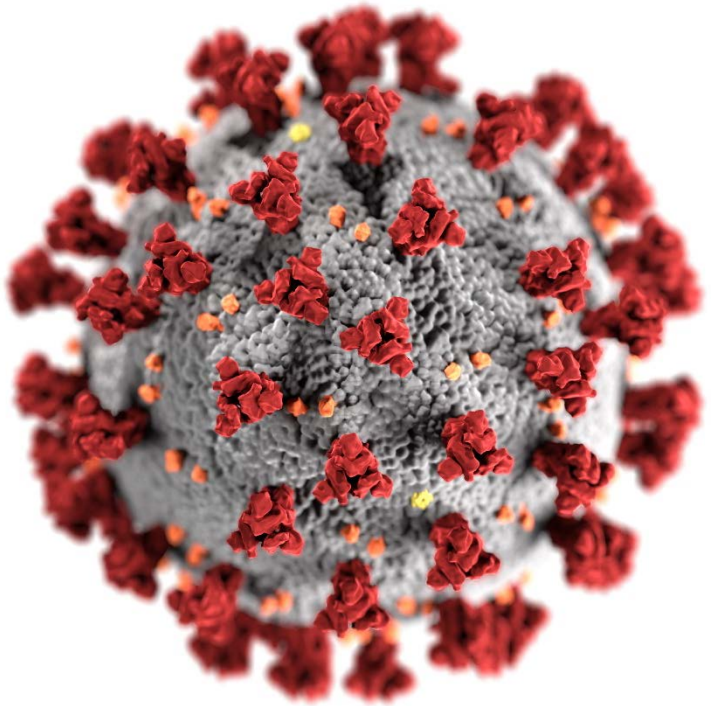
Preparing Outpatient Hemodialysis Facilities for COVID-19

April 13, 2020



For more information: **www.cdc.gov/COVID19**

Overview of Presentation

- Describe current epidemiology of COVID-19

- Review how outpatient hemodialysis facilities should prepare for patients with COVID-19

Coronavirus Disease 2019 (COVID-19)

COVID-19: Abbreviation for Coronavirus Disease 2019

“CO” stands for “corona”

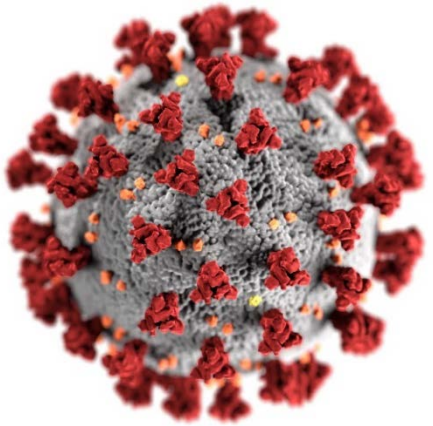
“VI” stands for “virus”

“D” stands for “disease”

“19” refers to “2019”

COVID-19

COVID-19: Emergence



- COVID-19 is a respiratory illness
- Caused by SARS-CoV-2, a type of virus called a ‘coronavirus’
  - Related to SARS-CoV and MERS-CoV
- This novel (new) coronavirus was first detected in China
- On January 31, 2020, Health and Human Services Secretary Alex M. Azar II declared a public health emergency for the United States

COVID-19: How It Spreads

- COVID-19 is a new disease and we are still learning how it spreads
- Person-to-person spread is thought to be the primary mode of transmission
  - Between people in close contact with one another (about 6 feet)
  - Through respiratory droplets when an infected person coughs, sneezes, or talks
  - Some recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms
- Contact with infected surfaces or objects
  - It may be possible to get COVID-19 by touching surfaces and then touching your mouth, nose, or eyes

COVID-19: Symptoms & Complications

Symptoms may include

- Fever
- New cough
- Sore throat
- Tiredness
- Muscle aches
- Shortness of breath

Estimated incubation period

- 2 to 14 days

Complications may include

- Pneumonia
- Acute Respiratory Distress Syndrome (ARDS)
- Multisystem organ failure

Wide range of illness severity has been reported

- Mild to severe illness
- Can result in death

Initial Symptoms might be mild and fever might be absent

COVID-19: Prevention

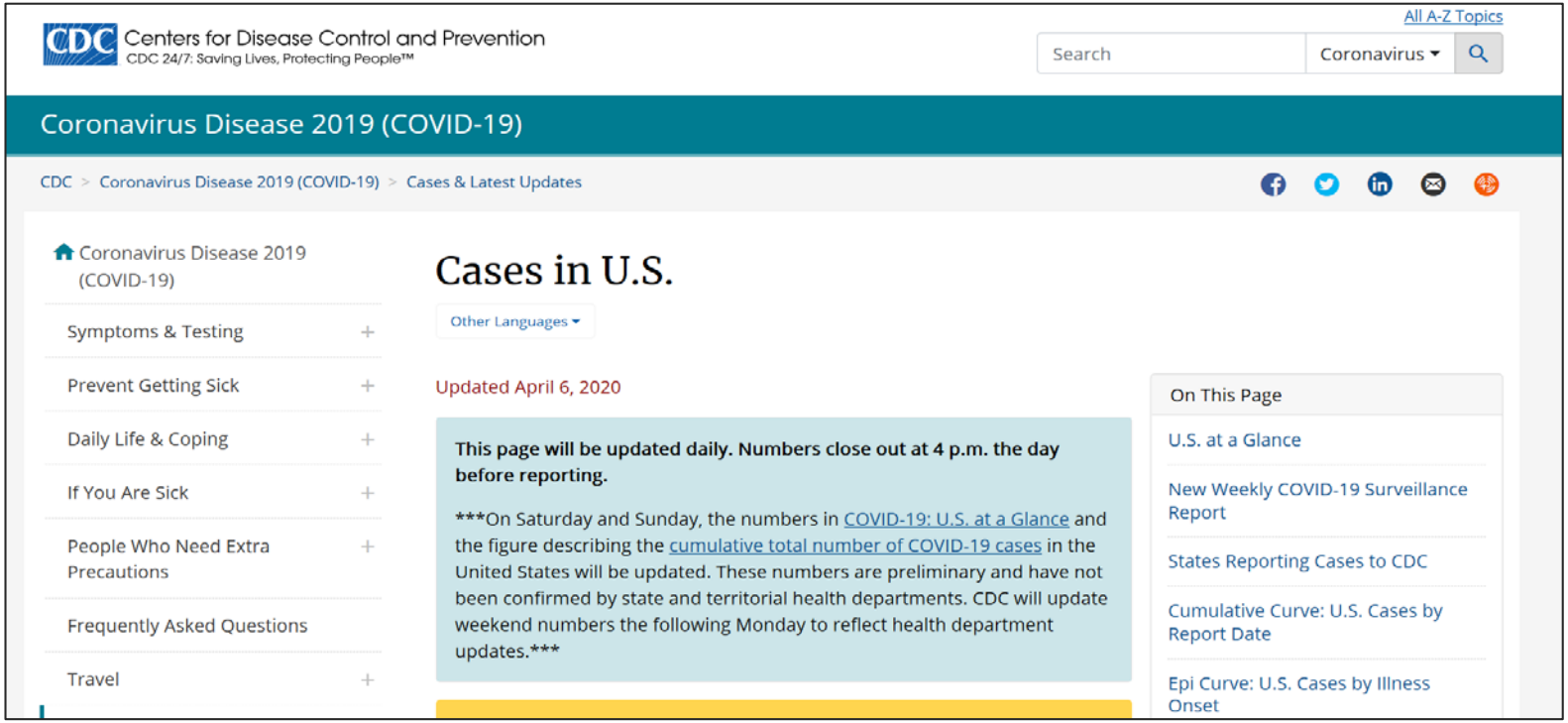
Everyday preventive actions for respiratory illnesses

- Cover your cough or sneeze with a tissue, then throw it away
- Cover your mouth and nose with a cloth face cover when around others
- Clean and disinfect frequently touched objects and surfaces
- Wash your hands often with soap and water for at least 20 seconds
  - Use an alcohol-based hand sanitizer with at least 60% ethanol or 70% isopropanol if soap and water are not readily available

COVID-19: Clinical Course and Management

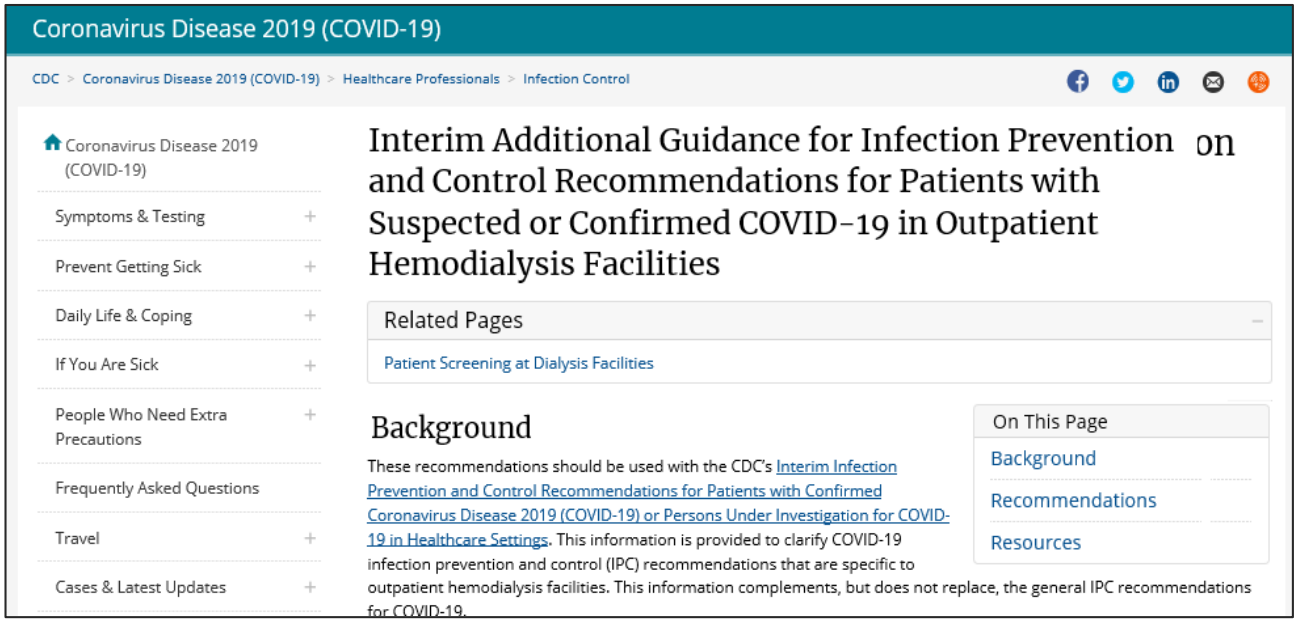
- Clinical presentation varies from asymptomatic to mild to severe or fatal illness
- Mortality rate likely varies by age.
  - Mortality rates among confirmed COVID-19 patients in one report (Chinese CDC. CCDC Weekly 2020; 8:113-122):
    - 0.2% for patients <40 years
    - 8% for patients 70 – 79 years
    - 14.8% for patients at least 80 years
- Clinical signs and symptoms may worsen with progression to lower respiratory tract disease in the second week of illness
- No specific treatment for COVID-19 is currently available
- Clinical management includes prompt infection prevention and control measures and supportive management of complications

COVID-19: Cases in the US on the CDC Website



Coronavirus Disease 2019 (COVID-19) Cases in the U.S.
(https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html)

COVID-19: Interim Guidance for Outpatient Dialysis Facilities on the CDC Website



Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities (https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/dialysis.html)

Preparing for COVID-19 in the Outpatient Hemodialysis Setting

COVID-19: Background

- These recommendations supplement the CDC's Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings. (https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html)

- This information is provided to clarify COVID-19 infection prevention and control (IPC) recommendations that are specific to outpatient hemodialysis facilities.

COVID-19: Educate Patients

- Provide information about COVID-19
- Describe actions the facility is taking to protect them
- Provide education about hand hygiene, respiratory hygiene, and cough etiquette
  - How to use cloth face coverings and facemasks
  - How to use tissues to cover nose and mouth when coughing or sneezing
  - Appropriate disposal of tissues and contaminated items in waste receptacles
  - How to perform hand hygiene

COVID-19: Educate Healthcare Personnel (HCP)

- Provide information about COVID-19
- Provide information on infection prevention and control measures and explain how they protect healthcare personnel (HCP) and patients with an emphasis on:
  - Hand hygiene
  - Everyone in the facility (including patients, visitors, and staff) should practice source control
  - Selection/use of personal protective equipment (PPE), including practicing how to put on, use, and take off PPE
    - Cloth face coverings are not considered PPE and should not be used by staff when a respirator or facemask is indicated
      - Facemasks, if available, should be reserved for staff

COVID-19: Managing Ill HCP and Monitoring for Symptoms

- Implement sick leave policies that are non-punitive and flexible
- Explain how HCP can serve as a source of infections in the facility
- Advise HCP not to report to work when ill
- If HCP develop fever or symptoms of COVID-19 (e.g., fever, cough, sore throat, tiredness, muscle aches, shortness of breath) while at work, they should return home
- Implement active screening (temp and symptoms) of HCP before their shift:
  - During times of community transmission
  - If patients with COVID-19 patients in facility

COVID-19: Ensure Access to PPE and Other Supplies

- Conduct an inventory of PPE
- Make PPE accessible, including:
  - Respirators (if available and facility has respiratory protection program)
  - Facemasks
  - Gowns
  - Gloves
  - Eye protection (face shield or goggles)
- Provide alcohol-based hand sanitizer with 60 – 95% alcohol and tissues in waiting and treatment areas

COVID-19: Prepare the Waiting Area

- Post alerts such as signs and posters at clinic entrances and in strategic places around the facility with instructions for patients with fever or symptoms of respiratory infection
- Waiting areas should be organized to divide patients with symptoms from patients without symptoms
  - Separate all patients by at least 6 feet (if possible)
  - The area for patients with symptoms should be at least 6 feet away from the area for patients without symptoms
- Provide tissues, alcohol-based hand sanitizer (ABHS), and trash cans
- Post signs about hand hygiene, respiratory hygiene, and cough etiquette

COVID-19: Plans for Triaging Patients

- Have a staff member call patients before their next treatment to ask them if they have any symptoms of COVID-19 (e.g., fever, new cough, sore throat, tiredness, or shortness of breath).
- Instruct patients to notify the facility before arriving if they have fever or symptoms of COVID-19
  - Consider using automated communications to remind patients about reporting symptoms (e.g., texts on their dialysis day or robocalls)
  - If they have symptoms, they should discuss them with a healthcare provider before arriving
    - Advanced notice gives the facility time to prepare for the patient's arrival or, if indicated based on symptoms, to refer them to a higher level of care

COVID-19: Plans for Triaging Patients

- Ask patients about fever or respiratory symptoms when they arrive at facility
- Place a staff member near all entrances (outdoors if weather and facility layout permit), or in the waiting room area, to ensure patients are screened for symptoms and fever before entering the treatment floor
- All patients should be wearing a cloth face covering or facemask on arrival at the facility regardless of their symptoms
  - If they do not have one on arrival, provide them with a face covering
- Bring symptomatic patients back to an appropriate treatment areas as soon as possible. If not possible, medically stable patients should:
  - Sit separated from other patients by at least 6 feet
  - Wait in a personal vehicle or outside the facility until it is their turn

COVID-19: Determine Appropriate Placement for Symptomatic Patients

- Patient may need to be transferred to another facility for the following reasons
  - Based on patient's clinical symptoms, a higher level of care may be required

    OR
  - In cases of suspected or confirmed COVID-19, if the facility is unable to comply with CDC's Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings.
  - If COVID-19 is suspected, the health department should also be notified.
- If transferring the patient to another facility, inform the receiving facility and transport personnel of the suspected diagnosis

COVID-19: Placement of Symptomatic Patients During Dialysis Treatment

- Facilities should maintain at least 6 feet of separation between patients with suspected or confirmed COVID-19 and other patients during dialysis treatment.
- Ideally, symptomatic patients would be dialyzed in a separate room (if available) with the door closed
- If a separate room is not available:
  - Perform treatment at a corner or end-of-row station, away from the main flow of traffic (if available)
  - The patient should be separated by at least 6 feet from the nearest patient (in all directions)
    - If the patient is unable to tolerate a mask, then they should be separated by at least 6 feet from the nearest patient station (in all directions)

COVID-19: Placement of Symptomatic Patients During Dialysis Treatment

- Hepatitis B isolation rooms should only be used for patients with symptoms of respiratory infection if:
  - The patient is hepatitis B surface antigen positive

    OR
  - The facility has no patients on the census with hepatitis B infection who would require treatment in the isolation room

COVID-19: Placement of Symptomatic Patients During Dialysis Treatment

- If a hemodialysis facility is dialyzing more than one patient with suspected or confirmed COVID-19, consideration should be given to cohorting these patients and the HCP caring for them together in the section of the unit and/or on the same shift
  - Consider the last shift of the day
- If the etiology of respiratory symptoms is known, patients with different etiologies should not be cohorted
  - For example, patients with confirmed influenza and COVID-19 should not be cohorted

COVID-19: Guidance on Personal Protective Equipment (PPE)

- HCP caring for patients with suspected or confirmed COVID-19 should use all of the following:
  - N-95 or higher-level respirator (or facemask if a respirator is not available)
    - A cloth face covering is NOT considered PPE and should not be worn by HCP when PPE is indicated
    - Respirators should be worn by fit-tested personnel in the context of a respiratory protection program
- Eye protection (e.g., goggles, a disposable face shield that covers the front and sides of the face).
- Gloves
- Isolation gown

COVID-19: Information About Isolation Gowns

- The isolation gown should be worn over or instead of the cover gown that is normally worn by hemodialysis personnel
- When gowns are removed, place the gown in a dedicated container for waste or linen before leaving the dialysis station
- Disposable gowns should be discarded after use
- Cloth gowns should be laundered after each use

COVID-19: Information About Eye Protection

- Eye protection
  - Goggles

    OR
  - Disposable face shield that covers the front and sides of the face

- Personal glasses and contact lenses are NOT considered adequate eye protection

COVID-19: When COVID-19 is Suspected or Confirmed

- Additional Measures:
  - Notify the health department about the patient
    - Know your local and state health department points of contacts:
    - Contact information for the healthcare-associated infections program in each state health department is available here: State-based HAI Prevention Activities (https://www.cdc.gov/hai/state-based/index.html)
  - Follow the Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings (https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html)
    - » Airborne Infection Isolation Rooms (AIIRs) are not required

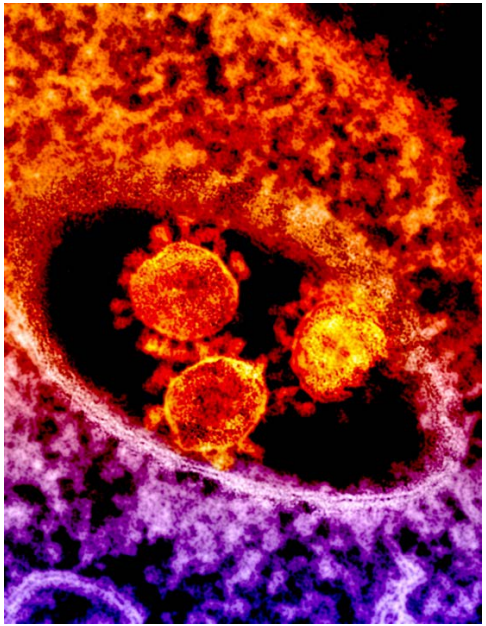
COVID-19: When COVID-19 is Suspected or Confirmed

- Routine cleaning and disinfection procedures are appropriate for COVID-19 in dialysis settings
  - Ensure HCP have access to EPA-registered, hospital-grade disinfectants
  - Refer to the EPA-website for List N: Disinfectants for Use Against SARS-CoV-2 (https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)
  - When using products from List N, facilities should ensure the products also have a bloodborne pathogen claim (hepatitis B, HIV)
- Any surfaces, supplies, or equipment located within 6 feet of symptomatic patients should be disinfected or discarded

Additional Considerations

Reporting PPE Shortages

- If your facility is concerned about a potential or imminent shortage of PPE, alert your state/local health department and local healthcare coalition, as they are best positioned to help facilities troubleshoot through shortages.
  - Link to identifying your state HAI coordinator: State-based HAI Prevention Activities (https://www.cdc.gov/hai/state-based/index.html)
  - Link to healthcare coalition/preparedness: HPP In Your State (https://www.phe.gov/Preparedness/planning/hpp/Pages/find-hc-coalition.aspx)

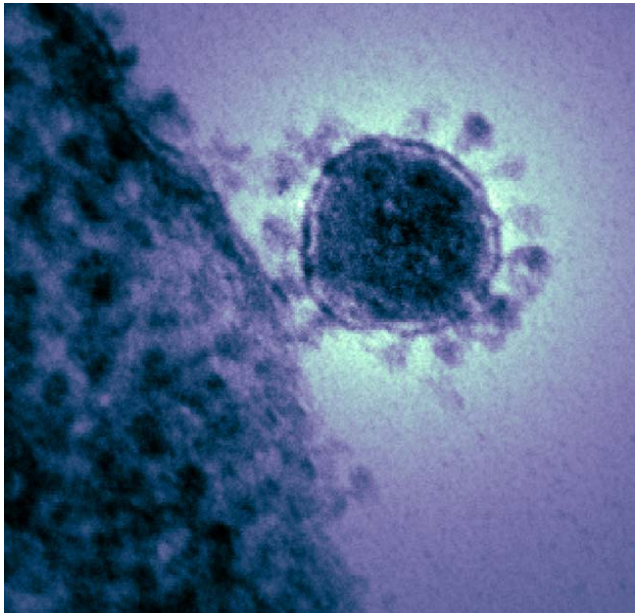


Strategies to Optimize the Supply of PPE and Equipment

- HCP and facilities—along with their healthcare coalitions, local and state health departments, and local and state partners—will have to work together to develop strategies that identify and extend PPE supplies, so that recommended PPE will be available when needed most
- All facilities should begin using PPE contingency strategies now
- Facilities experiencing PPE shortages may need to consider crisis capacity strategies, which must be carefully planned before implementation
- As PPE becomes available, healthcare facilities should promptly resume standard practices
- When using PPE optimization strategies, training on PPE use, including proper donning and doffing procedures, must be provided to HCP before they carry out patient care activities

Preserving PPE Supply in Times of Shortage

- Prioritize isolation gowns for aerosol generating procedures, care activities where splashes and sprays are anticipated, and high-contact patient care activities:
  - Initiating and terminating dialysis treatment, manipulating access needles or catheters, helping the patient into and out of the station, and cleaning and disinfection of patient care equipment and the dialysis station



Produced by the National Institute of Allergy and Infectious Diseases (NIAID), this highly magnified, digitally colorized transmission electron microscopic (TEM) image, reveals ultrastructural details exhibited by a single, spherical shaped, **Middle East respiratory syndrome coronavirus (MERS-CoV)** virion.

Preserving PPE Supply in Times of Shortage

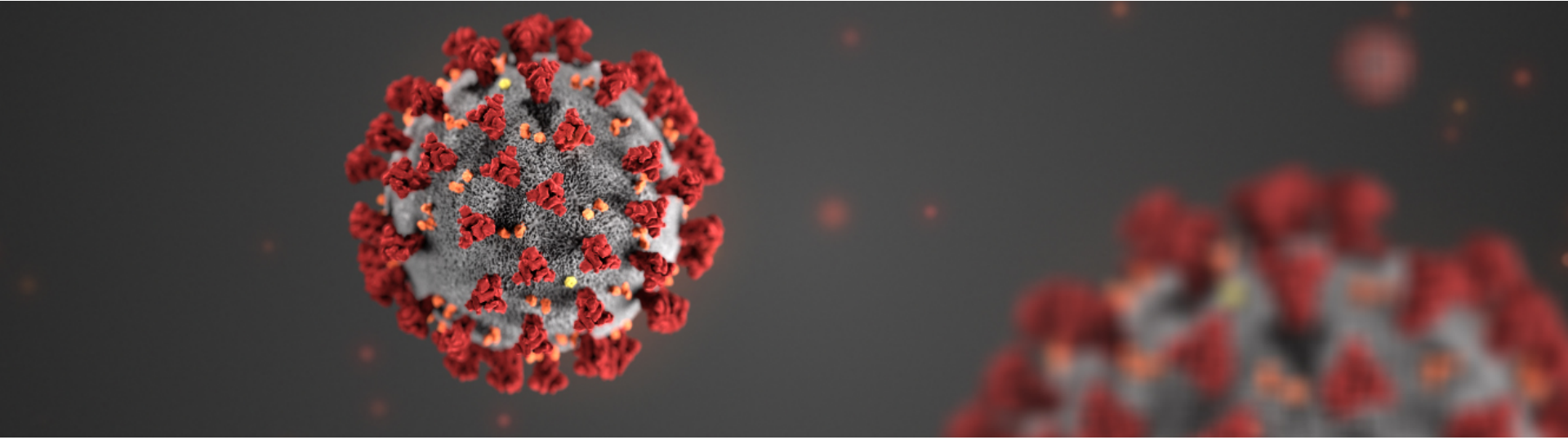
- In times of shortage, special care should be taken to ensure that respirators are reserved for situations where respiratory protection is most important, such as performance of aerosol generating procedures on patients with suspected or confirmed COVID-19 or provision of care to patients with other infections for which respiratory protection is strongly indicated (e.g., tuberculosis, measles, varicella).

Preserving PPE Supply in Times of Shortage

- Implement extended use of eye and face protection (respirator or facemask)
- Extended use means HCP remove only gloves and gowns and perform hand hygiene between patients while continuing to wear the same eye protection and respirator or facemask (extended use)
  - The same eye protection and respirator or facemask can also be worn (without removing) for repeated contacts with the same patient
  - HCP must take care not to touch their eye protection and respirator or facemask
  - Eye protection and the respirator or facemask should be removed and hand hygiene performed if they become damaged or soiled and when leaving the unit

Additional CDC Web Resources

- Steps Healthcare Facilities Can Take Now to Prepare (https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/steps-to-prepare.html)
- People Who Are at Higher Risk for Severe Illness (https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications.html)
- COVID-19 Infection Prevention and Control in Healthcare Settings: Questions and Answers (https://www.cdc.gov/coronavirus/2019-ncov/infection-control/infection-prevention-control-faq.html)
- Strategies to Optimize the Supply of PPE and Equipment and PPE burn rate calculator (https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html)
- Videos (https://www.cdc.gov/coronavirus/2019-ncov/communication/videos.html)



For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.