



SAN LUIS OBISPO COUNTY *Messenger* Public Health Laboratory

June 2016

Colistin Resistance - Laboratory watch

A patient seen at a health care facility in Pennsylvania for a urinary tract infection has resulted in the discovery of a strain of *E. coli* that is resistant to the polymyxin drug, colistin, a drug of last resort in the setting of multi-drug resistant infections. The investigation has shown that the bacteria carry a gene called *mcr-1* on a plasmid, a replicating ring of DNA separate from the bacterial chromosome. Plasmids are known to pass from one species to another, setting the stage for the potential spread of this resistance to almost any species of enterobacteria, such as *E. coli* and *Klebsiella pneumoniae*.

Zika Virus surveillance

As of June 15, 60 Zika virus infections have been reported in California—all in travelers who have residence in 15 California counties. Infection has not been reported for any San Luis Obispo County resident. Local transmission resulting in Zika virus infection has not been documented in California—although the vector mosquitoes have been detected in most of the counties that have reported traveler infections.

Exposures have occurred in 15 countries or territories including: Mexico, Brazil, El Salvador, Guatemala, Colombia, Puerto Rico, Honduras, Venezuela, Costa Rica, Dominican Republic, Haiti, Jamaica, American Samoa, Fiji, and Kiribati. Nationwide over 800 cases of Zika infection have been reported to the CDC—all in travelers. Testing for Zika virus as well as Dengue and Chikungunya viruses continues to be performed by the Viral and Rickettsial Disease Laboratory (VRDL) located in Richmond, CA. Studies have shown that urine is superior to serum for detection of infection by PCR in the 2-week period after onset, but serum must always be collected to ensure that serologic testing can be performed if indicated.

West Nile Virus activity

As of June 15, West Nile Virus (WNV) activity has been detected in 16 California counties located primarily in the South and Central Valley, slightly less than the 19 counties observed in 2015 at this time. While no human cases have been detected, WNV has been found in 127 mosquito pool samples, 118 dead birds and 1 sentinel chicken -- indicating the potential for transmission. Traditional human infection is typically detected in July and August when mosquito activity is highest. For more detail click on <http://westnile.ca.gov/>.