COUNTY OF SAN LUIS OBISPO
PUBLIC HEALTH LABORATORY

Messenger

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IN THIS ISSUE

PCR Panels for Infection Diagnosis

The use of PCR panels has steadily grown in popularity here on the Central Coast, finding adherents in the laboratory as well as in the medical community. So what is the impact of this new technology? Among the effects that have been reported:

- **Conclusive identification** of a pathogen agent with reduced time spent on (time-consuming) specific culture
- **Superior specificity** compared to rapid antigen detection tests
- **Effective therapy** targeted with rapid identification of bacteria species in blood-borne infections, and reduced need for empiric antibiotic choices
- **Enhanced antibiotic stewardship** with early recognition of viral agents of respiratory disease, and reduced imaging studies
- **Fewer patient diagnostic odysseys**, thanks to rapid identification of disease agents

A recent report showed that patients whose gastrointestinal illness was diagnosed using the Biofire Film Array gastrointestinal pathogen PCR panel were treated with targeted rather than empiric therapy, were treated much earlier than culture results allowed, and were removed from potentially harmful antibiotic therapy when infected with shigatoxin-producing E. coli much sooner than they would have been with conventional culture (Clin Infect Dis 67:1688-1696, 2018). Not all news is rosy, however, as the cost of this panel and the significance of the detection of multiple agents must be assessed to gauge the net value of the technology in each case.

The County of San Luis Obispo Public Health Laboratory (SLO PHL) has discovered a benefit to public health investigations using these panels. The detection of a bacterial agent prompts the attempt to culture a single specific agent immediately, avoiding the costly and time-consuming attempts to culture other agents and satisfying the need for the culture isolate still required for epidemiologic typing, now done with next generation sequencing.

The SLO PHL performs the Respiratory PCR Panel (“RP”) capable of detecting 17 different agents and the Gastrointestinal PCR Panel (“GP”) that detects 23 agents in about an hour after receipt of a specimen. For either panel, an agent is identified in about 50 percent of the specimens submitted, far surpassing the yield typically observed using cultural methods.

In 2019, the SLO PHL will offer the Pneumonia PCR Panel (“PN”) that is capable of detecting and semi-quantitating 18 different bacterial agents of

lower respiratory tract disease, including Legionella pneumophila, as well as 7 antibiotic resistance markers and 8 viruses. This new panel, just cleared by the FDA, is currently undergoing a verification study at the SLO PHL. Stay tuned for an announcement of its availability in the new year.

Mycoplasma genitalium Testing Now Available at SLO Public Health Laboratory

The Public Health Laboratory announces the availability of the M. genitalium (Mgen) amplification test (test # 2870), employing the APTIMA transcription-mediated amplification technology.

The indications for testing are similar to that of chlamydia and gonorrhea, and Mgen can infect asymptomatically. However, urethritis or epididymitis in males and cervicitis or PID in females should prompt a suspicion of Mgen infection.

Through February 28, 2019, Mgen testing (test #2870) will be performed without a charge for non-profit providers.

This will help the laboratory gain a better understanding of the disease burden caused by this emerging pathogen. Non-profit providers, please mark requisitions: “NO CHARGE MGEN SURVEILLANCE.”

Please note that two APTIMA urine collection tubes are requested if chlamydia, N. gonorrhoeae or trichomonas amplification tests are ordered together with an Mgen amplification test.

For collection supplies, contact the laboratory at 805-781-5507.

Holiday Hours

The County of San Luis Obispo Public Health Laboratory will be closed:

- Tuesday, December 25, Christmas
- Tuesday, January 1, New Year

Our courier pick-up will resume on the next scheduled business day.

Questions? Please contact the Laboratory Director at 805-781-5512 or jbeebe@co.slo.ca.us.

Happy Holidays from the Staff of the Public Health Lab!

County of San Luis Obispo Public Health Laboratory
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