Criteria to Guide Evaluation of Patients Under Investigation (PUI) for 2019-nCoV

Patients in the United States who meet the following criteria should be evaluated as a PUI in association with the outbreak of 2019-nCoV in Hubei Province, China. Healthcare providers should obtain a detailed travel history for patients being evaluated with fever and acute respiratory illness.

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>&amp;</th>
<th>Epidemiologic Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever and symptoms of lower respiratory illness (e.g., cough, difficulty breathing)</td>
<td>AND</td>
<td>In the last 14 days before symptom onset, a history of travel from Hubei Province, China.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– or –</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the last 14 days before symptom onset, close contact with a person who is under investigation for 2019-nCoV while that person was ill.</td>
</tr>
<tr>
<td>Fever or symptoms of lower respiratory illness (e.g., cough, difficulty breathing)</td>
<td>AND</td>
<td>In the last 14 days, close contact with an ill laboratory-confirmed 2019-nCoV patient.</td>
</tr>
</tbody>
</table>

Reporting a PUI

Healthcare providers should immediately contact both infection control personnel at their healthcare facility and the Kansas Department of Health and Environment in the event of a PUI for 2019-nCoV at 877-427-7317.

Testing for 2019-nCoV

- Diagnostic testing for 2019-nCoV can only be conducted at CDC and must be approved by KDHE.
- Contact the KDHE Epidemiology hotline for testing approval and specimen submission guidance.
- Testing for other respiratory pathogens should not delay specimen shipping to CDC.
- If a PUI tests positive for another respiratory pathogen, after clinical evaluation and consultation with KDHE, they may no longer be considered a PUI.
- This may evolve as more information becomes available on possible 2019-nCoV co-infections.
### Specimen Collection and Submission Guidelines

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection Procedures</th>
<th>Shipping and Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOWER RESPIRATORY SPECIMEN</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Bronchoalveolar lavage, tracheal aspirate, pleural fluid | - Collect 2-3 mL in a sterile, leak-proof, screw-cap sputum cup or sterile dry container.  
- Minimum volume: 2-3 ml. | **Transport device:** Sterile, leak-proof, screwcap sputum cup or sterile dry container.  
**Transport:** Ship cold (2-8°C) on ice packs. If previously frozen, ship on dry ice.  
**Storage:** Refrigerate at 2-8°C up to 72 hrs. If arriving at KHEL ≥ 72 hrs. after collection, freeze at ≤ -70°C. |
| **Sputum**                        |                                                                                        |                                                                                        |
|                                   | - Have the patient rinse the mouth with water.  
- Then expectorate deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. |                                                                                        |
| **UPPER RESPIRATORY SPECIMEN**    |                                                                                        |                                                                                        |
| Nasopharyngeal (NP) and Oropharyngeal (OP) swabs | - Collect only using synthetic tip swabs (ex. Dacron, Nylon, Polyester) with non-wooden shaft.  
- Place swabs immediately into sterile tubes containing 2-3ml viral transport media (VTM)  
- **Nasopharyngeal swabs** -- Insert a swab in the nostril parallel to the palate. Leave in place for a few seconds to absorb secretions. Swab both nasal areas.  
- **Oropharyngeal swab** -- Swab the posterior pharynx, avoiding the tongue.  
**DO NOT SUBMIT NP AND OP SWABS IN SAME VIAL**  
**IF SWABS ARE NOT IN VTM OR ARE IN THE SAME VIAL THEY WILL BE REJECTED** | **Transport device:** Sterile leak-proof containers.  
**Transport:** Ship cold (2 - 8°C) on ice packs. If previously frozen, ship on dry ice.  
**Storage:** Refrigerate at 2-8°C up to 72 hrs. If arriving at KHEL ≥ 72 hrs. after collection, freeze at ≤ -70°C. |
| Serum (adults and children)        | - Collect 1 tube (5-10 mL) whole blood in a serum separator tube.  
- Serum separator tubes should be stored upright for at least 30 minutes, and then centrifuged at 1000–1300 relative centrifugal force (RCF) for 10 minutes before removing the serum and placing it in a separate sterile tube for shipping (such as a cryovial).  
- Minimum volume: 200μl of serum. | **Transport device:** Sterile tube container.  
**Transport:** Ship cold (2 - 8°C) on ice packs. If previously frozen, ship on dry ice.  
**Storage:** Refrigerate at 2-8°C up to 72 hrs. If arriving at KHEL ≥ 72 hrs. after collection, freeze at ≤ -70°C. |
| Whole blood (infants)              | - A minimum of 1 mL of whole blood is needed for testing pediatric patients.  
- If possible, collect 1 mL in a serum separator tube. |                                                                                       |