**Prevent TB Disease by Treating TB Infection**

Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis* that is spread from person to person through the air. Persons with latent tuberculosis infection (LTBI) are infected with the bacterium that causes TB; however, they do not have active disease and do not experience symptoms of TB. In contrast, active disease is when TB bacteria overtake the defenses of the immune system, resulting in the progression from latent infection to TB disease. Today, more emphasis is being directed towards not only treating active TB disease, but also identifying and treating persons with LTBI.

A person cannot have TB disease without first having TB infection. Therefore, to truly eradicate TB disease, you must eliminate TB infection. According to the Centers for Disease Control and Prevention, over 11 million people in the US are estimated to have LTBI. If left untreated, 5–10% of that population will develop active disease. Immunocompromised persons and others with chronic illnesses are at an increased risk of disease progression. It is crucial to identify and treat those who are at higher risk for TB infection and progression to TB disease.

**High Risk Factors:**
- Immunodeficiency
- Young children < 5 years of age
- Diabetes, silicosis, and certain cancers
- Recent contacts to an infectious TB case
- Fibrotic changes in chest imaging consistent with prior TB
- Organ transplant or chronic renal failure
- Gastrectomy or jejunoileal bypass, or those that are 10% below their ideal body weight

The following are methods of evaluating for TB infections. These tests do not exclude TB infection or disease. Medical providers should always rule out active disease before initiating LTBI treatment.
- Mantoux tuberculin skin test (TST)
- IGRA-Interferon-Gamma Release Assays
  - QuantiFERON-TB Gold
  - T-Spot.TB
- Those in the high risk categories with positive IGRA and/or TST should be treated.

**Persons with LTBI are still infected with TB bacteria and require treatment to prevent TB disease.**

Below are some treatment options for LTBI:
- Isoniazid 9-Month regimen
  - Preferred regimen for children 2–11 years of age
- Isoniazid 6-Month regimen
  - Recommended for healthy adults
  - Not recommended for children, immunocompromised, or imaging suggestive of old TB
- Isoniazid-rifapentine (RPT) 12-dose
  - Given once a week under direct observe therapy
  - Recommended for healthy people ≥12 years of age
- Rifampin 4-Month
  - 6-Months for children
  - Not used for HIV infected persons on antiretroviral therapy

The most commonly used treatment for LTBI is the 9-month isoniazid regimen. The other options have been found to be just as effective and cost saving. They are helpful with compliance and completion due to their shorter duration. Please consult the Public Health Department for patient monitoring guidelines as needed; (800) 722-4794 or [http://1.usa.gov/1BiLqtc](http://1.usa.gov/1BiLqtc).

**Attention Prenatal Care Providers**

Pertussis (whooping cough) is widespread in the US. Young infants are at highest risk. All Californians who died of pertussis in the last decade were infants younger than four months of age, most of whom were too young to receive pertussis vaccine.

To cover this gap in immunity during early infancy, the American Congress of Obstetricians and Gynecologists, the Centers for Disease Control and Prevention, and the California Department of Public Health, recommend that women receive a dose of Tdap (Tetanus, Diphtheria, Pertussis) vaccine between 27 and 36 weeks gestation every pregnancy regardless of their vaccination history. Maternal transplacental pertussis antibodies resulting from third trimester Tdap immunization can help protect young infants until they are old enough to be immunized. In contrast, postpartum maternal vaccination occurs too late to provide transplacental antibodies, and immunity from maternal immunization before the third trimester may decline too rapidly to protect the infant.

Rates of prenatal immunization are highest when women are immunized during their prenatal examinations rather than after referral. We encourage all prenatal care providers to immunize during prenatal visits, or until this is possible, to adopt reliable methods that ensure that offsite immunization occurs and is being monitored closely by the prenatal provider; otherwise, opportunities to protect young infants from severe pertussis will be lost.
Provider Information: STD

Sexually transmitted disease (STD) numbers are increasing dramatically in San Bernardino County. Numbers of reported gonorrhea cases increased 27% or 548 cases, from 2013 to 2014. Cases of primary and secondary syphilis, the most infectious stages, increased 37% from 2013 to 2014 with all syphilis cases of any stage increasing 17% during the same time. STDs such as chlamydia, gonorrhea and syphilis are reportable by both providers and laboratories. Confidential Morbidity Reports (CMRs) to report an STD are available at http://1.usa.gov/1MGy21T.

The Department of Public Health needs complete CMRs from providers for every report to ensure address, race/ethnicity, pregnancy status and treatment information is provided. Please call (800) 722-4794, if you have any questions regarding STD reporting.

Listed below are STD resources available to providers:

⇒ If your office is interested in STD training, the Centers for Disease Control and Prevention (CDC) has a web page that lists webinars, continuing education modules, downloadable pictures and links to many other resources. There are learning opportunities for both providers and non providers. The STD training website can be found at http://www.cdc.gov/std/training/default.htm.

⇒ New 2015 STD treatment guidelines from CDC have recently been released. With STD rates soaring in most jurisdictions and gonococcal resistance being monitored, it is important to know the new guidelines to ensure your patient is getting appropriate care. The treatment guidelines can be reviewed at http://www.cdc.gov/std/default.htm.

⇒ The California Department of Public Health STD Branch has many guidelines available for providers covering a wide variety of topics from health advisories to gonococcal treatment failure protocols; available at http://bit.ly/1HYOXdP.

HPAI H5 Avian Flu

The Centers for Disease Control and Prevention (CDC) is reporting that highly-pathogenic avian influenza (HPAI) H5 viruses have been detected in some US poultry flocks, the first reported infections in US wild or domestic birds. The situation is being closely monitored and the CDC considers the risk to people to be very low. While there have been no human cases with these viruses detected thus far, it is always possible for human infections to occur with these viruses.

As a general rule, people should observe wild birds from a distance only and not make any contact. If you work with live poultry or have an occasion to be in the same vicinity of live poultry (chickens, turkeys, ducks and geese), avoid contact with any birds that may appear ill of have died. All precautions should be taken to avoid contact with feces from wild or domestic birds.

Clinicians should consider the possibility of infection with HPAI H5 in cases presenting with upper respiratory illness who have relevant exposure history. It is recommended that standard, contact and airborne precautions be taken when evaluating these types of cases. Conjunctivitis has been associated with avian influenza in humans.

Clinical Illness Criteria: Patients with new-onset influenza-like illness (ILI) or acute respiratory infection (ARI), whose symptoms may include conjunctivitis, which has been associated with avian influenza in humans. Clinical presentation of persons infected with these HPAI H5 viruses may vary somewhat from seasonal influenza or infection with other novel influenza A viruses. Thus, clinicians are encouraged to consider a range of respiratory signs and symptoms when evaluating a patient with appropriate exposure for HPAI H5 virus infection.

Bird Exposure Criteria: Patients who have had recent contact (within 10 days of illness onset) with potentially-infected (i.e., sick or dead birds, or flocks where HPAI H5 virus infection has been confirmed) in any of the following categories:

- Domestic poultry (e.g., chickens, turkeys, ducks, geese)
- Wild aquatic birds (e.g., ducks, geese, swans)
- Birds of prey (e.g., falcons) that have had contact with wild aquatic birds

Patients who meet clinical and exposure criteria should be tested by RT-PCR.

Clinical benefit is greatest when antiviral treatment is administered early, ideally within 48 hours of illness onset. Chemoprophylaxis with influenza antiviral medications can be considered for all persons meeting bird exposure criteria. Decisions to initiate antiviral chemoprophylaxis should be based on clinical judgment, with consideration given to the type of exposure and to whether the exposed person is at high risk for complications from influenza.

For more information: http://emergency.cdc.gov/han/han00378.asp.

Photo courtesy of USDA_ARS, Stephen Ausmus
**Immunizations** have had an enormous impact on improving the health of children in the United States. School-age children, from preschoolers to college students, need vaccines. Make sure children are up-to-date on vaccines before sending them back to school. It is important that children of all ages receive all their vaccinations on time; this helps to ensure children’s long-term health—as well as the health of friends, classmates, and others in the community.

**Vaccines for Kindergarten Students:** By two years of age, children should get vaccines that will protect them from 14 vaccine-preventable diseases. Kindergarten age children, will finish several vaccine series that were started at a younger age. Children age 4 to 6 are due for boosters of four vaccines: DTaP (diphtheria, tetanus, pertussis), chickenpox, MMR (measles, mumps, rubella) and polio.

**Vaccines for Middle School:** Preteens and teens need vaccines, too! As kids get older, they are still at risk for certain diseases. Before heading back to school, three vaccines are recommend for 11-12 year olds—HPV (Human papillomavirus), Tdap (Tetanus, diphtheria, and pertussis) and meningococcal conjugate vaccine—for continued protection.

**Vaccines for College:** Most vaccines are given early in childhood or early adolescence, but college students and young adults also need certain immunizations. First-year college students living in residence halls are recommended to be vaccinated with meningococcal conjugate vaccine. If they received this vaccine before their 16th birthday, they should get a booster dose before going to college for maximum protection. A single dose of Tdap is routinely recommended for preteens and teens (preferably at age 11-12 years); however, adults 19 or older who did not receive Tdap as a preteen or teen should receive a single dose of Tdap. HPV is recommended for young adults who did not start or finish the HPV vaccine series at age 11 or 12 years.

It is important that parents and medical providers, check immunization records for children and young adults that will be returning to school. Doing so will, avoid a potential last minute rush and will help ensure there are no enrollment surprises on the first day back to school.

If you are unsure of California school immunization requirements, check with the school or call us at (800) 722-4794, and ask to speak with a school law specialist.
Communicable Disease Section
351 N. Mountain View Ave #104
San Bernardino, CA 92415
Phone: 1(800) 722-4794
Fax: (909) 387-6377

Confidential Morbidity Reports (CMRs) can be found on our website and can be faxed to:
TB, Epi, STD: (909) 387-6377
For HIV CMRs call before faxing.

To report suspect or confirmed cases of TB to the Tuberculosis Control Program, please fill out a
TB case/suspect form for your hospitalized or clinic patient and fax to (909) 387-6377. Follow up
with a phone call to one of our TB nurses at 1-800-722-4794.

Immunization Skills Institute is a free innovative course that will train medical assistants on current, effective and caring immunization techniques.
For registration information contact a Health Education Specialist at:
1-800-722-4794.

The Communicable Disease Section has a Facebook page!
Like us at https://www.facebook.com/CommunicableDiseaseSection

Web Resources

County of San Bernardino Department of Public Health
http://www.sbcounty.gov/dph
https://www.facebook.com/CommunicableDiseaseSection

California Department of Public Health
- Division of Communicable Disease Control
  http://www.cdph.ca.gov/programs/dcdc
- Vaccine for Children (VFC)
  http://www.eziz.org
- School Immunization Requirements
  http://www.shotsforschool.org
- California Immunization Registry (CAIR)
  http://cairweb.org
- STD Branch Health Information for Professionals

Centers for Disease Control and Prevention
- Disease & Conditions (A - Z Index)
  http://www.cdc.gov
- Immunization Schedules
  http://www.cdc.gov/vaccines/schedules
- HIV/AIDS & STDs
  http://www.cdc.gov/std/hiv

American Public Health Association
http://www.apha.org

Events and Observances

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