

Influenza Update

January 12, 2007

Current Situation

The first polymerase chain reaction (PCR) confirmed case of Influenza A (H1) was identified in Clark County on December 22nd. Complete subtyping and antigenic characterization are pending; national data show that a majority of influenza A strains have been either untyped, or typed as H1 (Chart 1). Positive rapid influenza tests also continue to be reported, although the numbers have been low.

Increases in influenza-like illness (ILI) continue to be seen in Clark County. The proportion of patient visits to sentinel providers during week 52 (the week ending December 30th) was 7.1%. Nationally, 3.1% of patient visits were due to ILI; which is above the national baseline of 2.1%. On a regional level, these percentages ranged from 1.5-7.3%. In Nevada, influenza activity has increased and reports indicate regional activity (Chart 2).

During week 52 the proportion of mortality due to pneumonia and influenza (P&I) in Clark County was 8.7%. This has risen slightly from the beginning of the flu season (week 40) when the proportion of P&I deaths was at 7.0%. Nationally, after week 52 the P&I mortality was 6.4%; which is below the epidemic threshold of 7.5%.

Laboratory testing has identified influenza A in the majority of isolates. Ninety percent of all influenza A (H1) isolates antigenically characterized are A/New Caledonia/20/99-like; which is the H1 component of the 2006-2007 influenza vaccine.

Role of Laboratory Diagnosis Part II

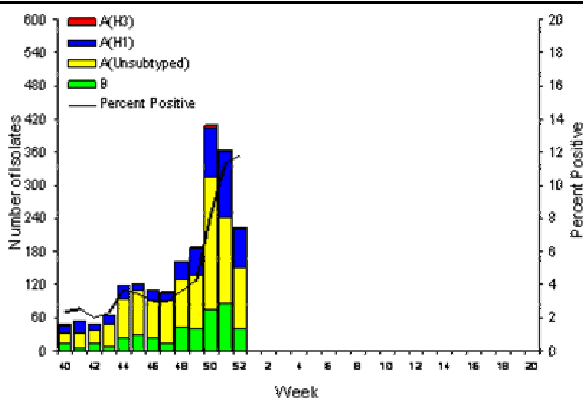
The specificity of rapid influenza testing varies considerably with the type of test used and specimen collected(1), and can be as low as 59%. If influenza is not circulating widely in the community, false positives significantly outnumber true positives, and the test is not a reliable diagnostic tool. The recent PCR confirmation of influenza establishes that influenza is now circulating in Southern Nevada. When influenza is circulating in the community, true positive results outnumber false positive result, and the test becomes a more reliable diagnostic tool for influenza. While rapid antigen tests are now considered a more reliable diagnostic tool, it is still vital to obtain viral cultures to antigenically identify the strains of influenza A circulating in Clark County.

In addition, the SNHD Office of Epidemiology (OOE) has received some influenza reports based on positive serological antibody testing results. According to the Centers for Disease Control and Prevention, serological testing results for human influenza on a single serum antibody test is not interpretable and is not recommended. Medical practitioners planning to utilize serological testing as a method for influenza confirmation should note that the only acceptable method through serology is a four-fold rise in influenza IgG by serologic assay from paired sera, one sample within the first week of illness and the second sample 2-4 weeks later (2).

(1) FDA Office of In Vitro Diagnostic Device Evaluation and Safety. Cautions in Using Rapid Tests for Detecting Influenza A Viruses <http://www.fda.gov/cdrh/oivd/tips/rapidflu.html>

(2) Centers for Disease Control Prevention. Influenza Symptoms and Laboratory Diagnostic Procedures.

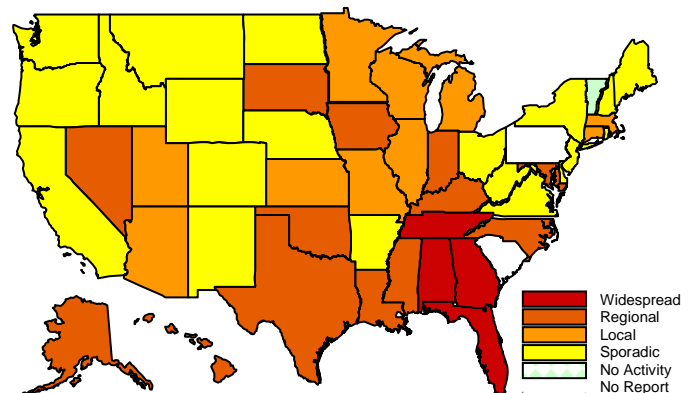
Chart 1: U.S. WHO/NREVSS Collaborating Laboratories Summary 2006-7



Source: Centers for Disease Control and Prevention

Chart 2: Weekly Influenza Activity Estimates Reported By State & Territorial Epidemiologists

Week ending Dec. 30, 2006-Week 52



Source: Centers for Disease Control and Prevention