North Carolina SPICE
Statewide Program for Infection Control & Epidemiology

STRENGTHENING INFECTION PREVENTION IN HEALTH DEPARTMENTS TOGETHER BY FOSTERING COLLABORATION, UNDERSTANDING CHALLENGES, AND ADVANCING PRACTICES

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https://spice.unc.edu/

https://spice.unc.edu/ask-spice/

OBJECTIVES

- Describe NC Public Health's Mission and local health department essential duties and how these pertain to infection prevention.
- Describe the NC Administrative code .0206 rule, and its requirements
- Describe infection risks associated with care in health departments, challenges that may exist, and best practices to mitigate these risks
- Identify ways to collaborate to advance infection prevention practices

“PATIENTS DESERVE EFFECTIVE INFECTION PREVENTION WHEREVER THEY RECEIVE HEALTHCARE.”

NC PUBLIC HEALTH SYSTEM MISSION

The General Assembly declares that the mission of the public health system is to promote and contribute to the highest level of health possible for the people of North Carolina by:

- (1) Preventing health risks and disease;
- (2) Identifying and reducing health risks in the community;
- (3) Detecting, investigating, and preventing the spread of disease;
- (4) Promoting healthy lifestyles;
- (5) Promoting a safe and healthful environment;
- (6) Promoting the availability and accessibility of quality health care services through the private sector; and
- (7) Providing quality health care services when not otherwise available.

https://www.ncleg.net/enactedlegislation/statutes/pdf/bychapter/chapter_130a.pdf

LOCAL HEALTH DEPARTMENTS

G.S. 130A-1.1(b) assigns NC's 86 LHDs the task of providing the following ten essential public health services:

- 1. Monitoring health status to identify community health problems.
- 2. Diagnosing and investigating health hazards in the community.
- 3. Informing, educating, and empowering people about health issues.
- 4. Mobilizing community partnerships to identify and solve health problems.
- 5. Developing policies and plans that support individual and community health efforts.
- 6. Enforcing laws and regulations that protect health and ensure safety.
- 7. Linking people to needed personal health care services and ensuring the provision of health care when otherwise unavailable.
- 8. Ensuring a competent public health workforce and personal health care workforce.
- 9. Evaluating effectiveness, accessibility, and quality of personal and population-based health services.
- 10.Conducting research.

https://www.ncleg.net/enactedlegislation/statutes/pdf/bychapter/chapter_130a.pdf

NC .0206 RULE

NC .0206 RULE

10A NCAC 41A .0206 INFECTION PREVENTION – HEALTH CARE SETTINGS

(a) The following definitions apply throughout this Rule:

(1) "Health care organization" means a hospital; clinic; physician, dentist, podiatrist, optometrist, or chiropractic office; home care agency; nursing home; local health department; community health center; mental health facility; hospice; ambulatory surgical facility; urgent care center; emergency room; Emergency Medical Service (EMS) agency; pharmacies where a health practitioner offers clinical services; or any other organization that provides clinical care.

(2) "Invasive procedure" means entry into tissues, cavities, or organs or repair of traumatic injuries. The term includes the use of needles to puncture skin, vaginal and cesarean deliveries, surgery, and dental procedures during which bleeding occurs or the potential for bleeding exists.

(3) "Non-contiguous" means not physically connected.

(b) In order to prevent transmission of HIV, hepatitis B, hepatitis C and other bloodborne pathogens each health care organization that performs invasive procedures shall implement a written infection control policy. The health care organization shall ensure that health care workers in its employ or who have staff privileges are trained in the principles of infection control and the practices required by the policy; require and monitor compliance with the policy; and update the policy as needed to prevent transmission of HIV, hepatitis B, hepatitis C and other bloodborne pathogens. The health care organization shall designate one on-site staff member for each noncontiguous facility to direct these activities. The designated staff member in each health care facility shall complete a course in infection control approved by the Department. The Department shall approve a course that addresses:

(1) Epidemiologic principles of infectious disease;
(2) Principles and practice of asepsis;
(3) Sterilization, disinfection, and sanitation;
(4) Universal blood and body fluid precautions;
(5) Safe injection practices;
(6) Engineering controls to reduce the risk of sharp injuries;
(7) Disposal of sharps; and
(8) Techniques that reduce the risk of sharp injuries to health care workers.

(c) The infection control policy required by this Rule shall address the following components that are necessary to prevent transmission of HIV, hepatitis B, hepatitis C and other bloodborne pathogens:

(1) Sterilization and disinfection, including a schedule for maintenance and microbiologic monitoring of equipment; the policy shall require documentation of maintenance and monitoring;
(2) Sanitation of rooms and equipment, including cleaning procedures, agents, and schedules;
(3) Accessibility of infection control devices and supplies; and
(4) Procedures to be followed in implementing 10A NCAC 41A .0202(4) and .0203(b)(4) when a health care provider or a patient has an exposure to blood or other body fluids of another person in a manner that poses a significant risk of transmission of HIV or hepatitis B.

(d) Health care workers and emergency responders shall, with all patients, follow Centers for Disease Control and Prevention Guidelines on blood and body fluid precautions incorporated by reference in 10A NCAC 41A .0201.

(e) Health care workers who have exudative lesions or weeping dermatitis shall refrain from handling patient care equipment and devices used in performing invasive procedures and from all direct patient care that involves the potential for contact of the patient, equipment, or devices with the lesion or dermatitis until the condition resolves.

(f) All equipment used to puncture skin, mucous membranes, or other tissues in medical, dental, or other settings must be disposed of in accordance with 15A NCAC 13B .1200 after use or sterilized prior to reuse.

History Note: *Authority G.S. 130A-144; 130A-145; 130A-147;*
Eff. October 1, 1992;
Amended Eff. January 1, 2010; December 1, 2003; July 1, 1994; January 4, 1994.

North Carolina Public Health

http://reports.oah.state.nc.us/ncac/title%2010a%20-%20health%20and%20human%20services/chapter%2041%20-%20epidemiology%20health/subchapter%20a/10a%20ncac%2041a%20.0206.pdf

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NC. 0206 RULE

- First, This rule requires any healthcare organization that performs invasive procedures to have a written infection prevention policy

  Infection control policy must include and address the following components necessary to prevent transmission of HIV, hepatitis B, hepatitis C and other bloodborne pathogens:

  - Disinfection and Sterilization
  - Maintenance and microbiologic monitoring of equipment
  - Sanitation of rooms and equipment
    - Cleaning procedures, agents used and schedules
  - Accessibility of infection control devices and supplies
    - Personal protective equipment (PPE), safety sharps, etc.
  - A post-exposure follow-up program

- Second, the organization must designate an on-site staff member to direct infection prevention activities.

NC .0206 RULE

- Second, the organization must designate an on-site staff member (for each noncontiguous healthcare facility) to direct infection prevention activities.
  - Must take the "State Approved Course" which is Course curriculum developed by SPICE and SPICE has oversight of course
  - On the job training is not sufficient and “Train the Trainer” concept cannot be used

Does your health department have a designated on-site staff member that has taken the .0206 course?

INFECTION RISKS ASSOCIATED WITH HEALTHCARE PROVIDED IN HEALTH DEPARTMENTS

- Communicable Illnesses
- Cleaning, Disinfection, and Sterilization
- Injection Safety
- Procedures
- Safe storage

COMMUNICABLE DISEASES & BEST INFECTION PREVENTION PRACTICES IN HEALTH DEPARTMENTS

Types of Communicable Diseases

- Respiratory Viruses (COVID-19, Influenza, RSV, etc.)
- Tuberculosis
- Measles
- GI illness (Norovirus, C.diff)
- Bloodborne Pathogens (Hep. B, Hep. C, HIV)

Best Practices to Prevent Infections

- Hand Hygiene
- Early identification
- Control measures at entry
- Proper protocols
- Isolation if needed
- Housekeeping/Cleaning/ Disinfection notification
- Safe Injection Practices
- Sterilization Practices
- Proper Storage (separation of clean and dirty)

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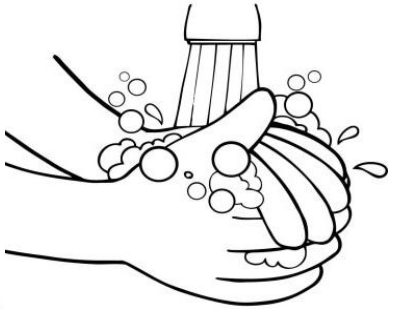
COMMUNICABLE DISEASES- HAND HYGIENE



<u>Number 1 way to prevent the spread of infections!</u>

- Alcohol gels and foams are the preferred method for hand hygiene except when hands are visible soiled, after working with a resident with diarrhea, or after using the restroom.
- Ensure all staff are trained, completed competency (upon hire and annually), and monitored on hand hygiene.
- We want our residents and visitors to know we are protecting them by cleaning our hands. It's ok for them to ask you to perform hand hygiene if they didn't see you. We want to show them that we care for their safety!

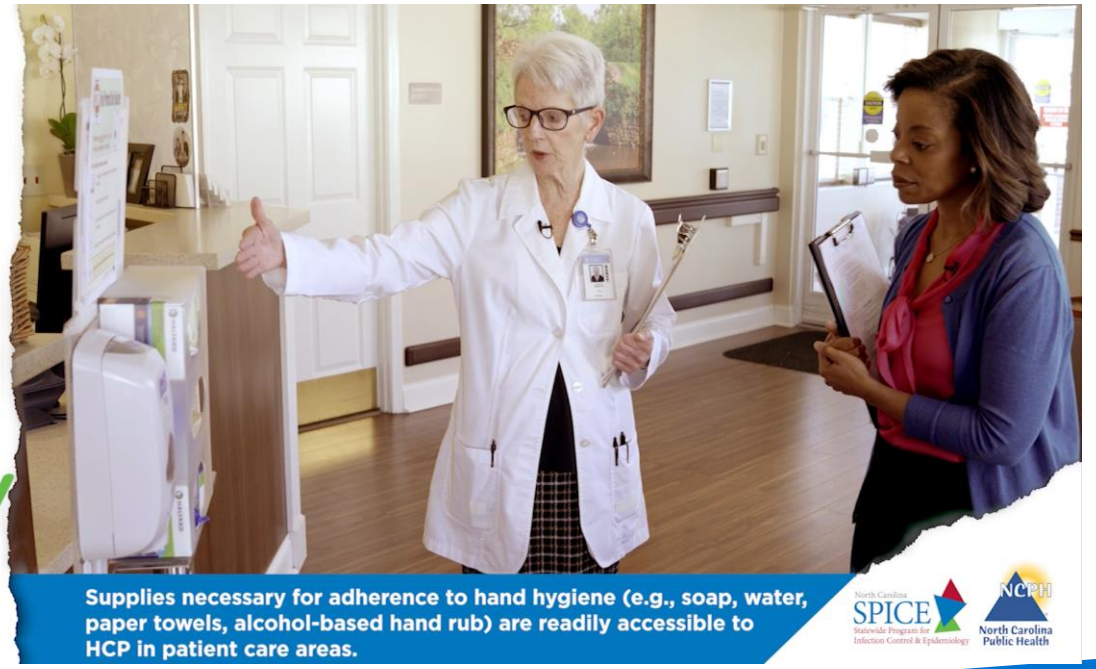
COMMUNICABLE DISEASES- EARLY IDENTIFICATION

- Signage on entry door
- Symptom screening

Image credit:
https://www.laborlawcc.com/kentucky-do-not-enter-if-sick/

Image credit:
CDC Public Health Image Library: https://phil.cdc.gov/

COMMUNICABLE DISEASE- CONTROL MEASURES AT ENTRY



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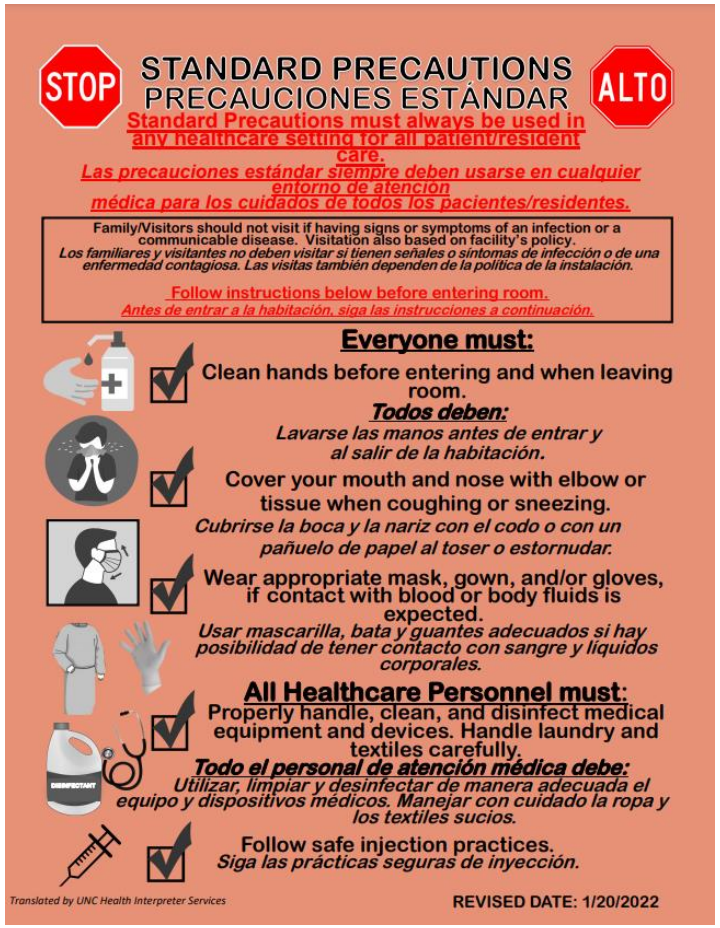
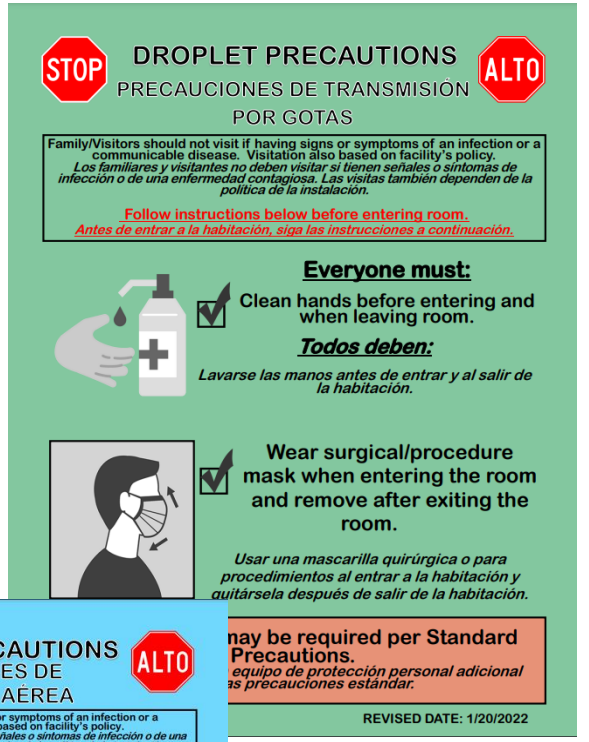
ISOLATION AND USE OF PPE

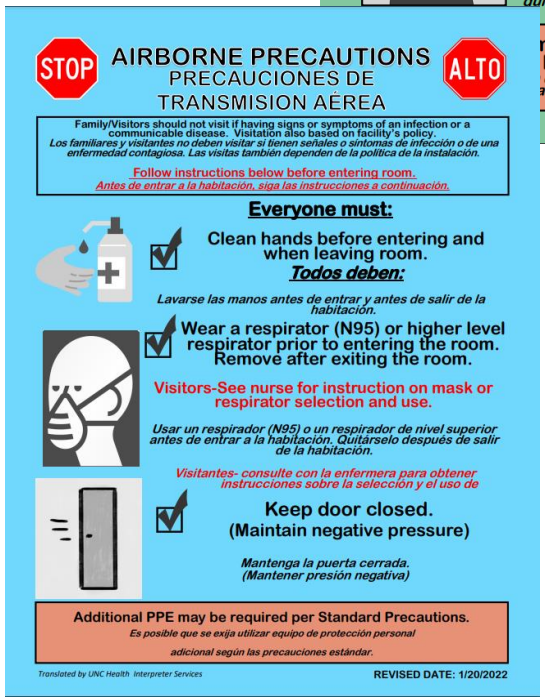
- Always remember your standard precautions!
- If needed, implement isolation precautions

https://spice.unc.edu/resources/signage/

- Follow your policies and procedures



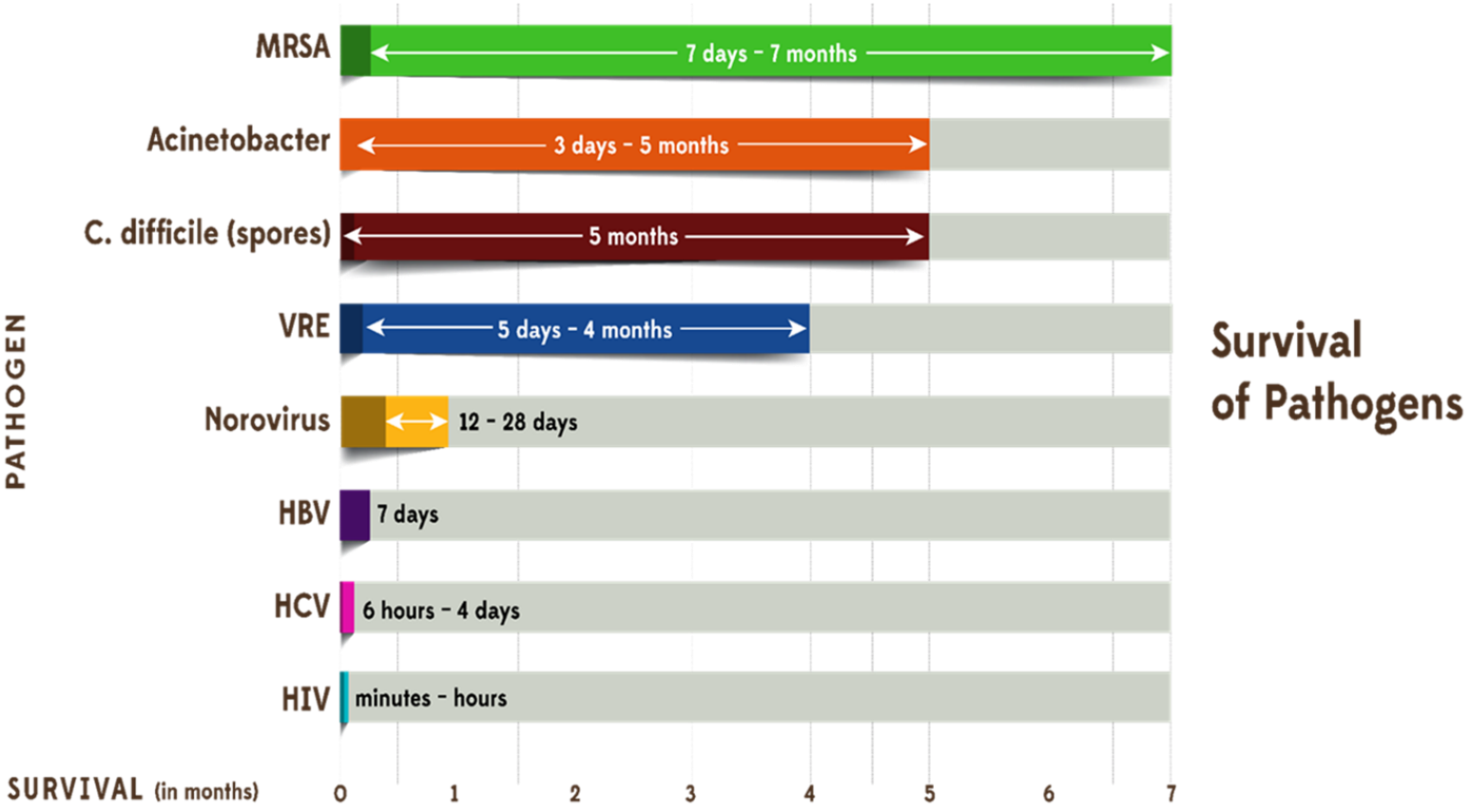




CLEANING AND DISINFECTION

- OSHA states that contaminated work surfaces shall be decontaminated with an *appropriate disinfectant* after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

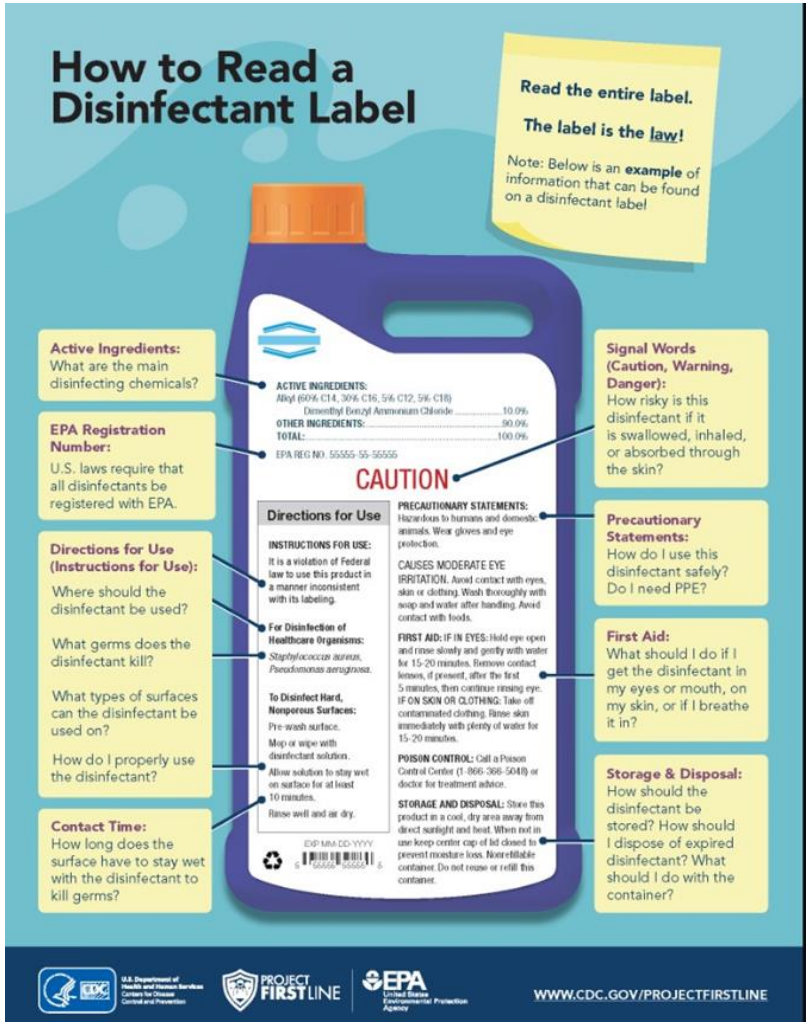
CLEANING AND DISINFECTION



- Consistent cleaning is essential in maintaining a clean and safe environment
- Environmental cleaning is a shared responsibility between clinical staff, the Housekeeping staff, and others. Communication across these departments about cleaning and disinfection essential!

CLEANING AND DISINFECTION

- Right product -EPA registered
- Minimize the number of different products
- Right preparation and dilution-Follow manufacturer's instructions for use
- Right application method
- Right contact time
- Wear appropriate PPE *(gloves, gown, mask, eye protection)*



HEALTH DEPARTMENT CHALLENGE

- Find contact times that can be adhered to!
- Ensure you have EPA registered disinfectants.
- Who is cleaning what? Good communication about this between clinical staff and housekeeping.

SAFE INJECTION PRACTICES

Definition from World Health Organization

"Safe injection practices are part of Standard Precautions and are aimed at maintaining basic levels of patient safety and provider protections."

Centers for Disease Control and Transmission (CDC)
https://www.cdc.gov/injectionsafety/index.html

INFECTION PREVENTION PRACTICES FOR SAFE INJECTIONS

- Syringe re-use, directly or indirectly
  - Never administer medications from the same syringe to multiple patients
  - Do not reuse a syringe to enter a medication vial or solution
  - Limit the use of multi-dose vials and dedicate them to a single patient whenever possible

- Inappropriate use of single dose or single use vials
  - Do not administer medications from a single dose vial or IV solution bag to more than one patient, more than one time

- Failure to use aseptic technique (contamination of injection equipment)
  - Keep contaminated items and surfaces away from the preparation area.
  - Designate a ‘clean’ medication preparation area that is not adjacent to contaminated items
  - Perform hand hygiene before handling medications.

BEST PRACTICES FOR ASSISTED BLOOD GLUCOSE MONITORING

- If blood glucose meters must be shared, the device should be cleaned and disinfected after **every** use, **per manufacturer's instructions**, to prevent carry-over of blood and infectious agents.
- If the manufacturer does not specify how the device should be cleaned and disinfected then it should **not** be shared.

INFECTION PREVENTION PRACTICES FOR SAFE INJECTIONS

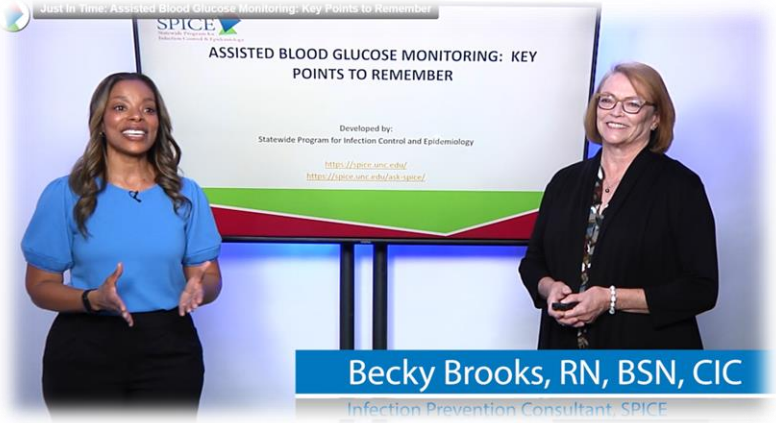
- Unsafe diabetes care/ assisted blood glucose monitoring (ABGM)
  - Use insulin pens and lancing devices for only one patient
  - Dedicate glucometers to a single patient. If they MUST be shared, clean and disinfect after each use

- Drug Diversion
  - Institute drug diversion monitoring systems and security measure to assist in averting and/or identifying diversion activity.

HEALTH DEPARTMENT CHALLENGE

- Med Room/Pharmacy space
- Appropriate disinfectant wipes for glucometers?
- Clean areas only
- Multidose vials prepared away from patient
- Dating multidose vials:
  - **Multi-dose vials are to be dated when opened and discarded within 28 days.**

    To note: CDC states **"The United States Pharmacopeia (USP) General Chapter 797 recommends the following:**
    - **An unopened multi-dose vial should be discarded according to the manufacturer's expiration date.**
    - **Once a multi-dose vial is opened (e.g., needle-punctured) the vial should be dated and discarded within 28 days unless the manufacturer states another date for that opened vial. The beyond-use-date should never exceed the manufacturer's original expiration date."**
      https://www.cdc.gov/injection-safety/hcp/clinical-safety/index.html
    - **For vaccinations, there are expiration dates and beyond use dates that may be applicable. Ensure you follow your manufacturer's instructions.**
      https://www.cdc.gov/vaccines/hcp/downloads/storage-handling-toolkit.pdf



STORAGE OF SUPPLIES- CLEAN VS DIRTY

- It’s important and imperative to know:
  - What surface is clean
  - What surface is dirty
  - How to keep them separated

STORAGE OF SUPPLIES- AVOID CONTAMINATION

- Splash zone (3 feet or splash guard installed)
- Covered items if removed from original packaging
- Storage of equipment (i.e. speculums) in drawers that have high potential for contamination)

SPOTLIGHT ON STERILIZATION AND HIGH LEVEL DISINFECTION (HLD)

SEMI CRITICAL AND CRITICAL ITEMS

Critical– Objects which enter normally sterile tissue or the vascular system and require sterilization

Semi-critical – Objects that contact mucous membranes or non-intact skin and require high-level disinfection, which kills all but high-levels of bacterial spores

Non-critical – Objects that contact intact skin but not mucous membranes, and require low-level disinfection

HEALTH DEPARTMENT CHALLENGE

SPACE and LOCATION of Central Sterile area!

North Carolina SPICE Statewide Program for Infection Control & Epidemiology

NCPH North Carolina Public Health

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STERILIZATION PRACTICES

- Ensure that “healthcare personnel perform most cleaning, disinfecting, and sterilizing of patient-care supplies in a central processing department in order to more easily control quality. The aim of central processing is the orderly processing of medical and surgical instruments to protect patients from infections while minimizing risks to staff and preserving the value of the items being reprocessed”.
- The central processing area be divided into at least three areas: decontamination, packaging, and sterilization and storage. Physical barriers should separate the decontamination area from the other sections to contain contamination on used items.
- Make sure the storage area for sterile items provides protection against dust, moisture, and temperature and humidity extremes

https://www.cdc.gov/infection-control/hcp/disinfection-sterilization/sterilizing-practices.html

STERILIZATION AND HLD

- Transporting of instruments
  - When transporting instruments from the patient room to the central sterile area, they are to be contained in a covered, puncture resistant container with a lid and biohazard label.
  - Kept moist

- Items must be cleaned using water with detergents or enzymatic cleaners before processing. Cleaning reduces the bioburden and removes foreign material that interferes with the sterilization process by acting as a barrier to the sterilization agent.
- Personnel working in the decontamination area should wear household-cleaning-type rubber or plastic gloves when handling or cleaning contaminated instruments and devices. Face masks, eye protection, and appropriate gowns should be worn when exposure to blood and contaminated fluids may occur (e.g., when manually cleaning contaminated devices).

BEST PRACTICES

- Follow ALL manufacturer's instructions for use
- Recommend sterilizers be monitored with biological indicators at least weekly. If a sterilizer is used frequently (e.g., several loads per day), daily use of biological indicators allows earlier discovery of equipment malfunctions or procedural errors.
- Recommend that chemical indicators are affixed to the outside of the packaging as well as placing another inside the package to verify sterilant penetration.

HTTPS://WWW.CDC.GOV/INFECTION-CONTROL/MEDIA/PDFS/GUIDELINE-DISINFECTION-H.PDF

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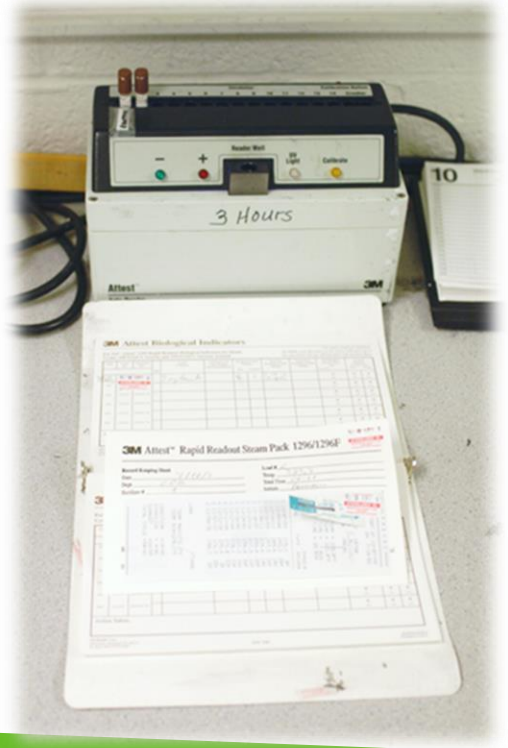

BEST PRACTICES

- Ensure to follow the sterilization times, temperatures, and other operating parameters recommended by the manufacturers of the instruments, the sterilizer, and the container or wrap used, and that are consistent with guidelines published by government agencies and professional organizations.
- Ensure all sterile packages are labeled with a load number that indicates the sterilizer used, the cycle or load number, the date of sterilization, and, if applicable, the expiration date.
- If the integrity of the packaging is compromised (e.g., torn, wet, or punctured), repack and reprocess the pack before use.

COLLABORATION WITH NC SPICE

INFECTION CONTROL ASSESSMENT and RESPONSE (ICAR) FOR HEALTH DEPARTMENTS

ICAR tools are used to systematically assess a healthcare facility's IPC practices and guide quality improvement

Introducing:

A collaborative between N.C. Department of Health and Human Services (NCDHHS) and N.C. Statewide Program for Infection Control and Epidemiology (SPICE).

Funded by CDC, under the American Rescue Plan Act of 2021 to support a broad range of healthcare infection prevention and control (IPC) activities in a variety of settings.

- *Activities:*
  - *Schedule a consultative, onsite visit to conduct assessment.*
  - *Provide an onsite exit summary of findings.*
  - *Provide a written follow up summary report with findings and recommendations.*
  - *Provide additional consultation and education (at facility's request).*

To request a visit OR for additional information please contact:

evelyn_cook@med.unc.edu

February 2025
https://spice.unc.edu/

How can this project benefit your facility?

- Educational and consultative visit with an Infection Prevention expert, using a standardized assessment tool.
- Verbal summary of findings/recommendations at time of facility exit.
- Written follow up summary with identified gaps and recommendations.
- Provision of additional resources and educational sessions if requested.

COLLABORATION WITH NC SPICE

Visit expectations

- Approximately ½ day meeting with SPICE Infection Preventionist (dependent upon size of facility and scope of services)
- Discuss and complete the CDC Outpatient-Health Department Assessment tool.
- Facility tour with practice observations.
- Exit summary to review findings, recommendations, and answer questions.

COLLABORATION AND RESOURCES

- NC SPICE Website: https://spice.unc.edu

- NC SPICE Video Library: https://spice.unc.edu/video-library/

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