



Yolo County Health Department Communicable Disease Update

Volume 5, Issue 1

January 2007

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Contact Us

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Related Web Sites:

CDC
www.cdc.gov

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

World Health Organization
www.who.int

Chickenpox Outbreak in Davis

Yolo County is currently experiencing an outbreak of Chickenpox (Varicella) in the Davis area. Most cases (approximately 20 thus far) are associated with attendance at the Merryhill School or exposure to an ill student from the school. The majority of those who are ill appear to be children who have been immunized but have not gotten full immunity from the vaccine. The vaccine first became available in 1995/96 and has been a requirement for entry into school in California since 2001.

Because of the occurrence of such outbreaks in other parts of the nation, the Advisory Committee on Immunization Practices (ACIP) now recommends that children receive two doses of Varicella vaccine (see Page 2). This recommendation is especially important during an outbreak. Varicella vaccine is effective in preventing illness or greatly lessening the severity of disease if given within 3 days of exposure.

Parents of children at the Merryhill school have been notified to contact their health care provider for a second dose of vaccine. Additionally, family members of ill children who have not either been immunized or had chickenpox are advised to seek immunization. Since other children in Davis may have been exposed to children ill with this disease, all parents are encouraged to check their children's immunization status and consider a second dose of vaccine.

Chickenpox is a highly contagious disease, usually mild in childhood, but may cause severe complications. Symptoms usually appear without warning, beginning with a rash which quickly progresses from vesicles to pustules and then scab over. The patient is contagious 2-3 days prior to the appearance of the rash and for up to five days after onset of rash. Infants, pregnant women and persons who are immunocompromised are particularly susceptible to complications.

Recommendations for Health Care Providers

Health care providers are advised to remain vigilant for chickenpox cases. A Varicella Quicksheet is included with this newsletter for reference. Note that chickenpox disease in vaccinated children is generally mild, consisting of fewer lesions that may appear more like insect bites.

Providers are also asked to prioritize Varicella vaccination for families who have received letters indicating that someone in the family may have been exposed to chickenpox. Refer to immunization guidelines on Page 2.

Only chickenpox cases resulting in death or hospitalization are reportable to the Health Department (otherwise chickenpox is not reportable). Contact Public Health Nursing at (530) 666-8645 if you have further questions or if your facility experiences difficulty obtaining Varicella vaccine.

ACIP Chickenpox Immunization Recommendations

Updated ACIP recommendations regarding Varicella vaccination include routine two dose varicella vaccination of children and second dose catch-up varicella vaccination for children, adolescents and adults who previously had received only one dose. The ACIP also expanded recommendations for varicella-containing vaccines to promote wider use of the vaccine for adolescents, adults, and HIV-infected children and approved new criteria for evidence of immunity to varicella. Refer to MMWR 55(51) Jan. 5, 2007 at www.cdc.gov with a link to complete ACIP recommendations (Reference 4). Recommendations include:

- **All children <13 years of age should be administered routinely two doses of varicella-containing vaccine**, with the first dose administered at 12-15 months of age and the second dose at 4-6 years of age. The second dose can be administered at an earlier age provided the interval between the first and second dose is at least 3 months. However, if the second dose is administered at least 28 days following the first dose, the second dose does not need to be repeated.
- **A second dose catch-up varicella vaccination is recommended for children, adolescents, and adults who previously had received one dose**, to improve individual protection against varicella and for more rapid impact on school outbreaks. Catch-up vaccination can be implemented during routine health care provider visits and through school and college entry requirements. Catch-up second dose can be administered at any interval longer than 3 months after the first dose.
- **Second dose varicella vaccine for outbreak control.** During a varicella outbreak, people who have received one dose of varicella vaccine should receive a second dose, provided the appropriate vaccination interval has elapsed since the first dose.
- **Contraindications and precautions** to use of varicella vaccine are available at:
www.cdc.gov/mmwr/preview/mmwrhtml/00042990.htm

Sources: MMWR 55(51) Jan. 5, 2007 & ACIP Provisional Recommendations for the Prevention of Varicella (June 2006).

Varicella Zoster Immune Globulin (VariZIG™)

In February 2006, an investigational (not licensed) VZIG product, VariZIG™ (Cangene Corporation, Winnipeg, Canada) became available under an investigational new drug application (IND). This product can be requested from the sole authorized US distributor, FFF Enterprises (Temecula, California), for patients who have been exposed to varicella and who are at increased risk for severe disease and complications. As with any product used under IND, patients must be informed of potential risks and benefits and must give informed consent before receiving the product.

Exposed patients without evidence of immunity for whom Varicella vaccination is contraindicated and who are at high risk for severe disease and complications, are eligible to receive VariZIG. The patient groups recommended by ACIP to receive VariZIG include the following:

- Immunocompromised patients.
- Neonates whose mothers have signs and symptoms of varicella around the time of delivery (i.e., 5 days before to 2 days after).
- Premature infants born at ≥ 28 weeks of gestation who are exposed during the neonatal period and whose mothers do not have evidence of immunity. Premature infants born at < 28 weeks of gestation or who weigh $\leq 1,000$ g at birth and were exposed during the neonatal period, regardless of maternal history of disease or vaccination.
- Pregnant women.

For information on obtaining and administering VariZIG, consult the Immunization Coordinator at (530) 666-8645.

VARICELLA CASE AND OUTBREAK 'QUICKSHEET'

California Department of Health Services (DHS) – updated March 2006

Infectious agent: Human (alpha) herpesvirus 3 (varicella-zoster virus, VZV), a member of the *Herpesvirus* group.

Mode of transmission: From person to person by direct contact or airborne spread of vesicle fluid or secretions of the respiratory tract of chickenpox cases or by direct contact spread of vesicle fluid of patients with herpes zoster. Scabs from varicella lesions are not infective.

Incubation period: From 2 to 3 weeks; commonly 14-16 days; may be prolonged in the immunodeficient.

Period of Communicability: As long as 5 but usually 1-2 days before rash onset, and continuing until all lesions are crusted (usually about 5 days). Chickenpox is one of the most readily communicable diseases, especially just before and in the early stages of the eruption. Breakthrough cases with vesicular lesions may sometimes be as infectious as natural varicella cases. Susceptibles have about an 80%-90% risk of infection after household exposure to varicella. Susceptible individuals should be considered potentially infectious 10 – 21 days following exposure and if they develop varicella, until vesicles are crusted over.

CDC CASE DEFINITION and CASE CLASSIFICATION (for purposes of public health reporting)

Clinical Case Definition: An illness with acute onset of diffuse (generalized) papulovesicular rash without other apparent cause. Note: In vaccinated persons who develop varicella more than 42 days after vaccination (breakthrough disease), the disease is almost always mild with fewer than 50 skin lesions and shorter duration of illness. The rash may also be atypical in appearance (maculopapular with few or no vesicles).

Case Classification:

Probable: A case that meets the clinical case definition is not laboratory confirmed, and is not epidemiologically linked to another probable or confirmed case.

Confirmed: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case. **Note:** Two probable cases that are epidemiologically linked are considered confirmed cases.

CLINICAL FEATURES

Prodrome

- In children, rash is often the first sign of disease. Moderate fever may be present for first few days of illness.
- Adults may have 1-2 days of fever and malaise prior to rash onset.

Rash

- The rash consists of maculopapules, vesicles and scabs in varying stages of evolution. Skin lesions initially contain vesicular fluid, but over a very short period of time they pustulate and scab. Successive crops of lesions appear for 3-4 days. The typical case has about 250-500 lesions.
- Breakthrough infection in a previously vaccinated person is generally very mild with fewer than 50 lesions that may not become vesicular (fluid-filled blister) or itchy.

Complications

- The risk of complications increases after puberty and is also higher in newborns exposed in utero; complications are infrequent among healthy children. Immunocompromised persons have a high risk of serious infection.
- The most common complications from varicella include secondary bacterial infections of skin lesions, dehydration, pneumonia, and central nervous system manifestations.
- Infection in pregnancy may be associated with congenital varicella syndrome with a 0.7% risk early in pregnancy and 2% risk at 13-20 weeks gestation. The onset of varicella in pregnant women from 5 days before to 2 days after delivery results in severe varicella infection in an estimated 17-30% of their newborn infants.

LABORATORY TESTING AND CONFIRMATION

Laboratory confirmation: Routine laboratory testing to diagnose varicella in each case is not generally recommended, but testing may be useful in special circumstances to confirm the diagnosis or to determine varicella susceptibility. The DHS Viral and Rickettsial Disease Laboratory can assist with laboratory testing.

Laboratory criteria for diagnosis:

- Isolation or detection of varicella virus from a clinical specimen, such as a swab of the base of a newly ruptured vesicle, vesicular fluid, or crusted lesion, usually using DFA, PCR or viral culture.
- Significant rise in varicella IgG antibody levels between acute and convalescent serum specimens by any standard serological assay.

RECOMMENDED TREATMENT AND CHEMOPROPHYLAXIS

Prevention

- Varicella vaccine is effective in preventing infection or modifying the severity of illness if given within 3 days after exposure, possibly up to 5 days. If not exposed, immunization will protect against subsequent exposure.
- Antiviral drugs are not recommended for prophylaxis.
- Varicella zoster immune globulin (VZIG) should be administered within 96 hours of exposure to susceptible persons at high risk for developing severe varicella including those for whom the vaccine is contraindicated (e.g., immunocompromised persons, pregnant women) and to neonates whose mothers have varicella within 5 days before to 2 days after delivery.

Treatment

- Treatment of varicella is supportive for immunocompetent children.
- Acyclovir and similar agents can reduce the duration and severity of illness if given within 24 hours of rash onset. These drugs should be considered for treatment of immunocompromised persons and other persons at high risk for severe varicella. (See the AAP Red Book.)

REPORTING AND NOTIFICATION

- Single cases of non-fatal varicella are not reportable, although local health departments are requested to report hospitalized varicella cases to the Immunization Branch.
- Cases of varicella that result in death and outbreaks of any disease are immediately reportable.
- To facilitate disease prevention and control, health departments should encourage varicella outbreak reporting in the following situations: ≥ 5 cases in children < 13 years of age in a childcare, kindergarten or grade school setting; ≥ 3 cases among persons ≥ 13 years of age in a high school or college setting; ≥ 3 cases in an adult or teen residential institution (e.g., correctional facility, homeless shelter); ≥ 2 cases in an acute care health facility.

VARICELLA OUTBREAK INVESTIGATION

The main purpose for responding to a varicella outbreak is to prevent transmission to susceptible persons at increased risk of complications of varicella and to offer vaccination to susceptible persons.

- Confirm case/outbreak.
- Identify and notify individuals/groups who have had close contact with the case between 2 days before and 5 days after rash onset. Schools should notify parents of children in the same classroom as a confirmed or probable case(s) of varicella. Use the diagram below to help determine cases' period of infection and communicability.

Incubation: 2 to 3 weeks; commonly 14-16 days			Rash	Communicability
-3 wks	-2 wks	- 1 week	Rash Onset	+ 5 days
Onset of rash minus 14 (10-21) days is probable exposure Date:		May have no prodrome before rash, but infectious period still begins 2 days prior to rash Date:	Rash emerges in 2-4 crops over 3-4 days, vesicles in each crop need up to 24 hours to become crusted Date:	Up to 5 days after rash onset (when all lesions crusted) Date:

STEPS FOR OUTBREAK MANAGEMENT (AS APPROPRIATE)

- Isolate or cohort infective cases until all lesions are crusted (usually about 5 days).
- Identify susceptible exposed persons at high risk for complications (e.g., immunosuppressed persons, pregnant women); recommend VZIG for post-exposure prophylaxis.
- Refer susceptible persons for vaccination. If outbreak occurs in a school/daycare center, a notification letter should be sent to parents recommending vaccination of susceptible children. Resources permitting, local health authorities may consider recommending a 2nd dose of varicella containing vaccine to those that have received 1 dose of varicella vaccine. If outbreak occurs in a residential institutional setting, vaccination of susceptible persons (staff and residents) should be considered.
- Exclusion of susceptible pregnant or immunosuppressed persons should be considered on a case-by-case basis.
- Exclusion from school of susceptible children and staff is recommended for children or staff at risk of serious infection. Local health authorities should consider excluding susceptible non high-risk pupils with exemptions to vaccination after five or more cases have been identified. Note: California Health and Safety Code 120335 requires that children admitted into a California school after July 1, 2001 receive varicella vaccine (see <http://www.dhs.ca.gov/ps/dcdc/izgroup/handbook.htm>).

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Yolo County Health Department Communicable Disease Update

Volume 5, Issue 2

February 2007

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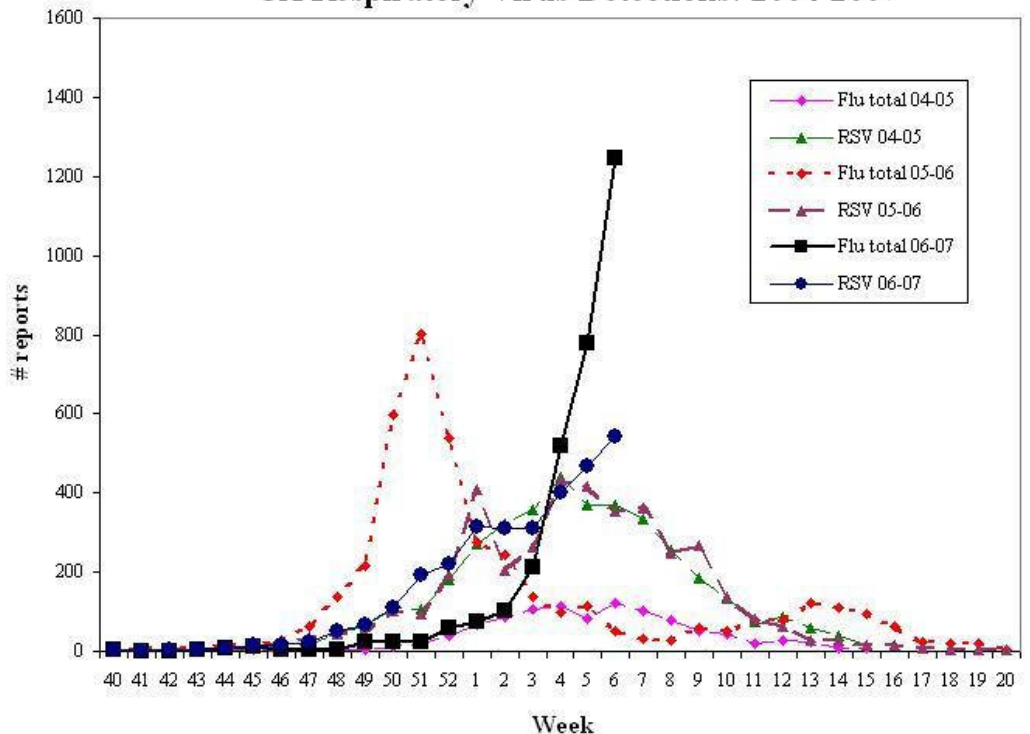
- **Flu Season Update**
- **TSE Surveillance**
- **Enhanced Gonorrhea Surveillance**
- **Salmonella Tennessee Outbreak**
- **2006 Disease Stats**

Flu Season Update

Influenza activity continues to be high in Yolo County and Northern California based on recent increases of influenza-like illness visits among sentinel providers, Kaiser inpatient flu admissions, and Kaiser antiviral usage surveillance.

Of specimens submitted to the California Department of Health Services (CDHS) Viral and Rickettsial Diseases Laboratory (VRDL), increases in Influenza A, Influenza B and RSV have been documented in mid-February 2007 (see graph below). Source: CDHS, VRDL California Influenza Surveillance Project.

CA Respiratory Virus Detections: 2004-2007



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TSE Surveillance

Transmissible Spongiform Encephalopathies (TSE) in humans, including classic Creutzfeldt-Jakob Disease (CJD), have been added to Title 17 of the California Code of Regulations as diseases to be reported to the local Health Department within 7 days of diagnosis. TSE diseases in animals (e.g., Mad Cow Disease, scrapie) remain reportable to the California Department of Food and Agriculture at (916) 654-1447.

TSE diseases are progressive fatal neurodegenerative diseases with characteristic clinical and diagnostic features. TSE occurrence in humans is typically rare (review of Yolo County death records from 1999 to present did not reveal any human deaths involving TSE as an identified underlying cause of death). Please contact the Health Department at (530) 666-8645 regarding suspected TSE cases.

Enhanced Gonorrhea Surveillance in California

Gonorrhea is the second most commonly reported STD in California with nearly **35,000 cases reported in 2005 in California**. Following many years of decline, California (including Yolo and Sacramento Counties) has recently seen increases in gonorrhea cases in all demographic groups, but particularly among teens and young adults. Reasons for the increases are not fully understood.

In an effort to better understand risk factors associated with gonorrhea infection and design effective interventions to prevent the spread of gonorrhea in California, the CDHS STD Control Branch has implemented the California Gonorrhea Surveillance System (CGSS) as of Jan. 1, 2007. This program seeks to obtain detailed epidemiologic and risk data on gonorrhea cases through telephone-based follow-up with gonorrhea patients.

Aspects of enhanced gonorrhea surveillance in Yolo County that health care providers should be aware of include:

- Initial patient information is obtained from the Confidential Morbidity Report (CMR) and/or lab report.
- The patient's medical provider (or representative) is contacted PRIOR to contacting the patient to furnish additional key medical information.
- The provider is notified of impending patient follow-up with a public health nurse or a trained public health investigator.
- The patient is contacted (by telephone) and asked to provide detailed demographic and risk history information. If a provider prefers that we not contact the patient, the provider may opt to complete the case investigation and submit the information to the Health Department.

Though other California counties have been conducting some form of enhanced gonorrhea surveillance for several years, this is a change in gonorrhea follow-up in Yolo County. The Health Department welcomes input from health care providers regarding the implementation of enhanced gonorrhea surveillance in our county. Please contact DeeDee Gilliam at (530) 666-8645 for further information about gonorrhea surveillance.

Salmonella Tennessee Outbreak Associated with Peanut Butter

CDC, USDA, and multiple states are investigating a large multi-state outbreak of *Salmonella* Tennessee infections. Interviews comparing foods eaten by ill and well persons have implicated consumption of Peter Pan or Great Value brands with product code beginning "2111" (manufactured by ConAgra in Georgia) as the likely source of the outbreak.

As of Feb. 21, 329 persons with *Salmonella* Tennessee infection associated with this outbreak have been reported to CDC from 41 states (including 3 California cases—none in Yolo County). Among patients for whom clinical information is available, 21% were hospitalized. There have been no reports of deaths attributed to this infection. Onset dates, range from Aug. 1, 2006 to Feb. 2, 2007.

Individuals who think they may have become ill from eating peanut butter are advised to contact their health care provider. Persons who have become ill and have Peter Pan or Great Value peanut butter with product code beginning with "2111" should set aside the jar for possible testing and contact the Health Department at (530) 666-8645.

Saved products will not be collected or tested until there is culture confirmation of *Salmonella* Tennessee infection in the patient. Persons who have not become ill and have peanut butter beginning with product code "2111" should discard the jar but may save the lid if they choose to obtain a refund from the manufacturer.

Yolo County Communicable Diseases 2001–2006.

Communicable disease statistics for confirmed reports of disease among Yolo County residents are shown in the table below. Diseases are shown by the year of disease onset*.

Surveillance and control of communicable disease is a core public health function involving both the Health Department and health care providers. The California Code of Regulations, Title 17, §2500 mandates that health care providers report certain diseases to the local health department. Reporting guidelines may be accessed at www.yolocounty.org/org/health/disease.asp.

Communicable Diseases Reported among Yolo County Residents by Year of Disease Onset*, 2001 — 2006.						
Disease	2001	2002	2003	2004	2005	2006
AIDS	See 'HIV Infection' below. Refer also to www.yolocounty.org/org/health/ph/aids .					
Amebiasis	4	2	2	0	0	2
Botulism: Foodborne	1	0	0	0	0	0
Infant	0	0	1	0	0	0
Wound	1	0	0	0	0	0
Brucellosis	0	0	0	0	1	0
Campylobacteriosis	24	49	31	48	53	57
Chlamydial Infection	278	341	386	434	526	457
Coccidioidomycosis	1	3	1	6	1	1
Cryptosporidiosis	1	0	3	3	3	2
<i>E. coli</i> O157:H7 / HUS	4	1	3	3	3	0
Encephalitis, infectious etiology (does not include WNV encephalitis)	2	0	2	2	3	3
Giardiasis	15	17	12	7	9	12
Gonococcal Infection	36	30	41	49	73	59
<i>Haemophilus influenzae</i> (invasive disease only)	1	0	0	0	1	0
Hepatitis A (acute)	6	8	4	10	3	4
Hepatitis B (acute and chronic)	56	52	48	38	58	46
Hepatitis C (presumed chronic)	143	91	88	117	131	132
HIV Infection	16	16	12	13	9	4
Kawasaki Syndrome	0	0	0	1	1	3
Legionellosis	1	0	0	0	1	0
Listeriosis	0	1	0	2	1	0
Lyme Disease	0	2	0	1	1	2
Malaria (travel related)	2	2	0	2	2	2
Meningitis, bacterial (does not include meningococcal meningitis)	4	0	0	6	3	1

Communicable Diseases Reported among Yolo County Residents by Year of Disease Onset*, 2001 — 2006 (cont'd).						
Disease	2001	2002	2003	2004	2005	2006
Meningitis, viral (does not include WNV meningitis)	5	10	22	28	12	2
Meningococcal Infection (includes meningococcal meningitis and meningococemia)	3	4	2	3	1	1
Mumps	0	1	0	0	0	0
Pertussis	3	103	108	6	17	49
Rheumatic Fever	0	0	1	0	0	0
Relapsing Fever	0	0	0	0	0	1
Rubella	1	0	0	0	0	0
Salmonellosis (non-typhoid)	18	14	16	28	17	21
Scombroid Poisoning	0	0	0	1	0	0
Shigellosis	2	3	17	4	10	9
Syphilis: Congenital	0	0	0	0	1	1
Primary/Secondary	2	1	1	1	2	0
Late/Latent/Lt. Latent	7	11	5	10	9	11
Tuberculosis	5	4	12	5	9	3
Typhoid Fever (acute)	0	1	0	1	0	0
Varicella (hospitalization or death only)	NR	NR	NR	0	1	0
Vibrio Infection (non-cholera)	0	0	0	1	1	2
West Nile Virus Disease (includes West Nile Fever and West Nile Neuroinvasive Disease)	NR	NR	0	1	11	27
Yersiniosis	0	1	1	0	0	1
* Diagnosis date or date reported to the Health Department are used to approximate onset date for cases where date of disease onset is unknown. NR = not reportable						
Data Source: Yolo County Health Department.						



Yolo County Health Department Communicable Disease Update

Volume 5, Issue 3/4/5

March/April/May 2007

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- **Brucellosis Cases in Yolo County**
- **Brucellosis Treatment**
- **Prenatal HBsAg Test Confirmation**

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Brucellosis & Queso Fresco

In May 2007, 1 confirmed and 2 probable cases of brucellosis were reported to the Yolo County Health Department. All 3 cases occurred among family members who spent a month in Mexico earlier this year. The source of infection is believed to have been unpasteurized soft cheese (*queso fresco*) eaten while in Mexico. One case required hospitalization. Common symptoms among all cases included intermittent fever, myalgia, and fatigue of 2-4 weeks duration. These cases appear to be recovering and no other cases have been reported in Yolo County.

Approximately 20 - 40 cases of brucellosis are reported in California each year. The last reported case in Yolo County occurred two years ago in a patient with a similar travel history to Mexico. Disease is often associated with exposure to infected animals or ingestion of unpasteurized dairy products from infected animals. Occasional aerosolization in lab settings has resulted in infection among lab workers. In California, unpasteurized soft cheeses brought from Mexico are frequently implicated as a source of infection.

These cases are an important reminder that brucellosis should be considered as a differential diagnosis among patients with compatible clinical illness and a travel history to Mexico or Central America and/or ingestion of unpasteurized dairy products. Please review the summary below and the *2006 Bioterrorism & Infectious Disease Manual* (online at www.yolohealth.org - click on purple 'Public Health Emergency Preparedness' button, select 'Information for the Clinician').

SIGNS & SYMPTOMS

The incubation period averages 2-4 weeks, but may take several months. Intermittent fever, malaise, anorexia, back pain, myalgias, arthralgias and headache are common. Mild leukopenia, anemia and thrombocytopenia may be present. A high index of suspicion is necessary to diagnose brucellosis, due both to the non-specific presentation and to the relatively long latency period between inoculation and the development of symptoms.

LABORATORY CONFIRMATION

Isolation of brucellae from infected tissues (typically blood culture) is the gold standard for diagnosis. The organism is very slow-growing and may require several weeks before confirmation. Please alert microbiologists to follow strict safety precautions when submitting specimens if brucellosis is a differential diagnosis. Acute and convalescent agglutination titers may also confirm diagnosis and may be ordered through the Public Health Laboratory by calling (530) 666-8645.

Commercial laboratories typically perform enzyme immunoassay (EIA) tests to screen for brucellosis, however false positives are not uncommon and these tests should be confirmed with agglutination titers.

TREATMENT

See following page.

REPORTING

As a foodborne disease and potential bioterror agent, a single case of brucellosis may signal a threat to public health requiring prompt investigation. Report all SUSPECTED cases of brucellosis immediately by calling (530) 666-8645.

Treatment for Brucellosis

Generally accepted principles of brucellosis treatment are that the antibiotics used must penetrate macrophages and that monotherapy has a higher rate of relapse compared to combined therapy regimens.

Adults and Children > 8 Years

The European Commission's Task Force on Biological and Chemical Agent Threats (BICHAT), has recommended as first-line therapy: Doxycycline 100 mg IV/PO twice daily, combined with **either** streptomycin 1 gm IM once or twice daily for up to 2 weeks; **OR** rifampin 600-900 mg PO daily for 6 weeks; **OR** gentamicin 5 mg/kg/day IV in 2 divided doses for up to 2 weeks. This regimen, dosage-adjusted to body weight, is also first-line treatment for children >8 years old. Quinolones have been used with success against brucellae, while macrolide antibiotics are not effective. Complications of brucellosis are also treated with 2-drug regimens, while neurobrucellosis has generally been treated with 3 agents.

Pregnant Women and Children < 8 Years

Treatment with trimethoprim-sulfamethoxazole (TMP-SMX) plus rifampin is recommended for pregnant women and for children <8 years of age.

Relapse

Relapses occur in about 10% of cases, usually during the first year after infection, and are often milder in severity than the initial disease. Relapse has been managed with a repeated course of the usual antibiotic regimens. Most cases of relapse are felt to be caused by inadequate treatment.

Post-Exposure Prophylaxis

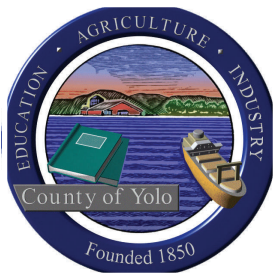
There is little evidence to support the utility of post-exposure prophylaxis against brucellosis in humans. However, BICHAT recommends a 3-6 week course of doxycycline **OR** TMP-SMX, with the addition of rifampin to either drug.

Prenatal HBsAg Testing: Make Sure Your Lab is Confirming

California law requires that all pregnant women be tested routinely for Hepatitis B surface antigen (HBsAg). With a few exceptions, a **confirmed** HBsAg laboratory result by enzyme immunoassay (EIA) is arrived at by the following three-step process: 1) initially reactive, then 2) repeatedly reactive, then 3) confirmation by neutralization. Only those specimens in which HBsAg can be neutralized by the confirmatory test procedure may be designated as positive for HBsAg.

Unfortunately, some laboratories are not routinely performing confirmatory testing on repeatedly reactive specimens and are reporting the result to clinicians as "reactive" or "repeatedly reactive". A second related problem is that some laboratories are reporting out "positive" results before confirmatory testing is completed. Because this conflicts with test manufacturer instructions and test package inserts, such testing and "positive" results are not in compliance with FDA/CLIA requirements.

The Health Department is asking providers to ensure that HBsAg testing and reporting for your patients is done according to manufacturer's specifications. Please report laboratories not complying with FDA/CLIA requirements to CDHS Laboratory Field Services at www.dhs.ca.gov/ps/l/LFSB/html/directory.htm. For further information, please contact Donna Nevraumont at (530) 666-8645 for further information.



Yolo County Health Department Communicable Disease Update

Volume 5, Issue 6/7

June/July 2007

In this Issue

- **Reportable Disease List Updated**
- **Hantavirus**
- **West Nile Virus**
- **NEW California Dept. of Public Health (CDPH)**

Contact Us

Yolo County Health Department
www.yolohealth.org

Fax CMRs to (530) 669-1549

137 N. Cottonwood St.
Woodland, CA 95695

(530) 666-8645

or

(916) 375-6380

Related Web Sites:

CDC

www.cdc.gov

CA Dept. of Public Health

www.cdph.ca.gov

World Health Organization

www.who.int

Reportable Disease List Updated

California Code of Regulations (CCR), Title 17, Section 2500 lists reportable diseases that healthcare providers must report to the Local Health Department.

The Reportable Disease List has recently been updated!

Please review the changes below. All Yolo County medical offices will be receiving updated forms in the mail as well as color charts to be posted to remind staff of reporting requirements. When you receive these, please replace all previous versions. These documents are also available online at www.yolohealth.org.

ADDED to Reportable Disease List:

- Avian Influenza
- Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE)
- Taeniasis
- Influenza hospitalizations and deaths (children <18 years)

REMOVED from Reportable Disease List:

- Anisakiasis
- Echinococcosis
- Lymphocytic Choriomeningitis
- Non-Gonococcal Urethritis (NGU)
- Reye Syndrome

For more information on reporting requirements, go to www.yolohealth.org and click on 'Disease Reporting & Laboratory'. There is a link to the full text of CCR, Title 17 as well as links to disease reporting documents and disease-specific information.

You and your staff are also encouraged to contact Public Health Nursing at (530) 666-8645 for more information about disease reporting.

CDPH Issues Hantavirus Warning

Two cases of hantavirus pulmonary syndrome (HPS) have recently been diagnosed in California (1 in El Dorado Co. and 1 in Mono Co.) Since HPS was first identified in 1993, there have been 48 cases in California (2 in Yolo Co.) and 465 cases nationally. About 33% of California HPS cases have been fatal.

HPS is contracted through contact with the urine, droppings or saliva of infected wild mice, primarily deer mice. Inhalation of aerosolized particles of mouse urine or droppings is the most common mode of transmission. The incubation period typically ranges from 2-6 weeks. Illness is characterized by fever, myalgia, and gastrointestinal illness followed by abrupt onset of respiratory distress and hypotension.

Recommendations for avoiding hantavirus are posted at www.cdph.ca.gov. Health care providers are encouraged to contact the Health Department at (530) 666-8645 to report all suspected cases of HPS and for information about submitting specimens for rapid testing and diagnosis of HPS.

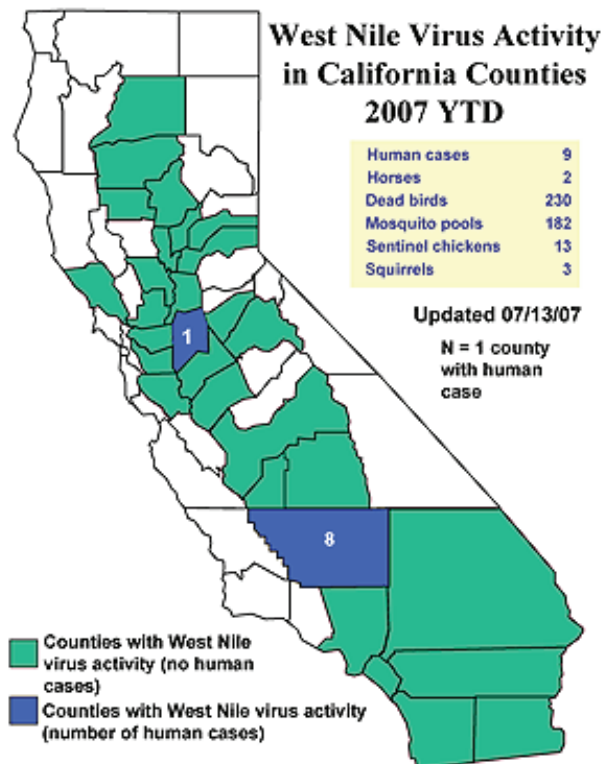
West Nile Virus (WNV) – 'Tis the Season

The first indication of WNV activity in Yolo County was identified on July 9th through dead bird surveillance. In the past, human cases have typically been diagnosed in the 1-2 months following detection of WNV in birds. Last year, 27 human cases of WNV infection were diagnosed among Yolo County residents.

At this time of year, WNV infection should be considered as a differential diagnosis for patients presenting with fever of unknown origin (>7 days duration), viral meningitis, encephalitis or other neuroinvasive disease.

Please contact the Public Health Laboratory at (530) 666-8644 for assistance in testing or ruling out WNV infection or Public Health Nursing to report suspected cases at (530) 666-8645.

Refer also to the CDPH website www.westnile.ca.gov and the Sacramento-Yolo Mosquito Vector Control website www.fightthebite.net for further information.



NEW California Department of Public Health

As of July 1, 2007, the California Department of Health Services (CDHS) divided into two departments: the **California Department of Public Health (CDPH)** and the Department of Health Care Services (DHCS). Yolo County Health Department will continue day-to-day communicable disease operations with the new CDPH after July 1.

There are several benefits to the reorganization:

- To provide more focused leadership in public health and health care financing at the state level.
- To create a more effective public health infrastructure in California resulting in decreased illness, injury, and death rates.
- To provide greater protection for California residents in the event of an act of bioterrorism or other major public health emergency.
- To increase accountability, responsiveness, effectiveness and transparency for the public health and health care purchasing functions of state government.
- To provide visibility on important health care issues to providers, local health departments, federal government, Legislature, advocates, press and general public.

For more information, check out the new CDPH website: www.cdph.ca.gov



Yolo County Health Department Communicable Disease Update

Volume 5, Issue 8/9/10

August/September/October 2007

In this Issue

- **Pediatric Influenza Surveillance**
- **Flu Season 07/08**
- **Become a Flu Sentinel**

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Pediatric Influenza Surveillance

Influenza season officially starts next week!

Since 2003, the Yolo County Health Department and the California Department of Public Health (CDPH) have conducted surveillance for Severe Pediatric Influenza cases that are either fatal or have required hospitalization in the pediatric intensive care unit (PICU). We would like to request your assistance with surveillance for severe pediatric influenza this season. Our goals are to both better confirm influenza infection in these cases and to characterize any circulating influenza viruses by performing viral culture, strain typing, neutralization studies and testing for the presence of antiviral resistance. Laboratory characterization will be vital in detecting novel influenza viruses that first present in children.

Please monitor for cases meeting the following case definition and report them as quickly as possible:

A. PEDIATRIC INFLUENZA CASES HOSPITALIZED IN THE PICU:

- Age 0- 17 years; AND
- A clinical syndrome consistent with influenza or its complications, including lower respiratory tract infection, acute respiratory distress syndrome, apnea, cardiopulmonary arrest, myocarditis, Reye or Reye-like Syndrome, or acute CNS syndrome (e.g., encephalitis, seizures); AND
- Confirmation by laboratory testing for influenza; AND
- Have been hospitalized in the ICU.

B. PEDIATRIC INFLUENZA-ASSOCIATED DEATHS:

- Age 0- 17 years; AND
- A fatal clinical syndrome consistent with influenza or its complications, including lower respiratory tract infection, acute respiratory distress syndrome, apnea, cardiopulmonary arrest, myocarditis, Reye or Reye-like Syndrome, or acute CNS syndrome (e.g., encephalitis, seizures); AND
- Confirmation by laboratory testing for influenza; AND
- No period of complete recovery between the illness and death.
- Hospitalization or ICU care not required.

Please contact the Yolo County Health Department at (530) 666-8458 to report pediatric cases meeting either of these case definitions. After your notification, your clinical laboratory may receive a request to hold residual specimens for transport by courier to the local Public Health Laboratory.

Flu Season 2007/2008

Severe influenza activity was documented earlier this year in Australia while other countries in the southern hemisphere experienced a moderate influenza season. Because influenza is predictably unpredictable, the level of activity in other regions of the world is not necessarily indicative of what we might see in the northern hemisphere. The good news is that influenza vaccine production was at a record-high this season, with up to 132 million doses available. The ACIP strongly recommends an annual influenza vaccination for the following groups:

- Persons at high risk for influenza-related complications and severe disease, including
 - ⇒ All children aged 6–59 months (i.e., 6 months–4 years);
 - ⇒ All persons aged >50 years;
 - ⇒ Children and adolescents (aged 6 months–18 years) who are receiving long-term aspirin therapy and who therefore might be at risk for experiencing Reye syndrome after influenza virus infection;
 - ⇒ Women who will be pregnant during the influenza season;
 - ⇒ Adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological or metabolic disorders (including diabetes mellitus);
 - ⇒ Adults and children who have immunosuppression (including immunosuppression caused by medications or by HIV);
 - ⇒ Adults and children who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration; and
 - ⇒ Residents of nursing homes and other chronic-care facilities.
- Persons who live with or care for persons at high risk, including
 - ⇒ Healthcare Personnel;
 - ⇒ Healthy household contacts (including children) and caregivers of children aged <59 months (i.e., aged <5 years) and adults aged >50 years; and
 - ⇒ Healthy household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.

Become A Sentinel Today!

The Yolo County Health Department is recruiting sentinel providers to participate in influenza-like illness (ILI) surveillance for the 2007/08 influenza season.

Who can be a Sentinel?

Physicians, nurse practitioners, or physician assistants (or a designee of any of these) from any specialty and type of practice can be a sentinel.

What are the responsibilities of a Sentinel Flu 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. Data are transmitted weekly by fax, or by using an internet-based reporting system. Sentinel providers also submit specimens from a subset of patients to the state lab for virus isolation **free of charge**. CDPH supplies specimen collection materials and pays for shipping.

What do Sentinel Flu Providers receive for volunteering?

Sentinel providers are offered Rapid Influenza Test kits, weekly updates on influenza trends in the state, and your choice of medical books or journal subscriptions.

To enroll in the Sentinel Flu program, contact Tim Wilson at (530) 666-8645.



Yolo County Health Department Communicable Disease Update

Volume 5, Issue 11/12

November/December 2007

In this Issue

- **HIV Test Consent Simplified**
- **Salmonella Newport Outbreak**
- **Flu Season Update**
- **Hib Vaccine Shortage Interim Guidance**

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HIV Test Consent Simplified: Jan. 1, 2008

A California Medical Association-sponsored law takes effect on January 1, 2008 that simplifies HIV testing consent requirements to facilitate routine HIV screening, as recommended by the CDC. Under current law, physicians are required to obtain informed consent before ordering an HIV test, which has proven to be a barrier to routine HIV screening. **The new law is expected to result in earlier detection of the virus and better care for patients. It is estimated that over 40,000 Californians are unaware they are HIV positive.**

The new law (AB 682) removes the informed consent requirement and instead simply requires providers to tell a patient that an HIV test is planned, provide information about the test, discuss the treatment options available for a patient who tests positive for HIV, and advise the patient that he or she has the right to decline the test. Physicians must also inform patients that test negative for HIV that they should continue to be routinely tested. If the patient declines the test, the physician must note that fact in the patient's medical file.

A study published earlier this year in the Journal of the American Medical Association (JAMA) "Association Between Rates of HIV Testing and Elimination of Written Consents in San Francisco," (March 14, 2007-Vol. 297, No. 10) revealed the potential for increased HIV testing rates when certain barriers to testing are removed. The research letter examined the rate of HIV testing after the San Francisco Department of Public Health, in May 2006, replaced written consent with verbal consent for testing through its facilities. The results show a major increase in the rate of HIV testing after this move to streamline the testing process.

According to the CDC, "HIV infection is consistent with all generally accepted criteria that justify screening: HIV infection is a serious health disorder that can be diagnosed before symptoms develop; HIV can be detected by reliable, inexpensive, and noninvasive screening tests; Infected patients have years of life to gain if treatment is initiated early, before symptoms develop; and the costs of screening are reasonable in relation to the anticipated benefits."

Salmonella Newport Outbreak

As of Dec. 21, 38 cases of *Salmonella* Newport infection with an indistinguishable PFGE pattern have been identified in the US (18 cases have been located in 12 CA counties, including Yolo County). Onset dates ranged from Oct. 4 - Nov. 9. The PFGE pattern is rare and was also isolated from ground beef just prior to the outbreak (September 26, 2007) at a slaughter/processing facility in California.

An investigation by the USDA failed to identify specific establishments, lots, or products that would be subject to a recall. However, among cases who consumed ground beef at home in the week prior to onset (or in the month of October for controls), 80% of the cases purchased their ground beef from Safeway, compared to only 26% of controls (OR=11.3, 95% CI 1.9-69.1, p-value 0.005). USDA issued a public health alert on December 20, 2007 to consumers who may have purchased fresh ground beef products from Safeway in AZ, CA, HI, NV, and NM between Sep. 19 - Nov. 5, 2007. Consumers are advised to discard or destroy any products that meet these criteria.

This outbreak is a reminder of the importance of forwarding *Salmonella*, *E. coli* O157 and *Neisseria meningitidis* specimens to the Yolo County Public Health Laboratory to ensure that routine serotyping and PFGE occur. For questions about submitting specimens, please contact the Yolo County Public Health Laboratory at (530) 666-8645.

Flu Season 2007/08 Update

For the reporting period December 9 – 15, 2007, influenza activity in California remained sporadic (defined by the CDC as “Isolated cases of lab-confirmed influenza in the state, but ILI [influenza-like illness] activity is not increased”). Outpatient activity and hospitalizations in California for ILI remained low, as did laboratory detections for influenza. Laboratory detections for RSV as reported by sentinel laboratories continue to climb. Nationwide, regional activity was reported in Colorado, and local activity was reported in Hawaii, Nevada, Texas, Virginia, and Maine.

Hib Vaccine Recall: Interim Recommendations

On December 11, 2007, Merck & Co., Inc. issued a voluntary recall of its *Haemophilus influenzae* type b (Hib) vaccines (www.fda.gov/cber/recalls/merckhib121107.htm). Routine testing of the vaccine manufacturing equipment identified the presence of *Bacillus cereus* bacteria. While the manufacturing issue is being resolved, production of both PedvaxHIB® and Comvax® is suspended for at least the next year. These Hib vaccines have accounted for approximately half of the nation’s supply. To address the shortfall in Hib vaccine, the CDC is releasing Hib vaccine from its stockpile, and Sanofi Pasteur will attempt to increase availability of its licensed Hib vaccines, ActHIB® and TriHIBit® (DTaP/Hib). Even so, a significant temporary shortage of Hib vaccine is expected.

Interim recommendations are available at www.cdc.gov (MMWR 12/19/07) and include:

1. The Hib booster dose at age 12-15 months should be temporarily deferred for children not at increased risk for invasive Hib disease.
2. Children at increased risk for invasive Hib disease should continue to receive the recommended booster dose of PedvaxHIB, ActHIB, or TriHIBit at 12-15 months of age. High-risk children include: American Indian and Alaskan Native (AI/AN) children, children with sickle cell disease, HIV infection, anatomic or functional asplenia, malignancy, other immunocompromising conditions.
3. The primary series should be completed with any available product even though this may mean changing type of product and number of doses in the primary series from 2 to 3 for children who started with but had only received one dose of a recalled product.
4. Physicians who serve predominantly AI/AN populations should attempt to use an OMP product if possible, however the main OMP products have been recalled. CDC will attempt to prioritize stockpiled OMP product for these communities.

The appropriate number and timing of doses of Hib vaccine for children who are behind schedule are available at www.cdc.gov/vaccines/pubs/pinkbook/downloads/hib.pdf (p. 123) and in the 2006 Red Book (pp 28-32).

Yolo County Health Department requests that all isolates of *H. influenzae* from sterile sites be serotyped and that cases of invasive *H. influenzae* disease in children younger than 15 years be reported promptly to the Health Department as per State regulations as well as any child, aged <6 years, vaccinated in the US, who: 1) had isolation of *B. cereus* from specimens other than feces or vomitus after any vaccination and 2) had been vaccinated with any vaccine after March 31.

For more information, please contact the Yolo County Immunization Coordinator at (530) 666-8645.