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### 10X Essentials: Stool's Out for Summer!

GML typically experiences increases in foodborne and waterborne infections each summer. Refer to the GML stool testing guide on page 2 for system algorithms devised for testing accuracy and laboratory stewardship.

The STCOM will identify all enteric bacterial pathogens; use this test (STCOM) for your stool cultures from now on. The STCUL option will soon be discontinued in favor of the comprehensive STCOM, as clinical symptoms cannot reliably distinguish *Salmonella*, *Shigella*, and *Campylobacter* spp. from other enteric pathogens. GML laboratories routinely identify all enteric pathogens listed, including a recent case of cholera.

Evidence-based Decision to Restrict Ova and Parasite Exams (OAP): GML encourages that you test OAP only after the following screening criteria are applied: 1) Relevant history\*, 2) Soft-liquid stool. 3) Out-patient status or in hospital for < 3 days, 4) Negative bacterial stool culture (STCOM), and 5) Negative Giardia/ Cryptosporidium Antigen Tests (GEIA and CRYIA) on record. See page 3.

#### New Urine Culture Specimen Collection Guide:

Please refer to the 'GML Best URINE Practices: Microbiology Specimen Collection Guide' for proper specimen collection for bacterial, AFB, fungal, viral, and parasite testing (page 4).

#### GML stepped up to the challenge presented by last year's influenza strain!!!

Due to the highly publicized influenza vaccine miss last winter, our outpatient testing for Flu A/B and RSV (ABRP) rose by 52% compared to the testing performed in the prior year; yet, as a system, we achieved a 33% improvement in mean turn around time (TAT) for outpatients. For inpatients, including Emergency Department, the median TAT ranged between 3 and 4 hours collect to result, approximately a 25% reduction in TAT from 2014 (4-5 hrs median). See page 5.

Reduction in inpatient TAT for sites that began testing instead of transporting by courier to Danville reached nearly 80% reduction in TAT from 2014, freeing up Emergency Room space, and supporting bed management and infection prevention.

If you have any questions, please contact the Doctoral Directors, Donna Wolk, Ph.D., D(ABMM) at 570-271-7467 or Raquel Martinez Ph.D., D(ABMM) at 570-214-6587.

For newsletter questions, contact Christv Attinger at (570) 271-6338.



#### SUMMARY

Order STCOM for enteric bacterial pathogens

Order GEIA and CRYIA, NOT OAP

#### LOW YIELD

In GHS region, Ova and Parasite Exams (OAP) have a 0.01% positive rate

#### Bacterial Pathogens (STCOM)

*Salmonella* spp.

*Shigella* spp.

*Campylobacter* spp.

Enterohemorrhagic *E. coli* (EHEC or Shiga Toxin)

*Yersinia* spp.

*Aeromonas* spp.

*Plesiomonas* spp.

*Vibrio* spp.

#### Relevant History Required for OAP

\*Group Home

\*Immunocompromised

\*Poor Sanitary Conditions

\*Recent Travel History with Exposure Risk

\*Voluminous diarrhea with other enteric bacterial pathogens and Giardia/ Cryptosporidium ruled out.

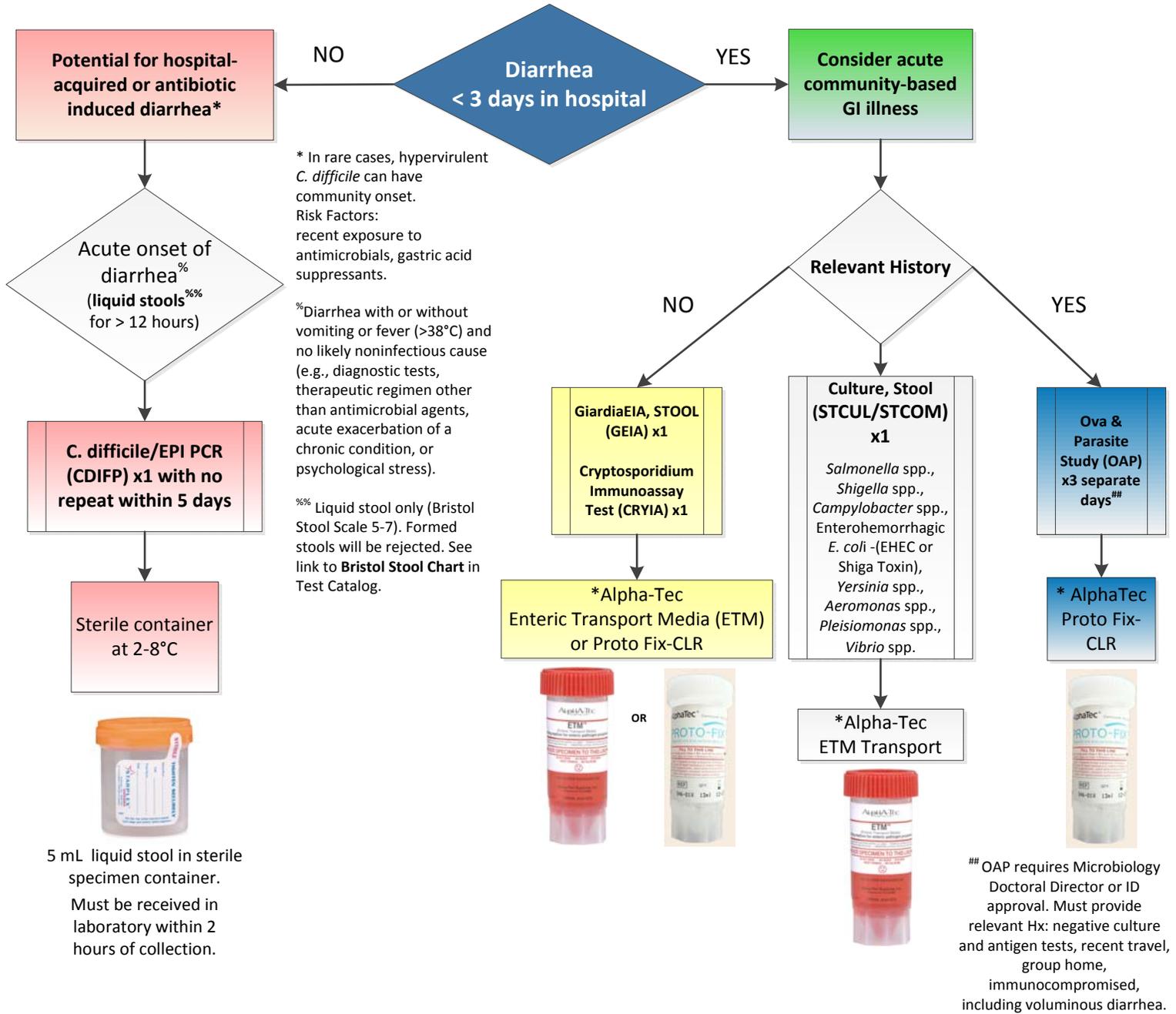
\*Voluminous stool with diarrhea-causing medications ruled out.

**"Make it the best." - A. Geisinger**

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# Stool Testing: Microbiology Specimen Collection Guide



	Routine Stool Cultures, Giardia and Cryptosporidium EIA negative? Other Risk Factors?					
Risk	Foodborne exposure with negative cultures	Immunocompromised		Viral risk group		
Diagnostic Test	Cyclospora and Isospora Exam (CYISO) x 1-3 samples on separate days	Cyclospora and Isospora Exam (CYISO) x 1-3 samples on separate days	Microsporidia Detection (MSPORI) x1-3 samples on separate days	Recent group setting: Norovirus PCR	Pediatrics: Rotavirus Antigen (RVIR)	Immunocompromised: various agents, including Adenovirus 40/41 antigen
Collection Device*	Para-Pak 10% Buffered Neutral Formalin	Para-Pak 10% Buffered Neutral Formalin	10% Formalin	Sterile Container at 2-8°C		

\*Please refer to GML Test Catalog for specific collection device information

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**For additional information, refer to GML Test Catalog  
Click on address below to invoke hyperlink, and search on  
keyword or (test code)**

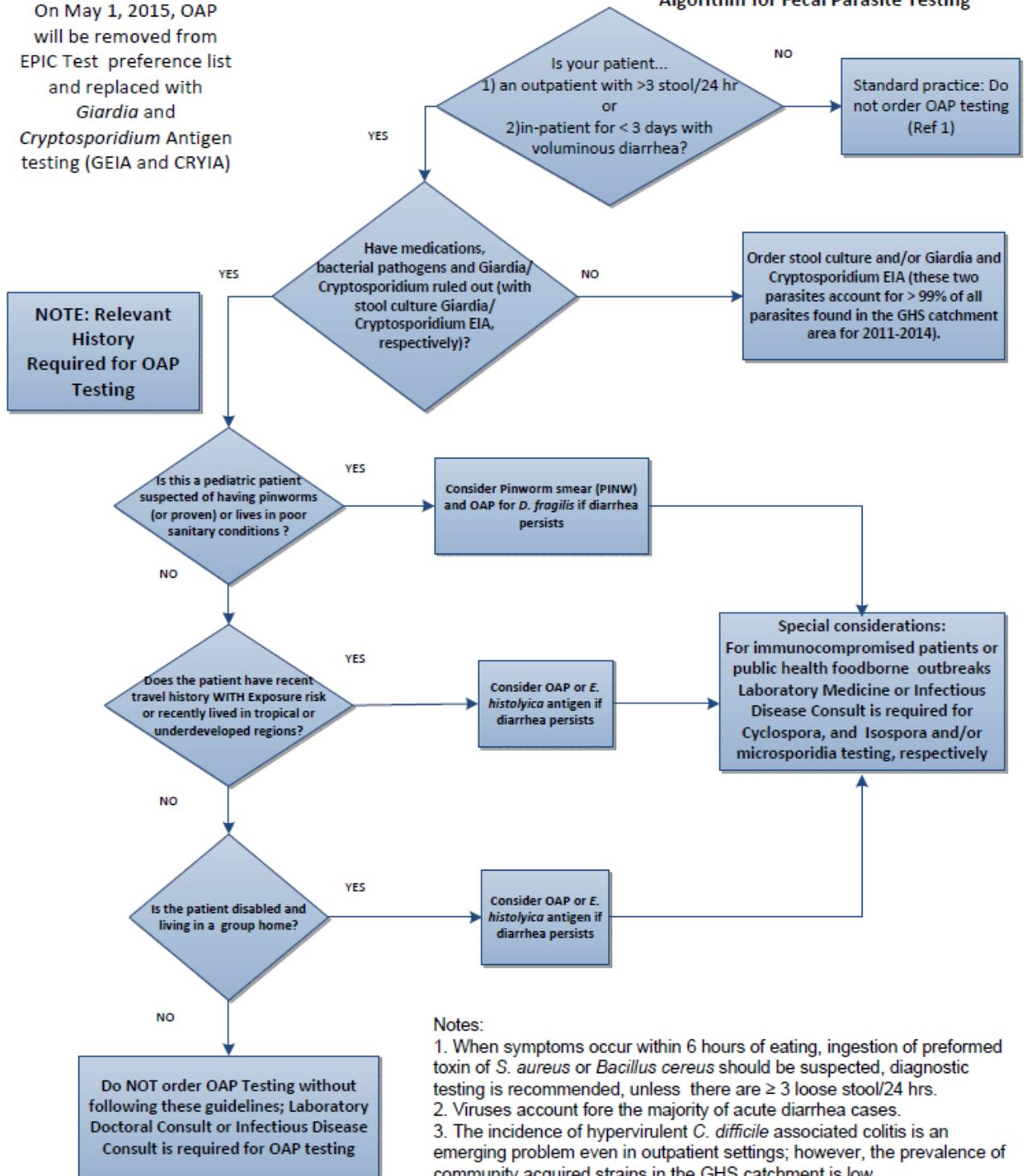
<http://www.geisingermedicallabs.com/catalog/index.cfm>

Call Geisinger Medical  
Laboratories Client Services  
Department:  
1-800-695-6491 with  
questions.

DMW;RMM: revised 11/04/2014  
GML stool collection.vsd

On May 1, 2015, OAP will be removed from EPIC Test preference list and replaced with *Giardia* and *Cryptosporidium* Antigen testing (GEIA and CRYIA)

### Algorithm for Fecal Parasite Testing



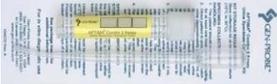
DMW, PJT, RMM  
3/31/15

References  
1. Wolk, DM., Martinez, RM. 2011-2014 parasite survey Geisinger Health System

#### Notes:

1. When symptoms occur within 6 hours of eating, ingestion of preformed toxin of *S. aureus* or *Bacillus cereus* should be suspected, diagnostic testing is recommended, unless there are  $\geq 3$  loose stool/24 hrs.
2. Viruses account for the majority of acute diarrhea cases.
3. The incidence of hypervirulent *C. difficile* associated colitis is an emerging problem even in outpatient settings; however, the prevalence of community acquired strains in the GHS catchment is low.
4. GHS Stool culture (STCOM) includes detection of nearly all culturable enteric pathogens: *Salmonella*, *Shigella*, *Campylobacter* Antigen, STEC Antigen, *Yersinia*, *Vibrio*, *Aeromonas* and *Pleisiomonas*.
5. Infection with HIV is also a common cause of diarrhea, as are many common medications.

# GML Best URINE Practices: Microbiology Specimen Collection Guide

TEST REQUEST	<b>Culture Quantitative Urine:</b>  <b>AEROBIC Bacteria, Mycobacteria (AFB), and Fungal</b>	<b>Culture Quantitative Urine:</b>  <b>ANAEROBIC*</b> *Anaerobic studies are performed only on request.	<b>Other:</b>  Mycoplasma culture, Ureaplasma culture	<b>Viruses:</b>  PCR for send out: CMV, BK, and JC	<b>Parasites:</b>  Microsporidia <sup>@</sup> , Schistosoma spp. <sup>#</sup> , Trichomonas vaginalis  @ with long term immunosuppression from transplant # with travel history and activity risks
<b>NOTE:</b> Cleanse area prior to collection to minimize contamination with bacteria that colonize the urethra.  <b>NOTE:</b> First void (patient has not urinated for several hours prior to specimen collection) is recommended. First void urine is more concentrated, thus more likely to contain large numbers of microorganism(s). Random urine from children under 7 is acceptable.					
SOURCE	Clean catch, Catheterized urine, nephrostomy, urostomy, vesicostomy or ileostomy	Suprapubic, renal pelvis, ureter or kidney/bladder tap	Urine 	Urine 	Urine 
TRANSPORT DEVICE	C&S preservative tube filled to minimum fill line recommended.    If a small volume of urine is collected (< 3 mL), do not place in C&S preservative tube. Submit in sterile specimen container.  	Anaerobic Transport Media ATM) is preferred.      	Universal Transport Media (UTM). Use 1:1 ration of UTM to urine.  <b>NOTE:</b> Urethral swabs are preferred for the recovery of Chlamydia, Mycoplasma and Ureaplasma.  <b>NOTE:</b> The Aptima molecular probe can be utilized for <i>C. trachomatis</i> , <i>N. gonorrhoeae</i> , and <i>Trichomonas vaginalis</i> detection. Urine collection device pictured below.	Sterile specimen container or 15 mL aliquot (2 mL minimum).  	Sterile specimen container or 15 mL aliquot (2 mL minimum).    <b>NOTE:</b> The Aptima molecular probe can be utilized for <i>C. trachomatis</i> , <i>N. gonorrhoeae</i> , and <i>Trichomonas vaginalis</i> detection. Urine collection device pictured below.
SPECIMEN STABILITY	<b>C&amp;S preservative tube:</b> 0-48 hrs at room temperature.  <b>Unpreserved urine:</b> 0-2 hrs at room temperature or 0-24 hrs refrigerated 2-8°C.	<b>Anaerobic Transport Media:</b> 72 hrs at room temperature.  <b>C&amp;S preservative tube:</b> 0-48 hrs room temperature.  <b>Unpreserved urine:</b> 0-2 hrs at room temperature or 0-24 hrs refrigerated 2-8°C.	<b>Universal Transport Media:</b> 48 hrs refrigerated 2-8° C.  <b>Aptima:</b> 30 days.    <a href="http://www.geisingermedicallabs.com/10xEssentials/GML_GC_CT_specimen%20collection%20guide.pdf">http://www.geisingermedicallabs.com/10xEssentials/GML_GC_CT_specimen%20collection%20guide.pdf</a>	<b>Sterile specimen container:</b> Send immediately to laboratory (room temperature).  <b>NOTE:</b> Specimens for viral studies must be received by reference laboratory by 96 hrs of collection.  	<b>Sterile specimen container:</b> Send immediately to laboratory (room temperature).    <a href="http://www.geisingermedicallabs.com/10xEssentials/GML_Tvag_Collection.pdf">http://www.geisingermedicallabs.com/10xEssentials/GML_Tvag_Collection.pdf</a>

**Respiratory OP Samples Tested vs Mean TAT  
2014-2015**

