SECTION HEADING

SURG 1130: Operating Room Theory

Description

Operating Room Theory will enable students to function as an essential part of the medical team providing surgical care to patients in an operating room setting. Students will study the total operating room environment which includes preoperative, intraoperative, and postoperative care. The principles of electricity, physics, Lasers, computers, and Robotics will be covered. In the Laboratory setting, the students will develop fundamental operating room skills, identify instruments, and prepare necessary supplies for surgical case management. Emphasis will be placed on demonstrating the principles of aseptic techniques as they apply skills inherent to the role of the surgical technologist. The students will observe, practice, and demonstrate these skills.

Credits

5

Prerequisite

None

Corequisite

None

Topics to be Covered

1. Development & history of surgery.

2. Legal concepts, risk management, and ethical issues.

3. Health care facilities, agencies, accrediting agencies, and organizations.

4. Different needs and special populations.

5. The surgical team members and the personal.

6. Physical environment and safety standards.

7. Communication skills.

8. Surgical attire.

9. Asepsis and sterile technique.

10. Identify instruments, surgical supplies and equipment.

11. Surgical wound closure & classification

12. Hemostasis & blood replacement

13. Emergency situations and preparation.

Learning Outcomes

1. Trace the historical development of surgery.

2. Identify different types of health care facilities, agencies, accrediting agencies and organizations.

3. Identify members of the surgical team, their roles, principles of communication and leadership, levels of management in the hospital, and the proper chain of command in the surgery department.

4. Discuss the pathways to advance in leadership/management roles and the characteristics of the professional surgical technologist including credentialing options.

5. Identify the aspects of the physical environment and floor plans of the surgical suites and surgery department and summarize the components and equipment in the surgical suites including suction, gas, lasers, and electrical outlet and the location of the safety controls and shut-off valves.

6. Identify hospital departments that relate to the patient's right to quality care in the surgical setting.

7. Discuss hazards to the patient and the health care provided in the operating room including ionizing radiation.

8. Discuss the development of a surgical conscience and problem-solving in ethical decision-making and the influence of ethics and morality in the professional practice.

9. Discuss principles of patient confidentiality, including verbal and written.

10. Analyze and discuss the various types of legal doctrines and concepts of law.

11. Discuss and understand of the process used to obtain an informed consent for a surgical procedure or treatment and other types of documentation used in the operating room and the use of computer and electronic medical records systems used in the operating room and the best practices for implementing information technology and securing protected health information.

12. Assess the physical, spiritual and psychological needs of the patient along with the patient's possible responses to illness, hospitalization, perceptions regarding death/dying and various coping strategies and mechanisms.

13. Discuss the process when a patient's death occurs in the operating room and the issues regarding organ and tissue recovery from a deceased individual including suicide.

14. Describe the purpose and coordination of the all-hazards systems, including hospital command system/emergency operations plan, national incident management systems, national response framework, and triage procedures and the role of the surgical technologist.

15. Describe how healthcare facilities can manage waste.

16. Describe the types of disasters and public health emergencies and the objectives and priorities in the operating room during emergency situations.

17. Discuss the applications, components, advantages, and risks associated with minimally invasive surgery (MIS) and Robotic systems.

18. Describe the biophysics, different types, advantages, and specific applications of lasers.

19. Discuss and describe the principles and requirements for preparing items for sterilization, the methods used for cleaning surgical instrumentation/equipment, concepts of disinfection, and sterile processing.

20. Discuss the principles of sterile storage and distributing sterile supplies.

21. Identify the names, functions, and handling of various types of accessory and special equipment utilized the operating room.

22. Describe and identify characteristics and grades, categories and use of surgical instruments and how they are assembled and handled.

23. Understand the different processes for hemostasis, blood replacement, wound management, and suture types/characteristics/packaging and preparation.

24. Describe suture needles parts/types and factors to be considered when choosing a suture needle and the needle holder. Describe the technique for cutting suture material.

25. Describe and define the types of wounds and closure, different would closure accessories, different skin closure techniques and different types of surgical dressings and their function.

26. Evaluate the mechanisms and factors that influence wound healing and the complications that interrupt normal wound healing, and how surgical wounds are classified.

27. Demonstrate donning and doffing surgical and accessory attire, Personal Protective equipment (PPE), and the restrictions involving surgical attire.

28. Demonstrate the principles of establishing the sterile field, including opening sterile supplies, instruments, draping, and organizing the back table and Mayo stand.

29. Demonstrate the importance of maintaining hand and skin integrity, basic hand hygiene, and the surgical hand scrub and rub.

30. Describe and demonstrate the types of surgical gowns and gloves and the methods of donning and doffing gowning and gloving using sterile technique.

31. Describe and demonstrate the purpose of surgical counts and the types of documentation, the sequence of the items to be counted, and timing of the surgical count including the intraoperative sequence for completing the count. Discuss and demonstrate the difference between a soft and full count.

32. Describe and explain the types and characteristics of draping materials, the application, removal, and sequence of draping equipment, furniture and the patient related to the surgical procedures.

33. State the purpose of patient identification, transportation, transfer of the patient, and the purpose of the time-out procedure, who will participate in the time-out procedure

34. Discuss the actions/steps taken, items and supplies required for urinary catheterization and the principles of monitoring urine output.

35. Discuss the different sections of the operating room table and accessory devices, the different surgical positions related to the procedure, and the accessories used for positioning.

36. Describe the various types of skin prep supplies, considerations to perform the patient skin prep, and the steps for completing a patient skin prep.

37. Discuss the concepts that apply to the maintenance of the sterile field and the duties of the surgical technologist to monitor the sterile field and the procedure to change contaminated sterile attire.

38. Describe different types of specimens, the methods of handling, obtaining, labeling, and placing specimens in containers and how to manage a specimen incident.

39. Discuss and demonstrate receiving, labeling and managing medications and solutions on the sterile field. This includes demonstrating mixing medications in ½ and ½ mixtures, filling and recapping syringes, and tabulating and reporting total amount used at the end of the procedure.

40. Demonstrate the assembly, use, care, and positioning of the various types of equipment in the operating room.

41. Identify basic instruments by type, function and name and demonstrate care, handling, assembly and passing of instruments.

42. Demonstrate proper sterile technique including the opening sterile supplies and instrument and how to correct contaminations during the opening of such supplies. Read and interpret the surgeon's preference card.

43. Care, handling and patient and healthcare provider safety in relationship to lasers will be demonstrated in the Clinical setting.

Credit Details

Lecture: 3

Lab: 2

OJT: 0

MnTC Goal Area(s): None