# INFLUENZA WATCH

Flu Surveillance and Related Disease Updates for Los Angeles County

**January 27, 2012**
Surveillance Week 3
Volume 6, Issue 7



## Local Influenza Activity Remains Low with Potential Upswing

Surveillance in Los Angeles County during Week 3 demonstrated an increase in influenza activity: 5.9% of samples were positive for flu A or B, up from 1.2% positive in Week 1 (Table 1). Future weeks will tell whether this increase is the beginning of a February peak observed in previous years. Influenza-like illness ED visits as well as overall Flu and RSV levels, however, are still lower than those from this time last year (Figure 1 & 2). Other respiratory viruses, including rhino/enterovirus (20.5%) and human metapneumovirus (hMPV) (13.3%) continue to be more prevalent (Figure 3). Page two of this report focuses specifically on hMPV, a lesser known virus.

**Table 1. LA County Surveillance Summary (2011-2012) Surveillance Week 3**

| LA County Surveillance Summary | Week 3 | 2011-2012 Season YTD |
|---|---|---|
| Positive Flu Tests / Total Tests (Percent Positive Flu Tests) | 26 / 438 (5.9%) | 102 / 8,062 (1.3%) |
| Percent Flu A / B | 85/ 15 | 70 / 30 |
| Positive RSV Tests / Total Tests (Percent Positive RSV Tests) | 26 / 323 (8.0%) | 175 / 5,891 (3.0%) |
| Community Respiratory Outbreaks | 0 | 4 |
| Flu Deaths, Confirmed (Pediatric Deaths, Confirmed) | ------- * | 3 (1) |

* Due to the lag time in reporting and confirmation of cause, weekly flu death data is delayed.

**Figure 1. Influenza-like Illness ED Visits in LA County (2007-2012) Surveillance Week 3**

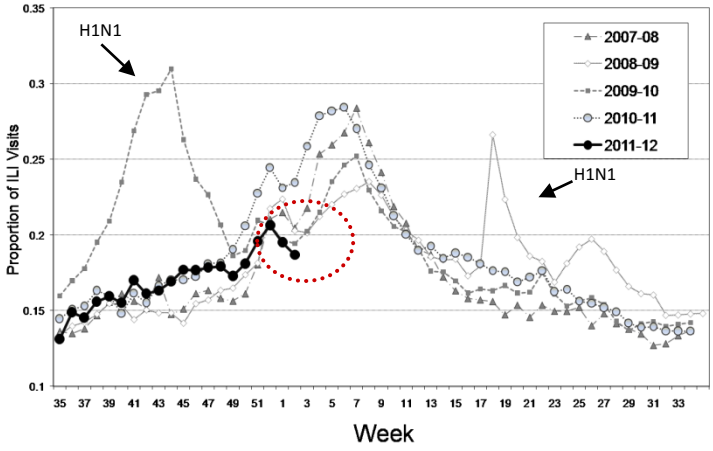
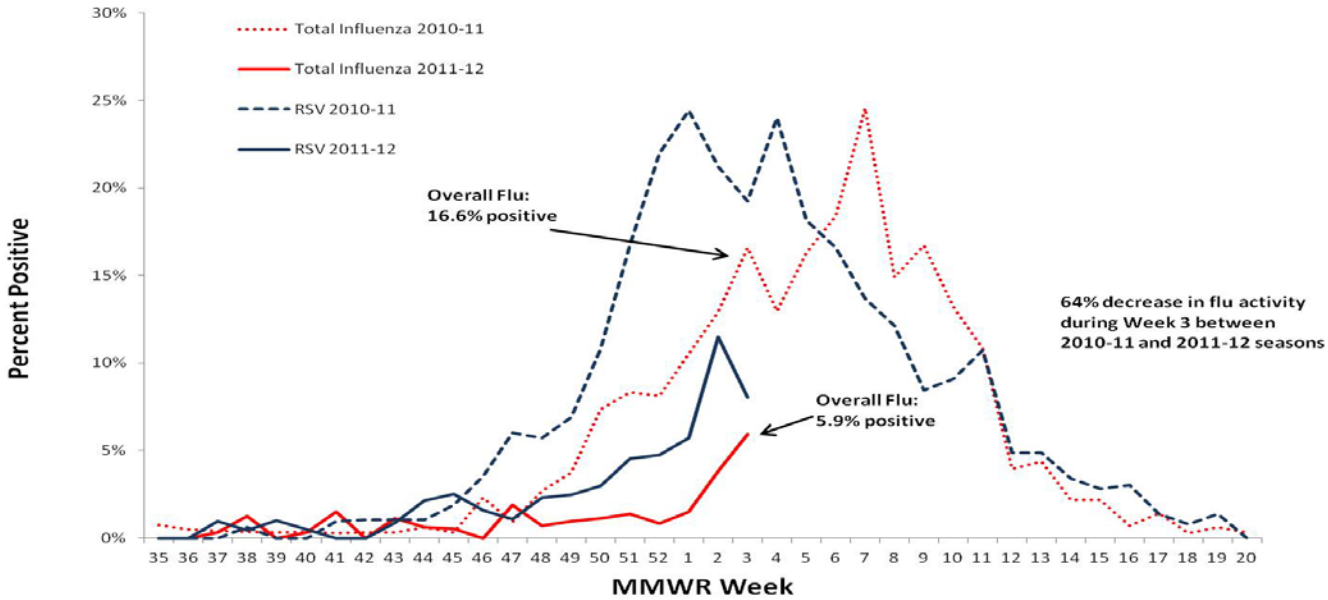



**Figure 2. Comparison of Influenza and RSV Percent Positive Cases between 2010-11 and 2011-12 Surveillance Years, LA County**





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## 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.

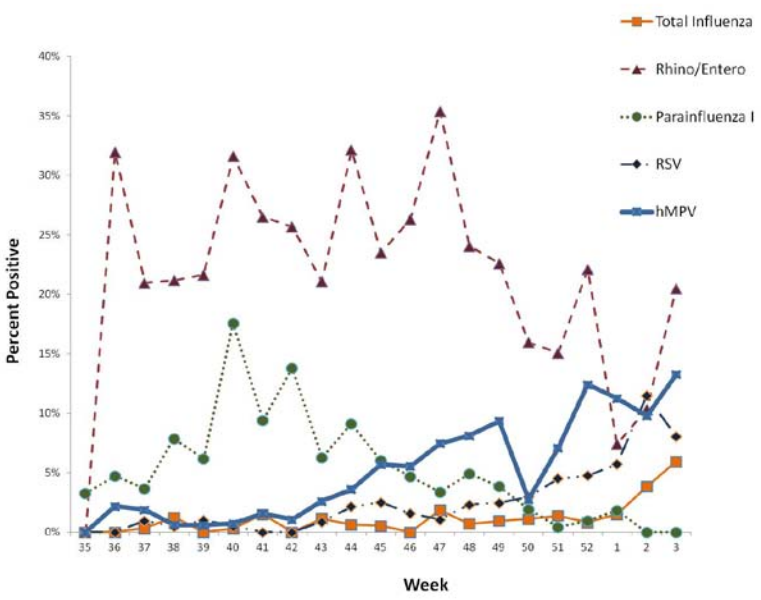
hMPV activity demonstrates seasonal variation, circulating in late winter to early spring in temperate climates. Irrespective of the locale, peak hMPV activity often coincides with or follows peak RSV activity. In past years in LAC, hMPV has also either coincided with or followed RSV; this season, patterns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

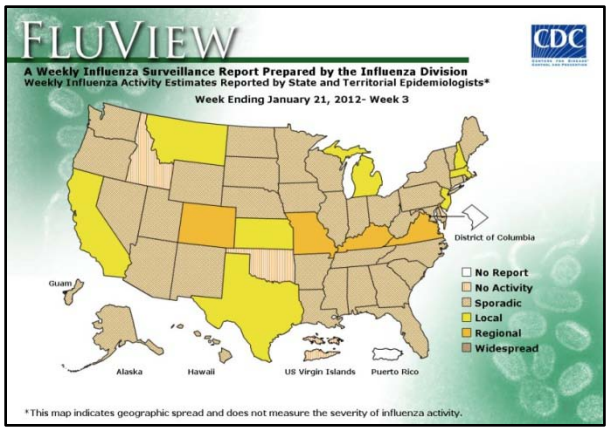
Clinical manifestations of hMPV are also similar to those of RSV. In children, symptoms can range from mild upper respiratory tract infections such as cough, rhinitis, fever, and wheezing, to more severe lower respiratory tract infection such as bronchiolitis, croup, and pneumonia. Fever occurs only 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.*


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




The CDC's tracking of national influenza activity shows continued increases in this disease. During week 3, the second highest level of influenza activity ("regional") was reported by four states (Colorado, Kentucky, Missouri, and Virginia). This is an increase from last week when only Colorado was noted at this level of activity. The third highest level of influenza activity ("local") was reported by eight states including California.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