Kansas Department of Health and Environment
Division of Health

Coronavirus Disease 2019 (COVID-19) Investigation Guideline

Contents

Effective Date: 04/2020
Current version: 09/2020
Published Date: 09/08/2020
Last Updated: 09/08/2020

Revision History:

Date	Replaced	Comments
04/23/2020	-	Released
05/01/2020	04/2020	Updated period of communicability, isolation restrictions to reflect 10 days. Updated Notification section. Updated "Associating Orphan Contacts".
06/10/2020	05/2020	Updated Laboratory Analysis Section with guidance on serology and antigen testing. Updated Notification of Test Results to Public Health section. Updated Contact Investigation and Contact Management with removal of "Exposure Risk Levels" guidance. Updated case investigation, communicable period, and contact investigation to consider asymptomatic contacts. Added information on pediatric multi-system inflammatory syndrome. Removed Triage of Reports Flowchart - if needed consider CDC guidance. **06/19/2020 Updated communicable period to include CDC language "Persons whose symptoms have resolved and who were previously determined to no longer be infectious by the will not be considered infectious again..."**
07/31/2020	06/2020	Updated Laboratory Analysis section. Additional guidance for antigen tests and 95 kPa bags are only required if shipping by air, e.g. FedEx air. For vehicle transport, a zip-top biohazard bag is all that's required. Added additional guidance under "Person Under Investigation" and updated the PUI definition. Quarantine section clarified that the critical infrastructure listing is a guideline.
09/04/2020	07/2020	Updated COVID Case Definitions. Updated Laboratory Analysis as related to new case definitions. Updated Susceptibility/ Resistance section of Disease Overview. Updated Restrictions, adding guidance on severely immunocompromised/ICU cases and exemption from quarantine based on presumed immunity. Updated broken links.

COVID-19
Disease Investigation Guidelines

COVID-19 DEFINITIONS (Current as of 09/01/2020)

Clinical Criteria

In the absence of a more likely diagnosis:

1) Any one of the following symptoms: cough, shortness of breath, or difficulty breathing, new olfactory disorder, or new taste disorder, **OR**
2) Severe respiratory illness with at least one of the following:
    - Clinical or radiographic evidence of pneumonia, or
    - Acute respiratory distress syndrome (ARDS), **OR**
3) With none of the other symptoms, at least <u>two</u> of the following: fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, nausea or vomiting, diarrhea, fatigue, or congestion or runny nose.

Laboratory Criteria

Using a laboratory method approved or authorized by FDA or designated authority:

Confirmatory laboratory evidence:

- Detection of severe acute respiratory syndrome coronavirus 2 ribonucleic acid (SARS-CoV-2 RNA) in a clinical or autopsy specimen using a molecular amplification test

Presumptive laboratory evidence:

- Detection of SARS-CoV-2 by antigen test in a respiratory specimen

Supportive *laboratory evidence:*

- Detection of specific antibody in serum, plasma, or whole blood
- Detection of specific antigen by immunocytochemistry in an autopsy specimen

Epidemiologic Linkage

One or more of the following exposures in the 14 days:

- Close contact** with a confirmed or probable case of COVID-19 disease; or
- Member of a risk cohort as defined by public health authorities during an outbreak.

***Close contact is defined as being within 6 feet for at least a period of 10 minutes or having direct contact with infectious secretions of a COVID-19 case. However, it depends on the exposure level and setting. Data are insufficient to precisely define the duration of exposure.*

Confirmed Case

- Meets confirmatory laboratory evidence.

Probable Case

- Meets clinical criteria **AND** epidemiologic linkage with no confirmatory laboratory testing performed for SARS-CoV-2.
- Meets presumptive laboratory evidence.
- Meets vital records criteria with no confirmatory laboratory evidence for SARS-CoV-2.

Suspect Case

- Meets supportive laboratory evidence*** with no prior history of being a confirmed or probable case.

Vital Records Criteria

A person whose death certificate lists COVID-19 disease or SARS-CoV-2 as a cause of death or a significant condition contributing to death.

Criteria to Distinguish a New Case from an Existing Case

A repeat positive test for SARS-CoV-2 RNA using a molecular amplification detection test within 3 months of the initial report should not be enumerated as a new case for surveillance purposes.

To date, there has been minimal evidence of re-infection among persons with a prior confirmed COVID-19 infection and growing evidence that repeat positive RNA tests do not correlate with active infection when viral culture is performed. Similarly, the experience with other coronaviruses is that reinfection is rare within the first year.

NOTE: The time period of 3 months will be extended further when more data becomes available to show risk of reinfection remains low within one year of the initial report.

Previous Case Definitions

Prior to 09/01/2020 the case definition approved by CSTE on April 5, 2020 was used:

- Coronavirus Disease 2019 (COVID-19) | 2020 Interim Case Definition, Approved April 5, 2020

Multi-System Inflammatory Syndrome in Children (MIS-C)

Summary:

- Cases compatible with multi-system inflammatory syndrome have been identified in children in the United States and the United Kingdom (UK).
- Characterized by persistent fever and features of Kawasaki disease and/or toxic shock syndrome; abdominal symptoms common, but respiratory symptoms were not present in all cases.
- Cases may require intensive care unit admission for cardiac and/or respiratory support.
- Many have tested positive for SARS-CoV-2 infection by RT-PCR, serology, or had exposure to confirmed case with COVID-19.
- Early recognition and specialist referral are essential, including to critical care if warranted.
- Healthcare providers who diagnose multi-system inflammatory syndrome in children (MIS-C) potentially associated with COVID-19 should immediately report them to the Kansas Department of Health and Environment, Infectious Disease Epidemiology and Response Section by calling 877-427-7317.

Description:
A multi-system inflammatory syndrome in children (MIS-C), recently reported by authorities in the United Kingdom[1], is also being observed among children and young adults in New York and Louisiana. Clinical features vary, depending on the affected organ system, but have been noted to include features of Kawasaki disease or features of shock; however, the full spectrum of disease is not yet known. Inflammatory markers may be elevated, and fever and abdominal symptoms may be prominent. Rash also may be present. Myocarditis and other cardiovascular changes may be seen. Additionally, some patients have developed cardiogenic or vasogenic shock and required intensive care. This inflammatory syndrome may occur days to weeks after acute COVID-19 illness.

This syndrome may include:

- An individual less than 21 years old presenting with persistent fever, inflammation (e.g. neutrophilia, elevated C- reactive protein and lymphopenia), and evidence of multi-organ dysfunction (shock, cardiac, respiratory, renal, gastrointestinal or neurological disorder).
- This may include meeting full or partial criteria for Kawasaki disease.
- No alternative etiology explains the clinical presentation. (note: patients should be reported regardless of SARS-CoV-2 PCR test results).

Reporting:
Consistent with the Kansas Administrative Regulations 28-1-2, which requires reporting of outbreaks and suspected outbreaks of syndromes of known or unknown etiology and of unusual disease or manifestation of illness, patients noted to have this syndrome should immediately be reported to the Kansas Department of Health and Environment by calling the Epidemiology Hotline at 877-427-7317.

Testing:
For patients presenting with this syndrome consider testing for COVID-19 by PCR or serology if they have not previously been tested or were negative in previous testing.

Additional information:
https://www.cdc.gov/mis-c/

[1] Pediatric Intensive Care Society. PICS Statement: Increased number of reported cases of novel presentation of multisystem inflammatory disease. April 27, 2020. Available at https://picsociety.uk/wp- content/uploads/2020/04/PICS-statementre-novel-KD-C19-presentation-v2-27042020.pdf.

LABORATORY ANALYSIS

- Viral testing, molecular and antigen testing:
  - Molecular (PCR or NAAT) and antigen testing are viral tests that diagnosis acute COVID-19.
  - Contacts, even when negative by a viral test, must still complete quarantine.
  - Isolation may be required for a symptomatic, COVID-19 negative person based on symptoms (diarrhea or fever exclusion measures) or the potential infectious agent.
- Positive molecular (PCR or NAAT) testing:
  - If a molecular diagnostic test is positive, the patient is a confirmed case requiring investigation.
  - Detecting viral RNA via molecular testing does not mean that infectious virus is present, but it is assumed until evidence is provided otherwise.
  - If the molecular test is negative no follow-up is required.
- Positive antigen testing:
  - If an antigen test is positive, the patient is considered a probable case requiring investigation;
    - **Unless** a negative PCR result is obtained on an appropriate specimen that was tested within 48 hours of the initial antigen positive results, consider the case-patient as not a case based on the PCR results.
  - Antigen levels for patients who have been symptomatic for more than five days may drop below the limit of detection of the antigen test.
  - If an antigen test is negative, and longer than 5 days of passed since symptom onset, consider obtaining a confirmatory molecular test. Case classification and public health actions may also be based on clinical criteria and epi-links, regardless of the negative antigen test.
- Serologic testing, while available commercially, has limitations:
  - Antibodies start developing within 1 to 3 weeks after infection.
  - SARS-CoV-2 serology tests cannot be used to definitively determine if a patient has developed protective immunity.
    - SARS-CoV-2 serology testing should not be used to guide personal protective equipment (PPE) use, adherence to social distancing practices, or to alter quarantine mandates.
  - SARS-CoV-2 serology testing should not be used to diagnose acute or recent COVID-19.
    - Assume currently or recently symptomatic persons are potentially infected with SARS-CoV-2 unless they test negative by viral testing.
  - Serological results do not require follow-up by the investigator
  - Interim Guidance for COVID-19 Antibody Testing in Clinical and Public Health Settings provides information on antibody tests.

General Information

Molecular Tests (PCR, NAAT)
- Amplify RNA of virus
- Diagnosis of acute infection

Antigen Tests
- Detect viral antigens
- Don't amplify
- Rapid diagnosis of acute infection

Serology
- Detect antibodies made by the immune system
- Detected after acute infection develops
- Indicates previous infection, population prevalence

Culture
- Grow virus
- Slow and not widely available
- Indicates infectivity period

- Molecular testing is conducted at the Kansas Health and Environmental Laboratories (KHEL), but will be prioritized for public health purposes and urgent needs. To use KHEL services:
  - Patients must be a Patient Under Investigation (PUI) meeting current online criteria or be part of an active public health investigation.
  - Providers do not need to call the Epidemiology Hotline for approval, but the ordering provider must report the PUI through the disease reporting portal and complete the document titled "KDHE Coronavirus Disease 2019 (COVID-19) Testing" form to send in with the specimen.
  - **Patients not meeting criteria may be rejected.**
- **Specimen Collection and Shipping instructions follow:**
  - For initial diagnostic testing for SARS-CoV-2, CDC recommends collecting and testing an upper respiratory specimen. A listing of acceptable specimens can be found online.
  - Fill out the KDHE Coronavirus Disease 2019 (COVID-19) Testing form. Include a copy of the form with the specimen shipment. Fax the form to 877-427-7318.
  - Use appropriate PPE and precautions for specimen collection.
    - Review videos available in the KDHE resource center.
  - Label the specimen container with the patient's name and specimen type.
  - Use a synthetic fiber swab with plastic shaft (not wooden) to collect.
  - The swab should be placed in 2-3 mL of Viral Transport Media (VTM). If VTM is not available, liquid Amies solution, sterile phosphate-buffered saline, or normal sterile saline is acceptable.
  - Shorten the length of the swab to allow specimen tube closure.
  - Ensure the specimen tube is secure and will not leak.
  - Place each specimen tube into its own appropriate type of zip-top biohazard bag. Ensure that sufficient absorbent material is present in the bag, but do not wrap the tube in the absorbent material.
  - KDHE COVID-19 Testing forms should be included with the package, but *do not place* in the bag with the specimen. Fold and place forms in the zip-top bag's outside pouch.
  - Store specimens at 2-8^0 C and ship overnight on ice packs as a Category B infectious substance.
    - Rapid shipping is important - specimens must be tested within 72 hours of specimen collection or results will be reported as unsatisfactory. Ship overnight. Use a weekend delivery option if shipping near the weekend, specifying Saturday Delivery for Saturdays.
  - ***Ship or deliver to***:
    Kansas Health and Environmental Laboratories
    6810 SE Dwight St
    Topeka, KS 66620
  - All results for tests conducted by KHEL are sent to the submitting facility. Results will be sent when they are available; results will not be provided by phone, nor will the status of the pending test be advised by phone.
    - To change a submitting facility preference for laboratory report delivery use the Laboratory Report Delivery Form.

EPIDEMIOLOGY

Coronavirus Disease 2019 (COVID-19) is an illness caused by a newly identified virus, SARS-CoV-2. COVID-19 is spread from person-to-person. This virus was first identified during an investigation into an outbreak in Wuhan, China at the end of 2019. The COVID-19 outbreak has been declared a global pandemic by the World Health Organization. www.cdc.gov/coronavirus/2019-ncov/cases-updates.

DISEASE OVERVIEW

A. Agent:
SARS-CoV-2, a novel coronavirus identified in 2019.

B. Clinical Description:
Patients with COVID-19 have reported mild to severe respiratory illness with symptoms of fever, cough, and shortness of breath. Refer to CDC for Information on additional symptoms and further details on clinical course.

C. Reservoirs:
It likely came from an animal source. More information is needed to identify the possible role that bats and other animals may play in the transmission.

D. Mode(s) of Transmission:
Mainly person-to-person. Transmission usually occurs between people in close contact with one another (within 6 feet for 10 minutes or more) or through respiratory droplets produced when an infected person coughs or sneezes.

E. Incubation Period:
Symptoms usually appear 2-14 days after exposure.

F. Period of Communicability:
Patients are most contagious when they have symptoms.

For investigation purposes:

- Symptomatic persons are considered infectious from 2 days prior to onset of any symptoms (including fever) until the following conditions are met:
    a. 10 days* have passed since symptoms first appeared **and**
    b. 72 hours have passed since the fever has resolved (without use of anti-pyretic medications) **and**
    c. There has been a significant improvement in symptoms.
- Persons never experiencing symptoms will be considered potentially infectious 2 days prior to until 10 days after the collection date of the first positive specimen.
- Persons whose symptoms have resolved and who were previously determined to no longer be infectious by the above criteria will not be considered infectious again, based on their history of COVID-19.

** Persons admitted to ICU or who are severely immunocompromised are considered infectious for a minimum of 20 days.*

G. Susceptibility and Resistance:
No confirmed reports have been received of a person being re-infected with COVID-19 within 3 months of initial infection. However, additional research is ongoing.

H. Treatment:
For information on investigational and developing therapies refer to CDC.

NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Contact the Kansas Department of Health and Environment (KDHE) immediately at 1-877-427-7317 if a patient is laboratory confirmed or presumptive positive for COVID-19. PUIs with pending test results may be reported via fax or online portal.

Kansas Department of Health and Environment (KDHE)
Bureau of Epidemiology and Public Health Informatics (BEPHI)
Phone: 1-877-427-7317 Fax: 1-877-427-7318

NOTIFICATION OF TEST RESULTS TO PUBLIC HEALTH

1. KDHE-Bureau of Epidemiology and Public Health Informatics (BEPHI) will receive lab results from KHEL and commercial laboratories, and notifications of symptomatic cases being tested by medical providers.
   - Laboratory reports are received by KDHE via electronic laboratory reports (ELRs) from KHEL and most commercial laboratories and by fax.
   - Medical providers are to report symptomatic persons (PUIs) being tested online through https://diseasereporting.kdhe.ks.gov/
2. Results will be entered in EpiTrax and assigned to a local public health agency based on the case-patient's address listed on the notification or the address of the diagnosing facility when patient address is not available.
   - For out-of-state patients treated at a Kansas facility, KDHE-BEPHI will classify the CMR as "Out-of-State" but assign the CMR to the public health agency covering the Kansas diagnosing facility's jurisdiction.
   - Indeterminate results are specimens that are going to be re-ran and the results will be delayed; do not consider them positive or negative.
3. The local public health agency will coordinate with local partners.
   - The local public health agency will need to monitor EpiTrax for cases.
   - The local agency will need to form partnerships with local providers to acquire any missing demographics and patient contact information.
   - When a record needs to be assigned to another public health jurisdiction, local public health will use the "Route to LHD" feature in EpiTrax to assign the record to the new local health department jurisdiction.
   - If a lab report is not received by KDHE, but is received by the local public health agency, the local investigator will attach the laboratory report to the record in EPITRAX and notify kdhe.epitraxadmin@ks.gov requesting lab be entered into the system and the case classified.
   - When a COVID-19 contact becomes symptomatic but is not tested, local public health will need to notify KDHE of the new probable case through the kdhe.epitraxadmin@ks.gov.

PUBLIC COMMUNICATIONS

1) Do not refer the public or patients to the Epidemiology Hotline; it will delay the epidemiologists' ability to assist healthcare providers and local public health.
2) For persons with general questions, refer to KDHE's COVID-19 Resource Center online (www.kdheks.gov/coronavirus), by email (COVID-19@ks.gov), or by phone (1-866-534-3463 or 1-866-KDHEINF).
3) To coordinate press releases between local Public Information Officers and KDHE Office of Communications, call 785-296-1317 or 785-296-5795.

STANDARD CASE INVESTIGATION AND CONTROL METHODS

Person Under Investigation Information (PUI)

1) If a symptomatic patient is being tested for COVID-19, they should be isolated with the assumption that they are infectious.
   - For **hospitalized** patients, follow the CDC guidance for infection control: www.cdc.gov/coronavirus/2019-ncov/infection-control/index.html.
   - For **non-hospitalized** patients, the local health department should contact the PUI and ensure they understand isolation requirements
     - The PUI must stay at home until results become available or until no longer considered infectious as described in the disease overview and online in COVID-19 Isolation & Quarantine documents and disease overview.
     - Household contacts of PUIs should be encouraged to stay home if lab results are expected to take longer than 72-hours, the PUI has a high risk of COVID-19, or at the direction of the local health department.
     - Quarantine of non-household contacts is usually not required until positive results are received (refer to contact investigation section).
2) When test results are expected, but not received within 72 hours of submission:
   - Not all specimens are being tested by KHEL, even those with a KDHE COVID-19 Testing Form may have been sent to a commercial laboratory.
   - With a delay in results, verify where the specimen was shipped for testing by contacting the original submitter.
   - Work restrictions or quarantine measures if not yet enforced should be instituted if test results cannot be obtained.

Case Investigation

1) Contact the medical provider who ordered testing that supports a COVID-19 or who is attending to the patient and obtain information to complete the COVID-19 Investigation Form (use paper form or direct entry into EpiTrax Investigation Tab).
   - Current patient status.
   - Hospitalization history: include dates, intensive care stay (ICU), ventilation or intubation use, extracorporeal membrane oxygenation (ECMO) use
   - Clinical information on symptoms and onset date.
   - Pre-existing medical conditions or immunocompromised.
   - Respiratory diagnostic testing results
   - Occupation of patient, note if patient is a health care worker or first responder
   - Note if patient is a resident of a nursing homes, residential care home for those with disabilities, psychiatric treatment facilities, group homes, board and care homes, homeless shelter or any other congregate setting.
2) Examine symptom onset to determine next steps:
   - Symptomatic, continue investigation as normal.
   - Asymptomatic currently but had symptoms which resolved within 14 days of current diagnosis, continue investigation as normal.
   - Asymptomatic currently but had symptoms which resolved greater than 14

days prior to diagnosis, report information needed to classify and close the case; if resources allow, follow-up if it is within 28 days of symptom resolution to ensure close contacts did not become symptomatic.

- Asymptomatic and never experienced symptoms, investigate and consider the potential infectious period as 2 days after a known exposure to COVID-19 or, without known exposure, 2 days prior to positive specimen collection.

3) For case-patients with no known exposure, interview the case or proxy about activities 14 days prior to symptom onset (or prior to positive collection date with no symptoms). Use the COVID-19 Exposure Time Line to assist in your interview. Especially, note:
   - Recent travel to areas of concern
   - Exposures to household members, close contacts, or recent ill travelers.
   - Case's occupation and association to any congregate living situations.
4) Continue the interview using the COVID-19 Exposure Time Line to collect information on patient's occupation and activities while infectious.
   - Infectious period depends on situation.
     - Start date: Symptomatic individuals, 2 days prior to onset of symptoms; or asymptomatic individuals who never developed symptoms, 2 days prior to positive specimen collection date or 2 days after a known exposure.
     - End date: Date isolation precautions would be discontinued.
   - Use *Guide When Interviewing Confirmed Case or PUI to Determine Contacts* to assist your investigation.
5) Investigate epi-links among cases (clusters, household, co-workers, etc).
   - Unreported, highly suspected patients or exposed symptomatic contacts, should be investigated as a case and reported to KDHE-BEPHI.
   - Link "orphaned contacts" to previous cases as identified.
6) Follow-up as instructed in Case Management and ensure restrictions or isolation measures are in place.

Contact Investigation

1) Review the COVID-19 Exposure Time Line to determine contacts.
2) Determine the potential **infectious** period for the COVID-19 person:
   - For currently or recently symptomatic individuals, consider the 2 days before symptom onset until date isolation precautions are discontinued.
   - For asymptomatic individuals who never experienced symptoms,
     a) If the date of exposure for the asymptomatic COVID person is known, consider the 2 days after the date of exposure until date isolation precautions are discontinued.
     b) If the date of exposure cannot be determined, use 2 days prior to positive specimen collection until date isolation precautions are discontinued.

3) **Close contacts are those exposed to an infectious COVID-19 person, by:**

- Being within approximately 6 feet (2 meters) of a COVID-19 case for a prolonged period (i.e. 10 minutes or longer but **any duration** is considered prolonged if the exposure occurs during an aerosol-generating procedure); **or**
- Having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed or sneezed on) – If such contact occurs while not wearing recommended personal protective equipment or PPE. Cloth face masks are not considered PPE.

4) Use the Contact Investigation Notes Form to create contact listings.

5) **Contacts of a COVID-19 case *within* healthcare facilities:**
   - Refer to CDC guidance in Potential Exposure at Work.
   - Outpatient Settings: Management of exposed HCP in outpatient settings will be monitored by local public health officials.
   - Inpatient Settings: Usually managed and monitored by the facility's occupation health program, if approved by the local public health agency.
   - Coordinate with healthcare facility's Infection Prevention and Control Practitioner (IP) to ensure exposed healthcare personnel (HCP) are identified, assessed, and work restrictions enforced if needed.
   - Local public health must ensure adequate follow-up and reporting of data.

6) **Contacts of a COVID-19 cases being managed by local public health**:
   - Create listings of all potential close contacts: include date of exposure, phone numbers, email addresses, and county of residence of all potential contacts.
   - Share contact information for those persons who are live outside for your jurisdiction with public health agencies that are responsible for jurisdiction of that contact's residence.
   - Interview potential close contacts.
     a) Note any symptoms COVID-19.
     b) Verify exposure details, date of first and last exposure, and if the person meets the definition of close contact.

7) If the contact's exposure was within the last 14 days:
   - Institute control measures as indicated under Isolation…Restrictions, and
   - Follow-up with close contacts as recommended under Contact Management.

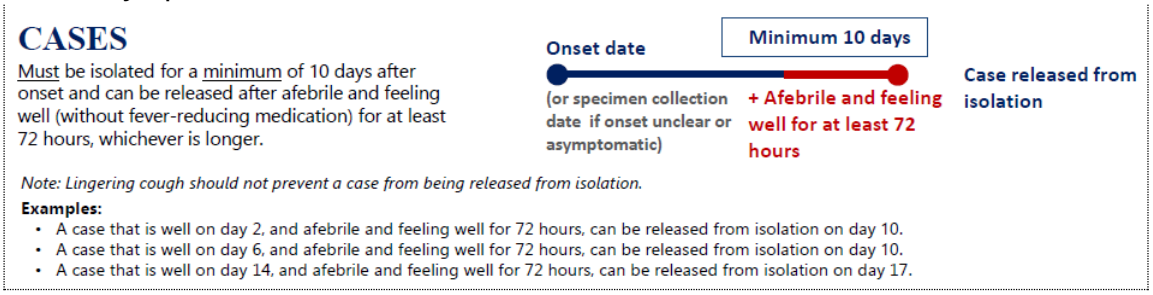
8) If the contact's last exposure was not within the last 14 days and contact never developed symptoms, no contact management is required for that contact.

9) Educate on avoiding future exposures with Caring for COVID-19 Infected People & Preventing Transmission in Homes (PDF).

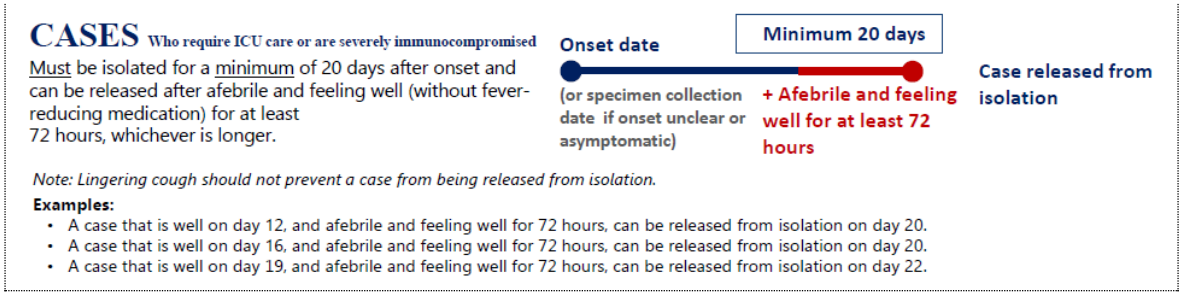
Isolation Restrictions

Non-hospitalized persons with a suspected or confirmed case of COVID-19 should remain in isolation until:

- At least 10 days have passed since symptoms first appeared; **AND**,
- At least 3 days (72 hours) have passed since recovery which is defined as resolution of fever without the use of antipyretic medications and improvement in symptoms.



Persons who require ICU care or who are severely immunocompromised with COVID-19 should remain in isolation for a minimum of 20 days after onset and can be released after afebrile and feeling well (without fever-reducing medication) for at least 72 hours.



If a case refuses to stay in isolation, a legal order may be needed. The Community Disease Containment SOG and its annexes are available at http://www.kdheks.gov/cphp/operating_guides.htm.

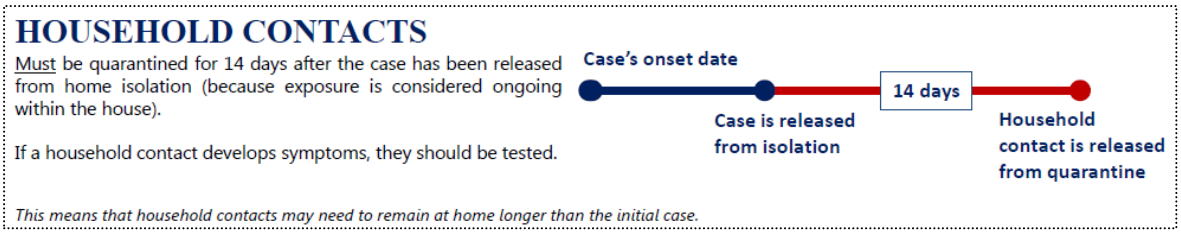
Refer to: Releasing from Isolation and Quarantine Graphic.

1) For hospitalized patients:
   - Hospitalized patients should be handled with Standard and Transmission-Based Precautions in accordance with CDC guidance.
     - HCP who enter the room with a known or suspected COVID-19 patient should use a respirator (or facemask if a respirator is not available), gown, gloves, and eye protection.
     - *Cloth face coverings are NOT PPE and should not be worn for the care of patients with known or suspected COVID-19.*
   - To discontinue Transmission-Based Precautions for hospitalized patients, refer to Discontinuing Transmission-Based Precautions for patients with COVID-19.
     - The decision to discontinue transmission-based precautions should be made on a case-by-case basis in consultation with clinicians, infection prevention specialists, and public health officials.

2) For patients not requiring hospitalization:
   - Refer to Coronavirus Disease 2019 (COVID-19 Caring for Patients at Home):
     – Considerations for care at home include whether:
       - Patient is stable enough to receive care at home.
       - Appropriate caregivers are available at home.
       - The caregiver, when possible, should not be someone who is at higher risk for severe illness from COVID-19.
       - A separate bedroom is available where the patient can recover without sharing immediate space with others.
       - Resources for access to food and other necessities are available.
       - The patient and other household members are capable of adhering to precautions recommended as part of home care or isolation.
   - If the patient lives in a group setting or a home setting where the above criteria cannot be met, the local public health agency will need to identify where the patient can be housed until no longer considered infectious.

Quarantine Restrictions

Quarantine is required until 14 days after exposure to COVID-19.



The latest quarantine recommendations are posted on-line refer to: Releasing From Isolation and Quarantine Graphic and the Frequently Asked Questions for guidance. Two different scenarios may be presented:

- Travel-Related Quarantine, or
- Exposure to COVID-19

Quarantine exemption based on presumed immunity after viral testing:
Close contacts with evidence of previous infection supported by a positive PCR or antigen test may be exempt from quarantine after re-exposure. This is to be determined by the local health officer based on a possible 3-month period of presumed immunity. If an investigation was done documenting the date that symptoms resolved, or the date isolation measures were discontinued, then the 3-month period can start from that end date. If those dates are not available, then the period will start from the date of the positive laboratory test. A serology or antibody test may not be substituted for a laboratory report of a viral diagnostic test.

Travel Related Quarantine

The 14-day travel associated quarantine may not be mandatory for those who work in critical infrastructure sectors needed for continuity of operations required to sustain normal day-to-day services vital to the economy and way of life. Public health, hospitals, clinics, pharmaceutical, food supply, and first responders are always considered. Other critical infrastructure sectors are considered on a case-by-case basis based on local assessments. See below for modifying quarantine.

Exposure to a COVID-19 Case Quarantine

Most workers have a mandatory 14-day quarantine if determined by local public health to have been exposed to an infectious COVID-19 person.

For healthcare, public health, and law enforcement workers exposed to an infectious COVID-19 case, there are situations where quarantine is highly recommended. However, if these workers are critical to the response, with the approval of the local health officer and employer, it is acceptable that the quarantine be modified.

In certain situations, other critical infrastructure employees may be considered for modified quarantine, for example beef, pork, and poultry processing.

Modifying or Not Modifying Quarantine for Critical Infrastructure Employees

Non-mandatory travel quarantine could still be applied to those in critical infrastructures, and recommended quarantine could be waived for certain situations; an assessment by the employer and local public health is needed to determine:

1. Are the employee's services critical to the response currently?
2. Is the population that the employee serves or works with at higher risk of COVID-19 complications? If they are, can the employee be reassigned to populations at lower risk of complications from COVID-19 or can special processes be put in place to lower the risk to clients and co-workers at risk of higher complications?
3. Can the employee adhere to procedures set forth by the facility to ensure their health is appropriately monitored and immediately stop work if symptoms develop?

If the employee is critical to the response and can work safely and not placing clients and other workers at risk, then the following should be followed:

1. Employee should monitor for signs and symptoms of COVID-19, including checking for a fever of 100^{o}F or higher at least twice per day and monitoring for lower respiratory symptoms including cough or shortness of breath. A symptoms log can be used for documentation.
2. If symptoms develop during the 14-day quarantine period, employees should stop work immediately and notify their employer and local public health.

Cohorts and modified quarantine:

When situations occur where a well-defined group has been exposed together as a cohort that can be quarantined together in a facility while causing no risk to others, modifications to quarantine may occur. This type of quarantine can be used in a school environment: Guidance for Modified Quarantine in K-12 Schools

Case Management

1) Institute isolation measures as recommended by most current guidance.
   - For hospitalized patients: Standard and Transmission-Based Precautions
   - For non-hospitalized patients, ensure proper care and resources are available.
     - Caring for COVID-19 Patients at Home
     - Pets at Home: Managing COVID-19 Pet Owners in Home Isolation
   - For asymptomatic patients that test positive – the date of specimen collection will be considered the "onset date" for isolation measures.
2) Coordinate activities related to isolation with outside facilities.
   - Work with medical providers to track patients in isolation.
   - Notify medical providers of suspect cases who may need medical treatment.
3) Submit data requested on the COVID-19 Investigation Form as soon as possible to assist with the descriptive epidemiology of this disease in Kansas.
4) Cases should be monitored in EpiTrax until isolation period is over.
   - Report on any changes in patient status: discharge, death, recovery date
   - The date isolation ends must be 3 days after recorded **date of symptom resolution** and 10 days after recorded **onset date** as found on the EpiTrax Investigation tab.
     - Asymptomatic persons who never developed symptoms do not require an onset date of symptoms to be recorded. Mark the patient as "Asymptomatic" on the investigation tab.
     - Date of symptom resolution in asymptomatic cases can be consider 10 days after specimen collection which is the date isolation should end.
   - The date isolation ended can be recorded in **LHD investigation completed** date field on the EpiTrax Administrative tab.

Contact Management

1) Contact tracing will be conducted for close contacts of **laboratory-confirmed or probable COVID-19 patients.**
   - Local public health should make initial contact immediately upon notification.
     - Assess whether contact is symptomatic.
     - If contact is not symptomatic, determine contacts' preferred monitoring method (text, email, phone call) and establish regular communication plan.
       - If resources allow, contact should be made at least two days per week for 14 days since last exposure.
   - Use the sample scripts to assist with introductory call and monitoring.
2) All close contacts will be asked to monitor themselves daily for symptoms and contact the local health department or KDHE if symptoms develop.
   - Symptoms Monitoring Log may be used to assist with medium and low risk individuals who are self-monitoring.
   - For contacts that report they are experiencing symptoms.

- If medical evaluation is needed, refer to appropriate medical care.
  - Pre-notification should occur to the receiving health care facility and EMS, if EMS transport indicated, and with all recommended infection control precautions in place.
  - Testing for COVID-19 should be considered as part the evaluation if the patient meets the most current recommendations for testing.
- If symptoms are mild and medical care or testing is not needed, the person will remain in home isolation until no longer considered infectious.
  - In some cases, local health departments may be required to assist with specimen collection for COVID-19 testing of patients in home isolation that do not need medical care but are considered part of a potential cluster or outbreak investigation for the community.
  - Even without testing, if the clinical criteria are met for a close contact of a positive COVID-19 patient, the contact is promoted to a morbidity event in EpiTrax and is considered a probable case.
  - Upon recording the contact's symptoms and promoting the contact to a morbidity event, the local health department should notify kdhe.epihotline@ks.gov about the probable case to allow the state case classification to be updated.
- Case and contact investigations and any necessary control measures will be carried out for all symptomatic contacts promoted to probable cases.

3) When quarantine measures are instituted:
   - Ensure adequate quarantine measures are in place.
   - Ensure proper care and resources are available to those in quarantine.
   - The Community Disease Containment SOG and its annexes are available at http://www.kdheks.gov/cphp/operating_guides.htm. Templates for legal orders of quarantine are available in Annex C.

Education

1) Instruct on the necessary Restrictions.
   - Isolation and Quarantine – Frequently Asked Questions
   - Caring for COVID-19 Infected People & Preventing Transmission in Homes
   - KDHE Tips for Home Isolation
2) Counsel contacts to watch for signs or symptoms within 14 days after their last exposure to a symptomatic COVID-19 case and how to seek medical attention only if needed.
   - KDHE Quarantine Guidelines
   - COVID Symptom Monitoring Log
3) Utilize templates to inform employees, employers, travelers and potential contacts of exposures and risks.
4) Provide education on preventing the spread of disease. Refer to:
   - Preventing 2019-nCoV from spreading: www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html
   - Refer to frequently asked questions:
     - KDHE specific: www.kdhe.ks.gov/coronavirus/index.htm.
     - CDC provided: www.cdc.gov/coronavirus/2019-ncov/faq.html

DATA MANAGEMENT AND REPORTING TO THE KDHE

A. Accept the case assigned to the LHD and record the date the LHD investigation was started on the [Administrative] tab.

B. Organize and collect data.

- Forms provided to assist the investigator include:

Forms and Worksheets for Reporting and Investigation	
Form Name	**Purpose**
COVID-19 Exposure Time Line	Used to record case-patient's activities during exposure and infectious period.
Contact Investigation Notes Form	Used to record and manage contacts of a case patient
COVID-19 Investigation Form	Used by local investigator to collect data that will be reported in the Kansas EpiTrax System.
COVID-19 Recurrent Presentation Form	Electronic form manually loaded into a EPITrax CMR when symptoms reoccur ≥30 days after symptoms initially resolved.

- Investigators can collect and enter all required information directly into EpiTrax [Investigation], [Clinical], [Demographics], [Contact] tabs without using the paper forms.
- During outbreak investigations, refer to guidance from a KDHE epidemiologist for appropriate collection tools.

C. Report data collected during the investigation into the EpiTrax system

- Verify that all data requested in Step 1) and on the COVID-2019 Investigation Form has been recorded on an appropriate EpiTrax [tab], or that actions are completed for a case lost to follow-up as outlined below.
- Some data that cannot be reported on an EpiTrax [tab] may need to be recorded in [Notes] or scanned and attached to the record.
- Refer to the following page for managing contacts.

D. If a case is lost to follow-up, after the appropriate attempts:

- Indicate 'lost to follow-up' on the [Administration] tab with the number of attempts to contact the case recorded.
- Record at least the information that was collected from the medical records.
- Record a reason for 'lost to follow-up' in [Notes].

E. After the case investigation and isolation period for the case-patient has ended, record the date in the "LHD investigation completed" field located on the [Administrative] tab.

- *Record the date even if the local investigator's Contact Management for the contact is not "Complete".*

F. Once the entire investigation is completed, the LHD investigator will click the "Complete" button on the [Administrative] tab. This will trigger an alert to the LHD Administrator, so they can review the case before sending to the state.

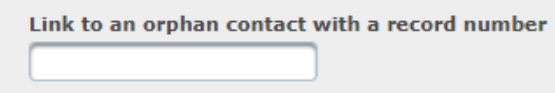
- The LHD Administrator will then "Approve" or "Reject" the CMR.
- Once a case is "Approved" by the LHD Administrator, BEPHI staff will review the case to ensure completion before closing the case.

Managing Contacts in EpiTrax

Associating "Orphan Contacts"

Orphan contacts are new cases/contacts whose exposure was to a previously reported case-patient, but the new case was never associated to the "older" case. These "orphan" cases/contacts cannot be previously associated to another parent-patient. To associate a new case with a previous case:

1. Open the CMR for the case that caused the exposure in "Edit" mode (i.e. open the old case or case with earliest onset)
2. Click on the *"Contacts"* tab.
3. Enter the CMR for the case (newer case) that you want to associate to a case that was the source of exposure in the "Link to an orphan contact…"



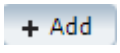
4. Save and Continue.

What to do when a contact has been associated to more than one case?

- Associate the contact with the most recent exposure, so quarantine period to be extended to cover the newest exposure.
- If the contact is already connected to the older case, remove the contact from the current parent patient (older case) and assign the contact to the newer case.

Creating a Contact

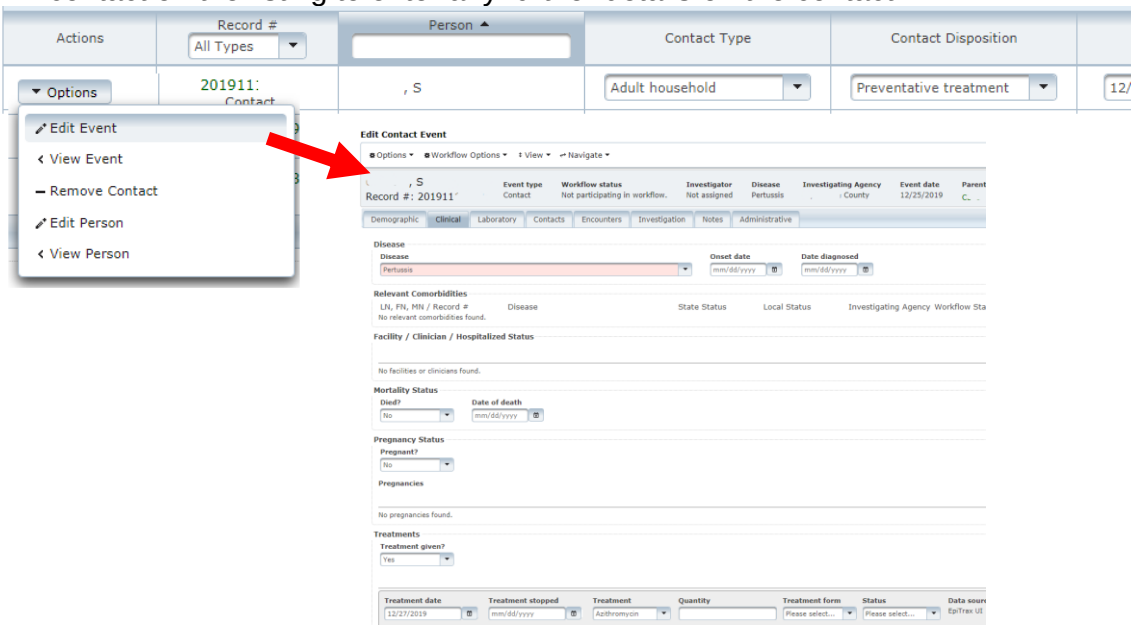
1. Click on the *"Contacts"* tab.
2. Click 

3. Enter person's *Last name* and *First name*, DOB (if known), and phone number.
4. Click 

5. Select appropriate choice for *contact type* (usually going to be 'other,' 'household 'or 'healthcare/healthcare worker').
6. Select appropriate choice for *disposition* (usually going to be 'not infected').
7. Enter *disposition date.*
8. Save and Continue.

Entering Information on Contacts on Separate Contact Form

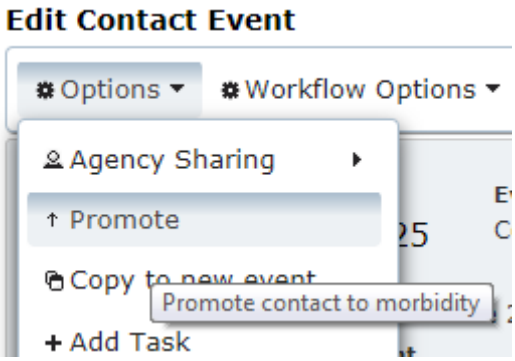
1. Add and save the contact on the case's (parent patient's) "Contacts" tab.
2. After the contact is saved, click 'Options' and 'Edit Event' beside the contact on the listing to enter any further details on the contact.



Promoting a Symptomatic Contact to a Case

If a contact becomes symptomatic and meets the "Probable Case Definition", they should be promoted to a case and classified as "Probable".

1. Open the contact's record in edit mode.
2. Click 'Options' and 'Promote'.



3. Click 'OK' to the question "Promote this event to a morbidity event?"

If a promoted contact is later determined not to meet the "Probable Case Definition" (i.e. test negative for COVID-19 and diagnosed with anther cause for their illness), the record can be "demoted" using the same process.

ADDITIONAL INFORMATION / REFERENCES

A. Quarantine and Isolation: Kansas Community Containment Isolation/ Quarantine Toolbox Section III, Guidelines and Sample Legal Orders
www.kdheks.gov/cphp/operating_guides.htm

B. KDHE COVID-19 Information:

- Resource Center: https://www.coronavirus.kdheks.gov/

C. Additional Information (CDC):

- www.cdc.gov/coronavirus/2019-nCoV/index.html
- Case and Contact tracing resources: https://www.cdc.gov/coronavirus/2019-ncov/php/open-america/contact-tracing/index.html

ATTACHMENTS

To view attachments in the electronic version:

1. Go to <View>; <Show/Hide>; <Navigation Pane>; <Attachments> – OR – Click on the "Paper Clip"  icon at the left.
    a. If the icon or attachments are not visible in your browser. Save the document and reopen with Adobe.
2. Double click on the document to open.

Releasing from Isolation and Quarantine

Guide When Interviewing Confirmed Case or PUI to Determine Contacts

Use this guide with confirmed cases or PUIs to develop a list of close contacts who may have been exposed during the infectious period.

A. Date of symptom onset (Day 0): _____/_____/_____

B. Date of infectious period (-2 days before onset): _____/_____/_____

C. Date of isolation or estimated infectious period end (if never isolated, Day 10 or 3 days after feeling afebrile and well, whichever is long): _____/_____/_____

Suggested script: *I'm going to ask you to think back over each day while you've been sick (and even a couple days before you felt sick) to remember what you did each day. This will help us figure out who you may have been around, and who else might get sick. If you're having a hard time remembering, sometimes it is helpful to look back at a calendar, or on your phone for messages sent on each day, or even at your credit card receipts. We are happy to give you time to consult other information to be sure that we understand your activities while you were ill as completely as possible.*

For the interviewer: Elicit all major activities and potential close contacts from the Case for every day from Day 0 (A in the list above) to Date of isolation/Day 10 (B in the list above). Suggested questions for each day are below.

- Where did you wake up this morning?
- Was anyone else staying in the same place as you?
- Where did you have breakfast? Did anyone dine with you?
- Did you go to work or school this day?
    - What is that environment like? Do you sit with other people?
    - What did your work day look like? Any meetings outside your office or normal workplace?
- Where did you eat lunch? Did anyone dine with you?
- Did you run any errands or go shopping?
- Where did you eat dinner? Did anyone dine with you?
- Did you go to the doctor?
- Any other outings or social gatherings?
- For any outings (school/work/doctor/shopping/etc): How did you get there? Did you share a ride with anyone? Did you interact with anyone there for >10 minutes?
- How did you feel this day?

For the interviewer: Record responses to the questions above, make sure to note the names and contact information (phone number, address) if possible re: any close contacts for each day. When you've completed the interview for all days, then proceed**.**

Now that we've gone through each day…. Think back over the whole time since you've been ill. Have you been to any big social gatherings that we haven't already discussed? Family reunion? Party? Concert? Work Meeting? Conference?

Scripts for Active Monitoring of close contacts of confirmed cases

Introduction script

Hello, I am _____ with the _____ Health Department. We are working with the CDC and Kansas Department of Health on an investigation of a case of the COVID-19, and the information we've gathered indicates that you've possibly been exposed to the COVID-19.

Out of an abundance of caution, we need to monitor your health for the next _____ days [14 days after last possible exposure]. I will be your contact, and I will call you once a day to check-in and review any symptoms you may have.

Do you have any questions for me about that information?

**you cannot tell them case information, nor can you explicitly state where they were exposed as this could lead them to ID the case. Some people will be able to deduce, and if they speculate who and where, just say that you can't confirm any information*

Only ask these during the first call.

I have some initial questions for you if you have a few minutes right now.

What is your occupation and where do you work?

Are you currently pregnant?

I need to get your contact information; can you provide your address and a secondary phone number?

How would you describe your race/ethnicity, and what is your primary language?

**If not English, ask if they will need a translator.*

What is your date of birth?

How many adults and children live in your home, including you, and what type of housing is it (apartment, dorm, single-family, etc.)? *We need to note the number of children and adults separately.*

Do you own the property where you live?

Symptom review/call script

Hi, _____, this is _____ with the Health Department. How are you feeling today (well/unwell)?

Let's run down the symptom checklist:

Fever, what was your highest temperature in the last 24 hours?
Any chills? Sever shivering?
Muscle or body aches? Headache?
Sore throat?
Any cough? Shortness of breath? Difficulty breathing?
Fatigue or malaise (extreme lack of energy, tired)?
Any lack of appetite? Loss of smell or taste disorder?
Diarrhea, or vomiting?

**if the contact says yes to any symptom, confirm the date and time of onset. Recommend the contact self-isolate immediately and let them know we will be in touch shortly with further instructions for testing and visiting a medical provider. Coordinate with your local leadership on next steps. Call 877-427-7317 for a consult. Those with minor symptoms may be asked to remain home and isolate without testing depending on the current status of your county cases.*

Do you know any other people who are experiencing symptoms like the ones we just discussed?

**Get their names if so.*

Ending the conversation

Do you have any questions or need to tell me anything else?

If you develop symptoms before our next call, please call me immediately and isolate yourself. We will go from there. If you need to call or text me to schedule a time to call next, feel free to do so and I can work with your schedule.