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

CORHA

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Background

The thresholds and outbreak definitions presented below are based on available scientific resources and expert opinion and intended only as guidance for potential adaptation to the local epidemiology of SARS-CoV-2 virus (COVID-19); for example, states and localities may have their own outbreak definitions and reporting requirements. The information provided here does not replace reporting of COVID-19 as part of state and local COVID-19 surveillance. 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. Detailed guidance for investigation of COVID-19 cases is available from Centers for Diseases Control and Prevention (CDC). 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 (LTACH)
Threshold for Additional Investigation by Facility	• ≥1 case of confirmed COVID-19 in a patient 7 or more days after admission for a non-COVID condition; • ≥1 case of confirmed COVID-19 in Healthcare Personnel (HCP)*	• ≥1 probable† or confirmed COVID-19 case in a resident or HCP*; • ≥3 cases of acute illness compatible with COVID-19 in residents with onset within a 72h period
Threshold for Reporting to Public Health	• ≥2 cases of confirmed COVID-19 in a patient 7 or more days after admission for a non-COVID condition, with epi-linkage‡; • ≥3 cases of confirmed COVID-19 in HCP* with epi-linkage§	• ≥1 probable† or confirmed COVID-19 case in a resident or HCP* • ≥3 cases of acute illness compatible with COVID-19 in residents with onset within a 72h period

*__Healthcare Personnel (HCP),__ defined by Center for Disease Control and Prevention (CDC), 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, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel)(2).
† **Probable case** is defined as a person meeting clinical criteria AND epidemiologic evidence with no confirmatory laboratory testing performed for COVID-19; A person meeting presumptive laboratory evidence AND either clinical criteria OR epidemiologic evidence; A person meeting vital records criteria with no confirmatory laboratory testing performed for COVID-19. (3)
‡**Epi-linkage among patients** is defined as overlap on the same unit or ward or having the potential to have been cared for by common HCP within a 14-day time period of each other.
§**Epi-linkage among HCP** is defined as having the potential to have been within 6ft for 15 minutes or longer while working in the facility during the 14 days prior to prior to the onset of symptoms; for example, worked on the same unit during the same shift.

	Acute Care Hospitals and Critical Access Hospitals	Long-Term Care Facilities (LTCF) and Long-Term Acute Care Hospitals (LTACH)
Outbreak Definition	• ≥2 cases of confirmed COVID-19 in a patient 7 or more days after admission for a non-COVID condition, with epi-linkage[‡]; • ≥3 cases of confirmed COVID-19 in HCP* with epi-linkage[§] AND no other more likely sources of exposure for at least 2 of the cases	• ≥1 facility-acquired[**] COVID-19 case in a resident

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 HCP, 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 Centers for Disease Control and Prevention (CDC)(4).
- Hospitals may opt to investigate cases of confirmed COVID-19 in patients that are identified fewer than 7 days after admission for a non-COVID condition (for example, 4-5 days).

[**]**Facility-acquired** COVID-19 infection in a long-term care resident is defined as a confirmed diagnosis 14 days or more after admission for a non-COVID condition, without an exposure during the previous 14 days to another setting where an outbreak was known or suspected to be occurring.

- Hospitals that use antigen tests should immediately confirm positive antigen test results in asymptomatic individuals (e.g., healthcare personnel tested for routine screening) using PCR and report to public health pending confirmatory testing if investigating a cluster of ≥3 epi-linked probable cases in patients or HCP.
- Public health officials may weigh available evidence and consider local conditions when applying the hospital outbreak criteria. For example, by increasing or decreasing the case thresholds depending on the extent of community levels of COVID-19, or adjusting the criteria to reflect a combination of HCP and patient cases.
- 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 long-term care facilities who have received Clinical Laboratory Improvement Amendments (CLIA) waivers to conduct point-of-care laboratory testing on site. Collaboration would be focused on timeliness, accuracy and completeness of laboratory reporting to the local or state public health electronic disease surveillance system. (11) Additional guidance on testing in nursing homes, including follow up of point-of-care test results. (12)
- 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 the Council for Outbreak Response: HAI/AR Pathogens (CORHA) (5).

Outpatient Setting Thresholds

	Dialysis Facilities	Emergency Department, Urgent Care, Primary Care
Threshold for Additional Investigation by Facility	• ≥1 confirmed COVID-19 case in a patient or HCP*	• ≥1 confirmed COVID-19 case in a HCP*
Threshold for Reporting to Public Health	• ≥3 cases of confirmed COVID-19 cases in patients or HCP*, with epi-linkage† ‡	• ≥3 cases of confirmed COVID-19 in HCP* with epi-linkage†
Outbreak Definition	• ≥3 cases of confirmed COVID-19 cases in patients or HCP* , with epi-linkage†‡, AND no other more likely sources of exposure for at least 2 of the cases	• ≥3 cases of confirmed COVID-19 in patients or HCP* with epi-linkage†‡, AND no other more likely sources of exposure for at least 2 of the cases

* **Healthcare Personnel (HCP),** defined by Centers for Disease Control and Prevention (CDC), 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, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel)(2).

† **Epi-linkage among HCP** is defined as having the potential to have been within 6ft for 15 minutes or longer while working in the facility during the 14 days prior to prior to the onset of symptoms; for example, worked on the same shift or proximity.

‡ **Epi-linkage among patients** is defined as overlap on the same unit or ward or having the potential to have been cared for by common HCP within a 14-day time period of each other.

Outpatient Thresholds continued

	Elevated Exposure Risk* Ambulatory Specialty Clinics (e.g., dental clinic, ENT, ophthalmology, oncology infusion center, etc.)	Other Ambulatory Specialty Clinics (e.g., endoscopy, ambulatory surgical center, pain clinics, antibiotic infusion centers, etc.)
Threshold for Additional Investigation by Facility	• ≥1 confirmed COVID-19 case in a HCP*, or when notified of ≥1 case in patient without other significant source of exposure	• ≥1 confirmed COVID-19 case in a HCP*, or when notified of ≥1 case in patient without other significant source of exposure
Threshold for Reporting to Public Health	• ≥1 confirmed COVID-19 case in a HCP*, or ≥2 cases in patients with epi-linkage†‡	• ≥3 cases of confirmed COVID-19 in HCP* with epi-linkage†
Outbreak Definition	• ≥3 cases of confirmed COVID-19 in patients or HCP* with epi-linkage†‡, AND no other more likely sources of exposure for at least 2 of the cases	• ≥3 cases of confirmed COVID-19 in patients or HCP* with epi-linkage†‡ AND no other more likely sources of exposure for at least 2 of the cases

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* **Healthcare Personnel (HCP),** defined by Center for Disease Control and Prevention (CDC), 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, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel)(2).

† **Epi-linkage among HCP** is defined as having the potential to have been within 6ft for 15 minutes or longer while working in the facility during the 14 days prior to prior to the onset of symptoms ; for example, worked on the same shift or proximity.

‡ **Epi-linkage among patients** is defined as overlap on the same unit or ward or having the potential to have been cared for by common HCP within a 14-ay time period of each other.

Points for Consideration

- The ambulatory specialty clinic thresholds and definitions assume patients are presenting for scheduled visits, not for evaluation of acute symptoms, and that patients presenting for scheduled ambulatory surgery or procedures are often tested for COVID-19 prior to their procedure.
- Public health officials may weigh available evidence and consider local epidemiology and extent of community transmission to modify thresholds. For example, by increasing the case threshold above 3 in the context of widespread community levels of COVID-19 or adjusting the criteria to reflect a combination of HCP and patient cases.
- 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 the Council for Outbreak Response: HAI/AR Pathogens (CORHA) (5)

References/Resources

1. 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
2. CDC Infection Control, Appendix 2. Terminology https://www.cdc.gov/infectioncontrol/guidelines/healthcare-personnel/appendix/terminology.html
3. Coronavirus Disease 2019 (COVID-19) – 2020 Interim Case Definition https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/
4. CDC COVID-19 Guidance for Managing Investigations During an Outbreak https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/outbreaks.html

5. CORHA Interim Framework for Healthcare-Associated Infection Outbreak Notification https://corha.org/resources/corha-interim-framework-for-healthcare-associated-infection-outbreak-notification/
6. Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease 2019 (COVDI-19) in Healthcare Settings https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html
7. Preparing for COVID-19 in Nursing Homes https://www.cdc.gov/coronavirus/2019-ncov/hcp/long-term-care.html
8. Interim Infection Prevention and Control Guidance for Dental Settings During the COVID-19 Response https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html
9. Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities https://www.cdc.gov/coronavirus/2019-ncov/hcp/dialysis.html
10. Coronavirus Disease 2019 (COVID-19) Outpatient Dialysis Facility Preparedness Assessment Tool https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID-19-outpatient-dialysis.pdf
11. 04/09/2020: Lab Update: FDA Clarifies CLIA-waived Status for Point-of-Care SARS-C0V-2 Tests under Emergency Use Authorizations https://www.cdc.gov/csels/dls/locs/2020/fda_clarifies_clia-waived_status.html
12. Clinical Questions about COVID-19: Questions and Answers, Testing in Nursing Homes: https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html#Testing-in-Nursing-Homes

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*The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens (CORHA)
https://corha.org/