

New IP Lunch and Learn



Ashley O'Keefe, MLS(ASCP)^{CM}, CIC, CDIPC

January 10, 2023

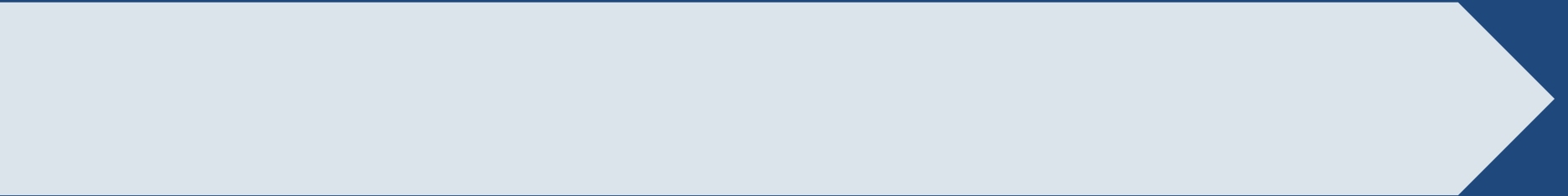
Infection Preventionist Lunch and Learn Series

- A new call series for Infection Preventionists (IPs) of all care settings that:
 - Encourages learning, growing, and networking.
 - Provides education and information that is non-regulatory.
 - Discusses topics relevant to new IPs.
- Each session will have time set aside for Q&A.

Laboratory Basics Part 1 Slides and Recording

- Part 1 of the two-part series discussed:
 - Microbiology culture collection.
 - Bacterial identification and susceptibilities.
- To view the Laboratory Basics Part 1 slides and recording, visit www.dhs.wi.gov/hai/ip-education.htm.

Laboratory Basics – Part 2



The Laboratory

- Unique setting within the health care facility
- Personal protective equipment (PPE) required for almost all activities
- Standards set forth by Clinical Laboratory Improvements Amendments (CLIA) 1988
- Separate regulatory survey process

Lab Tests

- Urinalysis
- Hematology
- Chemistry
- Serology
- Mycobacteriology

Urinalysis

- Commonly performed test that provides useful information [elevated nitrites and white blood cell count (WBC)] that can indicate a urinary tract infection.
- Standardized collection method and prompt transport to the lab are essential.
- Results can be an important part of antimicrobial stewardship.

Hematology and Chemistry

- In hematology, elevated white blood cell count and neutrophils (PMN) can indicate potential infection.
- Chemistry is not a major infection prevention concern.
- If using National Healthcare Safety Network (NHSN) definitions for surveillance, these may be included in the infection definition.

Knowledge Check

A patient has been admitted to the hospital with stiff neck, fever, and headache. **What type of empiric isolation precautions should be implemented right away?**

- A. Standard
- B. Contact
- C. Droplet
- D. Airborne

Knowledge Check

Spinal tap results come back as follows: Normal glucose, elevated protein, elevated WBC, predominant lymphocytes. **Should isolation precautions be maintained or discontinued?**

- A. Maintained
- B. Discontinued

Serology

- Detects antigens and antibodies
- Can be used both for detecting illness as well as determining immune status to diseases
 - **Lyme**: Involves enzyme immunoassay (EIA) and often Western Blot, yielding IgG and IgM results
 - **Hepatitis B**: Involves surface antigen (HBsAG), surface antibody (HBsAb), total core antibody (anti-HBc), and IgM core antibody (IgM HBc)

Knowledge Check

There is a significant exposure at your facility, and the labs on the **source** patient are as follows: HBsAg positive, Anti-HBc positive, IgM anti-HBc positive, Anti-HBs AB negative. **Regarding Hepatitis B, is this patient:**

- A. Acutely infected
- B. Chronically infected
- C. Immune due to vaccination

Mycobacteriology

- Testing is available for disease identification or for employee health purposes.
- If culturing, special techniques are required, which are often done in reference labs.
- Example: Pulmonary Tuberculosis (TB)
 - Active vs. latent: active indicates infectious nature of patient

Mycobacteriology

Testing via two different methods:

1. Interferon-Gamma Release Assay (IGRA)

- Blood test
- Can yield false positive results due to non-specific nature of the test

2. Tuberculin Skin Testing (TST)

- Tuberculin protein injected under the skin
- Skin observed 48-72 later for induration around the injection site, measured in millimeters

Knowledge Check

A nursing home resident has a draining lesion on the leg that is sent for culture. *Mycobacterium fortuitum* (nontuberculosis) grows. **What precautions are necessary?**

- A. Contact
- B. Droplet
- C. Airborne
- D. Standard

Knowledge Check

Let's say instead of *Mycobacterium fortuitum*, *Mycobacterium tuberculosis* grew in this same scenario. **What precautions would be necessary?**

- A. Contact
- B. Airborne
- C. Standard
- D. All of the above

Resources

- *The Infection Preventionist's Guide to the Lab*, Association for Professionals in Infection Control and Epidemiology (APIC)
- *Clinical Microbiology Made Ridiculously Simple*, Mark Gladwin
- *Control of Communicable Diseases Manual*, James Chin
- *Ready Reference for Microbes*, Kathy Brooks

Questions?

What topics or content would you like to see covered on future calls?
Please submit your ideas to ashley.okeefe@dhs.wisconsin.gov

Infection Preventionist Starter Kit



<https://www.dhs.wisconsin.gov/publications/p02992.pdf>

HAI Prevention Program Contact Information

HAI Prevention Program

dhswhaipreventionprogram@dhs.wisconsin.gov

608-267-7711

For additional contact information visit

www.dhs.wisconsin.gov/hai/contacts.htm

Upcoming Lunch and Learn Session

Date: Tuesday, February 14, 2023

Topic: Infection Surveillance