COVID-19 Clusters in Occupational, Educational, and Community Settings

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As community spread of COVID-19 continues in North Carolina, clusters of cases will likely occur linked to occupational, educational, and other community settings.

In congregate living settings, an outbreak of COVID-19 is defined as two or more laboratory-confirmed cases within a 28-day period. This is based on CDC guidance for influenza outbreaks in long-term care facilities and is appropriate for settings where (a) the likelihood of exposure having occurred at the facility is high and (b) rapid implementation of specific interventions is needed to reduce morbidity and mortality.

In other settings – including occupational, educational, and other community settings – it can be difficult to determine if a cluster of cases is occurring due to transmission within the setting or spread in the broader community. A different definition is needed in these settings to more accurately differentiate between community transmission and transmission within a specific setting for which specific control measures may be needed.

Reporting and investigating COVID-19 clusters is necessary in order to implement specific control measures, identify risk factors, and understand the contribution of clusters to the COVID-19 epidemic in North Carolina.

Definitions

NC DPH recommends the following definition for reporting clusters of COVID-19 in workplace, educational, and other community settings. A cluster is defined as:

- A minimum of 5 cases with illness onsets or initial positive results within a 14-day period AND
- Plausible epidemiologic linkage between cases*

*Local health departments should verify that cases were present in the same setting during the same time-period (e.g., same shift, same classroom, 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 in another setting).

The definitions of occupational, education, and other community settings are broad, but might include the following:

- Occupational settings
  - Food processing plants
  - Production facilities
  - Distribution facilities
  - Factories
  - Construction sites
  - Retail settings
  - Office buildings
Division of Public Health
Communicable Disease Branch

• Educational settings
  o Childcare facilities
  o Schools
  o Colleges or universities
• Other community settings
  o Religious gatherings
  o Camps
  o Other large gatherings or events

Reporting
Local health departments should report all COVID-19 clusters that meet the above definition to NC DPH.

- Reporting may be done through the Epidemiologist on Call at 919-733-3419 and/or by submitting an outbreak worksheet to CDOutbreakWorksheet@dhhs.nc.gov.
- An NC EDSS outbreak event will be created when a cluster is reported.
- New cases should be linked to the outbreak event as soon as possible.

All cases in these settings should be investigated regardless of whether they are part of an ongoing cluster. Local health departments can call the Epidemiologist on Call at 919-733-3419 for consultation and guidance regarding cases in occupational, educational, or other community settings.

Investigation
In order to facilitate identification of workplace clusters, all COVID-19 cases should be asked about their occupation and industry.

The CD Manual contains the following documents to assist with investigating and tracking outbreaks:

- COVID-19 Outbreak Worksheet: used to collect initial data when the LHD is notified of the cluster and contains the information that the Epidemiologist on Call will ask when the cluster is reported to NC DPH
- Line list template: tool that can be used by the LHD or the facility to investigate and track the cluster

Please provide updates on priority information about these clusters to your regional TATP nurse or the Epidemiologist on Call, including sudden increases in cases, hospitalizations, or deaths.

Additional Resources
Please note: Investigations of clusters in meat and poultry processing plants in North Carolina are a high priority. The investigation and implementation of control measures are complicated and require cooperation among different agencies, counties, healthcare providers, community groups and the facility. Guidance specific to these facilities is available at:

- LHD Investigation Steps for Outbreaks in Large Meat/Food Processing Plants
- Checklist for Initial Meetings with Facility Contacts for Tracking Employees

NC DHHS guidance for businesses and employers, child care providers, and community events is available here.

CDC guidance for outbreaks in businesses and workplaces is available here.