CSTE

Proposed Investigation Criteria and Outbreak Definition for COVID-19 in Non-Residential, Non-Healthcare Workplace Settings

BACKGROUND

Non-residential, non-healthcare workplace settings are workplaces where employees do not live on site and include but are not limited to: food and other manufacturing facilities such as meat and poultry processing, construction sites, office buildings, warehouses, restaurants/grocery stores, personal care and other service providing establishments such as salons, cleaners, and maid services.

Public health investigations for Coronavirus Disease-2019 (COVID-19) are challenging when they involve workplaces and businesses. There is limited data and published evidence on transmission and spread of COVID-19 in non-residential, non-healthcare settings, including workplaces and businesses in critical infrastructure sectors.

The information presented in this document is based on current available scientific resources and expert opinion, and is intended only as a guidance. The Council of State and Territorial Epidemiologists (CSTE) will update this interim guidance as additional information becomes available.

For individual COVID-19 cases, including those in non-residential, non-healthcare workplace settings, public health authorities should initiate prompt case investigation and contact tracing to prevent transmission and to ensure early outbreak detection. When clusters are identified, additional public health assessments in partnership with businesses and employers may be required to determine if the cluster meets the outbreak case definition. Since cluster and outbreak investigations require significant resources, prioritization may be necessary. The criteria provided below are intended as a guidance for public health authorities to help prioritize investigation of COVID-19 clusters/outbreaks in non-residential, non-healthcare workplace settings. CSTE guidance for educational and healthcare settings can be accessed here.

Criteria to Consider for Further Investigation

An outbreak response or investigation may take many forms depending on the characteristics of the outbreak and workplace. It can involve site visits and facility assessments, follow-up surveys for additional data that are not captured in standard case investigation or contact tracing, lab-testing of exposed individuals, and phone-based consultations to the facility and public health jurisdictions responding to the outbreak. Detailed guidance for managing investigations during a COVID-19 outbreak is available from Centers for Disease Control and Prevention (CDC).

Once a workplace cluster is identified, local/state public health authorities would determine if the conditions suggest a concern for disease spread and public health impact that warrant an investigation. **Consider the following criteria when determining the need for and type of outbreak investigation:**

- If the workplace/facility is part of a critical infrastructure sector*. As per the U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency recommendations (dated March 28, 2020), essential critical infrastructure workers may include individuals employed in following sectors:
  - » Healthcare
  - » Public health
  - » Law enforcement, public safety and other first responders
  - » Food and agriculture
  - » Energy (e.g., electric, petroleum, natural gas, other liquid fuels, nuclear)
  - » Water and wastewater
  - » Transportation
  - » Public works and infrastructure support services (e.g., construction, maintenance, utilities)
  - » Communications and information technology
  - » Other community- or government-based operations and essential functions (e.g., judicial system; workers supporting Census 2020; elections personnel; residential and commercial real estate services; workers supporting animal care, including zoos and aquariums)
  - » Critical manufacturing (e.g., metals, semiconductors, industrial minerals, aerospace, chemical, nuclear facilities, food and agriculture, operation of dams, materials and products needed for medical supply such as medical equipment, drugs and personal protective equipment)
  - » Hazardous materials
  - » Financial services
  - » Chemical (e.g., chemical and industrial gas supply chain, operation and maintenance of facilities dealing with high-risk chemicals and chemical manufacturing)
  - » Defense industrial base
  - » Commercial facilities (e.g., supply chain for building and hardware materials, warehouses, call-centers).
  - » Residential/shelter facilities and services
  - » Hygiene products and services (e.g., production of hygiene products, laundry services, dry cleaners, disinfection and pest control services)
- Facilities or work areas where the potential for workplace transmission of COVID-19 is high (e.g., meatpacking or other manufacturing facilities where people may have frequent unavoidable contact or inability to maintain social distancing).
- Consider total number of workers and proportion of workers testing positive, i.e. evidence of rapid growth of outbreak.
- Greater case rate in the workplace compared to the case rate in the community.
- Size and characteristics of workforce employed at the facility. For example, population of workers/customers/clients who are at a higher risk of severe illness from COVID-19. Consider education-level, language spoken and cultural diversity in the workforce. Workplaces with non-English speaking population or low literacy may have an increased difficulty in communicating infection prevention and control measures.

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* *Centers for Disease Control and Prevention. COVID-19 Critical Infrastructure Sector Response Planning. Available at: https://www.cdc.gov/coronavirus/2019-ncov/community/critical-infrastructure-sectors.html. Last accessed June 14, 2020.*

- Whether scientific evidence on possible transmission pathways of COVID-19 in the type of setting (e.g. food processing, construction, warehouse, transportation) and guidance for mitigation and spread within the facility and its workforce is available.
- Possibility of spread to others outside of the workplace: Service industry and/or workplaces with frequent direct contact with customers, clients, or non-workers (e.g. grocery store and restaurants may have higher chance of transmission from worker to non-worker, compared to a worker with COVID-19 in a manufacturing facility where no visitors are allowed).

OUTBREAK DEFINITION

Outbreak Definition

Two or more[†] laboratory-confirmed[‡] COVID-19 cases among workers at a facility with onset of illness within a 14-day period[§], who are epidemiologically linked[**], do not share a household, and are not listed as a close contact[††] of each other outside of the workplace during standard case investigation or contact tracing.

Outbreak-Associated Cases

- Individual confirmed and probable cases among workers in a non-residential, non-healthcare workplace setting meeting the outbreak definition **should be classified as outbreak-associated and included in outbreak case count.** This includes cases resulting from secondary transmission from an outbreak-associated case among workers who live in shared housing facilities (e.g. migrant labor camps, man camps) or use shared transportation services for work commute provided by the employer.
- Any individual confirmed and probable cases resulting from secondary transmission from an outbreak-associated case in a family member or close contact of a worker, who is not employed by the business/employer **should not be classified as outbreak-associated and not included in outbreak case count.**

Outbreak Resolution

No new symptomatic/asymptomatic probable or confirmed COVID-19 cases after 28 days (two incubation periods) have passed since the last case's onset date or specimen collection date (whichever is later).

PUBLIC REPORTING

The need to publicly report a COVID-19 outbreak in a non-residential, non-healthcare workplace setting should be determined by each public health jurisdiction and must balance the need for public disclosure

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† *Health departments may consider a higher threshold for defining an outbreak if there is a high case rate in the community (community transmission).*

‡ *Detection of SARS-CoV-2 RNA in a clinical specimen using molecular amplification detection test.*

§ *For onset, use symptom onset date whenever available. If symptom onset date is unknown or if a case is asymptomatic, use specimen collection date for the first specimen that tested positive. The 14-day period refers to 14 days before the date of first symptom onset or first positive test sample.*

** *Health departments should verify to the best extent possible that cases were present in the same setting during the same time period (e.g., same shift/department, same physical work area); that the timing fits with likely timing of exposure; and that there is no other more likely source of exposure for identified cases (e.g., household or close contact to a confirmed case outside of workplace setting).*

†† *Close contact is defined as being within 6 feet for at least a period of 15 minutes or more depending upon the exposure. Data are insufficient to precisely define the duration of exposure that constitutes prolonged exposure, and thus a close contact. For updated definition of a close contact please refer to the CDC Contact Tracing Plan Appendices website at: https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact.*

and maintaining patient privacy. Public reporting of outbreaks with significant risk to public health should be prioritized.

REFERENCES

1. Centers for Disease Control and Prevention. Coronavirus Disease 2019 (COVID-19) – 2020 Interim Case Definition. Available at https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/.
2. Centers for Disease Control and Prevention. Managing Investigations During an Outbreak. Available at https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/outbreaks.html.
3. Centers for Disease Control and Prevention. Groups at Higher Risk for Severe Illness. Available at https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html.
4. Centers for Disease Control and Prevention. Interim Guidance for Businesses and Employers Responding to COVID-19, May 2020. Available at https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html.
5. Centers for Disease Control and Prevention. Testing Strategy for Coronavirus (COVID-19) in High-Density Critical Infrastructure Workplaces after a COVID-19 Case Is Identified. Available at https://www.cdc.gov/coronavirus/2019-ncov/community/worker-safety-support/hd-testing.html.
6. Centers for Disease Control and Prevention. Worker Safety and Support. Available at https://www.cdc.gov/coronavirus/2019-ncov/community/worker-safety-support/index.html.

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