

CDC WEEKLY KEY MESSAGES

Coronavirus Disease 2019 (COVID-19) Pandemic **May 30, 2020**

This document summarizes key messages about the COVID-19 outbreak and the response. It will be updated and distributed regularly. For the most current information, visit www.cdc.gov/COVID19. **All content updated since May 23 is shown in colored text.**

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CORONAVIRUS DISEASE 2019 (COVID-19) NAMING

- The International Committee on Taxonomy of Viruses named the novel coronavirus causing an outbreak of respiratory illness that was first detected in Wuhan, Hubei Province, China, Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).
 - Due to potential for confusion with SARS-CoV, where possible, public communications will use “the virus that causes COVID-19.”
- On February 11, the World Health Organization (WHO) named the disease caused by this virus Coronavirus Disease 2019 (COVID-19).
 - **Disease name:** COVID-19

OUTBREAK SUMMARY

- There is an expanding outbreak of COVID-19 caused by a novel (new) coronavirus.
 - The outbreak began in China but has spread worldwide and is now considered a pandemic.
- Initially, many of the patients reportedly had some link to a large seafood and animal market, suggesting animal-to-person spread. Since then, sustained (ongoing) person-to-person spread in the community has occurred worldwide.
 - CDC provides a list of [international locations](#) that have reported cases of COVID-19.
- The virus that causes COVID-19 is thought to spread mainly from person to person, and mainly through respiratory droplets produced when an infected person coughs or sneezes.
 - These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
 - Spread is more likely when people are in close contact with one another (within about 6 feet).
- The virus can cause illness varying from mild to severe, including illness resulting in death.

INTERNATIONAL

- Global case numbers are reported by WHO in their [COVID-19 situation reports](#).
 - As of **May 29, 2020**, a total of **5,701,337** cases have been confirmed worldwide.
- On January 30, WHO declared this outbreak a Public Health Emergency of International Concern (PHEIC). A PHEIC is declared if an event poses a public health threat to other nations through the spread of disease and potentially requires a coordinated international response.
- On March 11, WHO announced that the outbreak of COVID-19 can be characterized as a pandemic.

DOMESTIC

- On January 31, Health and Human Services Secretary Alex M. Azar II declared a public health emergency for the United States to aid the nation’s healthcare community in responding to COVID-19.
- COVID-19 is a very serious public health threat and the federal government is working closely with state, local, tribal, and territorial partners, as well as public health partners, to respond to this public health threat.
- The goal of the ongoing U.S. public health response is to reduce community spread of this new coronavirus in the United States.
- As the virus continues to spread internationally and in the United States, it becomes harder and harder to contain its spread.
- Pandemics of respiratory disease follow a certain progression outlined in the [Pandemic Intervals Framework](#), part of the [National Pandemic Strategy](#).

- Pandemics begin with an investigation phase, followed by recognition, initiation, and acceleration phases.
- The peak of illnesses occurs at the end of the acceleration phase, which is followed by a deceleration phase, during which there is a decrease in illnesses.
- Different countries can be in different phases of the pandemic at any point in time and different parts of the same country can also be in different phases of a pandemic.
- The United States nationally is currently in the [acceleration](#) phase of the epidemic. The duration and severity of each phase can vary depending on the characteristics of the virus and the public health response.
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- On March 13, the President of the United States declared the COVID-19 outbreak a [national emergency](#).
- On March 16, the White House announced a program called [15 Days to Slow the Spread](#). This is a nationwide effort to slow the spread of COVID-19 through the implementation of social distancing at all levels of society.
 - On March 29, President Trump extended the nation's Slow the Spread campaign until April 30.
- On April 17, The White House released guidelines for [Opening Up America Again](#).

U.S. OUTBREAK STATISTICS

Cases in the United States as of **May 30**

- Total confirmed and probable cases: **1,737,950**
- Total confirmed and probable deaths: **102,785**

Demographics of cases as of **May 30**

- Age, race, and ethnicity data were collected from **1,395,416** people.
- Age was available for **1,392,310 (99.8%)** people.
 - **52,104** were 0-17 years old
 - **544,152** were 18-44 years old
 - **475,217** were 45-64 years old
 - **140,981** were 65-74 years old
 - **167,208** were 75+ years old
- Race was available for **691,946 (49.6%)** people.
 - **1.3%** were American Indian / Alaska Native
 - **4.7%** were Asian
 - **26.3%** were Black/African American
 - **0.4%** were Native Hawaiian/Pacific Islander
 - **52.1%** were White
 - **15.2%** were of Multiple/Other races
- Ethnicity was available for **633,213 (45.4%)** people.
 - **29.6%** are Hispanic / Latino

For information on case demographics, please visit [demographic characteristics of COVID-19 cases in the United States](#)
 For global cases, please see the WHO [daily situation reports](#).

SITUATION IN THE U.S.

- The number of cases of COVID-19 being reported in the United States is rising quickly.
 - This increase is expected given an increase in testing and ongoing rapid spread of disease across communities in the United States.
 - While these numbers are concerning, the increase is not unexpected.
 - More robust data will allow CDC to better understand and track the size and scope of the outbreak and strengthen prevention and response efforts.
- The United States nationally is currently in the [acceleration](#) phase of the epidemic. The duration and severity of each phase can vary depending on the characteristics of the virus and the public health response.
- [CDC and state and local public health laboratories](#) are testing for the virus that causes COVID-19.
- All 50 states, the District of Columbia, Guam, Puerto Rico, the Northern Mariana Islands, and the Virgin Islands [have reported cases of COVID-19](#) to CDC.
- U.S. COVID-19 cases include—
 - Imported cases in travelers
 - Cases among close contacts of a known case
 - Community-acquired cases where the source of the infection is unknown
- Visit CDC's [COVIDView](#) for a weekly summary and interpretation of key indicators that have been adapted to track the COVID-19 pandemic in the United States. On April 15, CDC began posting [demographic characteristics of COVID-19 cases in the United States](#).

CORONAVIRUS BACKGROUND

- Coronaviruses are a group of viruses that have a halo or crown-like (corona) appearance when viewed under a microscope. They are common in many different species of animals, including camels, cattle, cats, and bats.
- It is rare for animal coronaviruses to become capable of infecting humans and then spreading between people.
 - Severe acute respiratory syndrome (SARS-CoV) and Middle East respiratory syndrome (MERS-CoV) are examples of coronaviruses that originated in animals and spread to people.
 - It is suspected that the virus that causes the current outbreak of COVID-19 spread from animals to humans.
- Human coronaviruses are a common cause of mild to moderate upper-respiratory illness. But three coronaviruses have emerged to cause more severe illness: Severe Acute Respiratory Syndrome (SARS-CoV), Middle East Respiratory Syndrome (MERS-CoV), and now the virus that causes COVID-19 (SARS-CoV-2).

TRANSMISSION

- Much is unknown about how the new coronavirus that causes COVID-19 spreads.
- Most often, person-to-person spread is thought to happen among people in close contact (about 6 feet) with each other.
 - Person-to-person spread is thought to occur mainly through respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza and other respiratory pathogens spread.
 - These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- How easily a virus spreads person-to-person can vary. Some viruses are highly contagious (like measles), while other viruses are less so.
- It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then

touching their own mouth, nose, or possibly their eyes, but this is not thought to be the main way the virus spreads.

- Typically, with most respiratory viruses, people are thought to be most contagious when they are most symptomatic (sickest).
- A [recent MMWR](#) raises concerns about the level of virus spread that might occur before someone experiences symptoms.
 - This is why CDC recommends people stay at least six feet away from other people (“social distancing”), so they do not spread COVID-19 if they have become exposed through close contact with someone who is sick.
 - This research underscores the importance of social distancing to help break the chain of COVID-19 transmission.
 - The study findings are in line with recent COVID-19 studies and with previous studies of older adults with flu that show they may have few or atypical symptoms.
- Mother-to-child transmission during pregnancy is unlikely, but after birth a newborn is susceptible to person-to-person spread.
- There is much more to learn about the spread of this new coronavirus, severity of the disease, and other features associated with this outbreak and investigations are ongoing. This information will further inform the [risk assessment](#).

TESTING

- As of **May 29**, a total of **16,794,182** tests have been reported. Of those, **2,012,929** were positive (**12%**).

VIRAL TESTING

- CDC developed a real time Reverse Transcription-Polymerase Chain Reaction (rRT-PCR) test to detect SARS-CoV-2 (the virus that causes COVID-19) genetic material in respiratory samples from clinical specimens.
- CDC is conducting laboratory testing in four of its laboratories at its headquarters in Atlanta. CDC can test approximately 750 specimens per day.
 - Ten commercial laboratories including large reference facilities at ARUP, Mayo Clinic Laboratory, Quest Diagnostics, Lab Corp, BioReference, and Sonic Healthcare have the capacity to provide approximately **180,000** tests per day. Additional commercial laboratories are also standing up tests, increasing the nation’s testing capacity.
 - In addition, the U.S. Food and Drug Administration has issued many Emergency Use Authorizations for commercial manufacturers to distribute COVID-19 diagnostic tests, including a point-of-care test could deliver results in as short as 30 minutes.
 - Acceptable respiratory specimens vary considerably between authorized diagnostics, with several limited to specific upper respiratory specimens only.

ANTIBODY TESTING

- Antibody tests check a sample of a person’s blood to look for antibodies to SARS-CoV-2, the virus that causes COVID-19. These antibodies are produced when someone has been infected, so a positive result from this test **may indicate that the person was previously infected with the virus**.
- We do not know yet if the antibodies that result from infection with SARS-CoV-2 can protect someone from a repeat infection with this virus or how long antibodies to the virus will protect someone. Scientists are conducting studies to answer those questions.

- Antibody tests may not be able to tell you if you are currently infected because it typically takes 1 to 3 weeks to develop antibodies to SARS-CoV-2 after infection. To tell if you are currently infected, you would need a viral test that uses samples from your respiratory system.
- Antibody tests are not recommended to diagnose someone with current infection.
- Antibody tests are required to have an Emergency Use Authorization from the Food and Drug Administration (FDA). As of [May 26](#), FDA has authorized 13 antibody tests for emergency use.

TREATMENT

- There is no specific antiviral treatment for COVID-19. People with COVID-19 should receive supportive care to help relieve symptoms.
- Most people have mild illness and are able to recover at home.
- For severe cases, treatment should include care to support vital organ functions.
- See more in [Management of Patients Guidance for Healthcare Providers](#) section.

PREVENTION

- There is currently no vaccine to prevent COVID-19. The best way to prevent infection is to avoid being exposed to the virus.
- CDC always recommends everyday preventive actions to help prevent the spread of respiratory viruses, including—
 - Avoid touching your eyes, nose, and mouth with unwashed hands.
 - Avoid close contact with people who are sick.
 - Stay home when you are sick.
 - Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
 - Clean and disinfect frequently touched objects and surfaces using a regular household cleaning spray or wipe.
 - Wash your hands often with soap and water for at least 20 seconds, especially after blowing your nose, coughing or sneezing; going to the bathroom; and before eating or preparing food.
 - If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol.
 - Always wash hands with soap and water if hands are visibly dirty.

PEOPLE AT RISK FOR SERIOUS ILLNESS

- Based on what we know now, those at [higher-risk for severe illness](#) from COVID-19 are:
 - People 65 years and older
 - People who live in a nursing home or long-term care facility
 - People of all ages with underlying medical conditions, particularly if not well controlled, including:
 - People with chronic lung disease or moderate to severe asthma
 - People who have serious heart conditions
 - People who are immunocompromised
 - Many conditions can cause a person to be immunocompromised, including cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications

- People with severe obesity (body mass index [BMI] of 40 or higher)
- People with diabetes
- People with chronic kidney disease undergoing dialysis
- People with liver disease
- People with hemoglobin disorders, such as sickle cell disease or thalassemia.
- Based on current available information, pregnant people seem to have the same risk as adults who are not pregnant. However, pregnant people are known to be at higher risk for developing severe illness from other viral respiratory illnesses such as the flu.
- There are limited data available on how COVID-19 affects newborns. Early reports indicate that most newborns who had COVID-19 had mild or no symptoms and recovered fully. However, there are a few reports of newborns with severe illness.
- To date, most cases reported among children have not been severe. Still, clinicians should maintain a high index of suspicion for SARS-CoV-2 infection in children and monitor for progression of illness, particularly among infants and children with underlying conditions.
- Severe illness leading to hospitalization, including ICU admission and death, can occur in people of any age with COVID-19. However, older adults and people who have serious underlying medical conditions are at higher risk for severe COVID-19 illness.
- Based on the March 27 MMWR article, [Severe Outcomes Among Patients with Coronavirus Disease 2019 \(COVID-19\) — United States, February 12–March 16](#), the risk for serious disease and death from COVID-19 in the United States increases with age.
 - Eight out of 10 deaths reported in the United States have been in adults aged 65 years or older.
 - Among adults 85 years and older with confirmed COVID-19 reported in the U.S.:
 - An estimated 31-70% required **hospitalization**,
 - An estimated 6-29% required **admission to an intensive care unit**, and
 - An estimated 10-27% **died**.
 - Among adults 65-84 years old with confirmed COVID-19 reported in the U.S.:
 - An estimated 31-59% required **hospitalization**,
 - An estimated 11-31% required **admission to an intensive care unit**, and
 - An estimated 4-11% **died**.
 - Based on [preliminary reported outcomes](#) among COVID-19 patients:
 - Of COVID-19 patients with complete information about all health conditions, 78% of ICU admissions and 71% of non-ICU hospitalizations were among persons with one or more underlying health conditions. In contrast, 27% of those not hospitalized were reported to have one or more underlying health condition.
 - Among those with one or more underlying health conditions who had COVID-19, 52% were not hospitalized, 27% were hospitalized (not-ICU), and 13% were admitted to the ICU. For 7%, hospitalization status was unknown.
- If you are at higher risk for severe illness from COVID-19 due to age or because you have a serious underlying medical condition, it is especially important for you to take actions to reduce your risk of exposure.
- If you are a person with a serious underlying medical condition that can put you at higher risk, stay home and away from other people.
 - Stock up on supplies.
 - Make a plan with family members, friends, caregivers, and/or healthcare providers and consider including the following in your plan:
 - Identify alternate caregivers in case your caregiver is sick or paid service is limited or unavailable
 - A 30-day supply of medications and a checklist to monitor usage

- Have enough nonperishable food items to last at least 14 days
- If you feel sick, use these guidelines to reduce the risk of spread:
 - Stay home.
 - Call your healthcare provider and let them know about your symptoms. Tell them that you have or may have COVID-19. This will help them take care of you and keep other people from getting infected or exposed.
 - If you need emergency help, call 911.
 - If you are not sick enough to be hospitalized, you can recover at home. Follow CDC instructions for [how to take care of yourself at home](#).

WHAT PEOPLE AT HIGHER RISK CAN DO

- Stay home if possible.
- Wash your hands often.
- Take everyday precautions to keep space between yourself and others (stay 6 feet away, which is about two arm lengths).
- Keep away from people who are sick.
- Stock up on supplies.
- Clean and disinfect frequently touched surfaces.
- Avoid all cruise travel and non-essential air travel.
- Call your healthcare professional if you have concerns about COVID-19 and your underlying condition or if you are sick.
- Obtain essential supplies.
 - Contact your healthcare professional to ask about obtaining extra necessary medications to have on hand in case there is an outbreak of COVID-19 in your community and you need to stay home.
 - If you cannot get extra medications, consider using mail-order for medications.
 - Be sure you have over-the-counter medicines and medical supplies (tissues, etc.) to treat fever and other symptoms. Most people will be able to recover from COVID-19 at home.
 - Have enough household items and groceries on hand so that you will be prepared to stay at home.
- Take everyday precautions.
 - Keep away from people who are sick.
 - Take everyday preventive actions.
 - Wash your hands often with soap and water for at least 20 seconds, especially after blowing your nose, coughing, or sneezing, or having been in a public place.
 - If soap and water are not available, use a hand sanitizer that contains at least 60% alcohol.
 - To the extent possible, avoid touching high-touch surfaces in public places – elevator buttons, door handles, handrails, handshaking with people, etc. Use a tissue or your sleeve to cover your hand or finger if you must touch something.
 - Wash your hands after touching surfaces in public places.
 - Avoid touching your face, nose, eyes, etc.
 - Clean and disinfect your home to remove germs. Practice routine cleaning of frequently touched surfaces (for example: tables, doorknobs, light switches, handles, desks, toilets, faucets, sinks and cell phones).
 - Avoid crowds, especially in poorly ventilated spaces. Your risk of exposure to respiratory viruses like COVID-19 may increase in crowded, closed-in settings with little air circulation if there are

people in the crowd who are sick.

- If COVID-19 is spreading in your community, take extra measures to put distance between yourself and other people.
 - Stay home as much as possible.
 - Consider ways of getting food brought to your house through family, social, or commercial networks.
- Have a plan for if you get sick.
 - **Consult with your healthcare provider for more information about** monitoring your health for symptoms suggestive of COVID-19.
 - Develop a [care plan](#) which summarizes your health conditions and current treatment.
 - Stay in touch with others by phone or email. You may need to ask for help from friends, family, neighbors, community health workers, etc. if you become sick.
 - Determine who can provide you with care if your caregiver gets sick.
 - Consider ways of getting food brought to your house through family, social, or commercial networks.
 - Plan for how you will get more supplies if you need them before you recover.
- Watch for symptoms and emergency warning signs.
 - Check symptoms on CDC's [Coronavirus Self-Checker](#) to help make decisions about seeking appropriate medical care.

WHAT TO DO IF YOU ARE AT HIGHER RISK FOR SEVERE ILLNESS AND GET SICK

- Pay attention for potential COVID-19 symptoms including fever, cough, and shortness of breath.
- Stay home and call your doctor.
- Call your healthcare provider and let them know about your symptoms. Tell them that you have or may have COVID-19. This will help them take care of you and keep other people from getting infected or exposed.
- If you are not sick enough to be hospitalized, you can recover at home. Follow CDC instructions for [how to take care of yourself at home](#).
- [Know when](#) to get emergency help.
- Look for emergency warning signs* for COVID-19. If someone is showing any of these signs, seek emergency medical care immediately
 - Trouble breathing
 - Persistent pain or pressure in the chest
 - New confusion
 - Inability to wake or stay awake
 - Bluish lips or face

*This list is not all possible symptoms. Please call your medical provider for any other symptoms that are severe or concerning to you.

COMMUNITY SUPPORT FOR OLDER ADULTS

- Community preparedness planning for COVID-19 should include older adults, people with disabilities, their caretakers, and the organizations that support them in their communities, to ensure their needs are taken into consideration.
 - Many of these people live in the community, and many depend on services and supports provided in their homes or in the community to maintain their health and independence.
- Long-term care facilities should be vigilant to prevent the introduction and spread of COVID-19. [Information for](#)

[long-term care facilities can be found here.](#)

FAMILY AND CAREGIVER SUPPORT

- Know what medications your loved one is taking and see if you can help them have extra on hand.
- Monitor food and other medical supplies (hearing aid batteries, oxygen, incontinence, dialysis, wound care) needed and create a back-up plan.
- Stock up on non-perishable food items to have on hand in your home to minimize trips to stores.
- If you care for a loved one living in a care facility, monitor the situation, ask about the health of the other residents frequently and know the protocol if there is an outbreak.

RURAL COMMUNITIES

- Rural communities face some COVID-19 challenges that are different from urban and suburban communities. These differences warrant additional guidance.
- Many rural communities have experienced multiple closings of hospitals and healthcare facilities. This can leave an already vulnerable population without immediate access to healthcare, should an outbreak occur in the community.
- People living in rural communities can take steps to prepare.
 - Identify the two closest healthcare facilities to contact in case of an outbreak
 - Create an information card with the numbers and addresses of healthcare facilities and the family and friends who are physically nearest to you.
 - Locate state, local, or tribal health centers in advance to identify available resources
 - Create a phone tree system (activating a group of people by telephone to get a message out quickly) with family, friends, and neighbors

PEOPLE WITH ASTHMA

- People with moderate to severe asthma, particularly if not well controlled, might be at higher risk of getting very sick from COVID-19.
- COVID-19 can affect your respiratory tract (nose, throat, lungs), cause an asthma attack, and possibly lead to pneumonia and acute respiratory disease.
- If you have asthma, you should [prepare for COVID-19](#) and follow your Asthma Action Plan.
 - Take your asthma medication exactly as prescribed.
 - Talk to your healthcare provider, insurer, and pharmacist about creating an emergency supply of prescription medications, such as asthma inhalers.
 - Make sure that you have 30 days of non-prescription medications and supplies on hand too, in case you need to stay home for a long time.
 - Know how to use your inhaler.
 - Avoid your asthma triggers.
 - Clean and disinfect frequently touched surfaces like tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks daily to protect yourself against COVID-19.
 - Avoid disinfectants that can cause an asthma attack.
 - As more cases of COVID-19 are discovered and our communities take action to combat the spread of disease, it is natural for some people to feel concerned or stressed. Strong emotions can trigger an asthma attack. Take steps to help yourself cope with stress and anxiety.
- If you have symptoms

- Contact your healthcare provider to ask about your symptoms.

PREGNANT PEOPLE

- CDC does not currently know if pregnant people have a greater chance of getting sick from COVID-19 than the general public nor whether they are more likely to have serious illness as a result. Based on current available information, pregnant people seem to have the same risk as adults who are not pregnant.
- However, we do know that pregnant people have changes in their bodies that may increase their risk of some infections.
 - With viruses from the same family as COVID-19—and other viral respiratory infections, such as influenza—pregnant people have had a higher risk of developing severe illness.
- It is always important for pregnant people to [protect themselves from illnesses](#).

MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN

- On May 14, CDC released a Health Alert Network (HAN) Advisory on [Multisystem Inflammatory Syndrome in Children \(MIS-C\) Associated with Coronavirus Disease 2019 \(COVID-19\)](#), which has been reported in the United States and Europe.
- MIS-C has been described as inflammation across multiple body systems, potentially including the heart, lungs, kidneys, brain, skin, eyes, and gastrointestinal organs.
- Symptoms of MIS-C include fever and various body complaints such as abdominal pain, vomiting, diarrhea, neck pain, rash, conjunctivitis, and fatigue. Not all children will have the same symptoms.
- MIS-C may begin weeks after a child is infected with the virus that causes COVID-19. The child may not have shown symptoms and—in some cases—the child and their parents or caregivers may not even know they had been infected.
- CDC is collaborating with domestic and international partners to better understand this new syndrome, including how common it is and its risk factors, and to begin tracking cases.
- Healthcare providers who have cared for or are caring for patients younger than 21 years old meeting MIS-C criteria should report suspected cases to their [local, state, or territorial health department](#).
 - After-hours phone numbers for health departments are available at the [Council of State and Territorial Epidemiologists website](#).

PEOPLE WITH DISABILITIES

- Disability alone may not be related to higher risk for getting COVID-19 or having severe illness. Most people with disabilities are not inherently at higher risk for becoming infected with or having severe illness from COVID-19.
- However, some people with disabilities might be at a higher risk of infection or severe illness because of their underlying medical conditions. All people seem to be at higher risk of severe illness from COVID-19 if they have serious underlying chronic medical conditions like chronic lung disease, a serious heart condition, or a weakened immune system.
 - Adults with disabilities are three times more likely than adults without disabilities to have heart disease, stroke, diabetes, or cancer than adults without disabilities.
- People with certain disability types might be at increased risk of becoming infected or having unrecognized illness, including:
 - People who have limited mobility or who cannot avoid coming into close contact with others who may be infected, such as direct support providers and family members
 - People who have trouble understanding information or practicing preventive measures, such as hand washing and social distancing.

- People who may not be able to communicate symptoms of illness
- People with disabilities may experience potential challenges to routine medical care and access.

ANIMALS AND COVID-19

- At this time, there is no evidence that animals play a significant role in spreading the virus that causes COVID-19. Based on the limited information available to date, the risk of animals spreading COVID-19 to people is considered to be low.
 - CDC is aware of a small number of pets worldwide reported to be infected with the virus that causes COVID-19, mostly after close contact with people with COVID-19.
 - We are still learning about this virus, but it appears that it can spread from people to animals in some situations.
- On April 5, USDA reported the first confirmed case of SARS-CoV-2 infection in an animal in the United States, a tiger with a mild respiratory illness in a zoo in New York.
 - This case is the first confirmed infection in a tiger in the world.
 - Seven more lions and tigers with a respiratory illness in the same area of the zoo later tested positive through a fecal sample test; all these large cats are expected to recover.
 - These large cats were infected by a zoo employee who had COVID-19 but was not showing symptoms at the time, either because the person never developed symptoms or because the transmission occurred before that person developed symptoms.
- On April 22, USDA confirmed SARS-CoV-2 infection in two pet cats in New York.
 - These were the first confirmed cases in pets in the United States.
 - Both cats had mild respiratory illness and are expected to recover.
- Additional animals may test positive as infections continue in people.
- At this time, routine testing of animals is not recommended.
 - State animal health and public health officials will take the lead in making determinations about whether animals should be tested for SARS-CoV-2.
 - Should other animals be confirmed positive for SARS-CoV-2 in the United States, USDA will post the findings.
- Further studies are needed to understand if and how different animals could be affected by the virus and the role animals may play in the spread of COVID-19.
- Until we learn more about this virus, pet owners should treat pets like human family members to protect them from possible infection.
 - Do not let pets interact with people or animals outside the household.
 - Keep cats indoors when possible.
 - Walk dogs on a leash at least 6 feet (2 meters) from other people and animals.
 - Avoid dog parks or public places where a large number of people and dogs gather.
- CDC continues to recommend that people sick with COVID-19 isolate themselves from other people **and** animals, including pets, during their illness until we know more about how this virus affects animals.
 - When possible, have another member of your household care for your pets while you are sick.
 - Avoid contact with your pet, including petting, snuggling, being kissed or licked, and sharing food and bedding.
 - If you must care for your pet or be around animals while sick, wear a cloth face covering and wash your hands before and after you interact with them.
- If you are sick with COVID-19 and your pet becomes sick, **do not** take your pet to the veterinary clinic yourself.

- Call your veterinarian and tell them you are sick with COVID-19.
- Some veterinarians may offer telemedicine consultations or other ways to see sick pets.
- Your veterinarian can evaluate your pet and determine the appropriate steps for care.
- At this time, CDC has no data to suggest that this new coronavirus or other similar coronaviruses are spread by mosquitoes or ticks.
 - Mosquitoes and ticks cannot spread all types of viruses. For a virus to pass to a person through a mosquito or tick bite, the virus must be able to replicate inside the mosquito or tick.

STRESS AND COPING

- The COVID-19 pandemic may be [stressful](#) for people. Fear and anxiety about a disease can be overwhelming and cause strong emotions in adults and children.
- People who may respond more strongly to the stress of a crisis include:
 - People who are at higher risk for severe illness including older adults and people of any age who have serious underlying medical conditions
 - Children and teens
 - People who are helping with the response to COVID-19, like doctors and other health care providers, or first responders
 - People who have mental health conditions including problems with substance use
- Stress during an infectious disease outbreak may appear as
- Fear and worry about your own health and the health of your loved ones
 - Changes in sleep or eating patterns
 - Difficulty sleeping or concentrating
 - Worsening of chronic health problems
 - Worsening of mental health conditions
 - Increased use of alcohol, tobacco, or other drugs
- People with preexisting mental health conditions should continue with their treatment and be aware of new or worsening symptoms.
 - Additional information can be found at the Substance Abuse and Mental Health Services Administration ([SAMHSA](#)) website.
- Things you can do to support yourself and the people you care for:
 - Take breaks from watching, reading, or listening to news stories, including social media. Hearing about the pandemic repeatedly can be upsetting.
 - Take care of your body. Take deep breaths, stretch, or meditate. [Try to eat healthy](#), [well-balanced meals](#), [exercise regularly](#), [get plenty of sleep](#), and [avoid alcohol](#) and drugs.
 - Make time to unwind. Try to do activities you enjoy.
 - Connect with others through calls (audio or video), instant messaging, email, letters, or other forms of communication, even if you cannot be together in person.
 - Talk with people you trust about your concerns and how you are feeling.
- If you, or someone you care about, is feeling overwhelmed with emotions like sadness, depression, or anxiety, or if you are concerned about harming yourself or others, call 911 or the SAMHSA Disaster Distress Helpline: 1-800-985-5990 or text TalkWithUs to 66746 (TTY 1-800- 846-8517).
- If you, or someone you care about, is experiencing domestic violence or is affected by abuse and needs support, call 911 or the National Domestic Violence Hotline: 1-800-799-7233 (TTY 1-800- 787-3224).

RESPONDERS

- Responding to COVID-19 can take an emotional toll on you. There are things you can do to reduce secondary traumatic stress (STS) reactions:
 - Acknowledge that STS can impact anyone helping families after a traumatic event.
 - Learn the symptoms, including physical symptoms (fatigue, illness) and mental symptoms (fear, withdrawal, guilt).
 - Allow time for you and your family to recover from responding to the pandemic.
 - Create a menu of personal self-care activities that you enjoy, such as spending time with friends and family, exercising, or reading a book.
 - Take a break from media coverage of COVID-19.
 - Ask for help if you feel overwhelmed or concerned that COVID-19 is affecting your ability to care for your family and patients as you did before the outbreak.
- Learn more tips for [taking care of yourself](#) during emergency response.

PEOPLE WHO HAVE BEEN RELEASED FROM QUARANTINE

- Being separated from others if a healthcare provider thinks you may have been exposed to COVID-19 can be stressful, even if you do not get sick.
- Everyone feels differently after coming out of quarantine. Some feelings include:
 - Mixed emotions, including relief after quarantine;
 - Fear and worry about your own health and the health of your loved ones;
 - Stress from the experience of monitoring yourself or being monitored by others for signs and symptoms of COVID-19;
 - Sadness, anger, or frustration because friends or loved ones have unfounded fears of contracting the disease from contact with you, even though you have been determined not to be contagious;
 - Guilt about not being able to perform normal work or parenting duties during quarantine; and
 - Other emotional or mental health changes.
- Children may also feel upset or have other strong emotions if they, or someone they know, has been released from quarantine. [You can help your child cope](#).

MINIMIZING STIGMA AND MISINFORMATION

- [Minimizing stigma and misinformation](#) is important, especially during contagious disease outbreaks.
- **Everyone:** Know the facts about COVID-19 and help prevent the spread of rumors:
 - Fight stigma by supporting people who are coming back to school or work after completing their quarantine or isolation period for COVID-19 exposure or illness.
 - Someone who has completed their quarantine or met the requirements to discontinue infection control measures does not pose a risk of spreading COVID-19.
 - People of Asian descent, including Chinese Americans, are not more likely to get coronavirus than anyone else. Let people know that being of Asian descent does not increase the chance of getting or spreading COVID-19.
 - Viruses cannot target people from specific populations, ethnicities, or racial backgrounds.
 - People who have not been in contact with a person who is a confirmed or suspected case are not at greater risk of acquiring and spreading this new virus than others.
 - People who returned more than 14 days ago from an [area with widespread or ongoing](#)

[community spread](#) and do not have symptoms of coronavirus do not put others at risk.

- To [help counter stigma](#), public health professionals can:
 - Maintain privacy and confidentiality of those seeking health care and those who may be part of any contact investigation.
 - Communicate the risk or lack of risk from associations with products, people, and places in a timely manner.
 - Raise awareness of COVID-19 while showing empathy for people's concerns and fears.
 - Counter myths and rumors by sharing accurate information about how the virus spreads.
 - Speak out against negative behaviors, including negative statements on social media about groups of people, or exclusion of people who pose no risk from regular activities.
 - Be cautious about the images that are shared. Make sure they do not reinforce stereotypes.
 - Engage with stigmatized groups in person and through media channels including news media and social media.
- Thank healthcare workers and responders. People who have traveled to areas where the COVID-19 outbreak is happening to help have performed a valuable service to everyone by helping make sure this disease does not spread further.
- Share with others the need for social support for people who have experienced stigma, who have returned from an area with ongoing spread, or who are worried about friends or relatives in the affected areas.

TRAVEL

PRESIDENTIAL PROCLAMATIONS ANNOUNCING TRAVEL RESTRICTIONS FOR TRAVELERS FROM BRAZIL, IRAN, PARTS OF EUROPE, AND CHINA

- On January 31, President Trump issued the first [Presidential Proclamation](#) implementing temporary measures to increase our abilities to detect and contain the novel coronavirus proactively and aggressively.
 - The proclamation suspends entry to the United States of foreign nationals who have been in the People's Republic of China (excluding Hong Kong and Macau) in the past 14 days.
- On February 29, a [Presidential Proclamation](#) suspended entry to the United States of foreign nationals who have been in Iran in the past 14 days.
 - For more information, consult the [notice published in the Federal Register](#).
- On March 11, a [Presidential Proclamation](#) suspended entry to the United States of foreign nationals who have been in 26 countries in Europe (known as the Schengen Area) in the past 14 days.
 - The order suspends the entry of foreign nationals from the European Schengen area: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Vatican City.
- On March 14, a [Presidential proclamation](#) suspended entry to the United States of foreign nationals who have been in the United Kingdom (excluding overseas territories outside of Europe) or the Republic of Ireland in the past 14 days.
- [On May 24, a Presidential proclamation suspended entry to the United States of foreign nationals who have been in Brazil in the past 14 days.](#)
- Exemptions to these travel restrictions include American citizens, legal permanent residents, and certain family members of U.S. citizens and legal permanent residents. (Hereafter referred to as "American citizens and exempted persons.")

- Under the Presidential Proclamations: All American citizens and exempted persons coming from **areas with travel restrictions** will be directed to (“funneled to”) one of **15** U.S. airports.
 - The **15** airports where travelers are being funneled are:
 - Boston-Logan International Airport (BOS), Massachusetts
 - Chicago O’Hare International Airport (ORD), Illinois
 - Dallas/Fort Worth International Airport (DFW), Texas
 - Detroit Metropolitan Airport (DTW), Michigan
 - Daniel K. Inouye International Airport (HNL), Honolulu, Hawaii
 - **Fort Lauderdale-Hollywood International Airport (FLL), Florida**
 - **George Bush Intercontinental Airport (IAH), Houston, Texas**
 - Hartsfield-Jackson Atlanta International Airport (ATL), Georgia
 - John F. Kennedy International Airport (JFK), New York
 - Los Angeles International Airport (LAX), California
 - Miami International Airport (MIA), Florida
 - Newark Liberty International Airport (EWR), New Jersey
 - San Francisco International Airport (SFO), California
 - Seattle-Tacoma International Airport (SEA), Washington
 - Washington-Dulles International Airport (IAD), Virginia
- American citizens and exempted persons who have been in these areas in the previous 14 days will have an additional health assessment (screened for fever, cough, or difficulty breathing) performed by CDC and its partners with the Department of Homeland Security.
 - If symptomatic upon arrival, American citizens and exempted persons will be referred for a public health assessment by CDC Quarantine Station staff. If the person meets certain criteria, a CDC medical officer may refer the person to a health care center for further medical evaluation. (They will not be able to complete their itinerary at that time.)
 - If asymptomatic upon arrival, American citizens and exempted persons will be allowed to reach their final destination and, after arrival, will be asked to stay home and self-monitor for 14 days.
 - Regardless of symptom status, American citizens and exempted persons’ contact information is sent to their jurisdictional health department for post-arrival follow up.

CDC TRAVEL HEALTH NOTICES AND OTHER TRAVEL GUIDANCE

- On March 27, CDC issued a [Level 3 Global Travel Health Notice](#), advising travelers to avoid all nonessential international travel.
 - This is consistent with the U.S. State Department’s [Level 4 Global Health Advisory](#), posted on March 19, warning travelers Do Not Travel.
 - Travelers returning from international locations should stay home for a period of 14 days after returning to the United States, monitor their health, and practice social distancing.
- **All international travelers arriving into the United States receive a [Travel Health Alert Notice](#).**
- **CDC has a public health messaging system that offers up-to-date information to travelers at specific airports, seaports, and land borders where most international travelers enter or leave the United States.**
- CDC has issued a [Level 3 Travel Health Notice](#) for cruise ship travel. CDC recommends that all people [defer travel on cruise ships](#), including river cruises, worldwide.
- CDC has posted a webpage about [COVID-19 and considerations for travel in the United States](#).
- On April 22, CDC posted a [road travel toolkit](#) for transportation partners.

- On May 2, CDC posted an [air travel toolkit](#) for airline partners.

REPATRIATION FLIGHTS AND QUARANTINE ORDERS

- CDC has supported the Department of State in the safe and expedient ordered departure by chartered flights of U.S. citizens and residents from locations affected by outbreaks of COVID-19.
 - Individuals repatriated from Hubei Province, China, and from the Diamond Princess cruise ship docked in Yokohama, Japan, were issued quarantine orders on arrival in the United States.
- CDC also supported efforts to disembark and repatriate passengers aboard the Grand Princess, docked at the Port of Oakland.
- CDC managed approximately 3,200 federal [isolation and quarantine](#) orders for people from Hubei Province, China, the Diamond Princess cruise ship, and the Grand Princess cruise ship.
- All individuals under federal public health orders have completed quarantine or isolation and have returned home.

CRUISE SHIPS AND RIVER CRUISES

- On April 17, CDC recommended all persons [defer any travel on cruise ships](#), including river cruises, worldwide because of the increased risk of COVID-19 on board ships.
- CDC has posted [Interim Guidance for Ships on Managing Suspected Coronavirus Disease 2019](#).
- If an ill passenger or crew member (as defined in [federal regulations](#)) is identified on board the ship, the cruise line must report this to the CDC Quarantine Station responsible for the port. CDC staff and the U.S. Coast Guard will determine if further action is needed.
- CDC is continuously tracking the status of cruise ships operating in U.S. waters or coming into U.S. ports.

NO SAIL ORDER

- On April 9, CDC extended its [No Sail Order](#) (NSO) until the earliest of (1) the expiration of the Secretary of Health and Human Services' declaration that COVID-19 constitutes a public health emergency; (2) the CDC Director rescinds or modifies the order based on specific public health or other considerations; or (3) 100 days from the date of publication in the Federal Register. The NSO was published in the Federal Register and effective April 15. One hundred days from April 15 is July 24.
- CDC has released interim guidance for mitigation of COVID-19 among cruise ship crew during the period of the NSO.
 - CDC works closely with the U.S. Coast Guard and the U.S. Customs and Border Protection, as well as state and local public health officials, port authorities, and law enforcement, to ensure cruise lines are adhering to the conditions of the NSO and that crew members can safely disembark in a manner that protects public health.
- The NSO requires, as a condition to continue to operate in U.S. waters, that cruise ship operators submit to CDC a COVID-19 response plan that adequately prevents, mitigates, and responds to the spread of COVID-19 on board cruise ships.
- **CDC has provided feedback to all cruise lines on the response plans they submitted. CDC is working with the cruise lines to ensure they are implementing the safeguards outlined in their plans.**
- These plans are intended to ensure cruise lines are able to provide a safe environment for crew members to work and disembark.
 - **Approval of a plan does not indicate that it is safe for cruise lines to resume passenger operations.**

- While NSO response plans are being reviewed, CDC will also allow U.S. citizen crew to safely disembark from cruise ships in a way that does not endanger the public's health.
 - In order to allow U.S. citizen crew to disembark, the cruise ship operator must sign an attestation and agree to follow specific conditions designed to protect the public's health.
 - The cruise ship operator must:
 - Screen disembarking crew members for symptoms of COVID-19.
 - Ensure crew members with known exposures to COVID-19 are transported separately from those with no known exposure.
 - Provide face coverings, such as a cloth face covering, to disembarking crew members, or confirm that they have their own face coverings.
 - Instruct crew members disembarking to stay home for 14 days and continue to practice social distancing after reaching their final destination.
 - Ensure disembarking crew members:
 - will not stay overnight in a hotel before the flight or at any point until they reach their final destination
 - will not use public transportation (including taxis or ride-share services) to get to the airport or charter flight boarding location
 - will not enter the public airport terminal
 - will not take commercial aircraft after an initial charter flight
 - will not have a transportation layover exceeding 8 hours
 - will have no interaction with the public during their travel home or to their new duty station (e.g., rental car companies, restaurants, other public areas)
- On April 23, CDC informed all cruise lines in U.S. waters about the process for safely disembarking crew. CDC also provided updated information and guidance on its website outlining the process for cruise lines to disembark crew members, including the requirement to submit a signed attestation.
- CDC understands crew members are in a difficult situation and is committed to helping them disembark as quickly and safely as possible.
- On May 11, CDC posted a new email address for crew feedback on its website. Crew members can use the address to report non-compliance concerns with COVID-19 mitigation efforts onboard ships.
- CDC has received and approved requests for disembarkation from cruise ships.
- CDC wants to make sure the crew members are aware that there is a process in place for them to safely disembark and return home, and that CDC stands ready to approve requests from cruise lines with same-day turnaround in most cases. CDC encourages crew members who want to disembark to contact their cruise line about their requests to disembark.
- On May 5, CDC posted information on [Cruise Ship Crew Member Disembarkations](#).
- Emergency medical evacuations may be coordinated with U.S. Coast Guard and do not require CDC approval. CDC has notified all cruise lines as well as federal, state, and local partners that the NSO will not prevent anyone from receiving emergency medical care.

WHAT CDC IS DOING

CDC RESPONSE IN THE U.S.

- The federal government is working closely with state, tribal, local, and territorial partners, as well as public health partners, to respond to this public health threat.

- The goal of the ongoing U.S. public health response is to detect new cases quickly and prevent further spread of COVID-19 in this country.
- CDC established a COVID-19 Incident Management Structure on January 7. On January 21, CDC activated its Emergency Operations Center to better provide ongoing support to the COVID-19 response.
- CDC has posted a webpage about [COVID-19 and considerations for travel in the United States](#).
- CDC continues to support state, tribal, local, and territorial health departments as they work to detect and investigate cases, and to implement community mitigation measures, as needed in their communities.
 - CDC has deployed multidisciplinary teams to support state, tribal, local, and territorial health departments with clinical management, contact tracing, community mitigation, infection prevention and control, surveillance, data management, and communications.
 - More information about deployed CDC teams can be found on CDC's [Staffing Resources: Get and Keep America Open](#) web page.
- CDC has helped mobilize state health departments to receive returned repatriated travelers.
- State, local, territorial and tribal health departments continue to work to detect and investigate cases, and to help implement community mitigation measures, as needed in their communities.
- CDC is working closely with these health departments to strengthen the public health response to this disease outbreak.
- CDC is working with jurisdictions to identify needs for surge support staff to conduct contact tracing, provide infection prevention and control expert guidance, educate communities about COVID-19, support epidemiologic investigations and data analysis efforts, and more. Staff hired through various mechanisms will be placed directly in health departments to provide surge support.
- Through the Public Health Emergency Preparedness (PHEP) cooperative agreement, 62 state PHEP programs across the country are part of the multi-agency infrastructure working on quarantine, isolation, case finding, protecting health care workers and assuring medical supply chains.
- On March 16, CDC awarded nearly \$570 million in funding to 65 state, local, territorial, and tribal jurisdictions to provide resources to prevent, prepare for, and respond to the COVID-19 outbreak.
 - CDC made these awards 10 days after the President signed into law the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123)
- CDC has authorized recipients to begin spending their funds immediately.
- This funding gives state and local health departments the flexibility to implement response actions based on the disease characteristics and priorities in their communities.
- The funding supports two required activities:
 - Accelerated laboratory testing, data collection, and real-time reporting to CDC for identification and tracking of COVID-19 cases in the community; and
 - Implementation of COVID-19 community intervention plans.
- The supplemental funding is in addition to funding in the amount of \$35 million to 21 jurisdictions for immediate COVID-19 response activities.
 - CDC awarded that initial funding on March 6.
 - For the 21 jurisdictions that received the initial funding, CDC has combined their initial funding with the new supplemental funding to reduce the administrative burden of managing two awards.
- CDC has worked with the Department of State, supporting the safe return of Americans who have been stranded as a result of the ongoing outbreaks of COVID-19 and related travel restrictions. CDC has worked to assess the health of passengers as they return to the United States and provided continued daily monitoring of people who are quarantined.
- An important part of CDC's role during a public health emergency is to develop a test for the pathogen and equip

state and local public health labs with testing capacity. CDC developed a nucleic acid test called the CDC rRT-PCR test, to detect the virus that causes COVID-19 in human clinical specimens and distributed this test to state and local health laboratories.

- After distribution of a CDC rRT-PCR test to diagnose COVID-19 to state and local public health labs started, performance issues were identified related to a problem in the manufacturing of one of the reagents. Laboratories were not able to verify the test performance.
- CDC worked on two resolutions to this problem.
 - CDC developed a new protocol that uses two of the three components of the original CDC test kit to detect the virus that causes COVID-19 after establishing that the third component, which was the problem with the original test, could be excluded from testing without affecting accuracy.
 - CDC worked with FDA to amend the existing Emergency Use Authorization (EUA) for the test.
 - Further, newly manufactured kits were provided to the [International Reagent Resource](#) for distribution.
 - On February 27, CDC distributed new test kits to 7 laboratories to serve as evaluation sites to ensure health departments were able to verify the assay. On February 29, 6 of 7 pilot laboratories reported successful completion of the verification panel.
 - An additional 40 test kits were hand carried to IRR for repackaging and distribution to additional public health labs.
 - On February 28, IRR began to distribute new test kits to the additional 40 laboratories. As of May 26, 97 public health labs are testing for SARS-CoV-2, representing all 50 states, as well as the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands.
- CDC developed an [antibody test](#) (also called a serology test) to assist with surveillance to determine how much of the U.S. population has been exposed to the virus that causes COVID-19.
 - CDC's test was shown to be correct greater than 99% of the time if antibodies to SARS-CoV-2 are not present and correct 96% of the time if antibodies are present.
 - CDC's antibody test is designed and validated for broad-based surveillance and research to guide the response to the pandemic and protect the public's health. It is not currently designed to test individuals who want to know if they've already had COVID-19.
- CDC's antibody test is designed to detect antibodies produced in response to SARS-CoV-2 and to avoid detection of antibodies against other common coronaviruses that cause less-severe illnesses, such as colds.
- CDC is evaluating commercially manufactured antibody tests in collaboration with the Biomedical Research and Development Authority, the Food and Drug Administration, the National Institutes of Health, the Department of Defense, and the White House Office of Science and Technology Policy. Analysis of the initial evaluation is being completed, and evaluation of additional tests will continue.
- **CDC developed [interim guidelines](#) for how healthcare providers, laboratories, and public health staff should use antibody tests.**
 - **The guidelines include what is known currently about antibody development and immunity, types of antibody tests, strategies for optimizing testing outcomes, test limitations, and recommendations for use.**
- CDC has been uploading the entire genome sequence of the viruses from reported cases in the United States to GenBank.
- CDC has grown the virus in cell culture, which is necessary for vaccine studies and other studies, including for additional genetic characterization. The cell-grown virus was sent to NIH's BEI Resources Repository for use by the broad scientific community.
- CDC is analyzing data about COVID-19 disease to estimate the impact of the disease in the United States – including infections without symptoms, illnesses, medical visits, hospitalizations, and deaths – to enhance understanding of the full burden of COVID-19 in the country.

- CDC is studying various characteristics of the virus that causes COVID-19 to better understand factors that may contribute to spread of the disease to help determine ways to slow spread.
- CDC is managing a series of research networks for COVID-19 that collects data from adults and children in outpatient and inpatient settings to better understand the spectrum of COVID-19 disease (from asymptomatic to severe), risk factors for severe disease, testing practices, and rate of new cases.
- CDC is managing and analyzing data from U.S. public health laboratories, influenza-like illness surveillance (ILI), and the hospitalization surveillance system COVID-Net.
 - CDC compiles data from these systems weekly, along with data from the National Syndromic Surveillance Platform, other sources of virus surveillance data, and National Center for Health Statistics (NCHS) mortality data, and summarizes and publishes the data on CDC websites as [COVIDView](#) and the [COVIDNet](#) interactive module.
- CDC is conducting surveillance research and studies among pregnant women and infants exposed to the virus that causes COVID-19 during pregnancy to better understand how it affects these populations.

CONTACT TRACING

- On May 13, 2020 CDC released [Interim Guidance on Developing a COVID-19 Case Investigation and Contact Tracing Plan](#).
- This guidance provides staffing recommendations, key considerations, and strategies for state, tribal, local, and territorial health departments to facilitate case investigation and contact tracing.
 - Case investigation is the identification and investigation of people with confirmed or probable COVID-19 (referred to as cases).
 - Contact tracing follows case identification and is the identification, monitoring, and support of people who were in contact with the case (referred to as contacts).
- Prompt identification, voluntary quarantine (self-quarantine), and monitoring of COVID-19 contacts can effectively break the chain of disease spread, preventing further spread of the virus in a community.
- Since COVID-19 can be spread before symptoms occur or when no symptoms are present, case investigation and contact tracing activities must be swift and thorough.
- The complete clinical picture of COVID-19 is not fully known. As scientists learn more, updates may be made to recommendations for testing priorities and the time period or window (when the patient was infectious and not under isolation) from which contacts should be identified.
- Remote communications for the purposes of case investigation and contact tracing should be prioritized.
 - In-person communication may be considered only after remote options have been exhausted.
- Given the potentially large number of cases and contacts, jurisdictions may need to prioritize case investigation and contact tracing activities. Prioritization should be based on vulnerability, congregate settings and workplaces, and healthcare facilities.
- Depending on jurisdictional testing capacity, case investigations may be considered for clients with a probable diagnosis of COVID-19, not just confirmed COVID-19 cases.
- CDC is rapidly developing COVID-19 contact tracing [resources](#) and [training](#).
- CDC is developing general guidance, such as a [Digital Contact Tracing Tools fact sheet](#) and [Preliminary Criteria for the Evaluation of Digital Contact Tracing Tools fact sheet](#), to support jurisdictions' decision-making as they consider using contact tracing technology.

SEROLOGY SURVEILLANCE STRATEGY

- Tracking COVID-19 infections to determine how much of the U.S. population is infected over time is a CDC priority.
- CDC uses a variety of surveillance systems to track COVID-19 cases based on people who seek medical care.

- These systems miss infections that occur in people who did not seek medical care or get tested, many of whom had mild illness or no symptoms of illness.
- CDC is implementing a [serology surveillance strategy](#) to learn about the total number of people that have been infected, including those infections that might have been missed.
- The strategy involves working with state, local, territorial, academic, and commercial partners to better understand COVID-19 in the United States using [serology \(antibody\) testing for surveillance](#) (“seroprevalence surveys” or “serosurveys”).
- Seroprevalence surveys provide data to better understand how many SARS-CoV-2 infections have occurred at different points in time, in different locations, and within different populations in the United States.
- U.S. serologic surveillance can provide a more complete estimate of how many people have been infected and assist in planning for outbreak response and control.
- Through seroprevalence surveys, CDC can—
- track how infections progress through the population over time;
- estimate how much of the population has not yet been infected;
- look at [risk factors](#) for disease, such as a person’s age, location, or underlying health conditions;
- determine how long antibodies last in people’s bodies following infection; and
- help public health officials plan for future healthcare needs.
- Specifically, seroprevalence surveys help to answer important questions such as—
- How is the amount of the U.S. population that has been infected changing over time?
- Are there different characteristics, or risk factors, that are associated with SARS-CoV-2 infection, such as age, location, or underlying health conditions?
- How many U.S. residents experienced mild or asymptomatic COVID-19 illness?
- How long can antibodies be found after a SARS-CoV-2 infection?
- At this time, seroprevalence surveys cannot answer questions such as—
- How much of the U.S. population is immune to SARS-CoV-2 infection and not able to get infected again?
- How many antibodies are needed to protect someone from COVID-19?
- How long will someone with antibodies be protected from COVID-19?
- Can you be re-infected with SARS-CoV-2?
- Can people with antibodies return to work?
- [The seroprevalence surveys CDC is conducting](#) include—
- **Community-level Seroprevalence Surveys** that cover smaller areas, sampling from select counties and systematically selecting participants from within the area to allow for a more representative population to be tested.
- **Special Populations Seroprevalence Surveys** that answer important questions about the risk of infection within specific populations such as healthcare workers or pregnant women.
- **Large-scale Geographic Seroprevalence Surveys** conducted in locations across the United States focusing on areas highly impacted by COVID-19, such as Washington State and New York State, including New York City.

COLLABORATION FOR ANTIBODY TESTING STUDY IN 25 U.S. CITIES

- In the largest nationwide seroprevalence survey to date, CDC is partnering with the National Institutes of Health’s (NIH) National Institute of Allergy and Infectious Diseases (NIAID) and National Heart, Lung and Blood Institute (NHLBI), the Food and Drug Administration (FDA), Vitalant Research Institute (VRI), and large blood collection organizations to assess how many people in the United States may have been infected with SARS-CoV-2.

- As part of this collaboration, CDC will provide technical assistance and \$4.5 million in financial support to VRI and collaborating institutions for a seroprevalence survey in 25 U.S. metropolitan areas.
- In all, nearly 325,000 samples will be tested over the next 18 months by testing 1,000 blood samples apiece from the same 25 areas every month for 12 months with a final collection at 18 months.
- Testing will allow CDC to take “snap shots” of the percentage of people who have antibodies against SARS-CoV-2 at different time points to assess differences in infection rates around the country and over time.
- The results will help public health officials better understand how widespread the virus is.
- CDC and partners will ensure that results are accessible to government partners, researchers, and the public for use in public health decision making.

CDC INTERNATIONAL RESPONSE

- The COVID-19 pandemic is a serious global health threat and CDC is committed to stopping the global spread. One country cannot do it alone. CDC has a long history of improving public health capacity throughout the world to contain outbreaks at their source and minimize their impact.
- CDC has staff stationed in more than 50 countries. CDC has offices in a number of countries reporting cases of COVID-19, and in many countries that have not yet reported cases. CDC is providing assistance with planning and preparedness efforts.
- In addition to working with host country officials, CDC staff is coordinating with Department of State and other agencies within U.S. embassies.
- Due to global travel restrictions, CDC is mobilizing staff to support the global response from Atlanta headquarters. Many of these staffers have extensive experience responding to global outbreaks and pandemics.
- In many countries, CDC experts are working with WHO, international partners, and other U.S. government agencies to support Ministries of Health to prepare and respond to the pandemic.
- CDC supports countries in:
 - Carrying out WHO recommendations related to the diagnosis and care of COVID-19 patients and tracking the epidemic;
 - Conducting collaborative investigations that will help inform response efforts;
 - Providing technical assistance on emergency operations, laboratory operations, infection prevention and control, screening at ports of entry, risk communication and community engagement, and disease surveillance;
 - Conducting training on preparedness and response;
 - Serving as an important technical partner developing and strengthening [Field Epidemiology Training Programs \(FETP\)](#), which educate field epidemiologists—disease detectives—to identify and contain outbreaks; and
 - Developing well-functioning national public health institutes with strong linkages among the public health functions critical for more efficient outbreak preparedness and response efforts.
- Since 2015, CDC has been a key implementing partner of the USG Global Health Security Agenda (GHSA).
 - GHSA investments have helped countries build national capacities to prevent, detect, and respond to infectious disease threats.
 - These investments and partnerships have laid foundations to rapidly and effectively prepare for emerging threats, including the current COVID-19 pandemic.
 - Lessons learned from addressing HIV, influenza, Ebola, dengue, Zika, and many other viruses are being applied to the COVID-19 response.
- As of May 19, CDC has committed an initial \$183 million for its COVID-19 activities in 33 countries. This is part of the \$300 million that was authorized for CDC’s global response to COVID-19 as appropriated by Congress in the

Coronavirus Preparedness and Response Supplemental Appropriations Act.

- This funding builds on CDC's long-standing global investments to control HIV, TB, and malaria; eradicate polio; and prepare for influenza and other pandemic diseases. CDC investments to improve global health security have laid the foundation to rapidly and effectively prepare for emerging threats, including the current coronavirus outbreak.
- CDC's funding for international COVID-19 preparedness and response is supporting activities in 6 priority technical areas across the globe—
 - Emergency response
 - Laboratory, surveillance, and epidemiology
 - Border health
 - Infection prevention, control, and preparedness in healthcare facilities
 - Pandemic preparedness planning
 - Vaccine preparedness.
- These cross-cutting technical efforts are essential for ending the COVID-19 pandemic globally.
- For country-specific information, please contact CDCglobal@cdc.gov.

RECOMMENDATIONS

- CDC routinely advises that people help protect themselves from respiratory illnesses by washing their hands often, avoiding touching their face with unwashed hands, avoiding close contact with people who appear sick, and cleaning frequently touched surfaces.
 - CDC defines close contact as—
 - Being within about 6 feet (2 meters) of someone with COVID-19 for a prolonged period of time, such as living with, visiting, caring for or sharing a room in a healthcare facility
 - or -
 - By having direct contact with infectious secretions from a patient, such as being coughed on.
 - If you are a resident in a community where person-to-person spread of COVID-19 has been detected and you develop COVID-19 symptoms, call your healthcare provider and tell them about your symptoms.
 - If you have symptoms of COVID-19 and want to get tested, try calling your state or local health department or a medical provider. While supplies of these tests are increasing, it may still be difficult to find a place to get tested.
 - Most people have [mild illness](#) and are able to [recover at home](#).
 - For people who are ill with COVID-19, but are not sick enough to be hospitalized, please follow CDC guidance on how to reduce the risk of spreading your illness to others. People who are mildly ill with COVID-19 are able to isolate at home during their illness.

RECENT INTERNATIONAL TRAVELERS

- If you have [traveled internationally](#) in the past 14 days, stay home and monitor your health and practice social distancing.
- If you need to seek essential medical care for other reasons, such as dialysis, call ahead to your doctor and tell them about your recent travel.
- If you get sick with fever or cough in the 14 days after you return from travel:
 - Stay home. Avoid contact with others.
 - You might have COVID-19; most people are able to recover at home without medical care.
 - If you have trouble breathing or are worried about your symptoms, call or text a health care provider. Tell

- them about your recent travel and your symptoms.
- Call ahead before you go to a doctor's office or emergency room.

PEOPLE CONFIRMED TO HAVE, OR BEING EVALUATED FOR, COVID-19

- Your doctors and public health staff will evaluate whether you can be cared for at home.
- If it is determined that you can be isolated at home, you will be monitored by staff from your local or state health department.
 - You should follow the prevention steps below until a healthcare professional or local or state health department says you can return to your normal activities.
 - Stay home except to get medical care.
 - Separate yourself from other people and pets in your home.
 - Call ahead before visiting your doctor.
 - If possible, wear a cloth face covering over your nose and mouth if you must be around other people even at home.
 - Cover your coughs and sneezes with a tissue, then throw the tissue away, or cough or sneeze into your sleeve.
 - Wash your hands often with soap and water for at least 20 seconds.
 - Avoid sharing household items like eating utensils, cups, or linens.
 - Monitor your symptoms and seek prompt medical attention if your symptoms worsen.
- Detailed information is available in CDC's [Interim Guidance for Preventing COVID-19 from Spreading to Others in Homes and Communities](#).
- On February 27, CDC updated interim guidance for state and local public health officials on how to assess and manage the risks posed by patients who may have been exposed to this new coronavirus.
 - This guidance establishes four risk categories: High, Medium, Low and No Identifiable Risk.
 - The categories are based on a person's travel history and possible contact with patients who have laboratory-confirmed infections.
 - The guidance **offers recommendations** for movement restrictions and public health evaluations for people in different risk categories.
 - **In most cases, state and local authorities will make these decisions.**
 - **Federal public health authority primarily extends to international arrivals at ports of entry and preventing interstate communicable disease threats.**
 - These guidelines are subject to change as the situation requires. They do not apply retroactively to people who have been in [an affected area](#) with sustained transmission during the previous 14 days and are already in the United States, or those being managed as part of a contact investigation.
 - CDC will provide separate guidance for healthcare settings.

CLOSE CONTACTS OF PATIENTS UNDER INVESTIGATION

- People who have had close contact with someone who is confirmed to have, or being evaluated for, COVID-19, should:
 - Monitor your health starting from the day you first had close contact with the person and continue for 14 days after you last had close contact with the person. Watch for these signs and symptoms:
 - Fever—take your temperature twice a day.
 - Coughing.
 - Shortness of breath or difficulty breathing.

- Other early symptoms to watch for are chills, body aches, sore throat, headache, diarrhea, nausea, vomiting, and runny nose.
- If you develop fever or any of these symptoms, call your healthcare professional right away.
 - **Before** going to your medical appointment, be sure to tell your healthcare professional about your close contact with someone who is confirmed to have, or being evaluated for, COVID-19.
 - This notification will help the healthcare professional's office take steps to keep other people from getting infected. Ask your healthcare professional to call the local or state health department.
- On March 16, the White House [recommended](#) that if someone in your household has tested positive for COVID-19, the entire household should stay home and you should contact your medical provider.
- Detailed information for caregivers and household members can be found on the [Interim Guidance for Preventing COVID-19 from Spreading to Others in Homes and Communities](#) web page.

HEALTHCARE PROFESSIONALS

- Clinicians can access laboratory tests for diagnosing COVID-19 through clinical laboratories performing tests authorized by FDA under an Emergency Use Authorization (EUA).
 - Clinicians can also access laboratory testing through public health laboratories in their jurisdictions.
 - The CDC [clinical criteria for considering testing](#) for COVID-19 have been developed based on what is known about COVID-19 and are subject to change as additional information becomes available. There are two categories for prioritizing testing:
 - High Priority
 - Hospitalized patients with symptoms
 - Healthcare facility workers, workers in congregate living settings, and first responders with symptoms
 - Residents in long-term care facilities or other congregate living settings, including prisons and shelters, with symptoms
 - Priority
 - Persons with symptoms of potential COVID-19 infection, including fever, cough, shortness of breath, chills, muscle pain, new loss of taste or smell, vomiting or diarrhea, and/or sore throat
 - Persons without symptoms who are prioritized by health departments or clinicians, for any reason, including but not limited to public health monitoring, sentinel surveillance, or screening of other asymptomatic individuals according to state and local plans

RECOMMENDATIONS FOR REPORTING, TESTING, AND SPECIMEN COLLECTION

- Clinicians should immediately implement recommended [infection prevention and control practices](#) if a patient is suspected of having COVID-19. They should also notify infection control personnel at their healthcare facility and their state or local health department if a patient is classified as a PUI for COVID-19.
- State health departments that have identified a PUI or a laboratory-confirmed case should complete a [PUI and Case Report form](#) through the processes identified on CDC's Coronavirus Disease 2019 website.
- State and local health departments can contact CDC's Emergency Operations Center (EOC) at 770-488-7100 for assistance with obtaining, storing, and shipping appropriate specimens to CDC for testing, including after hours or on weekends or holidays.
- Testing for other respiratory pathogens should not delay specimen testing for COVID-19.

- For initial diagnostic testing for SARS-CoV-2, CDC recommends collecting and testing an upper respiratory specimen. The following are acceptable specimens:
 - A nasopharyngeal (NP) specimen collected by a healthcare professional; or
 - An oropharyngeal (OP) specimen collected by a healthcare professional; or
 - A nasal mid-turbinate swab collected by a healthcare professional or by a supervised onsite self-collection (using a flocked tapered swab); or
 - An anterior nares (nasal swab) specimen collected by a healthcare professional or by onsite or home self-collection (using a flocked or spun polyester swab); or
 - Nasopharyngeal wash/aspirate or nasal wash/aspirate (NW) specimen collected by a healthcare professional.
- For patients who develop a productive cough, sputum should be collected and tested for SARS-CoV-2. The induction of sputum is not recommended.
- For patients for whom it is clinically indicated (e.g., those receiving invasive mechanical ventilation), a lower respiratory tract aspirate or bronchoalveolar lavage sample **could** be collected and tested as a lower respiratory tract specimen.
- Specimens should be collected as soon as possible once a PUI is identified, regardless of the time of symptom onset. See [Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons for COVID-19](#) and [Biosafety FAQs](#) for handling and processing specimens from suspected cases and PUIs.
- Clinical specimens should be collected for routine testing of respiratory pathogens at either clinical or public health labs.
 - Clinical laboratories should NOT attempt viral isolation from specimens collected. Viral isolation from specimens should only be performed in a BSL-3 laboratory.
- Maintain proper infection control when collecting specimens.
- [Additional guidance](#) for collection, handling, and testing of clinical specimens is available on CDC's website.
- Detailed information on specimen types and shipping can be found on [CDC's Information for Laboratories](#) web page.
- On May 4, CDC updated its [guidance to assist health departments, medical examiners, and coroners establish a diagnosis of COVID-19 from tissue samples collected at autopsy](#). This latest guidance includes information on—
 - When CDC's COVID-19 testing on fixed autopsy tissue specimens can be helpful to establish a postmortem diagnosis.
 - How to best collect fixed autopsy tissue specimens for COVID-19 testing.
 - Timing for collecting postmortem swabs for COVID-19 testing.
- COVID-19 testing is recommended for [newborns born to mothers with confirmed or suspected COVID-19](#), regardless of whether the newborn has signs of infection.

COMMUNITY BASED INTERVENTIONS (AKA COMMUNITY MITIGATION)

- Protect yourself and your community from getting and spreading respiratory illnesses like coronavirus disease 2019. Everyone has a role to play in getting ready and staying healthy.
- Currently a vaccine is not available for COVID-19. Until a vaccine is developed, community-based interventions, such as temporary school dismissals, postponing or cancelling large events, social distancing (i.e., limiting face-to-face contact) can help slow the spread of coronavirus.
- Your local public health department and community partners have been preparing for disease outbreaks, like COVID-19 and have plans in place. Now is a good time for businesses, community and faith-based organizations, and health-care systems to reexamine their preparedness plans to make sure they are ready.
- Strong community partnerships between local public health departments, the healthcare sector, faith-based

organizations, and other community partners are vital for this response, and will be necessary to prepare for and coordinate if an outbreak occurs in their local communities.

- Community-based interventions can be grouped in three categories:
 - Personal protective measures (e.g., voluntary home isolation of ill persons, voluntary home quarantine of exposed household members, respiratory and cough etiquette, using cloth face coverings in community settings, practicing hand hygiene)
 - Community measures aimed at increasing social distancing (e.g., temporary school dismissals, social distancing in workplaces (like working remotely), postponing or cancelling mass gatherings)
 - Environmental measures (e.g., routine cleaning of frequently touched objects or surfaces)

HOUSEHOLD/PERSONAL PROTECTIVE MEASURES

- Everyone can do their part to help prepare for, prevent, and respond to this emerging public health threat.
- CDC recommends that individuals/households create an emergency plan of action, practice good personal health habits and plan for home-based care (if needed).
- During an outbreak in your community, limit face-to-face contact with others.

COMMUNITY MEASURES

MASS GATHERINGS

- Mass gatherings and events, such as concerts, festivals, conferences, worship services, and sporting events, increase the chance of a virus, like COVID-19, to spread and infect people crowded together within a close proximity.

COMMUNITY AND FAITH-BASED ORGANIZATIONS

- Local leaders and community organizers play a vital role to bring the community together to help plan for and reduce the impact of a potential COVID-19 outbreak. Since you know your community members the best, you can ensure groups most vulnerable to COVID-19 are considered and included in the planning process.
- CDC recommends finding out if your local government has a private-public emergency planning group that meets regularly that you can join. If not, suggest one that should be set up. Building strong alliances before an outbreak can help provide your organization with the support and resources needed.
- CDC has created [interim guidance](#) to help you create an emergency plan for your community and faith-based organization.

U.S. CHILDCARE PROGRAMS, K-12 SCHOOLS, AND INSTITUTIONS OF HIGHER EDUCATION

- Schools should plan for and prepare for a potential community-level outbreak of COVID-19. Fortunately, many of the steps to plan and prepare for COVID-19 are the same steps schools take to keep students healthy and safe from the flu.
- CDC recommends working with local and state health officials to determine if, when, and for how long schools may need to be dismissed in the event of an outbreak.
- School administrators should plan to provide critical support services, such as continuity of education and continuity of school meal programs, while schools are dismissed.
- CDC has posted [guidance for childcare and K-12 school settings](#) on its website.
- CDC has posted [supplemental guidance for childcare programs](#) on its website.
- CDC has posted recommendations of [considerations for school dismissals](#).

- CDC has posted [guidance for institutions of higher education](#) (IHE) on its website.
 - This guidance includes considerations about addressing campus housing. [Guidance for IHE with students participating in international travel or study abroad programs](#) is also available.

HOMELESS SHELTERS

- People experiencing homelessness may be at risk for infection during an outbreak of COVID-19.
 - Some people who are experiencing unsheltered homelessness may be at higher risk of moderate to severe disease because of age or serious underlying health conditions.
 - CDC has created [interim guidance for homeless shelters](#) that address planning for and responding to COVID-19 in these settings.
 - CDC has also posted [Interim Guidance for Responding to COVID-19 among People Experiencing Unsheltered Homelessness](#).

PARKS AND RECREATIONAL FACILITIES

- Information for Park Visitors:
 - Staying [physically active](#) is one of the best ways to keep your [mind](#) and body healthy.
 - In many areas, people can visit parks, trails, and open spaces as a way to relieve stress, get some fresh air and vitamin D, stay active, and connect safely with others.
 - While these facilities and areas can offer health benefits, it is important that you [follow the steps](#) to protect yourself and others from COVID-19.
- Information for Park Administrators:
 - Parks, trails, and open spaces can provide opportunities for physical activity and respite, contributing to health and wellness.
 - Individuals are encouraged to use parks, trails, and open spaces safely while following current guidance to [prevent the spread of COVID-19](#).
 - CDC offers [guidance](#) for the use and administration of local, state, and national parks.

LAW ENFORCEMENT

- CDC has developed [recommendations for law enforcement](#) to protect themselves from exposure.
 - Law enforcement who must make contact with individuals confirmed or suspected to have COVID-19 should follow [CDC's Interim Guidance for EMS](#).
 - Have a trained Emergency Medical Service/ Emergency Medical Technician (EMS/EMT) assess and transport anyone you think might have COVID-19 to a healthcare facility.
 - Ensure only trained personnel wearing appropriate personal protective equipment (PPE) have contact with individuals who have or may have COVID-19.
- Different styles of PPE may be necessary to perform operational duties.
 - These alternative styles (i.e. coveralls) must provide protection that is at least as great as that provided by the minimum amount of PPE recommended.
- Learn your employer's plan for exposure control and participate in all-hands training on the use of PPE for respiratory protection, if available.
- If close contact occurs during apprehension:
 - Clean and disinfect duty belt and gear prior to reuse. Use a household cleaning spray or wipe, according to the product label.
 - Follow standard operating procedures for the containment and disposal of used PPE.

- Follow standard operating procedures for containing and laundering clothes. Avoid shaking the clothes.

INFORMATION FOR MEAT AND POULTRY PROCESSING

- CDC and the Occupational Safety and Health Administration (OSHA) developed [Interim Guidance for Meat and Poultry Processing Workers and Employers](#) to help these facilities decrease the [spread of COVID-19](#) and lower its impact on the workplace.
- Meat and poultry processing facilities are critical infrastructure, and health and safety practices for critical infrastructure workers should be implemented.
- These recommendations are discretionary and not required or mandated by CDC.
- Management should conduct worksite assessments to identify COVID-19 risks and prevention strategies and develop a COVID-19 infection control plan.
- Workers involved in meat and poultry processing are not exposed to the virus that causes COVID-19 through the meat products they handle. However, their work environments—processing lines and other areas in busy plants where they have close contact with coworkers and supervisors—may contribute substantially to their potential exposures.
- Meat and poultry processing employers should implement a combination of engineering controls, cleaning and disinfection, social distancing, work practice controls, administrative controls, and use of personal protective equipment.
- Basic worker infection prevention information and training, including training on social distancing and ways to reduce the spread of infection, should be provided for all workers in a language and at a literacy level that they understand.

COMMUNITY DECISION TOOLS FOR REOPENING

- CDC released six decision tools for settings including [camps](#), [schools](#), [childcare facilities](#), [restaurants and bars](#), [mass transit](#), and [workplaces](#) with employees at higher risk for severe COVID-19 illness.
- These decision tools can assist government, business, and community leaders in thinking through health considerations and making operational decisions during the COVID-19 pandemic.
- The decision tools include questions and considerations organizations should think through when deciding how to scale up their operations.
 - These resources do not supersede state, tribal, local, and territorial public health recommendations.
- The decision and strategy tools emphasize the importance of working with appropriate health officials and being flexible to the unique needs and circumstances within communities.
- These tools can be implemented at the state, tribal, local, and territorial levels. Every locale is different and individual jurisdictions have the authority and local awareness needed to protect their communities.
- These critical resources complement other guidance CDC has released to help communities plan for, respond to and recover from COVID-19.
- CDC will continue to update these resources and may release additional resources to help government, business, and community leaders as they implement, adapt, and adjust COVID-19 mitigation strategies in their communities.

CONSIDERATIONS AFTER RE-OPENING

- CDC has published health consideration documents to help [Institutes of Higher Education](#), [Restaurants and Bars](#), [Schools](#), [Youth and Summer Camps](#), and [Youth Sports](#) to operate as safely as possible during the COVID-19 pandemic.
- Considerations documents are concrete, actionable resources that focus on four categories of safeguards:

- promoting behaviors to reduce spread,
- maintaining healthy environments,
- maintaining healthy operations, and
- preparing for when someone gets sick.
- Combining multiple safeguards can reduce the spread of COVID-19.
 - Leveraging multiple layers of protections is a common, effective public health strategy.
 - Stacking best practices—with several layers of safeguards to reduce the spread of COVID-19 and lower the risk of another spike in cases and deaths—is necessary to manage this pandemic while re-engaging our economy.
- The considerations documents compliment [other CDC resources](#) that help inform decisions about resuming and gradually scaling up operations in community settings.

HAND HYGIENE IN COMMUNITY SETTINGS (ENVIRONMENTAL MEASURES)

- Handwashing is one of the best ways to protect yourself and your family from getting sick.
- Clean hands can stop germs from spreading from one person to another and throughout an entire community—from your home and workplace to childcare facilities.
- Wash your hands often with soap and water for at least 20 seconds, especially after blowing your nose, coughing, or sneezing; going to the bathroom; and before eating or preparing food.
- If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol.
- Always wash hands with soap and water if hands are visibly dirty.
- Follow these steps to make sure you wash your hands properly:
 1. Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
 2. Lather your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, and under your nails.
 3. Scrub your hands for at least 20 seconds. Need a timer? Hum the “Happy Birthday” song from beginning to end twice.
 4. Rinse your hands well under clean, running water.
 5. Dry your hands using a clean towel or air dry them.

INFORMATION FOR HEALTHCARE SETTINGS

INFECTION CONTROL FOR HEALTHCARE SETTINGS

- Protecting the nation’s healthcare workforce continues to be an urgent priority for CDC’s response to COVID-19. One important measure to protect healthcare personnel is to reduce their risk for exposure in the workplace.
 - Recognizing that COVID-19 can be spread by people who do not have symptoms (asymptomatic) or who eventually develop symptoms (pre-symptomatic) to other people, CDC is recommending **all U.S. healthcare facilities** put policies into place **requiring everyone entering the facility to practice source control**, regardless of symptoms. This includes **all healthcare personnel, patients, and visitors**.
 - Cloth face coverings are **not PPE** and it is not known whether or to what extent cloth face coverings protect the wearer.
- **Healthcare personnel (HCP)** should wear a facemask at all times while they are in a healthcare facility.
 - When available, facemasks are generally preferred over cloth face coverings for HCP as facemasks offer both source control and protection for the wearer against exposure to splashes and sprays of infectious material from others.

- If there are anticipated shortages of facemasks, facemasks should be prioritized for HCP and then for patients with symptoms of COVID-19, as supply allows.
- Cloth face coverings **should NOT be worn instead of a respirator or facemask** if more than source control is required.
- Some HCP whose job duties do not require PPE (e.g., clerical personnel) can wear their cloth face coverings for source control throughout the time they are in the healthcare facility.
- HCP providing direct patient care, such as doctors or nurses, can wear their cloth face coverings for part of the day when not engaged in direct patient care activities, but **switch to respirators or facemasks when PPE is required for patient care.**
- HCP should consider continuing to wear their respirators or facemasks ([extended use](#)) instead of intermittently switching back to their cloth face coverings, which could cause self-contamination.
- HCP should remove their respirators or facemasks and put on their cloth face coverings when leaving the facility at the end of their shift.
- **Visitors and patients** should, ideally, be wearing their own cloth face coverings upon arrival to the facility per [CDC recommendations to the general public](#). If they are not, they should be offered a facemask or cloth face covering as supplies allow, and instructed to wear it while they are in the facility.
 - Facemasks should be reserved for HCP, unless supplies allow wider distribution.
- **Healthcare facilities** are responsible for protecting their HCP from exposure to pathogens, including by providing appropriate PPE and training for HCP. Healthcare facilities should:
 - Implement sick leave policies that are non-punitive, flexible, and consistent with public health guidance.
 - Actively screen everyone for fever and symptoms of COVID-19 before they enter the facility.
 - Provide job-specific training for HCP on PPE, including demonstrated competency with selection and proper use (e.g., putting on and removing without self-contamination).
 - Provide training about when, how, and where cloth face coverings can be used (e.g., frequency of laundering, guidance on when to replace, circumstances when they can be worn in the facility, importance of hand hygiene to prevent contamination).
- Healthcare facilities are increasingly unable to procure reliable and sufficient supplies for infection control, including N95 respirators.
- Protection of healthcare personnel is a priority. CDC's updated guidance on infection control aims to prioritize the use of N95 respirators and other respiratory protection devices for use during high-risk procedures while still protecting health care personnel with facemasks and eye protection during other routine patient care activities, in the setting of respirator shortages.
- The guidance also outlines multiple interventions that can be implemented to enhance protection of health care personnel
- CDC guidance updates the PPE healthcare personnel should use when caring for patients with known or suspected COVID-19:
 - Eye protection, gown, and gloves continue to be recommended.
 - While respirators remain preferred, facemasks are an acceptable alternative until the supply chain is restored.
 - Facemasks protect the wearer from splashes and sprays.
 - Respirators, which filter inspired air, offer respiratory protection.
 - Respirators should be prioritized for procedures that are likely to generate respiratory aerosols, which would pose the highest exposure risk to healthcare professionals.
- The risk of transmission can be reduced by several types of actions, like prompt screening and triage, limiting personnel in the room, hand hygiene, source control, and effective environmental cleaning.

- CDC reminds all employers and healthcare personnel about the hierarchy of controls.
 - PPE is only one aspect of patient and worker safety and involves a high level of worker involvement and is highly dependent on proper fit and correct use.
- All healthcare facilities should continuously review their infection control supply inventories and taking steps to optimize supplies.
 - This is particularly true for areas in facilities where aerosol-generating procedures are performed, so that appropriate PPE will be available for high-risk procedures now and as potential COVID-19 cases increase.
- Healthcare administrators should continue to do everything possible to acquire the needed supplies to protect their staff and patients.
- When the supply chain is restored, facilities with a respiratory protection program should return to use of respirators for patients with known or suspected COVID-19.
- The anticipated timeline for return to routine levels of PPE is not known.
 - CDC has posted information about [strategies to optimize the current supply of N95 respirators](#), including the use of devices that provide higher levels of respiratory protection (e.g., powered air purifying respirators [PAPRs]) when N95s are not available.
 - CDC has also posted a [companion checklist](#) to help healthcare facilities prioritize the implementation of the strategies is available.
- The majority of nursing homes and outpatient clinics, including hemodialysis facilities, do not typically procure N-95 respirators, currently have respiratory protection programs, nor fit-tested HCP. Therefore, they would not be able to implement all the recommended infection control interventions for care of COVID-19 patients.
 - Without respiratory protection programs and fit testing, unnecessary transfer of stable patients with known or suspected COVID-19 to another facility (e.g., acute care hospital) for evaluation and care may occur.
 - In areas with community transmission, acute-care facilities will be quickly overwhelmed by transfers of patients who have only mild illness and do not require hospitalization.
- Infection control procedures and appropriate use of PPE are necessary to prevent infections from spreading while caring for patients. CDC reminds all employers and HCP that PPE is only one aspect of safe care of patients with COVID-19.
 - Focusing only on PPE gives a false sense of security of safe care and worker safety.
 - It is critical to focus on other strategies to prevent spread of COVID-19 in healthcare settings. Examples include prompt screening and triage of patients and limiting the numbers of healthcare personnel entering the patient room.
- Healthcare personnel caring for patients with confirmed or suspected COVID-19 should adhere to CDC recommendations for [infection prevention and control \(IPC\)](#):
 - Assess and triage patients with acute respiratory symptoms and risk factors for COVID- 19 to minimize chances of exposure. Care for patients with known or suspected COVID- 19 in a single-person room with the door closed. Reserve Airborne Infection Isolation Rooms (AIIRs) for patients undergoing aerosol-generating procedures.
 - Use [Standard, Contact, and Airborne](#) Precautions, including eye protection, when caring for patients with confirmed or possible COVID-19.
 - Perform hand hygiene with alcohol-based hand sanitizer before and after all patient contact, before and after contact with potentially infectious materials, and before putting on and upon removal of PPE, including gloves. Use soap and water if hands are visibly soiled.
 - Practice how to properly [don, use, and doff PPE](#) in a manner to prevent self- contamination.
 - Perform aerosol-generating procedures (e.g., sputum induction, open suctioning of airways) in an AIIR, while following appropriate IPC practices, including use of appropriate PPE.

- The collection of respiratory specimens (e.g., nasopharyngeal swabs) are not considered aerosol generating procedures. These procedures should take place in an examination room with the door closed.
- Healthcare facilities can minimize the chance for exposures by ensuring facility policies and practices are in place and implemented before patient arrival, upon patient arrival, and throughout the duration of the affected patient's time in the healthcare setting.
- All healthcare facilities should ensure that their healthcare personnel are correctly trained and capable of implementing infection control procedures. Individual healthcare personnel should ensure they understand and can adhere to infection control requirements.
- Routine cleaning and disinfection procedures are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.
 - Products with [EPA-approved emerging viral pathogens claims](#) are recommended for use against SARS-CoV-2, the virus that causes COVID-19.
- Management of laundry, food service utensils, and medical waste should also be performed in accordance with routine procedures. Federal, state, and local guidelines and regulations specify the categories of medical waste that are subject to regulation and outline the requirements associated with treatment and disposal.
- CDC has released a [framework to support healthcare practices and systems as they provide clinical care for patients with conditions other than COVID-19](#).
 - Clinical services should be prioritized for patients most at risk if care is delayed. This includes high-risk populations such as people with serious underlying health conditions and people without access to telehealth.
 - Facilities should follow existing [CDC guidance](#) to reduce the risk of patient and healthcare provider exposure to COVID-19 during care.
 - Healthcare practices and systems should work with state and local public health officials as they make decisions about providing non-COVID-19 clinical care.
 - Public health departments can provide information to support decision making, including local COVID-19 transmission trends and region-specific recommendations.
 - Healthcare practices and systems should prioritize clinical services for patients most at risk if care is otherwise delayed.
 - Examples of this type of care include symptoms of stroke or heart attack, dental emergencies, treatment for a new cancer diagnosis, and well-child visits for newborns.
 - Even in areas with high local COVID-19 transmission, these types of care should not be delayed.
 - Many healthcare practices and systems will expand clinical services gradually.
 - As they consider their ability to expand services beyond urgent and emergent care services to include routine visits and elective procedures, facilities and providers will need to ensure they have adequate staffing, bed capacity, and personal protective equipment and supplies.
 - Healthcare practices and systems should provide clinical services in the safest way possible for both patients and healthcare workers by optimizing telehealth services, when available and appropriate, and following recommended infection control practices.

DENTAL SETTINGS

- **As the COVID-19 pandemic evolves, dental settings are preparing their practices to deliver non-emergency dental care.**
- **CDC has updated its [guidance for dental settings](#) to include recommendations for resuming non-emergency dental care.**
- **Dental settings should balance the need to provide necessary services while minimizing risk to patients and**

dental health care personnel (DHCP).

- DHCP should wear a surgical mask or cloth face covering at all times while they are in the dental setting.
 - DHCP should continue to practice universal source control and actively screen for fever and symptoms of COVID-19 for everyone entering the dental facility.
 - For patients who arrive at the facility with suspected or confirmed COVID-19, dental treatment should be deferred unless medically necessary.
 - For patients who do not exhibit COVID-19 symptoms, treatment may be provided only after assessing and considering the risks to the patient and DHCP.
- DHCP should regularly consult their state dental boards and state and local health departments as they make decisions about providing non-emergency dental care in their practice.
 - In communities experiencing no transmission or minimal community transmission of COVID 19, dental settings can provide non-emergency dental care to patients without suspected or confirmed COVID-19 using CDC's [Standard Precautions](#).
 - Given that transmission patterns can change and patients may be able to spread the virus without showing symptoms, it is recommended that DHCP practice according to [CDC's Interim Infection Prevention and Control Guidance for Dental Settings](#) whenever feasible.
 - In communities experiencing minimal to moderate or substantial COVID-19 transmission, dental settings should provide dental care to patients without suspected or confirmed COVID-19 using special considerations to protect DHCP and patients as described in [CDC's Interim Infection Prevention and Control Guidance for Dental Settings](#).
- If PPE and supplies are limited, dental healthcare practices should prioritize dental services for patients most at risk if care is delayed.
 - CDC has developed a [series of strategies to optimize supplies of PPE](#) in healthcare settings when there is limited supply, and a [burn rate calculator](#) that provides information for healthcare facilities to plan and optimize the use of PPE for response to the COVID-19 pandemic.

LONG-TERM CARE FACILITIES

- Nursing home populations are vulnerable to COVID-19.
- Ill visitors, healthcare personnel, and other facility staff are the most likely source of introduction of COVID-19 into nursing homes.
- In order to protect residents and nursing home staff, facilities need to take aggressive measures to limit COVID-19 exposure and prevent spread.
- The general strategies CDC recommends to prevent the spread of COVID-19 in long-term care facilities (LTCF) are the same strategies these facilities use every day to detect and prevent the spread of other respiratory viruses like influenza.
- CDC has issued [recommendations every LTCF can follow](#) to—
 - Keep COVID-19 from entering their facility
 - Identify infections in residents and staff early
 - Prevent the spread of COVID-19 in their facility
 - Assess and optimize supply of personal protective equipment (PPE)
 - Identify and manage severe illness
- LTCFs should screen of residents and healthcare personnel for fever and respiratory symptoms. This will help facilities react quickly to contain spread of COVID-19 and ensure residents receive appropriate care when sick.
- As part of source control efforts, HCP should wear a facemask or cloth face covering at all times while they are in the healthcare facility.

- CDC has updated its [guidance](#) to help nursing homes add testing to other infection prevention and control practices to keep COVID-19 out, detect cases quickly, and stop transmission. When used together, nursing homes have a more robust strategy to protect residents and staff.
 - Testing is just one part of a comprehensive infection prevention and control program and should be implemented in addition to existing infection prevention and control interventions.
 - CDC recommends that nursing homes that have identified a new confirmed COVID-19 case consider performing facility-wide testing among nursing home residents and staff.
- CDC's National Healthcare Safety Network (NHSN) provides nursing homes with a customized system to track infections and prevention measures in a systematic way.
 - NHSN is the nation's most widely used healthcare-associated infection tracking system.
 - NHSN identifies problem areas, measures progress of prevention efforts, and ultimately can help to eliminate healthcare-associated infections.
 - Facilities, states, regions, and the nation can use NHSN data to know when action is needed to stop healthcare-associated infections.
 - [The Centers for Medicare and Medicaid Services](#) (CMS) now requires nursing homes to report COVID cases through NHSN's new [COVID-19 module](#). Nursing homes should report cases, facility staffing, and supply information.
- Nursing homes may need to continue to restrict all visitors, including residents' family and friends, **except in end of life situations**.
 - This restriction may be difficult for residents and their families, but this is an important temporary measure to protect residents.
 - Facilities should work to implement alternative solutions, including the use of web-based services like video chat. Regular communication with residents and their families is an important factor in the well-being of the residents.
- CMS recently issued [Nursing Home Reopening Guidance](#) that outlines criteria to help determine when nursing homes may be able to relax restrictions on visitation and group activities.
 - Nursing homes should consider the current situation in their facility and the [community](#), and refer to guidance and direction from local and state officials, when making decisions about relaxing restrictions.
 - Nursing homes that begin to relax restrictions must remain vigilant for COVID-19 among residents and healthcare personnel to prevent spread and protect against severe infections, hospitalizations, and death.
- **As the COVID-19 pandemic evolves, CDC has updated its [guidance for assisted living facilities \(ALFs\)](#) to help them prevent spread of COVID-19 as they begin to relax restrictions on visitors and group activities.**
 - **Assisted living facilities should refer to state and local officials for guidance on making decisions about relaxing restrictions (e.g., easing visitor restrictions, allowing group activities and communal dining).**
 - **State licensing authorities overseeing assisted living facilities should share CDC's updated guidance with all such facilities in their jurisdiction. [State healthcare-associated infections programs](#) are can help assisted living facilities respond to COVID-19 and implement recommended practices.**
 - **CDC recommends source control measures for anyone in public, including when in a setting like an assisted living facility.**
 - **Personnel and visitors should always wear a facemask or cloth face covering while in the facility. Residents should be encouraged to wear a cloth face covering whenever they are around others inside or outside of the facility.**
 - **Cloth face coverings are not considered PPE and should not be worn by personnel instead of a respirator or facemask if more than source control is required.**

- Assisted living facilities should encourage personnel and residents to practice social distancing.
- Facilities should provide access to appropriate supplies so personnel can follow CDC's recommended infection prevention and control practices.
- When relaxing restrictions, assisted living facilities should continue to monitor for COVID-19 among residents and personnel in order to prevent spread and protect residents and personnel.
 - Assisted living facilities should promptly notify the health department about residents or personnel with suspected or confirmed COVID-19 to help ensure all recommended infection prevention and control measures are in place.
 - Residents and personnel with suspected COVID-19 should be prioritized for testing.
- Assisted living facilities should encourage residents to limit outside visitors, even as restrictions being to relax.
 - Alternative visitation methods should be facilitated to protect the residents and personnel who may be more vulnerable to severe illness from COVID-19.
 - CDC recommends Assisted living facilities actively screen all visitors and personnel for fever and symptoms of COVID-19 before entering the facility.
 - Anyone exhibiting a fever or symptoms of COVID-19 should be sent home.

DIALYSIS SETTINGS

- Dialysis is a lifesaving therapy and patients cannot postpone treatments.
- Hemodialysis patients are at higher risk of severe illness from COVID-19 due to end-stage renal disease (ESRD) and other underlying medical conditions.
- Dialysis facilities should follow [CDC guidance](#) to protect vulnerable patients and facility staff from respiratory infections, including COVID-19.
- CDC released a suite of [outpatient hemodialysis infection prevention materials](#) to support the implementation of COVID-19 prevention strategies so that dialysis patients can continue to receive the care they need.
- COVID-19 is being reported in communities across the United States. Dialysis facilities should ensure they are implementing infection prevention and control measures.
 - Patient-specific and facility-wide measures should be implemented immediately, regardless of whether COVID-19 cases are suspected or confirmed in the facility.
- All outpatient dialysis facilities should ensure their staff are trained, equipped, and capable of practices needed to—
 - Prevent the spread of respiratory infections, including COVID-19, within the dialysis facility.
 - Promptly identify and isolate patients with suspected COVID-19 and inform the correct dialysis facility staff and public health authorities.
 - Provide dialysis for patients with suspected or confirmed COVID-19 as part of routine operations.
 - Prepare to provide dialysis for an increasing number of COVID-19 patients in the context of an escalating outbreak.
 - Monitor and manage any healthcare personnel that might be exposed to COVID-19.
 - Assess and optimize supply of personal protective equipment (PPE).
- It is essential to identify patients with signs or symptoms of COVID-19 *before* they enter the facility. A multi-step screening process to assure patients do not enter the treatment area without being screened is critical.
 - [CDC guidance](#) provides strategies for dialysis facilities to prepare for patient arrival, to screen and place patients appropriately, and to properly clean and disinfect the facility following treatment.

- Because an infected person can spread the virus that causes COVID-19 before showing symptoms or without ever showing symptoms, everyone entering the dialysis facility including healthcare personnel, patients, and visitors should be wearing a cloth face covering or facemask for source control regardless of their symptoms.
 - Cloth face coverings are not considered PPE.
 - Facemasks, if available, should be reserved for healthcare personnel.
 - If a visitor or a patient arrives without a face covering, provide them with one.
- Facilities should consider cohorting patients with suspected or confirmed COVID-19 in the same section of the unit, same shift of the day, or even designating facilities for COVID-19 patients.

PHARMACY SETTINGS

- During the COVID-19 pandemic, pharmacy staff can [minimize their risk of exposure](#) while continuing to play an important role in providing healthcare services.
- All pharmacies can implement the strategies to keep staff and customers healthy.
 - Require everyone entering the pharmacy to wear a cloth face covering, regardless of symptoms.
 - Ensure pharmacists and pharmacy technicians always wear a facemask while they are in the pharmacy for source control.
 - Advise pharmacy staff who have fever or symptoms consistent with COVID-19 to stay home while sick. Ensure flexible, non-punitive sick leave policies.
 - Ask prescribers to submit prescription orders to pharmacies via telephone or electronically.
 - Encourage customers to pick up orders by drive-through windows, curbside pick-up, or home delivery.
 - Ask sick customers to stay home and request home delivery of medications.
 - Limit physical contact with customers and their items.
 - Promote the use of self-serve checkout registers and clean them frequently.
 - Use telehealth or tele-pharmacy strategies to provide chronic disease management services, medication management services, and other non-product, patient-oriented services.
 - Take steps in the pharmacy to limit possible exposure of pharmacy staff and customers, such as
 - Limiting the number of customers in the pharmacy area at any given time,
 - Using signage to encourage social distancing,
 - Removing shared items like magazines,
 - Closing self-serve blood pressure monitors, and
 - Frequently cleaning and disinfecting all customer service counters and customer contact areas.
 - Create separation between sick people who are seeking care at co-located retail clinics and other customers.
 - Postpone and reschedule some routine clinical preventive services, such as adult immunizations, which require face to face encounters.
- Pharmacies that are participating in public health testing for COVID-19 and other close-contact patient care procedures should—
 - Communicate with local and state public health staff to—
 - determine which persons meet the criteria for COVID-19 testing
 - clarify procedures for the collection, storage, and shipment of COVID-19 specimens
 - Follow all relevant [infection control guidance for healthcare professionals](#).
 - Be provided with appropriate PPE and training on its proper use.

WHAT CDC IS DOING TO PROTECT HEALTHCARE PERSONNEL

- Protecting healthcare personnel is a CDC priority and continues to be an urgent focus of the nation's public health response to COVID-19. Additionally, employers have a responsibility to protect HCP to the greatest extent possible.
- CDC is preparing first responders, healthcare providers, and health systems, by:
 - Establishing visibility across healthcare systems to understand healthcare use, particularly surges in demand for medical care and associated resources.
 - Conducting extensive outreach to clinical and hospital professional organizations to ensure health system preparedness.
 - Producing guidance documents on infection control, hospital clinical evaluation and patient management.
 - Working closely with healthcare facilities and providers to reinforce infection control principles that recognize PPE is one component of a larger set of practices that help to limit the spread of disease.
 - Developing a range of respirator conservation strategies, including strategies to make supplies last longer (such as using alternative products like reusable respirators) and extending the use of disposable respirators.
 - Leveraging existing telehealth tools to direct people to the right level of care.
 - Working with supply chain partners to understand supply usage, what products are available, and when more aggressive measures may need to be taken to ensure that HCPs at highest risk have access to PPE.
 - Sharing information with stakeholders to help them recognize when to shift the strategies they are using.
- Healthcare personnel (HCP) often have prolonged close contact with patients in healthcare settings and may come in contact with a person infected with COVID-19. HCPs can protect themselves by properly following recommended infection control practices, including the appropriate use of PPE when caring for patients with COVID-19.
- CDC recommends evaluating asymptomatic HCPs with close contact or a potential exposure to COVID-19 by assessing risk, monitoring symptoms, and determining the need for appropriate work restrictions.
- CDC has been responding aggressively to advise healthcare personnel and keep them safe as this crisis continuously evolves.
 - CDC is regularly developing and updating guidance, resources, and practical tools to prevent COVID-19 cases among healthcare personnel across various settings as we learn more about the virus and how it spreads.
 - CDC has released strategies to help healthcare facilities and personnel make the best use of available personal protective equipment (PPE) as we learn about lack of supplies and strain on the U.S. healthcare system due to COVID-19.
 - CDC is recommending strategies to reduce risk for healthcare personnel and everyone by promoting universal use of facemasks in healthcare settings for source control and identifying ways to safely reuse limited supplies of PPE.
- Many CDC staff are also practicing doctors, nurses, and healthcare personnel, and we stand with our colleagues on the front lines of this pandemic.

OPTIMIZING THE SUPPLY OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

- The outbreak of COVID-19 has led to a disruption in the global supply chain of PPE, particularly of N95 respirators.
- CDC recognizes that healthcare facilities may experience temporary shortages even if they do not care for patients with COVID-19.
- The COVID-19 pandemic is unprecedented and has directly impacted supply chains for tools needed by healthcare systems.

- In response, CDC released [PPE optimization strategies](#) for eye protection, isolation gowns, facemasks, and N95 respirators.
- PPE is needed not only to protect healthcare personnel against COVID-19, but also for personnel caring for patients with other serious infections like active TB and measles.
- Employers have a responsibility to protect patients and healthcare personnel to the greatest extent possible.
 - When PPE is available, it needs to be made available to healthcare personnel under the facility's optimization plan.
- CDC released strategies to help healthcare facilities and providers conserve PPE as we start to see strain on the U.S. healthcare system due to COVID-19. These strategies include considerations like what PPE to use, when to use it, and for how long.
 - CDC uses three categories (conventional, contingency, and crisis capacities) to describe the levels of PPE a facility has available.
 - Healthcare providers and facilities should use the contingency and crisis strategies according to whether they have expected or current PPE shortages.
 - These strategies provide options for how to provide care and protect healthcare personnel when best practices for infection control cannot be met due to national supply disruptions.
 - The crisis strategies include homemade facemasks as a last-resort strategy.
 - These should *only* be an option when there are absolutely no respirators or facemasks left and should be used with other protective equipment (i.e., face shields).
 - If there are no respirators or facemasks left, and as a last resort, using a homemade facemask may be preferable to not covering one's nose and mouth when providing COVID-19 patient care.
- These strategies also emphasize the need to postpone non-urgent medical visits and procedures in order to reduce the overall burden on the healthcare system. This will reduce PPE use (also called "burn") and help prevent spread of COVID-19.
- ***It is essential that all healthcare systems act now*** to stretch their PPE supply so that critical procedures can still be performed.
 - Even facilities that do not yet have supply shortages should be practicing optimization strategies that will help prepare them for anticipated supply limitations.
- These strategies do not adhere to the typical standards of care that we are accustomed to in the United States.
 - These strategies reflect the hard realities on the ground and the best possible approaches for many healthcare providers right now.
 - These strategies also mean healthcare professionals may have to make hard decisions about how to allocate the resources they have.
 - CDC will continue to revise these strategies as the situation changes.
- PPE is not the only way to keep healthcare providers safe. As PPE supplies diminish, leaning on other strategies becomes increasingly important.
 - Implement practical [engineering and administrative control measures](#) in the continuum of care (e.g., restricting personnel not involved in direct patient care from entry into the patient's room).
 - Optimize the use of telemedicine.
 - Emphasize hygiene—keeping hands clean can stop the spread of germs between people.
- CDC has provided additional resources related to these strategies:
 - [Checklist for Healthcare Facilities: Strategies for Optimizing the Supply of N95 Respirators during the COVID-19 Response](#) is intended to help healthcare facilities prioritize the implementation of the strategies presented in the [Strategies for Optimizing the Supply for N95 Respirators](#) guidance.
 - [Release of Stockpiled N95 Filtering Facepiece Respirators Beyond the Manufacturer- Designated Shelf](#)

Life: Considerations for the COVID-19 Response

- In times of increased demand and decreased supply, consideration can be made to use the N95s listed in the guidance past their manufacturer-designated shelf life when responding to COVID-19.
- This preliminary information from the NIOSH study suggests certain N95 models beyond their manufacturer-designated shelf life will be protective. CDC recommends that N95s that have exceeded their manufacturer-designated shelf life should be used only as outlined in the [Strategies for Optimizing the Supply of N95 Respirators](#).
- [Personal Protective Equipment \(PPE\) Burn Rate Calculator](#)
 - CDC designed the tool to help healthcare and non-healthcare systems, such as correctional facilities, track how quickly PPE will be used at those facilities.
 - The tool is based on data provided by healthcare systems on use of PPE during responses to infectious disease outbreaks.
 - Healthcare and non-healthcare systems can use the tool to enter the type of PPE they are using, such as gowns, gloves, surgical masks, respirators, and face shields.
 - The spreadsheet is open-ended and can also be used to calculate the use of other types of PPE as well.
 - This tool calculates the average consumption rate, also referred to as a “burn rate.” Healthcare personnel or facilities can use this tool to track the number of full boxes of each component of PPE that they have in stock, such as gowns or respirators.
 - They can enter these numbers to estimate the remaining supply of PPE based on the average consumption rate.
- CDC released updated guidance on [Strategies to Optimize the Supply of PPE](#) that highlights some strategies—including extended use and reuse without decontamination—that facilities can use in the event of an acute shortage of supply.
 - Many hospitals across the country already have begun using these methods without fully considering the risk-benefit of the methods. This guidance helps provide increased clarity about the benefits and risks of each method.
 - CDC’s new guidance provides information on promising methods for decontamination and methods that are not recommended. The methods that show the most promise are vaporous hydrogen peroxide, ultraviolet germicidal irradiation, and moist heat.
 - Research shows some methods are **not** promising because they may change the filtering facepiece respirator’s (FFR) performance or function or because of the uncertainties around the carcinogenic properties of the respirator after decontamination. The methods that are **not** promising include:
 - Ethylene oxide
 - Autoclave
 - Dry heat
 - Isopropyl alcohol
 - Soap
 - Dry microwave irradiation
 - Bleach
 - Disinfectant wipes
 - At this time, CDC and NIOSH do not recommend that FFRs be decontaminated and then reused. This practice would be inconsistent with their approved use, but in times of

crisis, this option may need to be considered.

MITIGATING HEALTHCARE PERSONNEL STAFFING SHORTAGES

- As the COVID-19 pandemic progresses, healthcare facilities must plan for [potential staffing shortages](#).
- Healthcare facilities and employers should use contingency capacity strategies now to prepare for mitigating this problem.
- Contingency capacity strategies include:
 - Cancel all non-essential procedures and visits, and shift healthcare personnel who work in these areas to support other patient care activities in the facility.
 - Adjust staff schedules, hire additional HCP, and rotate HCP to positions that support patient care activities.
 - Develop regional plans to identify designated healthcare facilities or alternate care sites with adequate staff to care for patients with COVID-19.
 - Healthcare personnel with suspected COVID-19 should be prioritized for testing, as testing results will impact when they may return to work and which patients they might be permitted to care for.
 - Develop plans and criteria for asymptomatic HCP who have had an unprotected exposure to COVID-19 to continue to work.
 - These HCP should still report temperature and absence of symptoms each day before starting work. These HCP should wear facemasks (for source control) while at work for 14 days after the exposure event.
 - If shortages persist despite implementing the strategies above, facilities should develop plans and criteria for allowing HCP with suspected or confirmed COVID-19 who are well enough to return to work, while taking precautions to reduce spread of virus.
- CDC has also provided crisis capacity strategies for healthcare facilities and employers to consider when staffing shortages do occur.

MANAGEMENT OF PATIENTS GUIDANCE FOR HEALTHCARE PROVIDERS

CLINICAL PRESENTATION

- Most frequently reported symptoms of COVID-19 include fever, cough, sore throat, myalgia, fatigue, or new loss of taste or smell. Less commonly reported symptoms include sputum production, headache, hemoptysis, and diarrhea. Older patients and people with chronic medical conditions may be at higher risk of severe illness.
 - Possible risk factors for progressing to severe illness may include, but are not limited to, older age and people of any age with underlying chronic medical conditions such as heart disease, lung disease and diabetes.
- [Signs of COVID-19 in newborns](#) may include fever, lethargy, runny nose, cough, fast breathing, difficulty breathing, vomiting, diarrhea, and difficulty feeding or reduced appetite.
- Illness among [pediatric cases](#) of COVID-19 appear to be mild, with most cases presenting with symptoms of upper respiratory infection such as fever, cough, nasal congestion, runny nose, and sore throat

CLINICAL COURSE

- Symptoms among reported cases of COVID-19 vary in severity from mild illness to severe or fatal illness.
- Some reports suggest the potential for clinical deterioration during the second week of illness.
- Among hospitalized patients with confirmed COVID-19, some will develop complications:

- Acute respiratory distress syndrome (ARDS)
- Intensive care for respiratory support
- Pneumonia resulting in death
- Secondary infection

DIAGNOSIS

- Reinfection is still unclear. More data about the possibility of reinfection with SARS-CoV-2 after recovery from COVID-19 is needed. Antibodies, associated with recovery, have been detected in most recovered patients.
- Co-infections have been reported. Detection of another respiratory pathogen does not (and should not) rule out COVID-19.
- The American College of Radiology also does not recommend CT for screening or as a first-line test for diagnosis of COVID-19.

LABORATORY AND RADIOGRAPHIC FINDINGS

- SARS-CoV-2 RNA has been detected from upper and lower respiratory tract specimens, and the virus has been isolated from bronchoalveolar lavage fluid.
- The duration of shedding of SARS-CoV-2 RNA in the upper and lower respiratory tracts is not yet known but may be several weeks or longer.

CLINICAL MANAGEMENT AND TREATMENT

- There are no U.S. Food and Drug Administration (FDA)-approved drugs specifically for the treatment of patients with COVID-19.
- At present, clinical management includes infection prevention and control measures and supportive care, including supplementary oxygen and mechanical ventilatory support when indicated.
- Some have hypothesized that certain medications may increase the risk of infection or worsen the severity of COVID-19, but there is currently no data to confirm this link. Experts have speculated that angiotensin-converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs), or non-steroidal anti-inflammatory drugs (NSAIDs, such as ibuprofen) may influence the infection.
- Patients with mild clinical presentation may not initially require hospitalization.
- The decision to monitor a patient in the inpatient or outpatient setting should be made on a case-by-case basis.
- The [World Health Organization](#) and the [Surviving Sepsis Campaign](#) have both released comprehensive guidelines for the inpatient and ICU management of patients with COVID-19, including those who are critically ill.
- [CDC has Clinical Care Guidance for Healthcare Professionals about Coronavirus \(COVID-19\), including information for pediatric healthcare providers and considerations for newborns.](#)

THERAPEUTIC OPTIONS FOR COVID-19 PATIENTS

- There are no drugs or other therapeutics currently approved by the U.S. Food and Drug Administration (FDA) to prevent or treat COVID-19.
- Current clinical management includes infection prevention and control measures and supportive care, including supplemental oxygen and mechanical ventilatory support when indicated.
- The National Institutes of Health have published [interim guidelines for the medical management of COVID-19](#) prepared by the COVID-19 Treatment Guidelines Panel.
 - These guidelines contain information about investigational therapeutics.

- These guidelines will be updated as new information emerges and drugs and other therapeutic interventions are approved for use by FDA.
- Persons seeking information about registered clinical trials for COVID-19 in the United States can search for such information at [ClinicalTrials.gov](https://clinicaltrials.gov).

INTERIM GUIDANCE FOR BUSINESSES AND EMPLOYERS (NON-HEALTHCARE)

- [Interim guidance for businesses and employers](#) to plan for and respond to COVID-19 is now available on CDC's website. This interim guidance may help prevent workplace exposures to acute respiratory illnesses, including COVID-19, in non-healthcare settings.
- Employers can use strategies now to prevent workplace exposures to acute respiratory illness:
 - Actively encouraging sick employees to stay home
 - Separating sick employees
 - Emphasizing staying home when sick, respiratory etiquette, and hand hygiene by all employees
 - Performing routine environmental cleaning
 - Advising employees before traveling to take certain steps
 - Checking the [CDC's Traveler's Health Notices](#) website for the latest guidance and recommendations for each country to which you will travel
- Some people, like healthcare workers caring for COVID-19 patients and other close contacts of COVID-19 patients, will have an increased risk of infection.
 - Employees who are well but who have a sick family member at home with COVID-19 should notify their supervisor and refer to CDC guidance for [how to conduct a risk assessment](#) of their potential exposure. [Recommendations released March 16](#) state that if someone in a household has tested positive, keep the entire household at home.
 - If an employee is confirmed to have COVID-19, employers should inform fellow employees of their possible exposure to COVID-19 in the workplace but maintain confidentiality as required by the Americans with Disabilities Act. Employees exposed to a co-worker with confirmed COVID-19 should refer to CDC guidance for [how to conduct a risk assessment](#) of their potential exposure.
- Employers should be ready to implement strategies to protect the workforce from COVID-19 while ensuring the continuity of operations.
 - An infectious disease outbreak response plan should include possible work-related exposures and health risks to employees. The plan should also explore flexible worksites (e.g., telecommuting) and work hours in accordance with human resource policies.
 - Determine how you will operate if absenteeism spikes from increases in sick employees, those who stay home to care for sick family members, and those who must stay home to watch their children dismissed from childcare programs and K-12 schools.