*One case of COVID-19 in a nursing home is considered an outbreak. The goals of outbreak investigation are (1) to identify potential asymptomatic sources of COVID that caused the outbreak, and (2) to identify other asymptomatic cases involved in the outbreak, minimizing further exposures and facilitating care processes and cohorting, when possible. Testing of symptomatic residents and staff should be performed regardless of the outbreak investigation or exposure history.*

**Definitions:**

**Onset Date:** The date the COVID test swab was done, or the date of onset of symptoms, whichever is earlier.

**Positive Date:** The date the COVID test result was reported. If the person was placed on isolation precautions prior to the date of the test result, use the date that isolation precautions started.

**Protocol:**

1. **New Resident Case**
   1. Interview resident, if resident is able to be interviewed:
      1. Verify symptoms and symptom onset
      2. Inquire about any other residents or visitors who were within 6 feet of the resident for more than 15 minutes total over a 24-hour period from 48 hours before the onset date until the positive date.
   2. Review the medical record for any activities representing potential exposure events from 48 hours before the Onset Date until the Positive Date. Include a review of assessments, progress notes, care plan, dining seating plans, and activity attendance records*.* 
      1. Communal dining or activities, and the other residents that attended. Consider those residents as exposed and place them in quarantine if they are unable to tolerate wearing a mask. *The resident may have been infectious before the Onset Date, generally considered to be a 48-hour period.*
      2. Trips outside of the facility, including office visits, procedures, and hospitalizations. Notify the staff at the destination of the potential exposure.
      3. Dialysis. Notify the dialysis staff of the potential exposure.
      4. Physical, Occupational, or Speech Therapies
      5. Dental care
      6. Eye care
   3. Review the facility visitor log for any potential exposure events in the 2 days prior to the Onset Date or between the Onset Date and the Positive Date. Notify them of the potential exposure.
   4. Review staffing sheets, assignments, and medical record entries (including ADL documentation) to identify any staff members who had an exposure to the resident, starting 2 days prior to the Onset Date up to the Positive Date
      1. For each staff member identified, determine what **specific** care or services were provided to the resident. Only include staff members who provided prolonged services, such as feeding, bathing, dressing, incontinence care, or interview. Do not include staff members who only provided brief service, such as delivering medication or food tray, assistance with phone or TV remote, repositioning, or transfer.
      2. Screen each exposed staff member for symptoms of COVID-19.
   5. Identify all residents who were roommates of the new resident case in the time period starting 48 hours before the onset date until the positive date. These roommates are considered exposed and should be managed using Section (D) of the workflows.
   6. For each resident and staff member identified as having an exposure, determine the First Exposure Date and Last Exposure Date starting 2 days before the Onset Date until the Positive Date. The first exposure date is the first worked day starting 2 days before the Onset Date until the Positive Date. The last exposure date is the last worked day starting 2 days before the Onset Date until the Positive Date. *The date(s) of exposure determine the optimal time for exposure testing for that staff member.*
   7. Exposed staff members should self-monitor for fever and symptoms of COVID-19 for 10 days and not report to work when ill or if testing positive for COVID-19 infection.
   8. For each staff member identified as having an exposure, calculate the date through which they need to wear a respirator (KN95 or N95) or mask at all times, usually for 10 days after the Last Exposure Date. Notify the staff member(s) of their masking requirements:
      1. Must wear a respirator (KN95 or N95) or well-fitting mask at all times when in the facility, removing the mask only when eating or drinking.
      2. Eating and drinking are only permitted in areas where residents are unlikely enter, and while physically distanced from all other people. Exposed staff members cannot eat or drink in a resident care area.
   9. For each resident identified as having an exposure, calculate the date that Source Control (masking) or precautions can be removed following the guidance in COVID-19 Nursing Home [Workflows](https://schabelmd-my.sharepoint.com/:f:/p/scott/Eq9qAHVnwDtHhcOnwvWjlLUBWBeBbSz2BTMOLweY0BfEfw).
   10. Identify any residents on the resident’s nursing unit with onset of COVID-19 in the 14 days prior to the resident’s onset date *(suggesting an outbreak with nosocomial transmission).*
   11. Identify any staff on the resident’s nursing unit with onset of COVID-19 in the 14 days prior to the resident’s onset date (*suggesting an outbreak with nosocomial transmission)*.
   12. Identify residents who share the same day shift CNA assignments as the new resident case. Do not consider these residents exposed if they had no other contact with the new resident case. *Residents on the same assignment may have had similar exposures and should receive asymptomatic targeted testing.*
   13. Report the above findings to the facility infection preventionist and the medical director(s).
   14. **Targeted Testing:** Identify residents with the same day shift CNA assignments as the new resident case. Do not test any residents within 1 month of the onset of confirmed COVID-19 illness or who are being tested for an exposure. *Other residents may have unrecognized COVID-19 infection.*
       1. Test identified residents once who have not had COVID-19 illness in the previous 3 months with a PCR nasopharyngeal swab for COVID-19.
       2. Test identified residents once who have had COVID-19 illness in the previous 3 months with an Antigen test for COVID-19.
   15. **Exposure Testing:** In consultation with the infection preventionist and the medical director(s), identify residents and staff exposed by the new case, for exposure COVID-19 testing. Do not test any residents or staff within 1 month of the onset of confirmed COVID-19 illness.
       1. Test exposed staff, with a nasal specimen (Antigen (preferred) or PCR) every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
       2. Test exposed residents (with a PCR nasopharyngeal swab for COVID-19 resulted by a local lab), regardless of vaccination status, who:
          1. Were roommates of the new resident case.
          2. Participated in the same service or activity as the new case starting 2 days before the Onset Date until the Positive Date.
          3. Test these exposed residents every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
          4. For residents within 3 months of confirmed COVID-19 illness, Point-of-Care Antigen testing is used. *Antigen testing reduces the possibility of identifying a “persistent positive” resident.*
       3. Institute universal use of medical masks for all staff, visitors, and residents (if able to tolerate a mask) of the affected units or areas for 14 days after the Positive Date.
   16. Residents may decline testing.
       1. A registered nurse will provide counseling to the resident regarding the type of test used, the benefits of testing to the resident and the other facility residents, and the risks of declining testing. Document any resident declinations of testing and the counseling provided in the medical record.
       2. Residents who decline testing and have symptoms of COVID-19 illness should be isolated separately from residents who declined testing and do not have symptoms.
       3. Residents with an exposure who decline testing and are unable to tolerate wearing a mask are placed in Quarantine for 10 days after the exposure.
   17. A staff member that refuses testing is considered to have an outdated or incomplete health assessment and shall be prohibited from working for the nursing home until they complete testing.
2. **New Employee/Staff Case**
   1. Complete Contact Tracing beginning 2 days before the Onset Date and continuing until the Positive Date. *The employee may have been infectious before the Onset Date, generally considered to be a 48-hour period.*
      1. Review medical records (including ADL documentation), staffing sheets, and assignments to identify affected residents and staff members.
      2. Residents with close contact (within 6 feet of the new employee case for 15 minutes or longer within a 24-hour period) and who are unable to tolerate wearing a mask are considered exposed and are placed in quarantine.
   2. Identify any residents on the employee’s nursing unit with onset of COVID-19 in the 14 days before the employee’s Onset Date *(suggesting an outbreak with nosocomial transmission).*
   3. Identify any staff on the employee’s nursing unit or in the employee’s department with onset of COVID-19 in the 7 days prior to the new case’s Onset Date *(suggesting an outbreak with nosocomial transmission).*
   4. Interview employee:
      1. Verify swabbing date and Positive Date~~,~~ and symptom Onset Date.
      2. Inquire about any exposures in the 7 days prior to onset, whether inside or outside of the nursing home, including with other staff members or on breaks
         1. Community places or events where social distancing is difficult
         2. Carpooling or using public transportation
         3. Determine what **specific** care or services the employee provided to each resident on each day worked (starting 48 hours prior to Onset Date). Only include prolonged services, such as feeding, bathing, dressing, incontinence care, and interview. Do not include brief service, such as delivering medication or food tray, assistance with phone or TV remote, repositioning, transfer, transport.
            1. Consider these prolonged contacts as exposures and the affected residents are managed per Section (D) of the [Workflows](https://schabelmd-my.sharepoint.com/:f:/p/scott/Eq9qAHVnwDtHhcOnwvWjlLUBWBeBbSz2BTMOLweY0BfEfw)
      3. Notify the employee of the date through which they must remain out of work, and the dates of any needed Return to Work testing. If the employee is returned to work before Day 11 after the Onset Date, notify the employee of the date through which they need to wear a respirator or mask at all times.
   5. For each resident and staff member identified as having an exposure, determine the First Exposure Date and Last Exposure Date starting 2 days before the Onset Date until the Positive Date. The first exposure date is the first worked day starting 2 days before the Onset Date until the Positive Date. The last exposure date is the last worked day starting 2 days before the Onset Date until the Positive Date. *The date(s) of exposure determine the optimal time for exposure testing for that staff member.*
   6. Exposed staff members should self-monitor for fever and symptoms of COVID-19 for 10 days and not report to work when ill or if testing positive for COVID-19 infection.
   7. For each staff member identified as having an exposure, calculate the date through which they need to wear a respirator (KN95 or N95) or well-fitting mask at all times, usually 10 days after the Last Exposure Date. Notify the staff member(s) of their masking requirements:
      1. Must wear a respirator (KN95 or N95) or well-fitting mask at all times when in the facility, removing the mask only when eating or drinking.
      2. Eating and drinking are only permitted in areas where residents are unlikely enter, and while physically distanced from all other people. Exposed staff members may not eat or drink in a resident care area.
   8. For each resident identified as having an exposure, calculate the date that Source Control (masking) or precautions can be removed following the guidance in COVID-19 Nursing Home [Workflows](https://schabelmd-my.sharepoint.com/:f:/p/scott/Eq9qAHVnwDtHhcOnwvWjlLUBWBeBbSz2BTMOLweY0BfEfw).
   9. Report the above findings to the facility infection preventionist and the medical director(s).
   10. **Exposure Testing:** In consultation with the infection preventionist and the medical director(s), identifyresidents and staff exposed by the new case, for COVID-19 testing. Do not test any residents or staff within 1 month of the onset of confirmed COVID-19 illness. Follow this guidance for any new cases identified.
       1. Test exposed staff, with a nasal specimen (Antigen (preferred) or PCR) every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
       2. Test residents (with a PCR nasopharyngeal swab for COVID-19 resulted by a local lab), regardless of vaccination status, who had an exposure to the new staff case.
       3. Test these exposed residents every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
       4. For residents within 3 months of confirmed COVID-19 illness, Point-of-Care Antigen testing is used. *Antigen testing reduces the possibility of identifying a “persistent positive” resident.*
       5. Institute universal use of medical masks for all staff, visitors, and residents (if able to tolerate a mask) of the affected units or areas for 14 days after the Positive Date.
   11. Residents may decline testing.
       1. A registered nurse will provide counseling to the resident regarding the type of test used, the benefits of testing to the resident and the other facility residents, and the risks of declining testing. Document any resident declinations of testing and the counseling provided in the medical record.
       2. Residents who decline testing and have symptoms of COVID-19 illness should be isolated separately from residents who declined testing and do not have symptoms.
       3. Residents with an exposure who decline testing and are unable to tolerate wearing a mask are placed in Quarantine for 10 days after the exposure.
   12. A staff member that refuses testing is considered to have an outdated or incomplete health assessment and shall be prohibited from working for the nursing home or adult care facility until they complete testing.
3. **New Visitor Case**
   1. Complete Contact Tracing beginning 48 hours prior to the Onset Date and continuing until the 14 days after the Onset Date or the last visit to the facility, whichever is earlier. *The visitor may have been infectious before the Onset Date, generally considered to be a 48-hour period.*
   2. Review the facility visitor log for any potential exposure events in the 48 hours prior to the Onset Date or between the Onset Date and the Positive Date. Identify all residents visited by the visitor.
   3. Interview visitor:
      1. Verify swabbing date and Positive Date, date(s) of visit(s), and symptom Onset Date.
      2. The duration of the visit, any close contact with the resident, and mask use.
      3. Any other residents, staff or visitors who were within 6 feet of the visitor for more than 15 minutes total over a 24-hour period, and if PPE was used.
      4. Inquire about any of the visitor’s other contacts or family members who have visited the facility or may visit the facility. Begin investigations for all such contacts.
      5. If the visitor entered any resident unit or other areas of the building where residents were present.
      6. If the visitor and the resident maintained at least 6 feet of distance from each other for the entire duration of the visit
   4. Interview resident(s) visited by the visitor case.
      1. Duration of the visit, close contact with the visitor, and mask use.
      2. Any other residents, staff or visitors who were within 6 feet of the visitor for more than 15 minutes total over a 24-hour period, and if PPE was used.
      3. If the visitor entered any resident unit or other areas of the building where residents were present.
      4. If the visitor and the resident maintained at least 6 feet of distance from each other for the entire duration of the visit
   5. Interview staff on duty during the visitor’s visit(s).
      1. Duration of the visit, close contact with the visitor, and mask use.
      2. Any other residents, staff or visitors who were within 6 feet of the visitor for more than 15 minutes total over a 24-hour period, and if PPE was used.
      3. If the visitor entered any resident unit or other areas of the building where residents were present.
      4. If the visitor and the resident maintained at least 6 feet of distance from each other for the entire duration of the visit
   6. Report the above findings to the facility administrator, infection preventionist, and the medical director(s).
   7. The resident(s) and staff member(s) who received the visit(s) should be treated as exposed.
      1. Exposed staff members should self-monitor for fever and symptoms of COVID-19 for 10 days and not report to work when ill or if testing positive for COVID-19 infection.
      2. For each staff member identified as having an exposure, calculate the date through which they need to wear a respirator (KN95 or N95) or well-fitting mask at all times, usually 10 days after the Last Exposure Date. Notify the staff member(s) of their masking requirements:
         1. Must wear a respirator (KN95 or N95) or well-fitting mask at all times when in the facility, removing the mask only when eating or drinking.
         2. Eating and drinking are only permitted in areas where residents are unlikely enter, and while physically distanced from all other people. Exposed staff members may not eat or drink in a resident care area.
      3. For each resident identified as having an exposure, calculate the date that Source Control (masking) or precautions can be removed following the guidance in COVID-19 Nursing Home [Workflows](https://schabelmd-my.sharepoint.com/:f:/p/scott/Eq9qAHVnwDtHhcOnwvWjlLUBWBeBbSz2BTMOLweY0BfEfw).
   8. **Exposure Testing:** In consultation with the infection preventionist and the medical director(s), identify residents and staff exposed by the new visitor case, for exposure COVID-19 testing, regardless of vaccination status. Do not test any residents or staff within 1 month of the onset of confirmed COVID-19 illness. Follow this guidance for any new cases identified.
      1. Test exposed staff, with a nasal specimen (Antigen (preferred) or PCR) every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
      2. Test exposed residents who received visits within 2 days of the Onset Date.
         1. Test these exposed residents every other day starting 1 day after the First Exposure Date and continuing until 6 days after the Last Exposure Date (usually a total of 3 tests).
         2. For residents within 3 months of confirmed COVID-19 illness, use Point-of-Care Antigen testing. *Antigen testing reduces the possibility of identifying a “persistent positive” resident.*
   9. Residents may decline testing.
      1. A registered nurse will provide counseling to the resident regarding the type of test used, the benefits of testing to the resident and the other facility residents, and the risks of declining testing. Document any resident declinations of testing and the counseling provided in the medical record.
      2. Residents who decline testing and have symptoms of COVID-19 illness should be isolated separately from residents who declined testing and do not have symptoms.
      3. Residents with an exposure who decline testing and are unable to tolerate wearing a mask are placed in Quarantine for 10 days after the exposure.
   10. A staff member that refuses testing is considered to have an outdated or incomplete health assessment and shall be prohibited from working for the nursing home or adult care facility until they complete testing.
4. **New Resident or Staff Case, Unable to do Contact Tracing.  
   (Also known as Geographic Outbreak Management)**

Contact tracing is less effective in a larger outbreak (more than 3 new resident or staff cases within 7 days) and when adequate numbers of staff trained to do the contact tracing are not available. Consult the medical director(s) when abandonment of contact tracing is considered.

* 1. Identify Residents and Staff for geographic outbreak management. Determine the geographic areas of the facility where positive residents and/or staff were present, starting 2 days before the most recent case Onset Date. If over 75% of the facility is affected, test all facility residents and staff. Include all staff who routinely these areas or are assigned to these areas, including non-clinical staff and staff from non-nursing disciplines.
  2. All staff members should self-monitor for fever and symptoms of COVID-19 for 14 days after the most recent Onset Date and not report to work when ill or if testing positive for COVID-19 infection.
  3. All residents in the affected geographic areas who are unable to tolerate wearing a mask are placed in quarantine for 14 days after the most recent case Positive Date. Follow Section (D) of the Workflows in caring for these residents.
  4. All staff members in the affected geographic areas should wear eye protection (face shield) when within 6 feet of a resident, and a respirator (not a mask) at all times for 14 days after the most recent case Positive Date. Notify the staff member(s) of their respirator and eye protection requirements:
     1. Must wear a respirator (not a mask) at all times when in the facility, removing the respirator only when eating or drinking.
     2. Must wear eye protection when within 6 feet of a resident.
     3. Eating and drinking are only permitted in areas where residents are unlikely enter, and while physically distanced from all other people. These staff members may not eat or drink in a resident care area.
  5. Test all identified residents and staff every other day until at least 3 tests are performed. If additional cases are identified, test all identified residents and staff every 2-3 days for 10 days after the most recent case Onset Date.
  6. Document all residents and staff identified for testing and the dates and results of all tests.
  7. Do not test any residents or staff within 1 month of the onset of confirmed COVID-19 illness.
  8. For staff and residents within 3 months of confirmed COVID-19 illness, Point-of-Care Antigen testing is used. *Antigen testing reduces the possibility of identifying a “persistent positive” resident.*
  9. Residents may decline testing.
     1. A registered nurse will provide counseling to the resident regarding the type of test used, the benefits of testing to the resident and the other facility residents, and the risks of declining testing. Document any resident declinations of testing and the counseling provided in the medical record.
     2. Residents who decline testing and have symptoms of COVID-19 illness should be isolated separately from residents who declined testing and do not have symptoms.
     3. Residents with an exposure who decline testing and are unable to tolerate wearing a mask are placed in Quarantine for 14 days after the most recent case Positive Date.
  10. A staff member that refuses testing is considered to have an outdated or incomplete health assessment and shall be prohibited from working for the nursing home or adult care facility until they complete testing.

References:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/case-investigation-contact-tracing.pdf>

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>