



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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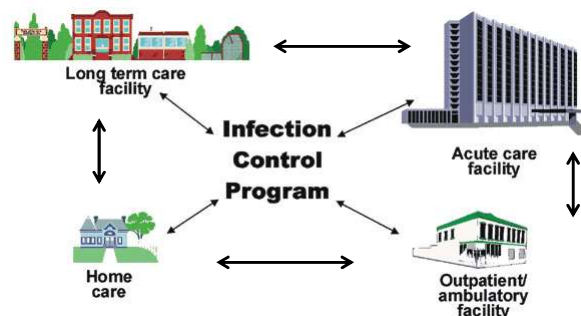
OBJECTIVES

- 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 Olivera 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 ¹⁻³ (standard error of rate)
All visits	860,386 (37,935)	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	56,982 (7,561)	6.6 (0.9)	17.7 (2.3)
Specialty type ⁴			
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 (21,600)	23.7 (2.3)	63.3 (6.7)
Metropolitan status			
MSA ⁵	764,804 (37,461)	88.9 (2.4)	272.7 (13.4)
Non-MSA	95,582 (21,946)	11.1 (2.4)	229.4 (52.7)

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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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OUTBREAKS AND PATIENT NOTIFICATIONS IN OUTPATIENT SETTINGS:2010-2014

- These events occurred in a variety of outpatient settings including primary care clinics, pediatric offices, cosmetic surgery centers, pain remediation clinics, imaging facilities, cancer (oncology) clinics, dental clinics, and health fairs.

- This is not an exhaustive list, but it serves as a reminder of the serious consequences that can result when healthcare personnel fail to follow basic principles of infection control.

- <https://www.cdc.gov/hai/settings/outpatient/outbreaks-patient-notifications.html>

Setting	Year Investigated	Pathogen(s)	Infection(s)	Patient Notification Performed (# notified)	Infection Control Breaches
Surgical Center (1)	2014	N/A*	N/A*	Yes (1,100)	1) Reuse of syringes to access medication vials used for >1 patient 2) Failure to properly reprocess reusable medical equipment
Orthopedic Clinic (2)	2013	Staphylococcus aureus	Septic Arthritis	No	1) Complex preparation/compounding of injection materials involved extensive manipulations in the procedure room, with opportunities for contamination
Plastic Surgery Center (3)	2013	N/A*	N/A*	Yes (415)	1) Reuse of syringes to access medication vials that may have been used for >1 patient
Pain Management Clinic (4)	2013	Hepatitis B Virus	Hepatitis	Yes (34)	1) Multiple procedural and infection control breaches were identified
Oral Surgery Clinic (5)	2013	Hepatitis C Virus	Hepatitis	Yes (5,810)	1) Mishandling of injectable medications including reuse of single-dose vials of propofol 2) Improper reprocessing of dental instruments
Plastic Surgery Center (6)	2013	Non-tuberculous mycobacteria, Other	Surgical Site Infection	No	1) Off-label use of lubricating gel directly on sterile tissues 2) Reuse of single-use breast implants as spacers
Dental Clinics (7)	2013	N/A*	N/A*	Yes (100)	1) Suspected tampering with injectable controlled substances by a healthcare provider
Hematology/Oncology Clinic (8)	2012	Hepatitis C Virus	Hepatitis	Yes (>300)	Specific lapses in infection control not identified at the time of the investigation
Cosmetic Surgery Facilities (9)	2012	Group A Streptococcus	Necrotizing Fasciitis	No	1) Failure to wear surgical masks and gowns consistently 2) Visibly dirty equipment 3) No logs of autoclave use, maintenance, or performance checks

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

Specific to ambulatory settings

- Enacted in 1992
- North Carolina Administrative Code Rule 10A NCAC 41A .0206 (“Rule .0206”) establishes requirements for infection prevention in health care settings. According to the Rule .0206, every health care organization that performs invasive procedures is required to do the following:
 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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10A NCAC 41A.0206 Infection Prevention- Healthcare Settings

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, masticate 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.



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DEFINITIONS

• "Healthcare organization" means:

- Hospital
- Clinic
- Physician Practice
- 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

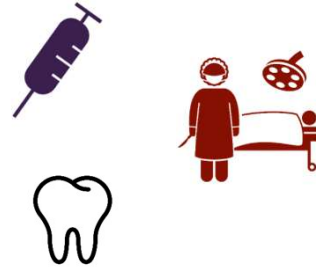
Or any other organization that provides clinical care



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DEFINITIONS

- “Invasive procedure” means entry into tissues, cavities or organs or repair of traumatic injuries. This includes:
 - 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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Dr. Zack Moore
State Epidemiologist



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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

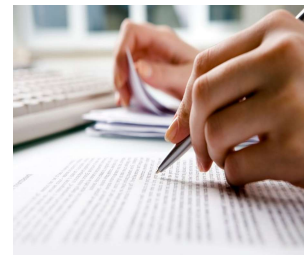
- Provide job- or task- specific infection prevention education and training to all HCP.
 - Includes agency, contract and volunteer staff
- Focus on principles of Healthcare Personnel (HCP) safety and patient safety.
- Provided on hire and repeated annually and when policies and procedures are updated/revised.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



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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

CHAPTER 41 - EPIDEMIOLOGY HEALTH SUBCHAPTER 41A - COMMUNICABLE DISEASE CONTROL SECTION .0100 - COMMUNICABLE DISEASE CONTROL

10A NCAC 41A .0101 REPORTABLE DISEASES AND CONDITIONS

(a) The following named diseases and conditions are declared to be dangerous to the public health and are hereby made reportable within the time period specified after the disease or condition is reasonably suspected to exist:

- (1) acquired immune deficiency syndrome (AIDS) - 24 hours;
- (2) anthrax - immediately;
- (3) botulism - immediately;
- (4) brucellosis - 7 days;
- (5) campylobacter infection - 24 hours;
- (6) **Candida auris - 24 hours;**
- (7) **Carbapenem-Resistant Enterobacteriaceae (CRE) - 24 hours;**
- (8) **chimeroid - 24 hours;**
- (9) chikungunya virus infection - 24 hours;
- (10) chlamydial infection (laboratory confirmed) - 7 days;
- (11) cholera - 24 hours;
- (12) Creutzfeldt-Jakob disease - 7 days;
- (13) cryptosporidiosis - 24 hours;
- (14) cyclosporiasis - 24 hours;
- (15) dengue - 7 days;
- (16) diphtheria - 24 hours;
- (17) Escherichia coli, shiga toxin-producing - 24 hours;
- (18) ehrlichiosis - 7 days;
- (19) encephalitis, arboviral - 7 days;
- (20) foodborne disease, including Clostridium perfringens, staphylococcal, Bacillus cereus, and other and unknown causes - 24 hours;
- (21) gonorrhea - 24 hours;
- (22) granuloma inguinale - 24 hours;
- (23) Haemophilus influenzae, invasive disease - 24 hours;

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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

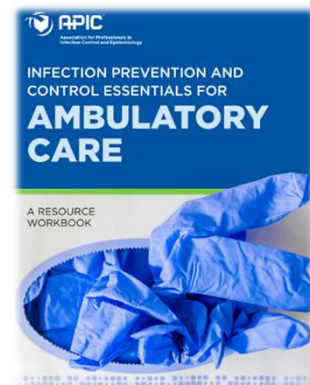
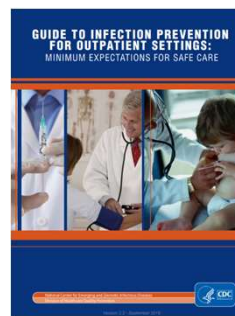


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Minimum Expectations

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



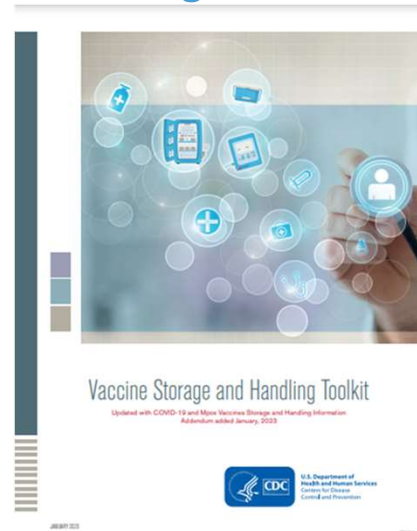
<https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html>

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North Carolina Immunization Program

The VFC (Vaccines For Children) program:

- Provides federally purchased vaccine, for eligible children, at no charge to public and private providers
- Automatically covers vaccines recommended by the Advisory Committee on Immunization Practices (ACIP), established by resolution and approved by the Centers for Disease Control and Prevention (CDC)
- Very specific vaccine storage requirements



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EDUCATION, TRAINING, COMPETENCIES & AUDITS

- Upon hire
- Annually
- New equipment, procedure, or policy change



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WHAT WE ASSESS FOR – GENERAL INFECTION PREVENTION ROUNDS

- Infection control policies and procedures
 - Surveillance and disease reporting if applicable
- Hand hygiene
- Standard and transmission-based precautions
- Linen
- Storage of supplies
- Refrigerators and ice machines
- Medication management
- Safe injection practices
- General environment
- Cleaning/disinfection, HLD & sterilization



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AREA SPECIFIC AUDITS



High-Level Disinfection


Sterilization Outpatient

Trophon-HLD



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NC STANDARDIZED ISOLATION SIGNAGE




DROPLET PRECAUTIONS

PRECAUCIONES DE TRANSMISIÓN
POR GOTAS



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

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 terminally cleaned upon discharge or discontinuation of precautions.

Common conditions (per CDC guidelines)
 B. pertussis (Whooping cough)
 Influenza virus
 Rhinovirus
 Known or suspected *Neisseria meningitidis* (meningococcal) and *H. influenzae* meningitis
 Mumps
 Rubella
 Parvovirus B19

Room Placement:
 Use private room when available. When private rooms are unavailable, place together in the same room persons who are colonized or infected with the same pathogen. Spatial separation of ≥3 feet and drawing the curtain between patient beds is especially important for patients in multi-bed rooms with infections transmitted by the droplet route.

Personal Protective Equipment
Put on in this order
 Mask - Cover nose, mouth, and chin. If wearing a mask with ties, all ties must be secured.

Take off and dispose in this order
 Mask - Do NOT grasp front of the mask when removing. Grasp bottom ties then the ties at top and pull away from face. For ear loop masks stretch the ear loops, remove, and handle only ear loops.
 • Alcohol based handrub or wash hands with soap and water if visibly soiled.

Gloves/Utensils:
 No special precautions. Should be managed in accordance with routine procedures.

Room Cleaning:
 Follow facility policy for Droplet Precautions

Trash and Linen Management:
 Bag linen and trash in patient/resident room (double bagging of trash or linen is not necessary unless outside of bag visibly contaminated).

Transport:
 Essential transport only. Place patient/resident in a medical grade mask. Clean and disinfect transport equipment. Alert receiving department regarding patient/resident isolation precaution status.

Duration of Precautions:
 For guidance for duration of precautions, follow Appendix A- Type and Duration of Precautions Recommended for Selected Infections and Conditions within the CDC's 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

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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

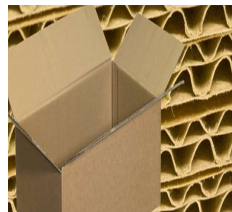
- ▶ Clean and sterile resident care supplies should be stored in areas with limited traffic.
- ▶ If possible, clean/sterile supplies are clearly separated from dirty items by having them in a separate room such as a “clean utility room.”
- ▶ If clean and dirty items **must** be stored in the same room 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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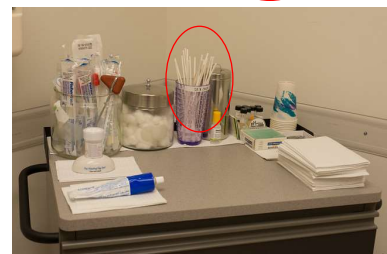
PREVENT INADVERTENT CONTAMINATION



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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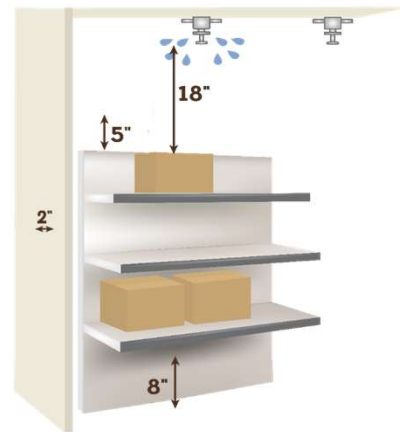
Storage Shelf Considerations

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

Medication Expiration List
Verify due the 15th each month

Medication	Expiration	PAB
acetaminophen TAB 325 mg	30 Jun 2023	30
Aspirin TAB 325 mg	31 Jul 2022	30
Aspirin	30 May 2022	3
Bacterostatic saline 30 mL	31 Oct 2022	35
Bacterostatic Water 30ml	30 Nov 2023	30
Beta Lix 1 Salicylic Acid 20%/	31 Jan 2023	300
Bupivacaine 0.25%	31 Jan 2023	5
Carbamide 0.7%	Ordered	1
CANDIDA SKIN TEST (CANDID)	4 Aug 2022	15
0.1 M		
Dichloroacetic Acid Delapex	21 May 2023	1
diphenhydramine (AP 50 mg	30 Apr 2023	30
diphenhydramine VIAL 50 mg/2 mL	31 Mar 2023	4
Dryfoal aluminum chloride 20%	July 2022	20
TOP SOLN (17.3 mL)	Feb 2023	7
Everpeel Glycine Bleaching Prone Skin	May 2023	7
Everpeel Glycine Brightening	31 Jul 2022	7
Everpeel Glycine	31 Jul 2022	7
Rejuvenating		
Everpeel Glycine TCA LP VIAL	30 Jun 2022	2
EPINEPHRINE AU/IO/BU 0.3 mg	31 Oct 2022	1
feric subcutaneous SGA/N (Monsieur Solution) 25 mL	14 Dec 2022	1
fluorouracil PF INJ 500 mg/100 mL	Jun 2022	20
gentamicin INJ VIAL 80 mg/2 mL	30 Jun 2022	25
hyaluronidase VIAL 150 UNITS/1 mL (HYALENEX)	30 Apr 2022	8
Ibuprofen TAB 100 mg	31 Mar 2023	30
Ibuprofen TAB 800 mg	30 Jun 2023	30
Kenalog 10 triamcinolone acetonide INJ VIAL 50 mg/5 mL	30 Sep 2022	50
Kenalog 40 triamcinolone acetonide INJ VIAL 40 mg/1 mL	30 Apr 2023	50

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REFRIGERATORS, COOLERS & ICE MACHINES

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



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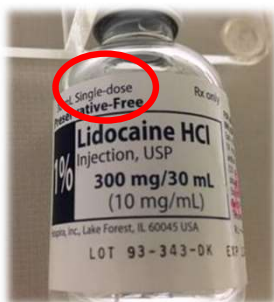
MEDICATION MANAGEMENT / SAFE INJECTION PRACTICES

- 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



Sharing of blood glucose meters without cleaning and disinfection between uses

Use of fingerstick devices or insulin pens on multiple persons



Failure to perform hand hygiene or change gloves between procedures

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



INJECTION SAFETY CHECKLIST		
The following Injection Safety checklist items are a subset of items that can be found in the CDC Infection Prevention Checklist for Outpatient Settings: Minimum Expectations for Safe Care.		
The checklist, which is appropriate for both inpatient and outpatient settings, should be used to systematically assess adherence of healthcare providers to safe injection practices. Assessment of adherence should be conducted by direct observation of healthcare personnel during the performance of their duties.		
Injection Safety	Practice Performed?	If answer is No, document plan for remediation
Proper hand hygiene, using alcohol based hand rub or soap and water, is performed prior to preparing and administering medications.	Yes No	
Injectors are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.	Yes No	
Needles and syringes are used for only one patient (this includes prefilled syringes and cartridge devices such as insulin pens).	Yes No	
The rubber septum on a medication vial is disinfected with alcohol prior to piercing.	Yes No	
Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.	Yes No	
Single-dose or single-use medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.	Yes No	
Medication administration tubing and connectors are used for only one patient.	Yes No	
Multi-dose vials are dated by healthcare when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial.	Yes No	
Note: This is different from the expiration date printed on the vial whenever possible.	Yes No	
Multi-dose vials are dedicated to individual patients whenever possible.	Yes No	
Multi-dose vials to be used for more than one patient are kept in a centralized medication area and do not enter the immediate patient treatment area (e.g., operating room, patient room/bedside).	Yes No	
Note: If multi-dose vials enter the immediate patient treatment area, they should be dedicated for single patient use and discarded immediately after use.	Yes No	

The One & Only Campaign is a public health effort to eliminate unsafe medical injections. To learn more about safe injection practices, please visit www.cdc.gov/injectionsafety/1safety.html.



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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



SPICE

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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.



SPICE

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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?



SPICE

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REPROCESSING AREA

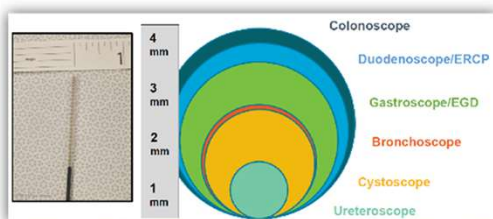
► Reprocessing area

- 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



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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 of sterilized items
- Orientation / competency
- Color-blind testing



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QUESTIONABLE PRACTICES

Instruments are soaking in ?
And for how long



How not to store items
after sterilization



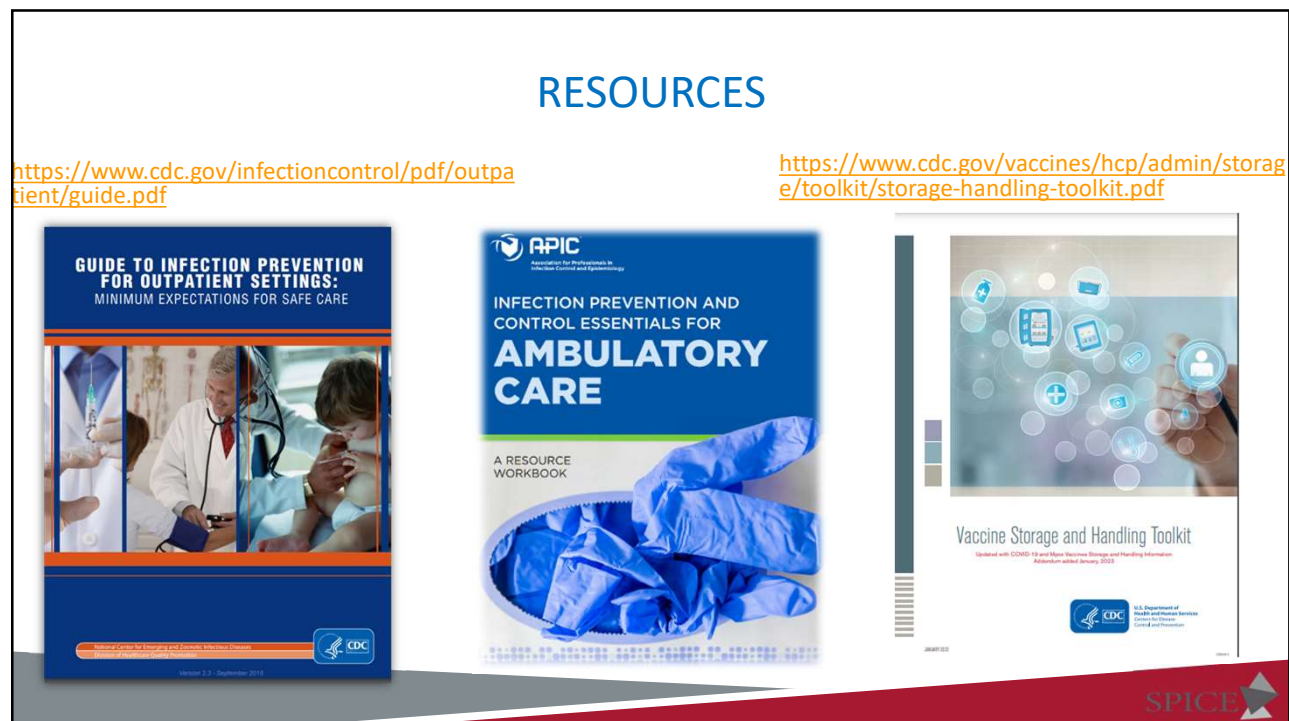
How not to load a
table-top sterilizer



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ADDITIONAL RESOURCES



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

- HOME
- ABOUT
- FACILITY TYPE
- COURSES
- BROWSE ALL RESOURCES

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, Pre-cleaning, and Transport, 4) High-Level Disinfection (HLD), and 5) Sterilization Process. View each of the modules. At the end of Module 5 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 approver by the American Nurses Credentialing Center's Commission on Accreditation.

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REFERENCES

- Standard Precautions for All Patient Care
<https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html>
- Statewide Program for Infection Control & Epidemiology
<https://spice.unc.edu/>
- Guide to Infection Prevention for Outpatient Settings – CDC
<https://www.cdc.gov/hai/settings/outpatient/outpatient-care-guidelines.html>
- Guidelines & Guidance Library – CDC
<https://www.cdc.gov/infectioncontrol/guidelines/index.html>
- One and Only Campaign
<https://www.cdc.gov/injectionsafety/one-and-only.html>
- APIC Text – Infection Prevention for Practice Settings and Service-Specific Patient Care Areas Ambulatory Care - <https://text.apic.org/toc/infection-prevention-for-practice-settings-and-service-specific-patient-care-areas/ambulatory-care>
- Infection Prevention and Control in Pediatric Ambulatory Settings Pediatrics Volume 40, number 5, November 2017
- 5 Ways to Improve Infection Prevention in Outpatient Settings
www.performancehealthacademy.com/5-ways-to-improve-infection-prevention-in-outpatient-settings.html. Accessed 8/24/22
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