## Coronavirus Disease 2019 (COVID-19)



(/coronavirus/2019-ncov/prevent-

#### getting-sick/about-face-

### coverings.html)

## Interim Guidance for Case Investigation and Contact Tracing in K-12 Schools

Updated Nov. 18, 2020 Print

## Overview

To promote safe and healthy learning environments in K-12 schools, school administrators can work together with health departments to reduce the risk of coronavirus 2019 (COVID-2019). K-12 school administrators can play an important role in taking steps to slow the spread of disease to prevent outbreaks, and protect students, staff and teachers. Regardless of the level of community transmission, K-12 schools should be prepared for COVID-19 outbreaks in their

On This Page
Overview
Background
Federal, state, and local legal considerations
Roles and responsibilities
Ways K-12 schools can prepare
When a COVID-19 case is suspected or confirmed
Assisting the health department with contact tracing
References

communities that may introduce infection to the school setting, identification of cases among students, staff and teachers, and potential exposure(s) to COVID-19 that may occur at school facilities or events.

Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019ncov/community/schools-childcare/guidance-for-schools.html) provides guidance to assist K-12 school administrators in planning a comprehensive response. Case investigation and contact tracing are essential interventions P C (https://www.whitehouse.gov/wpcontent/uploads/2020/04/Guidelines-for-Opening-Up-America-Again.pdf) in a successful, multipronged response to COVID-19, and should be implemented along with other mitigation strategies (/coronavirus/2019-ncov/community/schools-childcare/schools.html). As K-12 schools resume inperson learning, case investigation and contact tracing with staff, teachers and students should be anticipated as a crucial strategy to reduce further transmission once a case is identified. Centers for Disease Control and Prevention (CDC) encourages collaboration between K-12 schools and state, tribal, local, and territorial (STLT) health departments when investigating cases and exposures to infectious diseases, including (/coronavirus/2019-ncov/community/contact-tracing-nonhealthcare-workplaces.html) SARS-CoV-2, the virus that causes COVID-19. Prompt and coordinated actions, including case investigation and contact tracing, may inform decision-making about strengthening, focusing, and relaxing mitigation strategies (/coronavirus/2019-ncov/community/schools-childcare/schools.html). This document aims to highlight potential collaboration between health officials and K-12 school administrators to facilitate effective case investigation and contact tracing.

Who this guidance is for: Administrators of public and private K-12 schools coordinating case investigations and contact tracing in schools, in order to inform policy development and program implementation. This document may also be informative for public health professionals coordinating K-12 school case investigations and contact tracing.

## Background

COVID-19 is a nationally notifiable disease (https://wwwn.cdc.gov/nndss/conditions/coronavirusdisease-2019-covid-19/). When diagnosed or identified through laboratory or clinical criteria, COVID-19 cases are required to be reported, by healthcare providers and laboratories, to state, tribal, local, and territorial (STLT) health departments. When laboratories send positive test results for SARS-CoV-2 to health departments, many of these test results are received via electronic laboratory report. Testing locations, such as pharmacies and community testing sites, are also required to report positive test results to the health department for follow-up. Health care providers from a variety of clinical settings, including K-12 school-based clinics and community-based settings, also complete case reports on symptomatic patients diagnosed with COVID-19. Health departments have primary responsibility for case investigation and contact tracing. Case investigation and contact tracing are, core disease control measures employed by STLT health department personnel for decades, and an important part of the COVID-19 response.

**Case investigation** is the process of working with a person (patient) who has been diagnosed with COVID-19 to discuss their test result or diagnosis, assess their symptom history and health status, and provide instructions and support for self-isolation and symptom monitoring. This interaction is the first step to review the activity history of the person diagnosed with COVID-19, while infectious, and identify people (contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact)) who may have been exposed to COVID-19.

**Contact tracing** is the process of notifying people (contacts (/coronavirus/2019ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact)) of their potential exposure to SARS-CoV-2, the virus that causes COVID-19, provide information about the virus, and discuss their symptom history and other relevant health information. In addition, instructions for self-quarantine and monitoring for symptoms, and support and referrals to testing, clinical services, and other essential support services are provided, as indicated.

The case investigation and contact tracing processes help to prevent further transmission of disease by separating people who have (or may have) an infectious disease from people who do not. Prompt identification, voluntary self-quarantine, and monitoring of those contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) exposed to SARS-CoV-2 can effectively break the chain of transmission and prevent further spread of the virus in a community (/coronavirus/2019-ncov/php/contact-tracing/contact-tra

Classification of an individual as a close contact (/coronavirus/2019-ncov/php/contacttracing/contact-tracing-plan/appendix.html#contact) is based on many factors and should be assessed on a case-by-case basis. In the context of COVID-19, the definition of a close contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) is someone who was within 6 feet of a person diagnosed with COVID-19 for a total of 15 minutes or more. More information to inform the determination of exposure risk can be found, on CDC's Public Health Guidance for Community-Related Exposure (/coronavirus/2019ncov/php/public-health-recommendations.html). This information further notes that: 1) data to inform the definition of close contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact) are limited. Factors to consider when defining close contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) include proximity, the duration of exposure (e.g., longer exposure time likely increases exposure risk), and whether the exposure was from a person with symptoms (e.g., coughing likely increases exposure risk). Furthermore, while research indicates masks may help keep those who are infected from spreading the infection, there is less information regarding how much protection masks offer a contact (/coronavirus/2019-ncov/php/contact-tracing/contacttracing-plan/appendix.html#contact) exposed to a symptomatic or asymptomatic patient. Therefore, the determination of close contact (/coronavirus/2019-ncov/php/contact-tracing/contacttracing-plan/appendix.html#contact) should be made irrespective of whether the person with COVID-19 or the contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact) was wearing a mask. 2) Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Recommendations vary on the length of time of exposure, but a total of 15 minutes or more close exposure can be used as an operational definition. Brief interactions are less likely to result in transmission; however, symptoms and the type of interaction (e.g., whether the infected person coughed directly into the face of the exposed individual) remain important. Assessment of exposure beyond close contact (/coronavirus/2019-ncov/php/contacttracing/contact-tracing-plan/appendix.html#contact) is a recommended strategy in some K-12 school (/coronavirus/2019-ncov/community/schools-childcare/k-12-testing.html) and IHE (/coronavirus/2019-ncov/community/colleges-universities/ihe-testing.html) settings to control transmission of SARS-CoV-2.

SARS-CoV-2, the virus that causes COVID-19, can cause symptomatic illness and asymptomatic infection among young and healthy populations. K-12 schools may be a potential source of COVID-19 outbreaks, due to the number of individuals intermingling in close proximity for extended periods of time. K-12 school settings contain a mixed population of students, staff, and teachers, ranging from young children to older adults, who can be highly interconnected in multiple, close-contact (/coronavirus/2019-

ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) networks such as classrooms, libraries, theatres, gymnasiums, social meal events, sports teams, clubs, dormitories, and transportation. Some studies show that transmission from young children may be limited, <sup>[1]</sup> (/coronavirus/2019-ncov/community/schools-childcare/contact-tracing.html#\_ftn1) but more data are needed as some countries have observed widespread disease transmission in primary schools. [2] (/coronavirus/2019-ncov/community/schools-childcare/contact-tracing.html#\_ftn2) A priority consideration for when an outbreak of COVID-19 is identified in a K-12 school is the subsequent exposure/transmission to other members of a school community, such as "older and/or more vulnerable individuals (e.g., teachers, school workers, volunteers, grandparents, or immunocompromised children or adults) who are in proximity to school children." [3] (/coronavirus/2019-ncov/community/schools-childcare/contact-tracing.html# ftn3) In some instances, students may live in multigenerational households or have parents, guardians or caretakers with underlying health conditions, which may increase their risk for severe illness from COVID-19. These close settings, as well as close contact (/coronavirus/2019ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) activities such as certain sports, may cause the K-12 school population and more broadly at-risk family members and caretakers to be at increased risk of transmission of the virus.

Health departments are responsible for leading case investigations, contact tracing, and outbreak investigations. Case investigation and contact tracing in response to COVID-19 transcends standard practice. Throughout the country, health departments are scaling up case investigation and contact tracing programs by using different staffing models and technology supports. Given the large number of COVID-19 cases reported to health departments, coupled with how easily and quickly SARS-CoV-2 is spreading, health department resources can be overwhelmed. Multisector partnerships can be an asset to expand the reach and timeliness of case investigation and contact tracing, thus facilitating prompt isolation and quarantine of cases and contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact). Partnerships between health departments and K-12 schools are encouraged as they may help to limit the spread of COVID-19, in these settings and local communities.

### Federal, state, and local legal considerations

All COVID-19 preparedness and response activities should be implemented in a manner that is consistent with jurisdictional public health recommendations and should align with existing federal, state, tribal, local, and territorial workplace laws, as well as federal privacy laws such as the Family Educational Rights and Privacy Act (FERPA) (https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html).

Legal authority and responsibility for communicable disease investigation and contact tracing granted through legislation and regulation, and often articulated in health and safety codes, lies with state, tribal, local, and territorial health departments (/publichealthgateway/healthdirectories/healthdepartments.html).

CDC encourages collaboration between the K-12 school and health department when a school employee or student case is identified, and during investigation of school-related exposures to COVID-19. All case investigation and contact tracing support activities,

conducted by the K-12 schools, should be undertaken in coordination and agreement with the health department.

Allowable contact tracing activities among minors may vary greatly by jurisdiction, based on state, tribal, local, and territorial law. Some jurisdictions allow for individuals as young as 12 to answer medical and public health-related questions, while others require permission by the parent, caregiver, or guardian for all minors. K-12 schools should consult with public health officials and legal counsel to determine how best to conduct case investigations and contact tracing involving minors, as well as permissions necessary. This is particularly important, with implementation of innovative contact tracing models, such as proximity apps, which identify individuals who may have been exposed to COVID-19 by using their electronic devices to record time spent in proximity to a case. According to state, tribal, local, and territorial legal parameters, some K-12 schools and health departments may need to obtain consent from parents, caregivers, or guardians for activities conducted with some or all minors, and students with disabilities.

#### The Family Educational Rights and Privacy Act (FERPA)

(https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html) protects the privacy of student education records, including contact information. FERPA generally prohibits disclosures of a student's personally identifiable information (PII) from education records without the consent of parents in the event the student is under 18, or the student, if that person is at least 18 or attending an institution of higher education at any age. The U.S. Department of Education released FERPA & Coronavirus Disease 2019 (COVID-19) Frequently Asked Questions (FAQs

(https://studentprivacy.ed.gov/resources/ferpa-and-coronavirus-disease-2019-covid-19)) to assist K-12 school officials in protecting student privacy and clarifying allowable disclosures of PII from education records under FERPA. The document highlights the FERPA exception "to disclose, without prior written consent, PII from student education records to appropriate parties in connection with an emergency, if knowledge of that information is necessary to protect the health or safety of a student or other individuals." In the event the K-12 school determines that there is an "articulable and significant threat to the health or safety of the student or another individual," such as may be the case during a public health emergency, this information may be disclosed to public health authorities without prior parental consent. When releasing contact information from a student's education record, the K-12 school must record in the student's education record the articulable and significant threat that formed the basis for the disclosure, and the parties (e.g., local health department to whom information was disclosed. K-12 schools that plan to participate in contact tracing efforts should still consider obtaining student and parental consent prior to an outbreak to facilitate transparency and disclosures that fall outside of the health or safety emergency exception. K-12 school officials should consult with their legal counsel in preparing a consent form. The U.S. Department of Education has created a sample FERPA consent form 🔼 🖸

(https://studentprivacy.ed.gov/sites/default/files/resource\_document/file/FERPA%20and%20Coronaviru s%20Frequently%20Asked%20Questions.pdf#page=9) for voluntary adoption by educational institutions.

Confidentiality is a cornerstone of health department case investigation and contact tracing. Minimum professional standards for any agency handling confidential information should include providing employees with appropriate information and/or training regarding confidential guidelines and legal regulations (/coronavirus/2019ncov/php/contact-tracing/contact-tracing-plan/Confidentiality-Consent.html). All personnel involved in case investigation and contact tracing activities with access to such information should sign a confidentiality statement acknowledging the legal requirements not to disclose COVID-19 information. Efforts to locate and communicate with clients and close contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) must be carried out in a manner that preserves the confidentiality and privacy of all involved. This includes not revealing the name of the client to a close contact (/coronavirus/2019ncov/php/principles-contact-tracing.html) unless permission has been given (preferably in writing), and not giving confidential information to third parties (e.g., roommates, neighbors, family members). Note that all activities and information collected by a K-12 school should be limited to the school setting and be consistent with applicable federal, state, tribal, local, and territorial privacy, health/medical, and workplace laws and regulations (e.g., U.S. Equal Employment Opportunity Commission (EEOC) (https://www.eeoc.gov/coronavirus) and Americans with Disabilities Act (ADA) (https://www.ada.gov/) and Section 504 of the Rehabilitation Act (Section 504) (https://www.dol.gov/agencies/oasam/centers-offices/civil-rights-center/statutes/section-504-rehabilitationact-of-1973)). Violation of privacy and confidentiality can result in breaking federal or state laws intended to protect the public, and erode trust that the health department and the K-12 school have built with the student, staff and teachers. Additional resources to become familiar with privacy and confidentiality recommendations and requirements are the HHS Office for Civil Rights (OCR) HIPAA 🗹 (https://www.hhs.gov/hipaa/for-professionals/specialtopics/hipaa-covid19/index.html) and COVID-19 Bulletins, and CDC's compilation of training plans on requirements for the protection of health information (/coronavirus/2019ncov/php/contact-tracing/list-requirements-for-protecting-health-info.html).

Additional considerations for K-12 schools relate to their role as an employer. CDC's Case Investigation and Contact Tracing in Non-healthcare Workplaces: Information for Employers Guidance (/coronavirus/2019-ncov/community/contact-tracing-nonhealthcareworkplaces.html) lays out case investigation and contact tracing roles and responsibilities of health departments and employers for case investigation and contact tracing. Additionally, according to CDC's Strategies for Protecting K-12 School Staff from COVID-19 (/coronavirus/2019-ncov/community/schools-childcare/k-12-staff.html), every school should have a plan in place to protect staff, children, and their families from the spread of COVID-19, and a response plan in place for if a student, teacher, or staff member tests positive for SARS-CoV-2. For information on developing and implementing an Emergency Operations Plan (EOP), please refer to the Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019-ncov/community/schoolschildcare/schools.html) website. Resources related to developing a K-12 school-based emergency operations plan, including an interactive tool to create one, are also available at Readiness and Emergency Management for Schools Technical Assistance Center 🗹 (https://rems.ed.gov/). An important part of a K-12 school's EOP is to develop a plan for conducting initial and periodic hazard assessments 🗹 (https://www.osha.gov/shpguidelines/hazard-Identification.html) of the school to identify COVID-19 risks, prevention strategies (e.g., engineering and administrative controls and any needed personal protective equipment (PPE)), and to identify new or recurring hazards. The Occupational Safety and Health Administration's (OSHA) interim guidance 🖸 (https://www.osha.gov/memos/2020-05-19/revised-enforcement-guidance-recordingcases-coronavirus-disease-2019-covid-19) outlines OSHA's enforcement policy with respect to the recording of occupational illnesses, specifically cases of COVID-19. Under OSHA's recordkeeping requirements, COVID-19 is a recordable illness, and thus covered employers are responsible for recording employee cases of COVID-19 that meet certain criteria. K-12 schools are encouraged to frequently check CDC workplace (/coronavirus/2019-ncov/community/organizations/businesses-employers.html) guidance and OSHA's COVID-19 webpage 🗹 (https://www.osha.gov/SLTC/covid-19/) for updates to inform planning and response activities.

K-12 schools are encouraged to consult with their human resources, legal, medical, and occupational safety and health guidance, policies and other resources to help them develop and implement their COVID-19 preparedness, response, and control plan.

### Roles and responsibilities

K-12 school involvement with the official health department case investigation or contact tracing process may vary. It will depend on the authorities, responsibilities, and capacities of their health departments; federal, state, tribal, local, and territorial laws and regulations; and capacity of the K-12 school to participate in these activities.

When health department personnel investigate a case, if they learn that a person was physically present at a K-12 school where close contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) with others (teachers, staff, students, or community members) may have occurred, the health department may contact the school,

staff, teachers faculty, students and others to let them know of potential exposures. In some instances, this may involve obtaining consent from parents, caregivers or guardians to contact all or some minors.

Health department collaboration with the K-12 school will vary, depending upon the situation. The following three scenarios outline possible health department actions when a case is identified:

- Ask the K-12 school for help in understanding the risk for transmission in the school community and help to identify exposures and contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact) in the school setting. This may include health department-initiated interviews, site visits, and reviews of K-12 school records to identify close contacts (https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contacttracing-plan/appendix.html#contact) who may have been exposed to the virus to better understand the risk for transmission. Please note that an "agreement" with the health department does not facilitate disclosure of PII from education records without falling under the FERPA health or safety emergency exception.
- Ask the K-12 school to identify contacts (/coronavirus/2019-ncov/php/contacttracing/contact-tracing-plan/appendix.html#contact) among the immediate community of students, teachers, and staff affected by the case. While this is not typical, some health departments have or may initiate agreements with K-12 school occupational health, medical programs, or trained occupational safety and health personnel who are able to formally and confidentially carry out some aspects of contact tracing in the school setting. In such situations, to protect privacy, health departments should take responsibility for case investigation and contact tracing outside of the K-12 school setting. If K-12 schools are interested in this type of agreement, they should contact their health department in advance to discuss the possibility and details of this option. Please note that an "agreement" with the health department does not facilitate disclosure of PII from education records without falling under the FERPA health or safety emergency exception.
- Conduct contact tracing without directly engaging the K-12 school. The health department may decide they do not need assistance or information from the K-12 school. They may refrain from direct involvement because they may not have the resources to follow up with the K-12 school. They also may not be permitted to involve a K-12 school because state, tribal, local, or territorial privacy laws may limit third-party involvement in contact tracing without the case patient's consent. To the extent possible, health departments should notify K-12 schools that contact tracing is in progress, even if not able to provide any additional information.

K-12 school administrators can play an important role in establishing preventive measures (/coronavirus/2019-ncov/community/schools-childcare/schools.html) to limit the spread of COVID-19 in the school setting and provide partnership and support in case investigation and contact tracing when a case is identified.

#### Ways K-12 schools can prepare

K-12 schools should also be prepared for COVID-19 outbreaks in their local communities and for individual exposure events to occur in facilities. Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019-ncov/community/schools-childcare/schools.html) provides information to assist K-12 school administrators in preparation and planning mitigation strategies most appropriate for their current situation to minimize risk and maintain a healthy environment. This guidance suggests that when a confirmed case has been on campus, regardless of community transmission, the K-12 school should coordinate with public health officials to determine the next steps in communication with students, staff, and teachers, and decide whether the cancellation of classes and/or closure of buildings and facilities is necessary. While many of the basic action steps in planning and response for COVID-19 are consistent for all schools, the structure of each K-12 school environment will require individualized solutions for the protection of students, staff and teachers, particularly in regard to case investigation and contact tracing.

Case investigation and contact tracing efforts require a multipronged approach (/coronavirus/2019-ncov/php/principles-contact-tracing.html) to stop the spread of disease, including immediately interviewing and supporting confirmed cases, rapid identification of exposed individuals, self-quarantine of contacts (/coronavirus/2019ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact), and linkage to testing. K-12 schools should assist in ensuring staff, students, and families are comfortable and willing to participate in the case investigation and contact tracing process. Rapid identification of exposed individuals and the ability to efficiently and confidentially share relevant information is of utmost importance.

It is important to establish plans, policies, and standard operating procedures to reduce the potential for transmission prior to identification of a case, in order to facilitate a swift response. In some instances, health departments may have limited time to engage in planning efforts. K-12 schools can begin to take steps to prepare, independent of health department involvement. However, it is essential that collaborative agreements be constructed, with the public health departments, for those K-12 schools that have the capacity to take a more proactive role in case investigation and contact tracing in the school setting. The following are action steps for consideration by K-12 school administrators to protect their students, staff, and teachers from COVID-19 and prepare to collaborate with the health department with case investigation and contact tracing, when a case is identified.

## In preparation of supporting case investigations and contact tracing, K-12 schools should:

Designate an administrator, liaison or office to become familiar with local, state, territory, and national resources for K-12 schools about COVID-19 and be responsible for responding to COVID-19 concerns within the school community.

All teachers, staff, students, parents, caregivers and guardians should know who the liaison is and how to contact them. All communication should be directed through these individuals to reduce duplicated work or mixed messaging. Determine if an additional liaison is needed for the student body and families, as well as the best method of communication to document concerns and responses.

# Familiarize themselves with federal, state, tribal, local, and territorial laws, regulations, guidelines and policies.

K-12 school administrators need to be aware of guidance, tools and restrictions that may impact case investigation and contact tracing (e.g., FERPA 🔼 🔀 (https://studentprivacy.ed.gov/sites/default/files/resource\_document/file/FERPA%20and%20Coronavirus %20Frequently%20Asked%20Questions.pdf), OSHA 🔼 🎽 (https://www.osha.gov/Publications/OSHA3990.pdf) and CDC Workplace Guidance (/coronavirus/2019-ncov/community/organizations/businesses-employers.html)). Additionally, legal parameters vary by jurisdiction regarding authority (e.g., state, tribal, local, and territorial health department with primary responsibility) to conduct contact tracing, confidentiality and data security requirements, and program allowances or restrictions (e.g. minor consent, non-health department-third party entity to conduct case investigation and contact tracing activities, or use of technology such as proximity tracing tools). Further, localized differences in characteristics of COVID-19 cases and trends influence policies and procedures regarding case investigation, contact tracing, isolation, and guarantine practices. CDC encourages K-12 schools to contact their state, tribal, local, and territorial health department to gain insight into the local policies and procedures.

#### Conduct workplace hazard evaluation and prevention activities.

Employers need to provide a safe and healthy workplace, free from recognized hazards that are likely to cause death or serious physical harm. COVID-19 is a new hazard in the IHE workplace. K-12 School administrators should carry out relevant hazard assessments C (https://www.osha.gov/shpguidelines/hazard-Identification.html) that can help identify potential hazards related to COVID-19. They should then use appropriate combinations of controls from the hierarchy of controls

(/niosh/topics/hierarchy/default.html) to limit the spread of COVID-19 in the K-12 school setting. Protective measures <u>for K-12 schools (/coronavirus/2019-ncov/community/schools-childcare/schools.html</u>) should be developed in collaboration with <u>public health officials</u> (/publichealthgateway/healthdirectories/index.html). Consideration of whether and how to implement specific measures should include adjustments to meet the unique needs and circumstances of the K-12 school and the local community. K-12 schools can take the following steps:

- Encourage parents or caregivers to monitor their children for signs of infectious illness every day (/coronavirus/2019-ncov/community/schools-childcare/symptom-screening.html) (e.g., temperature screening and/or symptom checking). However, symptom screening alone will not prevent all individuals with COVID-19 from entering K-12 school, because symptom screenings are not helpful for identification of individuals with COVID-19 who may be asymptomatic or pre-symptomatic.
- Implement mitigation strategies to help protect students, teachers, and staff and slow the spread of COVID-19, as outlined in Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019-ncov/community/schools-childcare/schools.html). K-12 schools can access additional information on the CDC website to better understand the continuum of risk, by model of learning and implementation of proven mitigation strategies.
- Consider K-12 classroom policies that promote social distancing and the use of face masks, per CDC guidance (/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-coverguidance.html). If modified classroom structures do not support social distancing of at least 6 feet, consider assigned seating policies or placing students in learning pods so exposures are limited and better documented. Special attention should be taken to engage strategies for social distancing during activities which may have potential to increase exposure. These may include physical exertion and heavy breathing during physical education, singing during choir, or loud projected speech during drama class, among others. If additional space is needed to support social distancing or small group learning, consider all available safe spaces in the community and any relevant partnerships with properly vetted K-12 school volunteers that can support students while minimizing group size.
- Consider how attendance and physical distance will be managed at various on campus K-12 school events (e.g., sporting events, band concerts, plays, assemblies) and congregate activities (e.g., special interest group gatherings, student leadership forums, clubs, other extracurricular activities), if these events have been deemed to be able to take place safely. If it is not possible for events to take place in person, consideration should be given to establish forums for virtual meetings and events.
- Consider implementing other measures to maintain healthy environments and healthy operations (e.g., intensify cleaning and disinfection efforts), as outlined in CDC's Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019-ncov/community/schools-childcare/schools.html).
- Consider implementation of policies that aid in contact identification. Considerations may include, but are not limited to: easily accessible information on classroom structure, physical barriers, and seating charts; implementation of policies such as recording attendance and assigned seating during group settings, such as lunch, sporting events, assemblies and bus rides; easily accessible attendance rosters for classes, tutoring, study groups, extracurricular activities and events; electronic badge entry/exit to monitor building or room (e.g., library, cafeteria, gym, counseling services) access.

Learn about additional evaluation and prevention activities as well as how K-12 schools can prepare to collaborate with health departments:

- Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019ncov/community/schools-childcare/schools.html)
- OSHA: Hazard Identification and Assessment (https://www.osha.gov/shpguidelines/hazard-Identification.html)
- Department of Education Readiness and Emergency Management for Schools Technical Assistance Center (https://rems.ed.gov/Resources\_Hazards\_Threats\_Biological\_Hazards.aspx? AspxAutoDetectCookieSupport=1)
- Case Investigation and Contact Tracing in Non-healthcare Workplaces: Information for Employers (/coronavirus/2019-ncov/community/contact-tracing-nonhealthcare-workplaces.html)

# Acknowledge concerns of K-12 teachers, staff, students, parents, caregivers, and guardians.

Open communication, including listening to concerns, can help reduce anxiety regarding participation in contact tracing before an outbreak occurs. Messaging on how contact tracing works, including the role of parents and guardians, in helping students remember K-12 school contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) and other contacts (/coronavirus/2019-ncov/php/contact-tracing-plan/appendix.html#contact) outside of school, can help to build trust in the process which will be critical for the community.

#### Identify appropriate methods to ensure communication, with all K-12 teachers, staff, students, parents, caregivers and guardians, in compliance with the law.

Multiple methods of communication (e.g., meet 508 compliance standards, large print, multiple languages, translation services for non-English speakers, Braille, American Sign Language, close captioning, audio descriptions, plain language for people with vision, hearing, cognitive, and learning disabilities) may be necessary for effective delivery and districts should explore all available messaging, including, written and electronic communication, social media, meetings, learning management systems, school-wide updates or surveys, and other forums or communication systems for teachers, staff, students, parents, caregivers and guardians. Auxiliary aids and services should be made available for students, parents, caregivers, guardians, staff, and teachers with disabilities, including who are visually or hearing impaired.

Student Leaders and Interest Groups can facilitate peer-to-peer education and deliver culturally competent messaging to encourage participation in mitigation strategies (e.g., wearing masks, social distancing) and contact tracing.

# Educate teachers, staff, students, parents, caregivers, and guardians.

K-12 schools should be proactive in their messaging on policies regarding:

- When to stay home (/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html) and other steps K-12 students, teachers, and staff should take to protect themselves and prevent the spread of COVID-19. Students, staff, and teachers should be actively encouraged to stay home if they have tested positive for SARS-CoV-2, are showing symptoms of COVID-19 (/coronavirus/2019-ncov/symptoms-testing/symptoms.html), or have recently had close contact (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) with a person with COVID-19, including household members. Students or staff who have family members who test positive for SARS-CoV-2 should follow appropriate guidance on self-quarantining and continue to monitor symptoms. Mitigation strategies used in the classroom should be shared with families, as well as how the K-12 school intends to cooperate with local public health officials, while respecting parental and student rights.
- What to expect if a COVID-19 case is identified, and the importance of case investigation and contact tracing to reduce COVID-19 spread. Providing information on the process of case investigation and contact tracing helps teachers, staff, students, parents, caregivers, and guardians know what to expect. This prepares everyone for a positive engagement with health department and K-12 school staff who need cooperation in obtaining names of people and events to facilitate contact tracing. Messaging should be in clear language and culturally and linguistically appropriate and framed in a manner that prevents stigma and discrimination. CDC's website contains information for the public on what you can expect with contact tracing (/coronavirus/2019-ncov/daily-life-coping/contact-tracing.html). CDC has resources in languages other than English (https://wwwn.cdc.gov/pubs/other-languages?

Sort=Lang%3A%3Aasc&includes=function(a)%7B%22use%20strict%22%3Bvar%20b%3DObject(this)% 2Cc%3DparseInt(b.length%2C10)%7C%7C0%3Bif(0%3D%3D%3Dc)return!1%3Bvar%20d%2Ce%3Dpar seInt(arguments%5B1%5D%2C10)%7C%7C0%3Be%3E%3D0%3Fd%3De%3A(d%3Dc%2Be)%3C0%26% 26(d%3D0)%3Bfor(var%20f%3Bd%3Cc%3B)%7Bif(f%3Db%5Bd%5D%2Ca%3D%3D%3Df%7C%7Ca!%3 D%3Da%26%26f!%3D%3Df)return!0%3Bd%2B%2B%2D%7Dreturn!1%7D). K-12 schools should encourage students, staff, and teachers to play a role in limiting further spread of COVID-19, by working with the health department to discuss their illness, exposures, and contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact). Messaging should be coordinated with the health department to ensure consistency within the local community.

# Consider how to address the challenges that may arise with different age groups and cultures.

K-12 schools and health departments will need to become familiar with privacy and confidentiality laws regarding communication with minors, parents, and guardians regarding the health of a minor (e.g., COVID-19 diagnosis) and public health interventions (e.g., contact tracing). Parental consent may be required for case interview and contact investigation activities with minors, or students with disabilities. In some instances, the student may be too young to understand the situation or remember where they have been, and this may present roadblocks in determining exposures not documented by class schedule. Documentation from the K-12 school and participation from parents and guardians will be critical in identifying close CONtacts (https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) and activities conducted during the time that the student was potentially infectious and could have exposed others. Additionally, adolescents, may be reluctant to share information about their social networks or peer groups, which may present challenges in eliciting close contacts (https://www.cdc.gov/coronavirus/2019-ncov/php/contacts).

Additionally, it is important that case investigations and contact tracing are conducted in a culturally appropriate manner (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/special-considerations.html), which includes meaningfully engaging representatives from affected communities [PDF – 3 pages] (/coronavirus/2019-ncov/downloads/php/openamerica/Contact-Tracing-Community-Engagement-Checklist.pdf). These populations may include racial and ethnic minorities (/coronavirus/2019-ncov/need-extra-precautions/racial-ethnicminorities.html), members of tribal nations, immigrants, refugees and students from communities with lower incomes. Establishing special liaisons may be helpful in these efforts, including individuals that could translate for students, and parents, or caregivers who may not speak English. K-12 schools may be in a position to establish social norms which support case investigation and contact tracing and engage student organizations or leaders to serve as messengers to facilitate peer-to-peer education and provide effective culturally competent messaging that encourages participation with the health department.

#### Examine policies for absence and leave.

Policies should be flexible and non-punitive (/coronavirus/2019-ncov/community/schoolschildcare/schools.html), and allow sick students, teachers and staff to stay home and away from others, including protections for individuals at greater risk for COVID-19, and individuals with certain disabilities. Absence/leave policies should also account for employees who need to stay home with their children if there are school or childcare closures, or to care for sick family members. Consider implementation of non-punitive "emergency sick leave" policies to encourage sick students, staff, and teachers to stay home if they are sick (/coronavirus/2019-ncov/if-you-are-sick/end-homeisolation.html) or have been exposed (/coronavirus/2019-ncov/if-you-are-sick/quarantine.html) to a case of COVID-19.

# Examine policies for in-person learning, distance-based learning and telework.

In order to support in-person learning to better accommodate the aptitudes and learning methods of individual students, and meet class requirements for laboratory and practicum work, when possible consider the following: establish policies and practices for social distancing (maintaining distance of at least 6 feet or 2 meters) between students, staff, and teachers, as recommended by CDC, and other federal, state, tribal, local, and territorial authorities; implement flexible class schedules or work hours (e.g., staggered shifts); consider whether flexible learning platforms or worksites (e.g., distance-based learning, telework) can meet students' learning needs.

See resources to help plan and prepare for in-person, distance-based learning, and telework:

- Operating schools during COVID-19: CDC's Considerations (/coronavirus/2019ncov/community/schools-childcare/schools.html)
- Department of Education Readiness and Emergency Management for Schools Technical Assistance Center (https://rems.ed.gov/Resources\_Hazards\_Threats\_Biological\_Hazards.aspx? AspxAutoDetectCookieSupport=1)
- Interim Guidance for Businesses and Employers (/coronavirus/2019ncov/community/guidance-business-response.html)

# Become familiar with COVID-19 reporting requirements and local processes.

All suspected and confirmed cases of COVID-19 should be immediately reported to the state, tribal, local, or territorial health department. This is a legal reporting requirement for those K-12 schools providing clinical services. Case definitions (https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-

definition/2020/08/05/) and core data variables for reporting are standardized at the national level. However, state, tribal, local, and territorial health departments have in some instances modified local reporting requirements to better assess local risk factors and enhance the ability to prioritize cases at greatest risk for severe complications or spread.

#### Become familiar with health department resources.

This can be done through accessing health department websites to learn about resources and identify a point of contact. Initiating communication with the health department may provide additional clarity on the case investigation and contact tracing process, potential roles and responsibilities for health department and K-12 school personnel, and occupational health and safety programs that may be able to assist in the event a case is identified.

# Ensure that K-12 student contact information and attendance records are up to date.

Changes in student living situations and the disruption to schooling in the spring due to COVID may have made it more challenging for K-12 school districts to know where their students live and/or how to contact their families and caregivers. Whether done manually or supported by technology such as a Student Information System, keeping these records up to date will be critical to communications, prevention and investigations.

#### When a COVID-19 case is suspected or confirmed

#### When a student, teacher or staff is suspected or confirmed to have COVID-19, K-12 schools should:

Take action! Follow jurisdictional reporting criteria for immediate notification to facilitate swift activation of case management, contact tracing and local mitigation protocols.

Case investigation is recommended for probable and laboratory confirmed cases (https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/overview.html).

Due to the potential for spread (exposure of large numbers of people), K-12 schools and health departments will need to work quickly to begin the contact notification process. Open and timely communication is key to prevent further transmission and allows for immediate intervention.

Follow appropriate guidance and protocols to facilitate selfisolation and other referrals for students, staff or teachers suspected of or diagnosed with COVID-19.

Administrators are advised to defer to health care providers and health departments for the medical management of symptomatic students, staff and teachers, and advise on their ability to safely return to class or work. If a student, staff or teacher is identified on campus or in a daily symptom screening/check with symptoms consistent with COVID-19, the following steps should be taken:

- The K-12 school has an opportunity to expedite referral of the symptomatic person(s) to a health care provider in order to receive a clinical evaluation and testing, as appropriate.
- Note: Not all people who are sick nor those identified through school symptom check-ins will be referred for testing, or if tested, test positive or be diagnosed with COVID-19.

## If a probable or confirmed diagnosis of COVID-19 is identified in a K-12 student, staff or teacher, the following steps can be taken:

- Refer the person for self-isolation (/coronavirus/2019-ncov/if-you-aresick/isolation.html) and testing (/coronavirus/2019-ncov/symptoms-testing/testing.html) per CDC guidelines, and state, tribal, local, or territorial health department protocols.
- Encourage them to contact their health care provider for clinical management as necessary, and when to seek emergency medical attention (/coronavirus/2019-ncov/symptoms-testing/symptoms.html).
- Inform the person that the health department will be following up with them (e.g., discuss their diagnosis, assess needed isolation supports, and obtain information about close contacts (https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) who may have been exposed) in order to prevent further spread of the virus; encourage the person to "answer the call" from the health department (/coronavirus/2019-ncov/php/contact-tracing-comms.html).

# If a student is diagnosed with probable or laboratory confirmed case of COVID-19 through the K-12 school clinic or health center, the following steps should be taken:

- Immediately report the case to the health department, per state, tribal, local, or territorial reporting protocols and consistent with the Family Educational Rights and Privacy Act (FERPA). This is a legal reporting requirement for those K-12 schools providing clinical services.
- Case definitions and core data variables for reporting are standardized at the national level. However, state, tribal, local, and territorial health departments have in some instances modified local reporting requirements to better assess local risk factors and enhance the ability to prioritize cases at greatest risk for severe complications or spread.

# If staff or teachers are diagnosed with probable or laboratory confirmed case of COVID-19 through the K-12 school's occupational health services program, the following steps should be taken:

- Immediately report the case to the health department, per state, tribal, local, or territorial reporting protocols.
- Ensure compliance with federal, state, tribal, local, and territorial OSHA and privacy laws in conducting case reporting and determining the next steps with

case investigation and contact tracing for students, staff and teachers.

# Collect information about the K-12 school setting to inform case investigation and contact tracing.

One of the most useful things (/coronavirus/2019-ncov/community/contact-tracingnonhealthcare-workplaces.html) a K-12 school can do to assist is to quickly prepare and provide information and records to aid in the identification of potential Contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact), exposure sites and mitigation recommendations. Health department collaboration with K-12 school administration to obtain contact information of other individuals in shared rooms, class schedules, shared meals, or extracurricular activities will expedite contact tracing. Timely, accurate and actionable information is key in notifying people of potential exposure and initiating self-quarantine (/coronavirus/2019-ncov/if-you-are-sick/quarantine.html? CDC\_AA\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fif-you-aresick%2Fquarantine-isolation.html) for exposed individuals to interrupt the spread of COVID-19.

- Information specific to the K-12 school setting may include, but is not limited to, inperson and distance learning schedules, class rosters and seating assignments, learning pods, tutoring and counseling sessions, attendance rosters for extracurricular activities and events, and school dining/meal service and facility information.
- Documentation of names and locating information for students, parents, guardians, families, teachers, staff, advisors, chaperones, and participants at extracurricular events (e.g., sporting events, cheer events, debate competitions, student leadership events), including the names of event coordinators and other schools, when participation of multiple schools takes place at a single location, is also important information to be maintained and, where necessary and allowable, shared.
- Other examples of useful information to have on hand can be found in the Interim Customizable Non-Healthcare Workplace Infection Control Assessment and Response (WICAR) tool — Coronavirus disease 2019 (COVID-19)
  [PDF – 23 pages] (/coronavirus/2019-ncov/downloads/php/OccEpiToolkit\_WICAR.pdf).
- Note that all activities and information collected by a K-12 school should be limited to the school setting and be consistent with applicable federal, state, tribal, local, and territorial privacy, health/medical, and workplace laws and regulations.

#### Implement flexible and non-punitive policies.

Support students, teachers and staff diagnosed with COVID-19 and potentially exposed to COVID-19 to stay home and away from others, in accordance with CDC guidance (/coronavirus/2019-ncov/community/schools-childcare/schools.html), and as recommended by their health care provider.

#### Ensure privacy and confidentiality for individuals who have been diagnosed with COVID-19 or potentially exposed to COVID-19.

This is critical in maintaining trust with students, staff, and teachers and is essential for legal compliance.

# Assisting the health department with contact tracing

State, tribal, local, and territorial health departments have the legal authority to complete contact tracing. K-12 school activities should supplement the health department activities to ensure all exposed individuals are documented in a secure manner and receive proper follow-up. Where possible, K-12 schools and health departments should establish policies and procedures prior to the identification of a case within the facility. K-12 schools that have the interest, expertise and resources to take a proactive role in case investigation and contact tracing in the school setting, should take the following steps in planning for implementation of school-based programs to support case investigation and contact tracing for COVID-19:

- Define roles, responsibilities, communication, reporting and data requirements with health departments and initiate formal agreements, as appropriate. There are many different K-12 school structures with both off and on campus housing of students, multiple types of staff and teacher engagement (e.g., full time staff, contract staff, substitute staff, guest speakers), and varying interactions with the community (e.g., student volunteer hours, volunteers and chaperones for school events). Typically, the scope of case investigation and contact tracing for the K-12 school is limited to outreach to their students, staff and teachers. It is essential that schools and health departments partner to ensure contact tracing among community members, and that work closely with city/county officials to jointly craft communication regarding potential exposure sites within the community.
- Become familiar with Health and Safety Codes regarding case investigation and contact tracing, ADA, Section 504, Occupational Health, FERPA and other relevant laws, regulations and guidance. Consult occupational health programs to determine policies and practices related to K-12 school staff and teachers.
- Identify appropriate K-12 school personnel to provide leadership, oversight and quality assurance of case investigation and contact tracing activities.
- Identify appropriate personnel to conduct case investigation and contact tracing activities. Typically, health departments partner with occupational health, medical

programs, or trained occupational safety and health staff who can formally and confidentially carry out some aspects of contact tracing. K-12 schools should ensure compliance with federal, state, tribal, local, and territorial OSHA and privacy laws in the selection of staff and implementation of case investigation and contact tracing activities with students, staff and teachers.

- Provide knowledge and skill-based training for personnel conducting case investigation and contact tracing. CDC's website has resources for training (/coronavirus/2019-ncov/php/contact-tracing/index.html). K-12 schools should ensure that trainings and resources are coordinated with local health departments to maintain a cohesive program within the jurisdiction.
- Define roles and responsibilities for K-12 school occupational health clinics/programs and student health centers, making distinctions between the role as a health care provider with responsibilities for case reporting, and the role as advisor(s) in case investigation, contact tracing and outbreak response when COVID-19 is identified in the schools setting. K-12 schools should ensure compliance with federal, state, tribal, local, and territorial privacy and occupational health laws in determining the specific responsibilities of school clinic and student health center staff with students, staff and teachers, during COVID-19 case investigation, contact tracing and outbreak response.
- Ensure confidentiality, privacy and data security training and signed confidentiality agreements for all personnel conducting case investigation and contact tracing. Awareness of federal, state, tribal, local, and territorial laws regarding patient privacy and confidentially should be a priority. For additional information about confidentiality, please see CDC guidance on Confidentiality and Consent (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/Confidentiality-Consent.html).
- Develop policies and procedures for case investigation and contact tracing among students, staff, and teachers. K-12 school administrators and public health officials should work together to determine what information is needed in order to properly notify potentially exposed students, staff, or teachers, who is most appropriate to deliver that information, and how that information can be delivered in a secure manner. K-12 schools should review existing Interim Guidance on Developing a COVID-19 Case Investigation and Contact Tracing Plan (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/overview.html), Contact Tracing in Non-Healthcare Workplaces (/coronavirus/2019-ncov/community/contact-tracing-nonhealthcare-workplaces.html), and other Contact Tracing Resources (/coronavirus/2019-ncov/community/contact-tracing-nonhealthcare-workplaces.html) to inform the development of policies and procedures.
- Review, with state, tribal, local, or territorial public health officials, required data elements for a case investigation and identify the best methods of gathering necessary information. K-12 school administrative data management systems may vary greatly in design and accessibility. Information relevant to a case investigation and contact tracing can be provided by the health department. Specific pieces of personal information including phone number, demographics, and class schedule will greatly increase the speed with which health officials can complete the exposure notification process. Ensuring privacy and confidentiality about persons diagnosed with and potentially exposed to COVID-19 is critical in maintaining trust with students, teachers, and staff. Secure methods (i.e., secure email, reporting portals, secure FTPs, etc.) of transferring contact information to health departments will prevent unauthorized release of private information.

- Health department staff may provide training or language to properly discuss cases and exposures without revealing identifiable information. K-12 schools should identify personnel necessary to gather and transmit the information and be prepared to answer, at minimum, the following questions:
  - How can you quickly identify everyone in a classroom or shared space at a specific time? How is this information retrieved from the school data system? Do contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/appendix.html#contact) have to be identified one at a time or can you access information on group exposure (e.g., all students in one classroom)?
  - How quickly can you determine if there are shared dining or meals? How will this information be gathered?
  - How are extracurricular activities documented and recorded?
  - How will household contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracingplan/appendix.html#contact) be identified and who will conduct notification of exposure and related referrals in different settings (e.g., housemates at current residence, including student housing or community housing; family members, including children who may attend other schools, childcare programs or other early care settings, and other relatives)?
- Technology can support case investigation, symptom monitoring and contact tracing but cannot take the place of the staff who interview, counsel, and provide support for those impacted by COVID-19. There are two key types of technology that can contribute to the contact tracing process: case management tools—which augment information collected from surveillance systems, enhance data capture, and provide workforce management tools (such as automated SMS symptom monitoring of cases and contacts (/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-

plan/appendix.html#contact)); and proximity tracing and exposure notification tools voluntary opt-in tools to augment traditional contact tracing using Bluetooth or GPS. Digital tools to support contact tracing should be reviewed for compliance with federal, state, tribal, local, and territorial and regulations, considered, developed and implemented in coordination with the public health officials, with the inclusion of robust evaluation plans. For more information, reference CDC's Guidelines for the Implementation and Use of Digital Tools to Augment Traditional Contact Tracing (/coronavirus/2019-ncov/downloads/php/guidelines-digital-tools-contact-tracing.pdf).

## References

1. Heavey L, Geraldine C, Kelly C, Kelly D, McDarby G (2020). No evidence of secondary transmission of COVID-19 from children attending school in Ireland, 2020. <u>Euro Surveill</u>. 2020 May 28; 25(21): 2000903. DOI: <u>10.2807/1560-7917.ES.2020.25.21.2000903</u>

2. Estrin, D (2020). After Reopening Schools, Israel Orders Them to Shut if COVID-19 Cases are Discovered. National Public Radio. June 3, 2020. Retrieved from: https://www.npr.org/sections/coronavirus-live-updates/2020/06/03/868507524/israel-orders-schools-to-close-when-covid-19-cases-are-discovered (https://www.npr.org/sections/coronavirus-live-updates/2020/06/03/868507524/israel-orders-schools-to-close-when-covid-19-cases-are-discovered)

3. Vermund S and Pitzer V (2020). Asymptomatic transmission and the infection fatality risk for COVID-19: Implications for school reopening. <u>Clin Infect Dis</u>. 2020 Jun 25 : ciaa855. doi: <u>10.1093/cid/ciaa855</u>

Last Updated Nov. 18, 2020 Content source: National Center for Immunization and Respiratory Diseases (NCIRD) (/ncird/index.html), Division of Viral Diseases (/ncird/dvd.html)