



Public Health Bulletin

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2191 Johnson Avenue • P.O. Box 1489 • San Luis Obispo, CA 93406 • (805) 781-5500 • (805) 781-5543 fax

Valley Fever on Rise in San Luis Obispo County

Coccidioidomycosis (aka Cocci, San Joaquin Valley Fever, or Valley Fever) is on the rise in Southern California and San Luis Obispo County.

Cocci is a systemic infection caused by inhaling airborne arthrospores into the lungs. The incubation period ranges from one to four weeks.

Approximately 60% of infected individuals remain asymptomatic or experience self-limiting upper respiratory infections. Clinical manifestations of infection and illness range from an influenza-like illness with fever, chills, cough and (rarely) pleuritic chest pain, to severe pneumonia.

In rare cases, (~5%) erythema nodosum develop, and more rarely still, disseminated infection throughout the body occurs. In disseminated cases, meningitis, permanent neurologic damage and even death can occur. Dissemination occurs more frequently in African-American and Filipino cases.

San Luis Obispo County has also experienced higher than normal incidence of Cocci in the past year, and will be participating in a state-led, multi-county task force studying increased incidence.

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Health Director Notes: *Gregory Thomas, M.D., M.P.H.*



CMSP Increases Specialist Physician Reimbursement

On March 16, 2004, the Board of Supervisors authorized the County Medical Services Program (CMSP) to increase the rate of reimbursement to specialist physicians to Medicare rates.

The Board of Supervisors authorized a contract with Community Health Centers to take over the Family Care Centers and augment the hours and location of primary care services.

Due to Federally Qualified Health Center status, CHCCC is able to receive federal funds to augment payment for Medicare and Medi-Cal patient encounters. The County allocated part of the savings from discontinuation of directly providing primary care to increase CMSP rates and thereby increase access.

For more information, contact Janet Lorenzo at 781-4876.

Health Status Profiles 2004

The County Health Status Profiles indicate some improvements and some decreases in

community health. This report compares age-adjusted health status indicators for San Luis Obispo County versus California and other counties.

The health status profile is available at the following website: www.dhs.ca.gov/hisp/chs/OHIR/Publication/publicationindex.htm.

Some notable statistics for 2000-2002 morbidity/mortality:

- The rate for lung cancer mortality was 45.8 (per 100,000 population – age-adjusted) versus 44.8 for California.
- The rate for coronary heart disease mortality was 138.8 versus 186.6 for California.
- The rate of drug-induced deaths was 12.0 versus 8.8 for California as a whole.

West Nile Virus Brochure

Please share the enclosed West Nile Virus brochure with your patients and others. You can also find it at www.westnile.ca.gov.

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Health Officer (cont.)**Valley Fever on Rise in the County (cont.)****Flu Vaccine 2004-2005**

Please note that the following website has the first flu vaccine recommendations for next year, including pediatric vaccines: www.immunize.org/cdc/flubull_1.pdf.

The Public Health Department urges clinical providers to be on the lookout for Cocci in their patients. The San Luis Obispo County Public Health Lab can test various specimens (depending on the infection location), including

sputum, pus, urine, CSF or skin biopsies in suspected cases.

In San Luis Obispo County, the majority of cases occur in the North County region, but cases can be contracted anywhere the patient is exposed to dirt or dust.

Understanding Risks and Transmission of MRSA

Methicillin-resistant *Staphylococcus aureus* (MRSA) is of increasing concern for a number of reasons:

- 1) It is accounting for an ever-larger share of nosocomial infections, with attendant increased mortality and cost;
- 2) It is now recognized as an emerging pathogen in community-acquired *S. aureus* infections; and
- 3) Vancomycin-resistant *S. aureus* (VISA) is now a reality, raising the possibility of untreatable *S. aureus* infections.

Nosocomial MRSA

In 1968, the first cases of MRSA infections in the United States were reported. Since that time, MRSA infections acquired in hospitals have become an increasingly severe problem. The most recent data from the National Nosocomial Infections Surveillance System¹ indicate that 53.5% of *S. aureus* infections in ICU patients were resistant to methicillin in 1999. This was an increase of 40% compared to the average rate for the preceding 5 years (1994-1998). These infections are more lethal and more costly than infections with methicillin-sensitive *S. aureus* (MSSA).

Genetic studies of MRSA isolates have shown that resistance is conferred by acquisition of the staphylococcal cassette chromosome *mec* (SCC*mec*); however, worldwide spread of MRSA is the result of dissemination of a few clones—evidence that transfer of the SCC*mec* genetic material is a rare occurrence. This means that the spread of MRSA is primarily due to patient-to-patient transfer by healthcare workers (HCWs). Antibiotic use helps to maintain MRSA by providing it with a selective advantage.

Studies have documented frequent MRSA contamination of HCW hands and clothing after contact with an infected patient, contaminated equipment (including stethoscopes, otoscopes, etc.), and contamination of the patient environment. For example, 69% of white coats became contaminated after examining a patient with MRSA or vancomycin-resistant enterococcus (VRE), and the organisms were transferred to the hands in 27% of HCWs after touching the coat.

While there is a great deal of controversy over the means for controlling MRSA and even whether or not it should be attempted, studies have shown it is possible and cost-effective. Recently the Society for Healthcare Epidemiology of America published a guideline for preventing nosocomial transmission of MRSA and VRE². Control entails the following strategies:

- 1) Active surveillance cultures of high-risk³ patients to identify the reservoir for spread.
- 2) Hand hygiene
- 3) Barrier precautions for patients known or suspected to be colonized or infected with resistant pathogens such as MRSA or VRE—gloves, gowns and masks.
- 4) Antibiotic stewardship
- 5) Selective use of decolonization or suppression of colonized patients
- 6) Educational programs for HCWs
- 7) Computer tracking system for patients with resistant pathogens
- 8) Adequate disinfection of the environment—agent used, method of application, measures of effectiveness

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Community-Acquired MRSA (CA-MRSA)

Increasingly there are reports of MRSA infections of skin or soft tissues in persons with no known contact to a healthcare facility. These infections can be very serious, as in the four pediatric deaths reported in the Morbidity and Mortality Weekly Report⁴, all of whom were treated initially with cephalosporins, which are ineffective against MRSA. Recently, clusters of CA-MRSA have been reported, including three outbreaks in Los Angeles County involving, respectively, the jail, a football team, and among gay men.⁵ Other clusters involving athletic teams have been reported in fencers and wrestlers.⁶ In San Francisco, about 5% of injection drug users are colonized with MRSA.⁷ **Many CA-MRSA infections were first attributed to spider bites.**

CA-MRSA strains differ from hospital-acquired MRSA (HA-MRSA) strains in significant ways.

CA-MRSA isolates are often susceptible to many of the agents to which HA-MRSA are resistant. CA-MRSA and HA-MRSA strains from the same geographic area have different pulsed-field gel electrophoresis (PFGE) patterns. The SCC_{mec} found in CA-MRSA is much smaller than that of HA-MRSA isolates. The fulminant infections seen in many CA-MRSA cases may be related to production of a leukocidin known as Pantone-Valentine leukocidin.

While treatment of soft tissue infections through incision, drainage, and local care is usually sufficient, if antibiotic treatment is indicated, culture and sensitivities are increasingly important in guiding the selection of an antibiotic in CA-MRSA infections, which are often sensitive to oral antibiotics such as tetracycline, clindamycin, trimethoprim-sulfamethoxazole. CA-MRSA isolates are often sensitive to oral antibiotics such as tetracycline, clindamycin and trimethoprim sulfamethoxazole. Combination therapy may be necessary and reduces the development of resistance. Rifampin is frequently used in combination with these antibiotics. Attention to use of gloves, handwashing, disposal of dressings and other materials in contact with the infected area, cleaning surfaces of exam rooms (commercial disinfectant or 1:100 solution of diluted bleach), and proper laundering of linens will help to prevent transmission in the outpatient setting.

Vancomycin-Resistant *S. aureus* (VRSA)

In 1997, the first case of *S. aureus* infection with reduced sensitivity to vancomycin (vancomycin-intermediate *S. aureus* or VISA) was reported in the United States. Since then, seven more cases of VISA have been documented. In 2002, the first case of VRSA in the United States was reported; a second case occurred later the same year. Both isolates were susceptible to other antibiotics (e.g., chloramphenicol, linezolid, minocycline, trimethoprim-sulfamethoxazole). Independent risk factors for VISA or VRSA are treatment with vancomycin and infection with MRSA. In both VRSA cases, it appears that a vancomycin-resistant enterococcus transferred the gene for vancomycin resistance (*vanA*) to MRSA within the patient. VISA and VRSA may be under-recognized because fully automated susceptibility testing systems and disk diffusion testing may not correctly identify them. Laboratories using either of these methods should add either a vancomycin screen plate or non-automated minimum inhibitory concentration (MIC) method. **Any VISA or VRSA isolate should be reported to San Luis Obispo County Epidemiology at 781-5500.**

Resources

¹ Semiannual report: Data aggregated from the National Nosocomial Infections Surveillance System. Centers for Disease Control and Prevention, December 2000. Available at www.cdc.gov/ncidod/hip/NNIS/DEC2000sar.PDF

² SHEA Guideline for preventing Nosocomial Transmission of Multidrug-Resistant Strains of *Staphylococcus aureus* and *Enterococcus*. Infect Control Hosp. Epidemiology 2003;24:362-386.

³ Patients admitted from long term care facilities or other acute-care facility, admissions to rehabilitation units, dialysis patients, patients readmitted within 30 days of previous hospital discharge.

⁴ MMWR 48(32):707-710. August 20, 1999.

⁵ MMWR 52(5):88.

⁶ MMWR 52(33):793-795.

⁷ San Francisco Department of Public Health: www.dph.sf.ca.us/HealthInfo/adv_mrsa_stis_20030205.pdf

• CDC website: www.cdc.gov/ncidod/hip/Aresist/mrsa.htm

• Methicillin-Resistant *Staphylococcus aureus* Infections Among Competitive Sports Participants — Colorado, Indiana, Pennsylvania, and Los Angeles County, 2000—2003 www.cdc.gov/mmwr/preview/mmwrhtml/mm5233a4.htm

• Boyce J. Update on Resistant *Staphylococcus aureus* Infections. Clinical updates in infectious diseases, June 2003;VI(2). www.nfid.org/publications/clinicalupdates/id/staphresistant.html

• Orange County Epidemiology program MRSA information for clinicians www.ochealthinfo.com/epi/mrsa/providers.htm

San Luis Obispo County Reported Cases of Selected Communicable Diseases - Spring 2004

Disease	Jan.*	Feb.	March	Total 2004	Total 2003
AIDS	0	0	0	0	6
Amebiasis	0	0	0	0	1
Campylobacter	5	4	2	11	30
Chlamydia	33	56	12	101	511
Coccidioidomycosis	21	7	1	29	71
Cryptosporidiosis	2	0	0	2	8
E. Coli 0157:H7	0	0	0	0	2
Giardia	1	0	0	1	12
PPNG	0	0	0	0	0
Gonorrhea	5	5	2	12	56
Hepatitis A	0	0	1	1	4
Hepatitis B	4	1	0	5	1
Hepatitis C Acute	0	0	0	0	0
Hepatitis C Chronic	67	32	23	122	606
Hepatitis, Unspecified	0	0	0	0	0
Measles (Rubeola)	0	0	0	0	0
Meningitis - Total	6	2	0	8	35
Meningitis - Viral	3	2	0	5	28
Meningitis, H-Flu	0	0	0	0	0
Meningococcal Disease	0	0	0	0	1
Pertussis	0	0	0	0	1
Rubella	0	0	0	0	0
Salmonellosis	0	0	2	2	22
Shigellosis	1	0	0	1	2
Syphilis - Total	0	0	0	0	10
Tuberculosis	0	0	0	0	5

*January 2004 cases may reflect cases reported late from 2003.



San Luis Obispo County
 Public Health Department
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