



High Desert Health System POLICY AND PROCEDURE

POLICY NUMBER: 622
VERSION: 1

SUBJECT: STERILIZATION AND DISINFECTION OF EQUIPMENT AND ENVIRONMENT

PURPOSE: To monitor and direct the selection and use of sterilization or disinfection processes solutions and the department specific responsibilities in order to reduce rates of health-care–associated infections through appropriate use.

POLICY: The High Desert Health System (HDHS) Infection Prevention & Control Committee and Departments are to follow the Centers for Disease Control and Prevention (CDC) and manufacturers' recommendations for the use of sterilants, disinfectants, equipment and processes in accordance with regulatory requirements.

DEFINITIONS AND CRITERIA:

1. **Sterilization** - Sterilization is the complete elimination or destruction of all forms of microbial life. Types of sterilization methods include thermal (steam autoclave or dry heat) and chemical.
2. **Disinfection** - Disinfection describes a process that eliminates many or all pathogenic microorganisms, with the exception of bacterial spores, from inanimate objects; rarely kills all spores. Chemical agents include alcohol, bleach, iodophores, quaternary ammonia compounds and aldehydes.

High-level disinfection can be expected to destroy all microorganisms, with the exception of high numbers of bacterial spores.

Intermediate-level disinfection inactivates *Mycobacterium tuberculosis*, vegetative bacteria, most viruses, and most fungi, but does not necessarily kill bacterial spores.

Low-level disinfection can kill most bacteria, some viruses, and some fungi, but it cannot be relied on to kill resistant microorganisms such as *Mycobacterium tuberculosis* or bacterial spores.

3. **Cleaning** - Cleaning is the removal of all foreign material (e.g., soil, organic material) from objects, it is normally accomplished with water, mechanical action, and detergents or enzymatic products. Failure to remove foreign matter from an object before disinfection or sterilization process is likely to render the process ineffective.

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4. **Critical Items** - will enter tissue or vascular system or blood will flow through them.
Sterilization is required.
5. **Semi-critical Items** - (except Dental) will come in contact with mucous membrane or non-intact skin.
High levels of disinfection are required.
6. **Non-critical Items** - will come in contact with intact skin but not mucous membrane.
Intermediate or Low-level disinfection is required.

HDHS Infection Control Committee, & Departmental Responsibilities:

1. The HDHS Infection Prevention & Control Committee and the Infection Prevention Nurse oversee sterilization and disinfection activities in the following capacities:

The Infection Prevention Nurse:

- a. Serves as a consultant and makes recommendations regarding level(s) of disinfection or sterilization methods for equipment and the environment.
- b. Provides training regarding cleaning, disinfection and sterilization.
- c. Assists in policy development regarding cleaning, disinfection and sterilization.
- d. Performs monitoring activities.

The HDHS Infection Prevention & Control Committee:

- a. Approves, prior to purchase, solutions and processes used for cleaning, disinfection and sterilization.
- b. Reviews and approves policies and procedures for cleaning, disinfection or sterilization of equipment and environment.
- c. Reviews monitoring activities.

2. Departmental Responsibilities:

Each Department Manager is responsible for training and monitoring employees whose duties include preplanning, the use of disinfectants and or sterilization techniques and monitoring sterility of supplies and processes. Training will include review of departmental policies and procedures and documentation of training. The Department Manager will review and revise as necessary any relevant policies and procedures and will submit them to the HDHS Infection Prevention & Control Committee for approval.

The Department is responsible for maintaining logs of biological monitoring results as required for all autoclaves, including maintenance, repair and repeat testing of sterilization equipment.

Object Classification	Use of Item	Decontamination required after cleaning	Example
Critical items	Enter sterile body tissues, sterile body fluids, or the vascular system	Sterilization	Surgical Instruments
Semicritical items	Contact mucous membranes or non-intact skin	High-level disinfection	Endoscopes Endocavitary Ultrasound Probes
Noncritical items, including environmental surfaces	Contact intact skin, but not mucous membranes	Intermediate or Low-level disinfection	Stethoscopes Blood Pressure Cuffs

General Practices:

- All objects to be disinfected or sterilized should first be thoroughly cleaned to remove all organic matter (blood and tissue) and other residue.
- All equipment used in patient care shall be kept clean and in proper working condition.
- All medical equipment used for patient care must be cleaned and disinfected before use on another patient.
- A hospital grade disinfectant EPA approved and approved by the Infection Prevention & Control Committee is to be used to disinfect medical equipment and environmental surfaces.
- Clean items and equipment are to be stored in clean areas or clean utility rooms.
- Clean/sterile items are not to be stored under sinks or on counters where they can be exposed to splashing from sinks.
- Dirty items are to be stored in a soiled utility room until they are cleaned.
- Items should be clearly identified as clean or dirty. If in doubt if item is clean it is to be cleaned before use.
- Make available and use appropriate PPE (gloves, gowns, masks, eye wear, face shields) to preclude exposure to infectious agents or chemicals through the respiratory system, skin, or mucous membranes of the eyes, nose, or mouth.
- Follow manufacturers' instructions for proper use of disinfecting (or detergent) products -- such as recommended use-dilution, contact time, temperature, material compatibility, storage, shelf-life, and safe use and disposal.

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REFERENCE:

Centers for Disease Control and Prevention, Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008.

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