While penicillin therapy is the primary treatment for syphilis, differing penicillin formulations exist that may result in confusion—in particular, Bicillin® C-R has been confused with Bicillin® L-A. Bicillin C-R is a mixture of 1.2 million units (MU) benzathine penicillin G (BPG) and 1.2 MU procaine penicillin G, whereas Bicillin L-A is a preparation containing just BPG (2.4 MU). Because BPG has a longer half-life, which is considered essential for effective syphilis treatment, Bicillin L-A is the recommended regimen for treating syphilis according to treatment guidelines established by CDC.1

Although use of Bicillin C-R may result in subsequent declines in RPR and VDRL titers consistent with appropriate therapy, the efficacy of Bicillin C-R to treat syphilis is unknown. In addition, CDC has found that inadvertent Bicillin C-R use is more frequent than previously believed.2 Thus, it is important that all healthcare providers, including pharmacists, be familiar with the differences in these medications and verify the administration of the correct Bicillin in the diagnosis and treatment of their syphilis patients.

Avoiding Inadvertent Use of Bicillin® C-R for Treatment of Syphilis

While penicillin therapy is the primary treatment for syphilis, differing penicillin formulations exist that may result in confusion—in particular, Bicillin® C-R has been confused with Bicillin® L-A. Bicillin C-R is a mixture of 1.2 million units (MU) benzathine penicillin G (BPG) and 1.2 MU procaine penicillin G, whereas Bicillin L-A is a preparation containing just BPG (2.4 MU). Because BPG has a longer half-life, which is considered essential for effective syphilis treatment, Bicillin L-A is the recommended regimen for treating syphilis according to treatment guidelines established by CDC.1

Although use of Bicillin C-R may result in subsequent declines in RPR and VDRL titers consistent with appropriate therapy, the efficacy of Bicillin C-R to treat syphilis is unknown. In addition, CDC has found that inadvertent Bicillin C-R use is more frequent than previously believed.2 Thus, it is important that all healthcare providers, including pharmacists, be familiar with the differences in these medications and verify the administration of the correct Bicillin in the diagnosis and treatment of their syphilis patients.

Coccidioidomycosis:
Cases of Valley Fever on the Rise in Southern California

Since the fall of 2003, over 70 laboratory-confirmed cases of coccidioidomycosis, commonly known as “coccii” or “Valley Fever,” have been identified in Ventura County—an incidence almost nine times more than expected. Contributing factors may be the recent wildfires in Southern California that destroyed vegetation, exposing soil. This was followed by high winds causing infectious spores to become airborne.

In Los Angeles County since fall, there has been a slight increasing trend among residents in the San Fernando and Antelope Valleys. However, overall our county has not seen a large increase in cases—certainly not the same extent as has occurred in Ventura County. Whether the difference in incidence between Ventura
Coccidioidomycosis

County and our county is due to under-diagnosis, under-reporting, or is a true static state is unknown.

What is coccidioidomycosis?

Also known as Valley Fever, San Joaquin Valley Fever, desert fever, and desert rheumatism, coccidioidomycosis was first reported by a medical student in Argentina more than 100 years ago and has affected the residents of the desert Southwest for thousands of years.

Coccidioidomycosis is a fungal disease; its etiologic agent, Coccidioides immitis, grows in soil in areas of low rainfall, high summer temperatures, and moderate winter temperatures. As such, it is endemic to the south-western United States, northern Mexico, and parts of Central and South America. Since inhalation of infectious spores causes this disease, outbreaks often occur after dust storms, earthquakes, and major soil excavation. C. immitis has been shown to cause mass disease and has been touted as potential agent for bioterrorism.

Approximately 10-50% of persons living in areas with endemic disease are seropositive and considered immune. In any given year, about 3% of people who live in an area where coccidioidomycosis is commonly seen will develop infection.

Coccidioidomycosis is symptomatic in 40% of cases, and usually presents as a flu-like illness with fever, cough, headache, rash, and myalgia. It can lead to chronic pulmonary infection or widespread disseminated infection—causing meninges, soft tissues, joints, and bone in under 1% of infections. Immunocompromised people are at a much higher risk for severe disease. Others believed to be at risk for disseminated disease are: infants, the elderly, diabetics, pregnant women in their third trimester, and a variety of racial/ethnic groups (i.e., those of African-American, Latino, Asian, and Filipino descent). Historically, those most at risk for coccidioidomycosis infection are individuals who are not already immune and whose jobs involve extensive contact with soil dust such as construction or agricultural workers and archeologists.

In primary disease, the incubation period is 1 to 4 weeks. Dissemination may occur insidiously, or may occur years after primary infection. Infection provides life-long immunity. The disease is not contagious, and is not spread person-to-person. Primary pulmonary

Continued on page 3
Coccidioidomycosis (from page 2)
coccidioidomycosis generally resolves without treat-
ment. Treatment with antifungal medication (e.g.,
amphotericin B, itraconazole, or fluconazole) is re-
commended for disseminated coccidioidomycosis or
for primary pulmonary infection in patients with
increased risk for disseminated disease. Currently,
there is no vaccine—but development is underway.
Prevention consists of simple environmental measures
to decrease the amount of airborne dust, such as plant-
ing grass or paving roads in highly populated areas.

Reporting of cases is mandatory in Los Angeles
County
The Los Angeles County Department of
Health Services wants all healthcare providers to be
alert for the possible diagnosis of coccidioidomyco-
sis, especially in patients who have a pneumonia that
is not resolving over the course of three or four
weeks. Coccidioidomycosis should also be consid-
ered in individuals with infections where the cause
has not been found—especially in cases of bone or
joint infections or meningitis. Coccidioidomycosis
is a reportable condition in California, New Mexico,
and Arizona.

Coccidioidomycosis:
Case Definition
An illness characterized by one or more of the
following:
• Influenza-like signs and symptoms (e.g.,
fever, chest pain, cough, myalgia,
arthralgia, and headache)
• Pneumonia or other pulmonary lesion,
diagnosed by chest radiograph
• Erythema nodosum or erythema multi-
forme rash
• Involvement of bones, joints, or skin by
dissemination
• Meningitis
• Involvement of viscera and lymph nodes

Laboratory Criteria for Diagnosis:
• Cultural, histopathologic, or molecular
evidence of Coccidioides immitis, OR
• Positive serologic test for coccidioidal
antibodies in serum or cerebrospinal
fluid by:
  • Detection of coccidioidal immunoglobulin M
    (IgM) by immunodiffusion, enzyme immunoas-
    say (EIA), latex agglutination, or tube precipitin,
    OR
  • Detection of rising titer of coccidioidal
    immunoglobulin G (IgG) by immunodiffu-
    sion, EIA, or complement fixation, OR
  • Coccidioidal skin-test conversion from
    negative to positive after onset of clinical
    signs and symptoms.

Case Confirmed: A case meeting the clinical
definition that is laboratory confirmed.

To report a case of coccidioidomycosis:
Attach the pertinent laboratory data, and fax to 888-397-3778.
Healthcare providers are mandated to report disease under Title 17, California Code of Regulations.
The following summaries stress the importance of judicious antibiotic prescribing. Acute otitis media (AOM) is the most commonly treated infection among children—over 5 million pediatric cases occur annually in the U.S. resulting in more than 10 million prescriptions. Between 40% to 75% of AOM cases are viral. Additionally, about 80% of children with AOM will recover without antibiotics and have no increased risk of serious infection. To address this, the American Academy of Pediatrics (AAP) and American Academy of Family Physicians (AAFP) recently published guidelines on appropriate treatment of ear infections.

Antibiotic Selection Pressure and Resistance in *Streptococcus pneumoniae* and *Streptococcus pyogenes*


This study correlates outpatient antibiotic consumption with the prevalence of antibiotic resistant *Streptococcus pneumoniae* and *Streptococcus pyogenes* in Europe, North America and Australia. Total antibiotic use was significantly correlated with prevalence of penicillin-nonsusceptible *S. pneumoniae* (PPNSP), as was macrolide use and prevalence of macrolide-resistant *S. pneumoniae*, and macrolide-resistant *S. pyogenes*. Among 20 countries in the study, U.S. data was only available for analysis in penicillin resistance and ranked high in the proportion of PPNSP (34%), along with France (43%) and Spain (50%). The authors suggest that socioeconomic, cultural and behavioral determinants as well as healthcare policies have a major impact on outpatient antibiotic prescribing practices and resistance rates. These findings support efforts to promote appropriate use of antibiotics.

New Guidelines on Appropriate Treatment of Ear Infections


New clinical practice guidelines issued by the AAP and AAFP provide primary care physicians recommendations for the diagnosis and management of AOM in children 2 months to 12 years of age. These emphasize accurate diagnosis of AOM and address pain management with analgesics and to hold off on antibiotics. The option to observe and follow-up AOM cases for 48-72 hours can decrease unnecessary antibiotic prescriptions. In prior studies, the majority of parents were willing to treat their child’s AOM with pain medication alone.3,4 Summary recommendations from the guidelines are listed below.5

- Accurately differentiate AOM from otitis media with effusion, which requires different management.
- Relieve pain, especially in the first 24 hours, with ibuprofen or acetaminophen.
- Give parents of select children the option of fighting the infection on their own for 48-72 hours, then starting antibiotics if they do not improve.
- Prescribe initial antibiotics for children who are likely to benefit the most from this treatment.
- Emphasize prevention of AOM (i.e., encouraging breastfeeding, avoiding “bottle propping,” and eliminating exposure to tobacco smoke).
- If antibiotic treatment is agreed upon, amoxicillin should be used for most children.

References

1. Article available at: www.cdc.gov/ncidod/eid/vol10no3/03-0252.htm
2. Guidelines available at: www.aap.org/ and www.aafp.org/x26481.xml

Clinical practice guidelines and other resources:
- The American Academy of Pediatrics: http://aappolicy.aappublications.org/
- The American Academy of Family Physicians: www.aafp.org/x132.xml
- The California Medical Association (CMA) Foundation - www.aware md/resource/index.asp
- Clinical Practice Guidelines: Compendium (Pediatric and Adult) - www.aware.md/clinical/clinical_guide.asp
- The Centers for Disease Control and Prevention - www.cdc.gov/drugresistance/community/
- The Los Angeles County Department of Health Services: Acute-Communicable Disease Control Program - www.lapublichealth.org/aecd/antibia.htm

ANTIBIOTIC RESISTANCE INFORMATION CORNER
On March 4, 2004, Acute Communicable Disease Control (ACDC) received a Foodborne Illness Report from a concerned citizen stating that he was diagnosed with *Salmonella* gastroenteritis. He believed his illness was connected to eating at a restaurant in Los Angeles County. Over the next few days, several additional Foodborne Illness Reports were received by ACDC implicating the same restaurant. The potential for a wide-scale outbreak was heightened since the restaurant in question serves over 1,000 customers each day. On March 5, the Department of Health Services Environmental Health Division’s Food and Milk Program responded with a restaurant inspection. Shortly thereafter, ACDC initiated an epidemiological investigation to determine the extent of the problem, the risk factors for disease acquisition and the steps necessary to control and prevent further infections. Inspection of the restaurant revealed two major problem areas. First, the oven was malfunctioning which may have resulted in undercooked turkey meat—the suspected cause of illness. Second, an electric slicer may have been a source of cross-contamination between food items. The investigated restaurant was not closed because control measures were implemented as soon as the outbreak was recognized—use of the malfunctioning oven was immediately discontinued.

A press release was issued notifying the public of the *Salmonella* outbreak, and requesting that all ill patrons that dined at the restaurant between February 25-March 5 contact our Health Department. In response to the press release, ACDC received over 70 calls. Public callers, their dining partners and identified case-patients were interviewed for a case-control study. *Salmonella* isolates were sent to the Public Health Laboratory for typing.

As of April 7, 21 culture-confirmed cases and 56 presumptive case-patients were identified. One case-patient required hospitalization for dehydration. Among culture-confirmed case-patients, the median age was 34 years (range 12-67); 51% were male. All ate at the restaurant during February 25 to March 1. Most (86%) ate a dish containing turkey meat. All 21 isolates were typed as *Salmonella heidelberg*. Preliminary data analysis showed that eating dishes containing turkey, including sandwiches and salads, were statistically associated with illness, as well as eating leftovers from the restaurant. And since the restaurant is a popular stop for tourists, this investigation involves case-patients from two other cities (New York, Chicago) and two other countries (Canada, Wales).

### What is *Salmonella*?

*Salmonella* is one of the most common causes of foodborne illness. Annually, 40,000 culture-confirmed cases are reported nationwide. Plus, since it is estimated that for every identified case, 30 go undetected, roughly 1.2 million infections are believed to occur every year. *Salmonella* infections are also especially prevalent in our county—in 2002, over 900 cases were identified (incidence rate of 10.3 per 100,000 population).

**Symptoms for *Salmonella* gastroenteritis** are diarrhea, fever, and abdominal cramps starting 6-72 hours post exposure. While most people recover fully without treatment in 4-7 days, acute *Salmonella* infections account for more than 600 deaths each year nationwide. Highly susceptible groups include infants, the elderly, and the immuno-compromised. The most common mode of transmission is through the ingestion of contaminated food products—typically implicated food items include improperly cooked poultry, meats and eggs, unpasteurized milk and unwashed fruits and vegetables. Cross contamination is also a common cause of infection. In addition, food handlers may transmit disease with unwashed hands after contact with infected fecal matter.

Continued on page 6
Partner notification is a confidential process where the sex partners of STD and HIV patients are informed of their possible exposure and urged to seek immediate medical evaluation. The goals are to reduce the spread of STDs and HIV and prevent reinfection of the initiating patient. Usually, this is accomplished by either provider referral (where partners are contacted by health authorities) or patient referral (in which partners are notified by the initiating patient). Both are voluntary.

The Internet presents new challenges as well as opportunities for STD and HIV prevention and control. Using the Internet to meet sex partners has been shown to be a sexual risk-taking behavior. However, this technology can also prevent and control STDs. Last year, the Los Angeles County Sexually Transmitted Disease Program launched a notification program using the Internet. Our program was successful in reaching partners through the use of e-mail and instant messaging. Preliminary results demonstrate the promise of the Internet for partner notification and evaluation. While further study is needed to determine the most effective methods, public health officials now have an additional strategy for locating patients who are otherwise anonymous or difficult to find.

References

1. CDC. Using the Internet for partner notification of sexually transmitted diseases—Los Angeles County, California, 2003. MMWR 2004; 53(06):129-131. Available at: www.cdc.gov/mmwr/preview/mmwrhtml/mm5306a4.htm
Correction: Meningococcal prophylaxis

In the Feb/March 2004 issue of The Public’s Health, the description of antibiotic prophylaxis for the treatment of meningococcal patients was incorrect. The following is an accurate guide to treatment.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Age group</th>
<th>Dosage</th>
<th>Duration and route of administration¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifampin</td>
<td>Children &lt; 1 month</td>
<td>5 mg/kg every 12 hours</td>
<td>2 days</td>
</tr>
<tr>
<td></td>
<td>Children ≥ 1 month</td>
<td>10 mg/kg every 12 hours</td>
<td>2 days</td>
</tr>
<tr>
<td></td>
<td>Adults</td>
<td>600 mg every 12 hours</td>
<td>2 days</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>Adults</td>
<td>500 mg</td>
<td>Single dose</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>Children &lt; 15 years</td>
<td>125 mg</td>
<td>Single IM dose</td>
</tr>
<tr>
<td></td>
<td>Adults</td>
<td>250 mg</td>
<td>Single IM dose</td>
</tr>
</tbody>
</table>


2. Oral administration unless indicated otherwise.
3. Intramuscular.

DHS Staff Recent Publications


Authors: Trista A. Bingham, MPH, MS; Nina T. Harawa, MPH, PhD; Denise F. Johnson, MPH; Gina M. Secura, MPH; Duncan A. MacKellar, MA, MPH; Linda A. Valleroy, PhD

Previous research has not adequately explained existing significant disparities in HIV prevalence among Black men who have sex with other men (MSM) as compared to MSM of other races and ethnicities. Even after controlling for other traditional risk factors (e.g., number of sexual partners, type and frequency of unprotected sex), Black MSM have substantially higher odds of HIV infection as compared to other MSM. An analysis of the 1999–2000 Los Angeles Young Men’s survey² was conducted to investigate causes for this racial and ethnic differential in HIV prevalence. Among the findings, Black MSM reported fewer HIV-risk behaviors as compared to White MSM, but had a significantly higher HIV prevalence (26% versus 7.4% respectively). Multiple logistic regressions were performed controlling for age of sexual partners, frequency of Black partners, as well as some traditional risk factors (e.g., frequency of unprotected anal sex, number of sexual partners). Analyses indicated a 20% reduction in the relative odds of HIV infection between Black MSM and White MSM—the odds ratio decreased from 6.9 to 5.5. This reduction suggests that differences in male partner types, specifically having older partners and more Black male partners, may partially explain the higher HIV prevalence among Black MSM in Los Angeles.

References
1. From the Los Angeles County HIV Epidemiology Program
2. The Los Angeles Young Men’s survey is a cross-sectional venue-based study of MSM. Additional information about this study is available from previous publications:
Clarification Regarding Reporting of Hospitalized Varicella Cases

Confusion exists regarding the reporting of varicella cases. Fatal cases of varicella should be reported immediately by phone to Acute Communicable Disease Control (ACDC, 213-240-7941). In addition, ACDC is requesting the reporting of hospitalized cases with a primary or secondary diagnosis of varicella using the standard Confidential Morbidity Report (CMR) within 7 days of diagnosis. However, cases—including hospitalized cases—of herpes zoster (shingles) should NOT be reported.

The reporting of hospitalized varicella cases is an important method of gauging the prevalence of this vaccine-preventable disease. Unfortunately, though, hospitalized varicella is vastly underreported; the State Immunization Program estimates that approximately 97,000 varicella cases currently occur each year in California and about 230 cases are hospitalized—but, only 2 cases of hospitalized varicella were reported in California between May and December, 2003.

CDC recommends that states implement surveillance for all varicella cases by 2005; but the recommendation is currently not feasible in California because of the large number of cases. Case-based surveillance of hospitalized shingles cases is not feasible either for the same reason.


For questions, please contact Rachael Lee, RN, PHN or Dawn Tenshate, MD at (213) 240-7941.