Archived Document

October 9, 2009
Volume 6, Issue 1

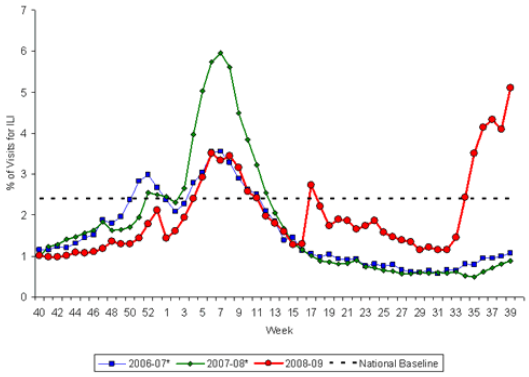
Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

- **Influenza activity increasing.** Outpatient visits to sentinel providers for influenza-like illness (ILI) continue to increase (red line on graph on right). Widespread activity was reported in 37 states. The proportion of deaths attributed to pneumonia and influenza has increased. See www.cdc.gov/flu.
- **Seasonal influenza vaccine.** For updates and locations of clinics, see www.ochealthinfo.com/public/flu.
- **Orange County (OC) influenza update:** As of 10/3/09, 253 hospitalized cases of pandemic H1N1, including 82 (32%) needing intensive care, and 22 deaths have been reported. Starting next week, we will only be reporting intensive care unit (ICU) and fatal cases on our website and in our updates. See www.ochealthinfo.com/h1n1.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-09 and Previous Two Seasons



*There was no week 53 during the 2006-07 and 2007-08 seasons, therefore the week 53 data point for those seasons is an average of weeks 52 and 1.

- **CDC partners with Emory University School of Medicine to create triage algorithm for adults with influenza-like illness (for use by healthcare professionals only).** See http://www.cdc.gov/h1n1flu/clinicians/pdf/adultalgorithm.pdf.
- **On-line self-assessment available to help adults with possible influenza:** http://www.flu.gov/evaluation/.
- **FDA authorizes use of certain lots of expired Tamiflu ® for Oral Suspension as part of response to the 2009 H1N1 public health emergency.** FDA has conducted scientific testing and analysis to assure that these lots can be used beyond their expiration date. The lots authorized to be used beyond their expiration date are not required to be relabeled therefore healthcare professionals will need to be able to explain this to patients. To verify a specific lot has been authorized for use beyond its expiration date, see http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm154962.htm.
- **Infectious Diseases Society of America (IDSA) updates policy on mandatory universal immunization of health care workers against influenza (both seasonal and 2009 H1N1).** IDSA recommends that employees who cannot be vaccinated due to medical contraindications or because of vaccine supply shortages, or who sign a written declination choosing not to be vaccinated for religious reasons be required to wear masks or be re-assigned away from direct patient care. See http://www.idsociety.org/redirector.aspx?id=15413.
- **Hospitalized U.S. 2009 H1N1 influenza patients summarized.** Of the 272 patients hospitalized between April-June 2009 included in the summary, 25% were admitted to an ICU and 7% died. Almost half (45%) of the hospitalized patients were children while only 5% were aged 65 years or older. Seventy-three percent had underlying medical conditions. See www.nejm.org early on-line publication 10/8/09. Summary of ICU cases from Australia and New Zealand also available.
- **US Equal Employment Opportunity Commission issues guidance on pandemic preparedness and the Americans with Disabilities Act.** See http://www.eeoc.gov/facts/pandemic_flu.html.
- **New "Flu Myths and Facts" page:** http://flu.gov/myths/index.html.

Pandemic influenza H1N1 vaccine update

- **First pandemic H1N1 vaccine doses (live attenuated nasal spray) arrived in Orange County this week; additional doses, both nasal and injectable, are expected each week.** For local H1N1 vaccine questions: 714-834-8560 or www.ochealthinfo.com/h1n1. **To order vaccine:** www.calpanflu.org.
- **Update on influenza A (H1N1) 2009 monovalent influenza vaccines (MIV).** Children aged 6 months-9 years should receive two (2) doses, separated by approximately four weeks; persons 10 years and older should receive one (1) dose. Approved age groups for use of the three FDA-approved inactivated MIVs (injectable form) vary by manufacturer. See www.cdc.gov/mmwr (10/9/09 issue) for summary table. 2009 (H1N1) live attenuated vaccine is licensed for healthy non-pregnant persons aged 2-49 years.

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
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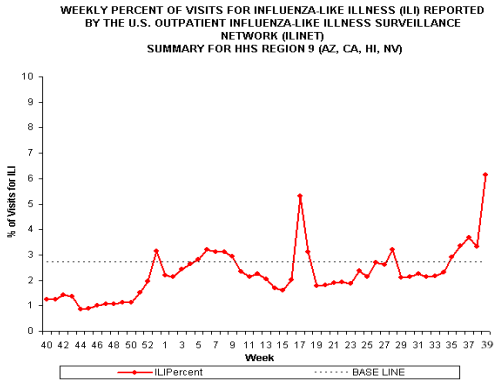
Eye on Influenza

October 19, 2009
Volume 6, Issue 2

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St. Santa Ana, CA 92706, (714) 834-8180

Influenza Continues to Increase

- **Orange County (OC) influenza update:** Beginning 10/4/09 (the official start of the influenza season), OC is reporting only cases of pandemic H1N1 admitted to an intensive care unit (ICU) or who died. As of 10/10/09, there were 82 patients with pandemic H1N1 admitted to an ICU and 22 deaths. During the week ending 10/10/09, 46% of all respiratory specimens tested at the OC Public Health Laboratory were positive for influenza, all of which were the pandemic H1N1 strain. For additional OC updates, see www.ochealthinfo.com/h1n1.
- **Pandemic H1N1 vaccine and thimerosal:** Because there is currently an insufficient amount of pandemic H1N1 vaccine and due to the risk that this virus poses to young children and pregnant women, the State of California has exempted the use of pandemic H1N1 vaccine from the requirement under California law that children younger than 3 years of age and pregnant women only be given influenza vaccines with mercury content below 1.0 microgram of mercury per 0.5 ml dose . For more information, go to: http://www.cdph.ca.gov/programs/immunize/Pages/CaliforniaThimerosolLaw.aspx
- **CDC updates infection control guidance** for pandemic H1N1 in healthcare settings. **Significant change: Healthcare personnel (HCP) who develop fever and respiratory symptoms should be excluded from work for at least 24 hours after they no longer have fever (without the use of fever-reducing medicines); temporary reassignment or continued exclusion for 7 days after onset or until resolution of symptoms, whichever is longer, is recommended for HCP working in areas with severely immunocompromised patients.** The update emphasizes the hierarchy of controls for preventing influenza transmission, particularly reducing or eliminating the sources of exposure. CDC continues to recommend standard precautions and respiratory protection at least as protective as a fit-tested N95 respirator. The guidance discusses prioritized respirator use when there is a shortage of N95 respirators. Isolation of hospitalized patients with influenza symptoms should be for 7 days after illness onset or until 24 hours after resolution of fever and respiratory symptoms, whichever is longer (note that, if clinically indicated, patients may be discharged before the end of the isolation period). Longer periods of isolation may be indicated for young children or severely immunocompromised patients due to prolonged viral shedding. The complete document is available at: http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm
- **CDC updates recommendations for use of antiviral medications for the 2009-10 influenza season.** The purpose of the update is to: 1) clarify treatment and chemoprophylaxis considerations for persons vaccinated with the 2009 H1N1 and seasonal influenza vaccines; 2) include women up to 2 weeks postpartum at higher risk for complications from 2009 H1N1 influenza; 3) provide additional oseltamivir dosing instructions for children younger than 1 year of age; and 4) review adverse events and contraindications associated with oseltamivir and zanamivir. See: http://www.cdc.gov/h1n1flu/recommendations.htm
- **CDC planning guide for vaccinating pediatric patients against pandemic H1N1 in primary care settings:** http://www.cdc.gov/h1n1flu/vaccination/pediatricpatients.htm
- **CDC Triage Algorithm for children with ILI:** Pediatric triage algorithm
- **American Journal of Roentgenology publishes studies on diagnostic imaging in pandemic H1N1 cases:** http://www.ajronline.org/



Influenza in the United States, week ending 10/10/09 (from CDC Flu View)

- 41 states reported widespread influenza activity
- 29.4% of respiratory specimens were positive for influenza
- All subtyped influenza A viruses were the pandemic H1N1 strain
- Oseltamivir resistance remains rare among pandemic H1N1 isolates
- At left is a graph showing percent of outpatient visits for ILI in western states.

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Eye on Influenza

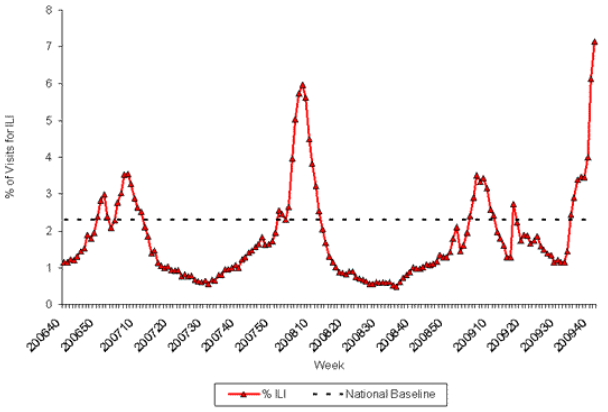
October 26, 2009
Volume 6, Issue 3

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

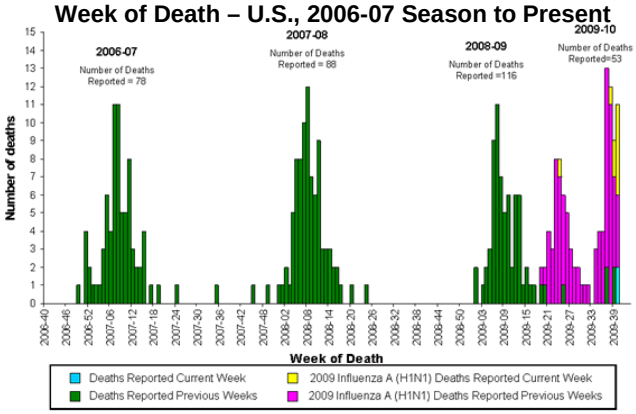
Influenza Update

- **Influenza activity continues to increase.** Outpatient visits to sentinel providers for influenza-like illness (ILI) continue to escalate (graph on right). Widespread activity was reported in 41 states. The proportion of deaths attributed to pneumonia and influenza has remained above the epidemic threshold for the past two weeks. Reports of influenza-associated deaths in children continued throughout the summer and have been increasing since the end of August (below). See www.cdc.gov/flu.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 1, 2006 - October 17, 2009



Number of Influenza-Associated Pediatric Deaths by Week of Death – U.S., 2006-07 Season to Present



- **Orange County (OC) influenza update:** As of 10/24/09, there were 102 patients with pandemic H1N1 admitted to an intensive care unit (ICU) and 23 deaths reported since the beginning of the H1N1 outbreak in the Spring. The proportion of visits to sentinel providers for influenza-like illness (ILI) and reports of ILI from schools have increased over the past few weeks.
- **CDC answers top 10 Frequently Asked Questions about 2009 H1N1 vaccine.** FAQ addresses intervals between doses, administration of seasonal and 2009 H1N1 vaccine, and more. See http://www.cdc.gov/H1N1flu/vaccination/top10_faq.htm. For CDPH flyer on H1N1 and seasonal influenza vaccine administration, see http://eziz.org/PDF/IMM-978H1N1administration.pdf.
- **FDA issues emergency use authorization (EUA) for use of intravenous (IV) antiviral peramivir for the treatment of 2009 H1N1 influenza.** This experimental drug has been authorized for IV treatment of certain patients with suspect or confirmed 2009 H1N1 (or nonsubtypable influenza A virus suspected to be 2009 H1N1) who are hospitalized and either are not responding to oral or inhaled antivirals, or for whom drug delivery by a route other than IV is not expected to be dependable or is not feasible. See http://www.cdc.gov/h1n1flu/eua/peramivir.htm for more information.
- **CDC schedules numerous updates for clinicians on H1N1.** Scheduled conference calls this week cover antiviral treatment options in critically ill (ICU) patients (Wednesday, 10/28 12 noon, call-in 888-283-2960; passcode 3659803), H1N1 influenza and children, diabetes and influenza, and infection control issues in healthcare facilities. For more information, see http://www.bt.cdc.gov/coca/callinfo.asp.
- **Cal/OSHA updates Interim Enforcement Policy on H1N1.** Guidance continues to recommend that employees who have direct exposure to H1N1 patients use respirators at least as protective as an N-95. Respirators are only one component of a hierarchy of controls to protect employees from exposure. See http://www.dir.ca.gov/DOSH/SwineFlu/SwineFlu.htm.
- **Deaths from 2009 H1N1 Influenza.** Physicians certifying deaths from known novel H1N1 influenza should include "H1N1 Influenza" as one of the causes of death in fields 107A, 107B, 107C, or 107D of the death certificate. For deaths with presumed or suspected H1N1 influenza (but absent or pending lab confirmation), one of the causes of death should include "Presumed H1N1 Influenza." Other causes of death should be entered as per usual procedures (see http://ochealthinfo.com/public/bd/physicians.htm).
- **President Obama declares 2009 H1N1 pandemic a national emergency.** The proclamation will allow authorities to waive legal requirements, if necessary, that could otherwise limit the ability of the health care system to respond to a surge of patients. See 10/26/09 News at www.cidrap.umn.edu/cidrap/content/influenza/swineflu/index.html.

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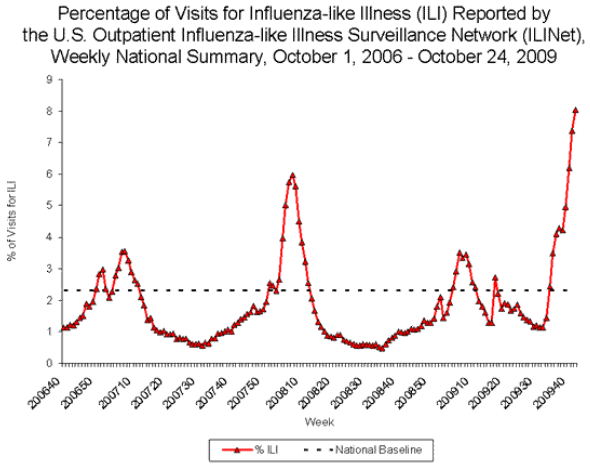
Eye on Influenza

October 30, 2009
Volume 6, Issue 4

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update – Special Edition

- **Influenza activity continues to increase.** Outpatient visits to sentinel providers for influenza-like illness (ILI) continue to escalate (graph on right), especially in younger age groups, and is now higher than what occurs during the peak of most influenza seasons. Widespread activity was reported in 48 states. The proportion of deaths attributed to pneumonia and influenza has remained above the epidemic threshold for the past four weeks. Reports of influenza-associated deaths in children continued throughout the summer and have been increasing since the end of August. See www.cdc.gov/flu. Hospitalization rates are highest in the 0-4 year old age group.



- **Pregnant women should be vaccinated against 2009 H1N1 and seasonal influenza.**
  - Six percent of confirmed 2009 H1N1 deaths have been pregnant women, however pregnant women make up only about one percent of the general population. Pregnant women have an increased risk of morbidity and mortality from both 2009 H1N1 and seasonal influenza.
  - Vaccination against influenza can reduce the risk of serious illness and complications in the pregnant women, as well as reduce the risk of illness in the newborn infant. For vaccination recommendations, see http://www.cdc.gov/h1n1flu/clinicians/pdf/Dear_Colleague_FINAL.pdf and for recent research on vaccine benefits on pregnant women, see http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/oct2909idsa2.html.
  - CDC hotline for to clarify CDC guidance for pregnant women: Telephone consultation with a board-certified OB/GYNs will be provided for health care providers. Call 404-368-2133.
  - CDC guidance regarding the care and treatment of pregnant women: http://www.cdc.gov/h1n1flu/
  - Note: women <2 weeks postpartum should now be considered high risk for influenza complications and prioritized for antiviral treatment if they develop symptoms of influenza.

Pandemic influenza H1N1 vaccine update

- Initial pandemic H1N1 vaccine doses in limited amounts have been distributed in Orange County since early October and additional doses are expected weekly.
  - The first shipment (all nasal spray vaccine) was directed to more than 90 providers (e.g., pediatricians and family practitioners) to begin reaching two initial target populations eligible to receive this vaccine formulation: healthy children 2 to 18 years of age, and healthy persons who live with or care for infants under 6 months of age.
  - OCHCA recently received over 30,000 additional doses of pH_1N_1 vaccine in injectable multiple dose vials and nasal spray formulations, and is completing distribution this week to provider locations to reach targeted groups (hospitals and specialty clinics, school-based H1N1 vaccination clinics, and Public Health Children's H1N1 Vaccination Clinics). See www.ochealthinfo.com/h1n1 for details.
  - Doses of thimerosal-free vaccine have been received that will be targeted for pregnant women who should call their obstetrician to get vaccinated or call the Health Referral Line 1-800-564-8448.
- Providers receiving partial shipments of orders of any particular vaccine formulation (e.g., nasal spray vaccine) will need to place a new order online to receive the balance of their original order of that formulation. Unfortunately, the CalPanFlu.org ordering system is not currently able to track the remainder of a partially filled request by formulation to fill later.
- Providers may still register to receive free pH1N1 vaccine at http://www.CalPanFlu.org. Registered providers will receive e-mail communication from CalPanFlu.org on actions taken regarding their orders (e.g., shipment dates, amounts shipped). The CalPanFlu pH1N1 Customer Service Center is also available at 888-865-0564.

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Eye on Influenza

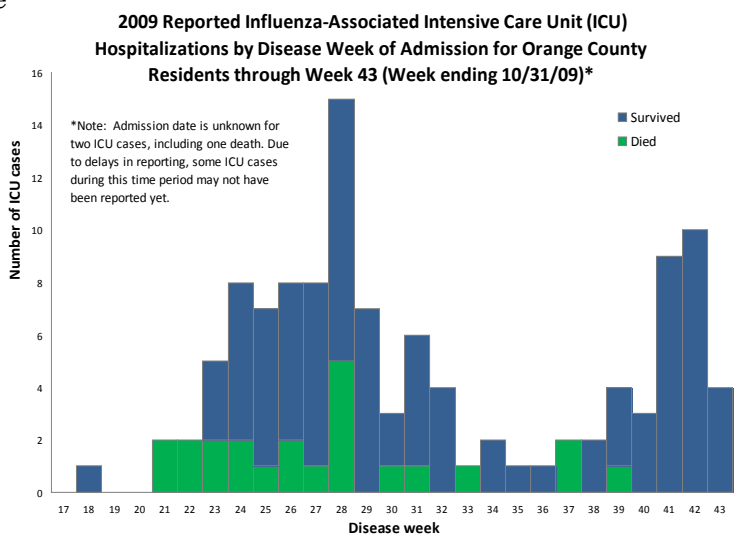
November 6, 2009
Volume 6, Issue 5

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

For updates on OC vaccine and available clinics, see www.ochealthinfo.com/h1n1.

- **Influenza activity continues to remain elevated.** Nationally, outpatient visits for influenza-like illness (ILI), the proportion of deaths attributed to pneumonia and influenza, and reports of pediatric influenza-associated deaths have all remained well above baseline levels for this time of year. Almost 100% of influenza characterized has been pandemic H1N1, with a few seasonal strains identified (influenza A/H1, A/H3, and B). Of the two H3N2 isolates characterized, both were related to the A/Perth H3N2 strain seen this past summer in the Southern Hemisphere and recommended for the 2010 Southern Hemisphere vaccine (but not in the current 2009-10 Northern Hemisphere seasonal vaccine). The majority (99.6%) of pH1N1 isolates characterized appear to be a good match to the 2009 H1N1 vaccine strain. See www.cdc.gov/flu.
- **Orange County influenza update.** Since April 2009, 117 patients with pH1N1 were admitted to an ICU and/or died (24). Over the past month, the number of reports of severe cases has again been increasing compared to the previous month (see graph). Note: due to delays in reporting, the number of case reports for recent weeks may not be complete. 100% of influenza characterized by the OC Public Health Laboratory has been pH1N1 over the past six weeks. Outpatient visits and school reports of ILI remain elevated.



- **Clinical trials reaffirm two doses of 2009 H1N1 vaccine needed for children under 10 years of age.** Initial data for pregnant women suggest one dose may be adequate. See 11/2/09 news at http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/.
- **California summarizes experience with 1088 hospitalized or fatal pH1N1 cases.** Median age was 27 years (range <1 – 92). 31% needed intensive care and 11% died. Viral pneumonia and acute respiratory distress syndrome were the most common causes of death reported. 68% had risk factors for influenza complications. 58% of 268 hospitalized adults for whom body mass index (BMI) was known were obese (BMI≥30) and 43% of those were morbidly obese (BMI≥40). For comparison, approximately 34% of the general population is obese and less than 5% are morbidly obese. See http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/ (11/3/09).
- **CDC issues health advisory for clinicians about antiviral treatment.** Key points include:
  - All hospitalized patients with suspect or confirmed influenza should receive antiviral therapy (oseltamivir or zanamivir) as early as possible, as it is most effective if started within the first 48 hours after illness onset. However, studies have shown that hospitalized patients still benefit when treatment is started more than 48 hours after illness onset. Outpatients, particularly those with risk factors for severe illness who are not improving, might also benefit from treatment initiated more than 48 hours after illness onset.
  - Some people without risk factors for severe illness, for example healthy persons with signs of lower respiratory tract involvement or clinical deterioration, may also benefit from antivirals. To date, 40% of children and 20% of adults hospitalized with 2009 H1N1 did not have risk factors.
  - Treatment if indicated should be started empirically. If a decision is made to test for influenza, treatment should not be delayed while waiting for laboratory confirmation.

  See http://www2a.cdc.gov/HAN/ArchiveSys/ for archived CDC health advisories and alerts.
- **CDC clinician conference calls (COCA):** Tuesday 11/10/09 8 am call focuses on pH1N1 and asthma. Call 888-283-2960; Passcode: 7113863. See http://emergency.cdc.gov/coca/callinfo.asp.

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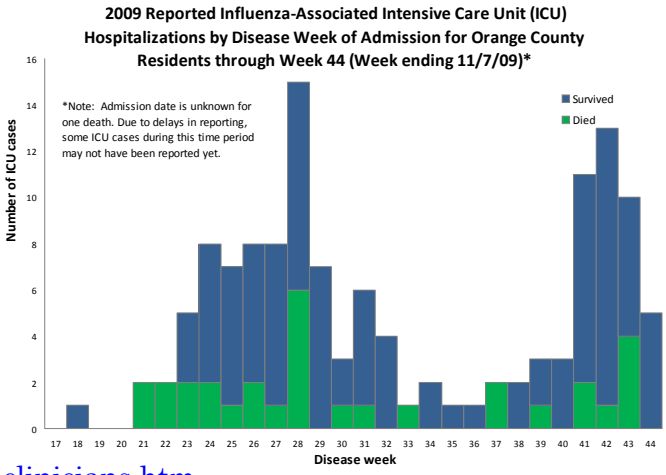
November 13, 2009
Volume 6, Issue 6

Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

- **National influenza activity continues to remain high but decreased slightly last week.** Outpatient visits for influenza-like illness (ILI), the proportion of deaths attributed to pneumonia and influenza, and reports of pediatric influenza-associated deaths have all remained well above baseline levels for this time of year. Almost 100% of influenza characterized has been pandemic H1N1. CDC estimates that between 14-22 million persons were infected with 2009 H1N1 between April and October 2009. See www.cdc.gov/flu.
- **Orange County severe influenza update.** Since April 2009, 131 patients with pH1N1 were admitted to an ICU and/or died (32). The median age of these severe pH1N1 cases was 26 years (range <1-81). The median length of hospital stay was 7 days (range <1 to 73). The median age of deaths was 50 years. Four of the deaths were in children and 3 were in pregnant women. Of the 31 deaths for whom underlying medical conditions are known, 24 (77%) had known risk factors for complications of influenza; an additional 2 deaths had obesity only.



- **CDC summarizes quick facts for clinicians about antivirals:** http://www.cdc.gov/h1n1flu/antivirals/facts_clinicians.htm.
- **American College of Obstetricians and Gynecologists (ACOG) publishes treatment algorithm for pregnant women with influenza-like illness:** http://www.acog.org/departments/resourceCenter/2009H1N1TriageTreatment.pdf.
- **CDC urges PPSV vaccination of persons with increased risk of invasive pneumococcal disease.** During previous pandemics and with the current pH1N1, secondary bacterial infections with *Streptococcus pneumoniae* have been reported, including fatal cases. Pneumococcal polysaccharide vaccine (PPSV) is available for high risk patients 2 years of age and older; a conjugate vaccine is recommended for all children < 5 years of age. For more information, see http://www.cdc.gov/h1n1flu/vaccination/provider/lettertoprovider.htm/?rss.
- **CDC clinician conference calls (COCA):** Tuesday 11/17/09 10 am (PT) call on pH1N1, pregnant women and newborns. Call 888-283-2960; Passcode: 7113863. See http://emergency.cdc.gov/coca/callinfo.asp.

2009 H1N1 influenza vaccine update

- **For updates on OC vaccine and available clinics, see www.ochealthinfo.com/h1n1.**
- CSL 2009 H1N1 Monovalent Vaccine now approved for children (≥6 months of age) as well as adults. The 0.25 ml prefilled syringes for children 6 months-3 years of age have also been approved. See http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm189891.htm.
- Providers receiving partial shipments of orders of any particular vaccine formulation (e.g., nasal spray vaccine) will need to place a new order online to receive the balance of their original order of that formulation. Unfortunately, the CalPanFlu.org ordering system is not currently able to track the remainder of a partially filled request by formulation to fill later.
- Providers may still register to receive free 2009 H1N1 vaccine at http://www.CalPanFlu.org.
- There is still only a limited supply of 2009 H1N1 vaccine in Orange County. If you received H1N1 vaccine, the provider agreement you signed with CalPanFlu for the vaccine states you will follow the Center for Disease Control's recommendations in determining which patients you will vaccinate. See http://www.ochealthinfo.com/h1n1/ for the list of priority groups.
- If you find you have more vaccine of certain formulations than you will be able to administer to these target groups in the near future, please contact us (714-834-8770 or jnguyen@ochca.com) and we will arrange to redistribute to other providers in Orange County.

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November 20, 2009
Volume 6, Issue 7

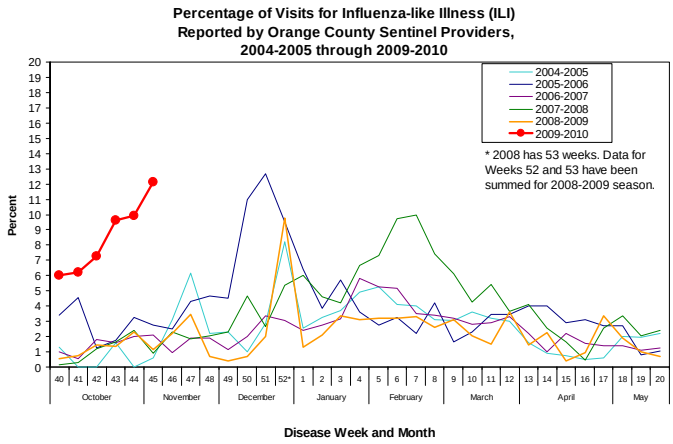
Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

As the holidays approach, protect yourself and your loved ones by 1) getting vaccinated if you are in a priority group recommended for vaccination; 2) staying home when ill; 3) covering your cough and sneeze; and 4) washing your hands.

- **CDC launches Travel Health Campaign to help travelers stay healthy during the 2009-2010 influenza season.** See http://wwwnc.cdc.gov/travel/content/novel-h1n1-flu.aspx.
- **Influenza activity.** National influenza activity continues to decrease but remains higher than during the peak of many previous influenza seasons. Influenza activity may come in waves and is often regional. Even after the peak of activity, influenza viruses continue to circulate for months in the community and reports of hospitalizations and deaths often peak weeks later. See www.cdc.gov/flu.
- **Orange County update.** The percentage of outpatient visits for influenza-like illness (ILI) reported by OC sentinel providers continues to increase and has doubled since early October (see graph right). Since April 2009, 153 patients with pH1N1 were admitted to an ICU and/or died (35). An additional influenza A positive death occurred in a child for whom subtyping of the virus was inconclusive. Among the 34 pH1N1 deaths for whom history is known, 28 (82%) had known risk factors for complications of influenza and an additional two had obesity only.



- **CDC updates guidance for labor and delivery, postpartum and newborn care settings.** Key points include updated criteria for duration of temporary separation of infant from ill mother and suggestions for implementing separation (including in-room options); additional guidance to protect the newborn from infection from mother and other ill caregivers; care of the newborn as exposed rather than infected unless symptomatic; and considerations for home care upon discharge. See http://www.cdc.gov/h1n1flu/guidance/obstetric.htm.
- **WHO revises guidance on clinical management of pH1N1 cases.** Recommendations include guidance on management of patients who progress to acute respiratory distress syndrome (ARDS) and advice against use of high dose systemic corticosteroids for viral pneumonitis. See http://www.who.int/csr/disease/swineflu/en/index.html.
- **CDC posters on donning and doffing N-95 respirators:** http://www.cdc.gov/h1n1flu/eua/n95.htm.

2009 H1N1 influenza vaccine update

- **For updates on 2009 H1N1 vaccine in Orange County, see www.ochealthinfo.com/h1n1.**
- For retail locations of flu vaccine clinics (when available):
  - http://www.lungusa.org/lung-disease/influenza/flu-clinic-locator/
- Providers may still order free 2009 H1N1 vaccine at http://www.CalPanFlu.org.

New Resources

- Updated guidance on use of CSL 2009 H1N1 Monovalent vaccine:
  - http://www.cdc.gov/H1N1flu/vaccination/csl_guidance.html or
  - http://www.ochealthinfo.com/h1n1/vaccine/index.htm
- Differentiating between live attenuated seasonal and 2009 H1N1 vaccine:
  - http://www.ochealthinfo.com/h1n1/vaccine/index.htm
- Tables on dose spacing and administration with other vaccines
  - http://www.cdc.gov/h1n1flu/vaccination/professional.htm
- Fundamentals on influenza vaccine administration, storage and handling (Powerpoint):
  - http://www.cdc.gov/vaccines/ed/ciinc/specialtopics/2009_flu.htm

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To receive this newsletter by email, please contact us at epi@ochca.com.

December 4, 2009
Volume 6, Issue 8

Eye on Influenza

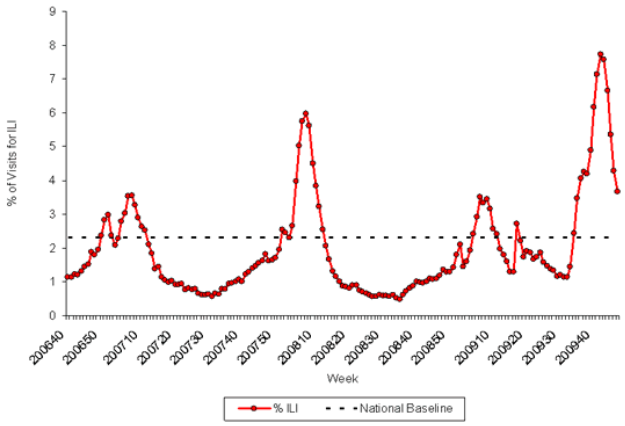
Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

As the holidays approach, protect yourself and your loved ones by 1) getting vaccinated against seasonal flu and 2009 H1N1, if you are in a priority group recommended for vaccination; 2) staying home when ill; 3) covering your cough and sneeze; and 4) washing your hands.

- **Influenza activity.** National influenza activity continues to decrease but still remains elevated for this time of year. Pneumonia and influenza deaths have remained above the epidemic threshold for the past nine weeks. Although influenza activity does appear to be decreasing, it may come in waves, especially with holiday gatherings, and also when seasonal strains emerge. Even after the peak of activity, influenza viruses continue to circulate for months in the community. See www.cdc.gov/flu.
- **Orange County update.** Influenza activity has decreased in Orange County. Since April 2009, 186 patients with pH1N1 were admitted to an ICU and/or died (40). The highest rates of severe (ICU/fatal) H1N1 cases are in infants less than one year of age and 1-4 year olds. 100% of influenza tested at the OC Public Health Laboratory in the past two months has been pH1N1.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 1, 2006 – November 28, 2009



- **Don't follow links to websites referencing a CDC sponsored State Vaccination Program for H1N1 "Swine Flu".** This is a phishing scam and can result in malicious code being installed on your system. See http://www.cdc.gov/hoaxes_rumors.html.
- **CDC Podcast for parents of children with high-risk medical conditions:** http://www2c.cdc.gov/podcasts/.
- **Q&A available for caregivers giving Tamiflu® opened and mixed in liquids to children who cannot swallow capsules.** See http://www.cdc.gov/h1n1flu/antivirals/mixing_tamiflu_qa.htm.
- **CDC updates guidance for managing influenza-like illness on commercial aircrafts:** http://www.cdc.gov/h1n1flu/guidance/air-crew-dom-intl.htm.
- **FDA approves additional seasonal influenza vaccine product.** "Agriflu," made by Novartis, has been distributed in other countries for the past 20 years and is now approved for use in adults in the U.S. Some doses may be distributed in the U.S. as soon as this winter. Fore more information, see http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm192148.htm.

2009 H1N1 influenza vaccine update

- **State extends exemption to 9/30/2010 allowing children under age 3 years and pregnant women to receive 2009 H1N1 vaccine with thimerosal.** The highest rates of hospitalization from pH1N1 have been in children under age four years and at least four pregnant women have died with pH1N1 to date in California. See http://www.cdph.ca.gov/programs/immunize/Pages/CaliforniaThimerosolLaw.aspx.
- **For updates on 2009 H1N1 vaccine in Orange County, see www.ochealthinfo.com/h1n1.**
  - Patients in the CDC priority groups for initial vaccination can call 1-800-564-8448 to make an appointment if they are unable to get vaccinated through their own provider.
- **For retail locations of flu vaccine clinics (when available):**
  - http://www.lungusa.org/lung-disease/influenza/flu-clinic-locator/
- **Providers may still order free 2009 H1N1 vaccine at http://www.CalPanFlu.org.**
- **CDC summarizes vaccine safety results for 2009 H1N1 vaccines.** No substantial differences in the proportion or types of serious adverse events were noted between H1N1 and seasonal flu vaccine. See www.cdc.gov/mmwr (12/4/09 Early Release).

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
To receive this newsletter by email, please contact us at epi@ochca.com.

December 11, 2009
Volume 6, Issue 9

Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

H1N1 vaccine availability has improved in the County. Persons in a priority group for vaccination should contact their healthcare provider or check www.ochealthinfo.com for available vaccine clinic locations.

- **Influenza activity.** National influenza activity continues to decrease but influenza is expected to still be circulating for months and additional waves may come, especially with holiday gatherings and when seasonal strains emerge. CDC has updated estimates of pandemic H1N1 2009 (pH1N1) illnesses in the U.S. through 11/14/2009: 47 million people (about 15% of the population) may have been infected, with 213,000 hospitalizations and 9,820 deaths. 16 million cases are estimated in children, with 71,000 hospitalizations and 1,090 deaths. Although direct comparisons to seasonal influenza cannot be made, severe illness and deaths are disproportionately affecting the young with pH1N1. See www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm.
- **Orange County update.** Influenza activity continues to decrease overall in Orange County. Since April 2009, 201 patients with pH1N1 were admitted to an ICU and/or died (44). 100% of influenza tested at the OC Public Health Laboratory in the past two months has been pH1N1. Parainfluenza viruses (mainly type 1 and a few type 2) have also been detected in the community through our surveillance, primarily in outpatients but also in a few intensive care patients.
- **CDC updates home care guide.** New pamphlet format includes discussion of symptoms to expect, when to call the doctor, how to prevent dehydration, and tips for caregivers (note: new guidance does not recommend masks or respirators for caregivers). See http://www.cdc.gov/h1n1flu/homecare/pdf/homecareguide.pdf.
- **CDC updates antiviral recommendations.** Updated items include information about the use of IV peramivir, dosing of oseltamivir for children under age 1 year based on weight, and treatment and prophylaxis considerations in persons vaccinated against influenza. See www.cdc.gov/H1N1flu/recommendations.htm. Recent *British Medical Journal* review of previous studies on effects of neuraminidase inhibitors does not change current recommendations.
- **Infectious Diseases Society of America (IDSA) convenes experts to answer frequently asked questions about antiviral therapy.** Issues addressed include treatment of pregnant women, newborns, and critically ill. See http://www.idsociety.org/Content.aspx?id=15743.
- **Increased pH1N1 death rates among American Indian/Alaska Native populations in U.S.** This MMWR report summarizes findings from 12 states indicating that the H1N1 mortality rate in these populations was four times higher than in persons in all other racial/ethnic populations combined. Although reasons for these disparate death rates are still under investigation, the high prevalence of chronic health conditions (e.g., diabetes and asthma) and delayed access to health care in these populations may be contributing factors. Previous reports have found increased rates of hospitalization and death in indigenous populations from Australia, Canada, and New Zealand. See www.cdc.gov/mmwr 12/11/2009 issue.
- **CDC Clinician Update**: next conference call is on pH1N1 and COPD. Monday, 12/14/2009, 1 pm. Call 888-283-2960 Passcode: 7113863. For more information, see http://www.bt.cdc.gov/coca/callinfo.asp.
- **H1N1 Preparedness Tools for Professionals.** Includes tools to estimate human health burden, hospital surge, and work loss, see http://www.cdc.gov/h1n1flu/tools/?s_cid=ccu120709_toolsforprofessionals_e.

2009 H1N1 Influenza vaccine update

- **For updates on 2009 H1N1 vaccine in Orange County, see www.ochealthinfo.com/h1n1.**
  - Patients in the CDC priority groups for initial vaccination can call 1-800-564-8448 to make an appointment if they are unable to get vaccinated through their own provider.
- **For retail locations of flu vaccine clinics (when available):**
  - http://www.lungusa.org/lung-disease/influenza/flu-clinic-locator/.

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To receive this newsletter by email, please contact us at epi@ochca.com.

December 18, 2009
Volume 6, Issue 10

Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

Happy Holidays from Orange County Public Health Epidemiology. This will be the last issue of *Eye on Influenza* in 2009. Until the next issue, any urgent influenza updates will still be communicated to you using the same distribution lists.

H1N1 vaccine availability has improved in the County. Any person wishing to be vaccinated should contact their healthcare provider or check www.ochealthinfo.com for available vaccine clinic locations.

- **Influenza activity.** Globally, pandemic H1N1 (pH1N1) continues to be the dominant virus circulating. Influenza activity in the U.S., Canada, and some other temperate areas of the Northern Hemisphere appears to have peaked but additional waves may come, especially with holiday gatherings and if seasonal strains emerge. In parts of Central and Northeastern Europe, and in South and Central Asia, influenza activity continues to increase. The majority of pH1N1 isolates tested are sensitive to oseltamivir (Tamiflu®) and a good match to the 2009 H1N1 vaccine.
- **Orange County update.** Influenza activity continues to decrease overall in Orange County. Since April 2009, 210 patients with pH1N1 were admitted to an ICU and/or died (49). The median age of deaths is 53 years (range <1-93); 5 (10%) deaths were in children, all of whom had underlying risk factors for complications of influenza. Of the 48 deaths for whom we have history, 40 (83%) had traditional underlying risk factors for influenza; if obesity alone is included, 44 (92%) had risk factors. The most common categories of underlying conditions were metabolic disease (e.g., diabetes, hypothyroidism, kidney disease), chronic lung disease (e.g., asthma and COPD), obesity, immunosuppression (e.g., cancer, HIV, chronic steroid use), chronic cardiac disease (e.g., congenital heart disease, congestive heart failure, coronary artery disease), and neuromuscular disorders. 100% of influenza subtyped at the OC Public Health Laboratory in the past two months has been pH1N1.
- **CDC updates interim recommendations for severely immunosuppressed patients with pH1N1.** Key points: (1) fever may not always be present so empiric antiviral therapy should be considered in a severely immunosuppressed patient with acute respiratory symptoms alone; (2) prolonged viral shedding and resistance to antiviral medications have been reported in severely immunosuppressed patients, especially those with lymphopenia or lymphocyte depletion, during treatment; therefore some experts recommend strict adherence to infection control measures until symptoms have resolved and serial respiratory specimens are negative. For these patients, some experts recommend a longer duration of treatment (e.g., 10 days vs. standard 5 days). Zanamivir should be used if oseltamivir resistance is suspected. IV zanamivir is available for compassionate use through the manufacturer. IV peramivir should not be used in patients with highly suspected or documented oseltamivir resistance. See http://www.cdc.gov/h1n1flu/immunosuppression/index.htm.
- **Autopsies done in New York on 34 pH1N1 fatal cases show damage throughout the airways.** Tracheitis, bronchiolitis and diffuse alveolar damage were seen in most of the cases and influenza antigen was found in alveolar epithelial cells and macrophages as well as in the tracheobronchial epithelium. 55% had evidence of bacterial pneumonia. 91% of the fatal cases had underlying medical conditions; 72% of the adult and adolescent cases were obese. See *Arch Pathol Lab Med* 2010;134:E1-E9, available at http://arpa.allenpress.com/pdf/i1543-2165-134-2-1.pdf.

Influenza vaccine update

- For information about the Sanofi Pasteur 2009 H1N1 pediatric vaccine voluntary recall, see http://www.cdc.gov/h1n1flu/vaccination/general.htm
- **2009 H1N1 vaccine now available for public (not just priority groups). See www.ochealthinfo.com/h1n1 for OC vaccine updates.**
  - Anyone interested in getting vaccinated against 2009 H1N1 can call 1-800-564-8448 to make an appointment if they are unable to get vaccinated through their own provider.
- Seasonal influenza vaccine available. See http://ochealthinfo.com/public/flu/ for information.

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
To receive this newsletter by email, please contact us at epi@ochca.com.

Eye on Influenza

January 8, 2010
Volume 6, Issue 11

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza Update

Happy New Year from Orange County Public Health Epidemiology!

Hope your New Year's resolutions include getting vaccinated and keeping healthy habits.

- **Influenza activity/Orange County update.** Over the past few weeks, influenza activity in the U.S. has returned to normal levels for a typical influenza season with recent increases in percentages of outpatient visits for influenza-like illness (ILI) being attributed to a reduction in routine healthcare visits during the holiday season and/or increases in RSV being reported in some areas. All influenza subtyped at the OC Public Health Laboratory in the past two months has been pandemic H1N1 (pH1N1). Very few severe influenza cases (admitted to an ICU/died) were reported recently in Orange County. Since April 2009, 214 patients with pH1N1 were admitted to an ICU and/or died (52). We continue to see parainfluenza, in particular type 1, circulating in OC, primarily in children seen as outpatients by our sentinel providers; a few adults have also been hospitalized in ICU with this virus.
- **California summarizes experience with severe pH1N1 in pregnant and postpartum women.** 95% of the 94 hospitalized pregnant pH1N1 cases were infected in the 2nd or 3rd trimester, and 19% required ICU care. 34% of the pregnant cases had underlying risk factors (besides pregnancy) for complications of influenza, compared with 60% of the non-pregnant hospitalized pH1N1 females of reproductive age. Although maternal deaths due to seasonal influenza are rarely reported, the cause-specific maternal mortality ratio (number of maternal deaths per 100,000 live births) was 4.3 with pH1N1 and may increase overall maternal mortality in the U.S. in 2009. This report also highlighted the importance of prompt antiviral therapy in pregnant women with ILI, with pregnant women who started antiviral therapy more than 48 hours after onset having 4 times the risk of admission to the ICU or death compared with those who started therapy earlier. See www.nejm.org 12/23/09 issue.
- **Increased risk for severe illness from pH1N1 seen in patients with *Streptococcus pneumoniae* infection.** pH1N1 patients also found to have *S. pneumoniae* infection were 125.5 times more likely to be hospitalized or die than those without *S. pneumoniae.* The study suggests that rapid ways to rule out bacterial coinfection should be considered, and reemphasizes the importance of pneumococcal vaccination in persons at risk for invasive disease. See *PLoS One* 2009;4:e8540 (www.plosone.org).
- **Studies look at characteristics of pH1N1 virus.** During a 2-week outbreak, 124 confirmed and over 800 suspect cases were reported at one NYC high school. Median incubation period for confirmed cases was 1.4 days with 95% developing symptoms within 2.2 days of exposure. Median duration of illness was 6 days with 75% recovered by 9 days after onset. The estimated secondary attack rate in households was 17.7% and the probability of household transmission was 0.14. A separate summary of transmission in 216 U.S. households (including 600 household contacts) revealed secondary cases in only 28% of households. The average secondary attack rates were 13% for acute respiratory illness and 10% for ILI. The proportion of household contacts in whom illness developed decreased with the size of the household from 28% with 2-member households to 9% in 6-member households. Children were twice as susceptible as 19-50 year old household contacts and older adults (>50 years of age) were less susceptible. See www.nejm.org 12/31/09 issue.

Influenza vaccine update

- **CDC urges continued influenza vaccination as supplies of 2009 H1N1 vaccine increase.** Orange County residents interested in getting vaccinated against 2009 H1N1 can come to HCA's walk-in clinic if they are unable to get vaccinated through their own provider. **Seasonal influenza vaccine is also available. See http://ochealthinfo.com/ for more information or call 1-800-564-8448.**
- **Recent studies confirm safety of H1N1 vaccine and discuss dosing strategies during a pandemic.** The three studies and two editorials in January *Lancet* also emphasize need for further studies in populations that have been severely affected by the virus, such as persons with underlying conditions, obesity, or pregnancy or in native populations. See www.thelancet.com (January 2, 2010 issue; by subscription only), or for summary, see www.cidrap.umn.edu/cidrap/content/influenza/swineflu.

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
To receive this newsletter by email, please contact us at epi@ochca.com.

January 21, 2010
Volume 6, Issue 12

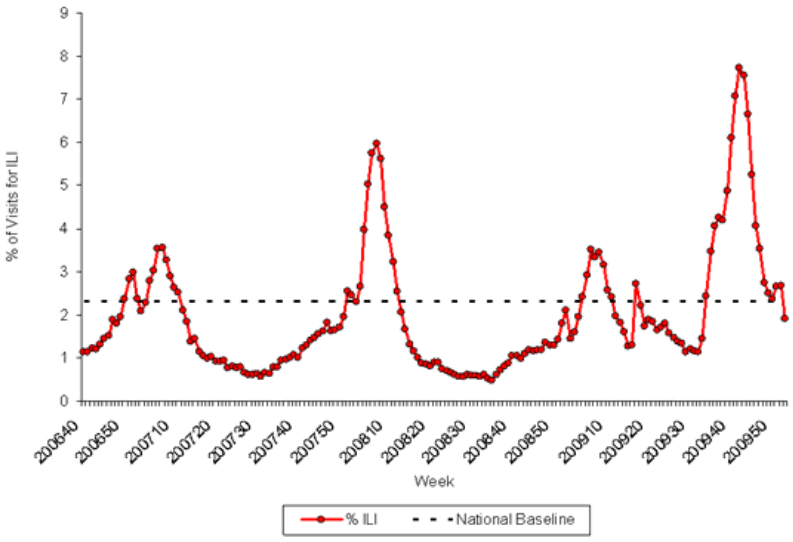
Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

H1N1 vaccine is now widely available. Contact your healthcare provider or see www.ochealthinfo.com/h1n1 for more information. Note: *Eye on Influenza* will be changing its distribution schedule to every two weeks, unless increases in influenza activity or interest occur.

- **Influenza activity/Orange County update.** Influenza activity continues to decrease and is at or below baseline levels for this time of year. However, another wave of pandemic H1N1 activity may occur at any time and we still expect to see some seasonal strains. Nationally, very few seasonal influenza isolates have been reported thus far although LA County has recently reported small numbers of influenza B infections. In Orange County, all influenza subtyped at the OC Public Health Laboratory in the past three months has been pandemic H1N1 (pH1N1). Since April 2009, 219 Orange County residents with pH1N1 were admitted to an ICU and/or died (53).

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 1, 2006 – January 9, 2010



Deaths in Orange County H1N1 cases

- The median age of the 53 deaths is 52.5 years (range <1-93).
- 45 (85%) have had underlying risk factors for complications of influenza. The most common underlying conditions were metabolic (includes diabetes and kidney disease), chronic lung disease (includes asthma, COPD, conditions requiring home oxygen), and chronic heart conditions (includes congenital heart disease, coronary artery disease, congestive heart failure). 38% of 50 deaths were obese (body mass index ≥30). Of the 6 deaths in women of childbearing age, 3 were pregnant.
- Of the 48 deaths for whom we have received death certificates, over 50% have had pneumonia and 25% acute respiratory distress syndrome (ARDS) listed as causes of death.

- **CDC estimates 61 million persons (20.3% of population) in U.S vaccinated with 2009 H1N1 monovalent influenza vaccine as of January 2, 2010.** Based on information from two national phone surveys, CDC estimates that 28% of persons in the initial five ACIP target groups have been vaccinated. Approximately 29% of children (aged 6 months -18 years) had received at least one dose. Among children 6 months – 9 years of age who are recommended to have two doses for protection, 18% had received 2 doses. 38% of pregnant women are estimated to have been vaccinated. See www.cdc.gov/mmwr, January 22, 2010 issue.
- **CDPH updates infection control recommendations for pandemic H1N1 in healthcare settings.** Key points include: (1) endorsement of CDC 10/14/09 guidance recommending respiratory protection be at least as effective as a N-95 respirator, use of standard instead of contact precautions, and exclusion of healthcare providers (HCP) with influenza-like illness for at least 24 hours after fever resolves (without the use of fever-reducing medications), unless HCP works with severely immunocompromised patients (exclusion would then be a minimum of 7 days after symptom onset); (2) recommendations for use of airborne infection isolation rooms, if available, for aerosol generating procedures but not for routine patient care; and (3) recommendations for allowing transfer of pH1N1 patients to other healthcare facilities (such as a skilled nursing facility) after they are free of a fever or signs of a fever for at least 24 hours, without the use of fever-reducing medications, and regardless of the availability of N-95 respirators at the receiving facility. See 1/12/10 infection control guidance at www.cdph.ca.gov/HealthInfo/discond/Pages/H1N1CDPHGuidances.aspx.

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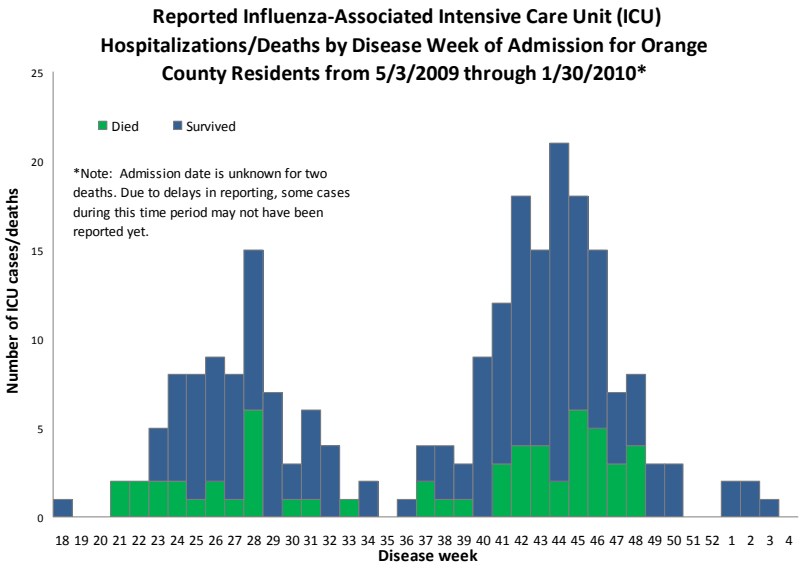
Eye on Influenza

February 5, 2010
Volume 6, Issue 13

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

H1N1 vaccine is now widely available. Contact your healthcare provider or see www.ochealthinfo.com/h1n1 for more information.

- **Influenza activity.** Influenza activity continues to remain at or below baseline levels for this time of year. Most states, including California, are reporting sporadic influenza activity. However, reports of hospitalizations or deaths of patients with pH1N1 continue to be received weekly. Resistance to the antiviral oseltamivir (Tamiflu®) is rare and no resistance has been reported to zanamivir (Relenza®). Circulating pH1N1 viruses appear to be a good match for the 2009 H1N1 vaccine. In Orange County, all influenza subtyped at the OC Public Health Laboratory in the past four months has been pandemic H1N1 (pH1N1) although influenza B has been reported in small numbers in Los Angeles, San Diego, and other areas in the U.S. Since April 2009, 222 Orange County residents with pH1N1 were admitted to an ICU and/or died (54).
- **Non-safety related recalls of 2009 H1N1 vaccine due to reduced potency.** See: www2a.cdc.gov/HAN/ArchiveSys/Index.asp.
- **Immunoglobulin G_2 subclass deficiency may be associated with severe pandemic H1N1 infection.** After observation of IgG_2 deficiency in a patient with H1N1 infection, clinicians in an Australian hospital tested serum immunoglobulin (Ig) and subclass levels on 39 hospitalized patients with confirmed H1N1. In a multivariate analysis, low mean serum IgG_2 levels and albumin were significantly associated with severe (ICU) H1N1 infection, compared with moderate (hospitalized, non-ICU). Follow-up serum IgG_2 levels remained deficient in 8 of 11 patients with severe H1N1 and 3 of 4 moderate H1N1 patients a mean of 90 +/- 23 days after the initial specimen. Follow-up levels of albumin, an acute phase reactant which may be depressed during acute illness, normalized in most patients. The authors recommend further investigation into the role of IgG_2 deficiency in the pathogenesis of H1N1 infection and its therapeutic implications. See *Clinical Infectious Diseases* 2010;50:672-8, subscription needed.



- **CDPH updates multiple infection control documents for care of patients with pH1N1.** The main changes center around an update in the suspect case definition, given the current low incidence of confirmed pH1N1 cases among hospitalized patients with influenza-like illness or pneumonia. A suspect case is now defined as "any patient whom a health care provider suspects, based on the patient's history and illness, of being infected with 2009 H1N1 influenza virus." Therefore, clinicians should take into consideration patient history, clinical presentation, age, local incidence of pH1N1, recent ill contacts, vaccination status, and other factors to determine who is a "suspect" case. Probable and confirmed case definitions have not changed. Suspect, probable, and confirmed cases should be handled using CDC and CDPH infection control recommendations. See CDPH 2/4/10 pH1N1 guidance : http://www.cdph.ca.gov/HealthInfo/discond/Pages/H1N1CDPHGuidances.aspx for:
  - Case definitions for infection control in health care settings: updated as above;
  - Infection control guidance for health care settings (Joint CDPH/Cal OSHA statement): unchanged from 1/12/2010 guidance except for incorporation of new suspect pH1N1 case definition;
  - Hospital infection control guidance: lists current pH1N1 infection control documents with links;
  - Outpatient and Long-Term Care Facility (LTCF) infection control guidance (separate documents): incorporates previous CDPH guidance with CDC recommendations from 10/14/09 and CDPH revised case definitions as above. Patients can be transferred from acute care hospital to LTCF after they are fever-free for at least 24 hours, without the use of fever-reducing medications.

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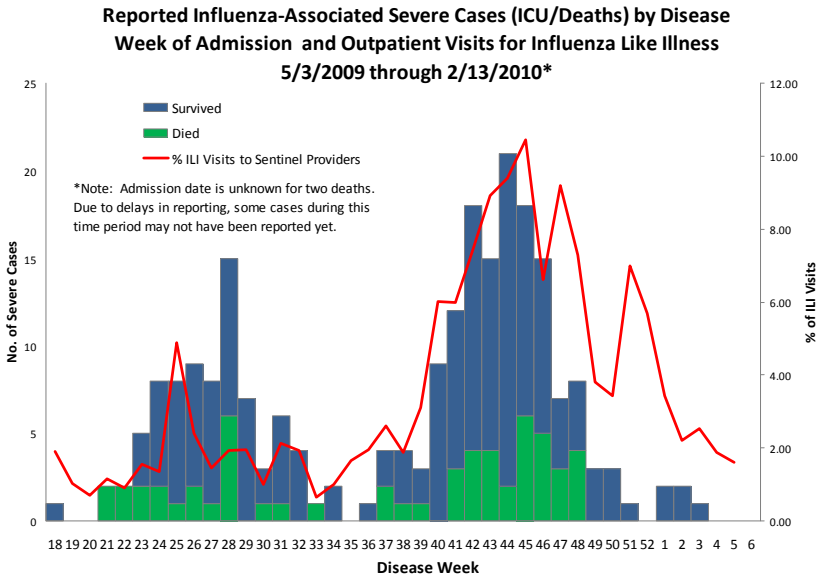
Eye on Influenza

February 19, 2010
Volume 6, Issue 14

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Although influenza activity is currently at a low level, influenza viruses (either pandemic H1N1 or seasonal strains) may circulate for several more months.

- **Influenza in Orange County.** 230 cases of severe influenza (hospitalized in ICU or death), including 58 deaths, have been reported to OC Epidemiology since enhanced surveillance for pandemic H1N1 (pH1N1) began in April 2009. The majority (97%) of these cases have been identified as pH1N1. The median age of severe cases is 31 years (range: <1 to 93), while the median age of fatal cases is 53 years (range: <1 to 93). The highest rate of severe influenza cases is in children under the age of 4 years. Hispanics have the highest age-adjusted rate of severe cases (8.3 per 100,000 persons), followed by Asian-Pacific Islanders (6.2/100,000), then non-Hispanic whites (5.1/100,000). The median length of hospitalization for severe cases is 8 days (range: 1 to 126). All influenza subtyped at the OC Public Health Laboratory in the past four months has been pandemic H1N1 (pH1N1) although influenza B has been reported in small numbers in Los Angeles, San Diego, and other areas in the U.S.



- **CDC updates estimates of pH1N1 influenza cases, hospitalizations and deaths, April 2009 - January 16, 2010.** Approximately 57 million people are estimated to have been infected with pH1N1 in the U.S., resulting in 257,000 pH1N1-related hospitalizations and 11,690 deaths. The latest estimates show a relatively small increase in numbers since December, and correlate with a period of low influenza activity in the U.S. See http://www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm.
- **WHO makes recommendations for 2010-11 Northern Hemisphere influenza vaccine.** Based on the viruses circulating globally over the past several months, the strains recommended are (1) A/California/7/2009 (H1N1)-like virus [pH1N1]; (2) A/Perth/16/2009 (H3N2)-like virus [change based on strains circulating in Southern Hemisphere and in U.S. this winter]; and (3) B/Brisbane/60/2008-like virus [Victoria lineage; no change]. See http://www.who.int/csr/disease/influenza/en/.
- **CDC provides abbreviated pandemic plan template for primary care provider offices based on input from stakeholders:** http://www.cdc.gov/h1n1flu/guidance/pdf/abb_pandemic_influenza_plan.pdf.
- **CDC releases Q&A on 2009 H1N1 and Seasonal Influenza and Hispanic Communities.** Q&A reviews factors that may disproportionately impact influenza-associated hospitalization rates and pediatric mortality among Hispanics, such as younger age distribution, disparities in rates of underlying risk factors such as diabetes, asthma, and pregnancy, barriers to vaccination and accessing health services. See http://www.cdc.gov/h1n1flu/qa_hispanic.htm.

Guillain-Barré Syndrome (GBS) Surveillance

As part of post-licensure vaccine safety monitoring for pH1N1 2009 influenza vaccine, the California Department of Public Health (CDPH) is conducting GBS surveillance throughout the state. To get a better understanding of GBS prevalence, risk factors, and infectious triggers, CDPH is interested in reports of all cases of GBS regardless of vaccination history. Case reports should be submitted to CDPH by fax to 916-440-5969. Testing of serum (preferably prior to IVIG), cerebrospinal fluid, and respiratory specimens for known infectious triggers of GBS will be done through the State. Stool culture (for *Campylobacter*) should be done by the treating clinician. For case report form and more information, see http://www.cdph.ca.gov/HealthInfo/discond/Pages/GBSsurveillance.aspx.

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
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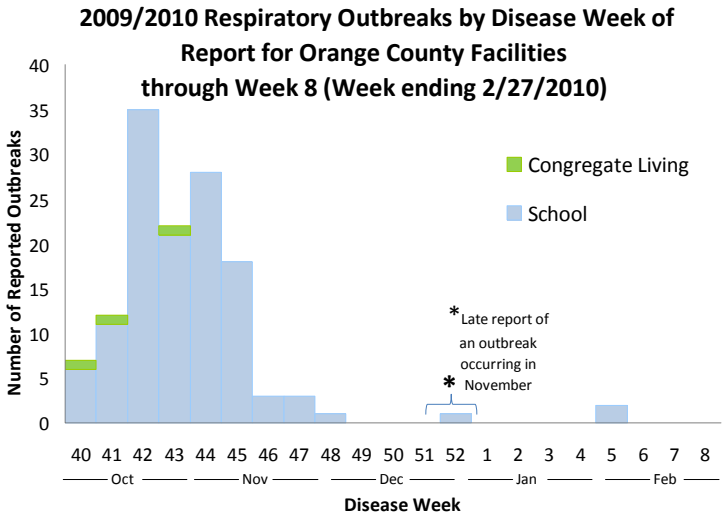
March 5, 2010
Volume 6, Issue 15

Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Although influenza activity is currently at a low level, influenza viruses (either pandemic H1N1 or seasonal strains) may circulate for several more months.

- **Influenza update.** Last week the Orange County Public Health Laboratory confirmed the first seasonal influenza, an A/H3, reported in an Orange County resident since September. The patient had not traveled and was not hospitalized in ICU. Seasonal influenza strains, especially influenza B, continue to be reported in small numbers in the U.S. Outpatient visits for influenza-like illness (ILI) are at low levels but anecdotal reports of hospitalizations and emergency department visits for ILI or pneumonia (not confirmed to be influenza-related) have increased relative to the past few months in some areas. Since the last update, only one additional severe influenza (hospitalized in ICU or death) case and no deaths have been reported to OC Epidemiology.
- **Respiratory outbreaks in Orange County.** 128 respiratory outbreaks, predominantly in schools, have been reported to OC Epidemiology since October 2009. Outbreaks in schools include clusters of illness (≥20%, minimum of 5 ill) within a classroom or specified group or increases in absenteeism over 10% of the average daily attendance. The average attack rate within a cluster was about 30% and the mean duration of increased illness at the school was about 12 days for the schools that submitted final numbers. Since December, reporting of outbreaks has decreased dramatically, in concordance with other influenza activity parameters.



- **CDC updates information on underlying health conditions among adults and children hospitalized with pandemic H1N1 (pH1N1).** Based on data from the Emerging Infections Program (EIP) covering 13 metropolitan areas in 10 states, 85% of adults and 58% of children hospitalized with pH1N1 have had one or more medical conditions, the most common of which were asthma (30%), diabetes (23%), chronic cardiovascular disease (20%) and chronic obstructive pulmonary disease (14%) in adults, and asthma (33%), neurological/developmental disabilities (11%), moderate-severe developmental delay (8%) and seizure disorder (6%) in children. Nine percent of women hospitalized for pH1N1 have been pregnant. See www.cdc.gov/H1N1flu/eip_underlying_conditions.htm.
- **CDC reports on impact of pH1N1 by race and ethnicity**. Using EIP data on hospitalizations as described above, CDC reports that minority groups, especially American Indians/Alaska Natives, followed by Hispanics then Black, non-Hispanics, have been more heavily impacted by pH1N1than White, non-Hispanics. Reasons for the disparities are unknown but may include preponderance of underlying health conditions among certain ethnic or minority groups, issues related to access to care, and self-care/care-seeking behaviors. See www.cdc.gov/h1n1flu/race_ethnicity_qa.htm.
- **Updated guidance for employers/employees:** www.cdph.ca.gov/HealthInfo/discond/Pages/H1N1Home.aspx.

Other Influenza News

- **CDC Advisory Committee on Immunization Practices recommends universal seasonal flu vaccination.** Recommendations were expanded to include all adults beginning in the 2010-11 season; therefore, all people aged 6 months and older are now recommended to receive annual influenza vaccination. See www.cdc.gov/vaccines/recs/provisional/.
- **Additional human H5N1 cases confirmed in Vietnam and Egypt.** Recent flurry of human cases mirror recent poultry outbreaks in both countries. In total, 18 human H5N1 cases with 5 deaths have been reported in 2010. See http://www.who.int/csr/disease/avian_influenza/en/index.html.

If you have any comments about this flyer, contact Michele Cheung, MD MPH, at (714) 834-8180.
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Eye on Influenza

March 19, 2010
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Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Although influenza activity is currently at a low level, influenza viruses (either pandemic H1N1 or seasonal strains) may circulate for several more weeks.

- **Influenza update.** Since the last update, only one additional severe influenza (hospitalized in ICU or death) case and no influenza-associated deaths have been reported to OC Epidemiology. Outpatient visits for influenza-like illness (ILI) are at low levels and hospital admissions for ILI and pneumonia continue to fluctuate. Nationally, influenza activity remains at similar levels to previous weeks. Worldwide, pandemic H1N1 transmission is most active in Southeast Asia and West Africa. Influenza activity may be increasing in the Caribbean and Central America. Seasonal influenza B viruses are predominant in East Asia. See http://www.cdc.gov/h1n1flu/updates/international/.
- **CDC reports morbid obesity may be associated with hospitalization and possibly death due to 2009 pandemic H1N1 (pH1N1) infection.** Using a case-cohort design to compare pH1N1 hospitalized and fatal cases from April-July 2009 to a cohort of the U.S. population [estimated from the 2003-2006 National Health and Nutrition Examination Survey (NHANES)], CDC reported that hospitalization for pH1N1 was associated with being morbidly obese [body mass index (BMI) ≥ 40] for individuals with known risk factors for influenza complications (OR=4.9; 95% CI 2.4-9.9) and without risk factors (OR 4.7; 95% CI 1.3-17.2) among persons ≥ 20 years old. Death was associated with obesity (OR 3.1; 95% CI 1.5-6.6) and morbid obesity (OR 7.6; 95% CI 2.1-27.9) in persons ≥ 20 years old without known risk factors. Among persons 2-19 years old, hospitalization was associated with being underweight (BMI ≤ 5th percentile for age) among those with and without known risk factors for influenza complications. Death was not associated with BMI in 2-19 year olds. Pregnant women and children less than 2 years of age were excluded since obesity cannot be defined by BMI in those groups. See *PLoS ONE* 2010;5:e9694, available at www.plosone.org.
- **Self-reported anticipated compliance with physician advice to stay home for 7 days during 2009 H1N1 pandemic.** Results from a survey of almost 1,300 households done in Queensland, Australia, suggest that 95% of respondents would comply with a physician's advice to stay home for seven days if diagnosed with pH1N1 or avian influenza, but only 71% would stay home with seasonal influenza and 60% with a common cold. In addition, 27% of health and community service workers would not comply with physician advice to stay home for seasonal influenza. For the common cold and seasonal influenza, self-reported anticipated compliance was negatively associated with male gender and younger age. See *BMC Public Health* 2010;10:138 at www.biomedcentral.com/1471-2458/10/138.
- **Influenza Vaccine Update:** CDC Clinician Outreach and Communication Activity (COCA) conference call is on Tuesday, March 23, 2010, 11 am PST. CDC experts will provide an update on influenza vaccine and the Vaccine Adverse Event Reporting System (VAERS). This call will cover Advisory Committee on Immunization Practices (ACIP) recommendations for use of influenza vaccines; recent epidemiologic findings and vaccine coverage for groups at higher risk for influenza-related complications; U.S. safety monitoring in place for 2009 Influenza A (H1N1) monovalent vaccines; and preliminary findings from VAERS. See http://emergency.cdc.gov/coca/callinfo.asp for a copy of the slide presentation. Call-in number: 888-566-6585. Passcode: 9411583.

H5N1 in the News

- **Additional human H5N1 cases confirmed.** In total, 21 human H5N1 cases with 7 deaths have been reported in 2010 from Egypt, Indonesia, and Vietnam. For the latest update on human cases, see http://www.who.int/csr/disease/avian_influenza/en/index.html. Poultry outbreaks have been reported in several countries, most recently in Bangladesh and Vietnam. See http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm for a list of countries with H5N1 outbreaks in birds and animals.
- **For more information on avian influenza, see http://ochealthinfo.com/epi/af/.**

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Eye on Influenza

April 16, 2010
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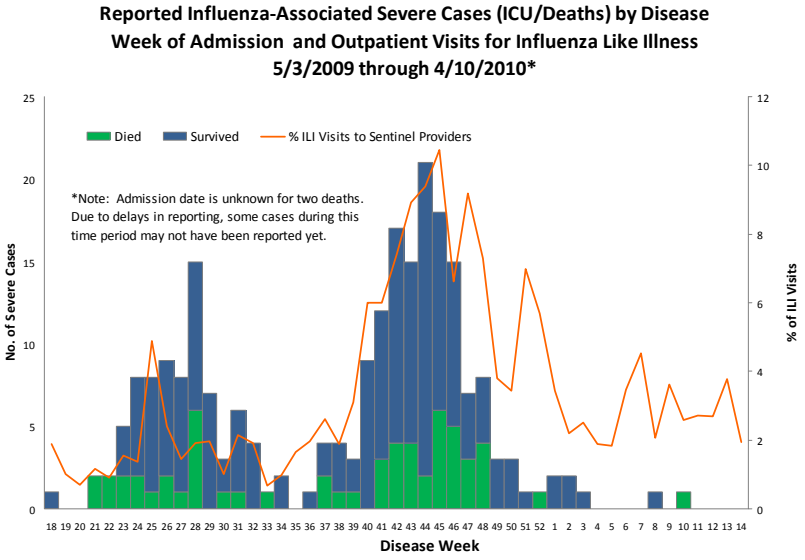
Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Influenza activity remains low in Orange County but is still elevated in some areas of the Southeastern U.S. and in other parts of the world.

- **Influenza update.** Since April 2009, 232 severe influenza (hospitalized in ICU or died) cases and 60 influenza-associated deaths have been reported to OC Epidemiology; 225 of the severe cases and 56 of the deaths were confirmed to be pandemic (p) H1N1. Outpatient visits for influenza-like illness (ILI) are at low levels. Worldwide, pH1N1 transmission is most active in Southeast Asia, West and Eastern Africa, and tropical regions of the Americas. Influenza B viruses are predominant in East Asia and have also been detected in Europe. Seasonal flu A H3N2 has been reported in Asia (especially Indonesia), Eastern Europe, and Eastern Africa. See http://www.cdc.gov/h1n1flu/updates/international/.



- **CDC summarizes influenza vaccination coverage in U.S. through January 2010.** State-specific estimates of 2009 H1N1 vaccination as of the end of January 2010 were derived from results from two telephone surveys, the Behavioral Risk Factor Surveillance System (BRFSS) and the National 2009 H1N1 Flu Survey. 2009 H1N1 vaccination rates in California were estimated to be 31.2% in children and 17.7% in adults; 27.7% of persons in the initial target groups were vaccinated, lower than the national average. Results from a survey of a nationally representative sample of 1,417 health care personnel (HCP) estimate that 37.1% of HCP were vaccinated against 2009 H1N1, 61.9% against seasonal influenza, and 34.7% against both by mid-January 2010. Existence of an employer requirement for vaccination was associated with an eightfold greater likelihood of 2009 H1N1 vaccination than for employees in facilities without a requirement and existence of an employer recommendation for vaccination was associated with a fourfold greater probability of vaccination. See www.cdc.gov/mmwr April 2, 2010 issue.
- **CDPH summarizes experience with rapid antigen test for diagnosis of pH1N1 influenza.** When compared to reverse-transcriptase polymerase chain reaction testing of 703 specimens at the State public health laboratory, the QuickVue Influenza test done in a clinical setting had sensitivity of 66%, specificity of 84%, positive predictive value (PV) of 84% and negative PV of 64%, providing further evidence that rapid test results should be interpreted with caution when pH1N1 is suspected and that more accurate point-of-care tests for influenza are needed. See www.cdc.gov/eid May 2010 issue.
- **Study suggests egg-allergic patients without anaphylaxis to egg may be administered influenza vaccine without a vaccine skin test.** Researchers at Children's Hospital Boston conducted a retrospective chart review of influenza vaccine administration to egg-allergic pediatric patients from 2002-2009. Patients with histories of recent egg-induced anaphylaxis were not immunized and were thus excluded, as were patients who were able to eat egg-containing foods since they were not considered to have a contraindication to vaccination. After removal of the skin test from the vaccination protocol in 2006, 111 (97%) of 115 egg-allergic patients who received vaccine without a preceding skin test tolerated the vaccine given in 2 graded doses (0.1 dose then 0.9 dose) without serious adverse reaction. There were no reports of anaphylaxis. See www.pediatrics.org Early Release, published on-line 4/5/10 DOI: 10.1542/peds.2009-2512.
- **CDC publishes guide for hospitals: "Coordinating Pediatric Medical Care During an Influenza Pandemic."** Topics include surge capacity assessment, alternate staffing and triage and target both children's and general hospitals. See http://emergency.cdc.gov/healthcare/pdf/hospital_workbook.pdf.

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August 13, 2010
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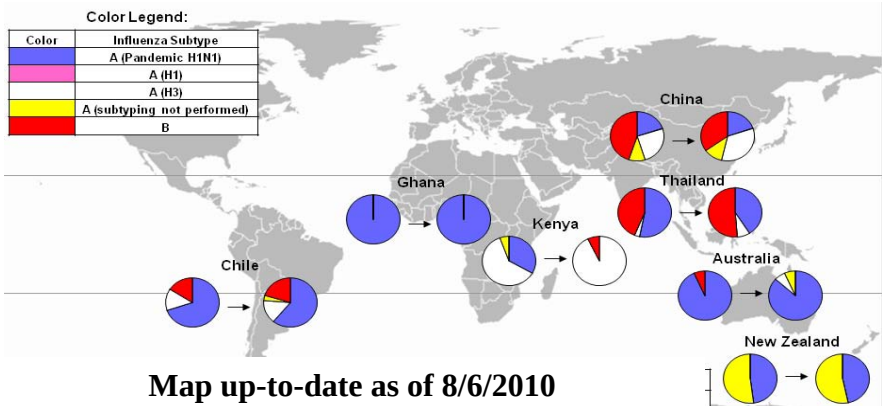
Eye on Influenza

Orange County Health Care Agency, Epidemiology & Assessment, 1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

The World Health Organization (WHO) announced this week that the H1N1 pandemic is over. Influenza activity is low in Orange County and the U.S. but recently there have been reports of influenza A (H3N2) in a few states. Traditional influenza season is just several weeks away!

- **Global update.** On August 10, 2010, the WHO announced that the world was no longer in phase 6 of influenza pandemic alert and that we had entered the post-pandemic period. The 2009 H1N1 virus is expected to circulate for years to come as a seasonal influenza virus. However, it is no longer the dominant virus and many countries are now reporting a mix of influenza viruses, similar to what is seen during typical seasonal epidemics. Recent studies indicate that 20-40% of populations in some areas have been infected with 2009 H1N1; additional protective immunity may be present in countries with good vaccination coverage. Overall influenza activity is low worldwide, with the most active areas being in parts of South Asia, limited areas of tropical and South America, and South Africa. See www.cdc.gov/h1n1flu/updates/international/ and www.who.int/csr/disease/swineflu/en/index.html.

Proportion of Influenza Subtypes in Select Countries
Week 28 to 29, 2010
Data Source: FluNet (http://gamapserver.who.int/GlobalAtlas/home.asp)



Map up-to-date as of 8/6/2010

- **U.S. update.** Influenza activity is low in the U.S. but influenza A (H3N2) infections have recently been reported in a number of states, including two small localized outbreaks in Iowa. Additional influenza A (H3) positive specimens from other states have been received as well as sporadic reports of 2009 H1N1 and influenza B viruses. For details, see www2a.cdc.gov/HAN/ArchiveSys/ 8/4/10 Health Advisory. Recommendations for Orange County health care providers:
  - **Consider influenza as a possible diagnosis in patients with acute respiratory illness, including pneumonia, even during the summer.**
  - **Treat patients with clinically suspected influenza illness who have illness requiring hospitalization; progressive, severe, or complicated illness, regardless of previous health status; and/or patients at increased risk of severe disease, with influenza antivirals.**
    - The neuraminidase inhibitors oseltamivir (Tamiflu®) and zanamivir (Relenza®) are the currently recommended influenza antivirals. The adamantanes (amantadine and rimantadine) are not recommended because of high levels of resistance in H3 and 2009 H1N1 viruses.
    - Treatment, when clinically indicated, should not be delayed pending definitive laboratory testing. Point-of-care rapid tests have limited sensitivity and a negative result should not be used to guide decisions regarding treatment with influenza antivirals. False-positive tests can also occur and polymerase chain reaction (PCR) testing and/or viral culture is recommended when laboratory confirmation is desired.
  - **Report all outbreaks and unusual increases in febrile respiratory illnesses to 714-834-8180.**
  - **Submit influenza-positive specimens to Public Health for confirmation and subtyping during time periods (such as currently) when influenza activity is minimal.** Call 714-834-8180 to discuss if influenza confirmation would be indicated on a case-by-case basis.
- **CDC updates recommendations for influenza vaccination.** (See www.cdc.gov/mmwr, Vol. 59, 7/29/10)
  - All persons aged 6 months and older should be vaccinated annually against influenza.
  - Vaccination of children 6 months-8 years of age must take into consideration the number of doses of seasonal influenza vaccine and 2009 H1N1 vaccine received previously. See the algorithm (Fig. 3) for vaccination of children on p. 34 of the recommendations.
  - The 2010-11 seasonal influenza vaccine will include A/California/7/2009 (H1N1)-like (the same strain as in the 2009 H1N1 vaccine), A/Perth/16/2009 (H3N2)-like, and B/Brisbane/60/2008-like strains. Information also available about newly approved vaccines and expanded age indications.

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