

Influenza A-Novel/Variant

BASIC EPIDEMIOLOGY

Infectious Agent

Novel or variant influenza is caused by an influenza virus that is not known to circulate in humans. Some animals (avian and swine populations) are considered higher risk for transmitting a novel/variant influenza strain to humans.

Transmission

The transmission route of novel/variant influenza viruses is likely to be similar to seasonal influenza which is primarily by droplet spread. Transmission may also occur by direct or indirect contact with oral secretions or fecal material from infected animals.

Incubation Period

The incubation period is likely to be similar to seasonal influenza with an incubation period of 1 to 4 days.

Communicability

The communicability of novel/variant influenza viruses is unknown and strain specific. It may range from low to high communicability depending on how well adapted the strain is to humans. Susceptibility is considered to be universal since by definition a novel/variant influenza strain is one that is not known to circulate in humans.

Clinical Illness

Symptoms are likely to be similar to seasonal influenza with fever, chills, muscle aches, headache, sore throat and cough. Many novel/variant influenza infections have had increased incidence of gastrointestinal symptoms such as vomiting and diarrhea.

Severity

The severity of illness is unknown and may vary from mild to severe depending on the specific strain and characteristics of the population.

DEFINITIONS

National Case Definition: Novel Influenza A Virus Infections (2014)

Clinical Case Definition

An illness compatible with influenza virus infection such as fever >100 degrees Fahrenheit with cough and/or sore throat

Laboratory Confirmation

Identification of an influenza A virus subtype or strain that is different from currently circulating human influenza H1 and H3 strains as confirmed by the Centers for Disease Control and Prevention's (CDC) influenza laboratory, by public health laboratories using CDC-approved protocols for that specific strain or by labs using Food and Drug Administration (FDA)-authorized tests for specific strains

- Novel/variant subtypes include, but are not limited to, H2, H5, H7 and H9 subtypes.
- Influenza H1 and H3 subtypes originating from a non-human species or from genetic reassortment between animal and human viruses are also novel/variant subtypes or strains.
- Methods available for detection of currently circulating human influenza viruses at public health laboratories (e.g., RT-PCR) will also detect suspected novel/variant subtypes

and strains.

- Initial confirmation that a specific influenza A virus represents a novel/variant virus will be performed by CDC's influenza laboratory.
- Currently, only viral isolation, RT-PCR, gene sequencing or a 4-fold rise in strain-specific serum antibody titers are considered confirmatory for case classification purposes.

Case Classifications

- **Confirmed:** A case of human infection with a laboratory confirmed novel/variant influenza A virus
- **Probable:** A case meeting the clinical criteria and epidemiologically linked to a confirmed case, but for whom no confirmatory laboratory testing for novel/variant influenza virus infection has been performed or test results are inconclusive for a novel/variant influenza A virus infection
- **Suspect:** A case meeting the clinical criteria in which influenza A has been detected but is pending laboratory confirmation. Any case of human infection with an influenza A virus that is different from currently circulating human influenza H1 and H3 viruses is classified as a suspect case until the confirmation process is complete.
 - Typically, sporadic novel/variant influenza cases will have a history of either
 - Close contact with ill animals known to transmit novel/variant subtypes of influenza A (such as wild birds or poultry, swine or other mammals) **OR**
 - Travel within 14 days of onset, to any country where a novel/variant influenza A virus (such as highly pathogenic avian influenza A H5N1) has been recently identified in animals or people.

Criteria for Epidemiologic Linkage

- The patient has had contact with one or more persons who either have or had the disease **AND** transmission of the agent by the usual modes of transmission is plausible.
- A case may be considered epidemiologically linked to a laboratory confirmed case if at least one case in the chain of transmission is laboratory confirmed.

Interim Case Definitions for Novel Influenza A (H5N1) and A (H7N9), and Novel Influenza A Viruses with the Potential to Cause Severe Disease in Humans (e.g., H5N2)

Novel influenza virus knowledge is constantly evolving; therefore, CDC publishes interim definitions for novel influenza viruses that are currently associated with severe disease in humans (e.g., H5N1, H7N9) or have the potential to cause severe disease in humans (e.g., H5N2). The case definitions for these novel influenza viruses may differ from the published national case definition for novel influenza A virus infections. Please consult the CDC websites for the most up-to-date definitions.

Novel Influenza A Viruses **Associated with Severe Disease** in Humans:

<http://www.cdc.gov/flu/avianflu/h7n9/specimen-collection.htm>

For case definitions, see: H5N1: <https://www.cdc.gov/flu/avianflu/h5n1/case-definitions.htm>;

H7N9: <https://www.cdc.gov/flu/avianflu/h7n9/case-definitions.htm>.

- **Case Under Investigation:** Illness compatible with influenza in a patient meeting any of the exposure criteria below and for whom laboratory confirmation is not known or pending.
 - Exposure criteria:
 - Patients with recent travel (within <10 days of illness onset) to areas where human cases of avian influenza A (H5N1) or (H7N9) virus infection have become infected or to areas where avian influenza A (H5N1) or (H7N9) viruses are known to be circulating in animals¹. **OR**

- Patients who have had recent close contact (within <10 days of illness onset) with confirmed or suspected² cases of human infection with avian influenza A (H5N1) or (H7N9) virus. Close contact may be regarded as coming within about 6 feet (2 meters) of a confirmed or suspected case while the case was ill (beginning 1 day prior to illness onset and continuing until resolution of illness). This includes healthcare personnel providing care for a confirmed case, family members of a confirmed case, persons who lived with or stayed overnight with a confirmed or suspected case, and others who have had similar close physical contact³. **OR**
- Unprotected exposure to live avian influenza A (H5N1) or (H7N9) virus in a laboratory.

Footnotes:

¹H5N1: See ~~Outbreaks of Highly Pathogenic Avian Influenza (subtype H5N1) in poultry notified to the OIE from the [end of 2003 to 28 November 2016](#) and [Cumulative Number of Confirmed Human Cases for Avian Influenza A \(H5N1\) Reported to WHO, 2003-2017](#)~~. H7N9: (10/30/17) China is the only country where avian influenza A (H7N9) viruses are known to be circulating in animals (poultry) or where human cases have become infected.

²Patients suspected of having infection with a novel influenza A virus can include probable cases, cases under investigation for infection with avian influenza A (H5N1) or (H7N9) virus, and other patients for whom available clinical and epidemiologic information support a diagnosis of infection with avian influenza A (H5N1) or (H7N9) virus.

³Limited, non-sustained, person-to-person transmission of highly pathogenic avian influenza A (H5N1) virus has been reported in several countries following close, prolonged unprotected contact with a severely ill H5N1 patient, including in household and hospital settings. Limited data are available for avian influenza A (H7N9) virus in which limited, non-sustained, person-to-person transmission could not be excluded in some family clusters.

Novel Influenza A Viruses with the Potential to Cause Severe Disease in Humans:

<http://www.cdc.gov/flu/avianflu/severe-potential.htm>

- Case Under Investigation: Illness compatible with influenza¹ in a patient meeting any of the exposure criteria below and for whom laboratory test results are not known or are pending²:
 - Patients who have had recent contact³ (within 10 days of illness onset) with birds potentially infected with avian influenza (AI) viruses (i.e., sick or dead birds [domestic poultry, wild aquatic birds, or captive birds of prey that have had contact with wild aquatic birds]⁴, or flocks where AI virus infection has been confirmed)
 - OR**
 - Patients who have had recent close contact (within 10 days of illness onset) with confirmed or suspected⁵ cases of human infection with AI or other novel influenza viruses. Close contact may be regarded as coming within about 6 feet(2 meters) of a confirmed or suspected case while the case was ill (beginning 1 day prior to symptom onset and continuing until resolution of illness). This includes healthcare personnel providing care for a confirmed or suspected case, family members of a confirmed or suspected case, persons who lived with or stayed overnight with a confirmed or suspected case, and others who have had similar close physical contact in a community or workplace environment.
 - OR**

- Unprotected exposure to live AI virus in a laboratory.

Footnotes:

1Illness compatible with influenza may present as influenza-like illness (ILI) [fever $\geq 100^{\circ}\text{F}$ plus cough or sore throat] or other signs and symptoms associated with influenza such as rhinorrhea, fatigue, myalgia, arthralgia, headache, and difficulty breathing. Note that influenza may not cause fever in all patients (especially in patients under 5 years of age, over 65 years of age, or patients with immune-suppression), and the absence of fever should not supersede clinical judgment when evaluating a patient for illness compatible with influenza. Atypical presentations of influenza may include nausea, vomiting, or diarrhea. While a rare sign of seasonal influenza, conjunctivitis has been reported as a sign of avian influenza virus infection.

2Note that commercially available rapid influenza diagnostic tests (RIDTs) cannot distinguish between influenza A virus subtypes (i.e., they do not differentiate between human and animal influenza A viruses); thus, a positive RIDT test result cannot confirm AI virus infections. Commercially available RIDTs also may not detect AI viruses in clinical specimens; therefore a negative RIDT result does not exclude infection with AI virus.

3Contact may include: direct contact with birds (e.g., handling, slaughtering, defeathering, butchering, preparation for consumption) or direct contact with surfaces contaminated with feces or bird parts (carcasses, internal organs, etc.) or prolonged exposure to birds in a confined space.

4Exposures that occur in geographic regions in the United States where newly detected avian influenza viruses have been identified are of most concern.

5Suspected cases of AI virus infection include probable cases, cases under investigation, and other patients for whom available clinical and epidemiologic information support a diagnosis of infection with AI virus.

SURVEILLANCE AND CASE INVESTIGATION

Case Investigation

Local and regional health departments should investigate all reports of suspected novel/variant influenza. Please use the General Influenza Investigation Form and the Influenza Investigation Form Supplemental Pages (if applicable) which are available on the DSHS website at <http://www.dshs.texas.gov/idcu/investigation/>. Healthcare providers may report suspected cases of novel/variant influenza. Only the state laboratory or the CDC can identify a confirmed or probable case of novel/variant influenza.

Case Investigation Checklist for Suspect Cases Pending Confirmatory Testing

- Determine why the healthcare provider suspects novel/variant influenza and evaluate the patient as a candidate for testing.
 - Consult the Definitions section (above), particularly the “Interim Case Definitions for Novel Influenza A (H5N1) and (H7N9), and Novel Influenza A Viruses with the Potential to Cause Severe Disease in Humans (e.g., H5N2)”.
 - **Patients who meet the “Case Under Investigation” criteria should be tested for novel influenza.**
- Use the current influenza season’s DSHS Influenza Laboratory Surveillance Protocol to give instructions for the collection and submission of specimens. Also, follow instructions in the Laboratory Procedures section (below).
- Ensure that appropriate infection control measures have been implemented (see Control Measures section, below).

- Complete and fax or securely email a copy of the General Influenza Investigation Form to DSHS.
- Do **not** enter suspect cases into NBS unless specifically requested.

Case Investigation Checklist for Confirmed, Probable and Suspect (Unsubtypeable Influenza A Pending Subtyping) Cases

- Ensure that appropriate infection control measures have been implemented (see Control Measures section, below).
- Confirm that the laboratory results meet the case definition.
- Review medical records or speak to an infection preventionist or physician to verify underlying health conditions and course of illness.
- Notify the State Influenza Surveillance Coordinator in DSHS EAIDU about the case under investigation as soon as enough information is available to determine that the case meets case definition.
- Interview the case (or surrogate) to identify travel history, animal contact and other risk factors.
- Identify close contacts and determine if secondary cases have occurred.
- See Public Health Follow Up section below.
- Enhance surveillance for ILI and influenza:
 - Ensure that all regular influenza reporters are reporting ILI data to public health.
 - If the case occurs outside of flu reporting season, contact regular flu reporters and request that they report ILI for at least 4 weeks.
- Contact local hospitals and large clinics to see if any increases in ILI activity have occurred.
 - Follow-up with hospitals and large clinics weekly for at least 4 weeks.
- Contact local schools to see if any increases in ILI activity have occurred.
 - Follow-up with schools weekly for at least 4 weeks.
- When non–travel-related novel/variant influenza cases are detected, health departments should work with providers to increase specimen submissions for influenza surveillance (PCR) testing.
- Refer to the state pandemic influenza plan (*Public Health Preparedness, Surveillance, and Response Plan for Texas: Respiratory Viruses Having Pandemic Potential*) for a list of responsibilities by department and program area.
- If applicable, complete the steps in the Managing Special Situations section.
- Complete the General Influenza Investigation Form and the Influenza Investigation Form Supplemental Pages and fax these forms to DSHS.
- DSHS may also request completion of other novel/variant influenza investigation forms, if needed.
- Enter and submit for notification in the NEDSS Base System (NBS) all confirmed and probable case investigations.

Control Measures

- Provide education on influenza to contacts of the case as needed.
- Provide guidance on infection control in healthcare settings.
 - **Standard, contact, and airborne precautions** are recommended when managing patients who may be infected with novel influenza A viruses, including confirmed cases, probable cases, suspect cases, cases under investigation for infection with a novel influenza A virus, and other patients for whom available clinical and epidemiologic information strongly support a diagnosis of infection with a novel influenza A virus.
 - See CDC's "Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with Novel Influenza A Viruses Associated with Severe Disease" at <http://www.cdc.gov/flu/avianflu/novel-flu-infection->

[control.htm](#) for more information.

- Recommend that anyone with risk factors experiencing symptoms or anyone with severe illness be evaluated by a healthcare provider.
- Remind local healthcare providers to consider influenza and report suspected cases.
- Antivirals may be used to treat and prevent influenza according to CDC guidance.
 - The Texas Medical Board recently changed its rules (Texas Administrative Code, Title 22, Part 9, Chapter 190, Subchapter B, §190.8) regarding the prescribing of prophylaxis for close contacts of patients with certain infectious diseases. Physicians can now prescribe antiviral medications to contacts of influenza cases without first medically evaluating the contacts.

School/Daycare Exclusion Criteria

Children are required to be excluded from school and daycare for at least 24 hours after fever has subsided without the use of fever suppressing medications. It is recommended that adults not return to work for at least 24 hours after fever has subsided without the use of fever suppressing medications. In the event of a pandemic or unusually severe presentation the exclusion period may be extended.

PUBLIC HEALTH FOLLOW UP

Public health follow-up (PHFU) for close contacts is required for all confirmed and probable novel/variant influenza cases. The extent of follow-up required may depend on the number of cases identified, the severity of illness or interest from public health leaders or media. PHFU requirements may cease in specific situations (e.g., in the case of an ongoing pandemic), as specified by DSHS EAIDU.

Routine contact tracing:

- Routine follow up should be done for all suspected (i.e., unsubtypeable influenza A pending subtyping), probable and confirmed novel/variant influenza cases.
- Complete the Respiratory Contact Tracking Form located on the DSHS website at <http://www.dshs.texas.gov/idcu/investigation> and provide a copy to DSHS.
- Advise contacts of signs and symptoms of illness and refer them to their healthcare providers if they experience any symptoms compatible with influenza or ILI within 10 days of their last contact with the confirmed/probable case.
- Prioritize contacts for laboratory testing and collect specimens.
 - Collect specimens from any contacts with influenza or ILI symptoms within 10 days of last contact with the confirmed/probable case.
 - Prioritize specimen collection from symptomatic contacts according to degree and frequency of contact (e.g., prioritize household contacts over coworkers).
 - Do not delay specimen collection or testing to wait for more specimens to become available (i.e., do not batch specimens!).
- Provide close contacts with a Novel/Variant Influenza fact sheet.
 - A fact sheet will be developed by DSHS EAIDU.
- Close contacts of persons with confirmed or suspected cases can be counseled about the early signs and symptoms of influenza and advised to contact their healthcare providers immediately if clinical signs or symptoms develop. Healthcare providers may choose to provide an influenza antiviral prescription to exposed persons at higher risk for complications of influenza virus infection. Prophylaxis recommendations will likely vary with the severity of disease. Guidance will be provided by CDC or DSHS.
 - The Texas Medical Board recently changed its rules (Texas Administrative Code, Title 22, Part 9, Chapter 190, Subchapter B, §190.8) regarding the prescribing of prophylaxis for close contacts of patients with certain infectious diseases. Physicians can now prescribe antibiotics to contacts of influenza cases without first medically evaluating the contacts.

Enhanced Public Health Follow Up:

- Enhanced public health follow up should be performed when DSHS EAIDU advises.
- Enhanced public health follow up includes all routine contact tracing requirements plus:
 - Close contacts should be actively monitored for symptoms of ILI for a minimum of 10 days (i.e., follow-up should be performed at regular intervals).
 - Consider testing asymptomatic close contacts in addition to symptomatic close contacts.

Close contacts definition: Close contacts are defined as persons who were within about 6 feet of a suspected (i.e., unsubtypeable influenza A pending subtyping), probable or confirmed case while the case was ill (beginning 1 day prior to the case's illness onset and continuing until the case's resolution of illness). This includes household and family contacts, healthcare personnel, laboratory workers and other persons who were known to be within about 6 feet of the case. Assess workplace, school and social settings for close contacts as well.

MANAGING SPECIAL SITUATIONS

Animal (Swine or Avian) Exposure Identified

If the influenza case is determined to be a novel/variant strain and if exposure to domestic or wild animals is identified during the investigation, DSHS EAIDU should be notified immediately so that partners in DSHS Zoonosis Control, the Texas Animal Health Commission (TAHC) and/or Texas Parks and Wildlife (TPW) can be included in the investigation.

Extensive efforts should be made to identify all animal contacts in the 2 weeks prior to onset of illness. Zoonosis Control, TAHC or TPW will conduct trace backs and investigations on animal contacts.

Multiple Cases of Novel/Variant Influenza Identified

If more than one case of novel/variant influenza is identified, enhanced surveillance will be expanded.

The local/regional health department should:

- Alert all acute care healthcare providers in the area to be cognizant of possible cases and encourage reporting of suspected cases.
- Continue to work with existing influenza surveillance partners and hospitals/large clinics in the area to track influenza-like illness and identify new cases.
- Investigate common exposures among the cases and work with any identified facilities or entities.
 - Recommend control measures based on the type of entity or setting.
 - Recommendations should be jointly developed with TAHC/TPW if animals are present.
- Encourage anyone with symptoms to be evaluated by a healthcare provider.
- Perform enhanced contact tracing for close contacts of confirmed/probable cases.
- Ensure specimen submission at an adequate level from the local/regional area to determine the prevalence of the novel/variant influenza virus in Texas according to Influenza Virologic Surveillance Right Size guidelines. DSHS will provide guidance on specimen volume and representativeness required to achieve this objective.
- See the Texas Influenza Surveillance Handbook for more information on control measures and outbreak response.
- Refer to the state pandemic influenza plan (*Public Health Preparedness, Surveillance, and Response Plan for Texas: Respiratory Viruses Having Pandemic Potential*) for a list of responsibilities by department and program area.

Pandemic

During a pandemic, DSHS will determine what information should be collected on individual EAIDG 2023

cases of pandemic influenza or if only aggregate data will be collected. It is anticipated that a complete novel/variant influenza investigation will be performed on initial cases. A specific investigation form will be provided for this purpose. As the case count increases, a General Influenza Investigation Form should be completed for all or a subset of cases.

Once a pandemic influenza strain becomes widespread in Texas it is likely that individual investigations will no longer be performed for all cases and only aggregate reporting of cases or full investigation of a subset of cases will be needed. Individual investigations may continue for a subset of cases such as influenza-associated deaths among pregnant/postpartum women or other groups of interest.

Refer to the state pandemic influenza plan (*Public Health Preparedness, Surveillance, and Response Plan for Texas: Respiratory Viruses Having Pandemic Potential*) for a list of responsibilities by department and program area. Investigation and reporting guidance specific to the pandemic will be shared by DSHS.

REPORTING AND DATA ENTRY REQUIREMENTS

Provider, School, Child-Care Facility, and General Public Reporting Requirements

Clinically suspected cases are required to be reported **immediately** to the local or regional health department or to DSHS EAIDU at **(800) 252-8239 or (512) 776-7676**. Healthcare providers are encouraged to report suspected cases of influenza with a recent history of international travel or with recent contact with swine or poultry.

Local and Regional Reporting and Follow-up Responsibilities

Local and regional health departments should:

- Report the case to the regional DSHS office or to EAIDU at **512-776-7676**.
- Enter the case into NBS and submit an NBS notification on all **confirmed** and **probable** cases within 30 days of receiving a report of a confirmed or probable case.
 - Please refer to the *NBS Data Entry Guidelines* for disease-specific entry rules.
 - A notification can be sent as soon as the case criteria have been met. Additional information from the investigation may be entered upon completion of the investigation.
- Investigation forms should be faxed or securely emailed as soon as an investigation has been completed.**
 - Investigation forms may be faxed to **512-776-7616** or securely emailed to the IRID team lead or State Influenza Surveillance Coordinator

When an outbreak is investigated, local and regional health departments should:

- Report outbreaks within 24 hours of identification to the regional DSHS office or to EAIDU at **512-776-7676**.
- Submit a completed **Respiratory Disease Outbreak Summary Form** at the conclusion of the outbreak investigation.
 - Fax or send a secure email to the DSHS regional office and/or to EAIDU at 512-776-7676. The secure email should be sent to the IRID team lead or State Influenza Surveillance Coordinator at EAIDU.
 - The Respiratory Disease Outbreak Summary Form is available at <http://www.dshs.texas.gov/idcu/investigation>.

LABORATORY PROCEDURES

Specimens associated with suspected novel/variant influenza cases should be submitted to the DSHS Laboratory or Laboratory Response Network (LRN) laboratory following the protocol for seasonal influenza surveillance. The protocol is available by request from DSHS EAIDU or from the regional influenza surveillance coordinator.

Specimen Collection

- For H5N1, H7N9, and novel influenza A viruses with the potential to cause severe disease in humans (e.g., H5N2), follow CDC’s specimen collection guidance at <http://www.cdc.gov/flu/avianflu/h7n9/specimen-collection.htm> and <http://www.cdc.gov/flu/avianflu/severe-potential.htm>
 - Ensure that proper infection control precautions are followed when collecting specimens from persons with suspected or known infection with a novel influenza A virus (<http://www.cdc.gov/flu/avianflu/novel-flu-infection-control.htm>).
 - The following should be collected as soon as possible after illness onset: (i) a nasopharyngeal swab, or (ii) a nasal aspirate or wash, or (iii) two swabs combined into one viral transport media vial (e.g., nasal or nasopharyngeal swab combined with an oropharyngeal swab). If these specimens cannot be collected, a single nasal, or oropharyngeal swab is acceptable.
 - For patients with lower respiratory tract illness, a lower respiratory tract specimen (e.g., an endotracheal aspirate or bronchoalveolar lavage fluid) is preferred for suspected H5N1 or H7N9 infection because these specimens have a higher yield for detecting avian influenza H5N1 and H7N9 viruses. For novel influenza A viruses with the potential to cause severe disease in humans (e.g., H5N2), a lower respiratory tract specimen may be preferred.
 - Specimens should be placed into sterile viral transport media and immediately placed on refrigerant gel-packs or at 4°C (refrigerator) for transport to the laboratory.
 - If possible, in order to increase the potential for novel influenza virus detection, multiple respiratory specimens from different sites should be obtained from the same patient on at least two consecutive days.
- The current influenza season’s DSHS Influenza Laboratory Surveillance Protocol should be consulted for storage, packaging, and shipping instructions.
- Refer to situation-specific guidance from DSHS EAIDU, if provided.

Submission Form (if submitting specimen(s) to DSHS Austin)

- Use the DSHS Laboratory G-2V Specimen Submission Form for specimen submission.
 - On the form, under the Virology section, check the box for “Influenza surveillance {Influenza real-time RT-PCR}”. In the blank space to the right of “Influenza surveillance {Influenza real-time RT-PCR}”, write “suspect novel influenza”.

Section 4. VIROLOGY	
<input type="checkbox"/> Electron Microscopy	
<input checked="" type="checkbox"/> Influenza surveillance {Influenza real-time RT-PCR}	<i>Suspect novel influenza</i>
Vaccine received: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date vaccine received: _____	
Travel history (if known): <u><i>No international travel</i></u>	
<input type="checkbox"/> Measles, real-time RT-PCR	
<input type="checkbox"/> Mumps, real-time RT-PCR	<i>Animal contact: Contact with pigs</i>
<input type="checkbox"/> MERS Coronavirus (Novel coronavirus)	
++++ <i>Prior authorization required.</i> +++++ Call Infectious Disease (512) 776-7676 for authorization	
<input type="checkbox"/> Other: _____	

- Indicate the patient’s flu vaccination status for the current season and the date of

- vaccination, if known.
- Indicate the patient's travel history.
- In the blank space to the right of "Influenza surveillance {Influenza real-time RT-PCR}", write "Animal contact" and the type of animal contact with which the patient had contact, if applicable.
- Make sure the patient's name and approved secondary identifier on the form exactly match what is written on the specimen tube.
 - An approved secondary identifier should be one of the following: date of birth, medical record number, social security number, Medicaid number, or CDC number.
- Make sure to fill in the date and time of collection in addition to the patient demographics on the form.
- Follow the submission form instructions found in the current influenza season's DSHS Influenza Laboratory Surveillance Protocol.

Specimen Shipping

- Notify the laboratory that you will be shipping the specimen and provide the shipment date and tracking number.**
- Transport temperature: Store the specimen at 2°-8°C if the specimen will be received at the laboratory within 72 hours of collection; ship the specimen on cold or freezer packs. Otherwise, the specimen must be stored frozen (-70°C) and shipped on dryice.
- Ship specimens for overnight delivery.
DO NOT mail specimens on a Friday or the day before a holiday unless special arrangements have been made in advance with the DSHS or LRN Laboratory.
- If shipping specimens to DSHS Austin, ship specimens to:

Laboratory Services Section, MC-1947
Texas Department of State Health Services
Attn. Walter Douglass (512) 776-7569
1100 West 49th Street
Austin, TX 78756-3199

Common Causes for Rejection:

- There is a discrepancy between the patient name on the specimen tube and the name on submission form.
- The specimen is not shipped in viral transport medium or the medium is expired.
- The specimen is received more than 72 hours after collection (if refrigerated).
- The specimen is received at ambient temperature.

REVISION HISTORY

January 2018

- Definitions: updated a web address/link and made a minor formatting change
- Surveillance and Case Investigation: added that the completed investigation forms can be securely emailed to DSHS and made minor formatting changes
- Reporting and Data Entry Requirements: added that a case of novel/variant influenza A should be reported to the DSHS regional office or DSHS EAIDU and that completed investigation forms may be sent to the IRID team lead or State Influenza Surveillance Coordinator by secure email