Date: April 2, 2018

To: Medical Staff, Nursing Staff

From: Shelley Odronic, MD., F. C. A. P., Pathologist

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RE: ***Important Ordering Changes for Gastrointestinal Pathogen Panel***

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The Laboratory is presenting the following information as a review of the multiple tests available to detect intestinal pathogens.

The **BioFire** **Gastrointestinal Panel by DNA** (LAB9561 or GIP) is a multiplex PCR panel that detects 22 common viruses, bacteria, and parasites that cause infectious diarrhea. It is superior in its ability to identify possible pathogens compared to Stool Culture and other less sensitive traditional testing options. Results of the GIP are also available much faster than traditional testing, providing results within hours versus days.

The GIP replaces the traditional Culture Stool (LAB5135 or CFEC) and the Giardia antigen (LAB259 or GIARD) screen. The stool O&P panel (LAB5202 or IO+P) used primarily for individuals with a history of travel to foreign countries, will still be available. Stool cultures may be necessary in a limited number of patients, such as follow up to a GIP detection of *Shigella* (to test of cure and/or for sensitivities), or when no organisms are detectedto exclude Hafnia and other opportunistic bacteria from immunocompromised patients. For comparison, the cost of the GIP is $791, which is less than the combined cost of traditional tests ordered by health care providers (Stool Culture, *C. difficile,*Giardia Ag. and Rotavirus Ag. $830).

The GIP may be **ordered only once** **per inpatient stay** with a goal of collection within **48 hours of admission**. Specimens received in the laboratory after 3 hospital days will be cancelled. These restrictions are based on data showing that routine stool cultures from patients with diarrhea that develops after 3 days of hospitalization are low yield for the pathogens detected by the GI panel. If there is a clinical need to perform the panel greater than 3 days after admission, it will require pathologist approval.

Outpatient use of the GI Panel should be performed when pathogen identification would result in a change in patient therapy. With this methodology, repeat testing and testing for the cure is not indicated due to the high sensitivity of the test. Please contact the microbiology lab if follow up testing is needed for any bacterial or parasitic pathogens.

*C. difficile* testing has unique risk factors different than those of infectious diarrhea. **If *a patient has the specific risk factors for C. difficile* infection*,* order the test C. DIFF Toxin By RT PCR** (LAB5400 or CDIFP) and completethe Dual RN C-DIFF Collection Form (required if inpatient). Interpretation of a positive *C. difficile* result in a patient without risk factors can be difficult due to the high asymptomatic carriage rates, especially in young children. Ordering a complete GIP when the clinical findings suggest *C. difficile* infection is improper test utilization. The cost of the *C.difficle* PCR test is $280, compared to $791 for the GIP.

It is important to remember that the GI panel detects the presence of a small amount of DNA and does not imply that the organism is viable or the cause of symptoms. Sometimes no treatment is needed. Misuse and overuse of antibiotics in the treatment of diarrheal illness has played an important role in the development of drug resistance. Selective antimicrobial use is critical. When necessary, please consult with a clinical pharmacist or an infectious disease physician for appropriate antimicrobial therapy.

Please do not hesitate to contact the Microbiology Department (419-226-9217) or Dr. Odronic (419-226-9229) with any questions or concerns.