

Molecular GI Testing: An Approach Based on Clinical Guidelines

With Daniel D. Rhoads, MD & Jose Alexander, MD

Conventional GI testing suffers from long turnaround times (TAT) and can be technically demanding for the lab to perform. Molecular GI panels provide an opportunity to consolidate this testing into an easier to use format while providing the clinical benefit of a rapid result. The Infectious Disease Society of America (IDSA) updated their guidelines for the management of infectious diarrhea in 2017. This webinar explores molecular GI testing within the context of these clinical guidelines, and how two institutions have transitioned GI testing to a PCR-based technology to address their needs.

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- Institutional Profile:**
 University Hospitals Cleveland Medical Center serves 12 acute care hospitals and numerous outpatient facilities. They perform approximately 12 stool pathogen panels per day.
- How They Do Stool Testing:** Stool cultures, and Shiga toxin and rotavirus testing, have been replaced by the VERIGENE[®] Enteric Pathogens (EP) test. VERIGENE EP has provided additional value through the inclusion of the norovirus target. Norovirus testing has accounted for 7.9% of the gastrointestinal infections and its detection has helped the institution's infection control efforts. The short TAT for the VERIGENE EP test allows clinicians to report results the same day, as opposed to the multiple days required for culture.
- Key Takeaways:** The IDSA guidelines for infectious diarrhea stress the importance of considering the patient's exposure history, symptoms, and immune status to determine which pathogens to test for. Testing for every pathogen at once isn't always necessary or appropriate.

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- Institutional Profile:**
 The Florida Hospital System has seven hospitals with 2,400 beds. The microbiology department is centralized and operates 24/7. They performed 7,200 stool cultures in 2017, with 66% of these coming from the outpatient setting.
- How They Do Stool Testing:** Florida Hospital utilized VERIGENE EP and created four different ordering options for their physicians (Bacterial panel, Viral panel, rotavirus, and norovirus). However, customized stool cultures (*Aeromonas*, *Plesiomonas*, *Pseudomonas*, and *S. aureus*) are performed by request only.
- Key Takeaways:** Stool cultures are technically challenging and time consuming for the lab, with slow turnaround times for clinicians. Transitioning this workload to the molecular lab led to operational efficiencies, while producing more sensitive and timely results for the clinicians, including in-house detection of norovirus. VERIGENE EP allowed them to tailor their testing to the clinical guidelines and their patient needs.

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