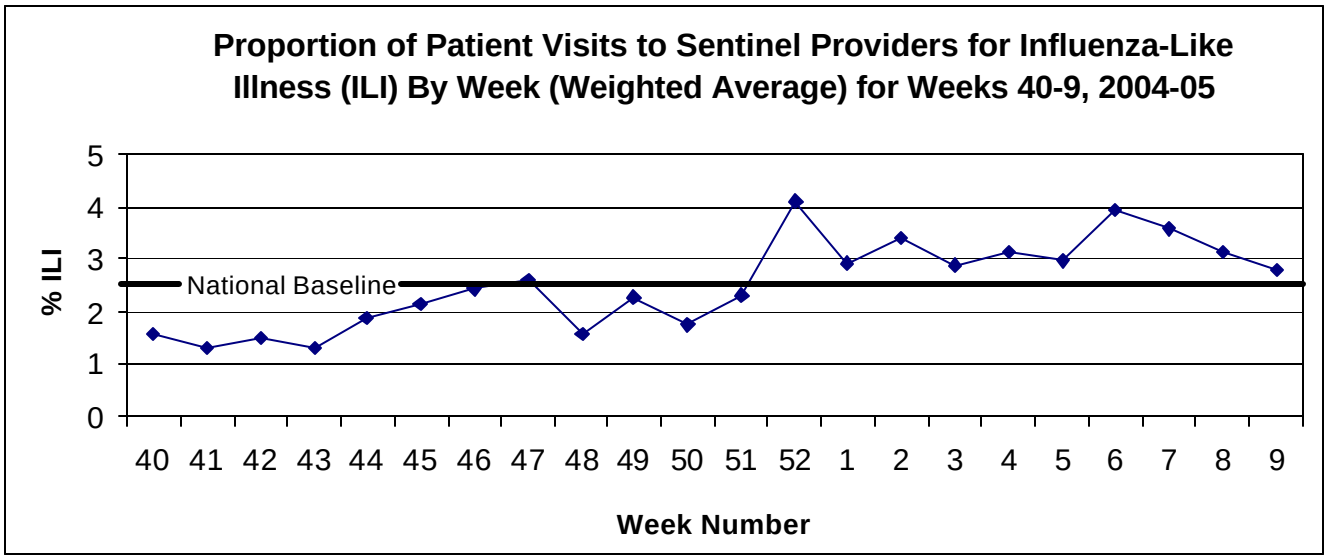
CLARK COUNTY
HEALTH DISTRICT

Office of Epidemiology
Influenza Surveillance Program

Date: **March 11, 2005**
To: **Health Care Provider**
From: **Salena Savarda, BS, Epidemiologist II**
Subject: **Influenza Report for Week 9 (February 27- March 5, 2005)**

The proportion of patient visits to sentinel providers for influenza-like illness (ILI) during week 9 was **2.76%** (weighted average), which is above the national baseline of 2.5%. **Criteria for inclusion as a case of ILI are fever ³100°F (37.8°C) and cough or sore throat.** During week 9 the proportion of mortality due to pneumonia and influenza (P&I) in Clark County was **11.33%** and the national P&I mortality was 8.9%. The epidemic threshold for week 9 is 8.2%. The proportion of ILI cases by week in Clark County for weeks 40-9 of the 2004-2005 surveillance season reported by sentinel site surveillance is presented in the following figure:



Clark County Health District Influenza Case Update

Three new laboratory-confirmed cases of influenza have been reported to the Office of Epidemiology (OOE) during week 10. This brings the total to one hundred and two confirmed cases of influenza that have been reported to the OOE this season in Clark County. Twenty-three of the one hundred and two cases were laboratory-confirmed as influenza B (19 cultures, 4 rapid antigen tests). Nineteen of the one hundred and two cases were laboratory-confirmed as influenza A (14 cultures, 5 rapid antigen tests). The remaining sixty cases were laboratory-confirmed by a type of rapid test which does not differentiate between influenza A and B. **Nevada law (NAC 441A) requires that healthcare providers report all positive influenza tests (including rapid tests) to the local health authority.** Physicians and healthcare workers are reminded that any unusual occurrence of illness or suspected outbreak should be reported to the Office of Epidemiology. The 24-hour number for reporting is 759-1300.

The 2004–05 influenza vaccine includes A/Fujian/411/2002 (H3N2)-like, A/New Caledonia/20/99 (H1N1)-like, and B/Shanghai/361/2002-like antigens. A breakdown of the isolates identified circulating in Clark County thus far in the 2004-05 influenza season by type, subtype and antigenic characterization is presented in Table 1. All subtyping and antigenic characterization was conducted by the Nevada State Health Laboratory.

Table 1. Number of Isolates by Type, Subtype and Antigenic Characterization

Number of Isolates	Type	Subtype	Antigenic Characterization
13	A	H3N2	Pending
1	A	Pending	
2	B		B/Sichuan/379/99-like
1	B		B/HongKong/330/2001-like
16	B		B/Shanghai/361/2002-like

Laboratory Surveillance Update

During week 9, the World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories in the United States reported testing 3,985 specimens for influenza viruses, of which 838 (21.0%) were positive. Of these, 73 were influenza A (H3N2) viruses, 541 were influenza A viruses that were not subtyped, and 224 were influenza B viruses.

Since October 3, WHO and NREVSS laboratories have tested a total of 99,198 specimens for influenza viruses, and of these, 15.8% were positive. Among the positive specimens, 82.2% were influenza A viruses and 17.8% were influenza B viruses. Approximately 33% percent of the positive influenza A virus isolates have been subtyped and 99.7% were influenza A (H3N2) viruses and 0.3% were influenza A (H1) viruses. During the last 3 weeks (weeks 7-9) the percentage of influenza B isolates in the United States has increased overall to 24.0% from 15.8% from the preceding 3 weeks (weeks 4-6). Although a majority of the US is reporting influenza A virus, the western states are reporting more influenza B virus than influenza A, which is comparable to what we are experiencing here in Clark County.

CDC has antigenically characterized 491 influenza viruses collected by U.S. laboratories since October 1, 2004: 4 influenza A (H1) viruses, 308 influenza A (H3N2) viruses, and 179 influenza B viruses. The hemagglutinin proteins of the influenza A (H1) viruses were similar antigenically to the hemagglutinin of the vaccine strain A/New Caledonia/20/99. Approximately 44% of the influenza A(H3N2) isolates were characterized as antigenically similar to A/Wyoming/3/2003, which is the A/Fujian/411/2002-like (H3N2) component of the 2004-05 influenza vaccine. The other 56% percent of the influenza A(H3N2) isolates had reduced titers to A/Wyoming/3/2003 and are most closely related to a recent reference strain, A/California/7/2004 (H3N2). One hundred twenty-eight of the influenza B viruses isolated this season belong to the B/Yamagata lineage and were characterized as B/Shanghai/361/2002-like, which is the influenza B component recommended for the 2004-05 influenza vaccine, and seven showed somewhat reduced titers to ferret antisera produced against B/Shanghai/361/2002. Forty-four influenza B viruses belong to the B/Victoria lineage.

Influenza B viruses can be divided into two antigenically distinct lineages represented by B/Yamagata/16/88-Like viruses and B/Victoria/2/87-Like viruses. The B/Sichuan/379/99-Like viruses and the B/Shanghai/361/2002-Like viruses are antigenically similar to the B/Yamagata-Like lineage. The B/HongKong/330/2001-Like viruses are antigenically similar to the B/Victoria-Like lineage.

References:

1. Centers for Disease Control and Prevention. http://www.cdc.gov/flu/weekly/ March 11, 2005.

This newsletter is also posted on the Clark County Health District webpage for health care practitioners. See http://www.cchd.org/physician/physician_only.htm for this and other health and bioterrorism related information