LifeLabs®

Health Care Providers Newsletter

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Clostridioides difficile: Updated Testing for Children Under 24 Months

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Starting June 2025, LifeLabs will no longer offer stand-alone enzyme immunoassay (EIA) or polymerase chain reaction (PCR) testing for *C. difficile* in children under 24 months. These tests will remain available only as part of the Infectious Diarrhea Panel (IDP).

This update follows current Infectious Diseases Society of America (IDSA) and Society for Health Epidemiology America (SHEA) guidelines, based on evidence that most children under 2 years are asymptomatic carriers of *C. difficile* (PMID: 29462280). It is hypothesized that infants lack the necessary cell structures to respond to the bacterial toxin, meaning a positive result often reflects colonization rather than true infection.

Even in immunocompromised children or those with chronic conditions, *C. difficile* testing should only be considered once other causes of diarrhea – especially viral – have been ruled out.

By age 2 to 3, asymptomatic carriage drops to about 1%, and true *C. difficile* infection becomes more plausible.

For children under 24 months with more than three unexplained episodes of diarrhea in 24 hours, the IDP panel is recommended to evaluate a broader range of causes. Keep in mind that a positive *C. difficile* result may still be present and is likely a reflection of asymptomatic carriage.

Some Pitfalls in Cerebrospinal Fluid Analysis

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Lumbar punctures are commonly used to diagnose medical conditions such as meningitis caused by bacterial, viral, and fungal infections. A traumatic lumbar puncture may occur when the needle punctures surrounding blood vessels which bleed into the subarachnoid space. The cerebrospinal fluid (CSF) sample then contains blood that can lead to misdiagnosis of subarachnoid hemorrhage. Traumatic lumbar puncture can also result in changes in protein concentration and cell counts, making the correct diagnosis difficult to be determined.

Another pitfall is when CSF specimens are contaminated, the microorganisms isolated may not represent the true etiology pathogens of meningitis, which can again result in misdiagnosis and ineffective antimicrobial selection. Therefore, it is important to perform careful aseptic techniques during lumbar puncture to effectively diagnose and treat conditions affecting the central nervous system. Of note, a culture-negative CSF result does not always rule out infections, because CSF culture-positivity rate is known to be low, sometimes due to false negative results. Although multiplex polymerases chain reaction (PCR) testing has been developed to help diagnose meningitis, one must be cognizant of the number of target pathogens in the multiplex panel and aware of what differentials could be missing.

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Gonorrhea and Chlamydia Sexually Transmitted Infections: Testing, Treatment, and Follow-up

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Gonorrhea (caused by *Neisseria gonorrhoeae*) and chlamydia (caused by *Chlamydia trachomatis*) STIs require timely treatment and must be reported to public health, along with notification of the patient's sexual partners. A short summary is provided in the table below.

	How Often and Who	Specimens Tested	Treatment	Test of Cure
Gonorrhea	Annually: sexually active under 30 3 to 6 mo: new partner/multiple partners Pregnant: 1st and 3rd trimester	*By Culture and NAAT* ❖ Male: First-catch urine or urethral swab ❖ Female: First-catch urine or self-vaginal swab	Ceftriaxone 500 mg IM 1 dose	*By Culture* 3 d to 3 w post treatment *By Culture and NAAT* 3 w or longer post treatment
Chlamydia	Annually: sexually active under 30 3 to 6 mo: new partner/multiple partners Pregnant: 1st and 3rd trimester	*By NAAT* ❖ Male: First-catch urine ❖ Female: First-catch urine or self-vaginal swab	Azithromycin 1 g PO 1 dose	*By NAAT* 3 mo post treatment* if meet *criteria*

Specimens Accepted for NAAT

Aptima Unisex Swab (MALE/FEMALE) and Specimen Transport Tube

For collection of cervix and urethra specimens for Chlamydia/GC/Trichomonas/Mycoplasma

Not for bacterial culture

Aptima Multitest Swab and Specimen Transport Tube

For collection of vaginal, throat, eye and rectal specimens for Chlamydia/GC/Trichomonas/Mycoplasma

Not for bacterial culture

For sample collection for initial diagnosis, men may provide first-catch urine; urethral swabs are done less often for men. Women can provide either a vaginal swab (self- or clinician-collected) or first-catch urine. Sterile urine containers provided by LifeLabs can be used for collection of first catch urine.

Treatment

As of per Canadian Guidelines on STI updated in May 2025, uncomplicated gonorrhea is treated with a single 500 mg intramuscular dose of ceftriaxone. Disseminated gonorrhea (such as arthritis, meningitis, or endocarditis) is treated with 2 g of ceftriaxone given daily by IM or IV for 7 to 28 days, along with a single 1 g oral dose of azithromycin. If the patient cannot take cephalosporins or macrolides, or has resistant infection, treatment includes a single 240 mg intramuscular dose of gentamicin plus doxycycline 100 mg taken twice daily for seven days.

If chlamydia has not been ruled out, concurrent treatment should be given. The preferred regimen is doxycycline 100 mg by mouth twice daily for seven days, or a single 1 g oral dose of azithromycin in pregnant or breastfeeding patients.

Test of Cure

A test of cure is always required for gonorrhea. For chlamydia, test of cure is needed if the patient meets the following criteria:

- if symptoms persist/adherence to the treatment was poor,
- if the patient is pregnant or pre-pubertal, or
- if a non-preferred treatment was used.

For both STIs, a patient who has not had sex after treatment still tests positive, this is considered treatment failure and must be reported to public health (see timelines in the table provided).

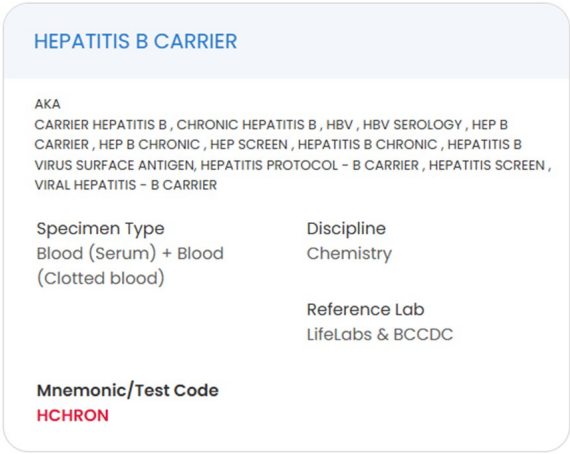
Reinfection Screening

To help prevent reinfection, repeat screening is recommended at three and six months after treatment for chlamydia and gonorrhea respectively.

Who is the Most Responsible Provider (MRP) in Laboratory Medicine?

Dr. Eugene Yeung, MD, FRCPC, FCCM, Medical Microbiologist

In hospital care, it is important to identify who the most responsible provider (MRP) in a patient's care, or else we may run into a situation called "too many cooks in the kitchen," associated with miscommunication and confusion on who should make some informed decisions with the patient. Generally, the MRP is the admitting physician for the inpatient. Even though a patient is usually managed in "multidisciplinary care," it is good practice to keep the MRP informed and involved in the decision making to prevent any patient safety errors.



Similarly, we identify the MRP in laboratory medicine that determines who should take the lead in managing some specific tests. We know that this can be confusing. For example, some infectious disease diagnostic testing that includes blood smear for malaria (hematopathology), blood culture (microbiology), and hepatitis serology (chemistry) in LifeLabs. How would a clinician know which department to contact?

One easy way may be to go to LifeLabs Test Information Page: https://lifelabs.my.site.com/frontline/s/

This page contains information regarding which discipline in LifeLabs is mainly responsible for the specific test. Feel free to cruise around!