



Yakima Health District BULLETIN

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More on Methicillin Resistant Staphylococcus Aureus

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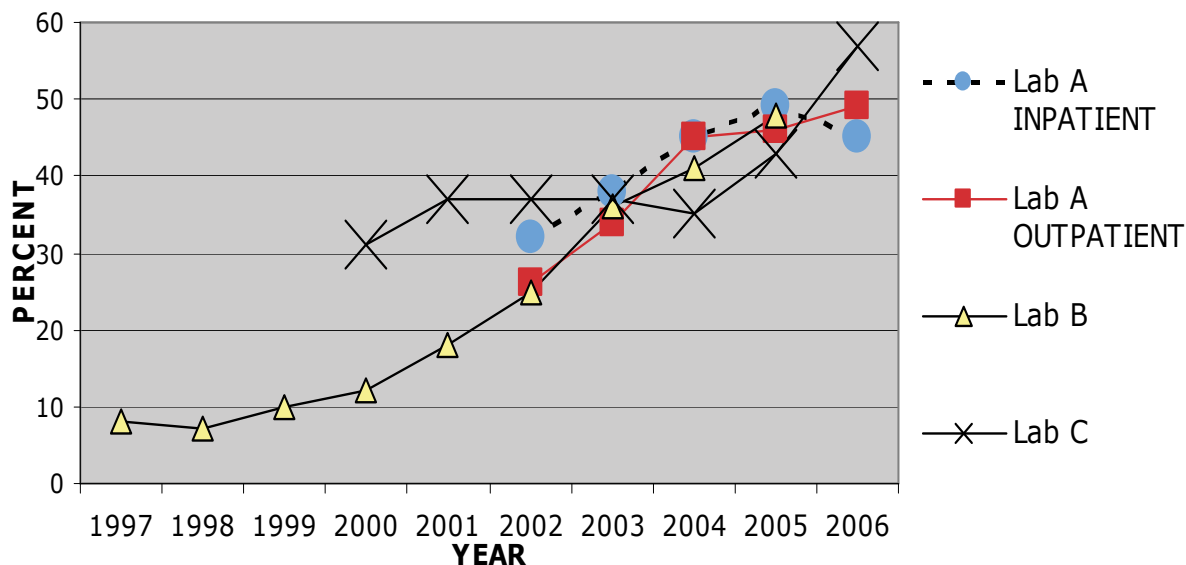
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In follow-up to the item on community acquired (CA) MRSA in the last edition of the *Yakima Health District Bulletin* (http://www.co.yakima.wa.us/health/documents/bulletin/bulletin5_6.pdf) YHD has obtained longitudinal methicillin resistance data from three major local laboratories serving Yakima County. The figure shows that proportion of *S. aureus* isolates which are resistant to methicillin has steadily increased over the past decade and now accounts for nearly 50% of all isolates. These data do *not* represent unduplicated patients; consequently, if MRSA is more prevalent among the duplicated patients, these figures may overestimate the true proportion of cases (not just isolates) which are methicillin resistant. Furthermore, the data do not discriminate between CA-MRSA and nosocomially acquired cases. Several recent reports in the medical literature describe blurring boundaries between the two anyway. That is, CA-MRSA clones are now accounting for up to 50% of hospital diagnosed MRSA in several settings. The bottom line is that methicillin resistance should be suspected in clinical situations where *S. aureus* is a probable or likely pathogen, adequate specimens for culture and sensitivity testing should be collected prior to initiation of empiric therapy, and selection of empiric therapy should account for the possibility of MRSA. CA-MRSA is typically susceptible to trimethoprim-sulfamethoxazole and tetracyclines, which are appropriate agents for empiric therapy of uncomplicated infections in outpatients. Severe, complicated, or hospitalized patients, as well as those who do not respond to initial outpatient therapy, should be managed in consultation with an infectious diseases specialist.

Additional Reading:

Maree CL, et. al. Community-associated Methicillin-resistant *Staphylococcus aureus* Isolates Causing Healthcare-associated Infections. *Emerging Infectious Diseases* 2007;13(2):236.

http://www.cdc.gov/eid/content/13/2/236.htm?s_cid=eid236_e#1f#1f



Norovirus Returns

In Yakima County and throughout the state, norovirus outbreaks have been reported in multiple congregate settings. Noroviruses are of the calicivirus family and typically cause self-limiting illnesses of several days' duration that are characterized predominantly by nausea, vomiting, diarrhea, low-grade fever, headache, malaise and myalgia. These viruses circulate predominantly in winter months and transmission is via the fecal-oral route, usually via intermediate fomites. The virus is stable in the environment for extended periods of time (e.g., hours). The infectious dose is exceedingly small (e.g., ≤ 100 particles, the amount contained in ≤ 1 microliter feces or vomitus at the peak of illness). The incubation period is typically 12-48 hours. This high infectivity and short incubation period make transmission exceedingly difficult to interrupt in households and other congregate settings, where attack rates often approach 50-75%. Patients should be considered communicable from the onset of illness until a minimum of 48 hours after the last episode of vomiting or diarrhea. Transmission in health care settings is typically initiated by an ill staff member, ill visitor, or admission of an incubating patient. Rotavirus is also being diagnosed in congregate facilities in Yakima County. Control practices are the same for both norovirus and rotavirus. Control in health care facilities should consist of the following:

- collection of stool specimens for routine enteric culture among several cases to exclude bacterial enteritis;
- increase hand hygiene among residents, patients, staff and visitors;
- cohorting and enteric precautions for ill patients until 48 hours after resolution of symptoms;
- contact precautions for patients with fecal incontinence
- aggressive decontamination and disinfection of soiled surfaces and toileting areas on a routine basis until the outbreak ceases (e.g., using 10% chlorine bleach in water);
- exclusion of ill staff and visitors until 48 hours after resolution of symptoms;
- heightened surveillance for volume depletion and acute care referral among vulnerable residents; and
- deferral of new admissions to non-acute care facilities until 96 hours (i.e., two incubation periods) after resolution of the last case.

For more information on norovirus control in health care facilities, go to:

http://www.cdc.gov/ncidod/dhqp/id_norovirusFS.html

Pandemic Influenza Preparedness Update

In January 2007, the Food and Agricultural Organization of the United Nations (FAO) expressed concern about new flare-ups of avian influenza in China, Egypt, Indonesia, Japan, Nigeria, South Korea, Thailand and Viet Nam. The numbers of outbreaks so far this year, however, are much lower than the epidemic numbers of last year.

Spread to other avian flocks by migrating birds in 2006 was also less than the previous year. But, the virus can still be spread through poultry trade and transport.

Countries are being strongly urged to remain alert and completely cooperative with surveillance efforts.

When the epidemic wave began in late 2003 there were eight countries affected. During 2004/05 the situation remained about the same. But in 2005/06 the virus spread to over forty countries.

This year eight countries have reported avian infections.

Continued strong government commitment and several years work will be needed to fully eradicate the H5N1 virus from poultry. Successful eradication will require all suspected outbreaks be reported immediately. To eradicate the virus in Indonesia, where it is widely distributed, the FAO has recommended vaccination of day-old chicks and blanket vaccination in heavily infected areas.

The Yakima Health District is in the process of updating our Emergency Preparedness and Response documents as well as the Pandemic Influenza Plan. These documents are dynamic with continuing revision and upgrade. The current plans are also part of the larger County Emergency Management Plan.

Both of these documents can be viewed through our website at: www.yakimapublichealth.org.

We have scheduled a tabletop exercise of the Pandemic Flu Plan for Monday, March 12 here in Yakima. It is during these types of activities where scenarios and responses are presented to determine effectiveness and needed revisions, and adjustments in our plan. Other entities (hospitals, law enforcement, first responders, schools, mental health, etc.) are also preparing response plans and participating in drills to test effectiveness. These are, and will continue to be, ongoing activities for the foreseeable future.

For further information please contact Gordon Kelly, Environmental Health Director, at 509-249-6507.

Immunization Q&A: Thimerosal

Q: As a clinician, am I required to use only thimerosal-free vaccines?

A: Yes, but only when two specific criteria are met:

- vaccine administration will occur on or after July 1, 2007;
- and
- the patient is either <36 months of age or is currently pregnant.

Discussion:

Thimerosal, a mercury-containing compound, has been used as a preservative in vaccines since the 1930s. No scientific evidence indicates that thimerosal in vaccines, including influenza vaccines, leads to serious adverse events in vaccine recipients. However, in 1999, the U.S. Public Health Service and other organizations recommended that efforts be made to eliminate or reduce the thimerosal content in vaccines to decrease total mercury exposure, chiefly among infants. Since mid-2001, vaccines routinely recommended for infants in the United States have been manufactured either without or with only trace amounts of thimerosal, resulting in a substantial reduction in the total mercury exposure from vaccines for children. The Washington State Department of Health currently provides thimerosal-free products for all routinely recommended childhood vaccines other than influenza.

Thimerosal is still present in multi-dose vials of inactivated influenza vaccine to reduce the likelihood of bacterial contamination, but many of the single-dose syringes and vials are thimerosal-free or contain only trace amounts of thimerosal (see Table). Influenza vaccine preparations containing trace amounts of thimerosal have <1 microgram mercury/dose and are considered “thimerosal-free.”

In March 2006, the Washington State Legislature joined six other states by passing a law stating that, beginning July 1, 2007, thimerosal-containing vaccines may not be administered to children <36 months of age nor to women known to be pregnant (RCW 70.95M.115).

The law stipulates that use of thimerosal-free preparations of influenza vaccine are allowed in these groups, as are other vaccines containing <0.5mcg of mercury per dose.

In the event that thimerosal-free influenza vaccine is not available, current scientific evidence would suggest that it is better to offer thimerosal-containing vaccine than to forego influenza immunization altogether. However, the new state law will prohibit such exercise of clinical judgment after July 1, 2007. The U.S. influenza vaccine supply for infants and pregnant women is in a period of transition; the availability of thimerosal-reduced or thimerosal-free vaccine intended for these groups is being expanded, but may not yet be sufficient to meet the demand. This could leave clinicians in a difficult bind if they encounter vaccine candidates for whom they have no legally usable vaccine after July 1. The Secretary of the Department of Health may, upon declaration of a public health emergency, suspend the requirements of this law for the duration of the emergency. Whether a shortage of thimerosal-free vaccine would be interpreted as such an emergency is not clear at this time, but YHD will stay abreast of the issue and keep you informed if the need to consider use of thimerosal-containing influenza vaccine in these groups should arise after July 1.

For more information on thimerosal as it relates to vaccines, visit:

- <http://www.cdc.gov/flu/about/qa/thimerosal.htm>
- ACIP. Prevention and Control of Influenza, 2006-2007. MMWR 2006;55(RR-10).
- http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5510a1.htm?s_cid=rr5510a1_e
- RCW 70.95M.115
- <http://slc.leg.wa.gov>

TABLE 4. Approved influenza vaccines for different age groups — United States, 2006–07 season

Vaccine*	Trade name	Manufacturer	Dose/ Presentation	Thimerosal mercury content (mcg Hg/0.5-mL dose)	Age group	No. of doses	Route
Inactivated							
TIV	Fluzone®	sanofi pasteur	0.25-mL prefilled syringe	0	6–35 mos	1 or 2†	Intramuscular§
			0.5-mL prefilled syringe	0	≥36 mos	1 or 2†	Intramuscular§
			0.5-mL vial	0	≥36 mos	1 or 2†	Intramuscular§
			5.0-mL multi-dose vial	25	≥6 mos	1 or 2†	Intramuscular§
TIV	Fluvirin™	Novartis Vaccine (formerly Chiron Corporation)	0.5-mL prefilled syringe	<1.0	≥4 yrs	1 or 2†	Intramuscular§
			5.0-mL multi-dose vial	24.5	≥4 yrs	1 or 2†	Intramuscular§
			TIV	FLUARIX™	GlaxoSmithKline	0.5-mL prefilled syringe	<1.25
Live, attenuated							
LAIV	FluMist™	MedImmune	0.5-mL sprayer	0	5–49 yrs	1 or 2¶	Intranasal**

* A 0.5-mL dose contains 15 mcg each of A/New Caledonia/20/1999 (H1N1)-like, A/Wisconsin/67/2005 (H3N2)-like, and B/Malaysia/2506/2004-like antigens. For the A/Wisconsin/67/2005 (H3N2)-like antigen, manufacturers may use the antigenically equivalent A/Hiroshima/52/2005 virus, and for the B/Malaysia/2506/2004-like antigen, manufacturers may use the antigenically equivalent B/Ohio/1/2005 virus.

† Two doses administered at least 1 month apart are recommended for children aged 6 months–<9 years who are receiving influenza vaccine for the first time.

§ For adults and older children, the recommended site of vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ Two doses administered at least 6 weeks apart are recommended for children aged 5–<9 years who are receiving influenza vaccine for the first time.

** One dose equals 0.5 mL, divided equally between each nostril.

Source: Centers for Disease Control and Prevention (CDC)

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Notifiable Conditions Summary 2004-2006

Condition (includes confirmed, probable and suspect cases)	Total Cases by Year		
	Total Cases by Year	Total Cases by Year	Total Cases by Year
	2006	2005	2004
Campylobacteriosis	206	115	99
Cryptosporidiosis	8	7	2
Enterohemorrhagic E. coli	5	3	3
Giardiasis	30	28	30
Salmonellosis	37	49	36
Shigellosis	37	25	7
Hepatitis A acute	1	3	2
Hepatitis B acute	4	1	4
Hepatitis B chronic	11	14	22
Hepatitis C acute	2	1	2
Hepatitis C chronic	176	214	219
Meningococcal	1	2	3
Pertussis	23	197	62
Tuberculosis	15	14	12
HIV New	3	14	12
HIV Deaths	0	2	1
HIV Cumulative Living	143	140	128
Chlamydia	1120	973	1002
Genital Herpes—Initial	70	99	125
Gonorrhea	166	138	198
Primary and Secondary Syphilis	3	2	0