Coronavirus Disease 2019 (COVID-19) Investigation Guideline

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Effective Date: 04/2020  Published Date: 10/15/2021
Current version: 10/2021  Last Updated: 10/14/2021
### Revision History:

<table>
<thead>
<tr>
<th>Date</th>
<th>Replaced</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>04/23/2020</td>
<td>-</td>
<td>Released</td>
</tr>
<tr>
<td>05/01/2020</td>
<td>04/2020</td>
<td>Updated period of communicability, isolation restrictions to reflect 10 days. Updated Notification section. Updated “Associating Orphan Contacts”.</td>
</tr>
<tr>
<td>06/10/2020</td>
<td>05/2020</td>
<td>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. <strong>06/19/2020</strong> 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...”</td>
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<tr>
<td>07/31/2020</td>
<td>06/2020</td>
<td>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.</td>
</tr>
<tr>
<td>09/04/2020</td>
<td>07/2020</td>
<td>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.</td>
</tr>
<tr>
<td>11/03/2020</td>
<td>09/2020</td>
<td>Updated Laboratory Analysis: molecular testing and specimen submission to KHEL. Revised Disease Overview Communicability and Susceptibility sections; Notifications to Public Health: routing to other jurisdictions and symptomatic contacts; Case Investigations: recurrent infections, clarification on infectious period; Contact Investigations: new definition of close contact; Quarantine: clarification on day 0 and rearrangement of paragraphs; and Managing Contacts: handle contacts with multiple exposures. Added Outbreak Definitions.</td>
</tr>
<tr>
<td>11/18/2020</td>
<td>10/2020</td>
<td>Updated Isolation and Quarantine Graphic. Updated Contact Management for promoted probable cases that test negative. Added section on Managing Reinfections in EPITRAX. Updated notification section with reporting guidelines.</td>
</tr>
<tr>
<td>01/11/2021</td>
<td>12/2020</td>
<td>Disease Overview: resources for vaccine information added. Modified laboratory analysis section with antigen guidance and testing with shortened quarantine. Modifications to presumption of immunity after natural disease and added presumption of immunity after vaccine.</td>
</tr>
<tr>
<td>02/23/2021</td>
<td>01/2021</td>
<td>Updated Disease Overview and Quarantine Restrictions based on public health recommendation for vaccinated persons</td>
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<td>Revision Date</td>
<td>Date Range</td>
<td>Updates</td>
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<tr>
<td>03/10/2021</td>
<td>02/2021</td>
<td><strong>Case definitions</strong>: addition of definition vaccine breakthrough, MIS-C case definition and reporting links. <strong>Laboratory Analysis</strong>: information on requesting rapid antigen testing, LabXchange, and sequencing. <strong>Disease overview</strong>: information on variants; clarified that persons with presumed immunity who develop symptoms or test positive should be evaluated as potential cases. Changed period of presumed immunity from 90 days to 6 months in Disease Overview and Quarantine Exemptions. <strong>Shortened Quarantine</strong>: recommendation to use 14-day after exposure to more infectious SARs-CoV-2 variants.</td>
</tr>
<tr>
<td>04/20/2021</td>
<td>03/2021</td>
<td><strong>Case definitions</strong>: removal of mention of CSTE statement for distinguishing new cases – no guidance has been provided; <strong>Laboratory Analysis</strong>: added description of WGS; added Figure 3 discussing assessments of potential reinfecions and testing; <strong>Disease Overview</strong>: clarified “currently” asymptomatic persons previous positive retesting positive under communicable period; edited list for variants to agree with KHEL statement on variant surveillance. <strong>Case Investigation</strong>: Additional clarification with potential reinfections.</td>
</tr>
<tr>
<td>05/28/2021</td>
<td>04/2021</td>
<td>No time limit of presumed immunity for fully vaccinated person. Updated: <strong>Disease Overview – Susceptibility and Resistance and Quarantine Restrictions</strong>: Quarantine exemption based on presumed immunity after COVID-19 vaccine. <strong>Laboratory Analysis</strong>: Additional information on rapid antigen tests provided by KHEL (pg.6) Links to communication toolkits placed in Additional Communications…Public Communications (pg.12)</td>
</tr>
<tr>
<td>08/02/2021</td>
<td>05/28/2021</td>
<td>Updated Case Definitions section including surveillance case definition for reinfection cases to be counted as new cases and included criteria for self-administered at home tests to be “suspect cases”. Updated Figure 3 under Laboratory Analysis on evaluating reinfections with an additional note for asymptomatic, vaccinated persons. Updated Managing Reinfecions in EpiTrax section. Added link to testing in schools in the Modified Quarantine After Exposure section. 08/02/2021 – Added recent changes for vaccinated persons.</td>
</tr>
<tr>
<td>09/01/2021</td>
<td>08/02/2021</td>
<td><strong>Case Definition</strong>: With reinfection, added language for symptomatic, epi-linked persons who re-develop symptoms after exposure but are not tested. <strong>Laboratory analysis</strong> – additional clarification about antigen testing and confirmation with NAATs and modified instructions on WGS to include ordering test through Labxchange and the ordering of supplies directly from laboratory. <strong>Disease Overview</strong>: additional comments in “Susceptibility/Resistance” to discuss actions that should occur even with presumed immunity, including testing. <strong>Quarantine</strong>: Added additional comments for testing of exposed persons after exposure to reflect KDHE guidance (in addition to CDC guidance posted 08/02/2021). Modified quarantine – removed link to discontinued modified quarantine in schools document as KDHE’s preferred method is Test to Stay strategy. Fixed broken web links.</td>
</tr>
<tr>
<td>10/14/2021</td>
<td>09/01/2021</td>
<td><strong>Laboratory Analysis</strong>: Replaced algorithm in Figure 2. Antigen Testing Algorithms with updated algorithms from CDC. Updated Outbreak Case Definitions to not include secondary cases in final counts based on CSTE proposed definitions. Updated Data management with guidance/definition of “investigation outcomes.” and “Creating a Contact” with new search feature. <strong>Attachments</strong>: Replaced “Release from Isolation and Quarantine” graphic with updated version.</td>
</tr>
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COVID-19
Disease Investigation Guidelines

COVID-19 DEFINITIONS (Current as of 08/01/2021)

**Clinical Criteria**
In the absence of a more likely diagnosis:
1) Any one of the following symptoms: cough; shortness of breath or difficulty breathing; olfactory disorder; taste disorder, confusion or change in mental status; persistent pain or pressure in the chest; pale-gray or blue colored skin, lips, or nail beds (depending on skin tone); or inability to wake or stay awake, OR
2) Severe respiratory illness with at least one of the following:
   o Clinical or radiographic evidence of pneumonia, or
   o Acute respiratory distress syndrome (ARDS), OR
3) With none of the other symptoms, at least two 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
- Detection of specific antigen by a self-administered “At-Home COVID SARS Antigen” test

**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 lab evidence for SARS-CoV-2.

**Suspect Case**
- Supportive laboratory evidence with no history of being confirmed or probable case.

*No investigation is required of suspect cases. If resources allow, the local investigator may reach out and recommend confirmation testing for self-administered “At-Home” tests.*
**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.

**Vaccine (COVID-19) Breakthrough Case Definition**
A person who has SARS-CoV-2 RNA or antigen detected on a respiratory specimen collected ≥14 days after completing the primary series of an FDA-authorized COVID-19 vaccine.

**Criteria to Distinguish a New Case from an Existing Case**

**Reinfection Case Definition:** 1) A person who has a repeat PCR or antigen positive test on a specimen collected >90 days from a previous case report, or 2) a person with no confirmatory or presumptive laboratory evidence for SARS-CoV-2 who meets the clinical criteria for COVID-19 with onset of symptoms >90 days after previous case report AND has an epidemiologic linkage.

- The 90-day period is based on the most recent specimen collection date compared to the onset date of the previous episode. When onset date is not available, specimen collection date will be used.
- After August 1, 2021, persons meeting the reinfection case definition will be counted as new cases allowing data collection on the COVID-19 Case Investigation Form versus the Reinfection Form.

For potential reinfection cases with specimen collection dates prior to August 1, 2021, those cases will not be counted as a new case and will be entered into the existing case record with the Reinfection Form competed in that record.

**Previous Case Definitions**

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

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

Prior to 08/01/2021, the definition approved by CSTE on August 5, 2020 was used:

- [Coronavirus Disease 2019 (COVID-19) | 2020 Interim Case Definition, Approved August 5, 2020](#)
Multi-System Inflammatory Syndrome in Children (MIS-C)

Summary:
- 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.
- Many have tested positive for SARS-CoV-2 infection by RT-PCR, serology, or had exposure to confirmed case with COVID-19.
- 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.

Case Definition for MIS-C:
- An individual aged <21 years presenting with fever*, laboratory evidence of inflammation**, and evidence of clinically severe illness requiring hospitalization, with multisystem (≥2) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological); AND
  - No alternative plausible diagnoses; AND
  - Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; or exposure to a suspected or confirmed COVID-19 case within the 4 weeks prior to the onset of symptoms. alternative etiology explains the clinical presentation. (note: patients should be reported regardless of SARS-CoV-2 PCR test results).

* Fever >38.0°C for ≥24 hours, or report of subjective fever lasting ≥24 hours
** Including, but not limited to, one or more of the following: an elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), fibrinogen, procalcitonin, d-dimer, ferritin, lactacid dehydrogenase (LDH), or interleukin 6 (IL-6), elevated neutrophils, reduced lymphocytes and low albumin

Additional comments:
- Some individuals may fulfill full or partial criteria for Kawasaki disease but should be reported if they meet the case definition for MIS-C.
- Consider MIS-C in any pediatric death with evidence of SARS-CoV-2 infection.

Reporting:
Immediately be reported to the Kansas Department of Health and Environment by calling the Epidemiology Hotline at 877-427-7317. Additional reporting information:
- Instructions for MIS-C Associated with COVID-19 Case Report Form
- Fillable MIS-C Associated with COVID-19 Case Report Form

Testing:
- Testing aimed at identifying laboratory evidence of inflammation as listed in the Case Definition section is warranted.
- Similarly, SARS-CoV-2 detection by RT-PCR or antigen test is indicated.
- Where feasible, SARS-CoV-2 serologic testing is suggested, even in the presence of positive results from RT-PCR or antigen testing. Any serologic testing should be performed prior to administering intravenous immunoglobulin (IVIG) or any other exogenous antibody treatments
- Other evaluations for cardiac involvement including, but not limited to: echocardiogram; electrocardiogram; cardiac enzyme or troponin testing; and B-type natriuretic peptide (BNP or NT-proBNP).

Additional information: https://www.cdc.gov/mis/hcp/index.html
LABORATORY ANALYSIS

To date, SARS-CoV-2 tests are only available under Emergency Use Authorization (EUA), which means the FDA has not thoroughly vetted the tests to grant full approval. An antigen test or a molecular test (polymerase chain reaction (PCR) or nucleic acid amplification test (NAAT)) are preferred for diagnosing acute infection. (Figure 1).

Even without testing evidence of SARs-CoV-2 infection, restrictions may still be needed based on clinical criteria or epi-links:

- Negative testing may provide evidence that COVID-19 isolation is not needed, but isolation may still be required for a symptomatic, person based on exclusion measures needed for the symptom (such as diarrhea or fever) or the potential non-COVID-19 etiological agent that is infectious.
- Isolation measures can be applied for symptomatic close contacts who are classified as probable cases without testing evidence or who test negative by antigen tests on specimens collected greater than 5 days from symptom onset.
  - If the result is a negative antigen test on a specimen collected within 5 days of symptom onset or a negative PCR result on a specimen collected after symptom onset, the person is not considered a probable case and may require quarantine as a contact.
- CDC has released guidance allowing for shorter quarantine periods. Local public health may opt to use this strategy; but, to shorten quarantine through testing, the specimen must be collected on or after day 6 following exposure and the testing methodology must be molecular (PCR or NAAT).

Screening testing for SARS-CoV-2 is intended to identify infected persons who are asymptomatic with no known or suspected exposure to SARS-CoV-2. Screening testing is performed in certain at-risk populations to prevent transmission. Screening test may be applied in settings such as schools to allow exposed persons to remain in the learning environment. With screening, false-positives may occur when pretest probability is low.

- Pretest probability is the likelihood that the person being tested has the infection. Likelihood is based on both the proportion of people in the test population or group who have the infection at a given time (prevalence) and the clinical presentation (including symptoms and known exposure) of the person being tested.
- PCR is preferable for the regular and repeated screening of unexposed and asymptomatic people, but antigen testing is acceptable. (Figure 2)

The screening or testing of persons who were previously diagnosed with COVID-19 may cause complications. Figure 3 aids with the evaluation of suspect reinfections.

Whole Genome Sequencing is used to identify variants. The sample preparation used by KHEL enriches even dilute amounts of SARS-CoV-2 genetic material. The genetic material that is present may not be replication competent or complete, but specific lineages can still be identified. The method while useful for surveillance is not diagnostic.
Figure 1. Characteristics of molecular and antigen tests for COVID testing.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PCR, NAAT</th>
<th>Antigen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen type</td>
<td>Respiratory, Saliva</td>
<td>Respiratory</td>
</tr>
<tr>
<td>Method</td>
<td>Amplifies RNA</td>
<td>Detects viral antigens</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Specificity</td>
<td>High</td>
<td>High *</td>
</tr>
<tr>
<td>Turn-around time</td>
<td>1 hour to days</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Location performed</td>
<td>Laboratory</td>
<td>Laboratory and point-of-care</td>
</tr>
<tr>
<td>Indicates</td>
<td>Acute or recent infection</td>
<td>Acute infection</td>
</tr>
</tbody>
</table>

* When pretest probability is low, there is still a chance of a false positive with antigen tests.

### Diagnostic Testing Purpose

<table>
<thead>
<tr>
<th>Symptomatic people</th>
<th>Preferable</th>
<th>Preferable within the first 5 to 7 days from symptom onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic people</td>
<td>Preferable</td>
<td>Acceptable in people with known exposure</td>
</tr>
<tr>
<td>Previous COVID-19 positive person with a new exposure followed by a new symptom onset (potential reinfection)</td>
<td>X</td>
<td>Preferable within the first 5 to 7 days from symptom onset</td>
</tr>
</tbody>
</table>

- **Molecular (PCR or NAAT) tests:**
  - Positive molecular tests are evidence of a confirmed case.
  - Positive molecular tests always require case investigation even if followed by a negative test.
  - Detecting viral RNA via molecular testing does not mean that infectious virus is present, but it is assumed until evidence is provided otherwise.
  - It is not recommended that a previously positive person be tested again by molecular testing within 90 days of initial recovery. This is based on studies that, although replication-competent virus was not isolated 3 weeks after symptom onset, recovered patients can continue to have SARS-CoV-2 RNA detected in their upper respiratory specimens for up to 12 weeks. (Korea CDC, 2020; Li et al., 2020; Xiao et al, 2020)
  - Two negative molecular tests collected 24 hours apart after a positive test may indicate isolation is no longer necessary for an asymptomatic person, but the method is not promoted as a routine way to remove restrictions.

- **Antigen tests:**
  - Less sensitive than molecular tests, but preferable if a specimen is collected within the first 5-7 days from a new symptom onset for a person previously diagnosed with COVID-19. (Figure 1)
  - Antigen levels for patients who have been symptomatic for more than five days may drop below the limit of detection of the antigen test.
  - Consider the need to **confirm negative antigen** results by PCR when the person is symptomatic (especially if longer than 7 days have passed since symptom onset). (Figure 2)
  - Consider the need to **confirm positive antigen results** by PCR if the person is asymptomatic. (Figure 2)
  - If an antigen test is positive, the patient is considered a probable case,
    - **Unless** a negative PCR result is obtained on an appropriate specimen collected at the same time as the antigen positive specimen or after but within 48 hours of the antigen specimen collection, resulting in the patient considered not a case based on PCR results.
**Figure 2. Antigen Testing Algorithms** (Source: [Interim Guidance for Antigen Testing for SARS-CoV-2 | CDC](#))

**Antigen Testing In Congregate Living Settings**

1. Asymptomatic persons are sometimes tested after known exposures to a person with COVID-19 or are sometimes tested as part of screening programs.
2. This antigen negative may need confirmatory testing if the person has a high likelihood of SARS-CoV-2 infection.
3. This antigen positive may not need confirmatory testing if the person has a high likelihood of SARS-CoV-2 infection.
4. If resources and access to confirmatory laboratory-based NAATs are limited, and the prevalence of infection is relatively high, congregate facilities may consider performing a second antigen test within 8 hours of the first positive antigen result. If the result is concordant and the second test is positive, the person should follow guidance for isolation. If the result is discordant and the second test is negative, then the person should have a confirmatory NAAT.
5. This antigen negative may not need confirmatory testing if the person has a low likelihood of SARS-CoV-2 infection.
6. This antigen positive may need confirmatory testing if the person has a low likelihood of SARS-CoV-2 infection.
7. In the case of quarantine at intake, individuals should be considered a close contact, especially in high transmission areas.
8. For those who recently traveled, refer to [Travel & Exposure Related Isolation / Quarantine | KDHE COVID-19 (kdheks.gov)](#)
9. Inpatients and residents in healthcare settings, regardless of vaccination or previous SARS-CoV-2 infection, should quarantine following an exposure, but fully vaccinated people and those who have had a SARS-CoV-2 infection in the last 6 months, who are not inpatients or residents, do not need to quarantine but should be tested via PCR or antigen test 3 to 5 days after exposure and to re-test 7-10 days after exposure even when asymptomatic.

**Antigen Testing in Community Settings**

1-7 Notes for Antigen Testing in Communities is on next page.
Asymptomatic persons are sometimes tested after known exposures to a person with COVID-19 or are sometimes tested as part of screening programs.

This antigen negative may need confirmatory testing if the person has a high likelihood of SARS-CoV-2 infection.

This antigen positive may need confirmatory testing if the person has a low likelihood of SARS-CoV-2 infection.

This antigen negative may not need confirmatory testing if the person has a low likelihood of SARS-CoV-2 infection.

This antigen positive may need confirmatory testing if the person has a low likelihood of SARS-CoV-2 infection.

For those who recently traveled, refer to Travel & Exposure Related Isolation / Quarantine | KDHE COVID-19 (kdheks.gov)

People who are fully vaccinated and those who have had a SARS-CoV-2 infection in the last 6 months do not need to quarantine but should be tested via PCR or antigen test 3 to 5 days after exposure and to re-test 7-10 days after exposure even when asymptomatic if they have had contact with a person who has COVID-19 within the last 14 days.

Additional notes on point of care (POC) and rapid antigen testing for COVID-19:

- Anyone performing non-home based, antigen testing should apply for a CLIA-waiver.
  - CLIA certification questions can be sent to KDHE.CLIA2@ks.gov.
- All negative and positive results must be reported to KDHE
  - KHEL can assist with the registering for LabXchange to allow result reporting.
  - Contact KDHE.KHEL_Help@ks.gov and include subject line: LabXchange
- Rapid antigen kits are available from KDHE.
  - Schools should contact their testing consultant to order supplies;
  - Healthcare providers and facilities should contact the laboratory at through Covid Testing Supply Request (arcgis.com)
If a person previously diagnosed with COVID-19 warrants retesting (asymptomatic screening, symptoms that develop within 14 days after close contact with a person infected with SARS-CoV-2, or COVID-19 like symptoms for which an alternative etiology cannot be readily identified by a healthcare provider, the following should be considered to evaluate suspect reinfection and need for re-isolation.

**Figure 3: Investigation of suspect reinfection and recommendation for re-isolation and quarantine**  
1,2,3

<table>
<thead>
<tr>
<th>Who</th>
<th>Length from Initial Infection</th>
<th>Recommendations for Testing</th>
<th>Isolation and Quarantine</th>
</tr>
</thead>
</table>
| Asymptomatic person | < 90 days | • No testing is recommended  
• Reinfections are highly unlikely  
• Any positive test is likely a false positive because of non-infectious viral shedding. | • No isolation or quarantine is warranted |
| Symptomatic person with a positive antigen or PCR test | < 90 days | • Investigate other causes for symptoms including testing for other respiratory pathogens (respiratory viral panel)  
• Test with a confirmatory PCR if first test is an antigen test  
  ○ Note: There is always concern for a false positive because of non-infectious viral shedding with PCR testing close to 90 days post-recovery. | • If confirmatory test is positive and all other testing is negative  
  • Isolate until criteria is met for discontinuation of isolation  
  • Initiate contact tracing for person’s reinfection and quarantine close contacts.  
• If confirmatory test is negative, then no isolation or quarantine is warranted. |
| Asymptomatic person with a positive antigen or PCR test | ≥90 days | • Test with a confirmatory PCR if first test is an antigen test  
• If the first confirmatory PCR test is positive, repeat test with another confirmatory PCR | • If both confirmatory PCR tests are positive  
  • Isolate until criteria is met for discontinuation of isolation  
  • Initiate contact tracing for person’s reinfection and quarantine close contacts.  
• If confirmatory PCR test is negative, then no isolation or quarantine is warranted. |
| Symptomatic person | ≥90 days | • Perform confirmatory PCR (if no testing is done or prior test is an antigen test).  
• If PCR is negative with a prior positive antigen test and there is concern for a false negative PCR, repeat another PCR.  
• Investigate other causes for symptoms including testing for other respiratory pathogens (respiratory viral panel) | • If confirmatory PCR tests are positive.  
  • Isolate until criteria is met for discontinuation of isolation  
  • Initiate contact tracing for person’s reinfection and quarantine close contacts.  
• If second confirmatory PCR test is negative, then no isolation or quarantine is warranted. |

4 It is recommended that fully vaccinated people with no COVID-19-like symptoms and no known exposure be exempted from routine screening testing programs, if feasible; but, because certain settings do require screening testing, such persons will be managed as a case if testing positive until it is determined by the local and state public health officials to be a false-positive test result in a low incidence population and that there is a very low risk that SARs-CoV-2 transmission will occur.
• Kansas Health and Environmental Laboratories (KHEL) conducts molecular testing that is prioritized for public health purposes and urgent needs.
  - Whole Genome Sequencing (WGS) should be considered for, potential vaccine breakthrough and situations that are concerns for variants.
    o Submit all patient information through LabXchange to allow for prioritization of specimens that will be sequenced.
    o Refer to KDHE_Laboratory_WGS_Submission_Instructions.pdf (kdheks.gov) for prioritization list and instructions.
    o For additional questions on whole genome sequencing, send an email to: KDHE_KHEL_INFO@ks.gov; Subject Line: ATTENTION SEQUENCING

• General Specimen (Swab/Saliva) Collection and Shipping instructions:
  - DO the following:
    ✓ Use appropriate PPE and precautions for specimen collection.
      ▪ Review videos available in the KDHE resource center.
    ✓ Use LabXchange (https://labxchange.io/) to submit specimen and patient information.
    ✓ Label the specimen container with patient’s name and specimen type.
    ✓ Specimens:
      ▪ Swabs for nasopharyngeal or nasal mid-turbinate
        o Use a synthetic fiber swab with plastic shaft (not wooden) to collect.
        o Place and keep swab in 2-3 mL of Viral Transport Media (VTM).
        o If VTM is not available, liquid Amies solution, sterile phosphate-buffered saline, or normal sterile saline is acceptable.
        o Shorten the length of the swab to allow specimen tube closure.
        o Do not send specimen tube without the swab.
      ▪ Saliva (currently Quicksal collection kits): follow manufacturer’s instructions
    ✓ Ensure the specimen tube is secure and will not leak.
    ✓ Place each specimen tube into its own appropriate zip-top bag.
    ✓ Ensure that sufficient absorbent material is present in the bag, but
      ▪ Do not wrap the tube in the absorbent material.
    ✓ Print the LabXchange submission form and include it in the side pouch of the specimen transport bag.
      ▪ Fold and place forms in the outside pouch of the zip-top bag containing the single specimen or use a double bag method. (The single specimen is in a primary zip-top bag and that primary bag is placed in a second zip-top bag which contains the testing form.)
    ✓ Store specimens at 2-8°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. 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
  - Results from KHEL are sent to the submitting facility. Results are sent when available. The status of pending results is not provided by phone.
  - To change report delivery preference: Laboratory Report Delivery Form
  - For KHEL customer service: KDHE.KHEL_Help@ks.gov or 785-266-1620.
  - Improperly collected or shipped specimens or missing or unreadable submission forms may result is in specimens being rejected or results delayed.
EPIEMIOLOGY
Coronavirus Disease 2019 (COVID-19) is an illness caused by SARS-CoV-2 and is spread from person-to-person. This virus was first identified during an outbreak in Wuhan, China at the end of 2019. [www.cdc.gov/coronavirus/2019-ncov/cases-updates](www.cdc.gov/coronavirus/2019-ncov/cases-updates).

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

B. Clinical Description:
Mild to severe respiratory illness with symptoms of fever, cough, and shortness of breath. Refer to CDC for further details on clinical course.

C. Reservoirs:
Likely from an animal source, but still under investigation.

D. Mode(s) of Transmission:
Mainly person-to-person.

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

F. Period of Communicability:
The transmission of SARS-CoV-2 is greater the longer an infected person is close to someone, the closer the persons are to each other, and when more than one infected person is around others. It also matters if the infected person is coughing, sneezing, singing, shouting, or doing anything else that could expel more respiratory droplets into the air. Available data indicate that it is much more common for SARS-CoV-2 to spread through close contact with a person who has COVID-19 than through other means of transmission. [Scientific Brief: SARS-CoV-2 Transmission | CDC]

For investigation purposes:
- Symptomatic persons are considered infectious from 2 days prior to onset of any symptoms 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 antipyretic medications) and
  c. There has been a significant improvement in symptoms.
- Persons never experiencing symptoms will be considered infectious 2 days prior to until 10 days after the collection date of the first positive specimen**.
- Currently asymptomatic person who is testing positive again after a previous episode in which symptoms resolved within the last 90 days and who was determined to no longer be infectious by the above criteria, will not be considered infectious based on their history of COVID-19. This does not apply to persons experiencing a recurrence of COVID-19 symptoms.

* Persons admitted to ICU or who are severely immunocompromised are considered infectious for a minimum of 20 days.
** If symptoms appear after the positive specimen collection date, the onset date of symptoms should be used to determine the period of communicability.

G. Vaccine:
H. Variants:
Viruses constantly change through mutation, and new variants of a virus are expected to occur over time. Multiple variants of SARS-CoV-2 have been documented throughout the pandemic. For up-to-date information: www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/variant-info.html and www.coronavirus.kdheks.gov/160/COVID-19-in-Kansas

Further discussion under Laboratory Analysis for requesting testing at the state lab.

I. Susceptibility and Resistance:
Current evidence suggests that reinfection is uncommon in the 90 days after natural (applied when evaluating reinfections) and some studies have shown immunity to natural disease to persist for six months or more (applied when assessing quarantine situations).

Based on research on vaccine effectiveness, fully vaccinated persons are presumed immune to COVID-19 without a time limit; but, while the risk is low, when breakthrough infections do occur studies have shown that vaccinated persons who are infected with the delta variant of COVID-19 while less likely to have serious symptoms have a similar viral load are still able to spread COVID-19.

For contact investigation purposes, immunity may be presumed for an asymptomatic person:
- During 6 months after recovery* from a COVID-19 infection that was diagnosed by molecular or antigen testing, or
- Indefinitely for an immunocompetent** person who is considered fully vaccinated which is ≥2 weeks after receipt of the last dose of an acceptable COVID-19 vaccination series that has been documented.

* Recovery date will be based on EPITRAX documentation of the date that symptoms resolved, or the date isolation measures were discontinued for asymptomatic cases. If neither of those dates are available, the date of the positive laboratory test result will be used.
** People with certain immunocompromising conditions, including use of immunosuppressive medications (for instance drugs, such as mycophenolate and rituximab, to suppress rejection of transplanted organs or to treat rheumatologic conditions), should discuss the need for personal protective measures with their healthcare provider after vaccination. Health officers may need to examine such situations closely to determine if quarantine after exposure is needed.

While presumed immunity may alter the need to quarantine, there are instances that reinfection or breakthrough infections could occur; therefore, presumed immunity should not alter:
- the need to isolate symptomatic (or recently SARS-CoV-2 positive) persons;
- the use of any NPI’s recommended for specific settings, or
- additional precautions, including testing in certain situations to identify exposed persons that may be infected even if symptoms are not present.

Refer to Quarantine Restrictions for further guidance on presumed immunity.

IMPORTANT: Even with presumed immunity, persons with recently positive diagnostic tests for SARs-COV-2 or who develop COVID-19 like symptoms must still be evaluated for the possibility of reinfection. The need for a complete case and contact investigation will depend upon the review of available information (exposure to COVID-19, medical history, time from and type of initial test or vaccination, alternative diagnosis, and current symptoms).

Further discussion on reinfection is in Laboratory Analysis Figure 3.

J. Treatment:
For information on investigational and developing therapies refer to CDC.
NOTIFICATION TO PUBLIC HEALTH AUTHORITIES

Use the online portal or LabXchange to notify the Kansas Department of Health and Environment (KDHE) of all viral antigen or molecular testing. For matters of urgent concern, outbreaks or high-risk settings, contact the EpiHotline at 1-877-427-7317.

Kansas Department of Health and Environment (KDHE) Bureau of Epidemiology and Public Health Informatics (BEPHI)
COVID Disease Reporting: https://diseasereporting.kdhe.ks.gov/
Phone: 1-877-427-7317

All mandated reporters are instructed to review and follow the requirements outlined by KDHE at www.kdheks.gov/epi/covid_reporting.html

The following topics are addressed in relation to when and how to report:
- Suspicion of disease
- Deaths due to COVID-19
- Screening test results
- Diagnostic testing
- Reference and In-Hospital Reporting Requirements
- Who is a mandated reporter?

ADDITIONAL COMMUNICATIONS IN PUBLIC HEALTH

1. KDHE-BEPHI will receive notifications of all testing results for SARs-CoV-2, except for antibody results that do not need to be reported.
   - Required data that must be reported by laboratories is described online.
   - Most reports are received via electronic laboratory reports (ELRs), including LabXchange.
   - Laboratories and point of care testing sites, including physicians’ offices, who are not set up to report by ELR will report laboratory results through diseasereporting.kdhe.ks.gov/ or LabXchange.
     - Questions on bulk reporting of laboratory results though the disease portal should be directed to KDHE.epitraxadmin@ks.gov.
   - Those facilities that do not perform testing do not need to report results to KDHE; point of care (POC) or PCR testing should be reported by the laboratory conducting the SARS-CoV-2 test. All required data, as listed in the online document, must be included in the report.

2. Reports will be entered in EpiTrax and assigned to a local public health agency based on the case-patient’s address listed on the laboratory report, or the address of the diagnosing facility when patient address is not available.
   - For patients with out-of-state addresses treated at a Kansas facility, KDHE will classify the CMR as “Out-of-State” and transfer the case out-of-state.
   - The local public health agency with jurisdiction over the diagnosing facility must notify KDHE-BEPHI if access is needed to an out-of-state case.

3. To better coordinate with local partners, the local public health agency will:
   - Monitor EpiTrax for CMRs not accepted and assigned to an investigator, by reviewing for the following event types - those “Assigned to LHD,” “Reopened by state” and “Reopened by manager”
• Form partnerships with local providers to acquire any missing demographics and patient contact information.

• Reassign CMRs to another public health jurisdiction when it is required but using the following steps:
  ✓ Enter the new address for the case into the demographics tab.
  ✓ Remove the old address as the “Address at Diagnosis,” if needed.
  ✓ Choose the new address as the “Address of Diagnosis.”
  ✓ Use “Route to LHD” feature under Workflow Options to assign the CMR to the new health department jurisdiction.

***IMPORTANT***: If the address of diagnosis is not updated, the case will remain associated to the original jurisdiction in case counts, even if the case has been re-routed to a different investigating jurisdiction.

• If a lab report is not received by KDHE, but is received by the local public health agency, the local investigator should 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 promote the contact to a case in EPITRAX and record the “yes” to exposure to COVID-19 case and “yes” to any symptoms on the EPITRAX investigation form for the case to be classified as “Probable” case.

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. For additional resources, review the following toolkits:
   - Document Center • KDHE COVID-19 • Civic Engage (kdheks.gov)
   - Communication Resources for Health Departments | CDC

4. 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 or a close contact of a COVID-19 case 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: https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control.html.
   - For **non-hospitalized** patients, local public health should coordinate with the provider or contact the PUI to ensure isolation requirements are understood.
     - The PUI must stay at home until results become available or until no longer considered infectious as described online in COVID-19 Isolation & Quarantine documents and the 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 discretion 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 for the PUI.

Case Investigation (of Confirmed and Probable Cases)

1) Contact the medical provider who ordered the 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 stays (ICU), ventilation or intubation use, extracorporeal membrane oxygenation (ECMO) use
   - Clinical information on symptoms and onset date.
   - Pre-existing medical conditions or immunocompromised patients
   - Respiratory diagnostic testing results
   - Occupation of patient, note if patient is a health care worker or first responder
   - Report associations to a learning institution, nursing home, residential care for those with disabilities, psychiatric treatment facility, group home, board and care home, homeless shelter, or any other congregate setting.
     - If the patient is known to be a resident of a facility with limited exposures, a shortened version of the COVID-19 Investigation Form can be used.
   - Vaccination status. **[Record information on vaccine doses on Clinical Tab.]**
     ***Important*** persons with current COVID-19 vaccinations should still be investigated to examine the possibility of vaccine break-through disease.

2) Examine symptom onset to determine next steps, for all persons even vaccinated:
   - Symptomatic or recently symptomatic within the last 14 days of the current diagnosis, continue investigation as normal.
• Recurrent symptoms after previous diagnosis* with COVID-19:
  − > 90 days from COVID-19 recovery, continue with a new investigation assuming the possibility of a reinfection until enough evidence supports it is not a reinfection.
  − < 90 days from the previous COVID-19 recovery, the possibility of reinfection and the need for a complete case and contact investigation will depend upon the review of available information (medical history, time from and type of initial test, alternative diagnosis, and current symptoms).

• Asymptomatic currently but reliable evidence provided of COVID-19 symptoms that resolved within the last 90 days but greater than 14 days prior to the current positive specimen being collected.
  − Report the 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.
  − If evidence is not dependable that symptoms were COVID-19 related, treat person as an asymptomatic person, never experiencing symptoms.

• Asymptomatic and never experienced symptoms or had a positive SARs-CoV-2 test within the last 90 days of current report, continue investigation.*

* For patients being evaluated for reinfections or who had positive SARs-CoV-2 tests within the last 90 days of the current report, review Figure 3.

3) Without a known source of exposure, interview the case or proxy about activities 14 days prior to onset (or prior to positive collection date without 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) Establish an infectious period for the case.
  • For currently or recently symptomatic individuals, consider the 2 days before symptom onset (day 0) until date isolation precautions are discontinued.
  • For asymptomatic individuals who never experienced symptoms,
    − If a specific day of exposure cannot be determined, use 2 days prior to positive specimen collection (day 0) until date isolation precautions are discontinued.
    − If a discrete day of exposure for the asymptomatic COVID person is known, consider the 2 days after the day of exposure (day 0) until date isolation precautions are discontinued.

Note: If onset does occur later after lab collection, use onset date as day 0.

![INFECTION PERIOD FOR THOSE NOT IN ICU OR SEVERELY IMMUNE COMPROMISED](image)
5) Continue the interview with calculated infectious period and COVID-19 Exposure Time Line to examine patient’s occupations and activities while infectious.
   - Use Guide When Interviewing Confirmed Case or PUI to Determine Contacts to assist your investigation.

6) 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.

7) 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) **Close contacts are those exposed to a person with COVID-19, even if that person didn't have symptoms, if any of the following situation happened:**
   - Living with the person or stayed overnight for at least one night in a house with the person; or
   - Within 6 feet of the person for 10 consecutive minutes or more; or
   - Direct contact with the infectious secretions of the person (for example, coughed or sneezed on; kissed; contact with a dirty tissue; shared a drinking glass, food, towels, or other personal items).

The chance of spreading the virus is greater the longer an infected person or persons are close to someone. It also matters if the infected person is coughing, sneezing, singing, shouting, or doing anything else that produces more respiratory droplets that contain virus or if there are exposures to more than one infected person. Under these higher risk situations, public health may want to consider a close contact someone who has been within 6 feet of an infectious person or persons for 10 cumulative minutes or more in a 24-hour period.

   - Situations that may increase the risk of transmission include practicing or playing contact sports, meaning sports involving more than occasional and fleeting contact, such as football, basketball, rugby, hockey, soccer, lacrosse, wrestling, boxing, and marital arts, with a COVID-19 case. Other sports may be included if social distancing, mask use, and other mitigation measures are not followed.

   The final decision on what constitutes close contact is made at the discretion of public health.

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

4) **Contacts of a COVID-19 case within healthcare facilities:**
   - Refer to CDC guidance in Potential Exposure at Work.
   - 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.
   - HCP contacts that are allowed modified quarantine while at work will need to quarantine outside of work.
   - Local public health must ensure adequate follow-up and reporting of data.
5) **Contacts of a COVID-19 case 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.
   - Contact information for those persons who are live outside your jurisdiction can be shared with public health agencies that are responsible for jurisdiction of that contact’s residence. Do not share contact listings with other third parties.
   - Contacts who are allowed modified restrictions at locations of occupation that are outside of their residential county must still follow quarantine measures put forth by their jurisdiction of residence when at home and not working.
   - Interview potential close contacts.
     - Note any symptoms COVID-19.
     - Verify exposure details, date of first and last exposure, and if the person meets the definition of close contact.

6) 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**.

7) 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.

8) 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, including suspected or confirmed vaccine breakthrough or reinfections with 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.

**CASES**

Must be isolated for a minimum of 10 days after onset and can be released after afebrile and feeling well (without fever-reducing medication) for at least 72 hours, whichever is longer.

**Onset date**

Minimum 10 days

Case released from isolation

+ Afebrile and feeling well for at least 72 hours

**CASES**

Who require ICU care or who are severely immunocompromised 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.

**Onset date**

Minimum 20 days

Case released from isolation

+ Afebrile and feeling well for at least 72 hours

If a case refuses to stay in isolation, a legal order may be needed. The Community Disease Containment SOG is available at [www.kdheks.gov/cphp/operating_guides.htm](http://www.kdheks.gov/cphp/operating_guides.htm).
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 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 should be made on a case-by-case basis in consultation with clinicians, infection prevention, 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 is unable to meet the above criteria, the local public health agency will need to identify appropriate housing for infectious persons.

Quarantine Restrictions

Quarantine is used to keep someone who might have been exposed to COVID-19 away from others during the person’s potential incubation period. An individual is potentially infectious 2 days prior to symptom onset, and symptoms may appear at any time 2 days to 14 days after exposure to the virus.

The recommended quarantine is a period of 14 days, but there are options to shorten and modify quarantine based on local circumstances and resources. Local public health authorities may modify or shorten any quarantine based on type of exposure, the population that may be affected by future exposures, and availability of testing.

KDHE recommends that individuals in quarantine after exposure to COVID-19 be tested via a PCR or antigen test 3-5 days after exposure and re-tested 7-10 days after exposure. A negative test result does not allow a patient to end quarantine early. The following sections consider:

- Presumed Immunity after Previous Infection
- Presumed Immunity after Vaccine
- Recommended Quarantine Overview
- Shortened Quarantine Options and Considerations
- Modified Quarantine After Exposure to a COVID-19 Case
- Modified Quarantine for Travel Related Exposures
- Modifying Quarantine: Things to Consider
**Quarantine exemption based on presumed immunity after viral testing:**

Close contacts with evidence of previous infection supported by a positive PCR or antigen test performed by a laboratory or CLIA-waived provider* may be exempt from quarantine after re-exposure if they remain asymptomatic. This is determined by the local health officer based on a possible 6-month period of presumed immunity. If an investigation was done documenting the date that symptoms resolved, or the date isolation measures were discontinued for asymptomatic patients, the 6-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. An antibody test may not be substituted for a viral diagnostic test. If the contact becomes symptomatic during the 90 days after recovery, the possibility of reinfection must still be examined and testing via an antigen test is preferred. The sample for the antigen test should be taken within the first 5 to 7 days from symptom onset (depending on the EUA for the test being used).

* Self-administered, at-home testing results require verification by additional testing.

**Quarantine exemption based on presumed immunity after COVID-19 vaccine:**

Two weeks after completion of a COVID-19 vaccination series, persons may be*** exempt from quarantine after exposure or re-exposure to COVID-19 if all the following criteria are met:

- Person is fully vaccinated** with ≥2 weeks following last required dose of the vaccine series,
- Have remained asymptomatic since the current COVID-19 exposure

** Note: **Day 0 is the day the last vaccine dose of the series is received; day 14 is the first day the person is considered fully vaccinated.

*** Exceptions to the above guidance:

- Vaccinated inpatients and residents in healthcare settings should continue to quarantine following an exposure to someone with suspected or confirmed COVID-19; outpatients should be cared for using appropriate transmission-based precautions.
- Fully vaccinated individuals that are close contacts to a suspected or confirmed case of COVID-19 do not need to quarantine or isolate if being tested while asymptomatic, but are recommended to:
  - Mask in public indoor settings for 14 days after their last exposure to an infectious case, and
  - Get tested via PCR or antigen test 3 to 5 days after exposure and to re-test 7-10 days after exposure even when asymptomatic.
    - Close household contacts should get tested 3-5 days after their initial exposure to the case while the case was infectious, and again 7-10 days after their initial exposure.

Persons with presumed immunity should still follow all current guidance to protect themselves and others.

Any time person becomes symptomatic (even after vaccination or previous disease) they should be tested via PCR or antigen test. Receiving the vaccine does not affect the results of a PCR or antigen test, only an antibody test. If they had natural disease recently, meaning they had COVID-19 disease in the last few months, an antigen test within the first 5 to 7 days from symptom onset (depending on the EUA for the test they are using) is preferred.
**Recommended Quarantine**

KDHE recommends quarantine until 14 days after last date of exposure to COVID-19. The last date of exposure is considered day 0; the last date of quarantine is day 14.

<table>
<thead>
<tr>
<th>DAY</th>
<th>0</th>
<th>1</th>
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The date of last exposure will depend upon the type of interactions a person has with a COVID-19 case. Household contacts are assumed to have continuous exposure.

**Shortened Quarantine Options**

KDHE recommends a quarantine period of 14 days. However, based on local circumstances and resources, the following options are acceptable.

- Quarantine can end after Day 10 without testing and if no symptoms have been reported during daily monitoring.
- *When diagnostic testing resources are sufficient and available*, then quarantine can end after Day 7 if a specimen collected after Day 5 tests negative by PCR and if no symptoms were reported during daily monitoring.

Persons can discontinue quarantine at these times (shortened quarantine) only if:

- Persons are not residents of long-term care or assisted living or incarcerated.
- No clinical evidence or diagnostic testing evidence of COVID-19 is elicited by daily symptom monitoring (either self-monitored or active monitoring) during the entirety of quarantine up to the time at which quarantine is discontinued; and,
- Daily symptom monitoring continues through quarantine Day 14; and,
- Persons are counseled regarding the need to adhere through quarantine Day 14 to all recommended non-pharmaceutical interventions (NPIs) and advised that if any symptoms develop, they should immediately self-isolate and contact the local public health authority or their healthcare provider.
- Persons are not close contacts of cases infected with variants of SARS-CoV-2 virus that are known to be more infectious.
**Modified Quarantine After Exposure to a COVID-19 Case**

Most workers have a mandatory 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, quarantine is still highly recommended. 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. Workers that have not had the training offered to healthcare, public health, and law enforcement may represent a higher risk of exposing others to COVID-19 if they develop symptoms. This risk must be scrutinized when deciding to modify quarantine.
- School settings (K-12) may be able to apply testing strategies to allow close contacts to attend school safely. Refer to additional guidance on KDHE COVID-19 resource page for schools and School-Based Testing.
- Use of Cohorts: 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.

**Modified Quarantine After Travel Related Exposures**

The 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.

**Modifying Quarantine**

Any modification to quarantine will always depend upon the situation and it may be waived following an assessment by the employer and public health:

1. Are the exposed person’s activities critical to the current situation?
2. Is the population that the person serves or works with at higher risk of COVID-19 complications? If they are, can the person 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 person adhere to procedures set forth by the facility to ensure their health is appropriately monitored and immediately stop work if symptoms develop?

If the person is critical to the situation and can work safely, not placing clients and other workers at risk, then the following should be applied for modified quarantine:

1. Exposed person should monitor for signs and symptoms of COVID-19, including checking for a fever of 100°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, persons should stop work immediately and notify their employer and local public health.

For additional guidance, the latest quarantine recommendations are posted on-line.
refer to the following documents:

- Public Health Management of Exposed Persons
- Releasing from Isolation and Quarantine Graphic and the
- Frequently Asked Questions for guidance.

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
   - Date isolation ends must be 3 days after date of symptom resolution and 10 days after onset date as recorded on the EpiTrax Investigation tab.
     - Asymptomatic persons who never developed symptoms do not require a recorded onset date. Mark as “Asymptomatic” on the investigation tab.
     - Date of symptom resolution in asymptomatic cases can be considered 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 persons.
   - 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.
       - Prioritize the monitoring of contacts living, working, or visiting congregate living facilities; those working in high density workplaces; and those visiting or working in other settings or at events that have a high risk of extensive transmission.
       - If resources allow, contact should be made at least two days per week for 14 days since last exposure.
       - Household contacts may not require active monitoring by public health but should always self-monitor and report any symptoms.
• Use and modify 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.
    o 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.
    o 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**.
    o 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.
    o 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.
    o Recording “Yes” to exposure to a COVID-19 case and “Yes” to any symptoms on the EPITRAX investigation form results in the case being classified as a “Probable” case.
  - If a contact promoted to a probable case (based on symptoms and epi-link) is determined to be negative by appropriate viral testing (either antigen testing collected in the appropriate time frame or any molecular testing), the promoted case is demoted back to a contact and quarantine continued.
  - **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.
• For quarantine and isolation orders, refer to **Annex C** of the Community Disease Containment SOG at www.kdheks.gov/cphp/operating_guides.htm.
Education

1) The following are non-pharmaceutical interventions (NPIs) should be addressed to mitigate the spread of disease especially when someone is being allowed a modified or shortened quarantine:
   - Correct and consistent mask use,
   - Social distancing,
   - Hand and cough hygiene,
   - Environmental cleaning and disinfection,
   - Avoiding crowds,
   - Ensuring adequate indoor ventilation, and
   - Self-monitoring for symptoms of COVID-19 illness.

2) For those being isolated or quarantined, instruct on the necessary NPIs and Restrictions.
   - Isolation and Quarantine – Frequently Asked Questions
   - Caring for COVID-19 Infected People & Preventing Transmission in Homes
   - KDHE Tips for Home Isolation

3) For those in quarantine, counsel contacts on NPIs and 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

4) Utilize templates to inform employees, employers, travelers and potential contacts of exposures and risks.

5) Additional resources:
   - CDC Communication Resources: www.cdc.gov/coronavirus/2019-ncov/communication/
   - Refer to frequently asked questions:
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:
     
     | 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 or unable to locate, after the appropriate attempts:
   - Indicate outcome 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,

- Record the “Investigation Outcome” on the [Administrative] tab.

<table>
<thead>
<tr>
<th>Investigation Outcome</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>Interview (*) and any other follow-up completed and recorded in EpiTrax.</td>
</tr>
<tr>
<td></td>
<td>*If needed, it may be possible to “complete” an investigation, recording all requested data, without interviewing case-patient.</td>
</tr>
<tr>
<td>Unable to locate</td>
<td>Interview was needed to complete investigation, but not able to contact the patient for interview. (e.g., patient never responded to calls/texts/letters)</td>
</tr>
<tr>
<td>Refused Interview</td>
<td>Reached patient but they refused to be interviewed</td>
</tr>
<tr>
<td>Lost to Follow Up</td>
<td>Initial patient interview completed or started; however, unable to reach patient again for follow-up.</td>
</tr>
<tr>
<td>No Investigation Performed</td>
<td>Did not complete investigation/patient interview. Case not investigated by LHD</td>
</tr>
</tbody>
</table>

- After recording the investigation outcome, 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 and close the case after ensuring it is complete and that the case is assigned to the correct event (DF/DHF), based on the reported symptoms reported.

**Managing Contacts in EpiTrax**

- [Associating Orphan Contacts](#)
- [Contact Associated to Multiple cases](#)
- [Creating a Contact](#)
- [Entering Information About Contacts](#)
- [Promoting / Demoting a Contact](#)
**Associating “Orphan Contacts”**

Orphan contacts are contacts who were “removed” from a previous parent-patient or are new cases who were identified as being exposed to a previously reported case-patient but never associated to the “older” case in EPITRAX as a contact. These “orphan” cases/contacts can be associated to a parent-patient by:

1. Open the CMR for the case that caused the exposure, use “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) or orphan contact that you want to associate to this opened case that was the source of exposure in the “Link to an orphan contact…” field.
4. Save and Continue.

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

- Associate the contact with the person causing the most recent exposure.
- If the contact is already associated to an older case but has not completed the quarantine period, remove the contact from the current parent patient (older case) and assign the contact to the newer case.
- If a contact has been associated to an older case and has completed that quarantine period, create a new contact record. One person can have multiple contact records but be certain the previous contact record is marked “Complete” in the disposition field.

**Creating a Contact**

1. Click on the “Contacts” tab.
2. Search for the exposed person by name, phone, or other demographics.
   
   a. If your person is listed in the search, click in the row with the name and demographics or if your person is not listed after the search, use .
   
3. Scroll to bottom of page where new contact has been added and select appropriate choice for contact type (usually going to be ‘other,’ ‘household’ or ‘healthcare/healthcare worker’).
4. For disposition, leave blank until quarantine over – then mark “Completed.”
5. Enter disposition date as last date patient was exposed to COVID-19.
6. 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 or diagnosed with another cause for their illness), the record can be “demoted” using the same process.

**Notice:** Contacts, not participating in workflow, will be assigned to the Investigating Jurisdiction of the parent patient after promotion. If the contact is promoted to a case needing to be investigated by a different county, the “Workflow Options” must be used to assign the contact to the appropriate Investigating Jurisdiction prior to or after promotion.
Identifying Cases in EpiTrax Needing Investigation

The following guidance uses the “Advanced Search Feature” in EpiTrax to locate those cases that have been newly assigned to the local health department.

For new cases that have never been accepted by the local agency. The following choices can be made:

- County* = your county
- Condition = Coronavirus Disease 2019 (COVID-19)
- Event type = morbidity
- Investigation status = assigned to LHD
- State case status = confirmed and probable

To identify newly assigned cases with specimens collected the last 14-days include a lab collected date range with the selections listed above.

Avoid using the “Event date range”.

- County* = your county
- Condition = Coronavirus Disease 2019 (COVID-19)
- Event type = morbidity
- Investigation status = assigned to LHD
- **Lab collected date range = 14 days prior to current day**
- State case status = confirmed and probable

* For cases, assigned to your jurisdiction that do not have a county in the address of diagnosis, use “Investigating Agency” in place of “County”.
Managing Potential Reinfections in EpiTrax

Prior to August 1, 2021, information on reinfection cases was entered on the COVID-19 Reinfection Form. The data that was previously reported on the 2019-nCoV form during the original infection was not be erased or deleted.

After August 1, 2021, new positive lab reports collected >90 days from a previous onset date are entered as new cases.

To review the previous COVID case record use the “Options” button beside the Relevant Comorbidity found on the Clinical Tab in EpiTrax.

If vaccine information was entered into the previous event, it can be viewed by clicking “Other Vaccines” on the Clinical Tab. The vaccine information can then be added to the current case record by selecting “+ Add to Event.”

The previous labs from the initial event can also be viewed on the Laboratory tab by selecting “Other Patient Labs”. **DO NOT ADD** the previous labs to the new record.
OUTBREAK DEFINITIONS

Outbreaks and clusters of disease occur in households, at events, and in facilities. Some outbreaks at a primary location may result in outbreaks in other settings through secondary transmission. Community outbreaks may represent a conglomeration of these occurrences.

The goal of COVID-19 outbreak reporting is to characterize the epidemiology of the disease in a specific setting, to measure the burden of disease in the setting, and to inform public health action for the setting. The decreasing incidence of cases directly associated to the facility is a good measure of the effectiveness of the control practices within the setting. While it may be proper to associate the secondary cases occurring in settings outside of the primary setting to determine the scope of the outbreak, our current surveillance system does not allow primary and secondary cases to be enumerated separately with the linking of the morbidity events to the outbreak record. Therefore, the focus of surveillance in EpiTrax will be to associate (link) only primary cases to the outbreak record and to report those primary cases in the final numbers. If time allows and the information has been collected, local jurisdictions are still able record the number of secondary cases that occurred with the outbreak in the “Outbreak Summary” of the “Investigation” tab in the outbreak record, but the individual listing of those secondary cases on the “Associated Events” tab will not occur.

The following outbreak definitions are based on proposed CSTE definitions:
- Proposed Investigation Criteria and Outbreak Definition for COVID-19 | CSTE EMERGENCY PREPAREDNESS & RESPONSE
- LCTF-Outbreak-Definition.pdf (cste.org)

For all outbreaks the following shall be used:

Outbreak-Associated Cases
- Confirmed and probable cases associated with the setting meeting the outbreak definition should be classified as outbreak-associated and included in outbreak case count.
- Any confirmed and probable cases resulting from secondary transmission from an outbreak-associated case in a family member or close contact of the case who is not associated with the setting should not be classified as outbreak-associated and will not be included in outbreak case count.

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

Setting specific Outbreak Definitions follow.
Healthcare, Long-Term Care Facilities, and Long-Term Acute Care Hospitals

**Outbreak Definition**
- ≥2 cases of COVID-19 in a patient/resident, 7 or more days after admission for a non-COVID condition, with epi-linkage†;
- ≥2 cases of COVID-19 in HCP* or other staff with epi-linkage‡ who do not share a household and are not listed as a close contact of each other outside of the workplace during standard case investigation or contact tracing.

^ If a case is transferred from one facility to another facility and develops COVID-19 less than 7 days later, the case is associated to the first facility’s potential outbreak. If the case becomes the source of an outbreak at the second facility, a notation is made in the first facility’s outbreak record of the secondary outbreak at the second facility. This notation is made on the Administration tab’s description field of the outbreak record.

† Epi-linkage among patients/residents: Defined as overlap on the same unit or ward or having the potential to have been cared for by common staff within a 14-day time period of one another.

* Healthcare Personnel (HCP) include, but are not limited to, emergency medical personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g. clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing and volunteers).

‡ Epi-linkage among HCP: Defined as having the potential to be within 6 feet for 10 minutes or more while working in the facility during the 14 days prior to the onset of symptoms. For example, worked on the same unit during the same shift.

All Other Settings

**Outbreak Definition**
- ≥2 COVID-19 cases among people at a setting with onset of illness within a 14-day period, who are epidemiologically linked**, do not share a household, and are not listed as a close contact†† of each other outside of the setting during standard case investigation or contact tracing.

** To the best extent possible, verify that cases were present in the same setting during the same time-period, that the timing fits with likely timing of exposure, and that there is no other more likely source of exposure for identified cases.

†† Defined as being within 6 feet for 10 minutes or more or having direct contact with secretions (e.g. being coughed or sneezed on).
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):

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.
RELEASES CASES FROM ISOLATION

MILD to MODERATE CASES

Requiring little to no hospitalization

Must be isolated for a minimum of 10 days after onset of symptoms, or sample collection if asymptomatic, and can be released after afebrile (without fever-reducing medication) for at least 72 hours and improvement in other symptoms, whichever is longer.

Onset date

(or specimen collection date if onset unclear or asymptomatic) + Afebrile and feeling well for at least 72 hours

Case released from isolation

Note: Lingering cough, headache, fatigue, and loss of taste or smell may persist for weeks or months and should not delay the end of isolation.

Examples:
• A case that starts to feel well on day 2, and remains afebrile and feeling well for 72 hours, can be released from isolation after day 10 (returning to normal activities on day 11).
• A case that starts to feel well on day 7, and remains afebrile and feeling well for 72 hours, can be released from isolation after day 10 (returning to normal activities on day 11).
• A case that starts to feel well on day 14, and remains afebrile and feeling well for 72 hours, can be released from isolation after day 16 (returning to normal activities on day 17).

SEVERE CASES

Requiring ICU care or are severely immunocompromised

Must be isolated for a minimum of 20 days after onset of symptoms and can be released after afebrile (without fever-reducing medication) for at least 72 hours and improvement in other symptoms, whichever is longer.

Onset date

(or specimen collection date if onset unclear or asymptomatic) + Afebrile and feeling well for at least 72 hours

Case released from isolation

Note: Lingering cough, headache, fatigue, and loss of taste or smell may persist for weeks or months and should not delay the end of isolation.

Examples:
• A case that started to feel well on day 12, and remained afebrile and feeling well for 72 hours, can be released from isolation after day 20 (returning to normal activities on day 21).
• A case that started to feel well on day 17, and remained afebrile and feeling well for 72 hours, can be released from isolation after day 20 (returning to normal activities on day 21).
• A case that started to feel well on day 19, and remained afebrile and feeling well for 72 hours, can be released from isolation after day 21 (returning to normal activities on day 22).

9/19/2021
UNVACCINATED HOUSEHOLD CONTACTS
(NO HISTORY OF NATURAL INFECTION)
Recommend quarantine for 14 days after the case has been released from home isolation (because exposure is considered ongoing within the home). *

If you are not able to stay home for 14 additional days and you do not have symptoms, you may leave home earlier:

• After 10 days without testing; or

• After 7 days with a negative PCR test performed on or after day 6 (must remain in quarantine until results are received)

* If you can have complete separation from the person in your house with COVID-19 (this means no contact, no time together in the same room, no sharing of any spaces, such as the same bedroom or bathroom), then follow the time frame for non-household contacts.

This means that household contacts may need to remain at home longer than the case.

Examples:

• A case that started to feel well 7 days after onset required isolation until day 10;
  o Household contact that is symptom free must remain quarantined through day 24 (returning to regular activities on day 25) OR
  o Household contact that is symptom free must remain quarantined through day 20 without testing (returning to regular activities on day 21) OR
  o Household contact that is symptom free must remain quarantined through day 17 if a PCR test was performed on or after day 16 and was negative (returning to regular activities on day 18)

• A case that started to feel well 14 days after onset required isolation through day 16;
  o Household contact that is symptom free must remain quarantined through day 30 (returning to regular activities on day 31) OR
  o Household contact that is symptom free must remain quarantined through day 26 without testing (returning to regular activities on day 27) OR
  o Household contact that is symptom free must remain quarantined through day 23 if a PCR test was performed on or after day 22 and was negative (returning to regular activities on day 24)

Individuals that are an unvaccinated household contact to a suspected or confirmed case of COVID-19 are recommended to get tested via a PCR or antigen test 3-5 days after their initial exposure to the case while the case was infectious and again 7-10 days after their initial exposure. † A negative test result does not allow an unvaccinated household contact to end quarantine early; this testing recommendation is aimed at identifying cases quickly. If the unvaccinated household contact tests positive, their quarantine period would end and their isolation period would begin (see Releasing Cases from Isolation above).
UNVACCINATED HOUSEHOLD CONTACTS (WITH HISTORY OF NATURAL INFECTION)

Unvaccinated household contacts with evidence of previous infection within 6 months of the current exposure supported by a positive PCR or antigen test: 1) do not have to quarantine if they have remained asymptomatic since their exposure, 2) are recommended to get tested via a PCR or antigen test 3-5 days after their initial exposure to the case while the case was infectious, and again 7-10 days after their initial exposure and 3) they should mask in indoor public settings for 14 days after their last exposure.

VACCINATED HOUSEHOLD CONTACTS

Fully vaccinated household contacts: 1) do not have to quarantine if they have remained asymptomatic since their exposure, 2) are recommended to get tested via a PCR or antigen test 3-5 days after their initial exposure to the case while the case was infectious, and again 7-10 days after their initial exposure and 3) they should mask in indoor public settings for 14 days after their last exposure.

† A case is considered infectious two days before the onset of the first symptom. If the case is asymptomatic, go back two days from when the positive sample was taken.

‡ A case is considered infectious two days before the onset of the first symptom. If the case is asymptomatic, go back two days from when the positive sample was taken. However, the close contact with a history of natural disease does not have to isolate at home while waiting for results if they do not have symptoms.

§ A case is considered infectious two days before the onset of the first symptom. If the case is asymptomatic, go back two days from when the positive sample was taken. However, the fully vaccinated close contact does not have to isolate at home while waiting for results if they do not have symptoms.
RELEASING NON-HOUSEHOLD CONTACTS FROM QUARANTINE

UNVACCINATED NON-HOUSEHOLD CONTACTS (NO HISTORY OF NATURAL INFECTION)

Recommend quarantine for 14 days after the date of last exposure with the person infected with COVID-19.

If you are not able to stay home for 14 additional days and you do not have symptoms, you may leave home earlier:

- After 10 days without testing; or

- After 7 days with a negative PCR test performed on or after day 6 (must remain in quarantine until results are received).

Individuals that are an unvaccinated close contact to a suspected or confirmed case of COVID-19 are recommended to get tested via a PCR or antigen test 3-5 days after their exposure to the case while the case was infectious and again 7-10 days after their exposure. A negative test result does not allow an unvaccinated close contact to end quarantine early; this testing recommendation is aimed at identifying cases quickly. If the unvaccinated close contact tests positive, their quarantine period would end and their isolation period would begin (see Releasing Cases from Isolation above).

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**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?

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.