

April 30, 2009

Swine Flu Update - #3

Dear Colleagues:

First, we can appreciate the extra burden this swine flu outbreak places upon busy clinical microbiology departments. We in public health are fortunate indeed to work with such a dedicated and unheralded clinical microbiology community. We are less than a week into our experience with this new agent, and adapting every day with our clinical colleagues.

There has been some conflicting information on acceptable specimens and storage conditions that has circulated. Acceptable specimens for the swine flu PCR testing at the BOL are currently nasopharyngeal swabs in VTM; we are working to validate nasal swabs/aspirate and nasal wash/aspirate, as well as a combined nasal/oropharyngeal swab in sterile saline or VTM. An oropharyngeal swab has not been validated in our lab for this test. There may be some confusion as this sample site is acceptable for many of the rapid flu tests used by clinical laboratories. The CDC website suggests N-95 masks be worn by those who collect specimens for swine flu testing from suspect patients, but not everyone is fit-tested; a surgical mask can be substituted in these instances.

Information posted on the CDC website on specimen collection, processing and storage (www.cdc.gov/swineflu/specimencollection.htm) indicates samples should be stored at 4 degrees C and then frozen at -70, and transported on dry ice. These directions are specific for the specimens we currently forward to CDC for further testing. Specimens being sent to us should be stored at 4 degrees C, and shipped on a cold pack. Specimens that are to be held for long term storage at a clinical laboratory should probably be frozen at -70.

Communications from our Bureau of Epidemiology indicated specimens from patients with a positive rapid flu test might be given priority in testing here. More important perhaps, is the relevance of that test to the patient; it provides evidence of an infectious state, and prompts consideration of infection control practices and the merit of antiviral administration. A rapid flu negative test result does not rule-out a diagnosis of swine flu. Poor specimen quality, poor sensitivity of the test system, testing late in the course of disease can all contribute to a false negative. The test result should be considered in light of the patient condition, and further testing, including collection of a sample for swine flu for testing at the PHLab should be considered if the patient presentation is highly suggestive of swine flu. The CDC website suggests manipulation of laboratory diagnostic samples from suspect patients be performed in a biological safety cabinet (BSC). Obviously, many sites performing rapid flu tests (physician offices, EDs) are not equipped with BSCs. CDC is reconsidering this blanket recommendation.

With very high demand worldwide for the components of specimen collection kits, we may experience shortages. We are proactively validating alternatives, such as sterile physiologic saline as a substitute for viral transport media. We will notify you when we have completed this process.

Finally, approval for testing must still be sought from local health authorities. The Bureaus of Epidemiology and Laboratories are then notified of the specimens that will be

tested. This process is burdensome, and likely to change as we enter the second and third waves of transmission. The CDC case definition has already changed to include residence in a community where there are one or more confirmed cases as a criteria. This now includes several communities of Michigan.

This is an evolving situation, where with each day we learn more about this emerging pathogen, and adapt our testing practices to current knowledge. The criteria for testing and our understanding of how various tests perform at different times in the course of disease will change with experience. Given enough time and experience, the microbiology and medical communities will assure reliable tests are widely available in the community to provide good patient care. Experience will be our teacher and we will all learn together.

For further questions on flu testing at the BOL, please contact Dr Anthony Muyombwe (muyombwea@michigan.gov) or Patty Clark (clarkp@michigan.gov).