NOTICE OF CHANGE OF SERVICE

DATE: July 21, 2008

TO: Housestaff and PCN Physicians, Faculty, and Nursing Personnel

FROM: Christopher R. Polage, M. D.
Assistant Professor of Clinical Pathology
Director, Microbiology Laboratory

RE: Changes to Laboratory Ova & Parasite Examination Practices

Traditional ova & parasite examinations (O&P) are rarely positive and due to the large volume of samples, results are often delayed. Review of laboratory records for stool O&P from 2003 to 2008 found that only 101 (1.4%) of 6997 patients tested positive for a well recognized parasitic pathogen. Of these, 85 were positive for *Giardia* or *Cryptosporidium* only, parasites for which antigen detection methods (e.g., immunoassay, DFA, EIA) are more rapid and sensitive. Parasites that required O&P or special stain for detection (e.g. helminthes, *Cyclospora*, *Isospora*, Microsporidia) were rare (16 (0.2%)). Such parasites are generally limited to immunocompromised patients or patients who are persistently symptomatic with history of travel or residence in a parasite endemic region.

In an effort to improve turn around time and the yield of O&P testing, the following changes are being made effective August 4, 2008. The CRYPTOSPORIDIIUM/GIARDIA FA (MICPA00006) test will be the primary test for gastrointestinal parasites as a cause of infectious diarrhea of >7-14 day duration. One or two specimens may be examined. For shorter duration of symptoms, the yield of parasite testing is not different from control populations and generally not recommended. Traditional manual O&P will remain available but has been renamed (OVA AND PARASITES, SPECIAL CASE (MICP000024)) and will be limited to patients with specific risk factors. Providers will be asked to select an indication for O&P prior to testing (e.g., immunocompromised, persistent symptoms and history of travel, residence in parasite endemic region, or other). Orders submitted with an indication of “other” should include an explanation under comments. For patients requiring traditional O&P, ≥ 2 specimens should be submitted over 10 days and the CRYPTOSPORIDIIUM/GIARDIA FA (MICPA00006) should also be ordered. For non-stool specimens requiring microscopic examination for parasites (e.g., respiratory samples for *Strongyloides*, etc.) a separate test has been created, OVA AND PARASITES, BODY FLUID (MICP000025). Many parasites require special test methods for optimal detection. See reverse for specific recommendations.

These changes are intended to provide more cost effective and quality patient care. Call the Microbiology Laboratory at 734-2544 with any questions.

APPROVED BY:

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Department of Pathology and Laboratory Medicine

cc: Bettye Andreos  Alan Siefkin, MD  Ralph Green, MD
   Carol Robinson, BRN  Dean Blumberg, MD  Robert Taylor
   Richard Pollard, MD  Phillip Raimondi, MD  Darrell O’Sullivan
NOTES:

1. CRYPTOSPORIDIUM/GIARDIA FA (MICPA00006) should be included whenever gastrointestinal parasites are suspected. Stool antigen for E. histolytica (EIA) may be indicated in some cases (see below).

2. OVA AND PARASITES, SPECIAL CASE (MICP000024) (e.g., traditional O&P) is indicated in the detection of Strongyloides spp. and other unusual helminthic infections. Submit 2-3 stool specimens over 10 days. Cryptosporidium, Cyclospora, Isospora and Microsporidia are NOT detected by this method.

3. Entamoeba histolytica has been reported in some U.S. populations (e.g., children in day care, institutionalized patients, men who have sex with men). For this organism, ENTAMOEBA HISTOLYTICA AG, EIA (LABP000126) is more sensitive than O&P examination. For suspected amoebic liver abscess, ENTAMOEBA HISTOLYTICA Ab,IgG (LABSD00030) is more sensitive than any stool examination. Traditional O&P cannot routinely distinguish between pathogenic E. histolytica and non-pathogenic E. dispar.

TESTS FOR INDIVIDUAL PARASITES

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<tr>
<th>Parasite or disease state</th>
<th>Test(s)</th>
<th>Comments</th>
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| **Giardia lamblia or Cryptosporidium spp.** | o CRYPTOSPORIDIUM/GIARDIA FA (MICPA00006), stool | o More sensitive than O&P  
o 1-2 specimens may be required for maximal sensitivity |
| **E. histolytica** | **Gastrointestinal:**  
o ENTAMOEBA HISTOLYTICA AG, EIA (LABP000126), stool | o EIA is more sensitive than O&P  
o Stool antigen test is insensitive in amoebic liver abscess |
| **Strongyloides spp.** | **Gastrointestinal / chronic infection:**  
o STRONGYLOIDES ANTIBODY, IgG (LABP000124), serum  
o OVA AND PARASITES, SPECIAL CASE X 3 (MICP000024), stool | o Chronic infection with Strongyloides is poorly detected by most O&P |
| **Hyperinfection syndrome / disseminated:**  
o OVA AND PARASITES, BODY FLUID (MICP000025), non-stool, e.g. BAL, abscess  
o OVA AND PARASITES, SPECIAL CASE X 3 (MICP000024), stool  
o STRONGYLOIDES ANTIBODY, IgG (LABP000124), serum |
| **Other Helminthes (Ascaris, Hookworms, Taenia, etc.)** | o OVA AND PARASITES, SPECIAL CASE X 3 (MICP000024), stool | o Rare in the United States  
o Generally not associated with diarrhea  
o Likelihood of disease is increased with significant exposure history |
| **Cyclospora or Isospora spp.** | o PARASITE STAIN, MOD. ACID FAST (MICPA00005) | o Rarely cause disease in immunocompetent patients  
o NOT detected by "O&P, special case" |
| **Microsporidia** | o MICROSPORIDIA STAIN (LABP000125) | o Rarely cause disease in immunocompetent patients  
o NOT detected by "O&P, special case" |
| **Dientamoeba fragilis, Blastocystis hominis** | o OVA AND PARASITES, SPECIAL CASE X 3 (MICP000024), stool | o Routine testing to detect these protozoa is not indicated  
o Generally considered non-pathogenic and rarely associated with symptoms  
o Consultation with specialist is recommended |