



Public Health Mōno-Gram

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Public Health
Prevent. Promote. Protect.

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“Jun-uary” becomes “Flu-uary” – or Not?

In our last Mono-Gram on January 3rd, we wondered if we would ever get snow – and/or the flu. Well, so far, both snow and flu are scarce! But as know, both will eventually arrive.

Local: No evidence of influenza activity thus far in the Eastern Sierra.

Regional: Surveillance in Los Angeles has demonstrated an increase in flu activity, although it is still low. Future weeks will tell whether this increase is the beginning of the usual February peak observed in most previous years. Other viruses, including rhino/enterovirus and human metapneumovirus, continue to be more prevalent. Refer to the following graphs.

California: Flu activity is characterized as local, but increasing. Most ((91.7%) is Type A, and most of that is H3N2. There have been no novel strains identified, no resistance to Tamiflu or Relenza, no deaths, and most strains are a good match with the vaccine.

USA: Generally reporting low, but increasing, levels of activity.

World: The most recent WHO update reported that the viruses detected throughout the northern hemisphere temperate zone have been predominantly of the A(H3N2) subtype.

Mexico, the source of the 2009 H1N1 swine flu pandemic, seems to be deviating from the above pattern by reporting an appreciable number of cases and deaths as a result of influenza A/(H1N1) virus infection (swine flu). An ongoing swine flu outbreak in Mexico has left at least 29 people dead and nearly 1500 others infected.

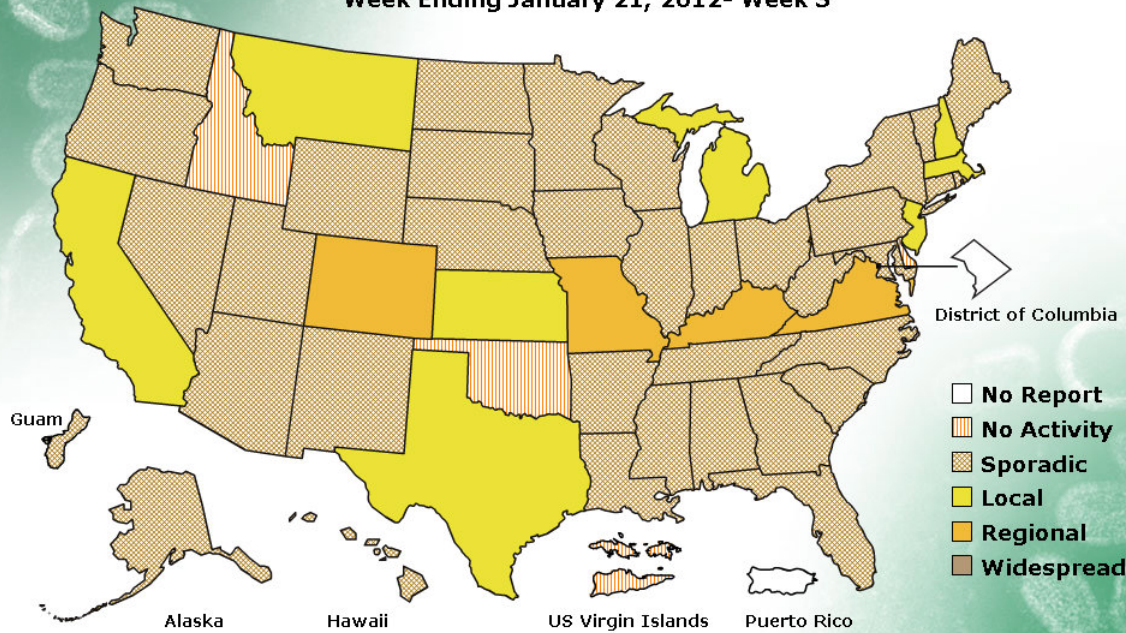
In Japan, one person has died and 2 are in a critical condition after 39 people were infected by a flu outbreak in a Saitama hospital. Both patients and staff have been affected by the nosocomial infection. In total, 20 patients and 19 staff members are believed to have contracted the virus. 31 of those stricken have tested positive for influenza type A virus infection. The deceased is believed to have been a woman in her 80s. The hospital says the woman contracted the virus on the afternoon of 20 Jan 2012. Doctors say the woman passed away within hours of showing the 1st signs of the virus infection. One man in his 80s and another in his 50s are still critical. The hospital has planned an inspection of its facilities and is urging local residents to take precautions against the virus. This outbreak emphasizes the need for enhanced infection control procedures in general hospitals treating influenza patients, and in particular a requirement for all medical and general staff in hospitals to have received the current seasonal influenza vaccine.

FLUVIEW



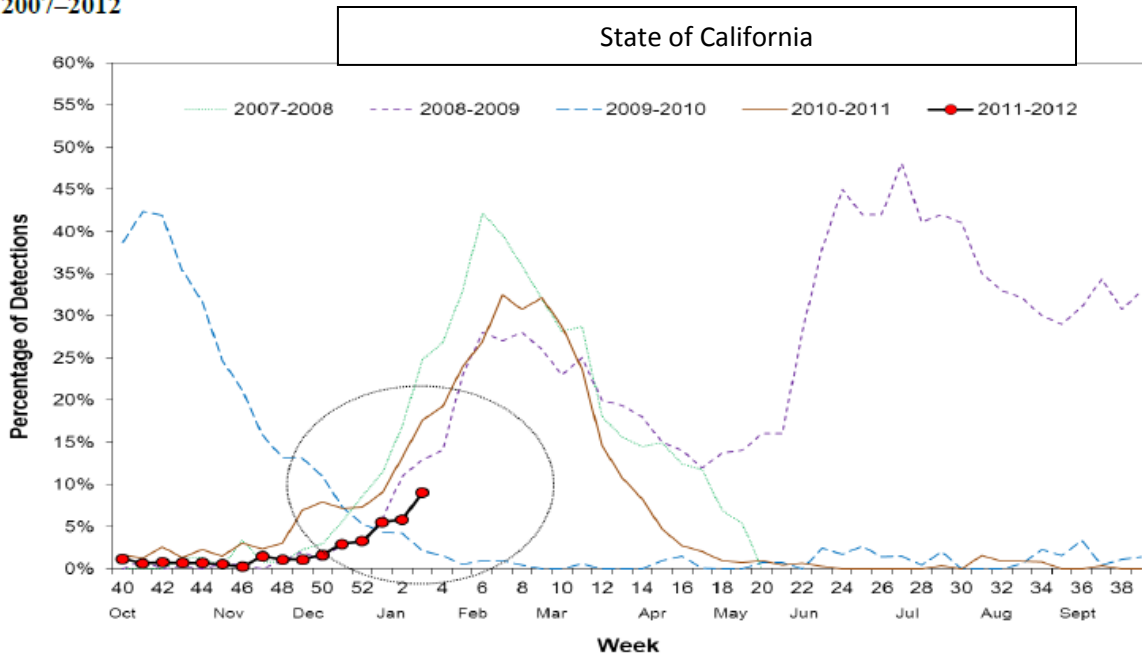
A Weekly Influenza Surveillance Report Prepared by the Influenza Division
 Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending January 21, 2012- Week 3



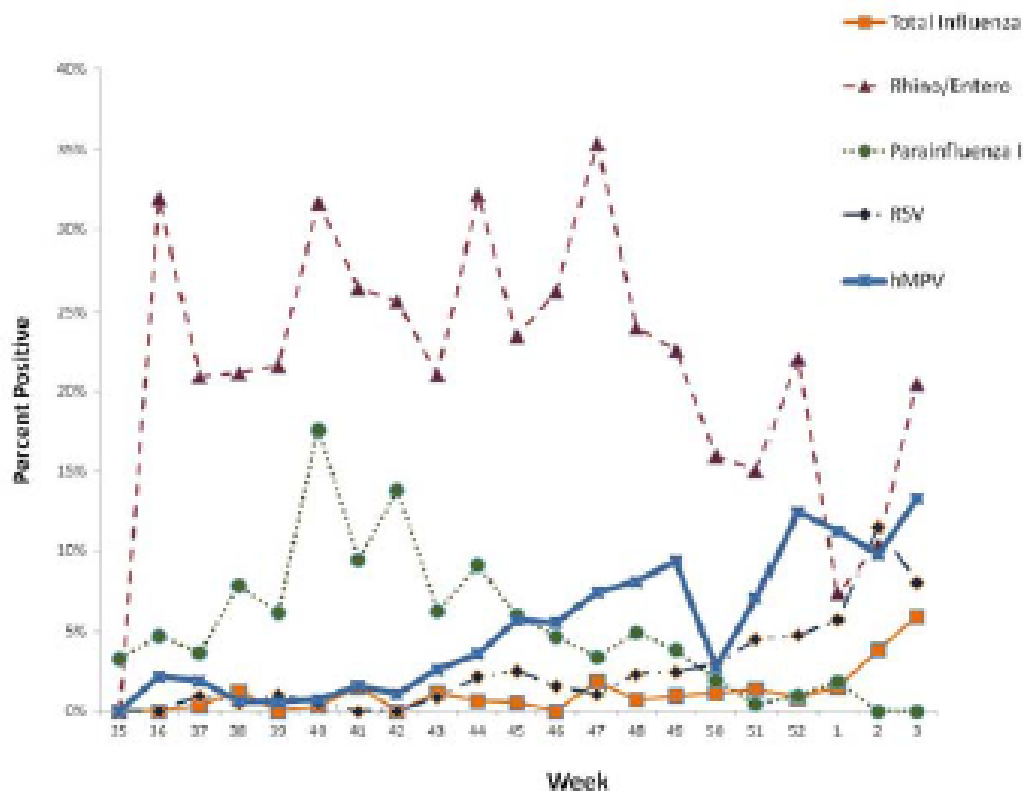
*This map indicates geographic spread and does not measure the severity of influenza activity.

Figure 2. Percentage of Influenza Detections in Respiratory Laboratory Network and Sentinel Laboratories, 2007-2012



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**Figure 3. Respiratory Viruses in LA County 2011-2012
Percent Positive Cases by MMWR Week**



Could be the “Mammoth crud”?

**Spotlight on hMPV:
A lesser known respiratory virus**

While the 2011-2012 flu season to date has been characterized by low levels of influenza, other respiratory viruses such as human metapneumovirus (hMPV), have been circulating in Los Angeles County (LAC) at a higher prevalence (Figure 3). hMPV is a leading cause of symptomatic upper and lower respiratory tract infections in children, elderly adults, and immunocompromised individuals. hMPV was first identified in 2001 in the Netherlands from nasopharyngeal aspirates of children with symptomatic respiratory tract infection. Subsequent investigations indicated that the virus has been circulating in humans at least since 1958.

hMPV is a single-stranded, negative sense, non-segmented RNA virus of the Paramyxoviridae family, Pneumovirinae subfamily—the same subfamily as human respiratory syncytial virus (RSV). Closely related to avian metapneumoviruses (aMPVs), hMPV has been speculated to have originated from birds.

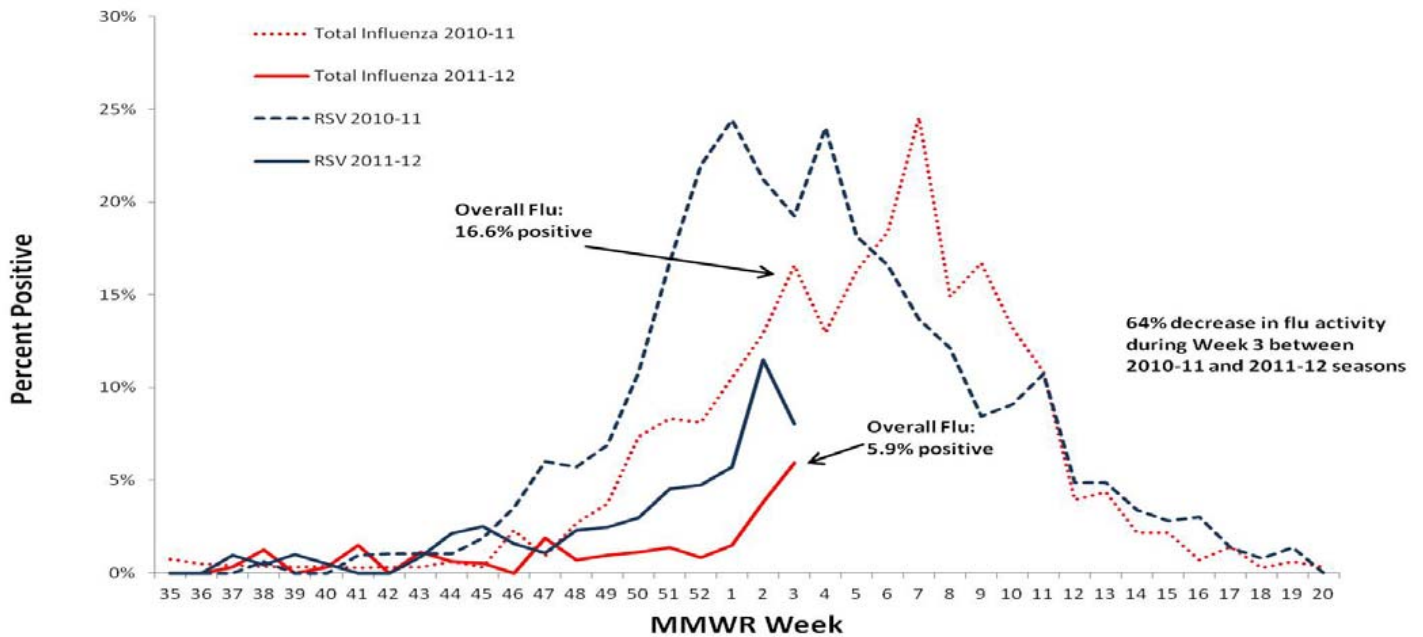
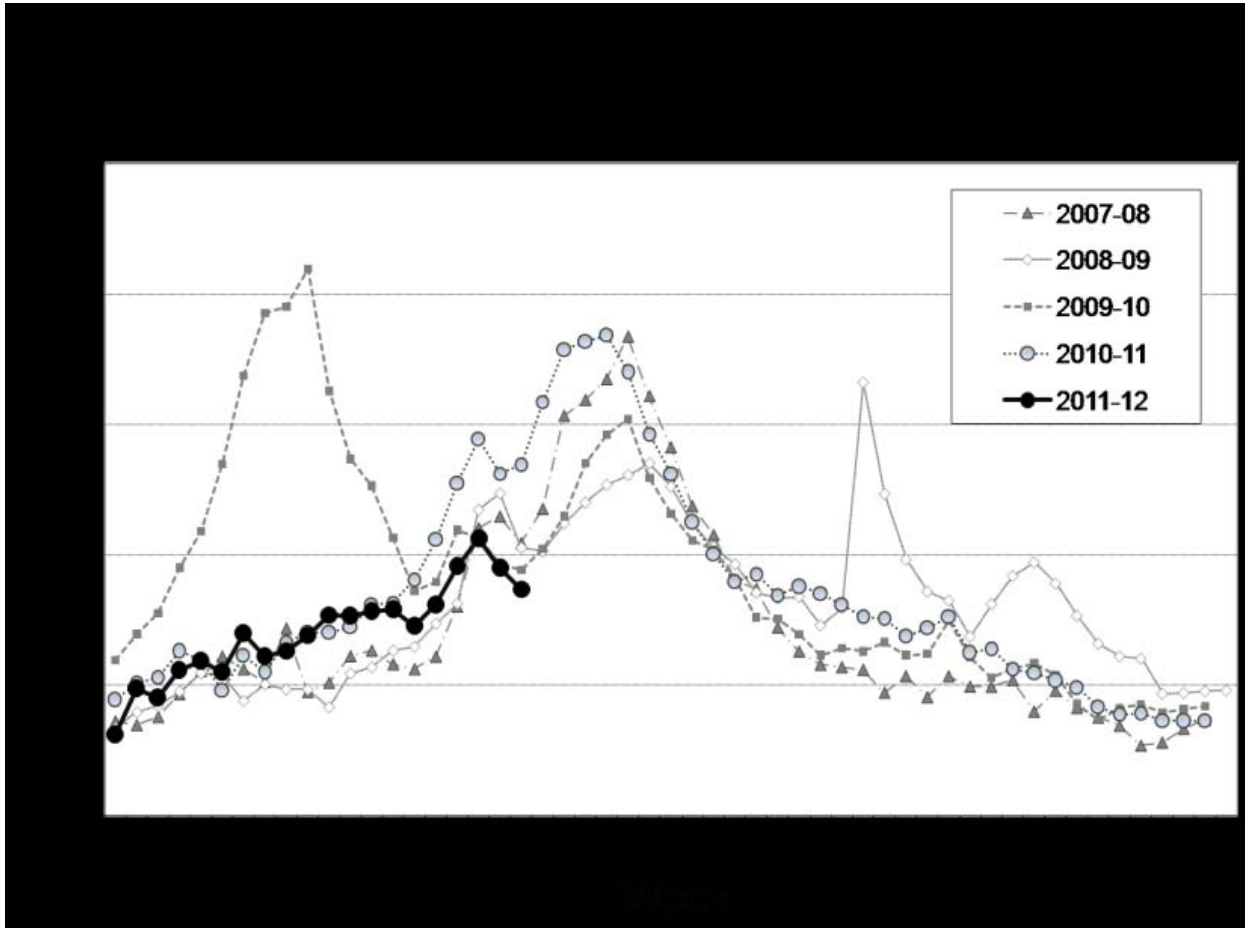
hMPV activity demonstrates seasonal variation, circulating in late winter to early spring in temperate climates. Irrespective of the locale, peak hMPV activity often coincides with or follows peak RSV activity. In past years in LAC, hMPV has also either coincided with or followed RSV; this season, patterns of hMPV activity tend to parallel those of RSV.

Clinical manifestations of hMPV are also similar to those of RSV. In children, symptoms can range from mild upper respiratory tract infections such as cough, rhinitis, fever, and wheezing, to more severe lower respiratory tract infection such as bronchiolitis, croup, and pneumonia. Fever occurs only in a small proportion of adults infected with hMPV. In the elderly and immunocompromised individuals, hMPV may be more severe, with manifestations including pneumonitis.

Several methods are available to detect hMPV infection including, in descending order of sensitivity: RT-PCR, immunofluorescent antibody tests for direct detection of hMPV antigens, and rapid antigen tests. To date, there remains no approved treatment or vaccine for hMPV; infections can be managed with supportive care. Most treatments tested for their efficacy against hMPV infection have been previously shown to be effective against RSV. Research into hMPV is ongoing with the goal of greater understanding of this prevalent human respiratory virus.

References: Schildgen et al. Clin Microbiol Rev 2011 24(4):734-54; Kroll et al. Semin Respir Crit Care Med 2011 32(4):447-53; Feuillet et al. J Clin Virol 2012 53(2):97-105.

Los Angeles: Influenza-like illness, ED visits



Los Angeles, Comparison of Influenza and RSV % Positive Cases 2010-11 and 2011-12