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Measles in a King County Resident

An unvaccinated adult female King County resident was infected with measles during international travel. After returning home she had several health care visits and community exposures while contagious. Her communicable period is estimated to be 12/11 to 12/20. Secondary cases would be expected to develop rash onset between 12/18/09 and 1/10/10. Community exposure locations and updates are posted at www.kingcounty.gov/health/

Influenza Update

The second wave of 2009 influenza A H1N1 peaked in late October, and has been decreasing for several weeks. The proportion and number of emergency department (ED) visits for influenza like illness (ILI) are currently at pre-outbreak levels. As in the spring first wave of H1N1,¹ the age groups with the highest ED visit counts have been children aged five to 17 years, and adults aged 18 to 44 years. 2009 H1N1 has been the predominant strain circulating in the community.

Hospitalizations for laboratory-confirmed influenza peaked the week ending October 24, 2009, and have been decreasing for the past several weeks. Between September 19, 2009, and December 21, 2009, there were 364 hospitalizations reported for laboratory-confirmed influenza. Of these, more than 70% were confirmed to be 2009 H1N1. Except for three cases of influenza B and three cases for which the influenza type was not specified, the remainder were influenza A positive that were not subtyped but are suspected to be 2009 H1N1.

During that same time period, Public Health received 17 reports of deaths due to laboratory-confirmed influenza. The median age was 51 years (range 28 to 87). All except one had a predisposing condition for complications of influenza.

Reviewing the deaths from the fall 2009 H1N1 outbreak highlights the importance of timely antiviral treatment. Of the 17 deaths, 15 (88%) were treated with antiviral medications. Excluding one patient with a derived onset date, and a transplant patient who was on prophylactic antivirals at the time of onset, the mean time between symptom onset and initiation of antiviral treatment was 5.8 days (range 2 to 12).

Five deaths were in persons with predisposing conditions who had a health care visit for ILI at which they could have been prescribed antiviral medication, but were not.

Remember that early empiric antiviral treatment is recommended for patients with severe illness as well as those with chronic conditions at high-risk for influenza complications. Treatment is most effective if started within 48

hours of symptom onset, but can still be beneficial if more than 48 hours have passed. **Do not rely on rapid influenza testing to guide treatment decisions, because rapid tests have poor sensitivity for 2009 H1N1.**

CDC currently estimates that approximately 15% of the population has been infected with H1N1 leaving a large proportion of the population susceptible. Annual influenza outbreaks typically peak in January or February, and it is possible that H1N1 activity may recur in a third wave (as seen in the 1957 pandemic, when adults were prominently impacted compared to younger persons in the early waves). H1N1 vaccine is increasingly available to healthcare providers and at area pharmacies, and healthcare providers should continue to actively vaccinate persons six months of age and older. For a complete report, see: www.kingcounty.gov/health/H1N1

Influenza Vaccine Availability: King County Expands H1N1 Vaccine Eligibility

Effective Saturday, December 12, King County expanded eligibility for H1N1 vaccine to any person six months of age and older who wishes to be protected against influenza A (2009 H1N1).

Specific factors that played into the decision to expand 2009 H1N1 vaccine access include:

- H1N1 vaccine supplies are increasing and are expected to continue to increase steadily,
- many health care providers are now reporting that they have met and/or are able to keep up with demand for H1N1 vaccine among the ACIP target population in their practice settings,
- there is significant demand for H1N1 vaccination among adults who are not currently eligible, and
- demand for vaccine is decreasing in the community among high risk patients.

This decreasing demand raises concern for missed opportunities for vaccination over the coming weeks when people traditionally lose interest in vaccination, and as supplies increase. This issue is particularly relevant this season because of the potential for a second winter outbreak of H1N1 flu that could impact adults harder than did the fall outbreak.

To balance continued priority vaccination of the ACIP target population along with open access to vaccine for all adults who would like to be protected, King County created the following guidelines:

- Public Health recommends that King County healthcare providers continue to aggressively vaccinate persons in ACIP target populations.
- In addition to persons in the ACIP target populations, beginning December 12th, healthcare providers may vaccinate any person six months of age and older who wishes to be protected against influenza A H1N1.

¹ "Spring 2009 H1N1 influenza outbreak in King County, Washington." Disaster Medicine and Public Health Preparedness. 2009;3(Suppl 2):S109-S116). For free access, go to <http://www.dmphp.org/> and search for keywords "King County."

- In settings where the demand for vaccination among ACIP target population patients is high, health care providers may consider preferentially vaccinating patients in target populations and refer patients outside of the target group to pharmacies or community clinics for vaccination where supplies permit.
- Healthcare providers should reinforce the preference for intranasal (LAIV) H1N1 vaccine for eligible patients, particularly where there is ongoing unmet demand among ACIP target population patients not eligible for LAIV.

To assure that ACIP target population patients have access to vaccination, Public Health is continuing to prioritize allocation of 0.5ml preservative-free formulations as needed to meet demand among pregnant and post-partum women and will continue to prioritize allocation of H1N1 vaccine to providers with ongoing unmet needs for ACIP target population patients.

Current influenza surveillance and information on influenza vaccine recommendations and availability is online at:

- Public Health's H1N1 information web page: www.kingcounty.gov/health/h1n1
- ACIP 2009 H1N1 vaccine recommendations: www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0821a1.htm

Carbon Monoxide (CO): A Silent Killer

Though it is not a communicable disease, carbon monoxide (CO) poisoning can occur in outbreaks during the winter months. Power outages after windstorms and snowstorms can lead some families to use gas generators without proper ventilation. Or to warm up from the bitter cold, others might light up a charcoal grill or hibachi indoors. Any use of a combustible fuel (oil, gas, wood, charcoal) in an enclosed space can lead to a build up of carbon monoxide (CO), an odorless gas that causes serious illness and death from asphyxiation.

Clinicians should be aware of the risk for CO poisoning, and provide information and counseling to patients about prevention of CO poisoning. Prevention measures include using combustible fuels only outdoors or in properly ventilated areas, and keeping stoves and furnaces well maintained. Home CO alarms can detect elevated levels of this silent killer.

In King County's last major outbreak in December of 2006, immigrants were at particular risk of CO poisoning. There were 259 reported cases of CO poisoning including 8 deaths.²

The diagnosis of unintentional CO poisoning requires a high degree of suspicion because the symptoms are nonspecific. Low levels can cause headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. Higher levels lead to unconsciousness and death.

² Carbon monoxide epidemic among immigrant populations: King County, Washington, 2006. Gulati RK, Kwan-Gett T, Hampson NB, Baer A, Shusterman D, Shandro JR, Duchin JS. American Journal of Public Health. 2009 Sep; 99(9):1687-92.

When CO poisoning is suspected, obtain a history of possible CO sources and document the time and duration of exposure. The clinical diagnosis can be confirmed in many cases by an elevated serum carboxyhemoglobin (COHb) level. An elevated COHb level of 2% for non-smokers and >9% COHb level for smokers strongly supports a diagnosis of CO poisoning. However, COHb levels are less useful if a patient has been removed from the source of exposure for several hours.

Treatment is supportive. Administer 100% oxygen until the patient is asymptomatic. Consider hyperbaric oxygen for patients with severe illness and older age (36 years and older). More aggressive treatment is also recommended for pregnant women. Conduct serial neurological exams and be alert for signs of cerebral edema and multi-system organ failure.

CO poisoning prevention information in multiple languages suitable for posting in office settings and/or providing to patients is available on the Public Health Disaster Preparedness website at:

www.kingcounty.gov/healthservices/health/preparedness/disaster.asp

For more information, see Centers for Disease Control and Prevention's (CDC's) "Clinical Guidance for Carbon Monoxide (CO) Poisoning After a Disaster" online at: www.bt.cdc.gov/disasters/co_guidance.asp

Erratum

We apologize for neglecting to credit Dr. Frank Riedo for his identification and investigation of the Zebra of the Month case of tularemia in a falconer summarized in the September 2009 *Epi-Log* online at: www.kingcounty.gov/health/epilog

Disease Reporting

AIDS/HIV (206) 296-4645
 STDs (206) 744-3954
 TB (206) 744-4579
 All Other Notifiable Communicable
 Diseases (24 hours a day) (206) 296-4774
 Automated reporting line
 for conditions not immediately notifiable (206) 296-4782

Hotline

Communicable Disease..... (206) 296-4949

Public Health-Seattle & King County Online Resources
 Home Page: www.kingcounty.gov/healthservices.aspx
 The *EPI-LOG*: www.kingcounty.gov/health/epilog
 Communicable Disease listserv (PHSKC INFO-X) at:
mailman_u.washington.edu/mailman/listinfo/phskc-info-x
 Influenza Updates, Vaccine Information, and Current Testing
 Guidelines: www.kingcounty.gov/health/h1n1

Reported Cases of Selected Diseases, Seattle & King County 2009

	Cases Reported In November		Cases Reported Through November	
	2009	2008	2009	2008
Campylobacteriosis	14	12	245	273
Cryptosporidiosis	3	1	29	35
Chlamydial infections	289	450	5218	5549
Enterohemorrhagic <i>E. coli</i> (including <i>E. coli</i> O157:H7 and non-O157)	5	3	65	45
Giardiasis	9	9	93	104
Gonorrhea	83	82	949	1219
<i>Haemophilus influenzae</i> (cases <5 years of age)	0	0	1	2
Hepatitis A	0	0	13	17
Hepatitis B (acute)	1	2	23	32
Hepatitis B (chronic)	74	68	711	932
Hepatitis C (acute)	2	3	8	12
Hepatitis C (chronic)	137	151	1814	1996
Herpes, genital (primary)	33	40	493	481
HIV and AIDS (includes only AIDS cases not previously reported as HIV)	47	35	316	324
Measles	0	0	0	0
Meningococcal Disease	1	0	4	5
Mumps	0	0	1	1
Pertussis	1	7	34	69
Rubella	0	0	0	0
Rubella, congenital	0	0	0	0
Salmonellosis	17	21	235	241
Shigellosis	5	2	60	40
Syphilis	10	10	139	187
Syphilis, congenital	0	0	0	0
Syphilis, late	2	8	74	83
Tuberculosis*	13 (4)	14 (8)	101 (123)	102 (109)

*A new system for counting TB cases was initiated January 1, 2009, and it is difficult to compare monthly case counts from 2009 to prior years. For this and future editions, TB case counts will include the monthly case count including cases reported at death as well as the number of high suspects started on TB treatment in parentheses.