

Laboratory Testing Protocol for the Surveillance of Novel H1N1 Influenza and Seasonal Influenza

September 8, 2009

These guidelines will be revised as the situation evolves.

Texas is currently following traditional influenza seasonal surveillance protocols for the identification of novel H1N1 influenza cases and the emergence of other novel influenza strains using providers from the Texas Department of State Health Services (DSHS) Influenza Laboratory Surveillance Program. Public health laboratory testing for influenza conducted by the DSHS Austin Laboratory and Texas Laboratory Response Network laboratories is primarily surveillance:

- To detect the distribution and spread of the virus
- To detect new variants of the virus and
- To assist in outbreak investigations.

Clinical disease management in individual patients is not a primary goal of public health laboratory testing. Diagnostic testing, if desired, should be performed by commercial laboratory services. To make the most effective and appropriate use of the DSHS Laboratory and Laboratory Response Network (LRN) resources in the primary mission of supporting public health activities, DSHS has revised the criteria for specimens that should be submitted to these laboratories.

Specimens submitted to the DSHS and LRN laboratories must be from one of the following categories:

- Patients hospitalized for at least 48 hours with influenza symptoms (symptoms are fever greater than 37.8°C (100°F) **and** cough and/or sore throat) plus **one or both** of the following conditions:
 - Severe illness such as lower respiratory tract infections or pneumonia
 - Unusual presentation in children, adults > 64 years of age, and immuno-compromised individuals
 - Patients who have died with influenza-like illness and have no other known cause of death (specimens must be collected before death)
 - Pregnant patients with influenza-like illness
- Individuals with influenza-like illness who are part of a critical public health investigation as identified by the DSHS Health Service Region (HSR), DSHS Infectious Disease Control Unit (IDCU) or local health department and communicated by the HSR or IDCU to the state laboratory.
- Providers who are participants in the DSHS Influenza Laboratory Surveillance Program as designated by the DSHS Infectious Disease Control Unit (IDCU). Only enrolled providers will be allowed to submit specimens that do not meet one of the other criteria above.

Qualifying criteria (symptoms or conditions) must be indicated on the submission form to ensure the specimen will be tested. As of **August 10, 2009**, specimens not meeting one of these criteria will not be tested by the DSHS Austin and LRN laboratories. Submitters should send these specimens to a [reference laboratory](#) for testing. DSHS may allow exceptions to this list depending on the specific epidemiological and clinical characteristics of the situation.

COLLECTION OF SPECIMENS:

Respiratory Specimens

Respiratory specimens are the only specimen type acceptable for polymerase chain reaction (PCR) laboratory testing for influenza.

Acceptable respiratory specimens include: nasopharyngeal swabs, nasopharyngeal aspirates, nasal swabs, throat swabs, and dual nasopharyngeal / throat swabs. If the swab or aspirate has been used for performing a rapid antigen test, please send an aliquot (1-2 ml) of the original suspension (not exposed to test kit reagents) in viral transport media or an additional original specimen swab in viral transport media.

Use the sterile, polyester-tipped, plastic shaft swabs and viral transport media (VTM) for specimen collection. Any commercially available VTM is acceptable for specimen transport. Dacron or rayon-tipped swabs with a plastic shaft or any other commercially available sterile collection system intended for virus isolation may be used. **Calcium alginate swabs, cotton swabs or swabs with wooden shafts are not acceptable for specimen collection as they may inhibit recovery of the virus. Supplies used for Genprobe testing are not acceptable. Specimens submitted using these supplies will be rejected.**

Viral transport media (VTM) tubes should be stored at the specified temperature according to product storage requirement or product insert. If the viral transport media (VTM) tube has been stored frozen, the media should be thawed (at either refrigeration or room temperature) completely before specimen collection. **Do not** heat, microwave, or incubate media prior to use as this may cause inactivation of the virus. **Be sure to check the expiration date of the medium prior to specimen collection. Specimens submitted on expired media will be rejected.**

After specimen has been collected, insert the fiber tip of the swab immediately into the VTM and break off the shaft so that the swab fits completely within the tube. Please tighten the cap securely and place at 4°C immediately in an upright position. Ship specimen tubes to your local Laboratory Response Network (LRN) laboratory or DSHS Austin Laboratory, as appropriate, **as soon as possible after collection. Specimens not shipped within 2 days of collection should be frozen in an upright position at -70°C. Ensure that the patient name and date of collection are written on each specimen tube that is submitted.**

For more information go to www.cityofbeaumont.com www.texasflu.org www.cdc.gov

SPECIMEN LABELING AND SUBMISSION FORM COMPLETION:

Obtain submission form from your appropriate LRN. Submission forms must be **completely** filled in for each specimen; incomplete information may cause the specimen to be rejected. Ensure that the patient name and date of collection are written on each specimen tube that is submitted. ***The patient name and date of collection on the specimen tube must match the name and date on the corresponding laboratory form. Qualifying criteria (symptoms or conditions) must be indicated on the submission form to ensure the specimen will be tested.***

PACKING AND SHIPMENT OF SPECIMENS TO LRN:

On January 1, 2007, the shipping regulations for clinical specimens changed. Boxes containing clinical specimens must now be labeled, "Biological Substance, Category B". Air shipments must display the UN3373 label with the adjoining words, "Biological Substance, Category B". The phone number and name of a contact person must be listed on the box or airbill for both the shipper and the recipient.

It is important to follow the triple container rules for all "Biological Substance, Category B" shipments. Components of a triple packing system include:

- Primary container = the receptacle specimen tube containing the media that the specimen swab is placed in or the blood tube
- Secondary container = the plastic liner with screw cap
- Outer shipping container = the Styrofoam box placed inside of the cardboard shipping box

Note: Please refer to the detailed diagrams of packing and shipping instructions that can be found at the end of this document.

The primary container (the specimen) should be placed into the secondary container (the plastic liner with screw cap or biohazard bag) with enough absorbent material to absorb the entire contents if leakage/breakage occurs. Be certain that the specimen tube and the plastic liner with screw cap are securely sealed to prevent leaks. The secondary container must then be placed in the Styrofoam box or other suitable container for controlled-temperature shipment. The Styrofoam box is then placed in a corrugated cardboard box, which is taped for shipping. (Please keep these two units together; do not separate the Styrofoam box from the outer cardboard box.). Place the laboratory submission form in a plastic bag on top of the Styrofoam box inside the cardboard box. ***You must submit a laboratory submission form for each specimen in the shipment in a plastic bag.***

Note: To avoid specimen warm-up during packing and shipment, it is helpful if the plastic liner (secondary container) is cold before placing the specimen inside.

If the specimen has been refrigerated at 4°C, place enough cold packs in the Styrofoam box to maintain that cold temperature until received at the laboratory. If the specimen has been frozen at -70°C, place enough dry ice in the Styrofoam box to maintain that frozen temperature until received at the laboratory. The recommended method of shipment is to use a carrier that will deliver the next day. **Next day deliveries cannot be accepted on Saturday, Sunday or state holidays unless coordinated with the receiving laboratory.**

Note: It is your responsibility as the shipper to make sure that all packaging and labeling meet the current criteria.

DSHS Austin Laboratory

Viral Isolation Team
Laboratory Services Section, MC 1947
Texas Department of State Health Services
1100 W. 49th Street
Austin, TX 78756-3199

For shipping to the DSHS Austin laboratory, use the G-2A Specimen Submission Form. Qualifying criteria (symptoms or conditions) **listed on the first page** must be indicated on the submission form to ensure the specimen will be tested. Under Section 5, "Payor Source" please check IDEAS.

DSHS Laboratory Forms

Go to www.dshs.state.tx.us/lab/MRS_forms.shtm to:

- Receive Test Request Form Samples and G-2A Form - Laboratory Services
- Obtain Test Request Forms by e-mail

LRN LABORATORIES

Please use the correct specimen submission form when submitting specimens to the LRN laboratories.

Corpus Christi

Corpus Christi Nueces Co Public Health Lab

Attn: Sandra Heatherley

1702 Horne Rd

Corpus Christi, TX 78416

Dallas

Dallas County Health & Human Services

Attn: Joey Stringer

003 Basement

2377 N Stemmons Freeway

Dallas, TX 75207

El Paso

City of El Paso Dept. of Public Health

Attn: Yolanda Olivas

4505 Alberta Ave. 2nd Floor

El Paso, TX 79905

Houston

Houston Department of Health Laboratory

Attn: Meilan Beilby

1115 South Braeswood Blvd.

Houston, TX 77030

Tyler

UTHSCT/PHLET

Attn: Jeremy Jordan

11949 US Highway 271

Tyler, TX 75708

Lubbock

City of Lubbock Health Department
Attn: Trish Jenkins
BT Response Lab
1902 Texas Ave.
Lubbock, TX 79411

San Antonio

San Antonio Metro Health District Lab – BT
Attn: Patricia Blevins
Bldg 125, B-Level
2509 Kennedy Circle
Brooks City-Base, TX 78235

South Texas Laboratory – Harlingen

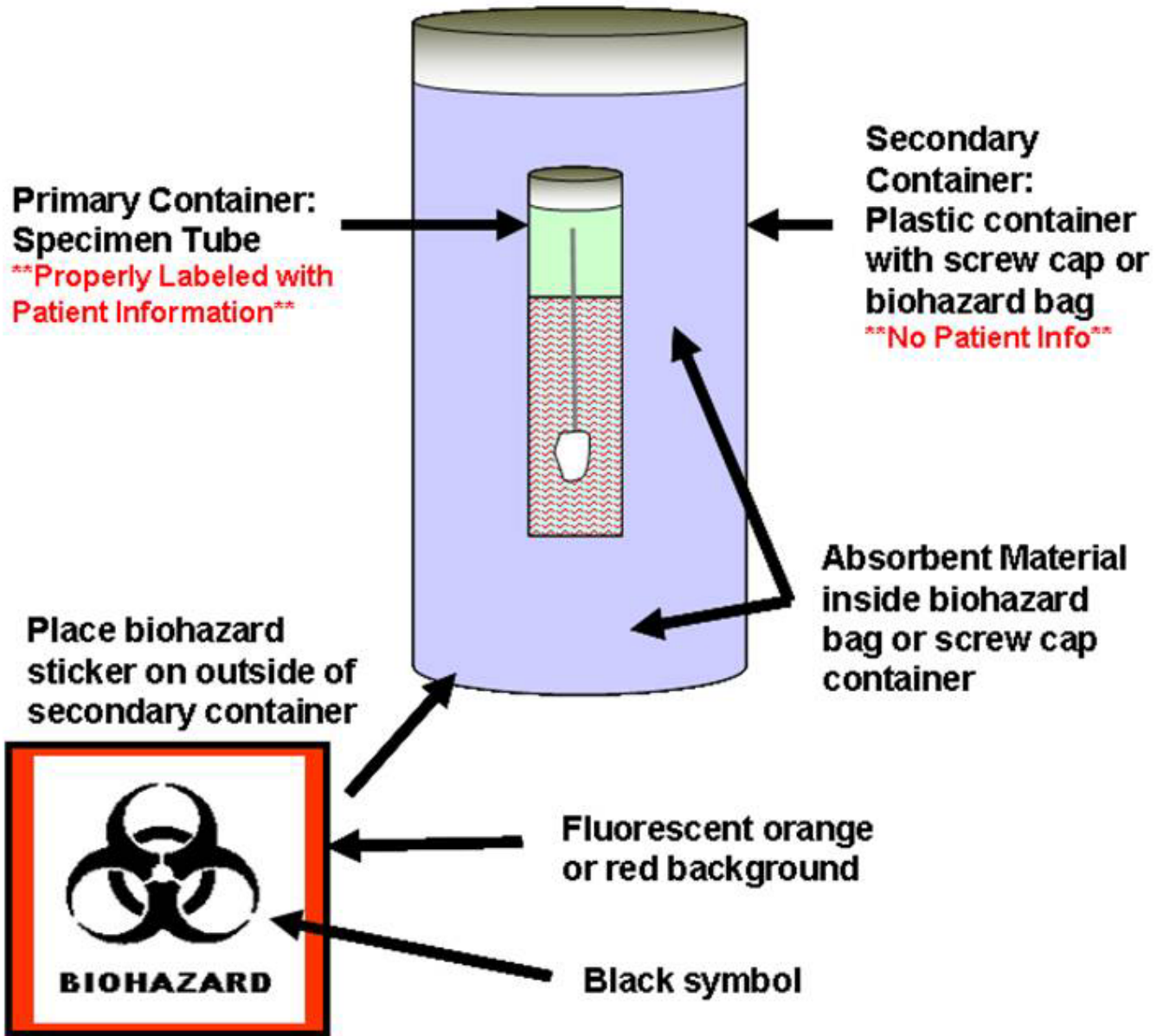
South Texas Laboratory
Attn: Kristina Zamora
1301 S. Rangerville Road
Harlingen, TX 78552

Tarrant County

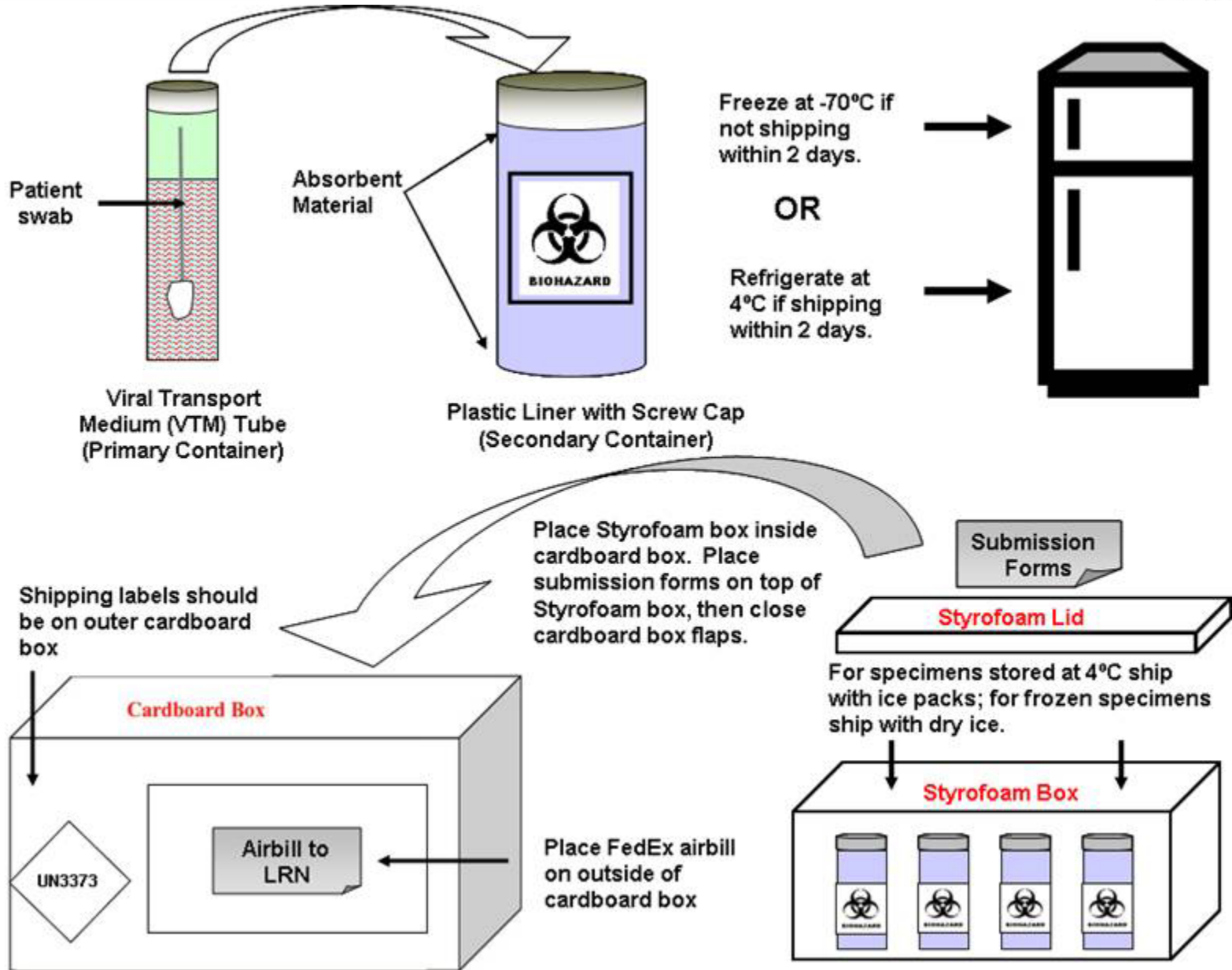
Tarrant County Public Health Department
Attn: Rebecca McMath
N Texas Regional Laboratory
1101 S. Main Street
Fort Worth, TX 76104

DIAGRAMS FOR PACKING AND SHIPMENT OF SPECIMENS TO LRN

**Do Not Put Any Patient Information
on Secondary Container or Lid**



**Biohazard Label should already be on
secondary container.**



For more information go to www.cityofbeaumont.com www.texasflu.org www.cdc.gov