

# Wisconsin HAI Education Series

**August 28, 2025**



WISCONSIN DEPARTMENT  
*of* HEALTH SERVICES

# Injection and Medication Safety

## Infection Prevention Priorities

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Infection Preventionist

Wisconsin Healthcare-Associated Infections (HAI) Prevention Program



**WISCONSIN DEPARTMENT**  
*of* **HEALTH SERVICES**

# Agenda

- Review safe injection practices and their importance.
- Discuss common injection practices mistakes and resources to implement best practice.
- Review injection prep spaces and how to prevent cross contamination during preparation.

Injection safety is a  
core component of  
standard precautions.





# ☑ Safe Injection and Medication Practices

- Prepare medication in a designated, clean prep area.
- Use aseptic technique.
- Disinfect the access point of the vial.
- Use needles, syringes, and single-dose vials for one patient only.
- Dedicate multi-dose vials to a single patient when possible.
- Wear personal protective equipment when appropriate.

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# Risks Associated with Unsafe Injection Practices



Illness or death



Loss of license



Legal charges



Criminal  
charges

# ✘ Unsafe Injection and Medication Practices

- Reusing needles and syringes for more than one patient.
- Accessing a medication vial with a syringe that has already been used on a patient.
- Reusing single-use medication for more than one patient.
- Failing to use aseptic technique.



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# Injection Practices



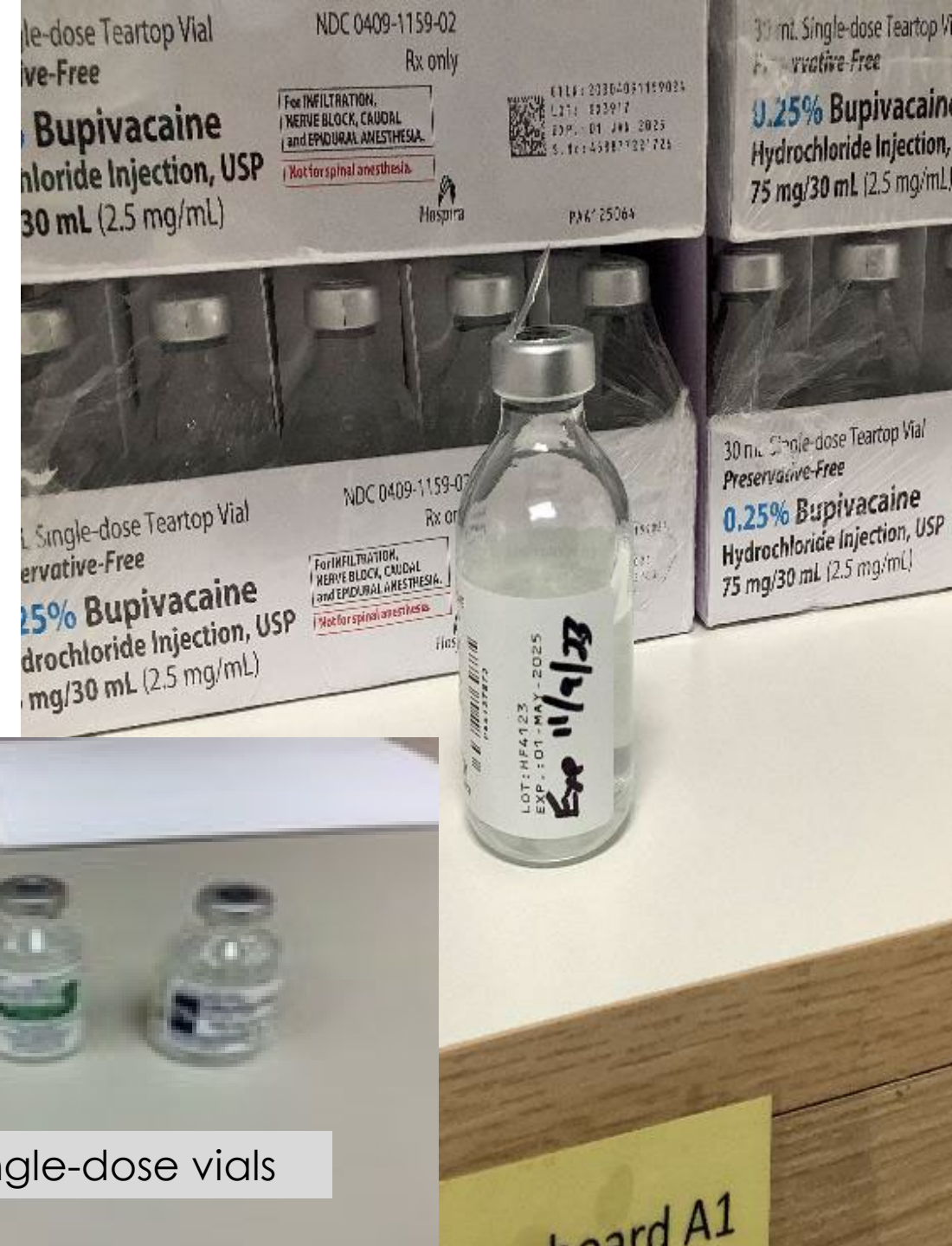
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# Injectable Meds

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# Vial storage

- Open vials
  - Single-dose vial
  - Multi-dose vial
- Expiration dates



Multi-Dose Vial

# 28-Day Expiration Calendar

**About multi-dose vials**  
A multi-dose vial contains more than one dose of a liquid medication and is approved for use only after the first dose vial is opened, the vial is labeled with the date which it was opened and the expiration date. The vial is discarded.

**Labeling multi-dose vials**  
Once opened, the **expiration date of the vial is 28-days**. Exceptions to this rule include:  
• When otherwise stated by the manufacturer's instructions for use.  
• If the manufacturer's expiration date has been reached.  
• When the vial enters the pharmacy's inventory.  
• Any time the sterility of the vial is compromised.

**How to use these calendars**  
These calendars may be displayed in the pharmacy to help personnel to easily and quickly determine the expiration dates for multi-dose vials.



January

Date opened	Expiration
January 1	January 29
January 2	January 30
January 3	January 31
January 4	February 1
January 5	February 2
January 6	February 3
January 7	February 4
January 8	February 5
January 9	February 6
January 10	February 7
January 11	February 8
January 12	February 9
January 13	February 10
January 14	February 11
January 15	February 12
January 16	February 13

Date opened	Expiration
January 17	February 14
January 18	February 15
January 19	February 16
January 20	February 17
January 21	February 18
January 22	February 19
January 23	February 20
January 24	February 21
January 25	February 22
January 26	February 23
January 27	February 24
January 28	February 25
January 29	February 26
January 30	February 27
January 31	February 28

# Multi-Dose Vial 28-Day Expiration Calendar





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# Immediate Use Sterile Compounding

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# Considerations Immediate Use Sterile Compounding

Can you use **manufactured prepared** medications?

No

Can you **outsource** to a third-party pharmacy?

No

Consider preparing medications onsite (**immediate use sterile compounding**).

# Preparation

- Dedicate space.
- Verify components.
- Use aseptic technique.
- Label appropriately.
- Avoid bulk preparation.



# Protocols

## Administration

- Timing
- Transport
- Aseptic technique

## Training and competency

- Written protocols
- Documentation
- Audits

# Safe Injection Preparation: Immediate Use Sterile Compounding

## Safe Injection Preparation Immediate Use Sterile Compounding

### What is sterile compounding?

Sterile compounding is the combining, admixing, diluting, pooling, reconstituting, repackaging, or otherwise altering a commercially prepared drug product. Common examples could include adding an antibiotic\* to IV fluids or mixing three or less medications to create a custom injection.

Ideally, compounded medications would be prepared in a controlled environment. There are times when this is not feasible, such as an emergent situation where a patient needs medication and there is no readily available access to a compounding pharmacy. Therefore, **sterile compounding**, and it is imperative that rigorous infection control practices are followed to ensure optimal safety for the patient. See [federal, state](#), and local laws along with any regulatory requirements.

\*Does not include reconstituting or diluting antibiotics per the manufacturer's instructions.

### Immediate use sterile compounding considerations



**Are you able to use manufacturer-prepared medications?**  
Manufacturer-prepared medications should be used to provide specific doses that are ready to administer.



**Can you outsource to a third-party pharmacy?**  
If able, outsource to a pharmacy that can provide the medication or utilize a pharmacy to prepare all sterile compounded medications.



**Prepare medications in a controlled environment.**  
Prepare immediate use sterile compounded medications in a controlled environment with strict infection prevention and control measures. See [Recommendations for safe preparation](#).

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### Immediate use sterile compounding: recommendations for safe practice

Your facility may consider preparing immediate use sterile compounded medications onsite if manufacturer-prepared medications are unavailable or sterile compounding cannot be outsourced to a third-party pharmacy.

Follow the recommendations for safe preparation, administration, and training and competency related to immediate use sterile compounding below.

#### Preparation

- ☐ Dedicate a **medication preparation site** that:
    - Is in a space separated from traffic and distractions (such as a medication room).
    - Is away from potential contamination (such as sinks or point-of-care testing).
    - Has all needed supplies readily available.
  - ☐ Confirm **medication components\*\***, ensuring:
    - There are no more than three different components involved in preparing the sterile compound.
    - Single dose components are not used for more than one patient.
    - Hazardous drug components are not included.
- \*\*Refer to [United States Pharmacopeia \(USP\) General Chapter <797>](#): [Frequently Asked Questions \(PDE\)](#) question 22 for more information.
- ☐ Use **aseptic technique** including:
    - Practicing proper hand hygiene.
    - Cleaning the preparation surface.
    - Disinfecting the rubber septum on the medication vial prior to access.
  - ☐ Label appropriately with **patient identification information**, including:
    - Names and amounts of all medications being compounded.
    - Patient name or identifier.
    - Name or initials of the person who prepared it.
    - The exact 4-hour beyond use date and time.
    - Administration must occur no later than 4 hours after preparation.
  - ☐ Avoid **bulk preparation** (the preparation of multiple individual doses at the same time), if possible. If bulk preparation is unavoidable ensure:
    - Each dose is labeled individually after it is made.
    - Prepared medications are stored in a protected area.
    - Medications are stored for no longer than 4 hours once prepared.



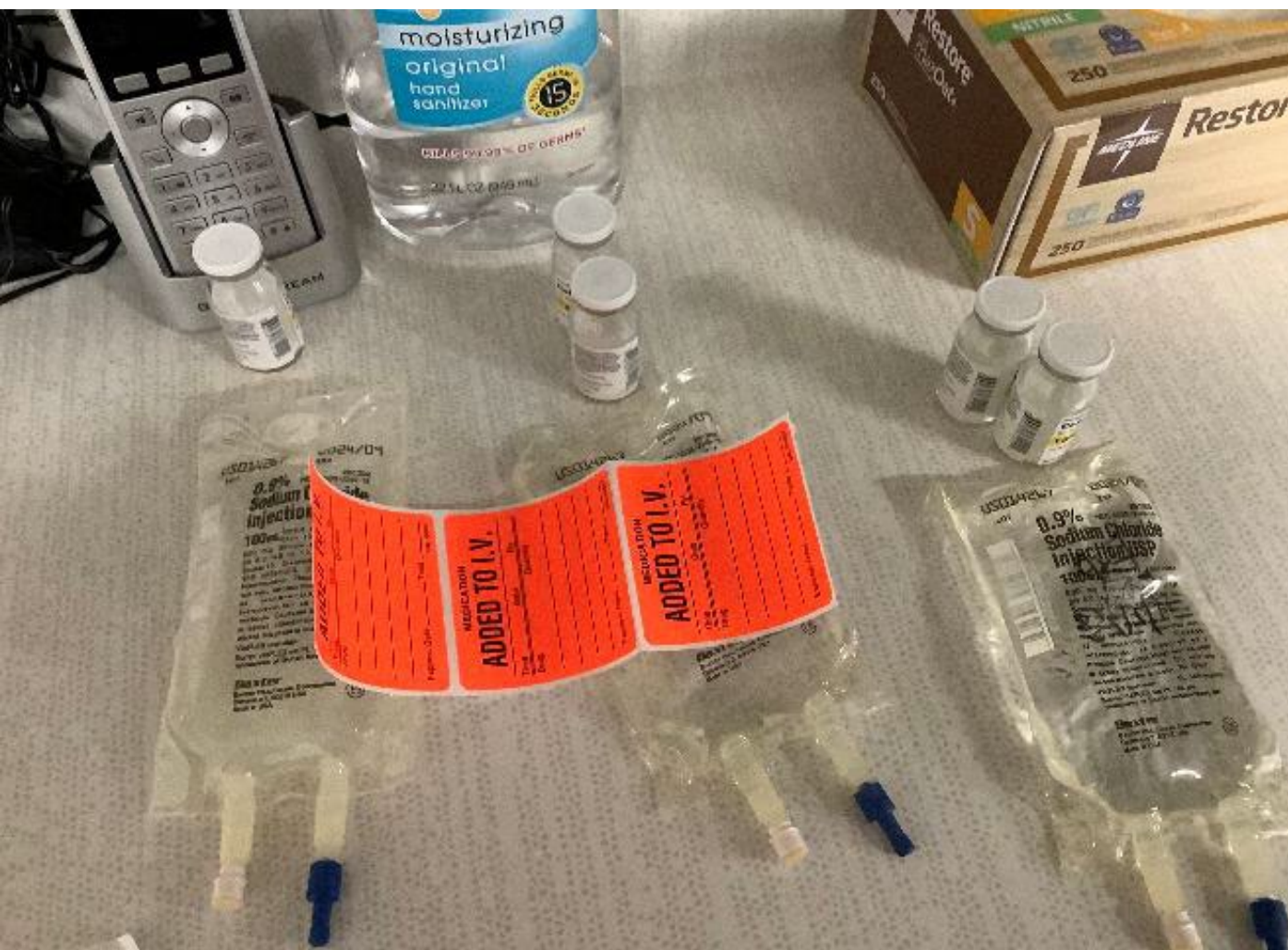
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# IV Fluids

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# Drug Diversion

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# Drug Diversion

- Presents a risk to patients.
- Implement security measures.
- Actively monitor.
- Open investigation process, if warranted.



# Preparation Spaces



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# Med Room

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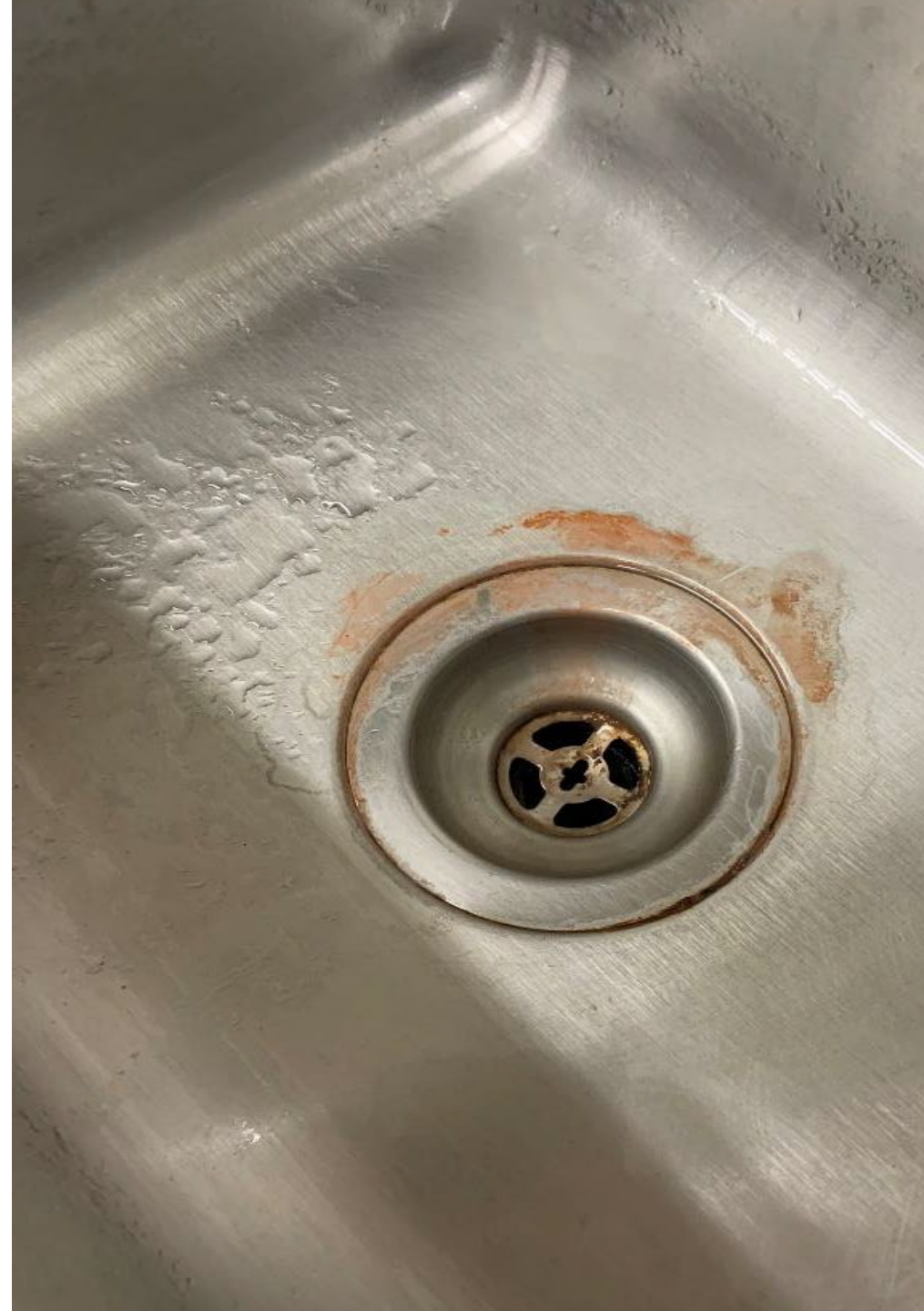


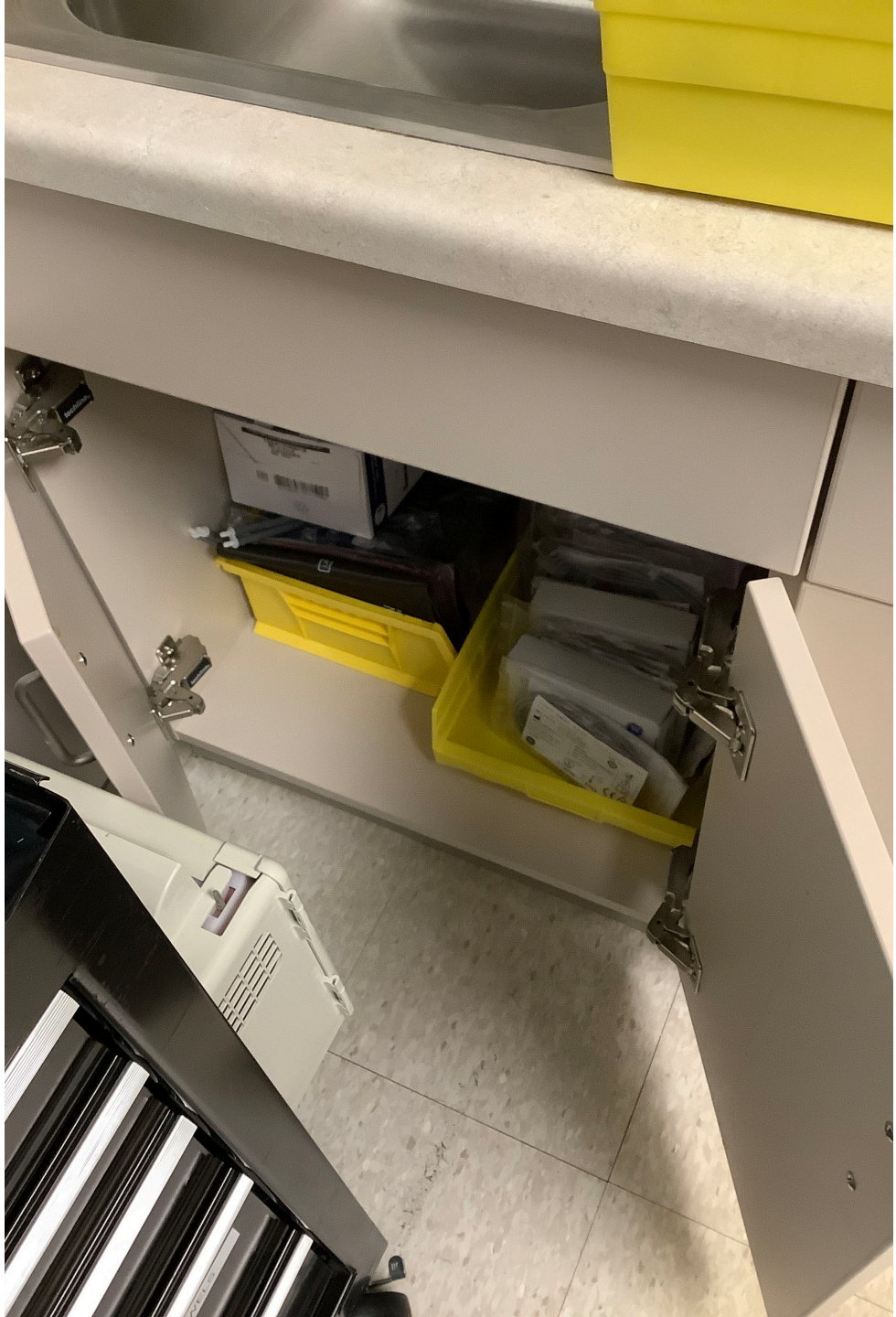


# Biofilm

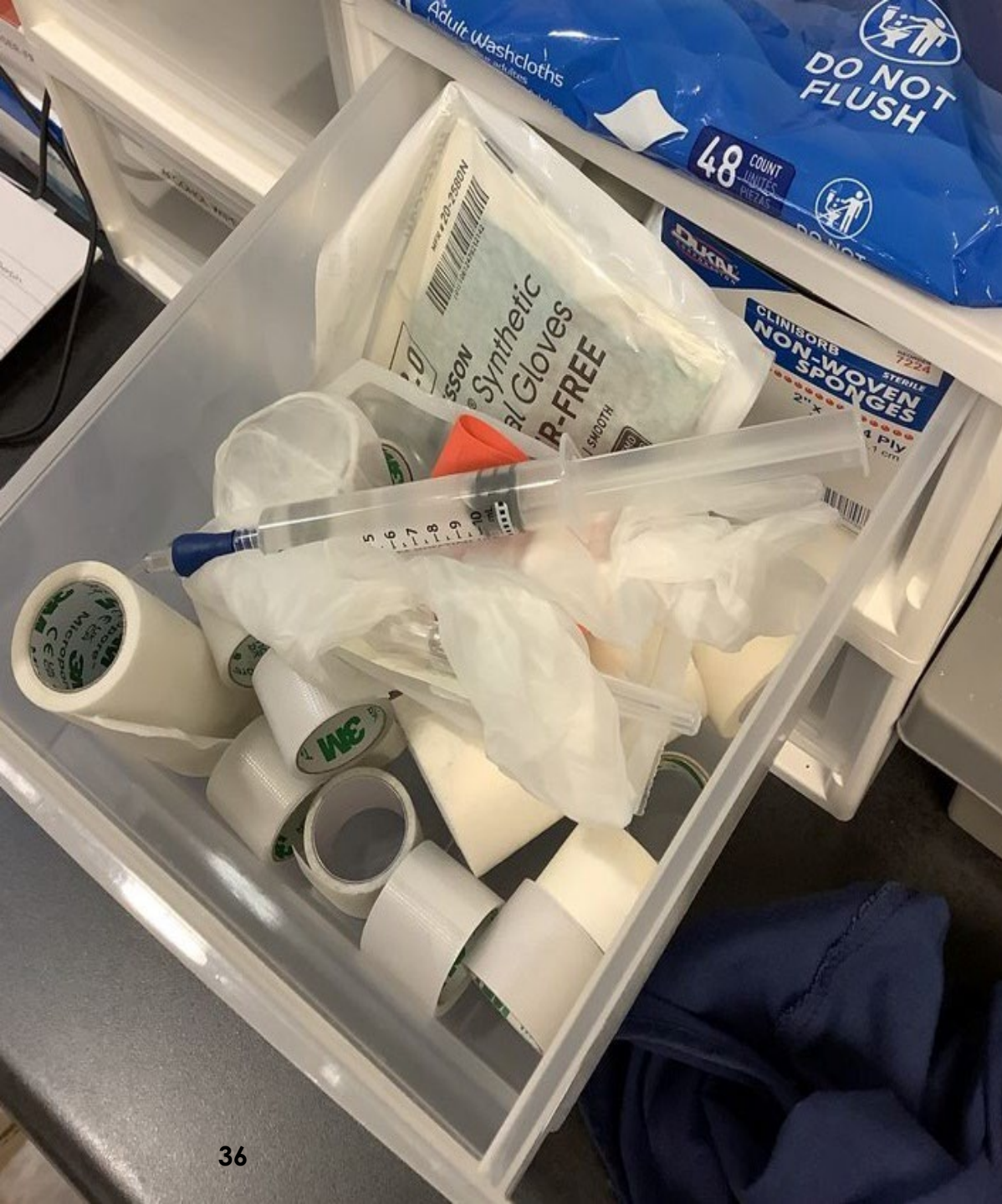
Slimy layer formed by bacteria

- *Pseudomonas aeruginosa*
- *Legionella pneumophila*







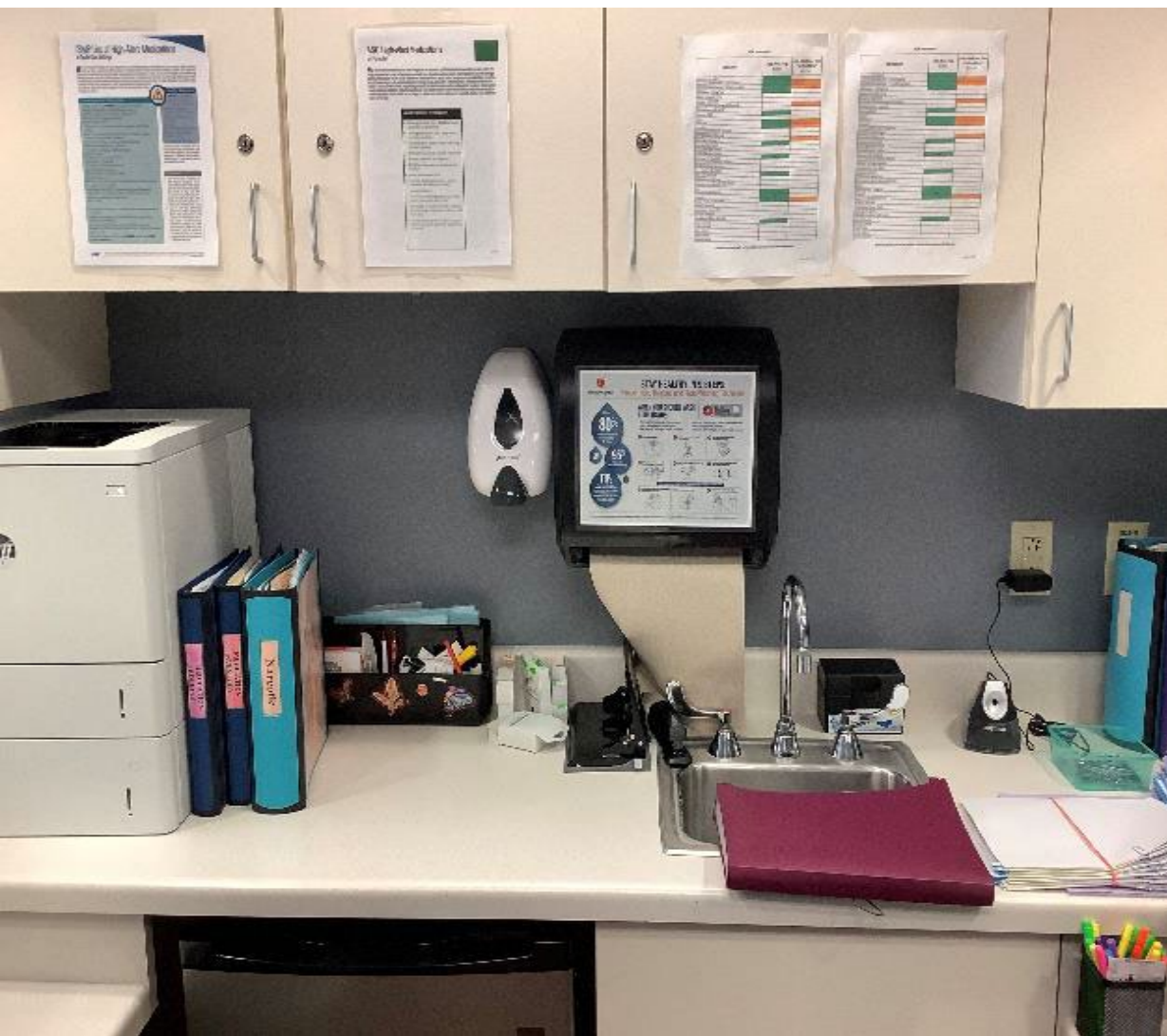




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# Unique Preparation Spaces

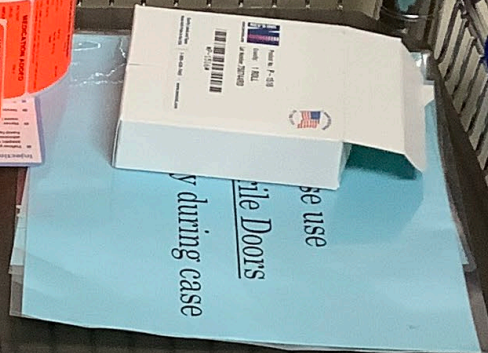
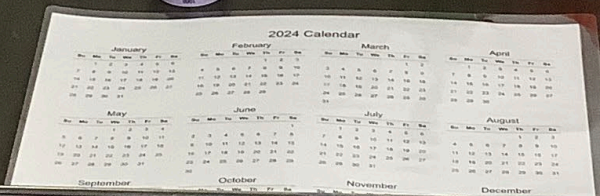
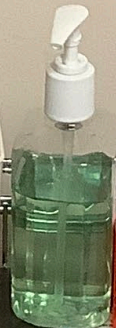
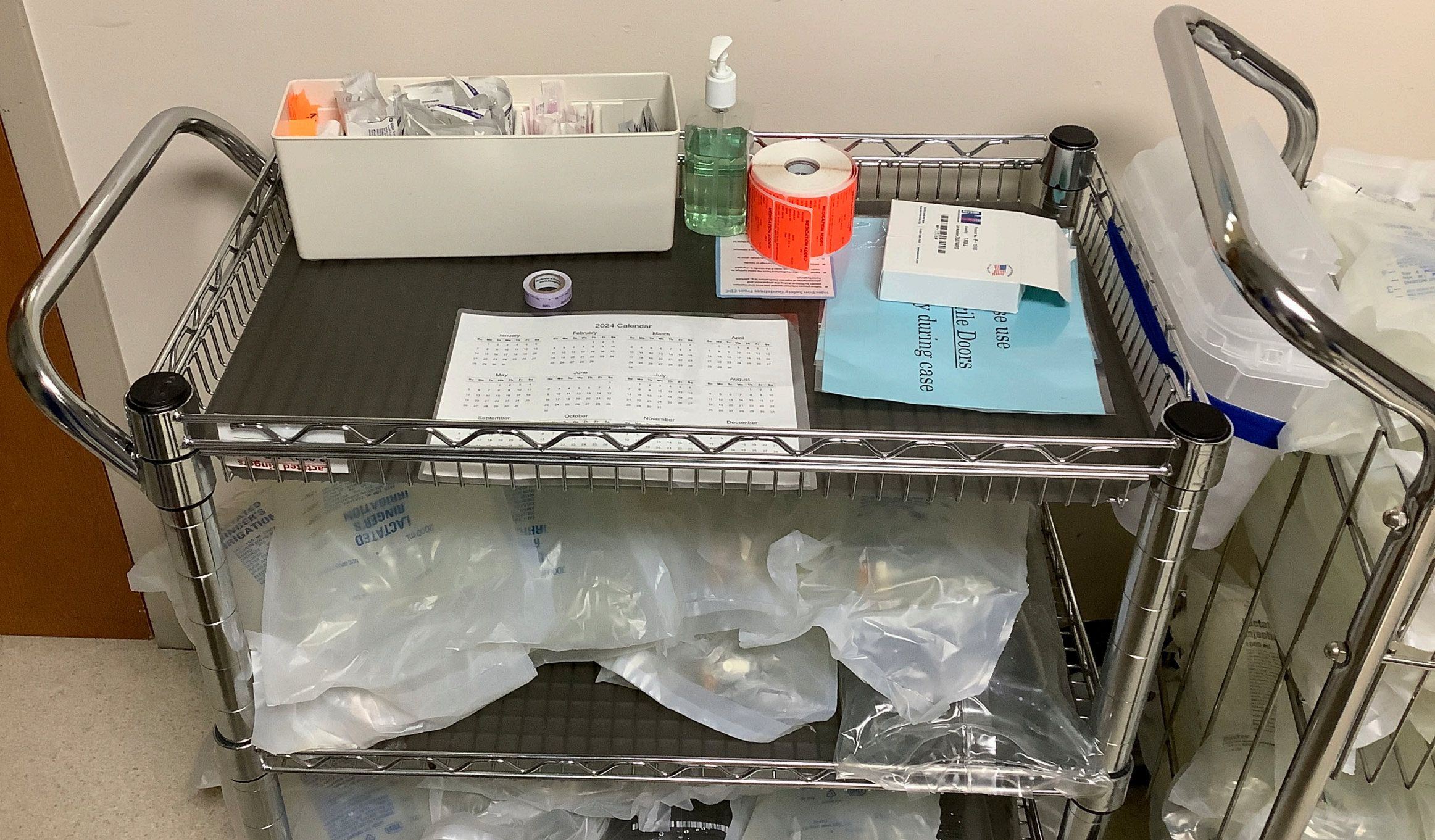
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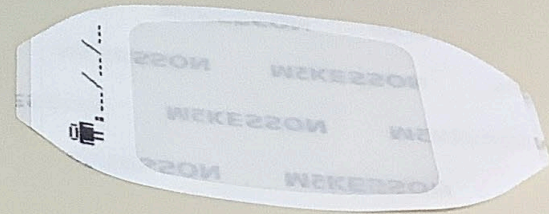
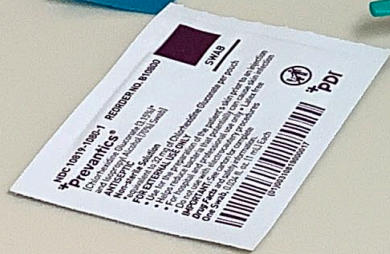
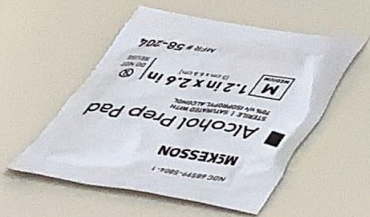
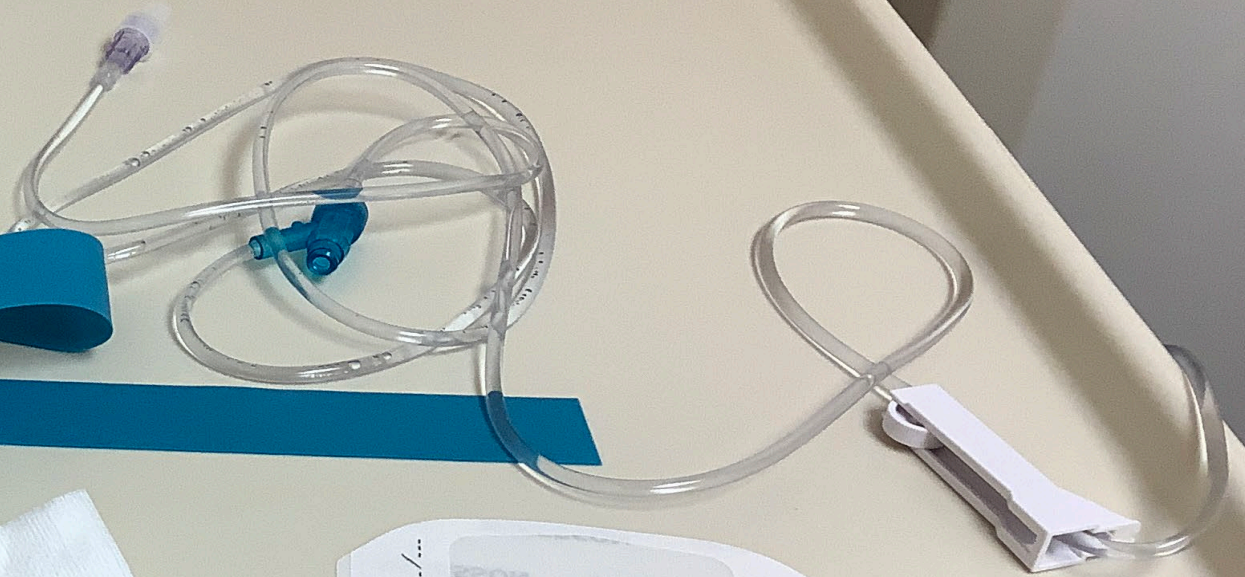
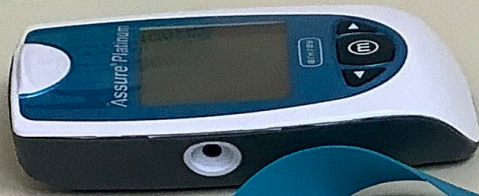
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# **Operating and Procedure Rooms**

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# Tying it All Together



- Unsafe injection practices put patients at risk
- Adhering to best practice decreases these risks
  - Safe preparation practices
  - Safe preparation spaces

# Questions?

Thank you!



# Infection Preventionist

**Jen Kuhn**



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608-772-4768

# Infection Preventionist Bootcamp

- **Date:** September 16 and 17
- **Location:** Green Bay
- [Registration](#)

# HAI Prevention Program Contacts



**Email:** [dhswhaipreventionprogram@dhs.wisconsin.gov](mailto:dhswhaipreventionprogram@dhs.wisconsin.gov)



**Phone:** 608-267-7711



**Website:** [www.dhs.wisconsin.gov/hai/contacts.htm](http://www.dhs.wisconsin.gov/hai/contacts.htm)

# HAI Prevention Program IPs

**Region 1:** Anna Marciniak; Phone: 608-590-2980

**Region 2:** Jennifer Kuhn; Phone: 608-772-4768

**Region 3:** Tess Hendricks; Phone: 608-338-9071

**Region 4:** Rebecca LeMay; Phone: 608-609-1918

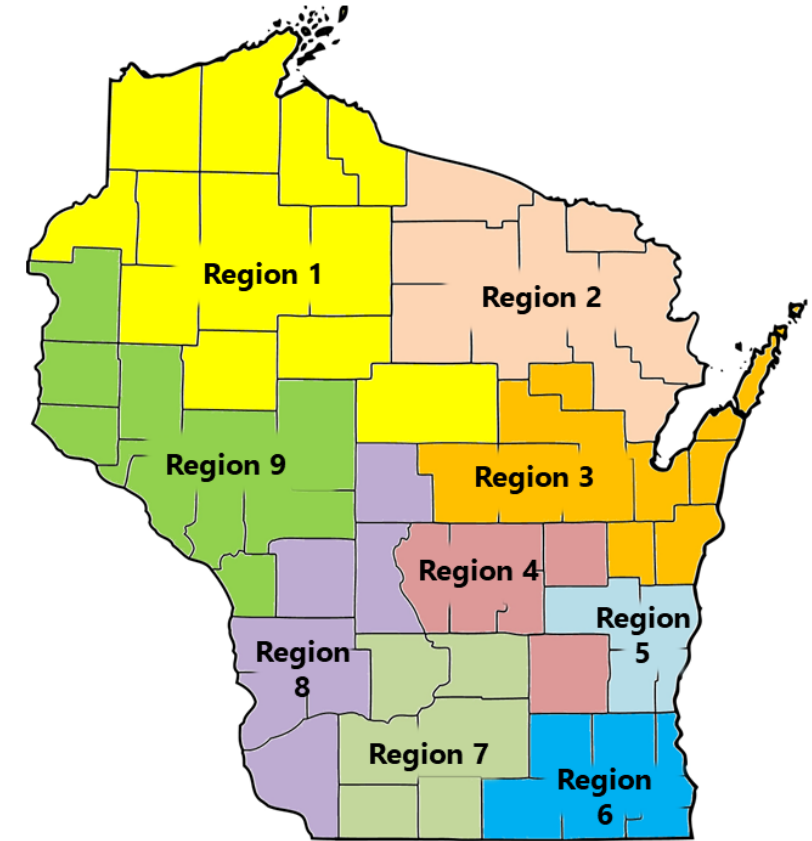
**Region 5:** Greta Michaelson; Phone: 608-867-4647

**Region 6:** Paula Pintar; Phone: 608-471-0499

**Region 7:** Beth Ellinger; Phone: 608-219-3483

**Region 8:** Ashley O'Keefe; Phone: 608-556-8608

**Region 9:** Nikki Mueller; Phone: 608-628-4464



# HAI Infection Prevention Education webpage



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## HAI Infection Prevention Education

IPs play an essential role in facility infection prevention policy development, surveillance, and risk assessment. IPs also serve as a resource to other staff and programs within their facilities. The resources on this page are intended to connect health care facility infection preventionists (IP) with education materials to support their role in preventing, detecting, and responding to healthcare-associated infections (HAI).

### Webinars

### HAI Education Series

The HAI Education Series provides educational presentations on topics including infection prevention, HAIs, antibiotic stewardship, disease surveillance, and outbreak response for health care staff in all setting types, local and Tribal health departments, and other health care partners. Each session features a new, timely topic presented by the Department of Health Services (DHS) program staff, HAI infection preventionists, partner organizations, or other external subject matter experts.

The HAI Education Series is a monthly webinar series, typically held the fourth Thursday of each month. Register for the [HAI Education Series](#) .

HAI Education Series recordings





# Upcoming HAI Education Session

Date: September 25

Topic: Latent Tuberculosis Infection Reporting



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