SURT-1710: STERILE PROCESSING TECHNIQUES II

Cuyahoga Community College

Viewing: SURT-1710 : Sterile Processing Techniques II

Board of Trustees:

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Academic Term:

Fall 2024

Subject Code

SURT - Surgical Technology

Course Number:

1710

Title:

Sterile Processing Techniques II

Catalog Description:

Covers techniques and protocol of processing patient care equipment. Includes the various packaging methods, sterilization methods, sterile storage methods, and appropriate distribution methods currently in use in today's health care environment. Discussion and identification of surgical instruments including techniques for recognizing damage and/or poor working condition to allow technicians to remove for preventive maintenance. Discussion and identification of the various methods of sterilization currently used in health care. Demonstration of appropriate monitoring techniques to achieve required degree of sterile assurance level.

Credit Hour(s):

4

Lecture Hour(s):

4

Requisites

Prerequisite and Corequisite

SURT-1700 Sterile Processing Tech I, SURT-1720 Introduction to Hospital Administration, and concurrent enrollment in SURT-1861 Clinical Experience: Sterile Processing and departmental approval.

Outcomes

Course Outcome(s):

Describe and discuss the process of decontamination to effectively clean, disinfect, store and distribute patient care equipment—identification and discussion of the various types of patient care equipment used in healthcare.

Objective(s):

1. Identify the specific types of patient care equipment.
2. Discuss the processing techniques for cleaning and disinfection of patient care equipment.
3. Identify protocol for reassembly, testing, and inspection of patient care equipment.
4. Discussion of the process of quality control to insure the functionality of equipment and eliminate patient injury.
5. Evaluate the various methods utilized for storage and distribution of patient care equipment.

Course Outcome(s):

Identification of surgical instrumentation, packaging material selection and wrapping techniques to ensure the integrity of sterile packs remains intact until point-of-use.

Objective(s):

1. Demonstrate the appropriate wrapping methods for sterile wrappers.
2. Demonstrate the appropriate methods for peel pouch closure.
3. Demonstrate the various components of rigid container systems and the preventive maintenance needed to ensure product integrity.

4. Identify the required information for labeling of sterile packs.
5. Discuss the concept of event-related sterility.
6. Identify the names and functions of the various types of surgical instruments.
7. Demonstrate methods utilized to test surgical instruments for proper working condition.
8. Identify the three main types of packaging methods used for sterile pack construction.
9. Discuss the required principles of sterile packs selection to ensure product integrity.

Course Outcome(s):

Describe and discuss the process of sterilization for critical medical devices to reduce the occurrence of healthcare acquired infections.

Objective(s):

1. Discuss the concept of microbial inactivation that occurs in the sterilization process.
2. Identify and discuss the various categories of medical devices and which type of sterilization method is suitable.
3. Identify and discuss the parameters of the various sterilization methods used in healthcare facilities.
4. Identify and discuss the four sterilization monitoring methods of administrative, mechanical, chemical, and biological.
5. Discuss the cause of wet packs in the sterilization process and demonstrate steps to perform to resolve issues.
6. Identify the 6 major methods of sterilization in healthcare facilities and the purpose of each method.
7. Describe the method use to biologically monitor the sterilization process and appropriate measures to take in the event of an unsterile load.
8. Describe the appropriate safety measure needed in regard to each sterilization method.

Course Outcome(s):

Analyze the various sterile storage and distribution methods to ensure the sterile integrity of items remains intact until the point of use.

Objective(s):

1. Define shelf-life of a sterile product and discuss the factors that affect shelf-life and sterility maintenance.
2. Describe the environmental controls and housekeeping procedures used in sterile storage areas.
3. Demonstrate proper stock rotation method needed to ensure that the first products sterilized are used first.
4. Discuss and demonstrate how sterile items should be handled and carried to prevent contamination of contents.
5. Describe the various inventory control, stock distribution, and patient charging mechanisms used in healthcare facilities.
6. Discuss cost containment techniques and the importance of a well-maintained inventory system.

Methods of Evaluation:

1. Examinations
2. Quizzes
3. Assignments
4. Class presentation
5. Class attendance and participation

Course Content Outline:

1. Processing of patient care equipment
   a. Discussion of the protocol for cleaning and disinfection of equipment
   b. Demonstration of the proper procedure for reassembly of equipment
   c. Demonstration of the required testing and inspection of equipment
   d. Discussion of quality control methods required to insure safe functioning of equipment
   e. Discussion of proper storage and distribution methods of equipment
2. Assembly, packaging, and instrumentation
   a. Identification of the main types of surgical instruments, surgical-grade Germany, and floor-grade Pakistan
   b. Discussion of the appropriate methods to classify surgical instruments according to their intended use
   c. Discussion of hand-held instruments and demonstration of proper testing protocol
   d. Discussion of laparoscopic instruments and demonstration of proper testing protocol
   e. Discussion of power equipment and demonstration of proper testing protocol
   f. Discussion of endoscopic equipment and demonstration of proper testing protocol
   g. Discussion of microsurgical instruments and demonstration of proper testing protocol

   h. Discussion of the appropriate processing of loaner equipment
   i. Demonstration of the required procedure for assembly of sets to ensure all required instruments are in working order
   j. Discussion of the criteria utilized for selection of packaging materials to ensure sterility maintenance
   k. Demonstration of the required pack assembly of textile packs
   l. Demonstration of the appropriate assembly of basin set construction
   m. Demonstration and discussion of the various peel pouch methods and discussion of benefits of each, heat seal vs. self-seal
   n. Demonstration and discussion of the various sterile wrap products, woven vs. nonwoven
   o. Demonstration and discussion of the methods and appropriate use of rigid containers for sterility maintenance
   p. Discussion of the appropriate use of sterility maintenance covers
   q. Discussion of the required labelling on sterile packages to ensure sterility maintenance
   r. Discussion of the concept of event-related sterility
3. Sterilization
   a. Discussion of the principles of sterilization and the parameters required to ensure sterility assurance level
   b. Discussion of the concepts and efficacy of steam sterilization
   c. Identification of the pros and cons of pre-vac air removal vs gravity air removal steam sterilization.
   d. Demonstration of the proper protocol for loading and unloading sterilizer racks
   e. Discussion of the various administrative monitoring techniques of sterilization
   f. Discussion of the various administrative monitoring techniques of sterilization
   g. Discussion of the various mechanical monitoring techniques of sterilization
   h. Discussion of the various chemical monitoring techniques of sterilization
   i. Discussion and demonstration of the various methods of biological monitoring of the sterilization process
   j. Definition of a false positive and discussion of the appropriate response
   k. Demonstration of the required rigid container validation testing
   l. Discussion of ethylene oxide sterilization parameters and protocol for efficacy
   m. Aeration
   n. Identification of Occupational Safety and Health Administration (OSHA) exposure limits to ethylene oxide to provide a safe working environment
   o. Discussion of gas plasma sterilization parameters and protocol for efficacy
   p. Discussion of ozone sterilization parameters and protocol for efficacy
   q. Discussion of dry heat sterilization and protocol for efficacy
   r. Discussion of peracetic acid sterilization and protocol for efficacy
4. Sterile Storage
   a. Discussion and definition of concept of shelf life in relation to the maintenance of sterility
   b. Demonstration of proper techniques for handling and inspection of packs to insure sterile integrity
   c. Discussion of environmental controls required for the sterile storage area
   d. Discussion and demonstration of proper stock rotation techniques to eliminate outdates product
5. Inventory Control and Distribution
   a. Demonstration of the available methods of requisitioning of supplies
   b. Identification of the methods and functions of the aspects of receiving of supplies
   c. Selection and handling of inventory
   d. Transporting supplies through facility
   e. Discussion of benefits of demand distribution system
   f. Discussion of benefits of par-level distribution system
   g. Philosophy of Just-in-time or stockless inventory systems
   h. Patient charging
   i. Demonstration of protocol for inventory management to insure products are available for clinical area when needed
   j. Identification of concept of economic order quantity in determination of stock levels
   k. Discussion and demonstration of computerized inventory systems
   l. Discussion of concept of ABC inventory classification systems

Resources

Sterile Processing University, LCC. *The Basics of Sterile Processing Textbook*. 7th ed. Lebanon, NJ: Sterile Processing University, LCC, 2019.

Sterile Processing University, LCC. *The Basics of Sterile Processing Workbook*. 7th ed. Lebanon, NJ: Sterile Processing University, LCC, 2019.

Steris, Instrument Management Services. . *Surgical Instrument Flash Cards*. 1st ed. Birmingham, AL: Steris, 2016.

Healthcare Serile Processing Association. *Sterile Processing Technical Manual (CRCST 9th edition)*. Healthcare Serile Processing Association, 2023.

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