

# MICHIGAN TESTING PROCESS FOR NOVEL SWINE-ORIGIN H1

## Information for the Public

Updated: May 20, 2009

	<b>Actions</b>	<b>Estimated Timeframe</b>
<b>Step 1</b>	<p>A doctor may order what is called a rapid influenza test, which is the same test that is done during a “normal” flu season. There are many different rapid test kits. Each hospital, clinic, or doctor’s office lab makes the decision which one they purchase. Not all labs use the same testing kit, and not all kits use the same type of specimen (nasal swab, throat, etc).*</p> <p>We did not know how well these rapid tests would work for the swine-origin influenza A virus. Scientists will be very interested to find out how well these kits performed.</p>	<p>The rapid test can usually be completed in an hour or two.</p>
<b>Step 2</b>	<p>If the patient meets the Centers for Disease Control and Prevention’s case definition, is considered highly suspect, and is approved for further testing by the local health department, the physician forwards the second swab to the Michigan Department of Community Health Bureau of Laboratories - “the state lab.”</p> <p>(At the beginning of the outbreak, these specific criteria were established to prevent the state lab and CDC from becoming overwhelmed by requests for testing. As the outbreak progressed, this criterion is subject to change. Currently, swabs from patients that are hospitalized are sent for testing. Requests for testing on patients that are not hospitalized still require approval by the local health department before they will be tested.)</p>	<p>The physician usually ships the specimen “next day.”</p> <p>The shipping of these specimens required a lot of coordination between private couriers, hospital laboratories, local health departments, and even services such as the US Postal Service, FedEx, and UPS.</p>
<b>Step 3</b>	<p>The state lab started out by performing tests for Influenza A, including tests for the specific subtypes that had been seen during this ‘normal’ flu season. Although this first test did detect H1 subtypes, it only detected those H1 subtypes that had been found in human influenza A viruses up to that time. Since the new H1N1 virus was a</p>	<p>The influenza testing at MDCH BOL was initially performed daily, including weekends. For specimens received by 8 a.m., MDCH BOL gave the MDCH Executive team the results by 4 p.m.</p> <p>The new specific test for Swine-origin Influenza A virus H1 done at MDCH BOL is</p>

\* Because the H1N1 is a “novel” virus, the Michigan Department of Community Health does not know whether all of these various rapid influenza testing kits will detect it. As Michigan Department of Community Health gets more data, this will become clearer. During this incident the Michigan Department of Community Health is recommending that a second swab specimen be collected at the same time in case further testing for the H1N1 virus is needed.

	<b>Actions</b>	<b>Estimated Timeframe</b>
	<p>“novel strain” (never seen before in humans), this first test did not “recognize” this new subtype.</p> <p>The state lab now performs tests for Universal Influenza A (detects human A, swine A, avian A), Swine A, and Swine subtype H1, tests for the specific subtype of the currently circulating swine flu virus</p>	<p>performed daily. For specimens received by 8 a.m., MDCH BOL has results within 24 to 48 hours (usually within 24). Testing no longer requires confirmation at CDC</p>
<b>Step 4</b>	<p>Early in the outbreak, if the state lab testing indicated the presence of Influenza A, but the virus was unsubtypeable (not able to determine if it is H1 of human origin), the specimens were considered “probable” Swine flu and were forwarded to the Centers for Disease Control and Prevention for confirmation. With the new test, if the state lab testing indicates the presence of Universal Influenza A, but the Swine A, and Swine subtype H1 are not detected, the sample is tested at a later date for Human A, Human H1, and Human H3 subtypes at BOL.</p>	<p>Subtyping for human strains is done as time allows usually 1-2 weeks after specimen receipt.</p>
<b>Step 5</b>	<p>A subset of BOL samples is sent weekly to CDC for surveillance testing – to determine if the virus is undergoing any changes.</p>	<p>CDC’s results are back in approximately one week.</p>