

Infection Prevention in the Outpatient / Ambulatory Setting

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Statewide Program for Infection Control and Epidemiology (SPICE)

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

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DISCLOSURES

- Nothing to disclose

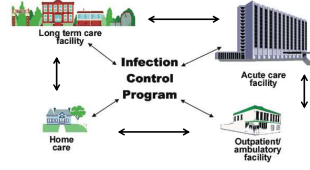
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OBJECTIVES

- Review the need for a focus on Infection Prevention in the outpatient and ambulatory care setting
- Describe infection prevention issues specific to the outpatient / ambulatory setting
- Describe potential issues that are looked for related to instrument reprocessing when performed in the outpatient / ambulatory setting

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



Adapted from: Jarvis WR Emerg Infect Dis. 2001;7:170-3. Macedo de Oliveira et al. Annals of Int Med. 2005, 11

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Ambulatory Care Use and Physician Office Visits (U.S.)

- National Ambulatory Medical Care Survey: 2018
 - 860.4 million physician office visits
- Interactive Summary Health Statistics for Adults: National Health Interview Survey, 2019-2020
 - Percent of adults who had a visit with a doctor or other health care professional in the past year: 83.4% (2020)
- Interactive Summary Health Statistics for Children: National Health Interview Survey, 2019-2020
 - Percent of children who had a visit with a doctor or other health care professional in the past year: 94.0% (2020)

Physician characteristic	Number of visits (standard error) in thousands	Percent distribution (standard error of percent)	Number of visits per 100 persons per year ^a (standard error of rate)
All visits	860,396 (37,930)	100.0 ...	267.1 (11.8)
Professional identity			
Doctor of medicine	803,404 (37,174)	93.4 (0.9)	249.4 (11.5)
Doctor of osteopathy	56,992 (7,561)	6.6 (0.9)	17.7 (2.3)
Specialty type ^b			
Primary care	440,155 (31,474)	51.2 (2.3)	136.6 (9.8)
Medical specialty	216,262 (19,037)	25.1 (2.2)	67.1 (5.9)
Surgical specialty	203,969 (21,800)	23.7 (2.3)	63.3 (6.7)
Metropolitan status			
MSA ^c	764,804 (37,481)	88.8 (2.4)	272.7 (13.4)
Non-MSA	95,592 (21,946)	11.1 (2.4)	29.4 (32.7)

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Ambulatory Care Use and Physician Office Visits – UNC System (2018)



- Total # of visits 130.0 million
- >500 Emergency Department visits
- >3.5 million outpatient visits

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Center	Year Implemented	Challenges	Outcomes	Future Research Needs	Effective Control Strategies
Surgeon General's Center	2014	N/A ^a	N/A ^a	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
Grassroots Center	2013	Healthcare Access	Healthcare Access	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
Public Safety Center	2013	N/A ^a	N/A ^a	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
Healthcare Center	2013	Healthcare Access	Healthcare Access	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
Old Surgeon Center	2012	Healthcare Access	Healthcare Access	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
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Old Surgeon Center	2012	N/A ^a	N/A ^a	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.
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Old Surgeon Center	2012	Healthcare Access	Healthcare Access	Nov 17, 2015	<ul style="list-style-type: none"> Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community. Development of a range of options to address the needs of the community.

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1. Implement a written infection control policy;
2. 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;
3. Require and monitor compliance with the policy; and
4. Update the policy as needed to prevent transmission of HIV, hepatitis B, hepatitis C and other bloodborne pathogens.

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- [illegible]

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

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Or any other organization that provides clinical care

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- Use of needles to puncture skin
- Vaginal and cesarean deliveries
- Surgery
- Dental procedures during which bleeding occurs or the potential for bleeding exists



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Key Recommendations – Guide to Infection Prevention for Outpatient Settings

Administrative

- Develop and maintain infection prevention and occupational health programs.
- Develop written infection prevention policies and procedures appropriate for the services provided by the facility which are based on evidence-based guidelines, regulations and standards.
- Assure availability of sufficient and appropriate supplies necessary for adherence to Standard Precautions.
- Assure at least one individual with training in infection prevention is employed by or regularly available (by contract) to manage the facility's infection prevention program.

Education and Training

- Provide job- or task- specific infection prevention education and training to all HCP.
 - Includes agency, contract and volunteer staff
- Focus on principles of Healthcare Personnel (HCP) safety and patient safety.
- Provided on hire and repeated annually and when policies and procedures are updated/revised.
- Competencies should be documented post each training.

Infection control 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.



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Infection control policies and procedures

- Facility infection prevention policies (hand hygiene, PPE, aseptic technique, etc.)
- Area specific policies
- Post exposure plan
- Reporting possible communicable disease exposures to Health Department
- Attendance at Outpatient Infection Prevention (.0206) SPICE course – if clinic meets criteria

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Communicable Disease Surveillance & Reporting

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Designated Staff member

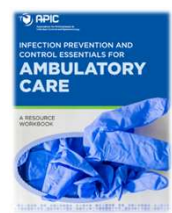
- Designated staff member must complete a State approved course in infection prevention
 - Course curriculum developed by SPICE
 - SPICE has oversight of course
 - On the job training is not sufficient and "Train the Trainer" concept cannot be used
 - Upon completion of course will receive a certificate of completion
 - Serves as documentation of compliance with rule .0206



Minimum Expectations

The Basics

- Follow standard precautions with all patients
- Perform appropriate hand hygiene
- Use personal protective equipment (PPE) when indicated
- Follow transmission-based precautions when indicated
- Follow respiratory hygiene/cough etiquette principles
- Ensure appropriate patient placement
- Properly handle, clean and disinfect patient care equipment, instruments and supplies
- Clean and disinfect the environment appropriately
- Handle textiles and linen carefully
- Follow safe injection practices
- Ensure healthcare worker safety through proper handling of needles and other sharps



<https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html>

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NC STANDARDIZED ISOLATION SIGNAGE

STOP DROPLET PRECAUTIONS
PRECAUCIONES DE TRANSMISION POR GOTAS

Family/Visitors should not visit if having signs or symptoms of an infection or a communicable disease. Visitations should be based on facility's policy.
Los familiares y visitantes no deben visitar si tienen señales o síntomas de infección o de otra enfermedad contagiosa. Las visitas dependen de la política de la institución.

Follow instructions below before entering room.
Antes de entrar a la habitación, siga las instrucciones a continuación.

Everyone must:
Clean hands before entering and when leaving room.
Todos deben:
Lavarse las manos antes de entrar y al salir de la habitación.

Wear surgical/procedure mask when entering the room and remove after exiting the room.
Usar una mascarilla quirúrgica o para procedimientos al entrar a la habitación y quitársela después de salir de la habitación.

Additional PPE may be required per Standard Precautions.
Es posible que se exija equipo de protección personal adicional según las precauciones estándar.

Droplet Precautions
Remove sign after room is thoroughly cleaned upon discharge or discontinuation of precautions.

Contaminated patient (see CDC definition)
A. patient (including staff)
B. patient's environment
C. patient's clothing
D. patient's linens
E. patient's waste

Room Placement:
Use private rooms when available. When private rooms are unavailable, place together in the same room persons who are infected or affected with the same pathogen.
Spatial separation of 3 feet and wearing the correct personal protective gear is especially important for patients in multi-bed rooms with infections transmitted by fine droplet route.

Personal Protective Equipment
Facility policy applies.

Room Cleaning:
No special precautions. Should be managed in accordance with routine procedures.

Room Disinfection:
Follow facility policy for Droplet Precautions.


Trash and Linen Management:
Follow facility policy.

Transport:
Essential transport only. Place patient in a sealed plastic bag. Clean and disinfect transport equipment. Avoid touching equipment carrying patient's waste or contamination.

Signage:
For guidance for duration of precautions, follow Agency A, Type and Duration of Precautions. Recommended for Room and Containment and Containment Area. See CDC Division of Field Epidemiology for more information on Standardized Infection Prevention and Control Signage.

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RESPIRATORY HYGIENE STATIONS



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LINEN: KEY POINTS TO REMEMBER

- Linen and other textiles
 - Use of appropriate PPE during handling and sorting of contaminated linen
 - Contaminated laundry bagged at point of use
 - Do not shake or agitate linens
 - Use standard precautions when handling all contaminated laundry



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THE WRONG WAY TO STORE LINEN



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THE RIGHT WAY TO STORE LINEN



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STORAGE: KEY PRINCIPLES TO REMEMBER

- Supplies and equipment that come in direct **OR** indirect contact with residents present a risk of infection transmission in healthcare settings.
- For this reason, a very important element in infection control and prevention is separation of clean and dirty.
- Items and equipment must be stored in a manner to prevent contamination.



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GENERAL GUIDELINES FOR STORAGE OF SUPPLIES

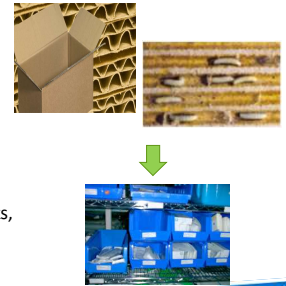
- ▶ Clean and sterile resident care supplies should be stored in areas with limited traffic.
- ▶ If possible, clean/sterile supplies are clearly separated from dirty items by having them in a separate room such as a "clean utility room."
- ▶ If clean and dirty items **must** be stored in the same room or location, there must be a clear separation of clean and dirty.



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STORAGE: GENERAL GUIDELINES

- ▶ Clinical care equipment and/or supplies should not be stored on the floor.
- ▶ Primary shipping containers/boxes should never be stored in any clinical care area.
- ▶ Items should be removed from shipping cartons and can be stored on shelves, racks, cabinets and/or washable containers



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PREVENT WATER CONTAMINATION

- ▶ Equipment and supplies should be stored at least 3 feet from the sink unless a barrier is in place, such as a plexiglass splashguard.
- ▶ Items or equipment should not be stored under the sink or exposed water pipes. Exceptions may be cleaning supplies or trash bags based on your facility policy.
- ▶ Storage in windowsills should be avoided.
- ▶ Packages should be inspected prior to use for any evidence of contamination (tears, moisture, soil).



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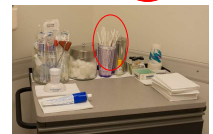
PREVENT INADVERTENT CONTAMINATION



Supplies should be stored in a manner that reduces the potential for contamination.

This means:

- ▶ Once taken out of original packaging, they should be placed in a covered container
- ▶ Supplies needed for a procedure should be opened immediately prior to use
- ▶ Supplies with an expiration date should be rotated and placed so that staff will use in a timely manner



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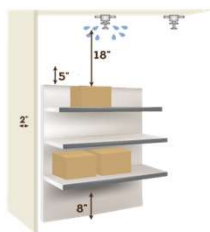
Storage Shelf Considerations

Assure items are protected from dust, moisture, and temperature and humidity extremes.

Guidelines for spacing between items and the surrounding environment should be followed:

Store at least:

- 8 inches from floor
- 5 inches from ceiling unless near sprinkler head [18 inches from sprinkler]
- 2 inches from outside walls



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STORAGE CONSIDERATIONS FOR NON-CRITICAL EQUIPMENT

- ▶ All non-critical reusable equipment should be cleaned, disinfected when visibly soiled and on a routine basis, **that is after each use**
- ▶ All non-critical reusable equipment should be stored between use in a manner to prevent inadvertent contamination by the environment or healthcare personnel hands
- ▶ Whenever possible blood glucose meters should be assigned to an individual resident and not shared
- ▶ Meters dedicated to individual residents should be stored in the resident's room if feasible.
- ▶ If not feasible to store in the room, disinfect after use, label with the resident's name and store in a manner to prevent contamination and inadvertent use on another resident.



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KEEPING UP WITH EXPIRATION DATES



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REFRIGERATORS, COOLERS & ICE MACHINES

- Monitored & recorded
- Patient/staff designation
- Scoops covered
- Clean & maintained
- Process for coolers



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MEDICATION MANAGEMENT / SAFE INJECTION PRACTICES

- Do staff use clean or sterile techniques and maintain clean, uncluttered and functionally separate areas for med prep?
- Are needles and syringes used only one time?
- Are sharps containers placed to be readily accessible to staff and close to area where sharps are used?
- Are safety devices available?
- Are sharps containers secured to prevent tipping and spilling?
- Observe injection practices.



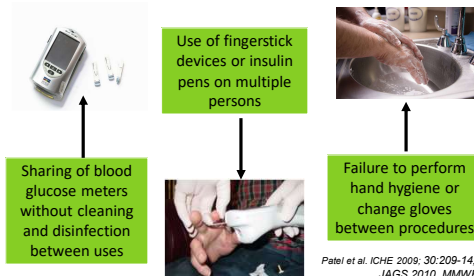
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MEDICATION MANAGEMENT / SAFE INJECTION PRACTICES



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UNSAFE DIABETES CARE



Patel et al. ICHE 2009; 30:209-14, Thompson et al. JAGS 2010, MMWR 2005; 54:220-3

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MEDICATION MANAGEMENT / SAFE INJECTION PRACTICES



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GENERAL ENVIRONMENT



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GENERAL ENVIRONMENT

- Are exam tables, procedure chairs intact and not torn?
- Are areas free of dust, dirt, clutter?
- Are countertops without chips or missing laminate?
- Are walls free from repair needs?
- Are there any leaks?



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CONSTRUCTION

- Was there a risk assessment (ICRA)?
- Dust
- Sticky mats
- Barriers
- Negative pressure



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CLEANING/DISINFECTION, HLD & STERILIZATION



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SPAULDING CLASSIFICATION

Spaulding Classification of Surfaces:

- **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



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CLEANING & DISINFECTING

SELECT, MIX, AND USE DISINFECTANTS CORRECTLY

Right product



Right preparation and dilution



Right application method

Right contact time

Wear appropriate PPE
(gloves, gown, mask, eye protection)

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CLEANING/DISINFECTION-NONCRITICAL

- Low-level disinfection is used for reusable patient items such as stethoscopes, reusable blood pressure cuffs, and blood glucose meters.
- Are they using manufacturer's instructions for cleaning/disinfection?
- Are staff aware of appropriate wet / contact time for disinfectant used.



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Pre-cleaning / Transport of Reusable Equipment

- Is point of use cleaning being done?
- Are soiled instruments handled and transported in a manner that will prevent contamination?
- If not being transported to the decontamination location immediately, are they pretreated or kept moist?



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REPROCESSING AREA

► Reprocessing area

- Clean to dirty flow
- Correct level of disinfection/sterilization utilized
- Packaged and stored correctly
- PPE available
- Controls are in use and recorded



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HIGH-LEVEL DISINFECTION-SEMI-CRITICAL



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INFECTION PREVENTION TRACERS – WHAT DO WE LOOK AT?

Infection Prevention High-Level Disinfection Tracer

- Negative pressure for endoscopy reprocessing rooms
- PPE
- Leak testing
- Enzymatic – correct concentration / temperature / soak time
- Expiration dates primary and secondary containers
- Secondary labels as indicated
- Expiration dates for test strips – open and unopened
- Quality control process – initial and prior to each time
- Minimal effective temperature per IFU
- HLD chemical soak time
- Rinsing post HLD soak
- Storage of HLD items
- ???Are any single-use items being disinfected
- Orientation / competency
- Availability of manufacturer's instructions for use
- Storage of HLD items
- Process to identify and recall inadequately high level disinfected instruments
- HLD equipment – Scope Buddy / Acu-sinQ maintained/used per IFU
- Transporting endoscopes to and from storage cabinet

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DON'T FORGET TO CHECK STORAGE



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INFECTION PREVENTION TRACERS – WHAT DO WE LOOK AT?

- Infection Prevention HLD using a Trophon
- First step – removing visible soil
 - PPE
 - Disinfectant cartridge load / expiration date
 - Chemical indicators expiration date
 - Process to identify Trophon HLD failure
 - Storage of HLD items
 - Orientation / competency
 - Availability of manufacturer's instructions for use
 - Trophon maintained / used per IFU



STERILIZATION-CRITICAL



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INFECTION PREVENTION TRACERS – WHAT DO WE LOOK AT?

Infection Prevention Sterilization Tracer

- Process for cleaning instruments and devices prior to sterilization
- PPE
- Enzymatic detergents – correct concentration / temperature / soak time
- Brushes
- Ultrasonic
- Rinsing and drying
- Wrapping and packaging
- Chemical indicators
- Biological indicators / logs
- Bowie-dick tests
- Labeling packs / pouches
- Logs
- Sterilizer maintenance
- Reprocessing failure
- Storage or sterilized items
- Orientation / competency
- Color-blind testing

QUESTIONABLE PRACTICES

Instruments are soaking in ?
And for how long



How not to store items
after sterilization



How not to load a
table-top sterilizer



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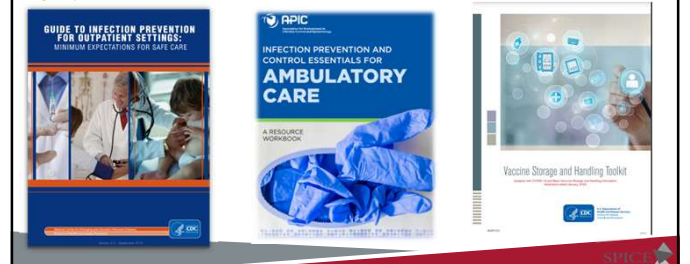
GOOD PRACTICE



RESOURCES

<https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf>

<https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf>



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ADDITIONAL RESOURCES



<https://spice.unc.edu/video-library/>

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INSTRUMENT REPROCESSING: HIGH-LEVEL DISINFECTION AND STERILIZATION FOR THE INFECTION PREVENTIONIST

This self-paced course consists of short modules. Topics covered: 1) Physical Plant Design, 2) Spaulding Classification Scheme, 3) Decontamination, Preheating, and Transport, 4) High and Low-level Disinfection (HLD), and 5) Sterilization Process. Once each of the modules is completed, you will be directed to a 10-question test. You must get at least 80% of the questions correct. You can retake the test as needed. When 80% is achieved, you will be redirected to a short evaluation of the course. Complete it and get your course completion certificate!

This course is free and on-line. Click on the button below, and you will be directed to log in or create an account. Search the course catalog for the course title, and get started!

This nursing continuing professional development activity was approved by the North Carolina Nurses Association, an accredited sponsor by the American Nurses Credentialing Center's Commission on Accreditation.

REFERENCES

- Standard Precautions for All Patient Care
<https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html>
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<https://www.cdc.gov/hai/settings/outpatient/outpatient-care-guidelines.html>
- Guidelines & Guidance Library – CDC
<https://www.cdc.gov/infectioncontrol/guidelines/index.html>
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