

COVID-19 Infection Control and Outbreak Response Toolkit for Long-Term Care

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DEPARTMENT OF HEALTH

Acknowledgement

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Introduction

This document contains resources to aid long-term care facilities (LTCFs) preparing for and responding to a COVID-19 outbreak, and is intended to expand upon [infection prevention and control \(IPC\) guidance](#) from the Centers for Disease Control and Prevention (CDC) for nursing homes and LTCFs.

For this toolkit, a LTCF can be defined as several types of facilities, including but not limited to skilled nursing facilities, personal care homes, assisted living residences, long-term structured residence, residential treatment facilities for adults, and intermediate care facilities.

This document is intended to provide a step-by-step guide for LTCFs before, during, and after an outbreak of COVID-19. The term “long-term care facility” is used broadly in this document and facilities should apply the guidance for their unique setting as appropriate based on the population that they serve and the clinical needs of the residents in their care. Please contact your local health jurisdiction to report new COVID-19 outbreaks or you may reach out to the Pennsylvania Department of Health (1- 877-PA HEALTH [1-877-724-3258]). Local and state health officials can assist with providing technical assistance as needed.

Background

COVID-19, also known as Coronavirus disease 2019, is a respiratory disease caused by a virus called SARS-CoV-2, or the severe acute respiratory syndrome coronavirus 2. The first known outbreak of COVID-19 was identified in Wuhan, China, in December 2019, and since that time, the disease rapidly spread worldwide resulting in what is now routinely recognized as the COVID-19 pandemic. The first cases of COVID-19 were identified in Pennsylvania in March 2020. It was not long before all 67 counties of Pennsylvania were impacted by this highly contagious disease.

SARS-CoV-2 spreads just like the flu or a cold—through the air by coughing or sneezing; through close personal contact, like touching or shaking hands; by touching an object or surface with the viruses on it; and occasionally, through fecal contamination.

People with COVID-19 may develop a wide range of symptoms from mild to severe illness, while some persons show no symptoms at all. When symptoms are present, persons may experience fever, cough, headache, fatigue, shortness of breath, and loss of smell or taste among [other symptoms](#). Symptoms may appear two to fourteen days after exposure to the virus. Older people are at a higher risk of developing severe symptoms. People of all ages continue to experience a range of effects, known as “long COVID,” for weeks to months after recovery. Studies are ongoing to further investigate the long-term effects of the disease.

**BEFORE THE OUTBREAK:
Steps to Achieve Facility
Readiness and Core Prevention
Measures for COVID-19**

Communications from Public Health

To receive Department of Health (DOH) communications and to stay up to date with COVID-19, LTCFs should sign up for the PA Health Alert Network, also referred to as PA-HAN. It serves as a communication network among state and local public health agencies, health care providers, hospitals, and emergency management officials. The information provided via the PA-HAN is based upon recommendations from the CDC and other health organizations. If you are a health professional, please [register here](#) for health alerts and advisories.

LTCFs can receive additional information regarding facility preparedness through their regional healthcare coalition (HCC). The HCCs provide a formal collaboration among healthcare organizations and public and private partners that is organized to prepare for, respond to, and recover from an emergency, mass casualty, or catastrophic event. Each coalition supports a Long-Term Care group or subcommittee. Membership is at no cost, and signup is completely automated through each coalition's administration website. Those websites and more information on Pennsylvania's healthcare coalitions can be found [here](#).

Facility Readiness – Be Prepared

The best way for LTCFs to address the threat of emerging pathogens and future pandemics is to be prepared. The following public health recommendations describe how LTCFs can promote and ensure a sustainable healthcare response in the event of an emerging threat or pandemic:

- Implement pandemic planning and exercises into the facility emergency management planning.
- Coordinate a multidisciplinary planning committee.
- Develop a plan for surveillance and reporting.
- Create a facility communication plan.
- Develop a plan for education and just-in-time training among healthcare personnel, residents, and visitors.
- Implement an infection control plan for managing infected residents and visitors.
- Implement an occupational health plan for managing infected healthcare personnel.
- Create a staffing plan.
- Develop a plan for testing, treatment, and vaccination. Additional information regarding these components of preparedness can be found throughout the toolkit.
- Integrate pathogen and pandemic plans into facility-wide safety plans.
- Coordinate policy changes and plan updates as received and review all procedures at a minimum annually.

The Pandemic Preparedness Checklist ([Reference 1](#)) included below can be used to help LTCFs monitor how prepared they are.

Reference 1. Pandemic Preparedness and Readiness Checklist

Planning for a pandemic is critical for ensuring a sustainable response. Below is a checklist designed for long-term care facilities (LTCFs) to help them determine their level of readiness for an emerging threat or pandemic. These steps are a general framework that can help facilities prepare and respond to any disease event or outbreak. Please note this is a suggested approach, and this checklist does not supersede any guidelines or requirements from any federal, state, or local regulatory agency. More information can be found at [CDC LTC Infection Prevention Tools](#).

Yes	No	In Progress	
			Implement pandemic planning and exercises into the facility emergency management planning <ul style="list-style-type: none"> Conducting exercises around potential threats and pandemics will provide insight into domains highlighting strengths and areas needing improvement which will allow the facility to adjust their policies and procedures as needed Continuous pandemic planning in the facility emergency management plan will allow the facility to mobilize the emergency management plan as needed
			Coordinate a multidisciplinary planning committee <ul style="list-style-type: none"> This planning committee will develop, evaluate, and maintain the plans outlined in this document The committee will assign dedicated staff for critical roles outlined in this document; ensure each of these roles have primary, secondary and tertiary assignments In the event of an emerging threat or pandemic, the planning committee can help to coordinate response activity
			Develop a list of committee members with their name, title, and contact information and ensure the list is reviewed and revised at least annually <ul style="list-style-type: none"> Committee members may include facility administrator, medical director, nursing director, infection control, occupational health, environmental services, pharmacy services, transport services, rehabilitation staff representative, nursing/techs staff representative, and other member(s) appropriate This planning committee could be the facility's Infection Control Committee or Quality Committee if needed
			Develop a plan for surveillance and reporting <ul style="list-style-type: none"> Determine how data will be collected, monitored, and reported for residents and HCP who are confirmed with infection Determine how routine testing will be conducted
			Develop a protocol for monitoring healthcare personnel (HCP) and residents for signs and symptoms of potential illness
			Develop a system for screening visitors coming into the facility and ensure a policy is in place that outlines visitation guidelines

			Create a facility communication plan <ul style="list-style-type: none"> • The plan should include a detailed description of the methods of communication that will be used to alert and inform HCP, residents, and visitors about the emerging threat or pandemic and the response activities to follow • Assign a designated staff person to monitor public advisories and update the planning committee as needed in the event of an emerging threat or pandemic • Assign a dedicated staff person who is responsible to communicate with local health authorities and assign a dedicated staff person responsible for communication with HCP, residents, and visitors regarding the status and impact of the emerging threat or pandemic in the facility • Create a list of healthcare entities (other LTC facilities, local hospitals, emergency services, etc.) and their points of contact with whom it will be necessary to maintain communication during a pandemic; this list should be reviewed annually at a minimum
			Develop a plan for education and just-in-time training among HCP, residents, and visitors <ul style="list-style-type: none"> • Education and training should include information on infection prevention and control • Language and literacy level should be considered in any materials created or when considering supplemental and support education • A dedicated training coordinator should be assigned with responsibility for managing education and training
			Implement an infection control plan that includes protocols for managing infected residents and visitors which should include guidance on <ul style="list-style-type: none"> • Isolating and potentially cohorting infected residents • Closing units or the entire facility to new admissions • Developing criteria and protocols for enforcing visitor limitations • The facility should already have an infection control plan in place; the plan can be updated to include pandemic preparedness and readiness
			Implement an occupational health plan for managing infected HCP <ul style="list-style-type: none"> • The facility may already have an occupational health plan or policies that can be updated to include emerging threat and pandemic preparedness and readiness • There should be a liberal and non-punitive sick leave policy that addresses the needs of symptomatic HCP and facility staffing needs • Create a system to monitor HCP vaccination status (if applicable)
			Create a staffing plan <ul style="list-style-type: none"> • A contingency and crisis staffing plan should be developed that identifies minimum staffing needs and prioritizes critical and non-essential services based on resident's health status, functional limitations, disabilities, and essential facility operations • A dedicated staff person must be assigned to conduct daily assessment of staffing status and needs
			Develop a plan for treatment and vaccination <ul style="list-style-type: none"> • If there are treatment or vaccination options, ensure a plan is in place to expedite delivery to residents and staff as recommended by local, state or federal health authorities

Metrics for Community Respiratory Virus Transmission

With the end of the public health emergency on May 11, 2023, CDC will no longer receive data needed to publish Community Transmission levels for SARS-CoV-2. This metric informed CDC's recommendations for broader use of [source control](#) in healthcare facilities to allow for earlier intervention, to avoid strain on healthcare systems, and to better protect individuals seeking care in these settings.

As described in [CDC's Core IPC Practices](#), source control remains an important intervention during periods of higher respiratory virus transmission. Without the Community Transmission metric, healthcare facilities should identify local metrics that could reflect increasing community respiratory viral activity to determine when broader use of source control in the facility might be warranted.

The CDC plans to develop metrics that could be used to guide when to implement select infection prevention and control practices for multiple respiratory viruses. However, at this time there are some [general metrics](#) that could be used to help facilities make decisions about community respiratory virus incidence. Facilities should follow national data on trends of several respiratory viruses, and some might consider recommending masking during the typical respiratory virus season (approximately October-April).

The [RESP-NET interactive dashboard](#) or data from the [National Emergency Department Visits for COVID-19, Influenza, and Respiratory Syncytial Virus](#) can be used to inform when respiratory virus season is beginning or ending. The [National Respiratory and Enteric Virus Surveillance Systems \(NREVSS\)](#) also provides additional information on the circulation of several respiratory viral pathogens. Lastly, outpatient respiratory illness visits determined by data reported to [ILINet](#), are aggregated to provide state level estimates of influenza-like illness. Weekly statewide activity levels are provided which can serve as a guide when determining whether respiratory virus activity is increasing/decreasing. Additional information on influenza activity in Pennsylvania is [posted weekly](#) during influenza season, as well as when activity is determined to be above background levels.

Maintain a Facility Infection Prevention and Control Program

For routine operations, LTCFs must maintain a facility infection prevention and control (IPC) program. To ensure a comprehensive IPC program, facilities are encouraged to do the following:

- Assign one or more individuals with training in IPC to provide on-site management of the IPC program. This is a full-time role for at least one infection preventionist in LTCFs that have more than 100 residents or that provide on-site ventilator or hemodialysis services. Smaller facilities can consider staffing the IPC program based on the resident population and facility service needs identified in the [IPC risk assessment](#). CDC has created an [online training course](#) that can orient individuals to the role of infection preventionist in nursing homes, which can be applied to other LTCFs.
- Ensure facility has supplies necessary to adhere to recommended IPC practices including hand hygiene supplies and personal protective equipment (PPE).
 - Hand hygiene supplies:
 - Place FDA-approved alcohol-based hand rub (ABHR) with 60-95% alcohol in every resident room (ideally both inside and outside of the room) and other resident care and common areas (e.g., outside dining hall, in therapy gym, etc.). Verify facility plan for hand hygiene meets life safety code and any other applicable local, state, and federal regulations.
 - Unless hands are visibly soiled, performing hand hygiene using an ABHR is preferred over soap and water in most clinical situations (e.g., before and after touching a resident); use the Department's [Alcohol-based Hand Rub Memo](#) and [DOH Hand Hygiene Moments Poster](#) to inform your facility's policy and educate staff.
 - Develop a plan to make sure that sinks are well-stocked with soap and paper towels for hand washing.
 - PPE:
 - Select appropriate PPE and provide it to HCP in accordance with Occupational Safety and Health Administration ([OSHA](#)) [PPE standard \(29 CFR 1910 Subpart I\)](#).
 - Perform and maintain an inventory of PPE in the facility.
 - Monitor daily PPE use to identify when supplies will run low; use the [PPE burn rate calculator](#) or [PPE Preservation Planning Toolkit](#).
 - Follow [CDC PPE optimization strategies](#) for options to use when PPE supplies are stressed, running low, or exhausted. If a facility is facing challenges to procuring PPE independently, they can contact their regional healthcare coalition.
 - Use the Supplies and PPE pathway in the National Healthcare Safety Network (NHSN) [LTCF COVID-19 Module](#) to indicate critical

PPE shortages (i.e., less than one week supply remaining despite use of CDC PPE optimization strategies).

- Designate staff responsible for managing supplies, monitoring, and providing just-in-time feedback, and promoting appropriate use of PPE by staff.
- Implement a [respiratory protection program](#) that includes medical evaluations, training, fit testing, and is compliant with the OSHA respiratory protection standard ([29 CFR 1910.134](#)) for employees if not already in place.
- Develop a program for environmental cleaning and disinfection that includes a schedule for regular cleaning and disinfection of shared equipment, high-touch surfaces in resident rooms, and common areas:
 - Ensure EPA-registered, hospital-grade disinfectants are available to allow for frequent cleaning of high-touch surfaces and shared resident care equipment.
 - Use an EPA-registered disinfectant from Disinfectants for Coronavirus ([List N](#)) on the EPA website to adequately disinfect surfaces.
 - Ensure HCP are appropriately trained on product use and follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method, and contact time).
- Create and maintain policies and procedures addressing the following:
 - Which PPE are required and in which situations (e.g., residents with confirmed or suspected COVID-19, residents placed in empiric transmission-based precautions);
 - Recommended sequence for safely donning and doffing PPE;
 - How to clean, decontaminate, and maintain any reusable PPE after and between uses as allowed by the manufacturer's instructions for use; and
 - Written schedule for hand hygiene, PPE, environmental cleaning, and other IPC audits
- Create a thoughtful facility policy that outlines how to manage residents that require transmission-based precautions. This plan should include triggers for individual cases, clusters, and unit-based or facility-wide outbreaks. It should also include how to cohort residents appropriately when private rooms may be limited.
- Develop a plan to notify HCP, residents, and visitors about outbreaks including how to report new outbreaks to local and/or state public health.
- Educate residents, HCP, and visitors about SARS-CoV-2, current precautions being taken in the facility, and the actions recommended to protect all who enter the facility.

- Regularly review DOH, CDC, & U.S. Centers for Medicare and Medicaid Services (CMS) websites for current information and ensure HCP, residents, and visitors are updated when guidance changes.
- Educate, train, and validate competency for HCP, including facility-based and consultant personnel (e.g., rehabilitation therapy, wound care, podiatry, barber, ancillary personnel, ombudsman, and volunteers who provide care or services in the facility) on IPC policies and procedures, PPE selection and use, and return-to-work policies.

Education for Frontline Staff

CDC has created [training resources](#) for frontline staff that can be used to reinforce recommended practices for preventing transmission of SARS-CoV-2 and other pathogens.

[PA Project Firstline](#) (PA PFL) is a collaborative effort with CDC to provide training in IPC for frontline healthcare workers. The PA PFL audience includes but is not limited to:

- Nurses;
- Allied health workers;
- Certified nursing assistants;
- Clinicians;
- Home health workers;
- Patients/residents;
- Family members of patients; and
- Visitors of healthcare facilities.

The team at PA PFL offers educational resources, conducts trainings, and publishes a quarterly newsletter covering IPC topic areas and continuing education credit opportunities. They create posters and infographics, which you may view on their website and order as many as your facility requests. The posters will be shipped to your facility.

PA PFL's team is available to conduct a myriad of training in your facility, covering IPC topics such as:

- Environmental and Body Reservoirs: Where Germs Live;
- Recognizing Risk in Healthcare: How Germs Make People Sick;
- COVID-19;
- Environmental Cleaning;
- Hand Hygiene;
- Injection Safety;
- Personal Protective Equipment (PPE);
- Source Control;
- Disinfection of Equipment;
- Transmission-Based Precautions; and
- Triage and Screening.

If you would like to request training, print materials, or more information, please complete the [Pennsylvania Project Firstline Training Request Form](#).

To contact PA Project Firstline, please email: RA-DHFIRSTLINE@pa.gov

Create a Staffing Plan

Maintaining appropriate staffing in healthcare facilities is essential to providing a safe work environment for HCP and for safe resident care. To prepare for potential staffing shortages, it is important that healthcare facilities have plans and processes in place to mitigate challenges before shortages occur, including providing resources to assist HCP with [anxiety and stress](#). Facilities need to:

- Determine their normal staffing needs and the minimum number of staff needed to provide a safe work environment and safe resident care under normal circumstances.
- Monitor community respiratory virus transmission of SARS-CoV-2 to anticipate staffing challenges.
- Communicate with local [healthcare coalitions](#) and federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) to identify additional HCP (e.g., hiring additional HCP, recruiting retired HCP, using students, or volunteers), when needed. A dedicated staff person should be assigned to conduct daily assessment of staffing needs.
- Collaborate with partners to identify alternate sites for transfer of residents if staffing becomes insufficient for safe resident care after mitigation strategies are exhausted.
- Dedicate staff to specific units or group of residents to limit transmission of pathogens throughout the facility.
- Develop a contingency and crisis staffing plan that identifies minimum staffing needs and prioritizes critical and non-essential services based on resident's health status, functional limitations, disabilities, and essential facility operations.
- If there are no longer enough staff to provide safe resident care, facilities should consider implementing [CDC's Strategies to Mitigate Healthcare Personnel Staffing Shortages](#). A brief summary is outlined in Table 1 below.

Table 1. Summary of Strategies for Mitigating Staffing Shortages for HCP with COVID-19 Infection

Vaccination Status	Conventional	Contingency	Crisis
Regardless of vaccination status	10 days OR 7 days with negative test*, if asymptomatic or mild to moderate illness (with improving symptoms)	5 days with/without negative test [§] , if asymptomatic or mild to moderate illness (with improving symptoms)	No work restrictions, with prioritization considerations (e.g., facility role, types of patients they care for, etc.)

*Negative test result from test collected within 48 hours of returning to work. For calculating the day of the test, consider day of symptom onset (or first positive test if asymptomatic) as day 0. Either a NAAT (molecular) or antigen test may be used. If using an antigen test, HCP should have a negative test obtained on day 5 and again 48 hours later.

[§]Healthcare facilities may choose to confirm resolution of infection with a single negative NAAT (molecular) or a series of 2 negative antigen tests taken 48 hours apart.

Vaccination

Vaccination with COVID-19 vaccines is one of the most important ways people can prevent infection, hospitalization, and death from COVID-19. These vaccines are safe, effective and can offer added protection to people who have had COVID-19, including protection against being hospitalized from an infection. People are best protected when they stay up to date with the recommended number of doses and boosters. Facilities should have a process in place for tracking and monitoring the vaccination status of both residents and HCP.

There are multiple [COVID-19 vaccines](#) available in the United States. Vaccine recommendations are based on age, the first vaccine received, and time since last dose. People who are [moderately to severely immunocompromised](#) have specific recommendations for COVID-19 vaccines, including boosters. Individuals may self-attest to their moderately or severely immunocompromised status, which means documentation of immune status to receive COVID-19 vaccine or booster doses is not required.

If you recently had COVID-19, you still need to stay up to date with your vaccines, but you may consider delaying your next vaccine dose by 3 months from when your symptoms started, or if you had no symptoms, when you first received a positive test. More information on getting your COVID-19 vaccine can be found [here](#).

CDC recommends COVID-19 vaccines for everyone 6 months and older and boosters as appropriate (see [vaccination schedules](#)).

- Encourage everyone to remain [up to date](#) with all recommended COVID-19 vaccine doses to protect HCP, residents, and visitors against SARS-CoV-2 infection.
- Provide [education and resources](#) to HCP, residents, and visitors about the importance of receiving the COVID-19 vaccine.
- Ensure the correct [age-appropriate vaccine product](#) is administered based on the recipient's age on the day of vaccination.
- Check for [updated recommendations for COVID-19 vaccine and boosters](#) as the CDC continues to monitor the latest COVID-19 data.

Per CMS requirements, facilities licensed by CMS must submit the number of nursing home residents and HCP who received any doses of the COVID-19 vaccination into [NHSN](#).

Testing Residents and HCP for COVID-19

There are several ways LTCFs can facilitate SARS-CoV-2 testing. Testing resources are currently available through the PA DOH Bureau of Laboratories (BOL), commercial testing labs, point-of-care (POC) tests, and at-home tests. Any LTCF wanting to use POC tests require a clinical laboratory improvement amendments (CLIA) certificate. See [Understanding Clinical Laboratory Regulation in Pennsylvania](#) for more information.

- Email RA-DHPACLIA@PA.gov for questions regarding laboratory permits or CLIA certification.

LTCFs are encouraged to plan to procure their own testing support and supplies if they have not already done so.

Test Type Descriptions, Diagnostic and Non-Diagnostic

Diagnostic

[Nucleic Acid Amplification Tests \(NAAT\)](#)

- Detects one or more RNA sequences of SARS-CoV-2;
- Considered the gold standard for clinical diagnostic testing of SARS-CoV-2; and
- Highly sensitive and can detect even small amounts of SARS-CoV-2 RNA in a specimen making it likely to return a true positive.

Viral RNA may stay in a person's body for up to 90 days; if testing someone with prior SARS-CoV-2 infection within 90 days, antigen testing is recommended.

[Antigen tests](#)

- Immunoassay that detects the specific viral antigen for SARS-CoV-2;
- Indicates current or recent infection;
- Less sensitive than NAAT with a higher chance for false negatives; and
- Test depends on the amount of viral load present in person when the specimen is collected.

Non-Diagnostic

[Antibody Tests](#)

- Serology test that detects antibodies in your blood produced by the immune system in response to SARS-CoV-2 infection, or vaccination; and

- Indicates recovery from past infection or antibodies from vaccination.

Training on Specimen Collection

Only trained staff should collect specimens for SARS-CoV-2 testing. If LTCFs are going to collect SARS-CoV-2 specimens for HCP and residents, they must:

- Carefully review the instructions for use (IFU) for the tests done at the facility.
- Train appropriate HCP on specimen collection, handling, and performance of the test according to the IFU.
- Use online training videos or package insert instructions provided by company.
- Document and maintain HCP training and competency.

The CDC Booklet [Ready, Set, Test](#) is a good resource for basic training. There is also an [online training](#) which covers the same materials as the booklet and offers educational credits for different professionals. Good specimen collection technique is essential for accuracy of testing results.

Other Testing Information

Routine SARS-CoV-2 testing of HCP based on vaccination status is no longer recommended. Facilities need to follow their established policies and procedures. There is no routine testing recommendation for residents unless they are newly admitted to the facility or have been gone for more than 24 hours. Refer to Table 2. Summary of Testing Triggers and Recommendations below.

Testing Plan for Residents and HCP

A testing plan is an important component of outbreak response and management to ensure the timely identification of individuals who may be infectious with COVID-19. Regardless of vaccination status, testing recommendations are as follows:

Table 2. Summary of Testing Triggers and Recommendations

Testing trigger	Testing Recommendations
Newly admitted residents or those who leave the facility for >24 hours	<ul style="list-style-type: none"> • At facility discretion.
Symptomatic	<ul style="list-style-type: none"> • Test anyone with even mild symptoms of COVID-19 as soon as possible.

New case of COVID-19 in a facility that can identify close contacts*	<ul style="list-style-type: none"> Immediately test all those deemed exposed (but not earlier than 24 hours after the exposure) and, if negative, again 48 hours after the first negative test and, if negative, again 48 hours after the second negative test. This will typically be at day 1 (where day of exposure is day 0), day 3, and day 5.
New case of COVID-19 in a facility that is unable to identify close contacts*	<ul style="list-style-type: none"> Test all residents and HCP facility-wide or unit-wide (but not earlier than 24 hours after the exposure) and, if negative, again 48 hours after the first negative test and, if negative, again 48 hours after the second negative test. This will typically be at day 1 (where day of exposure is day 0), day 3, and day 5.

**Due to challenges in interpreting the result, testing is generally not recommended for asymptomatic people who have recovered from COVID-19 in the prior 30 days. Testing should be considered for those who have recovered in the prior 31-90 days; however, an antigen test instead of a nucleic acid amplification test (NAAT) is recommended. This is because some people may remain NAAT positive but not be infectious during this period.*

Testing Resources

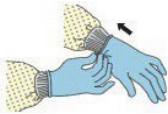
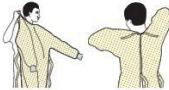


- CMS Testing Guidance [CMS QSO 20 38](#)
- [CDC SARS-CoV-2 Testing](#)
- [FDA COVID-19 Test Basics](#)

Personal Protective Equipment (PPE), Source Control, and When to Use Universal PPE

PPE

PPE is a key component of infection prevention practices in LTCFs. PPE is equipment that is worn to minimize exposure to hazards that may cause workplace harm or illness. In LTCFs and other medical settings, HCP wear PPE to protect them from potentially infectious conditions. This includes equipment such as respirators, masks, gowns, gloves, and eye protection. The table below (Table 3) describes what PPE is worn when caring for residents with confirmed or suspected COVID-19.

Table 3. PPE Types Used for Caring for Residents with Confirmed or Suspected COVID-19

	Gloves: protects the hands
	Gown: protects the skin and clothes
	Facemask/Respirator: protects the mucous membrane of nose and mouth
	Eye Protection (goggles or face shield)*: protects the eyes

*Ensure that reusable eye protection is cleaned and disinfected per manufacturer instructions for use when removed

While having the recommended PPE is important to protect the wearer, it is equally critical to ensure the wearer knows how to appropriately don and doff PPE to best protect themselves from infectious disease exposure. For more information about how to appropriately don and doff PPE when caring for residents with confirmed or suspected COVID-19, please review [CDC PPE Donning and Doffing Sequence](#).

Source Control

Source control refers to the use of [respirators or well-fitting facemasks or cloth masks](#) to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing. People, particularly those at high risk for severe illness, should wear the most protective form of source control that they are able to wear.

Source control options for HCP include:

- A NIOSH-approved particulate respirator with N95 filters or higher;
- A respirator approved under standards used in other countries that are similar to NIOSH-approved N95 filtering facepiece respirators (note: these should not be used instead of a NIOSH-approved respirator when respiratory protection is indicated);
- A barrier face covering that meets [ASTM F3502-21](#) requirements including Workplace Performance and Workplace Performance Plus masks; OR
- A well-fitting facemask.

When used solely for source control, any of the options listed above could be used for an entire shift unless they become soiled, damaged, or hard to breathe through. If a respirator is used during the care of a resident with COVID-19, they should be removed using proper doffing technique and discarded after the resident care encounter and a new one should be donned.

LTCFs may choose to offer well-fitting facemasks as a source control option for visitors but should allow the use of a clean mask or respirator with higher level protection by people who chose that option based on their individual preference.

Masks and respirators used for source control should be changed if they become visibly soiled, damaged, or hard to breathe through. Learn more about the [types of masks and respirators](#) and infection control recommendations for healthcare personnel.

When to Use Universal PPE

If SARS-CoV-2 infection is not suspected in a resident presenting for care (based on symptom and exposure history), HCP should follow [standard precautions](#) (and [transmission-based precautions](#) if required based on the suspected diagnosis).

As [SARS-CoV-2 transmission in the community](#) increases, the potential for encountering asymptomatic or pre-symptomatic patients with SARS-CoV-2 infection also likely increases. In these circumstances, LTCFs should consider implementing broader use of respirators and eye protection by HCP during resident care encounters as described below.

- NIOSH-approved particulate respirators with N95 filters or higher may be used for:
 - All aerosol-generating procedures (refer to Infection Control FAQ: [Which procedures are considered aerosol generating procedures in healthcare settings?](#)).
 - All surgical procedures that might pose higher risk for transmission if the patient has SARS-CoV-2 infection (e.g., that generate potentially infectious aerosols or involving anatomic regions where viral loads might be higher, such as the nose and throat, oropharynx, respiratory tract).
 - HCP working in other situations where additional risk factors for transmission are present, such as when the patient is unable to use source control and the area is poorly ventilated.

- Healthcare-associated SARS-CoV-2 transmission is identified and universal respirator use by HCP working in affected areas is not already in place.
 - To simplify implementation, facilities in counties with higher levels of SARS-CoV-2 transmission may consider implementing universal use of NIOSH-approved particulate respirators with N95 filters or higher for HCP during all resident care encounters or in specific units or areas of the facility at higher risk for SARS-CoV-2 transmission.
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face) worn during all patient care encounters.

Source Control Recommendations Including Broader Use Based on Core Practices

Source control is recommended for individuals in healthcare settings who:

- Have suspected or confirmed SARS-CoV-2 infection or other respiratory infection (e.g., those with runny nose, cough, sneeze); OR
- Had close contact (patients and visitors) or a [higher-risk exposure](#) (HCP) with someone with SARS-CoV-2 infection, for 10 days after their exposure.

Source control is recommended more broadly as described in [CDC's Core IPC Practices](#) in the following circumstances:

- Residing or working on a unit or area of the facility experiencing a SARS-CoV-2 or other outbreak of respiratory infection; universal use of source control could be discontinued as a mitigation measure once the outbreak is over (e.g., no new cases of SARS-CoV-2 infection have been identified for 14 days); OR
- Facility-wide or, based on a facility risk assessment, targeted toward higher risk areas (e.g., emergency departments, urgent care) or patient populations (e.g., when caring for patients with moderate to severe immunocompromise) during periods of higher levels of community SARS-CoV-2 or other respiratory virus transmission; OR
- Have otherwise had source control recommended by public health authorities (e.g., in guidance for the community when [COVID-19 hospital admission levels](#) are high).

When Masking is not Possible for Residents and Visitors

When masking is not possible for certain residents and visitors, consider the following infection prevention measures:

- Physical distancing of at least 6 feet is recommended for everyone in a healthcare setting, including residents and their visitors.
- Ensure physical distancing is feasible and will not interfere with provision of care.
- Arrange seating in common areas, treatment areas, and during group activities so that residents are at least 6 feet apart.
- Consider scheduling appointments to limit the number of residents in common areas or participating in group activities at one time.

Managing and Optimizing PPE

The increased need for PPE during the COVID-19 pandemic has caused shortages in supply leading to challenges in healthcare. During outbreaks of COVID-19 ensuring a supply of PPE is essential. To guarantee there are adequate supplies to care for residents and protect HCP, LTCFs should:

- Perform and maintain an inventory of all PPE in the facility through daily monitoring.
- Create plans for surge capacity and determine PPE usage when in conventional, contingency, and crisis capacity.
- Continually educate and train HCP on PPE to ensure their safety and that supplies will not be wasted.
- HCP should be able to demonstrate competency with donning and doffing PPE needed to perform job duties.

PPE Optimization Resources

- [PPE burn rate calculator](#)
- [PPE Preservation Planning Toolkit](#)
- [National Healthcare Safety Network \(NHSN\) LTCF COVID-19 Module](#)
- [CDC General PPE optimization strategies](#)
- [CDC Summary of PPE optimization strategies](#)

Evaluation and Monitoring of Healthcare Personnel

It is important that HCP not work while acutely ill, even if SARS-CoV-2 testing is negative, to minimize the risk of transmission of other infectious pathogens such as influenza. Having a policy on the facility's process for evaluating HCP for signs and symptoms of COVID-19 and managing those that are suspected, confirmed, or have been exposed to the virus is a key component of the facility's IPC program. Include the following key elements in your facility's policy:

- Sick leave policies should be non-punitive, flexible, and consistent with public health policies that support HCP to stay home when ill;
- Inventory of all HCP including fellows, interns, and volunteers who provide care in the facility to determine which personnel are non-essential and whose services can be delayed if such restrictions are necessary to prevent or control transmission;
- Procedure to ensure all HCP entering the facility, regardless of their vaccination status, are aware of recommended actions to prevent transmission to others and to report to occupational health if they have a positive viral test for SARS-CoV-2, signs and symptoms of COVID-19, or a higher-risk exposure;
- A plan for how to respond to HCP with COVID-19 who worked while infectious; and
- Return to work criteria for HCP with COVID-19 and those who were exposed to individuals with confirmed COVID-19.

Evaluation and Monitoring of Residents

Early detection of signs and symptoms of COVID-19 is key to minimize transmission throughout the facility, as it enables HCP to implement mitigation strategies early (see Table 4 below). As part of your facility's routine assessment of your residents for signs and symptoms of illness, it is important to assess and monitor for any signs and symptoms of COVID-19 regardless of their vaccination status. Include the following key elements in your facility's policy:

- Educate residents on the signs and symptoms of COVID-19 infection.
- Encourage residents to report if they are experiencing any symptoms consistent with COVID-19 or an acute respiratory infection, even if symptoms are mild.
- For older adults (aged 65 or older), be aware that a single temperature reading greater than 100°F (37.8°C), multiple readings greater than 99°F (37.2°C), or a rise in temperature greater than 2°F (1.1°C) above the person's normal (baseline) temperature may be a sign of infection.
- Older adults with SARS-CoV-2 infection may not show common symptoms such as fever or respiratory symptoms. It is important to assess for other COVID-19 symptoms that are listed in the table below:

Table 4. Signs and Symptoms of COVID-19

Signs and Symptoms of COVID-19	
Fever or chills	Source: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html This list does not include all possible symptoms; CDC will continue to update as necessary
Cough	
Shortness of breath or difficulty breathing	
Fatigue	
Muscle or body aches	
Headache	
New loss of taste or smell	
Sore throat	
Congestion or runny nose	
Nausea or vomiting	
Diarrhea	

With identification of any COVID-19 symptoms, implement prompt isolation and further evaluation for SARS-CoV-2 infection. Refer to [Duration of Transmission-Based Precautions for Residents with COVID-19](#) for additional information.

Identify a COVID-19 Care Unit Dedicated to Monitor and Care for Residents with Confirmed COVID-19

Dedicating an area within the facility to cohort residents on isolation for confirmed COVID-19 during their infectious period is best practice for decreasing the likelihood of transmission. Components of a COVID-19 Care Unit ideally include the following:

- Physical separation from other rooms and spaces where residents are not confirmed with COVID-19;
- Single-person room(s) with designated bathroom(s);
 - Place a resident with suspected or confirmed COVID-19 in a single-person room. The door should be kept closed, if safe to do so. The resident should have a dedicated bathroom.
 - If limited single rooms are available, or if numerous residents are simultaneously identified to have symptoms concerning for COVID-19, residents may remain in their current location until cause of symptoms is determined.
 - If cohorting, only residents with the same pathogen should be housed in the same room. Multidrug-resistant organism (MDRO) colonization or infection status, and/or presence of other communicable disease should also be taken into consideration during the cohorting process. See resident cohorting guide ([Reference 2](#)) below.
- Dedicated entrance and exit specifically used for COVID-19 Care Unit HCP;
- Dedicated HCP (medical assistants, nurses, qualified medication administration persons, and environmental services staff) to care or provide services for COVID-19 Care Unit residents only;
 - If unable to dedicate HCP to COVID-19 Care Unit, educate and encourage a workflow process that allows HCP to perform routine care working from non-isolated to COVID-19 isolated residents (e.g., resident assessments, med pass, etc.). Also, create a process and educate HCP on cleaning high-touch surfaces in these shared spaces after each use, practice source control, distancing, hand hygiene recommendations, and staggering break times.
- Dedicated breakrooms and restrooms specifically for COVID-19 Care Unit HCP;
- Dedicated patient care equipment;
 - When dedicated equipment is not feasible, maintain a cleaning policy to ensure shared equipment is properly disinfected between use.
 - Ensure that a plan is in place that allows HCP to identify if shared equipment is clean or dirty such as a tagging system or designated staging area.
- Signage to remind individuals that they are entering a COVID-19 Care Unit;
- Full PPE (NIOSH-approved N95s or higher-level respirator for staff, eye protection, gowns, and gloves) readily available and include signage or education for proper donning, doffing, and disposing; and

- Hand hygiene products readily available and accessible.


























Please note that temporary barriers may now be considered a violation of Life and Safety codes, according to [CMS QSO-22-15-NH](#). LTCFs can work with the Department of Health Quality Assurance Deputate and CMS to determine if facility-specific temporary barriers can be used. You can facilitate this discussion by reaching out to your local field office to speak with a surveyor.

It is important to remember that facilities should limit the transport and movement of COVID-19 positive residents outside of the unit unless the movement is essential for medical purposes.

Reference 2. Resident Cohorting Guide

This document provides suggested guidance on cohorting residents regardless of vaccination status. For additional guidance on isolation, please refer to your facility policy.

 = Cohort  = Do not cohort

		Resident A				
Resident B		No respiratory symptoms and not in isolation	Resident with respiratory symptoms	Resident + for COVID-19	Resident + for influenza	Resident + for COVID-19 and influenza
	No respiratory symptoms and not in isolation					
	Resident with respiratory symptoms					
	Resident + for COVID-19					
	Resident + for influenza					
	Resident + for COVID-19 and influenza					

Residents in isolation for other pathogen(s) such as *C. difficile*, norovirus, vancomycin-resistant *Enterococcus* (VRE), etc. **cannot** be cohorted with other residents unless they have the same pathogen(s).

[CDC Isolation Guidance](#)

Updated: 5/22/2023

Visitation Plan

LTCFs should have a written plan for managing visitation to help prevent and reduce the spread of COVID-19 in their facility. Facilities must ensure that the plan adheres to local, state, and federal regulations. Visits that occur in skilled nursing facilities (SNFs) specifically, must align with the guidance and core principles of COVID-19 infection prevention outlined in [QSO-20-39-NH](#). SNFs must facilitate in-person visitation consistent with applicable CMS regulations.

In general, LTCFs should have appropriate measures in place to ensure that everyone entering the facility, regardless of their vaccination status, is aware of recommended IPC practices and actions being taken by the facility to prevent the transmission of SARS-CoV-2. Facilities are encouraged to post visual alerts such as signs or posters at the entrance and in areas of the facility that are frequented by visitors (e.g., waiting areas, elevators, and cafeterias). Furthermore, facilities should establish a process to make certain that visitors who have a positive viral test for SARS-CoV-2, symptoms of COVID-19, or have had close contact with someone with COVID-19 are aware of the recommended actions below:

Table 5. Recommendations for Visitors with Confirmed COVID-19, Compatible Symptoms, or Recent Exposure

Criteria	Actions*
Confirmed COVID-19 or compatible symptoms	<ul style="list-style-type: none">Defer non-urgent, in-person visitation until the healthcare criteria to end isolation is met (10 days from test date or onset date which is known to be day 0). This time period is longer than what is recommended in the community.
Close contact with someone with COVID-19 or were in another situation that put them at higher risk for transmission	<ul style="list-style-type: none">Defer non-urgent, in-person visitation until 10 days after their close contact if they are unable to wear source control. No delay if source control is worn unless symptoms develop, in which case the resident should be placed in isolation.

* Visits that occur in Skilled Nursing Facilities (SNFs) specifically, must align with the guidance and core principles of COVID-19 infection prevention outlined in [QSO-20-39-NH](#).

If a resident is infectious or if the facility is experiencing an outbreak, the facility should encourage residents to limit in-person visitation. Encourage the use of alternative methods such as video call applications on cell phones or tablets, when appropriate. Should a resident choose to proceed with visitation, both resident and visitor(s) should be counseled on the risks of an in-person visit.

Residents and their visitors should wear well-fitting source control (if tolerated) and physically distance (if possible) during the visit. Facilities may choose to offer facemasks as a source control option for visitors but should allow the use of a mask or respirator with higher-level protection if preferred.

Prior to entering the resident's room, visitors should be provided instruction on hand hygiene, limiting surfaces touched, and use of PPE according to current facility policy. Visitors should also be instructed to only visit the resident's room and minimize their time spent in other locations in the facility.

The Visitation Plan Checklist ([Reference 3](#)) below can be used to help LTCFs in the creation of a comprehensive plan.

Reference 3. Visitation Plan Checklist

For visitors

- Post signs at the entrance reminding visitors of the importance of:
 - Remaining up to date with all recommended COVID-19 vaccines including boosters;
 - Maintaining source control and physical distancing; and
 - Adhering to any other facility instructions related to visitation.
- Establish a process to make visitors entering the facility, regardless of their vaccination status, aware of recommended actions to prevent transmission to others if they have any of the following three criteria:
 - A positive viral test for SARS-CoV-2;
 - [Symptoms of COVID-19](#); or
 - Close contact with someone with COVID-19.

Visitors with COVID-19 or compatible symptoms should delay non-urgent in-person visitation until they have met the **healthcare** criteria to end isolation (longer than community criteria). Visitors who have had close contact with someone with COVID-19 should delay their non-urgent in-person visitation until 10 days after their close contact if they cannot wear source control. Additional information about visitation from [CMS](#).

IPC during visitation

- Educate visitors on recommended infection prevention and control practices that are to be used during the visit.
- Instruct visitors to maintain source control regardless of vaccination status.
- Maintain physical distancing of at least 6 feet between people, including, when around other residents, visitors that are not part of their group, and HCP in the facility.
- Develop a plan to manage visitor flow throughout the facility.
 - Determine if there is a need to limit the total number of visitors in the facility at one time to maintain recommended IPC precautions.
 - Determine if there is a need to limit the number of visitors per resident at one time to maintain any required physical distancing.
- Residents and their visitors can choose to have close contact and to not wear source control, however these best practices should be considered:
 - Resident and all visitors are up to date with all recommended COVID-19 vaccines including boosters; and
 - Resident is not moderately or severely immunocompromised; and
 - Visit takes place in resident's room or the designated visitation room.

Location of visitation

- Indoor visitation can occur in single-person rooms, or multi-person rooms if the roommate is not present.
- If the roommate is unable to leave:
 - Facilities should attempt to enable in-room visitation while maintaining recommended IPC practices, including physical distancing, vaccination education, and source control.
- Outdoor visitation:
 - Outdoor visits generally pose a lower risk of transmission due to increased space and airflow. For outdoor visits, create accessible and safe outdoor spaces for visitation, such as in courtyards, patios, or parking lots, including the use of tents, if available. However, weather considerations (e.g., inclement weather, excessively hot or cold temperatures, poor air quality) or an individual resident's health status (e.g., medical condition(s), COVID-19 status, quarantine status) may hinder outdoor visits. LTCFs should have a policy for outdoor visits. Per CDC, residents and their visitors should follow the source control and physical distancing recommendations for outdoor settings described on the page addressing [Your Guide to Masks](#).
 - Outdoor visitation is preferred when the resident and/or visitor are not up-to date with all recommended COVID-19 vaccine doses.
- LTCFs should facilitate and [encourage alternative methods for visitation](#) (e.g., video conferencing) and communication with the resident.

Additional information about visitation for [nursing homes](#) and [intermediate care facilities for individuals with intellectual disabilities and psychiatric residential treatment facilities](#) is available from CMS.

Environmental Infection Prevention and Control

Environmental infection prevention and control including cleaning, disinfection, and ventilation are central components for reducing the transmission of pathogens, including SARS-CoV-2, and maintaining a safe environment for HCP, residents, and visitors.

Cleaning and Disinfection

Thoroughly cleaning and disinfecting all areas including surfaces, equipment, and shared resident care items decreases the spread of SARS-CoV-2 by removing viral particles and potential contaminants that can later be transferred to individuals by way of airborne or contact transmission. Cleaning and disinfection processes vary depending upon numerous factors including what equipment is used for, level of contamination, status of resident, equipment instructions for use, etc. This section will address key components of an effective and comprehensive environmental cleaning and disinfection program for LTCFs.

Environmental Cleaning and Disinfection Plans

Environmental cleaning and disinfection plans should include:

- Education on facility standards of practice including cleaning responsibilities, products used, cleaning and disinfection procedures, and frequency;
- Identification of individuals responsible for cleaning and disinfection tasks, including a contingency staffing and education plan for any environmental HCP coverage;
- Documentation for tracking (i.e., logs, checklists, etc.);
- Process for auditing and providing feedback to environmental services staff; and
- An environmental risk assessment based on the risk of pathogen transmission and vulnerability of residents for individual resident care areas. These risk levels determine cleaning frequency, method, and process in routine and contingency cleaning schedules for all resident care areas. This risk-based approach is outlined in CDC's [risk-assessment for determining environmental cleaning method and frequency](#).

Table 6. Cleaning Best Practices to Reduce the Transmission of SARS-CoV-2

Best Practices for Cleaning in Healthcare Facilities	Additional Guidance for Ongoing Success
Use disinfectants that kill SARS-CoV-2	<ul style="list-style-type: none"> Use EPA List N for a complete list of disinfectants
Clean reusable items between use	<ul style="list-style-type: none"> Dispose of single-use items after use
Work from clean to dirty to avoid spreading dirt and microorganisms	<ul style="list-style-type: none"> Clean low-touch surfaces before high-touch surfaces Clean resident zones (beds, sitting areas) before resident toilets Clean high-touch surfaces outside the resident zone before the high-touch surfaces inside the resident zone
Clean general resident areas not under transmission-based precautions before those areas under transmission-based precautions.	<ul style="list-style-type: none"> Ensure appropriate PPE is worn
Proceed from high surfaces to low surfaces to prevent dirt and microorganisms from dripping or falling and contaminating already cleaned areas	<ul style="list-style-type: none"> Clean bed rails before bed legs Clean environmental surfaces before cleaning floors Clean floors last to allow collection of dirt and microorganisms that may have fallen
Proceed in a systematic manner to avoid missing surfaces	<ul style="list-style-type: none"> Clean clockwise, or left to right, etc.
Perform management of laundry, food service utensils, and medical waste in accordance with state law and regulations and facility policy.	<ul style="list-style-type: none"> Ensure policies in place for staff to reference

Source: Additional recommendations can be found here: [Best Practices for Environmental Cleaning in Healthcare Facilities](#)

Terminal Cleaning Recommendations for Residents who were in Transmission-Based Precautions

Prior to entering the room, determine if the vacated resident was on transmission-based precautions to determine appropriate PPE usage and amount of time required to wait before entering room. Once the recommended time has passed, individuals may enter the room and clean as described below:

- HCP, including environmental services personnel, should refrain from entering the vacated room of a SARS-CoV-2 (or other airborne pathogen) positive resident until sufficient time has elapsed for enough air changes to remove potentially infectious particles. Refer to [CDC's Air Contaminant Removal Table](#) for additional guidance. After this time has elapsed, the room should undergo appropriate

cleaning and surface disinfection before it is returned to routine use.

- Remove soiled/used personal care items (e.g., cups, dishes) for reprocessing or disposal.
- Remove facility-provided linens for reprocessing or disposal. See CDC's [linen and laundry management](#).
- Inspect window treatments and if soiled, clean blinds on-site, and remove curtains for laundering.
- Clean and disinfect all reusable (noncritical) resident care equipment.
- Using the general best practices, clean and disinfect the room systematically from clean to dirty, top to bottom, including all low-touch and high-touch surfaces, other surfaces that may not be accessible when the room/area was occupied (e.g., patient mattress, bedframe, tops of shelves, vents), and floors.
- All non-dedicated, non-disposable medical equipment used for that resident should be cleaned and disinfected according to manufacturer's instructions and facility policies before use on another resident.

Minimum Cleaning and Disinfection Recommendations

The below chart contains the minimum frequency and method for cleaning and disinfecting. Enhanced cleaning and disinfecting processes or an increase in frequency in some resident-care areas may be necessary depending on a [risk assessment](#).

During outbreaks, cleaning and disinfection of equipment and common surfaces should be conducted several times per day.

Table 7. Cleaning Frequency Recommendations

Items/ areas	Type of Cleaning	Method	Frequency
Shared equipment	As needed	Clean	In between each use
Visibly soiled equipment and/or areas	As needed	Clean	Immediately
Bodily fluid	As needed	Clean and disinfect	Immediately
Occupied resident rooms- high touch-surfaces and floors	Routine	Clean	Daily
Occupied resident rooms- Private bathroom toilets	Routine	Clean and disinfect	Daily
Shared bathroom toilets	Routine	Clean and disinfect	Twice daily
Floors in shared common areas	Routine	Clean	Daily
Low-touch surfaces in common areas, walls, baseboards, cupboards, etc.	Scheduled	Clean	Weekly
Window blinds, bed curtains	Scheduled	Clean	Monthly
Vacated resident rooms	Terminal	Clean and disinfect	Upon discharge

Ventilation

Effective ventilation strategies and practices are helpful in reducing viral particle concentration in the air. This section will explore options to improve ventilation delivery and indoor air quality in all shared spaces to help prevent transmission of SARS-CoV-2. It is important to partner with facility engineers or HVAC professionals to see which of these options is feasible for your facility.

Since SARS-CoV-2 viral particles spread between people more readily indoors than outdoors, one way to reduce the concentration of viral particles is to increase the introduction of outdoor air when possible. Ways in which a facility can increase the introduction of outdoor air include:

- Open outdoor air dampers beyond minimum settings to reduce or eliminate HVAC air recirculation. In mild weather, this will not affect thermal comfort or humidity. However, this may be difficult to do in cold, hot, or humid weather, and may require consultation with an experienced HVAC professional.
- Open windows and doors, when weather conditions allow, to increase outdoor air flow. Do not open windows and doors if doing so poses a safety or health risk (e.g., risk of falling, triggering asthma symptoms) to occupants in the building. Even a slightly open window can introduce beneficial outdoor air.
- Use fans to increase the effectiveness of open windows if facility policy allows. Safe fan placement is important. Avoid placing fans in a way that could potentially cause contaminated air to flow directly from one person to another. Also, fans should not be used in rooms where air pressure is monitored (e.g., clean storage rooms, airborne isolation rooms, soiled linen room, etc.).
- Use a window fan to exhaust room air to the outdoors. This will help draw outdoor air into the room via other open windows and doors without generating strong room air currents.
- Ensure facility has a policy or procedure for cleaning of fans used in resident rooms.

Another way in which facilities can improve ventilation is to improve air filtration. Ways in which facilities can improve air filtration include:

- Increase air filtration to as high as possible without significantly reducing design airflow. Increased filtration efficiency is especially helpful when enhanced outdoor air delivery options are limited.
- Make sure air filters are properly sized and within their recommended service life.
- Inspect filter housing and racks to ensure appropriate filter fit and minimize air that flows around, instead of through, the filter.
- Ensure restroom exhaust fans are functional and operating at full capacity when the building is occupied.

- Inspect and maintain exhaust ventilation systems in areas such as kitchens and cooking areas. Operate these systems any time these spaces are occupied. Operating them even when the specific space is not occupied will increase overall ventilation within the occupied building.
 - Use portable high-efficiency particulate air (HEPA) fan/filtration systems to enhance air cleaning (especially in higher risk areas such as areas frequently inhabited by people with a higher likelihood of having COVID-19 and/or an increased risk of exposure to COVID-19). Note: Portable air cleaners that use filters less efficient than HEPA filters can contribute to room air cleaning. However, they should be clearly labeled as non-HEPA units. For more information see the FAQ on [HEPA filters and portable HEPA air cleaners](#).
- As necessary, generate clean-to-less-clean air movement by evaluating and repositioning the supply louvers, exhaust air grilles, and/or damper settings. See the FAQ below on [Directional Airflow](#).

Environmental Cleaning and Ventilation Resources

- [Environmental Cleaning Procedures | Environmental Cleaning in RLS | HAI | CDC](#)
- [Guidelines for Environmental Infection Control in Health-Care Facilities: Ventilation](#)
- [Ventilation in Buildings | CDC](#) (“community”)
- Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) [Guidance for Building Operations During the COVID-19 Pandemic](#)

Reporting and Surveillance

Health departments and governmental agencies routinely collect information on individuals with certain diseases and conditions to help control outbreaks, prevent the spread of disease, and help public health professionals better understand novel diseases. LTCFs in Pennsylvania are required to report key indicators to help support these initiatives. This section will summarize key components of disease reporting as it pertains to COVID-19. Please note, the below guidance does not apply to Department of Human Services (DHS) facilities. For guidance on DHS case reporting, please refer to [DHS Reporting Guidance](#).

Surveillance Systems

Data pertaining to COVID-19 is entered into numerous data systems. A summary of each system and data expectations is included in Table 8.

Table 8. Summary of Data Reporting for COVID-19

Reporting System	Metric	Frequency
Nursing Care Facilities Event Reporting System (Event Reporting System)	<ul style="list-style-type: none">Information about staff and residents that test positive for COVID-19	Daily (individual)
National Healthcare Safety Network (NHSN)* (COVID-19 Module)	<ul style="list-style-type: none">Resident Impact and Facility CapacityStaff and Personnel ImpactTherapeuticsCOVID-19 Vaccination Module	Weekly (aggregate)

* Centers for Medicare & Medicaid Services (CMS)-certified long-term care (LTC) facilities may submit point-of-care SARS-CoV-2 testing data, including antigen testing data, to NHSN as the preferred CDC and CMS pathway.

**DURING THE OUTBREAK:
COVID-19 Outbreak Management
and Control Measures**

Reference 4. Long-Term Care Facility Checklist for COVID-19 Outbreak Management and Control

Below is a framework for responding to COVID-19 in long-term care facilities (LTCFs). It aims to guide infection preventionists and facility leadership on what to do when a case of COVID-19 has been identified in their facility.

1. **Identify & Isolate First Case**

Resident with Confirmed COVID-19

- ☐ Isolate with transmission-based precautions (TBP) on COVID-19 Care Unit in accordance with most up to date isolation guidance. If COVID-19 Care Unit is unavailable, provide source control to positive patient and isolate in room. Ideally, residents should be placed in a single-person room.
- ☐ Prepare to open COVID-19 Care Unit. A COVID-19 Care Unit may not be necessary if the number of cases remains small, but plans should begin to open the unit, if needed, as soon as one case is identified. In the COVID-19 Care Unit:
 - ☐ Dedicate staff to care for residents with COVID-19 as possible. If this not feasible, the facility must develop a thoughtful plan on how staff will care for residents with and without COVID-19. This plan should include bundling resident care activities and changing PPE as needed.
 - ☐ Place TBP signs on the door to indicate to those entering the COVID-19 Care Unit of the personal protective equipment (PPE) requirements when providing care to residents with COVID-19.
 - ☐ Ensure all required PPE is available including N95 or higher-level respirator, gowns, gloves, and eye protection and is worn as shown [Isolation PPE](#).
 - ☐ Perform on-the-spot donning/doffing training for HCP who are not trained in donning/doffing. No staff should enter a COVID-19 isolation room prior to successful completion of this training. Guidance for donning and doffing can be found at [PPE Sequence](#).
 - ☐ Notify any receiving facility of TBP requirements for residents with COVID-19 prior to transfer.
 - ☐ Reinforce core infection prevention practices among residents, visitors, and healthcare personnel (HCP) including hand hygiene, appropriate use of PPE, environmental cleaning, and disinfection.

HCP with Confirmed COVID-19

- ☐ Exclude from work in accordance with most up to date return to work guidance.

2. **Identify Additional Cases and Exposures**

In general, exposed asymptomatic residents and HCP do not require empiric transmission-based precautions (residents) or work restrictions (HCP) but should be tested with a series of up to 3 viral tests.

- ☐ Select outbreak investigation approach (contact-tracing, unit-based or facility-based). More information on the outbreak investigation approach is available under the section, “Response to an Outbreak of COVID-19” that immediately follows this checklist in the toolkit.
- ☐ Identify exposures because of close contact.
- ☐ Test exposures immediately (but not within 24 hours of exposure) and if negative, another test at 48 hours, and if negative another test 48 hours later. If results are positive, no further testing is needed, and the resident is to be placed in transmission-based precautions and HCP is to be restricted from work.
- ☐ Maintain a [line list](#) of all cases.

3. **Notification & Reporting**

- ☐ Report new outbreaks in accordance with most recent notification and reporting guidance.
- ☐ Notify residents, families, visitors, and HCP promptly about identification of COVID-19 in the facility and maintain ongoing, frequent communication on the situation and facility actions

4. **Managing the Outbreak**

- ☐ Monitor daily PPE use to identify when supplies will run low.
 - ☐ Aim to procure resources independently through the commercial market as part of sustainable outbreak operations.
 - ☐ Use [PPE Burn Rate Calculator](#) or other tools, such as the [PPE Preservation Planning Toolkit](#).
 - ☐ Submit a [PPE Critical Needs Assessment Form](#) during PPE shortages.
 - ☐ Use the Supplies and PPE pathway in the [NHSN LTCF COVID-19 Module](#) to indicate critical PPE shortages (i.e., less than one week supply remaining despite use of CDC PPE optimization strategies).
- ☐ Review staffing plans to ensure adequate coverage.
 - ☐ Refer to CDC guidance for mitigating staffing shortages and PPE optimizing strategies if needed [Strategies to Mitigate Healthcare Personnel Staffing Shortages](#).
- ☐ Ensure adequate testing is available. If the facility has been unsuccessful in procurement of testing resources, contact the local or state health department.
- ☐ Determine a facility plan for visitation [QSO-20-39-NH-REVISED](#).
- ☐ Consider universal source control as outlined in the [source control implementation](#) section. If the outbreak is facility-wide, universal source control should be enforced throughout the facility.
- ☐ Provide ongoing education on COVID-19 prevention to residents, visitors, and HCP.
- ☐ Implement ongoing infection prevention audits including hand hygiene, donning/doffing of PPE, and environmental cleaning and disinfection. Sample IPC audit tools can be found at DOH's [Healthcare Professionals Resources Page](#) or the [Agency for Healthcare Research and Quality](#).
- ☐ Maintain room restriction and full TBPs (N95 or higher-level respirator, gowns, gloves, and eye protection) for care of residents who are positive for COVID-19 until there are no new cases identified depending upon outbreak investigation approach selected:
 - **Contact tracing:** If no additional cases are found, outbreak is complete when the resident/staff with COVID-19 has completed their isolation period and exposed persons have completed their 10-day monitoring period.
 - **Broad-based (unit-based or facility-wide):** If additional cases are identified, testing should continue for 3-7 days until there are no new cases for 14 days.

5. **Returning to Routine Operations**

- ☐ The facility can return to routine operations when the outbreak has been deemed as complete, such as 14 days without new cases.
- ☐ Maintain ongoing infection prevention and control audits including hand hygiene, donning/doffing of PPE, and environmental cleaning and disinfection.
- ☐ Provide ongoing education around COVID-19 prevention to residents, families, visitors, and HCP; this is especially important as new guidance becomes available through scientific advancements.

- ☐ Continue to stress the importance of vaccination for residents, HCP, and visitors. Current vaccination guidance can be found at [CDC Vaccination FAQ](#).
- ☐ Perform retrospective outbreak management and control review to identify what worked for the facility, as well as potential opportunities for improvement in the event of a future outbreak.

Please note that this is a suggested approach, and this checklist does not supersede outbreak response guidelines or requirements from any federal, state, or local regulatory agency. If you have additional questions, please call your local health department or DOH at 1-877-PA-HEALTH (1- 877-724-3258).

Response to an Outbreak of COVID-19

A single new case of COVID-19 in any resident or HCP is a potential outbreak (see Reference 5 prior to this section for an Outbreak Management Checklist). Upon identification of an outbreak, it is important to select the appropriate outbreak response from one of the three approaches: **contact tracing**, **unit-based**, or **facility-based**. Not every outbreak will follow the same outbreak response method, and it is possible to move between outbreak response methods during the same outbreak. It is recommended to consult with the local or state health department to determine how best to respond to an outbreak if assistance is needed. This section will outline the different approaches for outbreak response.

Determining if there is an Outbreak

An outbreak is defined as the occurrence of one or more cases of COVID-19 in a LTCF that meet the following criteria included in Table 9 below:

Table 9. Outbreak Definitions

Individual	Outbreak Definition
Residents	<ul style="list-style-type: none">New nursing home-onset of COVID-19 that originated in the nursing home in a resident. It does not include residents who were known to have COVID-19 on admission to the facility and were placed in isolation to prevent transmission to others in the facility.
HCP	<ul style="list-style-type: none">New onset of COVID-19 in an HCP who was working in the facility while infectious (during the 2 days prior to symptom onset or positive test, if asymptomatic).

In addition to the situations noted above, there may be other scenarios where a LTCF outbreak response may be required such as a new admission that was not placed in transmission-based precautions during their infectious period and tested positive on day 5 after admission. In this scenario, it may be unclear if the infection was acquired in the facility or in the community; regardless of where the infection was acquired, additional monitoring and testing of HCP and other residents may be warranted.

Responding to the Outbreak

Upon identification of an outbreak, select the appropriate outbreak response type from the algorithm in Figure 1 below. Factors to consider when selecting the outbreak response type include:

- Experience and resources to perform individual contact tracing;
- Whether the index case (the first identified case in a group of related cases) is a resident or HCP;

- Whether there are other individuals with suspected or confirmed COVID-19 identified at the same time as the index case; and
- Extent of potential exposures identified during the evaluation of the index case.

Following an exposure, empiric transmission-based precautions (residents) and work restrictions (HCP) are generally unnecessary; however, source control should be worn by all individuals for 10 days.

Source Control Recommendations for Residents and Visitors during an Outbreak

- If a resident with confirmed or suspected COVID-19 must leave their room, they should wear a facemask if a mask can be tolerated.
- Residents who are not confirmed or suspected of having COVID-19 should wear a facemask when leaving their room.
- Visitors who are not confirmed or suspected of having COVID-19 should wear facemasks when they are in the LTCF.
- Visitors with confirmed or suspected COVID-19 should not be in the facility.

Implementing a contact tracing approach

Conduct [contact tracing](#) to identify any residents or HCP who have been exposed to an individual with COVID-19.

Immediately perform viral testing for all residents and HCP identified as having an exposure, regardless of vaccination status (testing should not occur earlier than 24 hours after the exposure). If negative, test again 48 hours after the first negative test and, if negative, again 48 hours after the second negative test. This will typically be at day 1 (exposure is day 0), day 3, and day 5.

- If testing of close contacts does not reveal additional residents or HCP with COVID-19 infection, continue to stress source control for 10 days following the exposure. After the initial series of 3 viral tests, ongoing testing is not required if close contacts remain asymptomatic.
- If testing of close contacts reveals additional residents or HCP with COVID-19, the facility can choose to continue contact-tracing to identify individuals with an exposure to the newly identified individual(s) with COVID-19 or implement a facility-wide or unit-level approach. If all potential contacts cannot be identified or managed with contact-tracing or if contact-tracing fails to halt transmission, a broad-based approach is recommended.

Managing ongoing transmission

Evidence of ongoing transmission may include the detection of new cases in additional unit(s) or new cases being detected beyond the first 14-day period.

In the event of ongoing transmission within a facility that is not controlled with initial interventions, consider implementing these additional measures if not already done:

- Implement empiric transmission-based precautions (residents) and work restrictions (HCP) when higher-risk exposures have been identified.
- Expand testing to facility-wide approach, if not already done.
- Reach out to the jurisdiction's public health department for additional guidance.

Implementing a broad-based approach

Perform viral testing for all residents and HCP identified on the affected unit(s) or facility-wide regardless of vaccination status immediately (but not earlier than 24 hours after the exposure) and, if negative, again 48 hours after the first negative test and, if negative, again 48 hours after the second negative test. This will typically be at day 1 (where day of exposure is day 0), day 3, and day 5.

- If additional cases are identified, testing should continue on affected unit(s) or facility-wide every 3-7 days until there are no new cases for 14 days.
 - If antigen testing is used, more frequent testing (every 3 days), should be considered as antigen tests can be less sensitive than other NAAT (molecular) tests.

See Figures 1-3 (next page) for guidance on choosing an outbreak response.

Figures 1-3. Algorithm for Choosing an Outbreak Response, Contact-tracing-based vs. Broad-based approach

FIGURE 1. CHOOSING AN OUTBREAK RESPONSE METHOD FOR LONG-TERM CARE FACILITIES

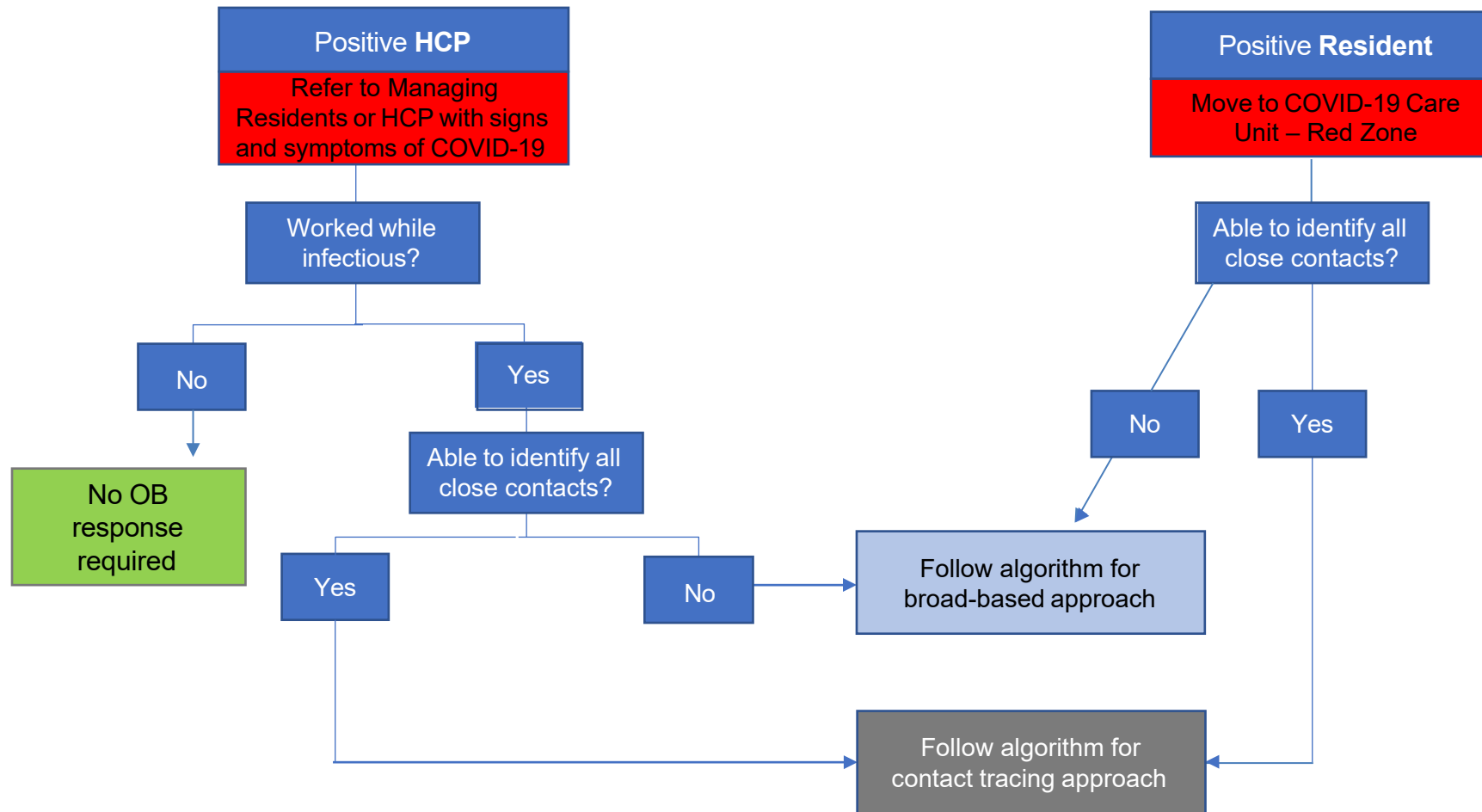


FIGURE 2. IMPLEMENTING A CONTACT-TRACING-BASED APPROACH TO OUTBREAK RESPONSE FOR LONG-TERM CARE FACILITIES

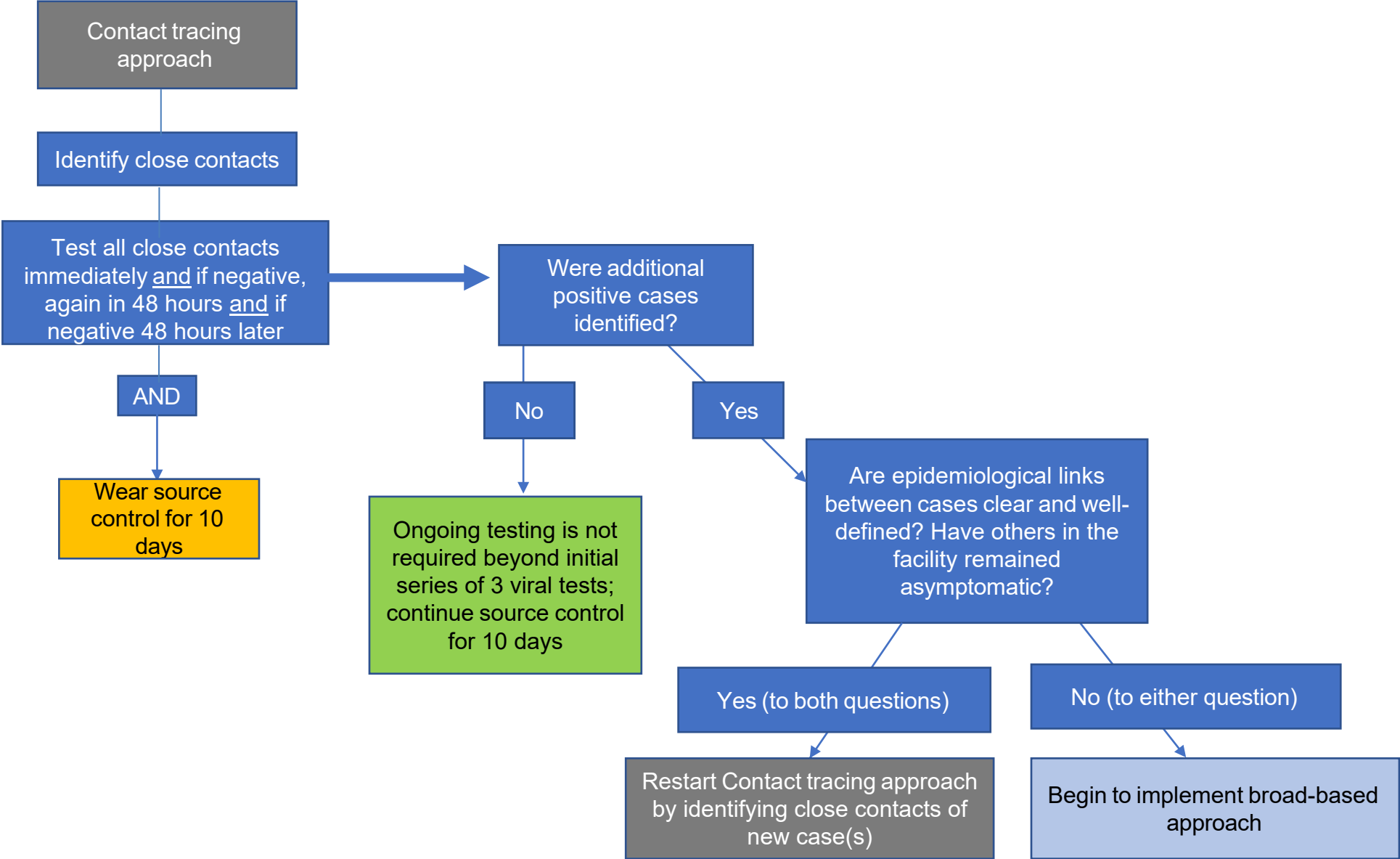
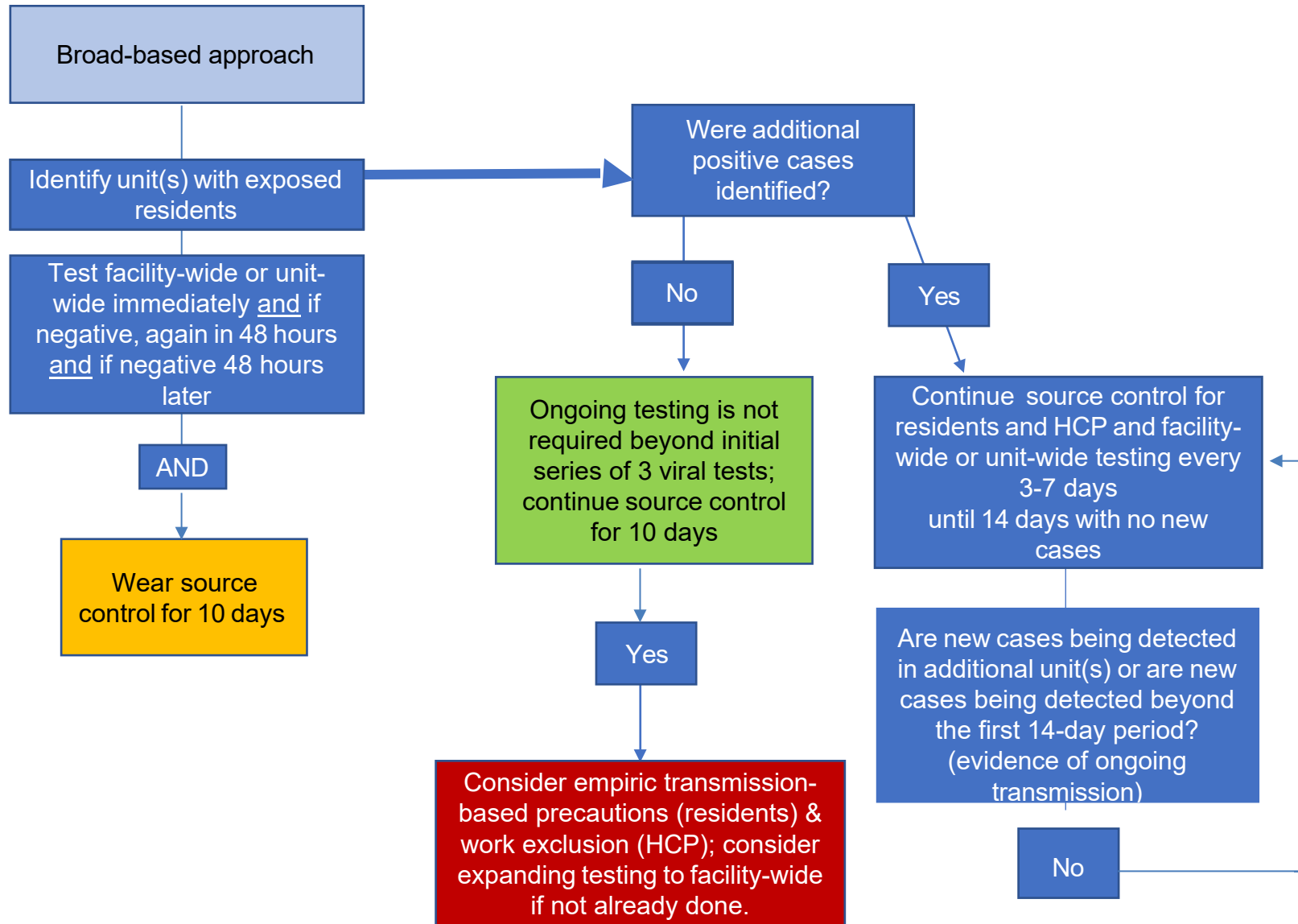


FIGURE 3. IMPLEMENTING A UNIT-BASED OR FACILITY-WIDE OR BROAD-BASED APPROACH TO OUTBREAK RESPONSE FOR LONG-TERM CARE FACILITIES



Managing Residents or HCP with signs and symptoms of COVID-19

Residents with signs and symptoms of COVID-19

If a resident develops signs and symptoms of COVID-19:

- Perform viral testing.
 - If using [NAAT](#) (molecular) such as reverse transcription polymerase chain reaction (RT-PCR), a single negative test is sufficient in most circumstances. If a higher level of clinical suspicion for COVID-19 infection exists, consider maintaining transmission-based precautions and confirming with a second negative NAAT.
 - If using an antigen test, a negative result should be confirmed by either a negative NAAT or a second negative antigen test taken 48 hours after the first negative test, or in accordance with manufacturer instructions.
- Implement empiric transmission-based precautions while results are pending.
 - If the resident has a roommate, refer to resident cohorting guide.
 - Do not place a person with suspected COVID-19 into a COVID-19 Care Unit prior to confirmation of infection by positive test result.
- If a resident suspected of having COVID-19 is never tested, the decision to discontinue transmission-based precautions can be made based on time from symptom onset as described in the isolation section. Ultimately, clinical judgment and suspicion of COVID-19 determine whether to continue or discontinue empiric transmission-based precautions.
- Additionally, it may be difficult to tell the difference between influenza, COVID-19, and other acute respiratory infections based on symptoms alone. Consider testing for pathogens other than COVID-19 and initiating appropriate infection prevention precautions for symptomatic older adults.

Duration of Transmission-Based Precautions for Residents with COVID-19

Determining when to discontinue transmission-based precautions (TBP) for residents with COVID-19 is influenced by the severity of symptoms and the presence of immunocompromising conditions. Residents should self-monitor and seek re-evaluation if symptoms worsen or rebound. If symptoms rebound, place residents back in isolation until they again meet the criteria below to discontinue TBP for COVID-19 unless an alternative diagnosis is identified. Additionally, residents, should continue to wear source control until symptoms resolve or, for those who never developed symptoms, until they meet the criteria to end isolation and then revert to facility policy for source control for residents.

The tables below provide recommendations for discontinuation of TBP for residents.

Table 10. Discontinuation Criteria for Transmission-Based Precautions for Residents with COVID-19 who are NOT moderately to severely immunocompromised

Residents who are NOT moderately to severely immunocompromised*	Discontinuation Criteria
Mild to moderate illness	<ul style="list-style-type: none"> At least 10 days have passed since symptoms first appeared; AND At least 24 hours have passed since last fever without the use of fever-reducing medications; AND Symptoms (e.g., cough, shortness of breath) have improved.
Asymptomatic throughout infection	<ul style="list-style-type: none"> At least 10 days have passed since the date of their first positive viral test.
Severe to critical illness	<ul style="list-style-type: none"> At least 10 days and up to 20 days have passed since symptoms first appeared; AND At least 24 hours have passed since last fever without the use of fever-reducing medications; AND Symptoms (e.g., cough, shortness of breath) have improved.

* In general, residents who are hospitalized for COVID-19 should be maintained in Transmission-Based Precautions for the time period described for patients with severe to critical illness

Table 11. Discontinuation Criteria for Transmission-Based Precautions for Residents with COVID-19 who ARE Moderately to Severely Immunocompromised

Residents who ARE moderately to severely immunocompromised*	Discontinuation Criteria
Symptomatic throughout their infection	<ul style="list-style-type: none"> Resolution of fever without the use of fever-reducing medications AND Symptoms (e.g., cough, shortness of breath) have improved AND Negative results from at least two consecutive respiratory specimens collected ≥ 48 hours apart tested using an antigen test or NAAT.
Asymptomatic throughout their infection	<ul style="list-style-type: none"> Negative results from at least two consecutive respiratory specimens collected ≥ 48 hours apart tested using an antigen test or NAAT.

* Individuals who are moderately to severely immunocompromised may produce replication-competent virus beyond 20 days after symptom onset or, for those who were asymptomatic throughout their infection, the date of their first positive viral test. Use of a test-based strategy and consultation with an infectious disease specialist or other expert is recommended to determine when TBP may be discontinued for these residents.

HCP with signs and symptoms of COVID-19

HCP with even mild symptoms of COVID-19 should be prioritized for viral testing with approved NAAT (molecular) or antigen detection assays regardless of vaccination status. Symptomatic HCP should be restricted from work pending results.

- If using NAAT (molecular), a single negative test is sufficient in most circumstances. If a higher level of clinical suspicion for COVID-19 infection exists, consider maintaining work restrictions and confirming with a second negative NAAT.
- If using an antigen test, a negative result should be confirmed by either a negative NAAT or second negative antigen test taken 48 hours after the first negative test.
- When testing a person with symptoms of COVID-19, negative results from at least one viral test indicate that the person most likely does not have an active COVID-19 infection at the time the sample was collected.
- If viral testing results are negative, return to work should be based on the facility's policy. If another diagnosis is suspected or confirmed, return to work decisions should be based on their other suspected or confirmed disease/condition, or a physician consultation.
- If test results are positive, follow guidance as outlined in the Staffing- Return to Work section.

Return to Work Criteria for HCP with COVID-19

Criteria to determine when HCP with COVID-19 can return to work are influenced by severity of symptoms and the presence of immunocompromising conditions regardless of vaccination status. After returning to work, HCP should self-monitor for symptoms and seek re-evaluation from occupational health if symptoms recur or worsen. If symptoms recur HCP should be restricted from work and follow recommended practices to prevent transmission to others (e.g., use of well-fitting source control) until they again meet the healthcare criteria below to return to work unless an alternative diagnosis is identified. Once HCP have returned to work, they should wear source control until all symptoms have completely resolved or are at baseline. Then they can follow facility source control policy.

The table below provides recommendations for return to work for HCP.

Table 12. Return to Work Criteria for HCP with COVID-19 who are NOT Moderately to Severely Immunocompromised

HCP who are NOT moderately to severely immunocompromised	Return to Work Criteria
Mild to moderate illness	<ul style="list-style-type: none"> At least 7 days have passed since symptoms first appeared; AND A negative antigen* or NAAT (molecular) is obtained within 48 hours prior to returning to work OR 10 days have passed
	if testing is not performed or the HCP tests positive at day 5-7; AND <ul style="list-style-type: none"> At least 24 hours have passed since last fever without the use of fever-reducing medications; AND Symptoms (e.g., cough, shortness of breath) have improved.
Asymptomatic throughout infection	<ul style="list-style-type: none"> At least 7 days have passed since the date of their first positive viral test; AND A negative antigen* or NAAT (molecular) is obtained within 48 hours prior to returning to work; OR 10 days have passed if testing is not performed or the HCP tests positive at day 5-7.
Severe to critical illness	<ul style="list-style-type: none"> At least 10 and up to 20 days have passed <i>since symptoms first appeared</i>; AND At least 24 hours have passed since last fever without the use of fever-reducing medications; AND Symptoms (e.g., cough, shortness of breath) have improved.

* If using an antigen test, HCP should have a negative test obtained on day 5 and again 48 hours later.

Table 13. Return to Work Criteria for HCP with COVID-19 who ARE Moderately to Severely Immunocompromised

HCP who ARE moderately to severely immunocompromised*	Return to Work Criteria
Severe to critical illness	<ul style="list-style-type: none"> Resolution of fever without the use of fever-reducing medications; AND Improvement in symptoms (e.g., cough, shortness of breath); AND Results are negative from at least two consecutive respiratory specimens collected 48 hours apart tested using an antigen test or NAAT.
Asymptomatic throughout infection	<ul style="list-style-type: none"> Results are negative from at least two consecutive respiratory specimens collected ≥ 48 hours apart (total of two negative specimens) tested using an antigen test or NAAT.

* Individuals who are moderately to severely immunocompromised may produce replication-competent virus beyond 20 days after symptom onset or, for those who were asymptomatic throughout their infection, the date of their first positive viral test. Use of a test-based strategy and consultation with an infectious disease specialist or other expert and an occupational health specialist is recommended to determine when these HCP may return to work.

Identification of Exposure to Residents, HCP, and Visitors

In the event of an OB, it is important to determine if there are additional facility exposures to prevent transmission among residents, HCP, and visitors. Depending upon the extent of the OB, facilities can choose contact-tracing or broad-based outbreak response. Descriptions of the different OB response are included in the [Response to a COVID-19 Outbreak](#) Section.

Resident Exposure: Defined as someone who has been within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period, during their infectious period. The infectious period begins from 2 days before illness onset (or, for asymptomatic patients, 2 days before the specimen collection date of the positive test).

HCP Exposure: There are 3 types of HCP exposure that can occur which include community-related exposure, household exposure, and occupational exposure:

Table 14. HCP Exposure Types

Exposure Type	Definition
Community-related	<ul style="list-style-type: none">• Having close contact (within 6 feet for a total of 15 minutes or more) with an infectious person with COVID-19 in the community/outside of the LTCF. When an HCP is exposed to COVID-19 within a healthcare setting as a patient or visitor, the criteria for community-related exposure applies.
Household exposure	<ul style="list-style-type: none">• Sharing a household with an individual who has COVID-19. For HCP who share a household with someone who has COVID-19, work restrictions are generally not required. For additional information regarding situations when work restrictions may be considered, please refer to Managing Individuals with Exposure. The testing and work restrictions (if applicable) interval may be extended to accommodate ongoing exposure in the household.
High-risk (occupational)	<ul style="list-style-type: none">• Exposure of HCP eyes, nose, or mouth to material potentially containing COVID-19, particularly if present in the room for an aerosol-generating procedure. Occupational exposures occur when:<ul style="list-style-type: none">○ HCP not wearing a respirator (or if wearing a facemask, the person with COVID-19 was not wearing a cloth mask or facemask);○ HCP not wearing eye protection if the person with SARS-CoV-2 infection was not wearing a cloth mask or facemask; OR○ HCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure.

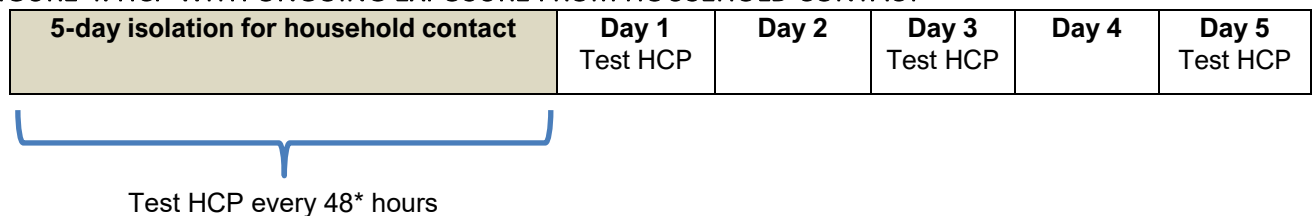
Managing Individuals with an Exposure/Duration of Empiric Transmission-Based Precautions

If a resident or HCP has been identified as having an exposure to an individual with COVID-19, empiric transmission-based precautions (residents) and work restrictions (HCP) are generally not recommended. To prevent further transmission, the following should be stressed for residents and HCP following an exposure:

- Maintain source control for 10 days following exposure.
- Test with a series of 3 viral tests. Testing should occur immediately following the exposure (but not within 24 hours of exposure) and if negative, another test at 48 hours, and if negative another test 48 hours later. If results are positive, no further testing is needed, and the resident is to be placed in transmission-based precautions and HCP is to be restricted from work.
- Test residents and HCP who develop symptoms of COVID-19 as soon as possible.

For HCP with an ongoing household exposure who are unable to isolate from the COVID-19 positive case, testing should begin during the exposure and extend for 5 days after the COVID-19 positive case isolation time frame ends.

FIGURE 4. HCP WITH ONGOING EXPOSURE FROM HOUSEHOLD CONTACT



*Test immediately (but not earlier than 24 hours after the exposure) and, if negative, again 48 hours after the first negative test and, if negative, again 48 hours after the second negative test.

While empiric transmission-based precautions (residents) and work restrictions (HCP) are generally not recommended, it may be considered if:

- Resident/HCP is unable to be tested or wear source control as recommended for the 10 days following their exposure.
- Resident/HCP is moderately to severely immunocompromised.
- Resident/HCP is residing/working on a unit with others who are moderately to severely immunocompromised.
- Resident/HCP is residing/working on a unit experiencing ongoing SARS-CoV-2 transmission that is not controlled with initial interventions.

Managing New Admissions and Readmissions

Create a plan for managing new admissions and readmissions. Newly admitted residents and residents who have left the facility for 24 hours or longer should be managed according to your facility policy. **Vaccination status is no longer used to inform screening testing or source control.** LTCFs will use the following guidance for managing new admissions and residents who have left the facility for 24 hours or longer:

- Admission testing is at the discretion of the facility. Some general testing guidance is included below.
- Empiric use of transmission-based precautions is generally not necessary for new admissions or for residents who leave the facility for less than 24 hours (e.g., for medical appointments, community outings) unless they meet criteria described [here](#).

In general, testing is not necessary for asymptomatic people who have recovered from COVID-19 in the prior 30 days. Testing should be considered for those who have recovered in the prior 31-90 days; however, an antigen test instead of a NAAT is recommended. This is because some people may remain NAAT positive but not be infectious during this period.

If a new admission tests positive and was not in empiric transmission-based precautions during the infectious period, initiate OB response.

Residents Who Leave the Facility for Medical or Social Reasons

Remind residents who leave the facility, as well as those accompanying them (e.g., transport personnel, family members, etc.) to follow all recommended IPC practices including well-fitting source control (when required), physical distancing, and hand hygiene.

For residents going to medical appointments, regular communication between the medical facility and the nursing home is essential to help identify residents with potential exposures or symptoms of COVID-19 before they enter the facility so that proper precautions can be implemented.

Residents who have left the facility for greater than 24 hours for any reason should be managed as described above. A risk assessment ([Reference 5](#)) for residents leaving the facility for any reason can be used to determine exposure.

Upon return to the facility, screen and monitor residents for signs and symptoms of COVID-19.


- If the resident develops signs or symptoms consistent with COVID-19 after returning to the facility, see [Managing Residents With Signs and Symptoms of COVID-19](#) section for next steps regarding testing and empiric transmission-based precautions.
- If the resident is asymptomatic but had close contact with someone with COVID-19 infection, empiric transmission-based precautions are not required. However, the resident should receive a series of three viral tests and wear source control for 10 days following the exposure.

In most circumstances, empiric transmission-based precautions are not recommended for residents who leave the facility for less than 24 hours (e.g., for medical appointments, community outings with family or friends) except in certain situations, described in the CDC's [empiric transmission-based precautions](#) guidance.

Refer to [CMS QSO-20-39-NH](#) for additional guidance on resident outings.

Reference 5. Risk Assessment for Residents who Leave the Facility

Utilize this tool to assess the risk of residents who leave the facility for any reason. **If you answer yes to any of the questions, the resident may be considered at increased risk for COVID-19 exposure.** The facility should consider additional assessment if needed and/or quarantine the individual based on current CDC guidance.

General risk assessment	Yes	No
Did the resident have close contact (less than 6 feet away for a combined total of 15 minutes or more over a 24-hour period) with someone with confirmed COVID-19 or who had symptoms consistent with COVID-19 while away from the facility, and now the resident is symptomatic?	<input type="checkbox"/>	<input type="checkbox"/>
Did the resident neglect to wear well-fitting source control if circumstances recommended the use of source control (except for eating or drinking) while away from the facility?	<input type="checkbox"/>	<input type="checkbox"/>
Did the resident neglect to practice physical distancing (e.g., 6 feet separation) while away from the facility if circumstances recommended the use of physical distancing (except when receiving medical care or transfer assistance)?	<input type="checkbox"/>	<input type="checkbox"/>
Was the patient resident transported in a vehicle with occupants not wearing source control?	<input type="checkbox"/>	<input type="checkbox"/>
Additional risk assessment specific to medical appointments		
Does the outside healthcare facility treat patients with known or suspected COVID-19?	<input type="checkbox"/>	<input type="checkbox"/>
Does the outside healthcare facility have an outbreak of COVID-19 or documented transmission among its staff or patients?	<input type="checkbox"/>	<input type="checkbox"/>
Did transport services and/or the outside facility fail to adhere to source control, physical distancing, and infection prevention measures while the patient/resident was in their care?	<input type="checkbox"/>	<input type="checkbox"/>
Did the resident leave the facility for >24 hours?	<input type="checkbox"/>	<input type="checkbox"/>
If you answered yes to any of the questions above, STOP – The resident/patient may be at increased risk for COVID-19 exposure and should be managed as described in the Managing New Admissions and Readmissions section.		

Adapted from The New Jersey Department of Health

Pre-Exposure Prophylaxis and Treatment

Therapeutic options are available for the treatment of COVID-19 that can help reduce the risk of becoming severely ill or requiring hospitalization. Treatment is especially encouraged for those who are at high risk for severe illness from SARS-CoV-2 infection. This includes people who are 65 years or age or older and/or have certain medical conditions. If a resident tests positive for SARS-CoV-2, their healthcare provider can determine if treatment is needed, even if symptoms are mild. To be effective, treatment must be started within days after a resident first develops symptoms. For individuals who are not yet sick with COVID-19, a pre-exposure prophylaxis is available for preventing infection. If a physician-to-physician consultation is needed, call 1-877-PA-HEALTH (1-877-724-3258) or visit a [Test-to-Treat site](#).

Therapeutic Resources

- [COVID-19 Treatments and Medications](#)
- [COVID-19 Therapeutics Locator](#)

Multi-Pathogen Outbreak Response

For the purposes of this toolkit, multi-pathogen outbreaks are those in which a facility is experiencing an active COVID-19 outbreak, along with an outbreak involving at least one additional pathogen (e.g., Influenza A, RSV, norovirus, etc.).

To determine if facility is experiencing a multi-pathogen outbreak, Table 15 below summarizes the definitions of an outbreak for three primary viruses. Case definitions for influenza and norovirus can be found in the [Toolkit for Control of Norovirus Outbreaks in Long- Term Care Facilities](#) and the [Influenza Outbreaks in Long-term Care Facilities: Toolkit for Facilities](#). Many of the COVID-19 response and prevention activities will also be applicable to other agents. Being prepared for COVID-19 will enable LTCFs to be prepared for various disease events.

Table 15. Outbreak Definitions

Virus*	Outbreak Definition
SARS-CoV-2	<ul style="list-style-type: none">• Resident: New nursing home-onset of COVID-19 that originated in the nursing home in a resident. It does not include residents who were known to have COVID-19 on admission to the facility and were placed in isolation to prevent transmission to others in the facility.• HCP: New onset of COVID-19 in an HCP who was working in the facility while infectious (during the 2 days prior to symptom onset or positive test, if asymptomatic).
Influenza	<ul style="list-style-type: none">• One laboratory-confirmed influenza positive case along with other cases of respiratory illness in a unit of a long-term care facility OR• Two or more laboratory-confirmed influenza positive cases OR• Two cases of respiratory illness or influenza-like-illness within 72 hours.• Note that if one patient is positive for influenza A and another patient is positive for influenza B at the same time, these are considered two separate outbreaks because they are caused by two separate viruses.
Norovirus	<ul style="list-style-type: none">• An occurrence of two or more similar illnesses resulting from a common exposure that meets either the confirmed or probable case definition for norovirus.
Other Respiratory Viral or influenza-like illness (negative results for SARS-CoV-2 and Influenza)	<ul style="list-style-type: none">• Two or more residents that have influenza-like illness symptoms within one incubation period. Incubation periods vary between respiratory viruses, but are usually between 12 hours and 5 days, extending up to 8 days for RSV and parainfluenza.

Reminder: It is important to note that isolation precautions may be different from one pathogen to another.

More information on isolation precautions can be found in these two resources: [2007 Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings](#) and [Type and Duration of Precautions Recommended for Select Infections and Conditions](#).

Determining the End of an Outbreak

An outbreak ends when there have been 14 days without any additional cases that meet outbreak criteria. Identification of a single new case 14 days after the last known case would meet the criteria for a new outbreak and prompt the need for a new outbreak response.

The date of the most recent positive test counts as day zero when determining the end of the outbreak. Upon completion of day 14 without any additional cases, the outbreak is deemed complete.

AFTER THE OUTBREAK: Evaluation and Lessons Learned

Post-Outbreak Response

Before the facility returns to routine operations, it is important to reflect on the strengths of the outbreak response and the areas needing improvement.

Recognizing and implementing lessons learned from outbreaks helps LTCFs be ready for the next outbreak or pandemic event and will ensure the safety and health of residents, HCP, and visitors.

Summarize the Outbreak Experience

Create a summary report (Reference 7 below) for all COVID-19 outbreaks, and any other outbreaks involving other pathogens, to be shared and saved. These reports will serve as a source of information that can be referred to in future outbreaks. The outbreak summary report should include the following information:

- Facility Information;
- Case Definition;
- Outbreak Period Information;
- Laboratory Information;
- HCP Information;
- Resident Outcome;
- Facility Outbreak Control Measures; and
- Number of New Cases per Day.

Conduct Outbreak Evaluation

It is critical for LTCFs to discuss how effective their detection and response activities were during a COVID-19 outbreak. Doing so will help to improve future outbreak response and decide if changes need to be made to facility policies and procedures.

An outbreak evaluation needs to be done with a multidisciplinary team to include:

- Identifying the cause: what was the root cause of the outbreak?
- Recognizing the outbreak: was the outbreak recognized in a timely manner?
- IPC measures: were the appropriate IPC measures taken and were they implemented in a timely manner?
- Communication: how effective were the facility's efforts to inform and educate HCP, residents, and visitors? Was the health department appropriately notified?

Share Outbreak Summary Report and Evaluation Findings

Once the outbreak summary report and evaluation has been completed, the findings and recommendations for quality improvement should be shared with the LTCF's Infection Control Committee and facility leadership and potentially public health partners as needed to allow for quality assurance and performance improvement.

Reference 6. Outbreak Summary Report

This form was created to help LTCFs summarize findings, actions, and outcomes of the outbreak investigation and response. This summary report will serve as a record that the facility can refer to for future outbreaks as well as highlight areas for improvement in outbreak prevention and response. This form should be filled out by the facility infection preventionist with support from other front-line HCP (e.g., physicians or other providers, nurses, laboratory, etc.).

Content

Section 1: Facility Information

- Name and phone number of local or state health department contact
- Date facility first contacted local or state public health
- Total number of residents in the facility at the time of the outbreak
- Total number of HCP documented as working in the facility at the time of the outbreak
- Brief summary (to be completed over the course of the outbreak) of prevention activities, new cases/exposures, etc. of the outbreak

Section 2: Case Definition

Provide a description of the criteria used to determine cases among residents and HCP. This could include signs and symptoms, having a positive diagnostic test, and timeframe during which individuals may have been involved. If there are DOH guidelines for what constitutes a case definition/outbreak use those. Case Definition will change depending on the pathogen causing the outbreak.

Section 3: Outbreak Period Information

- Outbreak start date (date first person developed signs and symptoms)
- Outbreak end date (date last person recovered from outbreak illness and became symptom-free for 24 hours or removed from isolation)
- Total number of cases

Section 4: Laboratory Information

Pathogen(s) identified during outbreak and laboratory tests used to identify them

Section 5: HCP Information

- Were staff providing care to residents during infectious window period?
- Did any staff seek medical attention during outbreak?

Section 6: Resident Outcome

Number of resident hospitalizations and deaths (if any).

Section 7: Facility Outbreak Control Measures

List out all infection control measures implemented at the facility- during the outbreak and start date of the measure

Example: Educated facility HCP on hygiene practices: MM/DD/YYYY

Section 8: Number of New Cases per Day

Number of new resident and HCP cases each day of the outbreak.

Section 1: Facility Information

Health Dept. Contact Name/phone number:

Date First Notified DOH:

Total number of Residents:

Total number of HCP:

Brief Summary:

Definitions

The following definitions have been made available for reference to define common terminology used throughout this guide.

Airborne Infection Isolation Rooms (AIIRs): AIIRs are single-patient rooms at negative pressure relative to the surrounding areas, and with a minimum of 12 air changes per hour (6 air changes per hour are allowed for AIIRs last renovated or constructed prior to 1997). Air from these rooms should be exhausted directly to the outside or be filtered through a high-efficiency particulate air (HEPA) filter directly before recirculation. Room doors should be kept closed except when entering or leaving the room, and entry and exit should be minimized. Facilities should monitor and document the proper negative-pressure function of these rooms.

Cleaning: Removal of dirt and organic matter from surfaces using soap or detergents.

- **Routine cleaning and disinfection** of resident areas occurs while the resident is admitted, focuses on the resident zones, and aims to remove organic material and reduce microbial contamination to provide a visually clean environment.
- **Scheduled cleaning** occurs concurrently with routine or terminal cleaning and aims to reduce dust and soiling on low touch items or surfaces. Perform scheduled cleaning on items or surfaces that are not at risk for soiling under normal circumstances, using neutral detergent and water. But if they are visibly soiled with blood or body fluids, clean and disinfect these items as soon as possible.
- **Terminal cleaning** is an enhanced cleaning and disinfection process which occurs after the resident is discharged or transferred, includes the entire room and aims to remove organic material and significantly reduce and eliminate microbial contamination to ensure that there is no transfer of microorganisms to the next resident.

Close contact: Someone who was within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period, during their infectious period. The infectious period begins from 2 days before illness onset (or, for asymptomatic patients, 2 days prior to specimen collection date of the positive test).

Cloth mask: Textile (cloth) covers that are intended primarily for source control in the community. They are not personal protective equipment (PPE) appropriate for use by healthcare personnel as the degree to which cloth masks protect the wearer might vary. Guidance on design, use, and maintenance of cloth masks is [available](#).

Disinfection: Using chemicals to kill viruses and bacteria on surfaces.

Empiric transmission-based precautions: Use of transmission-based precautions for asymptomatic residents who had close contact or were potentially exposed to someone with COVID-19.

Facemask: OSHA defines facemasks as “a surgical, medical procedure, dental, or isolation mask that is FDA-cleared, authorized by an FDA EUA, or offered or distributed as described in an FDA enforcement policy.” Facemasks are PPE and are often referred to as surgical masks or procedure masks. Use facemasks according to product labeling and local, state, and federal requirements. FDA-cleared surgical masks are designed to protect against splashes and sprays and are prioritized for use when such exposures are anticipated, including surgical procedures. Facemasks that are not regulated by FDA, such as some procedure masks, which are typically used for isolation purposes, may not provide protection against splashes and sprays.

Healthcare Personnel (HCP): HCP refers to all paid and unpaid persons serving in healthcare settings who have the potential for direct or indirect exposure to patients or infectious materials, including body substances (e.g., blood, tissue, and specific body fluids); contaminated medical supplies, devices, and equipment; contaminated environmental surfaces; or contaminated air. HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services (housekeeping), laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

Healthcare settings: refers to places where healthcare is delivered and includes, but is not limited to, acute care facilities, long-term acute-care facilities, inpatient rehabilitation facilities, nursing homes, home healthcare, vehicles where healthcare is delivered (e.g., mobile clinics), and outpatient facilities, such as dialysis centers, physician offices, dental offices, and others.

High-touch surfaces: Surfaces that individuals frequently touch which become easily contaminated with microorganisms and picked up by others via their hands.

- Examples of high-touch surfaces include pens, counters, tables, doorknobs, light switches, handles, stair rails, elevator buttons, desks, keyboards, phones, toilets, faucets, and sinks.

Immunocompromised: For the purposes of this guidance, moderate to severely immunocompromising conditions include, but might not be limited to, those defined in CDC’s [Use of COVID-19 Vaccines in the United States](#).

- Other factors, such as end-stage renal disease, may pose a lower degree of immunocompromise and not clearly affect decisions about need for or duration of transmission-based precautions if the individual had close contact with someone with COVID-19. However, people in this category should consider continuing to practice physical distancing and use of source control while in a healthcare facility, even if they are up to date with all recommended COVID-19 vaccine doses.
- Ultimately, the degree of immunocompromise for the patient is determined by the treating provider, and preventive actions are tailored to each individual and situation.

Isolation: separates people infected with a contagious disease from people who are not infected.

Low-touch surfaces: Surfaces that individuals touch less frequently however potential for contamination with microorganisms remains and may be picked up by others via their hands.

- Examples of low-touch surfaces include walls, vents, surface above shoulder height such as cabinets or cupboards.

Personal Protective Equipment (PPE): A variety of barriers used alone or in combination to protect HCP from contact with infectious agents. PPE includes eye protection (goggles or face shields), gloves, gowns, masks, and respirators.

Resident zone: Considered to be the entirety of the resident's room and bathroom.

Respirator: A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. [Respirators](#) are certified by the CDC/NIOSH, including those intended for use in healthcare.

SARS-CoV-2 Illness Severity Criteria (adapted from the NIH COVID-19 Treatment Guidelines). The studies used to inform this guidance did not clearly define "severe" or "critical" illness. This guidance has taken a conservative approach to define these categories. Although not developed to inform decisions about duration of Transmission-Based Precautions, the definitions in the [National Institute of Health \(NIH\) COVID-19 Treatment](#) Guideline are one option for defining severity of illness categories. The highest level of illness severity experienced by the patient at any point in their clinical course should be used when determining the duration of transmission-based precautions.

Mild Illness: Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging.

Moderate Illness: Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, and a saturation of oxygen (SpO₂) ≥94% on room air at sea level.

Severe Illness: Individuals who have respiratory frequency >30 breaths per minute, SpO₂ <94% on room air at sea level (or, for patients with chronic hypoxemia, a decrease from baseline of >3%), ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO₂/FiO₂) <300 mmHg, or lung infiltrates >50%.

Critical Illness: Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

Source control: Use of well-fitting cloth masks, well-fitting facemasks, or respirators to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing. Source control should not be placed on children under age 2, anyone who cannot wear one safely, such as someone who has a disability or an underlying medical condition that precludes wearing a cloth mask, facemask, or respirator safely, or anyone who is unconscious, incapacitated, or otherwise unable to remove their cloth mask, facemask, or respirator without assistance. Face shields alone are not recommended for source control.

Standard Precautions: Standard Precautions are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where health care is delivered. (**Source:** Guidelines for [Standard Precautions](#)).

Transmission-based precautions: the second tier of basic infection control and are to be used in addition to Standard Precautions for patients who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission (**Source:** Guidelines for [Isolation Precautions](#)).

Up to date: In general, persons are [up to date](#) with COVID-19 vaccines if they have completed a COVID-19 vaccine primary series and received the most recent booster dose recommended by CDC. Vaccine recommendations are based on age, the vaccine first received, and time since last dose. People who are moderately or severely immunocompromised have [different recommendations for COVID-19 vaccines](#).