Yolo County Health Department Communicable Disease Update

Volume 4, Issue 1/2 January/February 2006

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Contact Us

Yolo County Health Department
www.yolohealth.org

Fax CMRs to (530) 669-1549

10 Cottonwood St.
Woodland, CA 95695
(530) 666-8645

500-B Jefferson Blvd.
West Sacramento, CA 95605
(916) 375-6380

Related Web Sites:

CDC
www.cdc.gov

CA Dept. of Health Services
www.dhs.ca.gov

World Health Organization
www.who.int

Summary Tdap Vaccine Recommendations

Two Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (Tdap) products were licensed by the FDA in 2005 as single dose booster vaccines to provide protection against tetanus, diphtheria, and pertussis. GlaxoSmithKline's BOOSTRIX® is indicated for persons 10–18 years of age, and sanofi pasteur's ADACEL™ is indicated for persons 11–64 years of age. Recommendations by the Advisory Committee on Immunization Practices (ACIP) regarding the use of Tdap vaccines in adults and adolescents are summarized below

Adolescents

In July 2005, ACIP recommended the routine use of Tdap vaccines in adolescents age 11–18 years in place of tetanus and diphtheria toxoids (Td) vaccines.

Summary: ACIP recommends that adolescents 11–18 years of age receive a single dose of Tdap instead of Td for booster immunization against tetanus, diphtheria and pertussis if they have completed the recommended childhood DTP/DTaP vaccination series and have not received Td or Tdap. Adolescents who require a tetanus toxoid-containing vaccine as part of wound management should receive a single dose of Tdap instead of Td if they have not previously received Tdap. Adolescents who have never received tetanus diphtheria-pertussis vaccination should receive a series of three vaccinations. The preferred schedule is a single Tdap dose, followed by a dose of Td ≥4 weeks after the Tdap dose and a second dose of Td 6 to 12 months after the Td dose. Tdap may substitute for any one of the 3 Td doses in the series.

For complete ACIP recommendations, precautions and contraindications for Tdap and Td use in adolescents, go to www.cdc.gov/nip/publications/acip-list.htm.

Adults

Summary: In October 2005, ACIP recommended routine use of a single dose of Tdap for adults 19 - 64 years of age to replace the next booster dose of tetanus and diphtheria toxoids vaccine (Td). ACIP also recommended a single dose of Tdap for adults who have or who anticipate having close contact with an infant <12 months of age (e.g., parents, childcare providers, health-care providers). Ideally, Tdap should be given at least 1 month before beginning close contact with the infant. Women should receive a dose of Tdap in the immediate post-partum period if they have not previously received Tdap. Any woman who might become pregnant is encouraged to receive a single dose of Tdap. Tdap may be given at an interval shorter than 10 years since receipt of the last tetanus toxoid-containing vaccine to protect against pertussis. The safety of intervals as short as approximately 2 years between administration of Td and Tdap is supported by a Canadian study of children and adolescents.

For complete ACIP Tdap adult recommendations, precautions and contraindications, go to www.cdc.gov/nip/publications/acip-list.htm.

Public Health Update ,Volume 4, Issue 1 (January-February 2006)
Yolo County Health Department
Health Officer Bette G. Hinton, MD, MPH
Editor Tim Wilson, DVM, MPH

This newsletter is distributed to health professionals and facilities serving Yolo County residents. Copies may be accessed online at www.yolohealth.org. Please direct subscription requests and questions/comments regarding this publication to (530) 666-8645.

Recommendation Against Use of Amantadine and Rimantadine

On the basis of available antiviral testing results, **CDC is providing an interim recommendation that neither amantadine nor rimandatine be used for the treatment or prophylaxis of influenza A in the US for the remainder of the 2005–06 influenza season**. During this period, oseltamivir or zanamivir should be selected if an antiviral medication is used for the treatment and prophylaxis of influenza. Testing of influenza isolates for resistance to antivirals will continue throughout the 2005–06 influenza season, and recommendations will be updated as needed. Annual influenza vaccination remains the primary means of preventing morbidity and mortality associated with influenza. Additional information about the prevention and control of influenza is available at http://www.cdc.gov/flu/.

Shots for Tots — Immunization Registry for Yolo County Kids

Shots for Tots (Kids Immunization Data System) is a regional computerized database that keeps track of your pediatric patients' immunizations. All health care providers that immunize children are encouraged to use the system. The benefits of using the Immunization Registry include:

- It's free!!!
- Keeps a record of a pediatric patient's immunization history, including ones given at other clinics.
- Allows immunization records to be easily copied for schools, day care, or camp entry requirements.
- Assists your staff in reminding families when their child's immunizations are due.
- Prevents duplicate shots because of lost records, especially if the family moves between counties.
- Lets you run reports to show how your clinic is doing with immunizing your pediatric patients.
- Helps your clinic staff keep track of your immunization inventory.

Thirty-six percent (36%) of Yolo County's 0-5 year-olds are in the Registry. That is over 5,166 immunization histories from our county. However, when a provider queries the Registry for a child's immunization history, all seven participating counties (Sacramento, Sutter, Placer, Yuba, El Dorado, and Nevada) are included. So the child may be one of 52,274 already listed in the database.

To sign up for registry access, contact the KIDS Helpdesk at (916) 441-0726 or Yolo County Immunization Coordinator, Lynne Foster, at (530) 666-8645 / (916) 375-6385.

Mercury Free Act to Impact Flu Vaccine Orders for 2006/07 Flu Season

Recent California legislation, *The Mercury Free Act of 2004*, Chapter 837, statutes of 2004 (AB 2943, Pavley), will limit the administration of mercury-containing vaccines to pregnant women and children younger than 3 years old. As a consequence of this legislation, effective July 1, 2006, it will be against California law (Health and Safety (H&S) Code Section 124172) to administer doses of inactivated influenza vaccine from a multi-dose vial to pregnant women or children younger than 3 years old because of the level of the mercury-containing preservative, thimerosal, contained in multi-dose vials. Effective July 1, 2006, only doses of influenza vaccine from single-dose syringes or vials with trace levels or no mercury may be given to these groups. This law does not apply to persons who are 3 years of age and older and who are not pregnant.

To order the appropriate formulation of influenza vaccine for the 2006-07 influenza season, CDHS is encouraging health care providers to consider this new law and to estimate the number of their vaccinated patients who will be pregnant or younger than 3 years. Pre-booking for certain influenza vaccine manufacturers and distributors is began in January. For a list of influenza vaccines that currently meet the new law's mercury limit, go to www.dhs.ca.gov/ps/dcdc/izgroup/provider.htm. For additional questions about this topic, please contact Health Department Immunization Coordinator, Lynne Foster at (530) 666-8645 / (916) 375-6385 or Nisha Gandhi at CDHS Immunization Branch at (510) 620-3732.

(Source: CDHS Advisory, 01/11/2006)

Yolo County Health Department Communicable Disease Update

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Guidance for Workers Involved in Avian Flu Eradication

Avian influenza (H5N1) has been detected in poultry in Asia, Europe and Africa. If the virus is detected in US flocks, health care providers may need to advise persons involved in the culling or removal of dead birds. The following CDC interim recommendations are based on what are deemed **optimal** precautions for protecting individuals if an outbreak of high pathogenic avian influenza occurs in the US. These guidelines are available at www.cdc.gov (click on Avian Flu link).

Birds infected with avian influenza viruses can shed virus in saliva, nasal secretions, and feces. Most cases of avian influenza infection in humans have resulted from contact with infected poultry or contaminated surfaces.

Basic Infection Control

- Educate workers about the importance of strict adherence to and proper use of hand hygiene after contact with infected or exposed poultry, contact with contaminated surfaces, or after removing gloves. Hand hygiene should consist of washing with soap and water for 15-20 seconds or the use of other standard hand-disinfection procedures.
- Ensure that personnel have access to appropriate personal protective equipment (PPE), instructions and training in PPE use, and respirator fit-testing (detailed below).

Personal Protective Equipment

- Disposable gloves made of lightweight nitrile or vinyl or heavy duty rubber work gloves that can be disinfected should be worn. Gloves should be changed if torn or otherwise damaged. Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces.
- Protective clothing, preferably disposable outer garments or coveralls, an impermeable apron or surgical gowns with long cuffed sleeves, plus an impermeable apron should be worn.
- Disposable protective shoe covers or rubber or polyurethane boots that can be cleaned and disinfected should be worn.
- Safety goggles should be worn to protect the mucous membranes of eyes.
- Disposable particulate respirators (e.g., N-95, N-99, or N-100) are the minimum level of respiratory protection that should be worn. This level or higher respiratory protection may already be in use in poultry operations due to other hazards that exist in the environment (e.g., other vapors and dusts). Workers must be fit-tested to the respirator model that they will wear and also know how to check the face-piece to face seal. Workers who cannot wear a disposable particulate respirator because of facial hair or other fit limitations should wear a loose-fitting (i.e., helmeted or hooded) powered air purifying respirator equipped with high-efficiency filters.
- Disposable PPE should be properly discarded, and non-disposable PPE should be cleaned and disinfected as specified in state government, industry, or USDA outbreak-response guidelines. Hand hygiene measures should be performed after removal of PPE.

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Yolo County Health Department
Health Officer Bette G. Hinton, MD, MPH
Editor Tim Wilson, DVM, MPH

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Avian Flu Resources: All linked from www.yolohealth.org

Yolo County Health Department

- **www.yolohealth.org** - links to all of the following are available at our web site. Click on the purple "Public Health Emergency Preparedness" button, then click on the Pandemic Flu link.

California Department of Health Services

- **www.dhs.ca.gov/ps/dcdc/vrdl/html/FLU/H5N1/Main%20Avian%20Flu%20page.htm** - source of current State guidance for screening criteria, infection control, case management, specimen collection…

CDC guidance and updates - includes pandemic planning checklists for medical offices, schools and businesses

- **www.cdc.gov** - click on Avian Flu link

US Government Pandemic Flu - clearinghouse for multiple federal and state sites

- **www.PandemicFlu.GOV** (US Government)

World Health Organization—multiple links

- **www.who.int.en** (WHO) - click on Avian Flu links

WHO list of H5N1-affected countries
(***This list is updated daily and is recommended by CDC and CDHS when determining if suspect avian flu patients have traveled to an H5N1-affected country***)

- **www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm**

USDA Guidance and links for poultry farmers, pet health (birds, cats, and other affected species), food safety, and other concerns

- **www.usda.gov**—click on Avian Influenza link (under "Spotlights" section)

Chelation Deaths due to Accidental Na_2EDTA Administration

The CDC recently described three deaths associated with chelation-therapy-related hypocalcemia. Medical records and coroner reports indicate that Na_2EDTA was administered instead of CaEDTA in at least two of the cases with the third case still under investigation. It is believed that these deaths involved "look-alike, sound-alike" substitutions (i.e., confusion of drugs with similar names). A review of medical records in one case revealed that the brand names for the Na_2EDTA product (Endrate®), and the CaEDTA product (Versenate®), were used interchangeably and likely resulted in the inappropriate administration of Na_2EDTA.

The CDC is suggesting that all hospital pharmacies evaluate whether continued stocking of Na_2EDTA is necessary, given the established risk for hypocalcemia, the availability of less toxic alternatives, and an ongoing safety review by the FDA. Health care providers and pharmacists should ensure that Na_2EDTA is not administered to children during chelation therapy. Additionally, case reports of cardiac arrest or symptoms of hypocalcemia during chelation therapy should be reported to the CDC Lead Poisoning Prevention Branch (770-488-3300) or to MedWatch, the FDA adverse event reporting system, at www.fda.gov.medwatch.

(Source: MMWR 55(08): 204-207)

Yolo County Health Department Communicable Disease Update

Volume 4, Issue 5 May 2006

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Fax CMRs to (530) 669-1549

10 Cottonwood St.
Woodland, CA 95695
(530) 666-8645

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Mumps Outbreak in Midwest

Iowa and neighboring states are battling an outbreak of mumps in young adults. As of May 2, 2006, more than 2,100 possible mumps cases with onset in 2006 have been reported to the CDC in Iowa, Kansas, Illinois and Nebraska. Many cases have occurred either in college students or those in contact with infected college students. Over 20 cases have been hospitalized for severe mumps. As of May 9, 2006, California has had no mumps cases linked to this outbreak.

The current outbreak has led to the re-evaluation of vaccine efficacy and the revision of existing vaccination recommendations. Data from outbreak investigations indicate that doses from two mumps vaccine are more effective than a single dose. In California, thanks to the School Immunization Law, most people born after 1987 who went to California schools should have received two doses of MMR vaccine. Those born between 1975 and 1987 should have received at least one dose of MMR vaccine. The California Department of Health Services (CDHS) recommends that persons who are not up-to-date according to the Advisory Committee on Immunization Practices (ACIP) MMR vaccination recommendations get vaccinated.

The Health Department encourages clinicians to:

- Be aware of the possibility of mumps disease occurring in the student population and include this possibility in any assessments, including phone advice and triage
- Report all suspected mumps cases to the Health Department by calling (530) 666-8645
- Administer a second MMR vaccine to persons not up-to-date on their MMR vaccination status, especially young adults and health care providers.

Mumps is an acute viral infection characterized by a nonspecific prodrome, including muscle aches, loss of appetite, malaise, headache, and fever, followed by acute onset of unilateral or bilateral, tender swelling of parotid or other salivary glands. An estimated 60% - 70% of mumps infections produce typical acute parotitis. Approximately 20% of infections are asymptomatic and nearly 50% are associated with nonspecific or primarily respiratory symptoms. Complications include encephalitis, spontaneous abortion, deafness, and, more commonly, inflammation of the testicles, ovaries or breasts. Treatment of mumps is supportive. Additional information about mumps is available at www.cdc.gov/nip/diseases/mumps/default.htm. Again, if you suspect a case of mumps, please contact the Health Department at (530) 666-8645 for notification and assistance in diagnostic testing.

ABC Pandemic Flu Movie

On May 9, ABC aired "Fatal Contact: Bird Flu in America." The movie depicted an outbreak of H5N1 avian flu from its origins through its mutation into a pandemic virus. A viewer's guide and FAQ are available at www.pandemicflu.gov/news/birdfluinamerica.html#QA.

Communicable Disease Stats 2000—2005

Communicable disease statistics for confirmed reports of disease for Yolo County residents are shown in the table below and continued on the next page. Reports submitted for non-Yolo County residents are forwarded to the appropriate jurisdiction and are not shown below. Diseases are shown by the year they were reported versus year diagnosed. This table is also available online at www.yolohealth.org (click on the "Disease Reporting and Laboratory" link on the left side of the page).

Number of Selected Communicable Diseases Reported among Yolo County Residents, 2000 — 2005.

Disease	2000	2001	2002	2003	2004	2005
Amebiasis	1	5	2	2	0	0
Botulism	0	2	0	1	0	0
Brucellosis	0	0	0	0	0	1
Campylobacteriosis	39	23	48	28	48	52
Chlamydial Infection	283	261	354	347	415	531
Coccidioidomycosis	0	1	3	1	5	2
Cryptosporidiosis	1	1	0	3	3	2
***E. coli* O157:H7 / HUS**	3/0	3/0	2/0	2/0	3/1	2/1
Encephalitis (does not include WNV encephalitis)	0	2	0	2	2	3
Giardiasis	16	15	17	12	7	8
Gonococcal Infection	33	35	28	39	42	65
Haemophilus influenzae (invasive disease only)	0	1	0	0	0	1
Hantavirus	2	0	0	0	0	0
Hepatitis A	34	5	9	4	10	3
Hepatitis B (acute and chronic)	73	49	57	45	42	55
Hepatitis C (acute and chronic)	181	140	93	92	116	117
Kawasaki Syndrome	0	0	0	0	1	1
Legionellosis	0	1	0	0	0	0
Listeriosis	0	0	1	0	0	1
Lyme Disease	0	0	2	0	1	1
Malaria	4	2	2	0	2	2
Meningitis, bacterial (does not include meningococcal meningitis)	2	4	0	0	6	2
Meningitis, viral	6	5	9	23	27	13
Meningococcal Infection (includes meningococcal meningitis and meningococcemia)	0	2	4	3	3	1
Mumps	0	0	1	0	0	0

Data Source: Yolo County Health Department. Table continued on following page.

Number of Selected Communicable Diseases Reported among Yolo County Residents, 2000 — 2005 (CONTINUED).						
Disease	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Pertussis	0	2	52	140	21	18
Rubella	0	1	0	0	0	0
Salmonellosis (non-typhoid)	16	16	14	17	28	15
Scombroid Poisoning	0	0	0	0	1	0
Shigellosis	11	2	3	17	4	9
Syphilis (congenital)	0	0	0	0	0	1
Syphilis (primary/secondary)	0	2	1	0	2	2
Syphilis (latent)	9	6	10	3	11	10
Tuberculosis	9	5	4	12	5	9
Typhoid Fever (acute)	0	0	1	0	1	0
Varicella (hospitalization or death only)	0	0	0	0	0	1
Vibrio Infection (non-cholera)	1	0	0	0	1	1
West Nile Virus Infection	0	0	0	0	1	12
Yersiniosis	0	0	1	1	0	0
Data Source: Yolo County Health Department.						

The Zebra Book

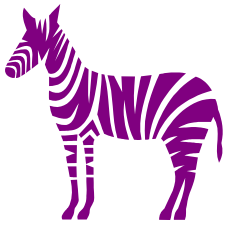
"When you hear hoofbeats, think horses , not zebras..."

So goes a well-known medical truism exhorting clinicians to keep in mind that rare diseases, like zebras, are unlikely to be encountered in a world full of horses. To this we'd like to add

"...but be sure you know what zebras look like and who to call when you see one!"

And be sure to have our updated "Zebra Book" handy, just in case. You'll know it when you see it—it's purple, with stripes.

The Zebra Book (AKA the *2006 Bioterrorism & Infectious Disease Manual for Clinicians)* includes sections on Bioterrorism Agents (anthrax, smallpox, ricin, etc.), avian flu, chemical emergencies, radiological emergencies, infection control, emergency planning and lots, lots more. Each disease section includes a brief overview of the disease, clinical signs and symptoms, differential diagnoses, treatment and recommendations in a reader-friendly format



Zebra books are being distributed to all Yolo County hospitals, clinics, medical offices and veterinary clinics free of charge. If you haven't gotten yours yet, contact Tim Wilson at (530) 666-8645 to arrange to receive a copy. The Zebra book can also be downloaded from the Health Department web site:

www.yolohealth.org.

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Yolo County Health Department
Health Officer Bette G. Hinton, MD, MPH
Editor Tim Wilson, DVM, MPH

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Osteoporosis Awareness & Prevention Month

May is Osteoporosis Awareness and Prevention Month. Health care providers are encouraged to promote bone health by screening for calcium intake and physical activity during office visits. The American Academy of Pediatrics suggests the following screening questions:

- How many times a day do you/your child drink white or flavored milks?
- How often do you/your child eat cheese, yogurt, or other dairy products?
- How often do you/your child drink sweetened drinks (soft drinks, etc)?
- Do you/your child drink calcium-fortified juices or eat any other calcium-fortified foods such as cereal or bread? How often?
- Do you/your child eat any of the following: broccoli, beans, cooked greens (e. g., collards, turnip greens, kale), or tofu?
- Do you/your child take calcium supplements including those with vitamins?
- How many times a week do you/your child participate in vigorous weight-bearing physical activity?
- Have you/your child had any bone fractures?
- Is there a family history of osteoporosis?
- Was your child born prematurely?

Other Ways to Promote bone health

- Encourage families to include at least three age-appropriate servings of milk products (four servings for teens) in daily meals.
- Recommend options for lactose-intolerant patients. Research has shown that most individuals can tolerate lactose when consumed in small amounts or with other foods. Fermented milk products such as hard cheese and yogurt may be tolerated better than fresh milk. Lactose-free and low-lactose milks are available as well as lactase enzyme tablets or drops.
- Encourage intake of fruits and vegetables that are sources of potassium and bicarbonate, which may improve calcium retention. Nondairy food sources of calcium include dark green vegetables, almonds, sunflower seeds, soy foods, tofu, or calcium-fortified foods and juices. If an individual consumes no milk products and depends on nondairy or calcium-fortified foods to meet calcium needs, another source is needed for vitamin D.
- Evaluate teens (especially young women) following restrictive diets using only nondairy calcium sources for overall nutritional adequacy and eating practices. Consider recommending a calcium and Vitamin D supplement. Refer teens with highly restrictive diets or erratic eating habits to a registered dietitian for further evaluation and counseling.

For more information about osteoporosis screening and to access educational materials, please refer to the National Osteoporosis Foundation's website www.nof.org.

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Yolo County Health Department
www.yolohealth.org

Fax CMRs to (530) 669-1549

10 Cottonwood St.
Woodland, CA 95695
(530) 666-8645

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Updated H5N1 Case Definition and Guidance

On June 8, 2006, the CDC updated interim case definition and guidance for laboratory testing of persons with suspected avian influenza A (H5N1) infection in the US. In addition to the revised case definition (shown below), assuming a patient meets the criteria for laboratory testing, **California Department of Health Services (CDHS) now recommends collecting an oropharyngeal swab AND nasopharyngeal swab, wash or aspirate AND a lower respiratory specimen. See** www.dhs.ca.gov/ps/dcdc/VRDL/html/FLU/Fluintro.htm for updated materials as they become available.

Updated Case Definition

I. A suspect case, for whom H5N1 laboratory testing is recommended, meets these criteria:

Has an illness that requires hospitalization or is fatal; **AND** has or had a documented temperature of ≥ 38ºC (>100.4ºF); **AND** has radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe illness for which an alternative diagnosis has not yet been established; **AND** has at least one of the *potential exposure criteria* (A,B or C) listed below **Within 10 days of symptom onset.**

Potential exposure criteria:

A. A history of travel to a country with influenza H5N1 documented in poultry, wild birds, and/or humans (www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm)

AND at least one of the following potential exposures:

- Direct contact with (e.g., touching) sick or dead domestic poultry;
- direct contact with surfaces contaminated with poultry feces;
- consumption of raw or incompletely cooked poultry or poultry products;
- direct contact with sick or dead wild birds suspected or confirmed to have influenza H5N1;
- close contact (approach within 1 meter approx. 3 feet]) of a person who has been hospitalized or died due to a severe unexplained respiratory illness

OR

B. Was in close contact (approach within 1 meter [approx. 3 feet]) of an ill person who has confirmed or suspected H5N1 infection

OR

C. Worked with live influenza H5N1 virus in a laboratory.

II. A suspect case, for whom H5N1 laboratory testing should be considered on a case-by case basis in consultation with local and state health departments, meets these criteria:

1. A hospitalized or ambulatory patient with mild or atypical disease (e.g., a patient with respiratory illness and fever who does not require hospitalization, or a patient with significant neurological or gastrointestinal symptoms in the absence of respiratory disease) who has at least one of the potential exposure criteria (A,B or C) listed above.

OR

2. A patient with severe or fatal respiratory disease whose epidemiological information is uncertain, unavailable, or otherwise suspicious but does not meet the criteria above (e.g., a returned traveler from an influenza H5N1-affect country whose exposures are unclear or suspicious, or a person who had contact with sick or well-appearing poultry).

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Plague & Domestic Cats in California

Statewide surveillance by CDHS in 2006 suggests that plague activity in California may be increased over previous years. Two human cases of plague were recently identified: one in Kern County in November and a second in Los Angeles County in April. These represent the first cases of human plague in California since 2000. In addition, plague activity was detected in wild carnivores collected in April in Kern, Mariposa, Plumas and Sierra counties.

Plague is enzootic in wild rodent populations in California and remains a threat to pets and people who have contact with rodents or their fleas. Domestic cats are highly susceptible to plague; in 2005, four cases of plague were identified in domestic cats in California. Feline plague is a serious public health concern because cats can serve as a direct source of transmission for *Yersinia pestis* bacteria to owners, veterinary staff, and others who have direct contact with the infected cat. Veterinary clinics will be mailed information regarding submission of lab specimens for suspect plague cases in the next few weeks.

All suspected cases of plague in humans and animals should be reported immediately to the Yolo County Health Department by contacting the Communicable Disease Coordinator at (530) 666-8645.

Mumps Outbreak Waning

The recent mumps outbreak in the Midwest appears to be waning with a dramatic decrease in new cases reported to the CDC since early June. Over 4,500 cases have been linked to this outbreak (mostly in Iowa). No California cases have been linked to the outbreak. Source: CDC.

First Human West Nile Virus Case Reported in California for 2006

A 27-year-old Kern County man has been infected with West Nile virus (WNV), the first reported human case in California this year. The man is hospitalized with the neurological form of WNV infection.

To date, WNV has been detected in 13 of California's 58 counties in 31 dead birds and 11 mosquito samples. In 2005, a total of 935 human WNV infections were reported in 40 counties, including 19 deaths.

In Yolo County no WNV activity has been detected, although dead birds have tested positive for WNV in Sacramento County. In 2005, 12 Yolo County residents experienced WNV infection (no deaths).

Californians are urged to take these simple steps to protect themselves from mosquito bites and WNV:

- Apply insect repellent containing DEET, picaradin or oil of lemon eucalyptus, according to label instructions, whenever you are outside.
- Eliminate all standing water in buckets, flowerpots, old tires, gutters and other sources of standing water that can support mosquito breeding.
- Be sure all window and door screens fit tightly and have no rips or tears.
- Wear long sleeves and long pants if you're going to be out at dawn or dusk, when mosquitoes are most active.

WNV is transmitted to humans and animals through a mosquito bite from a mosquito that has been infected by feeding on an infected bird. Approximately 80% of people who are infected with WNV will have no symptoms. Up to 20% of the people who become infected will display symptoms such as fever, headache, body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Less than 1% of infected individuals infected will develop severe illness that can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis.

For more information about WNV, visit www.westnile.ca.gov. Contact the Yolo County Public Health Laboratory at (530) 666-8645 to request WNV testing for patients. Source: CDHS.

Yolo County Health Department Communicable Disease Update

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Yolo County Health Department
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Woodland, CA 95695
(530) 666-8645

500-B Jefferson Blvd.
West Sacramento, CA 95605
(916) 375-6380

Related Web Sites:

CDC
www.cdc.gov

CA Dept. of Health Services
www.dhs.ca.gov

World Health Organization
www.who.int

West Nile Virus Update

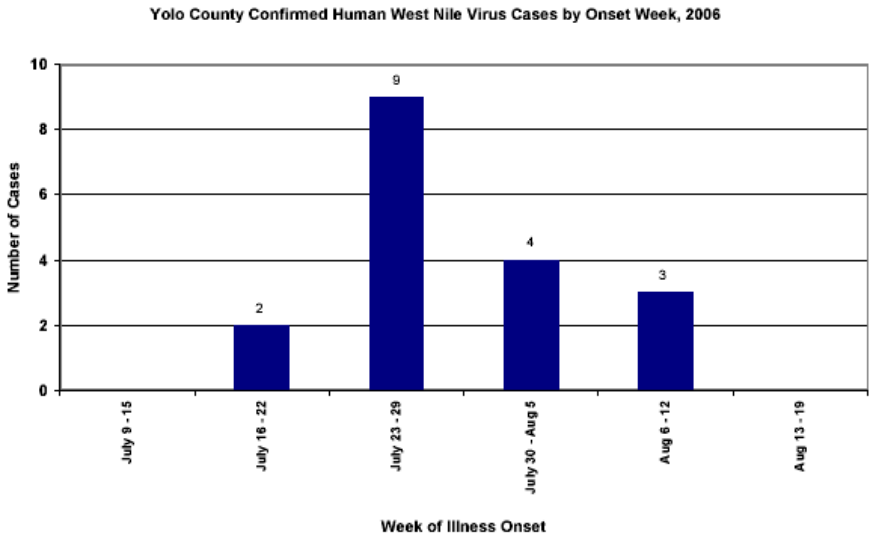
As of August 24, 2006, 18 human West Nile virus (WNV) infections have been identified involving Yolo County residents. Of these cases, 17 experienced symptoms of West Nile Fever and one case is classified as West Nile neuroinvasive disease requiring hospitalization. In 2005, 12 human WNV infections were detected in Yolo County.

Preliminary characteristics of Yolo County human WNV cases:

- Average age: 41.5 years (age range 9 – 70 years)
- Sex:
  67% (12/18) Male
  33% (6/18) Female
- Place of Residence:
  56% (10/18) Davis
  33% (6/18) Woodland
  11% (2/18) Winters

The first human death caused by WNV in California this year was recently reported in Butte County. No deaths have occurred as a result of West Nile infection in Yolo County thus far. Zero horses have been reported with WNV in 2006 (compared to 16 horses in 2005). Updated West Nile surveillance statistics may be accessed at www.westnile.ca.gov (Click on 'Maps and Data' on left toolbar, then click on '2006 WNV Activity by County').

Based on previous years of observation, WNV activity is expected to decline by mid-September. Medical providers should consider West Nile virus as a differential diagnosis for patients experiencing neurologic illness such as encephalitis, meningitis, acute flaccid paralysis or flu-like illness in the absence of other known cause. Contact the Public Health Laboratory regarding WNV specimen submission by calling (530) 666-8645. As in previous years, WNV testing is available through the Public Health Laboratory at no cost to Yolo County medical providers.



Public Health Update , Volume 4, Issue 7/8 (July/August 2006)
Yolo County Health Department
Health Officer Bette G. Hinton, MD, MPH
Editor Tim Wilson, DVM, MPH

This newsletter is distributed to health professionals and facilities serving Yolo County residents. Copies may be accessed online at www.yolohealth.org. Please direct subscription requests and questions/comments regarding this publication to (530) 666-8645.

Increase in *Vibrio parahemolyticus* infections

From May through July 2006, several cases of vibriosis caused by *Vibrio parahemolyticus* have been reported to local health departments. Cases have occurred primarily in New York, Washington and Oregon, but an increase in cases has also been detected in California, including at least 3 cases among Yolo County residents. Preliminary multi-state traceback investigation findings reported by the Centers for Disease Control and Prevention (CDC) have linked contaminated oysters and clams to harvest areas in Washington and British Columbia. Shellfish harvest areas in Washington associated with illness have been closed to harvesting. Oysters from those areas have been recalled by Washington state shellfish-control authorities.

V. parahemolyticus infection causes acute, self-limited gastroenteritis typically characterized by diarrhea, abdominal cramps, nausea, vomiting, fever and chills of 1-3 days duration, with onset within 24 hours after eating contaminated foods. Cases are most commonly reported during warmer months and are often associated with eating raw or undercooked shellfish or other cooked foods that have been cross-contaminated with raw shellfish. To decrease the risk of vibriosis, shellfish should be thoroughly cooked before eating.

The CDC estimates that each laboratory-confirmed case of *V. parahemolyticus* represents approximately 20 additional cases that may go undiagnosed and/or underreported. Vibriosis is reportable to the Health Department. Since a single case of vibriosis may signal a public health emergency, providers should contact Public Health Nursing as soon as vibriosis is suspected by calling (530) 666-8645. Medical providers are advised to request stool specimens from patients with acute gastroenteritis and a history of recent shellfish consumption. Contact the Public Health Laboratory at (530) 666-8645 for guidance regarding specimen submission.

(Source: CDC, MMWR Dispatch Vol. 55 / August 7, 2006.)

Salmonella oranienburg Outbreak Associated with Healthcare Facilities

The CDC is investigating a national outbreak of *Salmonella oranienburg* infections. At this time, most of the cases have occurred in people with connections to healthcare facilities, including several cases in patients who had been hospitalized for several days before the organism was recovered. In most cases, the organism has been recovered from stool, but some patients have had the organism recovered from blood or urine. Clinicians should consider *S. oranienburg* as a potential cause of healthcare-associated diarrhea if routine evaluations are unrevealing. *S. oranienburg* can be diagnosed by stool culture.

While laboratories may report positive Salmonella cultures to the Health Department, practitioners are required to report all cases of Salmonella to the Health Department to ensure timely investigation. Cases may be reported by submitting a Confidential Morbidity Report (CMR) by fax to (530) 669-1549 or by contacting Public Health Nursing by phone at (530) 666-8645.

Crabs

Two rare cases of lung fluke infection (paragonimiasis) in Orange County are under investigation by CDHS. The two unrelated patients were evaluated for chronic respiratory symptoms leading to a lung biopsy in one case and a pleural fluid tap in the other. Both patients subsequently had positive serology for *Paragonimus,* a lung fluke associated with ingestion of raw or uncooked crabs or crayfish. Both persons reported eating live raw Japanese fresh water crabs, also known as sawagani crabs, 4-5 months before at the same Orange County sushi restaurant. The crabs were imported from Japan.

No other cases have been reported in California, but preliminary investigation has revealed that such crabs might have been distributed to other restaurants. CDHS is advising consumers who have eaten raw or undercooked fresh water crabs and have an illness with pulmonary symptoms to seek medical evaluation for possible pulmonary paragonimiasis. Other symptoms, including abdominal pain, diarrhea, fatigue, and hives, may result from the parasite migrating from the intestine to the lung or other sites. To prevent this infection, people should avoid eating raw or undercooked fresh water crab and crayfish. The parasites are killed if fresh water crabs and crayfish are cooked.

Yolo County Health Department Communicable Disease Update

Volume 4, Issue 9 September 2006

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Contact Us

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www.yolohealth.org

Fax CMRs to (530) 669-1549

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Spinach Outbreak Update

As of September 20, 2006, 146 *E. coli* O157:H7 infections associated with spinach have been reported in the US, including 76 hospitalizations, 23 cases of hemolytic uremic syndrome (HUS), and 1 death. One California case has been reported in Shasta Co. and is recovering at home after hospitalization. Disease onset dates for cases range from August 2 to September 9.

The outbreak is ongoing and the source of contaminated spinach has not been identified. Many of the cases who have been interviewed recalled one or more brands of spinach based in San Juan Bautista, California. CDHS is advising consumers not to eat any fresh, prepackaged spinach products until the source of the contamination that is causing this outbreak is determined.

All cases of *E. coli* O157:H7 infection (suspected or lab-confirmed) and HUS, regardless of history of diarrhea, should be immediately reported to the Health Department at (530) 666-8645. The Health Department will follow up with all cases in coordination with the California Department of Health Services (CDHS). Contact the Public Health Laboratory for questions regarding specimen submission (530) 666-8645.

E. coli O157:H7 infection often causes abdominal cramps and bloody diarrhea. A small percentage of infected individuals also develop HUS. There is usually little or no fever, and the illness typically resolves in 5-10 days. Those most at risk for serious complications include young children, the elderly and those with compromised immune systems.

The CDC Case Definition for post-diarrheal HUS is provided for reference:

> HUS is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal).
>
> The following are both present at some time during the illness:
>
> - Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear and;
> - Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline).

Daily outbreak updates are posted at: www.dhs.ca.gov/opa/ecoli/

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Influenza Sentinel Providers Needed for Yolo County

The Yolo County Health Department and CDHS are recruiting sentinel providers to participate in influenza-like illness (ILI) surveillance for the upcoming influenza season. **The number of clinicians enrolled in the program is currently below the minimum recommended to sufficiently represent the population of California!**

Who can be a Sentinel Provider?
Sentinel providers may be physicians, nurse practitioners, or physician assistants (or a designee of any of these) from any specialty and type of practice.

What are the responsibilities of a Sentinel Provider?
Sentinel providers report the number of patient visits for ILI categorized by age group, and the total number of patient visits each week. The numbers are simple tallies and contain no identifying patient information. These data are transmitted weekly by fax, or by using an easy internet-based reporting system. Sentinel providers also submit specimens from a subset of patients to the state lab for virus isolation **free of charge**. CDHS supplies the specimen collection materials and pays for shipping.

What do Sentinel Providers receive for volunteering?
Sentinel providers are offered Rapid Influenza Test kits, weekly updates on influenza trends in the state, and medical books or journal subscriptions.

For more information about the California Sentinel Provider Influenza Surveillance program, contact Tim Wilson at (530) 666-8645 or Melissa Dahlke at (510) 620-3494.

Botulism Outbreak Associated with Carrot Juice

Commercial pasteurized carrot juice has been confirmed as the cause of a cluster of three botulism cases in Georgia. The three patients had onset of symptoms on September 8, 2006 after consuming a common meal that included commercially produced carrot juice. The label on the implicated bottle reads "Bolthouse Farms, Bakersfield, California, 100% carrot juice." The use by date is 09-18-06.

The investigation is ongoing, however it is believed that the juice may have been unrefrigerated or improperly refrigerated. Improper refrigeration may have facilitated the growth of *Clostridium botulinum* spores, which can survive pasteurization. CDC has not been notified of any cases of suspected botulism since this cluster was reported. Improperly refrigerated carrot juice has been implicated in other cases of foodborne botulism in California in the past. The FDA is advising consumers of the importance of keeping carrot juice — including pasteurized carrot juice — refrigerated.

Report all cases of suspected botulism immediately to Public Health Nursing at (530) 666-8645.

WNV Update

Twenty-five (25) cases of West Nile virus (WNV) infection have been confirmed among Yolo County residents to date. Of these, at least two cases have experienced neuroinvasive disease. The average age of cases is 48 years (age range 9 — 81 years). No deaths due to WNV have been reported in Yolo County.

Contact the Public Health Laboratory regarding testing of specimens for WNV at (530) 666-8645.

Yolo County Health Department Communicable Disease Update

Volume 4, Issue 10 October 2006

Inside this Issue

Contact Us

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or

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www.dhs.ca.gov

World Health Organization
www.who.int

Influenza Season '06—'07: It's Here!

In California, influenza activity is sporadic with early increased activity. While inpatient hospitalization activity in Southern California remains minimal, activity in some Northern California hospitals is rising, with hospital admissions for influenza and pneumonia increasing from 4.8% to 6.1% in the past week (compared to 5% last year at this time). All other parameters are at a low level, including the percentage of influenza-like illness (ILI) visits reported by sentinel providers and laboratory detection reports.

H5N1 Refresher

H5N1 TESTING is RECOMMENDED for any patient who has an illness that requires hospitalization or is fatal; AND has a documented fever >100.4°F; AND has radiographically-confirmed pneumonia, ARDS or other respiratory illness with no alternate diagnosis; AND has at least one of the following exposures (A,B, or C) within 10 days of symptom onset:

A. Travel to an area with documented H5N1 influenza in poultry, birds and/or humans with at least one of the following:
   - Direct contact with (e.g. touching) sick or dead domestic poultry); OR
   - Direct contact with surfaces contaminated with poultry feces; OR
   - Consumption of raw or incompletely cooked poultry or poultry products; OR
   - Direct contact with sick/dead birds suspected/confirmed to have H5N1; OR
   - Close contact (within 1 meter) of a person who was hospitalized or died due to unexplained respiratory illness.

B. Close contact (within 1 meter) of an ill patient who was confirmed or suspected to have H5N1;

C. Worked with live influenza H5N1 virus in a laboratory.

H5N1 TESTING SHOULD BE CONSIDERED on a case-by-case basis for:

- A hospitalized or ambulatory patient with mild or atypical disease with one of the above exposures (A, B, or C); OR
- A patient with severe or fatal respiratory disease whose epidemiological information is uncertain, unavailable or suspicious, but does not meet criteria listed above (e.g. returned traveler from an affected country with unclear exposure, or with contact with well-appearing poultry)

For a list of affected countries, visit the World Organization of Animal Health (www.oie.int/downld/AVIAN INFLUENZA/A_AI-Asia.htm) and click on "GRAPH" at the top of the page.

See attached documents for specimen collection instructions. For cases meeting the above criteria, contact the Health Department immediately 24/7 at (530) 666-8645.

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Raw Milk Consumption and Illness

In the past month, 5 matching *E. coli* O157 isolates have been identified from patients whose common exposure was raw (unpasteurized) milk or raw milk products including raw colostrum. This *E. coli* O157 PFGE pattern has never been previously seen in the US. A 6th patient with HUS also reported exposure to raw milk. The brand associated with all 6 of these cases has been identified by the California Department of Food and Agriculture (CDFA). No new cases have emerged since a quarantine was placed on this brand (the quarantine was lifted on Oct. 6).

Raw milk may harbor disease-causing pathogens, such as *Campylobacter*, *E. coli*, *Listeria*, *Salmonella*, *Yersinia*, and *Brucella*. While the sale of raw milk across state lines is illegal, intrastate sale of raw milk is allowed in California with appropriate labeling.

An increase in the consumption of raw milk and raw milk products has been observed in California based largely on claims that raw milk may have health benefits over pasteurized milk. The FDA has shown that pasteurized milk is not significantly different from raw milk in nutrient content and concludes that risk of severe illness associated with raw milk consumption far outweighs any presumed benefits. Additionally, while cow and goat raw colostrum are rich in cow and goat antibodies, these antibodies are digested by the human gastrointestinal tract and do not confer immunity to humans whether pasteurized or unpasteurized. Pasteurized milk also contains Vitamin D which enhances calcium absorption.

Health care providers should be vigilant for consumption of raw milk or raw milk products in patients with gastroenteritis, especially when *Campylobacter*, *E. coli* or *Salmonella* infection is suspected or diagnosed. Please immediately contact the Health Department whenever reportable enteric diseases are diagnosed by calling (530) 666-8645 or by faxing a Confidential Morbidity Report (CMR) to (530) 669-1549.

Severe Illness Laboratory Surveillance (SILS) Project - A Resource for Clinicians

The California Department of Health Services Viral and Rickettsial Disease Laboratory (VRDL), Microbial Disease Laboratory (MDL) and Yolo County Health Department can assist clinicians with diagnostic workup of severely ill, hospitalized cases or fatalities due to possible infectious etiology as part of the Severe Illness Laboratory Surveillance (SILS) project.

As the state reference laboratories, VRDL and MDL offer a broad range of diagnostic testing for viral, bacterial and rickettsial pathogens, including molecular-based assays such as polymerase chain reaction and sequencing (PCR), culture, serologic testing and electron microscopy. Algorithms for diagnostic testing have been developed based on syndromic clinical presentation, including cases of severe pneumonia/acute respiratory distress syndrome, acute rash illness with fever, acute fulminant hepatitis, acute myocarditis, and sepsis with multiorgan failure.

Examples of some state-of-the-art testing available include PCR and/or serologic testing for many viral and bacterial pathogens. Electron microscopy studies of appropriate skin biopsy and stool specimens can assist with identification of infectious etiologies. Available tissue specimens can also be forwarded to the CDC for immunohistochemical analysis. **Diagnostic testing through the SILS Project is offered free-of-charge.** For best results, early consultation with the Health Department is critically important in obtaining the optimal clinical specimens that will provide the best yield with diagnostic testing. For further questions, please call the Yolo County Public Health Laboratory at (530) 666-8645.

Updated June 12, 2006

CALIFORNIA DEPARTMENT OF HEALTH SERVICES (CDHS) GUIDELINES FOR COLLECTING AND SHIPPING SPECIMENS FOR INFLUENZA A (H5N1) DIAGNOSTICS

(Adapted from the 2005 US Department of Health & Human Services Pandemic Influenza Plan)

******CALIFORNIA LOCAL HEALTH DEPARTMENTS AND CDHS MUST BE NOTIFIED ABOUT ANY CASE OF SUSPECT AVIAN INFLUENZA A (H5N1)******

Many local public health laboratories in California can perform polymerase chain reaction (PCR) and subtype testing. Local health departments should be contacted to determine where specimens should be submitted. Local health departments should report any suspect or laboratory-confirmed case to CDHS immediately.

To submit specimens to CDHS VRDL:

1. All specimens should be labeled with the following information: PATIENT'S NAME, DATE TAKEN AND TYPE OF SPECIMEN. Because culture is not recommended in these cases, please note on the form that this is a suspect case of avian influenza a (H5N1).

2. Complete a CDHS Viral and Rickettsial Disease Laboratory Specimen Submittal Form for Suspect Avian Influenza A (H5N1) for each vial with the following information: patient's name, age, date of onset of illness, type of specimen, date collected and clinical symptoms.

3. For questions about specimen submittal, contact David Cottam at 510 307-8585.

SPECIMEN COLLECTION

To improve diagnostic sensitivity, testing should be performed on multiple samples types. Some studies have demonstrated the need for multiple samples collected over several days for optimal H5 detection sensitivity. Orophayrngeal swab specimens and lower respiratory tract specimens (e.g. bronchalveolar lavage[1] or tracheal aspirates) are preferred because they appear to contain the highest quantity of influenza A (H5N1) virus based on current data. Given that most human cases have presented with lower respiratory tract infections, the collection of only a upper respiratory specimen, particularly a single nasopharyngeal or nasal swab, is NOT recommended.

MINIMUM SPECIMEN REQUIREMENTS FOR INFLUENZA A (H5N1) TESTING INCLUDE THE FOLLOWING:

- Oropharyngeal swab specimens collected in 3 cc viral transport media (VTM); AND
- A nasopharyngeal swab OR nasopharyngeal wash OR nasopharyngeal aspirate collected in 3 cc viral transport media (VTM)[1]; AND

- Any specimen(s) from the lower respiratory tract (e.g., sputum, bronchoalveolar lavage, tracheal aspirate or pleural fluid tap)[2].

1. Orophayngeal swabs may have better yield than nasopharyngeal specimens. While both types of specimens should be collected, an oropharyngeal swab should be performed preferentially if only one sample can be taken.

2. In outpatient settings, it may be difficult to obtain samples from the lower respiratory tract in children. In these instances, two specimens from the upper respiratory tract (e.g. a nasopharyngeal wash and a throat swab) are acceptable.

INFECTION CONTROL PRECAUTIONS:
Infection control precautions during specimen collection should include the use of gloves, gown, goggles or face shield, and a fit-tested respirator with an N-95 or higher-rated filter. A loose-fitting powered air-purifying respirator (PAPR) may be used if fit-testing is not possible (for example, if the person has a beard). For detailed guidance, please see the CDHS Infection Control Recommendations for Suspect Cases of Avian Influenza A (H5N1).

I. RESPIRATORY SPECIMENS

Respiratory specimens are optimally collected within the first 3 days of illness onset. If possible, serial specimens should be obtained over several days from the same patient.

A. Collecting specimens from the upper respiratory tract

1. Nasopharyngeal wash/aspirate

- Have the patient sit with head tilted slightly backward.
- Instill 1 ml–1.5 ml of nonbacteriostatic saline (pH 7.0) into one nostril. Flush a plastic catheter or tubing with 2 ml–3 ml of saline. Insert the tubing into the nostril parallel to the palate. Aspirate nasopharyngeal secretions. Repeat this procedure for the other nostril.
- Collect the specimens in sterile vials.
- For shipping, use cold packs to keep the sample at 4°C.

2. Nasopharyngeal or oropharyngeal swabs

- Use only sterile dacron swabs with aluminum or plastic shafts. Do **not** use calcium alginate or cottom swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit PCR testing.
- To obtain a **nasopharyngeal swab**, insert a swab into the nostril parallel to the palate. Leave the swab in place for a few seconds to absorb secretions. Swab both nostrils.
- To obtain an **oropharyngeal swab**, swab the posterior pharynx and tonsillar areas, avoiding the tongue.
- Place each swab immediately into two separate sterile vials containing 2 ml of viral transport media (VTM, either commercially available, herpes buffere tryptose gelatin meium or Hanks' balanced salt solution with gelatin). Break the applicator sticks off near the tip to permit tightening of the cap. Place at 4°C immediately after collection.
- For shipping, use cold packs to keep the sample at 4°C.

B. Collecting specimens from the lower respiratory tract

1. Broncheoalveolar lavage, tracheal aspirate, or pleural fluid tap

- During bronchoalveolar lavage or tracheal aspirate, use a double-tube system to maximum shielding from oropharyngeal secretions.
- Place the unspun fluid in sterile vials with external caps and internal O-ring seals. If there is no internal O-ring seal, then seal tightly with the available cap and secure with Parafilm®.
- For shipping, use cold packs to keep the sample at 4°C.

2. Sputum

- Educate the patient about the difference between sputum and oral secretions.
- Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile screw-cap sputum collection cup or sterile dry container.
- For shipping, use cold packs to keep the sample at 4°C.

II. BLOOD COMPONENTS (optional)

Collection of sera for serologic testing for influenza as well as other respiratory viruses can be considered, but should not replace collection of respiratory specimens, which are highly recommended for influenza A (H5N1) testing . Serologic testing for influenza H5N1-specific antibody can be considered if other influenza H5N1 diagnostic testing methods are unsuccessful (for example, due to delays in respiratory specimen collection). For serologic testing, paired blood samples are ideal. Collect an acute phase blood specimen (5-10 ml whole clotted blood) on each patient within the first week of illness, complete a CDHS Viral and Rickettsial Disease Specimen Submittal Form for Suspect Avian Influenza A (H5N1), and schedule patient to return in 14-21 days for a convalescent blood specimen. A demonstrated rise in the H5N1-specific antibody level is required for a diagnosis of H5N1 infection. Serum specimens will be forwarded to the Centers for Disease Control and Prevention where the micro-neutralization assay, which requires live virus, can be performed to test for H5N1-specific antibody.

To collect serum for antibody testing:

- Collect 5 ml–10 ml of whole blood in a serum separator tube. Allow the blood to clot, centrifuge briefly, and collect all resulting sera in vials with external caps and internal O-ring seals. If there is no internal O-ring seal, then seal tightly with the available cap and secure with Parafilm®.
- The minimum amount of serum preferred for each test is 200 microliters, which can easily be obtained from 5 ml of whole blood. A minimum of 1 cc of whole blood is needed for testing of pediatric patients. If possible, collect 1 cc in an EDTA tube and in a clotting tube. If only 1cc can be obtained, use a clotting tube.
- If unfrozen, ship with cold packs to keep the sample at 4°C. If frozen, ship on dry ice.

III. AUTOPSY SPECIMENS

Immunohistochemical (IHC) staining for influenza A (H5) viruses can be performed on autopsy specimens at the Centers for Disease Control and Prevention. Viral antigens may be focal and sparsely distributed in patients with influenza, and are most frequently detected in respiratory epithelium of large airways. Larger airways (particularly primary and segmental bronchi) have

the highest yield for detection of influenza viruses by IHC staining. Collection of the appropriate tissues ensures the best chance of detecting the virus by (IHC) stains.

• If influenza is suspected, a minimum total of 8 blocks or fixed-tissue specimens representing samples from each of the following sites should be obtained and submitted for evaluation:

- Central (hilar) lung with segmental bronchi
- Right and left primary bronchi
- Trachea (proximal and distal)
- Representative pulmonary parenchyma from right and left lung

In addition, representative tissues from major organs should be submitted for evaluation. In particular, for patients with suspected myocarditis or encephalitis, specimens should include myocardium (right and left ventricle) and CNS (cerebral cortex, basal ganglia, pons, medulla, and cerebellum). Specimens should be included from any other organ showing significant gross or microscopic pathology.

• Specimens may be submitted as:

- Fresh-frozen unprocessed tissue in 10% neutral buffered saline, or
- Tissue blocks containing formalin-fixed, paraffin-embedded specimens, or
- Unstained sections cut at 3 microns placed on charged glass slides (10 slides per specimen)

• Specimens should be sent at room temperature (**NOT FROZEN**).
• Fresh-frozen unfixed tissue specimens may be submitted for RT-PCR.
• Include a copy of the autopsy report (preliminary, or final if available), and a cover letter outlining a brief clinical history and the submitter's full name, title, complete mailing address, phone, and fax numbers.

Yolo County Health Department Communicable Disease Update

Volume 4, Issue 11/12 November/December 2006

Inside this Issue

Influenza Season '06—'07 Update

Influenza activity in the US and in California remains at a low level and sporadic. The proportion of visits to sentinel providers for influenza-like illness (ILI) and the proportion of deaths due to influenza and pneumonia remain below baseline.

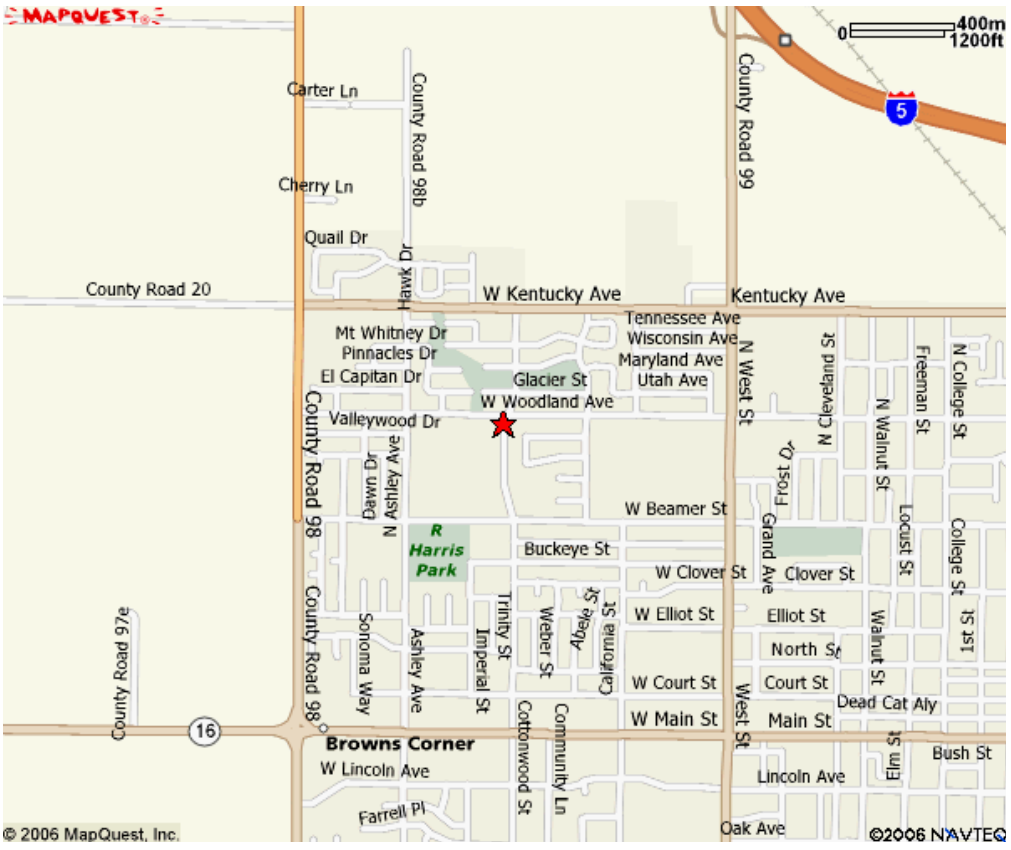
Sentinel provider ILI surveillance is important in tracking flu season activity, identifying new circulating influenza strains and in detection of new emerging respiratory illnesses. To participate in this project, contact Tim Wilson at (530) 666-8645 or Melissa Dahlke at (510) 620-3494.

WE'VE MOVED!!!

Update your e-rolodexes and contact lists because WE'VE MOVED. The Health Department and Public Health Laboratory are now located in the Bauer Building at the corner of Woodland St. and North Cottonwood St. in Woodland (about a block north of the previous location). The new mailing address of the Health Department is:

Yolo County Health Department
137 North Cottonwood
Woodland, CA 95695

The main phone and CMR fax numbers have not changed (see box at left).



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Shiga Toxin in Feces now Reportable

The California Department of Health Services (CDHS) has made the detection of Shiga toxin (Stx) in feces reportable by health care providers and laboratories. This addition to California's reportable disease list responds to a trend by clinical laboratories toward testing for Shiga toxin-producing *E. coli* (STEC) infections using EIA or other non-culture based methods, and the resulting need for timely and reliable notification of STEC infections that may not be culture-confirmed.

The need for this reporting requirement became evident during the recent *E.coli* outbreak involving spinach. A follow-up culture should be performed on all Stx-positive specimens. For further questions on Stx testing or on the new regulation for reporting Stx in stool, please contact Public Health Nursing at (530) 666-8645.

Chikungunya Virus in Travelers to India and Indian Ocean Islands

Large outbreaks of Chikungunya fever have been reported recently on several islands in the Indian Ocean, Sri Lanka, India and coastal areas of Kenya (Mombasa). Since May 2004, approximately 580,000 suspected Chikungunya fever cases have been reported from these areas. Affected islands include Comoros, Lamu, Madagascar, Mauritius, Mayotte, Réunion, and the Seychelles. In recent years, extensive Chikungunya activity also has been documented in Southeast Asia.

Chikungunya fever is caused by an alphavirus indigenous to tropical Africa and Asia, where it is transmitted to humans by the bite of infected mosquitoes. Most Chikungunya epidemics occur during the tropical rainy season (usually June—October) and abate during the dry season. 'Chikungunya' is derived from a Makonde or Swahili word meaning 'that which bends up' which likely refers to the contorted posture of patients affected by the severe joint pain associated with this disease. The incubation period typically is 2-4 days. Symptoms can be similar to dengue and malaria. The disease is characterized by sudden onset of fever, headache, malaise, arthralgias or arthritis, myalgias, and low back pain. Approximately half of cases develop a skin rash that is usually generalized and maculopapular. Although Chikungunya fever is almost always self-limited, typically lasting 3-7 days, certain patients experience persistent joint symptoms for weeks or months and occasionally years. Serious complications (e.g., neuroinvasive disease) are rare. Treatment of Chikungunya fever is supportive, with bed rest, fluids, and mild analgesics. Since there is no vaccine, preventive measures, such as using mosquito repellant, should be emphasized.

Local health departments have been receiving inquiries about available testing for possible Chikungunya virus infection in travelers returning from endemic or outbreak areas. Testing is only available through the CDC via arrangement through the State Viral and Rickettsial Disease Laboratory (VRDL). Concurrent serologic testing for dengue infection and other infectious diseases through VRDL is usually recommended. To arrange submission of specimens to VRDL and CDC, contact the Yolo County Public Health Laboratory at (530) 666-8645.

Specimen requirements include acute- and convalescent-phase sera collected at least two weeks apart (submission of acute-phase samples should not be delayed pending collection of convalescent-phase samples). All specimens must be accompanied by a brief clinical history; a copy of the physician's notes or admission history/physical from the hospital medical records is ideal.

Clinicians should be alert for additional cases among international travelers. Since August 2006, 19 suspect cases of Chikungunya have been tested in California; results so far include 6 confirmed as Chikungunya virus infection, 1 dengue infection, and 1 co-infection with dengue and leptospirosis.

Additional information about Chikungunya fever can be obtained from the CDC website:

www.cdc.gov/travel/other/2006/chikungunya_india.htm