



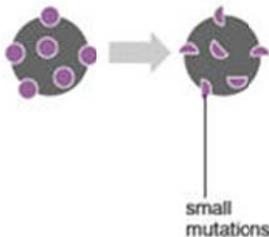
Center for Community and Preventive Health
Infectious Disease Epidemiology Section
Influenza Virologic Surveillance Handbook
2013 – 2014 Season

Version 1.0

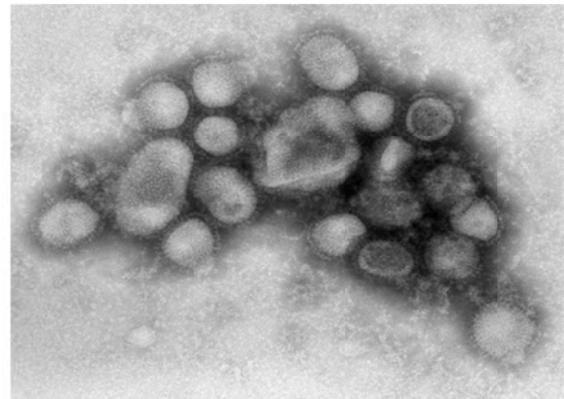
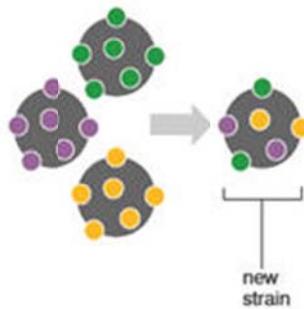
September 2013

Mutation

Antigenic drift



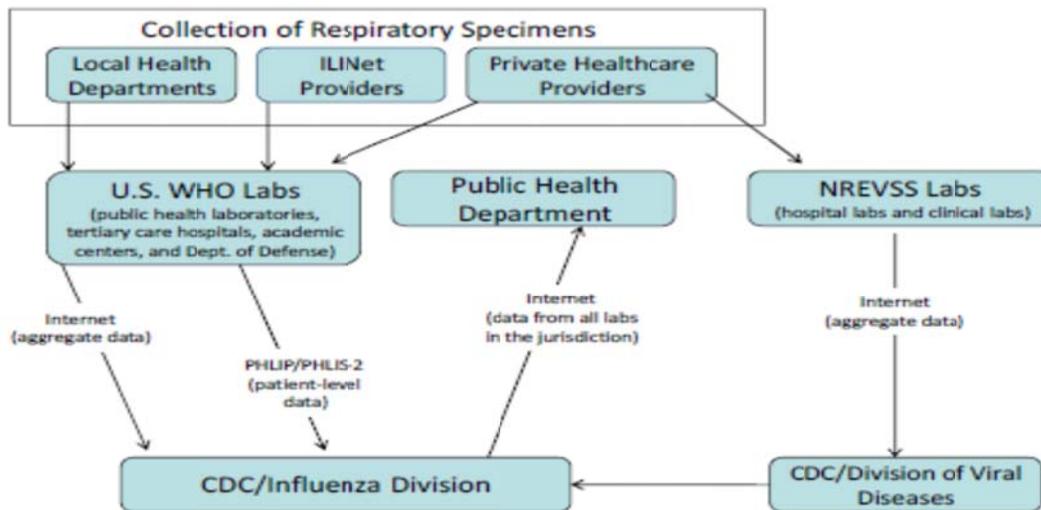
Antigenic shift



I. INTRODUCTION

Virologic surveillance is the foundation on which national and international influenza surveillance systems are built. The goal of virologic surveillance is to identify and track drift variants of currently circulating influenza virus types and subtypes and to detect the emergence of novel influenza A subtypes in human populations. This information allows for monitoring of the match between vaccine strains and currently circulating viruses and selection of optimal vaccine components each year.

II. DATA FLOW OF THE U.S. VIROLOGIC SURVEILLANCE SYSTEM



III. LOUISIANA VIROLOGIC SURVEILLANCE

Beginning in the 2013-2014 influenza season, the goal is for the Louisiana State Public Health Laboratory to increase samples to meet requirements of the Association of Public Health Laboratories *Influenza Virologic Surveillance Right Size Roadmap*. The increase in sample submission will require regular participation from a core group of surveillance sites statewide. All materials required for sample collection and submission will be provided free of charge and transportation will be coordinated through Statewide transport.

Participation in active surveillance will require:

- Collecting a nasal or nasopharyngeal (NP) swab on **all patients** who present with clinical symptoms resembling influenza-like illness on any one day of the week (or more if the site is willing).
- Packing specimens in an ice chest with proper ice blocks (all provided) for Statewide transport pick-up.

A portion of flu positives from active surveillance will be forwarded to CDC for further antigenic characterization and antiviral resistance testing. All **flu negative NP swabs** submitted will be tested for

other respiratory viruses including Respiratory Syncytial Virus, Parainfluenza, Human Metapneumovirus, and Adenovirus.

A. Specimen Collection

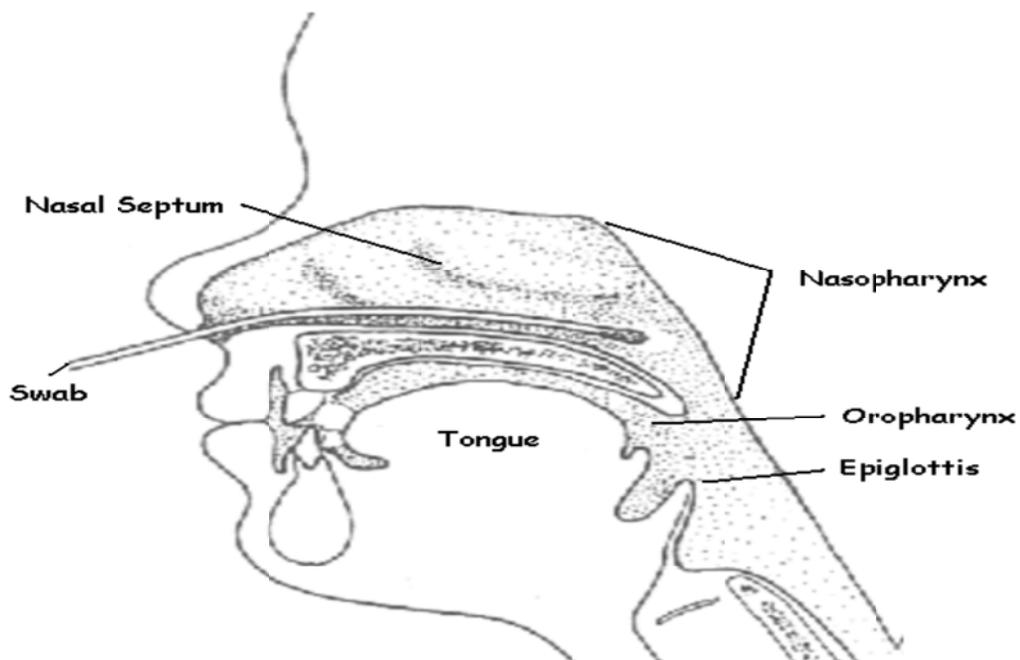
Nasopharyngeal (NP) swabs, when collected by properly trained personnel are the optimal choice of clinical material. A nasal swab is an acceptable substitute and is the optimal choice for many participating sites.

Nasopharyngeal (NP) swabs

- 1) Optimal timing. Specimens ideally should be collected within 72 hours of influenza-like illness symptom onset (e.g. respiratory symptoms and/or fever) but are acceptable up to 5 days from symptom onset. Specimens should ideally be collected prior to the initiation of antiviral medications but are acceptable after the antiviral therapy has begun.
- 2) Materials. Nasopharyngeal swab (flexible shaft) with rayon tip, viral transport medium. All materials will be provided for participants.
- 3) Swab types. Swab specimens should be collected using only swabs with a synthetic tip, such as nylon or Dacron®, and an aluminum or plastic shaft. Calcium alginate swabs are unacceptable and cotton swabs with wooden shafts are not recommended.
- 4) Collecting the NP swab. Insert swab through the nares parallel to the palate (not upwards, Figure 1) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient. An instructional video from The Joint Commission on NP swab collection can be viewed at:

<http://www.youtube.com/watch?v=hXohAo1d6tk&feature=youtu.be>

Figure 1: Nasopharyngeal Swab Collection

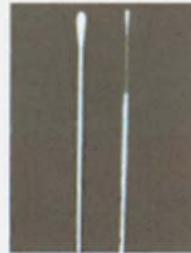


B. Specimen Packaging

Refrigerate specimens after collection. Ship specimens refrigerated to be received within 72 hours from collection.



Use a collection kit containing swabs and viral transport media to collect flu specimen.



The swab on the left is for nasal specimens. The swab on the right is for nasopharyngeal.



After collection, place the swab in the tube of viral transport media.



Snap the swab shaft and cap the tube. Double check that your media is in date.



Put the date and time of collection on the tube along with the patient's name.



For each specimen collected, completely fill out a Lab Test Request Form 96.



Place each specimen in a separate compartment of the bubble wrap pouch.



Roll up the bubble wrap sleeve with the specimens. Tape the roll closed.



Each ice chest is furnished with two biohazard transport bags and absorbent strips.



Insert specimen roll into the long pouch. Pull off the liner and press to close.



Fold the lab forms in half and insert them into the outside pouch of the transport bag.



Freeze the ice bricks prior to use. Cover the bottom of the ice chest with one brick.



Place the transport bag with samples on top of the first ice brick.



Layer the second ice brick on top of the transport bag with samples.



Tape the ice chest closed. Ship ice chests overnight via StateWide Transport.

C. Lab Test Request Form

Lab Form 96 – Virology needs to accompany all specimens submitted for testing. When you enroll as a participating site, you will be provided with a form with your site information pre-filled.

Patient Information		Submitter Information	
*First Name	*Last Name	*Facility Name	
*Date of Birth	*Gender	*Facility Address	
Patient's Home Address		*City, State	*Zip Code
City, State	Parish	Name of Contact Person	
Medicaid Number	Patient ID Number	Phone	Fax
Specimen Information			
Submitted Specimen Is From: <input checked="" type="checkbox"/> Human <input type="checkbox"/> Animal			
*Collection Date:	Time:	If Frozen, indicate Date:	Time:
*Specimen Type:	<input checked="" type="checkbox"/> Swab <input type="checkbox"/> Aspirate/Wash <input type="checkbox"/> Tissue <input type="checkbox"/> Viral Culture		
*Specimen Source:	<input type="checkbox"/> Nasal <input type="checkbox"/> Oropharynx <input type="checkbox"/> Other	<input type="checkbox"/> Nasopharynx <input type="checkbox"/> Bronchi <input type="checkbox"/> Trachea	<input type="checkbox"/> CSF <input type="checkbox"/> Acute Serum <input type="checkbox"/> Convalescent Serum
Additional Information: <input type="checkbox"/> Mother <input type="checkbox"/> Child		Date of Symptom Onset: _____	
Test Request Information			
All tests listed may not currently be available. For questions regarding test availability, contact the Virology Dept. at 504-219-4676.			
*At Least One Test Must Be Requested			
<input checked="" type="checkbox"/> Respiratory Virus Panel* RSV, Influenza, Parainfluenza Metapneumovirus, Rhinovirus and Adenovirus	<input type="checkbox"/> Arbovirus Panel, IFA SLE IgM, SLE IgG, EEE, IgM, EEE IgG, CE IgM, CE IgG, WEE IgM and WEE IgG	<input type="checkbox"/> Hepatitis A Hepatitis A Total Antibody (Anti-HAV) Hepatitis A IgM Antibody (Anti-HAV IgM)	
<input type="checkbox"/> Norovirus Real Time RT-PCR Norovirus GI and GII	<input type="checkbox"/> Arbovirus Panel, MIA West Nile and SLE	<input type="checkbox"/> Hepatitis B Panel Hepatitis B Surface Antigen (HBsAg) Hepatitis B Core Total Antibody (Anti-HBc)	
<input checked="" type="checkbox"/> Influenza Real Time RT-PCR Detection and Characterization	<input type="checkbox"/> Maternal Serum Panel HCG, uE3, AFP and Inhibin A	<input type="checkbox"/> Hepatitis B Immunization (Anti-HBs)	
Epi Risk Factor <u>Influenza Piglet</u> <u>Size Virologic Survey Marker,</u> <u>Sentinel Provider</u>	<input type="checkbox"/> Other Testing <input type="checkbox"/> Herpes IgM <input type="checkbox"/> Herpes IgG <input type="checkbox"/> Lyme IgM <input type="checkbox"/> Lyme IgG <input type="checkbox"/> Lyme Total Aby	<input type="checkbox"/> Hepatitis B Core IgM Antibody (Anti-HBc IgM) <input type="checkbox"/> Hepatitis C Total Antibody (Anti-HCV)	
	<input type="checkbox"/> Rubella IgG <input type="checkbox"/> Toxo IgG <input type="checkbox"/> CMV IgG <input type="checkbox"/> Measles IgM <input type="checkbox"/> Measles IgG	<input type="checkbox"/> Mumps IgG <input type="checkbox"/> Vaccinia <input type="checkbox"/> Varicella <input type="checkbox"/> Other	
To Be Forwarded to CDC: Contact 504-219-4646 for prior approval.		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		Diagnosis Suspected: Please include One CDC History form per specimen.	
Send To: DHH-OPH Central Lab, 3101 West Napoleon Ave., Metairie, LA 70001			
TO BE COMPLETED BY STATE LABORATORY			
LABORATORY NUMBER:	DATE/TIME RECEIVED:	TEMPERATURE CONDITION:	

D. Shipping Specimens

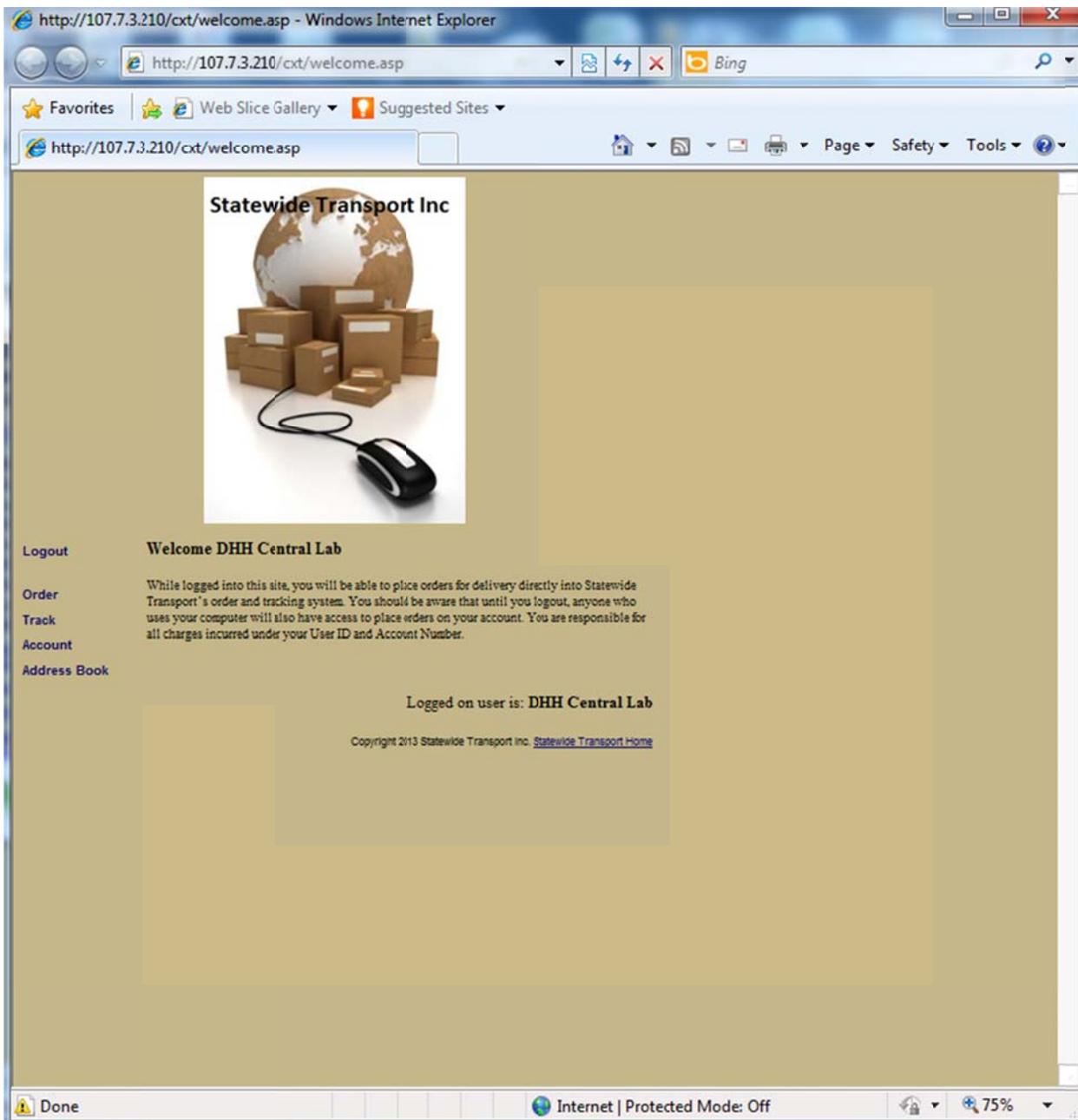
Website: [statewidetransportation.com](http://www.statewidetransportation.com)

The screenshot shows the Statewide Transport Home website in a Windows Internet Explorer browser window. The address bar displays <http://www.statewidetransportation.com/>. The page features a navigation menu with links for [E-Mail Us](#), [Contact Our Locations](#), [Technology](#), [Employment](#), [ServiceArea](#), [Air Freight Customer Login](#), [Loss & Damage Form](#), and [Driver's Login](#). A "Customer Login" section includes fields for "User ID:" and "Password:", a "Login" button, and a "Remember me" checkbox. A link for "Forgot your password?" is also present. The main content area is divided into three columns: "Pick-Up" (showing a conveyor belt with boxes), "Transport" (showing a person pushing a cart), and "Delivery" (showing hands passing a box). Below these are sections for "Industries Served by Statewide" (listing Office Products & Supplies, Industrial, Petrochemical, Pharmaceutical & Medical Supplies, Equipment & Parts Manufacturing, Energy, Financial, and Convention & Trade Shows) and "Services" (listing Expedited, Same Day Delivery, Next Day Delivery, Scheduled, Air Freight, Warehousing & Storage, and Logistics). A "WebMail" section includes a "Net Mail" icon and a "We Recycle Toner Cartridges" logo. The footer contains the text "© 2013 Statewide Transport Inc. All Rights Reserved" and a "Click About Us" link. The browser's status bar at the bottom shows "Error on page." and "Internet | Protected Mode: Off".

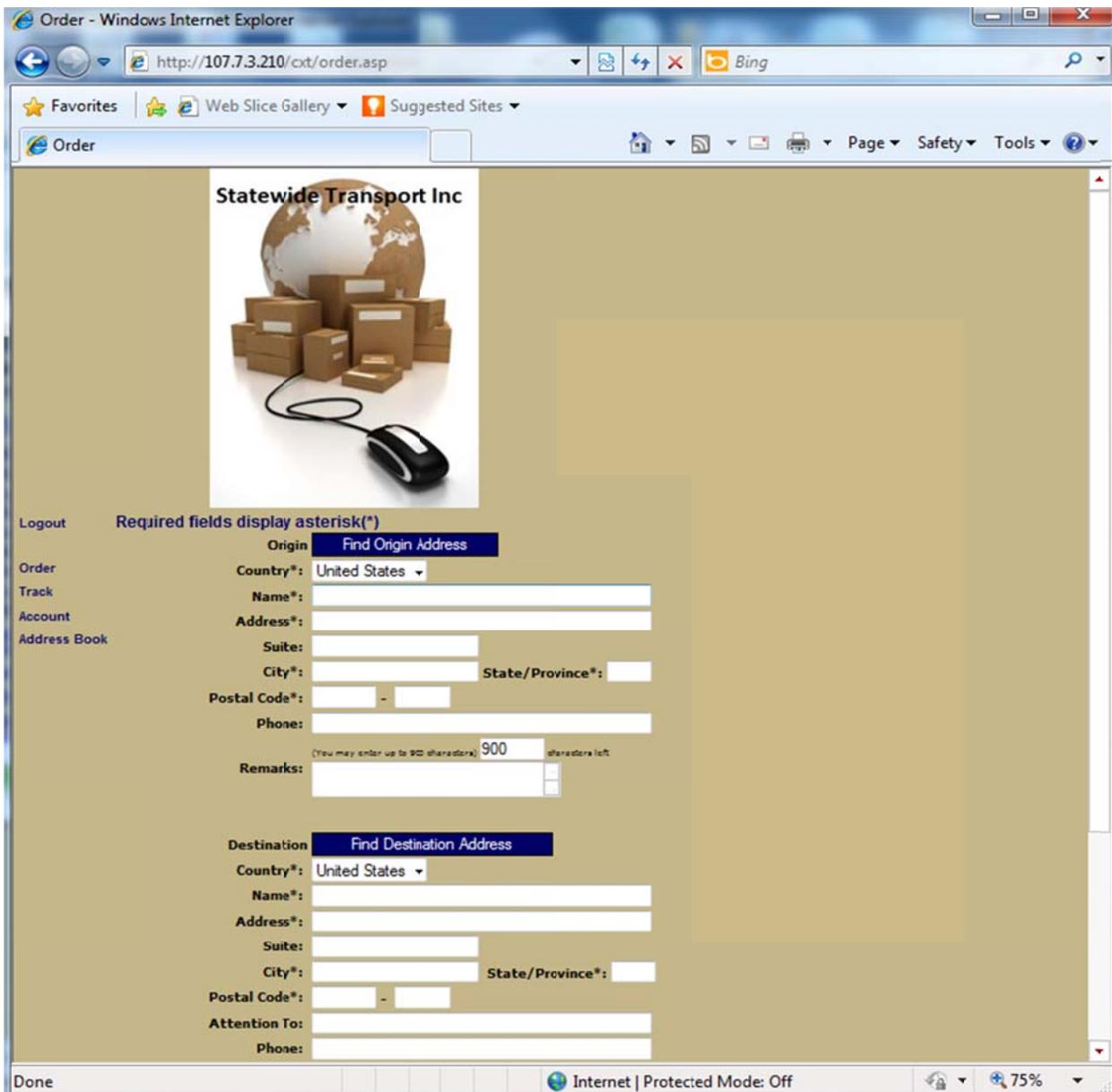
Enter User ID: **centrallab**

Enter Password: **central**

Press LOGIN



Press ORDER and the ordering screen will open

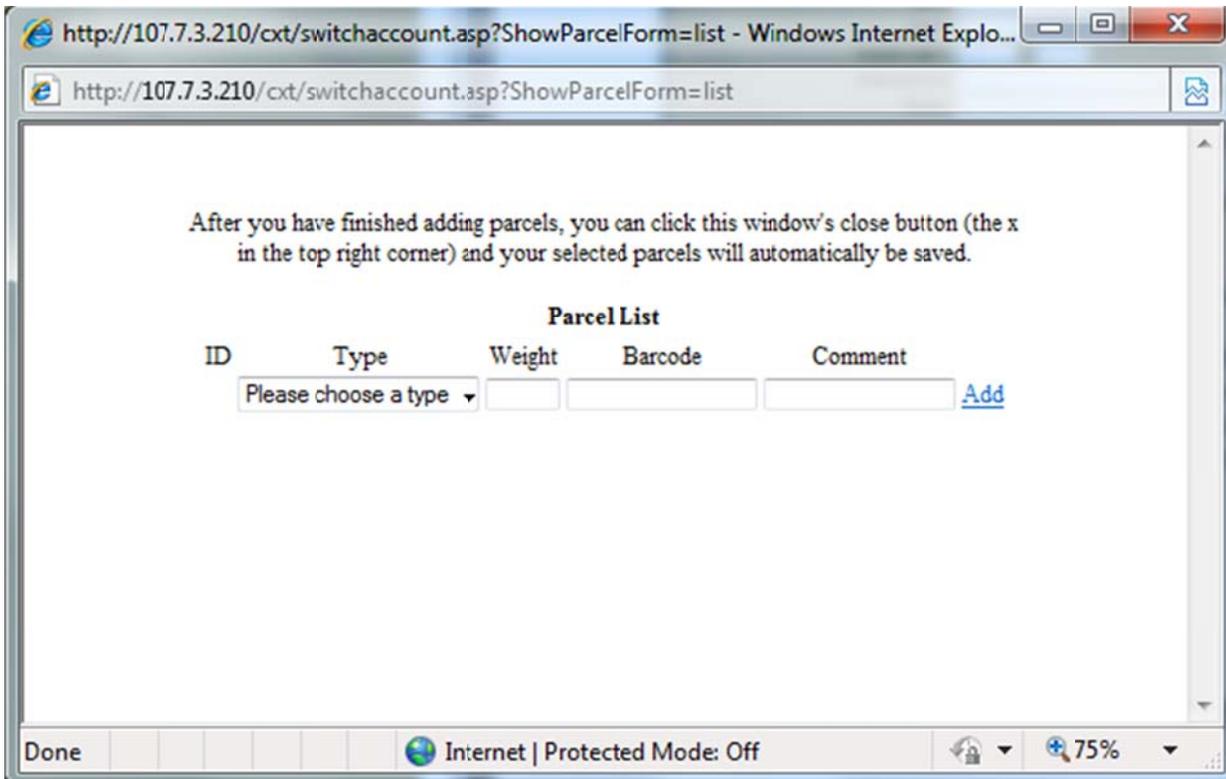


Press FIND ORIGIN ADDRESS and a screen will appear asking for the first few characters of the address you wish to find. Type the first few characters of your address and press FIND ADDRESS.

The address will be displayed. Press SELECT. This will auto fill the address field with your address.

Press FIND DESTINATION ADDRESS and a screen will appear asking for the first few characters of the address you wish to find. Type LOU and press FIND ADDRESS for the Central Lab address.

Press PARCELS.



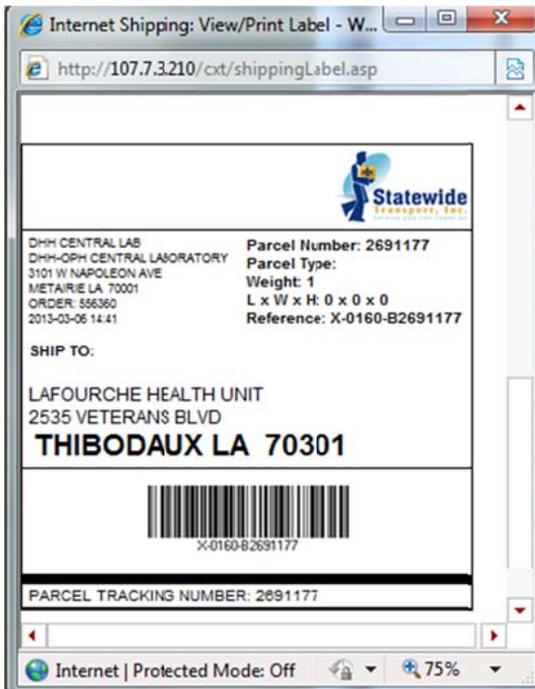
Press ADD. If you have more than one parcel going to the same address, press ADD for every parcel. You can then close this screen.

You do not need to worry about weight or type or billing. You also do not need to worry about a pickup date and time if you are printing the labels when you are ready to ship.

Press CONTINUE

Do not choose the RETURN option. RETURN is for Central Lab to send back empty ice chests.

Print the waybills. You will get one for each parcel (ice chest)



and one return (for the driver to sign)



Repeat this process for however many shipments you need to log in.

The Statewide IT contact is Lambert. His cell numbers are 504-416-5158 and 985-662-4325.

E. Receiving Results

If you are not already in the State Public Health Laboratory StarLIMS database, you will be asked to fill out a secure fax form.

Bobby Jindal GOVERNOR		Kathy H. Kliebert SECRETARY
State of Louisiana Department of Health and Hospitals Office of Public Health		
<p>To Whom It May Concern:</p> <p>In order for you to receive results from the Louisiana Office of Public Health Laboratory, we will need the following information to enter into our StarLIMS database which registers your facility as a submitter and allows us to fax reports to your secure fax machine. If your facility has more than one secure fax number where reports may be sent, please indicate all fax numbers and what types of test results should be sent to each. Once the form is completed, please sign the document and fax it back to us at 504-219-4670 ATTN: StarLIMS Administrator.</p> <p>If you have any questions, please contact our helpdesk at 504-219-4625.</p> <p>Thank you for your cooperation.</p>		
Name of Facility: _____		
Contact Person: _____		
Address: _____		
City, State, Zip: _____		
Parish: _____		
Telephone Number: _____		
Secure Fax Number: _____ Type of Test(s): _____		
Secure Fax Number: _____ Type of Test(s): _____		
Secure Fax Number: _____ Type of Test(s): _____		
Signature: _____ Date: _____		
Fax form to: Office of Public Health Central Laboratory ATTN: StarLIMS Administrator 504-219-4670		
<small>Central Laboratory • 3101 West Napoleon Avenue • Metairie, Louisiana 70001 Phone #: 504/219-4664 • Fax #: 504/219-4670 • TDD: 219-4670 "An Equal Opportunity Employer"</small>		