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Abstract

COVID 19 and laboratory diagnosis during a time of supply chain concerns.

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Abstract:
Clinical Microbiology laboratories are continuing to be impacted particularly hard by the COVID 19 global pandemic and the urgent needs to increase testing capacity for both COVID 19 and for other infectious diseases – particularly hospitalized and critical care patients. As an example, blood culture collections have increased. With this increased testing capacity demand, were the coincidental requirements for technology (i.e. instruments), reagents, plastics (i.e. assay trays, pipette tips) and additional technical laboratory staff. A shortage of trained medical laboratory technologists (MLT) remains a challenge and this will likely continue as retirements will outpace new graduates. Technology is promoted as an alternative to staffing shortages with a transition from "traditional" bench microbiology and microscopy to automated and semi-automated platforms including multiplex polymerase chain reaction (PCR), automated Gram staining and total lab automation. Matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) has already revolutionized bacterial/yeast identification in labs with this technology. Such technology advances offer exciting opportunities but have negative consequences related to loss of traditional microbiology skill sets. Clinically, however, clinicians are anxious for accurate results within shorter turn-around-times (TAT) that influence therapeutic decisions and/or patient flow and favor these technological advances. Currently there is a disconnect between availability of equipment (weeks to months for delivery) and availability of the necessary supplies/assays to operate these instruments. Supply chain has been frequently cited as a concern during the COVID 19 pandemic. In some instances, the limiting factor might be availability of a specific pipette tip or reagent. To meet testing demands in our diagnostic laboratory, we are operating similar technology from different vendors in an attempt to secure necessary supplies but this is not a guarantee. This presentation will focus on testing for COVID 19 and other infectious diseases during a time of supply chain issues.

Biography:
Dr. J.M. Blondeau is Head of Clinical Microbiology at Royal University Hospital and the University of Saskatchewan and Provincial Lead for Clinical Microbiology with the Saskatchewan Health Authority. To date he has published 180 manuscripts and more than 250 abstracts at international meetings. He is the Editor-In-Chief for the journal Expert Review on Respiratory Medicine.

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