to get tested following an exposure as long as they do not develop new symptoms. Fully vaccinated people with no COVID-19 symptoms do not need to be tested following an exposure to someone with COVID-19*



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

Negative COVID-19 test¹

- You were likely not infected when your test sample was collected
- If you have symptoms later, you may need another test to determine if you are COVID-19(+) ²



A negative test today does not prevent you from getting COVID-19 later

Positive COVID-19 test¹

Take steps to Help Prevent the Spread



Stay Home

- Avoid public areas and stay home except to get medical care



Get Rest & Stay Hydrated

- Take over-the-counter medicines to help you feel better* ³



Stay in Touch with Your Doctor or Healthcare Provider ⁴

- Seek care right away if any symptoms are severe



Distance Yourself from Other People

- Wear a mask when separation isn't possible

Seek medical care immediately if someone has Emergency Warning Signs of COVID-19 (listed below) ^{†4}

- 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 reduce fever / 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: Setting the record straight on COVID-19 misinformation



Fals

- ✗ Being able to **hold your breath for 10 seconds** or more without coughing or feeling discomfort means you don't have COVID-19¹
- ✗ Thermal scanners are **able to detect** if someone is COVID-19(+)¹
- ✗ A negative test result means **you are now immune** to COVID-19²
- ✗ Once tested for COVID-19, **it is okay to break social distancing and mask wearing** while you are waiting for your test results³
- ✗ Sunny or hot weather **will stop** the spread of COVID-19¹

Tru

- ✓ A vaccine will **not give you COVID-19**⁴
- ✓ **Cases of reinfection** with COVID-19 have been reported, but **remain rare**⁵
- ✓ 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 illness⁶
- ✓ Even if you tested negative for COVID-19, **you may still need to quarantine** if you were exposed to someone sick with COVID-19⁷



Myth-busting: Setting the record straight on COVID-19 misinformation



Fals

- ✗ People who get COVID-19 will have their health information **made public**¹
- ✗ Supplements **can cure** you of COVID-19²
- ✗ Hydroxychloroquine helps **prevent or treat** COVID-19²
- ✗ Adding pepper to your soup or other meals **prevents or cures COVID-19**²



Tru

- ✓ Steroids are recommended for **severe and critically ill patients** with COVID-19²
- ✓ Antibiotics **do not treat** COVID-19²
- ✓ Doctors **may recommend fever-reducing medicine, rest and hydration** to relieve symptoms³



Slowing the spread in the unvaccinated: Things to think about



Get A Vaccine For Free!³

How is COVID-19 spread?¹



Respiratory droplets



High touch surfaces



Airborne transmission

*Some people
without
symptoms
may be able
to spread
the virus²*

Steps to take to slow the spread²



Wear a mask



Wash your hands often



Stay 6 feet apart*



Avoid crowds[†]



Clean & disinfect high touch surfaces

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

**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*

1. American Medical Association. <https://www.ama-assn.org/system/files/2020-12/covid-19-transmission-info-for-patients.pdf> Accessed May 4, 2021; 2. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>. Accessed May 4, 2021; 3. Centers for Disease Control and Prevention. https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html?_cid=10473:is%20covid%20vaccine%20free;sem.ga:p:RG:GM:gen:PTN:FY21. Accessed May 17, 2021



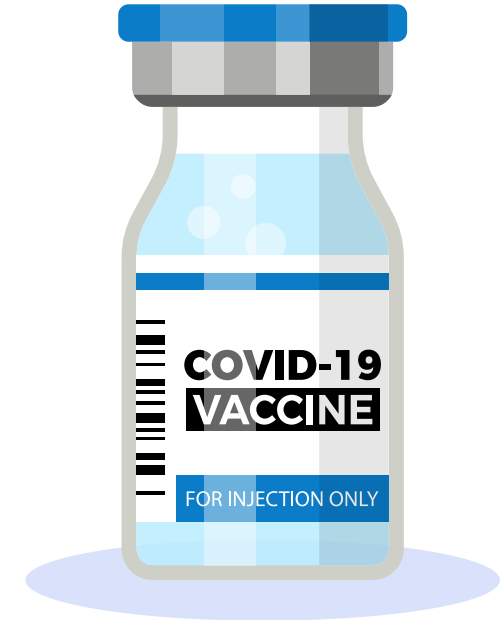
CDC recommends getting a vaccine as soon as it is available to you¹

Vaccines help protect against COVID-19²

- Getting vaccinated is one of many steps you can take to help protect yourself and others from COVID-19

How the COVID-19 vaccine works³

- COVID-19 vaccines teach our immune systems to recognize and fight the virus that causes COVID-19
- It typically takes **2 weeks after you are fully vaccinated*** for the body to build full immunity against the virus causing COVID-19⁴
 - **Fully vaccinated= 2 weeks after 2nd dose in a 2-dose series; 2 weeks after a single-dose vaccine*



Currently available US vaccines have EUA from the FDA⁵

EUA

Emergency Use
Authorization

FDA may issue an EUA to grant access to
unapproved medical products or
unapproved uses of approved medical
products during public health emergencies

FDA granted EUA authorization to available
COVID-19 vaccines based on their
determination that the potential benefits of
the products outweigh the risks



COVID-19 vaccine clinical trials include minorities

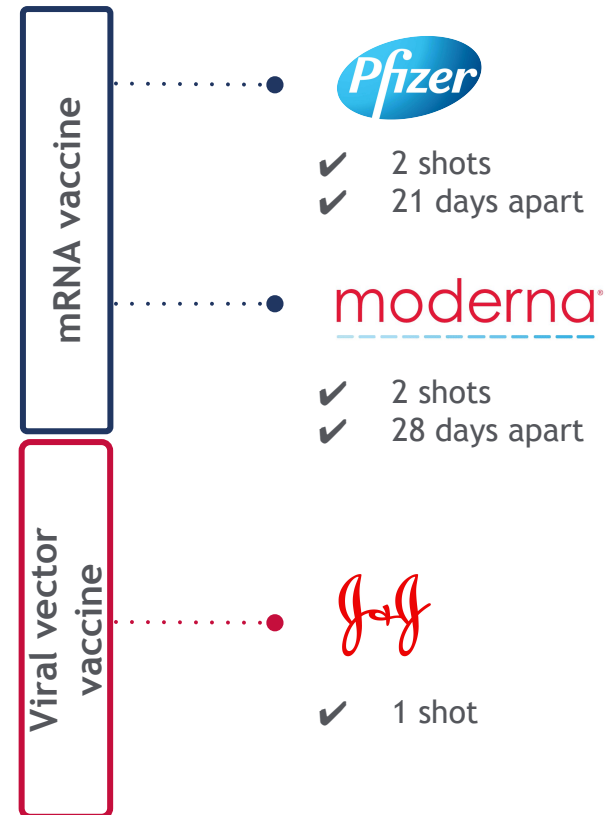
COVID-19 clinical trials include people from diverse racial/ethnic backgrounds¹

	Total US Population ¹	Pfizer - BioNTech ²	Moderna ³	Johnson & Johnson ⁴
Total	258 million	40,277	27,817	39,321
Race				
White	73.6%	81.9%	79.4%	62.1%
Black or African American	12.3%	9.8%	9.7%	17.2%
Asian	5.9%	4.4%	4.7%	3.5%
Other	1.0%	0.8%	1.0%	8.6%
Ethnicity				
Hispanic/LatinX	17.6%	26.2%	20.0%	45.1%
Non-Hispanic	82.4%	73.2%	79.1%	52.4%
>105,000 vaccine trial participants in total ^{2,3,4}				

As of May 4, 2021

1. Kaiser Family Foundation. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-diversity-within-covid-19-vaccine-clinical-trials-key-questions-and-answers/>. Accessed May 4, 2021; 2. US Food & Drug Administration. <https://www.fda.gov/media/144245/download>. Accessed May 4, 2021; 3. US Food & Drug Administration. <https://www.fda.gov/media/144434/download>. Accessed May 4, 2021; 4. US Food & Drug Administration. <https://www.fda.gov/media/146217/download>. Accessed May 4, 2021; 5. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/your-vaccination.html>. Accessed May 4, 2021; 6. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html>. Accessed May 4, 2021; 7. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness/work.html>. Accessed May 4, 2021

COVID-19 vaccines are readily available in the US^{5,6}



Vaccines authorized for use in the US are effective at preventing COVID-19, and help people who are vaccinated from getting sick or severely ill⁷



The best COVID-19 vaccine is the first one that is available to you. Do not wait for a specific brand

- CDC⁶



COVID-19 vaccine side effects explained

Side effects may be normal signs that the body is building protection against the virus causing COVID-19¹

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 effects²

- 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* —————

1. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html>. Accessed May 4, 2021

2. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>. Accessed May 4, 2021



Why get the COVID-19 vaccine?

We Are In This Together

- **COVID-19 may affect anyone:** 33M+ cases in US, 164M+ 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 vulnerable



The most vulnerable⁴



Elderly



Pregnant women



People with other health conditions

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

*As of April 16, 2021

1. Johns Hopkins Coronavirus Resource Center. <https://coronavirus.jhu.edu/map.html>. Accessed May 19, 2021; 2. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/your-health/need-to-know.html>. Accessed May 4, 2021; 3. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/personal-social-activities.html>. Accessed May 4, 2021; 4. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/index.html>. Accessed May 4, 2021



Myth-busting: Setting the record straight on the COVID-19 vaccine*



Fals

- ✗ A COVID-19 vaccine will **make you sick** with COVID-19 ¹
- ✗ A COVID-19 vaccine **will alter** your DNA ²
- ✗ **CDC can mandate** you get a COVID-19 vaccine ²



Tru

- ✓ A COVID-19 vaccine **helps keep you** from getting seriously ill even if you get COVID-19 ³
- ✓ **COVID-19 vaccine reactions** may range from mild to severe, and **often resolve on their own** ⁴
- ✓ **Getting vaccinated yourself may also protect people around you**, particularly people at increased risk for severe illness from COVID-19 ⁵
- ✓ 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** ²

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



Myth-busting: Setting the record straight on COVID-19 misinformation



Fals

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