Improved methods for detecting bloodstream infections

January 29 2016

Bloodstream infections (BSI) are a major cause of morbidity and mortality throughout the world. Quick identification of bloodstream pathogens would allow for timely administration of targeted therapy to patients, which could significantly help improve clinical outcomes. To address these issues, the American Society for Microbiology and the Centers for Disease Control have developed an Evidence-Based Laboratory Medicine Practice Guideline (EBLMPG) to provide information that could be used for timely and effective patient care.

"ASM got involved in the development of EBLMG to ensure clinical microbiologists were evaluating and addressing quality gaps in the clinical laboratory," said Alice Weissfeld, Ph.D., D(ABMM), Chair of ASM's EBLMPG Committee. "CDC is the ideal partner for this ASM initiative," she added.

The purpose of EBLMPG is to improve healthcare outcomes by developing and disseminating evidence-based information to patients, clinicians, and other decision makers regarding which interventions are most effective for individual patients under specific circumstances. "Many evidence based practice study designs have been developed, but the CDC Laboratory Medicine Best Practice Project is the first to address evidence based practices that improve laboratory medicine impact on healthcare quality and patient safety, said Nancy Cornish, M.D., Medical Officer, CDC, Division of Laboratory Systems.

Moreover, the review evaluates the evidence of the effectiveness of

three rapid diagnostic practices in decreasing the time to targeted therapy for hospitalized patients with BSIs. The review was performed by applying the Center for Disease Control and Prevention's Laboratory Medicine Best Practices Initiative's (CDC-LMBP) systematic review methods for quality improvement practices and translating the results into evidence-based guidance. Work will resume immediately to update the guideline as more publications have become available. The guideline also includes examples of study design for those interested in performing assessment of rapid technology and its effect on patient health outcomes in their own healthcare organization.

"Additional outcome studies in a variety of healthcare settings are necessary to assess the publication's wider impact and broader potential to improve patient care," said Donna Wolk, MHA, Ph.D., D (ABMM), senior author and System Director of the Microbiology Laboratory at Geisinger Medical Lab and Director of the Infectious Disease Research Laboratory at the Weis Research Center.

More information: Stephanie S. Buehler et al. Effectiveness of Practices To Increase Timeliness of Providing Targeted Therapy for Inpatients with Bloodstream Infections: a Laboratory Medicine Best Practices Systematic Review and Meta-analysis, *Clinical Microbiology Reviews* (2015). DOI: 10.1128/CMR.00053-14

Provided by American Society for Microbiology