Proposed Investigation/Reporting Thresholds and Outbreak Definitions for COVID-19 in Healthcare Settings

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Background

Since November 2020, the Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens (CORHA) and the Council of State and Territorial Epidemiologists (CSTE) have issued investigation and reporting thresholds and outbreak definitions for COVID-19 in healthcare settings based on available scientific resources and expert opinion. Suggested thresholds are intended to expedite facilities' investigation of COVID-19 cases and reporting to public health authorities, thus ensuring early detection of possible outbreaks and timely intervention to prevent the virus' spread. These thresholds may be adapted to reflect current conditions and to the local epidemiology of COVID-19, with recognition that limitations in resources such as staffing may impact capacity for investigation, reporting, and response.

During the Summer of 2023, CORHA updated this guidance based upon the evolving COVID-19 experience of facilities and public health jurisdictions, including changes in community mitigation measures and data reporting triggered by the end of the federal Public Health Emergency (PHE) declaration on May 11, 2023. In addition, updates were aligned to outbreak thresholds for influenza (1,2).

- The reporting thresholds for cases among healthcare personnel (HCP) that previously were tiered by community transmission metrics are now replaced with a single threshold to report HCP cases only if they are associated with at least one facility-acquired case in a patient or resident.
- The outbreak definition for long-term care facilities was changed from one facility-acquired case to two or more facility-acquired cases in residents, reflecting changes in transmission dynamics with the removal of restrictions on visitation and increased levels of immunity from vaccination and prior infection in this setting.
- The outbreak thresholds and definitions for outpatient settings were removed.

Many states and localities have their own outbreak definitions and reporting requirements. The information provided here does not replace state and local COVID-19 reporting requirements. Detailed guidance for surveillance of COVID-19 cases is available from the Centers for Diseases Control and Prevention (CDC) (3). Healthcare facilities should consult public health authorities if they have questions.

Inpatient Setting Thresholds

	Acute Care Hospitals and Critical Access Hospitals	Long-Term Care Facilities (LTCF) and Long-Term Acute Care Hospitals
Threshold for Additional Investigation by Facility	≥1 case of suspect[†], probable[*] or confirmed COVID-19 among HCP[††] or patients 4 or more days after admission	≥1 case of suspect[†], probable[*] or confirmed COVID-19 among HCP[††] or residents OR ≥3 cases of acute illness compatible with COVID-19 among residents with onsetwithin a 72h period
Threshold for Reporting to Public Health	≥2 cases of probable[*] or confirmed COVID-19 among patients 4 or more days after admission for a non-COVID condition, with epi-linkage[¶] OR ≥2 cases of suspect[†], probable[*] or confirmed COVID-19 among HCP[††] **AND** ≥1 case of probable[*] or confirmed COVID-19 among patients 4 or more days after admission for a non-COVID condition, with epi-linkage[§,¶]	≥2 cases of probable[*] or confirmed COVID-19 among residents identified within 7 days OR ≥2 cases of suspect[†], probable[*] or confirmed COVID-19 among HCP[††] **AND** ≥1 case of probable[*] or confirmed COVID-19 among residents, with epi-linkage[§,¶] OR ≥3 cases of acute illness[#] compatible with COVID-19 among residents with onsetwithin a 72h period

	Acute Care Hospitals and Critical Access Hospitals	Long-Term Care Facilities (LTCF) and Long-Term Acute Care Hospitals
Outbreak Definition	≥2 cases of probable* or confirmed COVID-19 among patients 4 or more days after admission for a non-COVID condition, with epi-linkage¶ OR ≥2 cases of suspect†, probable* or confirmed COVID-19 among HCP†† **AND** ≥1 case of probable* or confirmed COVID-19 among patients 4 or more days after admission for a non-COVID condition, with epi-linkage§,¶	≥2 cases of probable* or confirmed COVID-19 among residents, with epi-linkage¶ OR ≥2 cases of suspect†, probable* or confirmed COVID-19 among HCP†† **AND** ≥1 case of probable* or confirmed COVID-19 among residents, with epi-linkage§,¶ AND no other more likely sources of exposure for at least 1 of the cases

*__Probable case__ is defined as a person meeting presumptive laboratory evidence. Presumptive laboratory evidence includes the detection of SARS-CoV-2 specific antigen in a clinical or post-mortem specimen using a diagnostic test performed by a CLIA-certified provider (includes those tests performed under a CLIA certificate of waiver).

†__Suspect case__ is defined as a person meeting supportive laboratory evidence OR meeting vital records criteria with no confirmatory or presumptive laboratory evidence for SARS-CoV-2. Supportive laboratory evidence includes the detection of SARS-CoV-2 specific antigen by immunocytochemistry OR detection of SARS-CoV-2 RNA or specific antigen using a test performed without CLIA oversight.

††__Healthcare Personnel (HCP),__ defined by CDC, include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staffnot 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, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel)(6). Facilities should prioritize investigations of cases in HCPs whose duties require them to have close contact with patients or visitors. Healthcare facility infection prevention or occupational health personnel should, wherever feasible, interview HCP with COVID-19 to identify likely sources of exposure and assess whether there are epi-linkages with other HCP or patient cases.

¶__Epi-linkage among patients or residents__ is defined as overlap on the same unit or ward, or other patient care location (e.g., radiology suite), or having the potential to have been cared for by common HCP withina 7-day time period of each other. Determining epi-linkages requires judgment and may include weighing evidence whether or not patients had a common source of exposure.

§__Epi-linkage among HCP__ is defined as having the potential to have been within 6 ft for 15 minutes or longer while working in the facility during the 7 days prior to the onset of symptoms; for example, worked on the same unit during the same shift, and no more likely sources of exposure identified outside the facility. Determining epi-linkages requires judgment and may include weighing evidence whether or not transmission took place in the facility, accounting for likely sources of exposure outside the facility.

‖During periods of surge and high community transmission rates, it may be impossible to determine whether HCP case exposures and transmission occurred within or outside the facility. However, hospitals should still report suspected outbreaks.

#If resident tests negative for both influenza and SARS-CoV-2, consider testing with a multiplex respiratory viral panel.

Points for Consideration

- An outbreak response or investigation may take many forms depending on the characteristics of the outbreak and healthcare setting. It can involve site visits and facility assessments, collection of additional data that are not captured in standard case investigation or contact tracing, lab-testing of potentially exposed patients and HCPs, guidance related to infection control practices including cohorting, and other forms of technical assistance and phone-based consultations involving the affected facility and with public health jurisdictions responding to the outbreak. Detailed guidance for managing COVID-19 investigations in healthcare settings is available from CDC (9).
- Public health officials may adapt the above thresholds to reflect current conditions and local epidemiology of COVID-19, with recognition that limitations in resources such as staffing may impact both healthcare and public health partners' capacities for investigation, reporting, and response.
- Public health officials may wish to offer additional guidance to long-term care facilities about reporting cases or clusters of suspected COVID-19, tailored to the type of long-term care facility (e.g., Nursing Home vs. Assisted Living vs. Group Home or other type), including general guidance on reporting of residents with severe respiratory infection that results in hospitalization or death (not limited to those with suspected or confirmed COVID-19).
- Public health officials may collaborate with healthcare facilities to inform the public and potentially exposed patients through public notification. Detailed guidance for outbreak notification is available from CORHA (8).
- Distinct thresholds for outpatient settings were removed from this document. Readers may consider the thresholds included above, as well as any state or local COVID-19-specific or general outbreak reporting requirements, to inform thresholds for outpatient settings.

References/Resources

1. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza https://www.idsociety.org/practice-guideline/influenza/#FullRecommendations
2. CDC Interim Guidance for Influenza Outbreak Management in Long-Term Care and Post-Acute Care Facilities https://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm
3. CDC COVID-19 Guidance for Health Departments https://www.cdc.gov/coronavirus/2019-ncov/php/index.html
4. Interim Final Rule (IFC), CMS-3401-IFC, Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency related to Long-Term Care Facility Testing Requirements https://www.cms.gov/files/document/qso-20-38-nh-revised.pdf
5. Interim Final Rule Updating Requirements for Notification of Confirmed and Suspected COVID-19 Cases Among Residents and Staff in Nursing Homes https://www.cms.gov/medicareprovider-enrollment-and-certificationsurveycertificationgeninfopolicy-and-memos-states-and/interim-final-rule-updating-requirements-notification-confirmed-and-suspected-covid-19-cases-among
6. CDC Infection Control, Appendix 2. Terminology https://www.cdc.gov/infectioncontrol/guidelines/healthcare-personnel/appendix/terminology.html
7. Update to the Standardized Surveillance Case Definition and National Notification for SARS-CoV-2 Infection (the virus that causes COVID-19). https://cdn.ymaws.com/www.cste.org/resource/resmgr/ps/ps2022/22-ID-01_COVID19.pdf
8. CORHA Framework for Healthcare-Associated Infection Outbreak Notification https://corha.org/resources/corha-interim-framework-for-healthcare-associated-infection-outbreak-notification/
9. Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVID-19) in Healthcare Settings https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html

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