Central Service Errors Impact Customers

CRCST SELF-STUDY LESSON PLAN

LESSON NO. CRCST 108

(Technical Continuing Education-TCE)

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LEARNING OBJECTIVES:

1. Indicate that the fast pace of change is affecting healthcare, including Central Service, in an increasing variety of ways.
2. Review examples of how patients can be harmed when errors occur.
3. Review common errors made by Central Service personnel and how these problems can affect patients.
4. Discuss competencies that can improve processing in Central Service departments.

Questions are likely to be numerous and answers may be difficult to determine when there are unexpected negative outcomes from a surgical procedure. All too frequently, fingers are pointed by staff members in one department at persons in other departments in efforts to track down errors and to "place the blame."

Today's world of "high-tech" instrumentation and interrelated systems impact personnel in almost all departments of a healthcare facility. However, communication errors still occur, and the numerous technologies implemented to help healthcare professionals and their patients are not always effectively used. Surgical services is generally the largest customer of the CS department, and one seemingly small error or a series of them can immediately cause adverse reactions for patients and/or staff.

Unfortunately, errors of several types created by mechanical/technological equipment or caused by human hands can go undetected within CS areas. Problems caused by these lapses in protocols and processing systems can create significant challenges for patients and for the professionals working in surgical suites. This lesson addresses some of the most common types of errors that, unfortunately, can occur and also outlines what must be done to protect healthcare employees and the patients they serve.

Objective 1: Indicate that the fast pace of change is affecting healthcare, including CS, in an increasing variety of ways

Significant advancements in all forms of healthcare delivery have occurred within just the past several years. These have led to numerous changes in regulatory statutes, guidelines and recommendations that impact the safe practices that should be consistently used by CS technicians. The Joint Commission, Association for the Advancement of Medical Instrumentation (AAMI), American National Standards Institute (ANSI), Association of periOperative Registered Nurses (AORN), US Food and Drug Administration (FDA), and Centers for Medicare and Medicaid Services (CMS) are among the regulatory or advisory agencies that develop/modify guidelines and standards for patient safety, documentation factors, sterilization, and labeling. New and detailed information about the manufacturing requirements for tissue banking and the reuse of single-use, remanufactured devices are examples of evolving guidelines prompted by healthcare organizations and even societal concerns that were unheard of just a few years ago. These and numerous other issues increasingly impact how healthcare is being planned, managed and delivered.

Consider how the microorganisms that CS technicians must confront every day are changing. Examples include the increasing resistance that some pathogens (disease-causing organisms) have to disinfectants and drugs. Methicillin-Resistant Staphylococcus Aureus (MRSA) and Vancomycin-Resistant Enterococcus (VRE) are no longer sensitive to the drugs identified in their names. Think also about the special precautions needed to process instruments that are or may be contaminated with the prions (disease-causing agents made of protein that are neither bacterial, fungal, nor viral, and which contain no genetic material) that cause Creutzfeldt-Jakob Disease (CJD).

The need for extended sterilization cycles to process today's highly sophisticated instrumentation is still another example of why it is even more important for CS technicians to keep up with the changes and to effectively communicate with one another and those who receive their processed products and services.

Objective 2: Review examples of how patients can be harmed when errors occur

Surgery, or even a visit to the hospital for an outpatient procedure, presents anxious moments for many (most) people [1]. They don't know what to expect, and they are looking for reassurance that every staff member they encounter is trained and knows exactly what he or she is doing. They want to know and experience the hospital or outpatient surgery center as a "safe zone" where they will be healed. They want to trust their physicians and believe that the healthcare facility in which they will be treated is "up-to-date." No one expects to return home in a worsened condition or with problems that were created while they were at the facility.

With training and careful adherence to policies and procedures that safeguard patients, including those related to patient identification, instances of surgical procedures being performed on the wrong patient or surgical site can be eliminated. Unfortunately, nosocomial (hospital-acquired) infections can occur at the surgical site when improperly processed and unsterilized instrumentation is used. Also, broken or malfunctioning instruments or equipment can cause physical harm to patients, including tears and burns. When these conditions occur, they lead to unnecessary pain, prolonged recovery time, the potential need to repeat the surgery and, possibly, the loss of a limb or even death.

The actions of CS staff can have a dramatic impact on the departments they serve. The results may (or may not) create harm for patients, but they can create serious challenges for the staff, including surgeons. Examples include:

- Delays and possibly adverse reactions for a patient during surgery when staff must obtain a replacement for a broken or malfunctioning instrument in a procedure set that should never have been included within it.
- Burns to patients and even surgeons from unsafe laparoscopic instruments and other injuries that would not occur if the general instrumentation was in proper condition and safe for use.
- Releases of non-sterile items when mismanaged sterilization cycles have occurred or when processing parameters have not been properly monitored.

Objective 3: Review common errors made by CS personnel and how these problems can affect patients

Central Service departments are not the only place in a healthcare facility where undetected errors can occur; however, these are the locations where CS managers have the most responsibility and, probably, the most opportunities to ensure that there are no breakdowns in simple procedures. These are also the areas where managers practice on-going supervision to ensure that human error is minimized.

"Cutting corners" is probably the most frequent cause of errors in most CS facilities. Short-cuts taken in violation of policies and procedures for processing instruments, for reusing single-use devices, and for storing sterilized instrumentation, provide examples of problems that, unfortunately, can occur all-too-often. The results, whether caused by an employee who didn't know, didn't care, didn't follow procedures, or didn't pay attention, are the same. They create unwanted and unnecessary deviations from the standards of excellence demanded at all times for all CS personnel.

Problems such as use of the incorrect surgeon preference cards for specific surgeons create special concerns and must be avoided. When a surgeon's preference card is pulled or incorrectly assigned, the incorrect instruments, supplies, and/or equipment may be issued to the surgical suite. This can delay the procedure and, in turn, create scheduling problems for other procedures planned for that suite later in the day. Further, if single-use supplies are opened but not used, they are wasted, unnecessary expenses are incurred and revenue losses accrue to the facility.

Dirty instruments contained in a sterile set must obviously be avoided. No CS manager wants to learn about one or more dirty instruments found in a sterile set during a surgical procedure. Unfortunately, this does occur, and it is typically caused by poorly trained technicians working in the cleaning, decontamination, and assembly areas of the CS department. These and related errors can only be effectively controlled when CS managers consistently explain the importance of following appropriate procedures, provide for proper staff training and practice principles of appropriate supervision. Policies must be consistently followed to validate and verify each specific case and the applicable surgeon and his/her preference card. Ongoing use of procedures relating to use of the correct pick list for case cart supplies — and for issuing the proper instrumentation and equipment — can also yield significant reductions in delayed procedures and inventory waste.

Problems can occur when a "one-of-a-kind" set must be reprocessed quickly for the surgeon's next case. Unfortunately, rapid processing does not always relate to CS effectiveness (doing the right thing) and efficiency (doing the right thing correctly). CS technicians cannot revise processing procedures in these instances to provide faster turn-around. They can (and must), however, inform their managers about the unique sets. The managers must, in turn, advocate the purchase of additional instrumentation and/or the need to recognize instrument set limitations when schedules are developed.

Another error that CS technicians should avoid involves lint or small particulate matter that can remain in trays, which, in turn, can cause granulomas (small non-cancerous areas of inflammation caused by an injury, such as from an infection). This is a special concern in cases such as total joint replacement because it can result in the need for replication of the surgery.

CS technicians must always follow the cleaning and sterilization recommendations of the processing equipment and instrument manufacturers. To do otherwise can damage the equipment or instrument, or render the device non-sterile. Both of these alternatives can harm the patient and potentially affect the facility's reputation and financial resources.

Objective 4: Discuss competencies that can improve processing in CS departments

CS technicians are professionals: persons working in an occupation that requires extensive knowledge and skills [2]. Professionals are proud of themselves and what they do. They can do the job correctly, and they always try to do better and improve their profession in the process. A professional "goes the extra mile," is part of the team, tries to put forth the best possible effort to meet the facility's and department's goals, and is truly interested in assisting other employees and the patients.

Professional CS technicians know what their supervisor expects of them and consistently attain these standards. They are effective communicators, and they are courteous and concerned about the problems encountered by other staff members.

CS professionals understand their role and they know that the many challenges in their day-to-day work are best met with technical competence. They know that the health and safety of others are compromised when they are careless or do not consistently follow appropriate processing procedures. CS areas staffed with professionals, then, have eliminated the most significant cause of processing errors: personnel who are improperly trained or who do not consistently perform their responsibilities in the most professional manner possible.

The requirements and the abilities to perform numerous tasks within the CS department revolve around four basic and specific activities:

- *Decontamination* – Professional CS technicians understand the need for personal protective equipment (PPE) that is mandated by the Occupational Safety and Health Administration (OSHA). Healthcare employers must provide PPE for their employees, and facility officials must also ensure that it is used correctly to protect employees from bloodborne pathogens and contamination.[3]
- *Assembly* – Professional CS technicians working in instrument assembly areas must accurately assemble instruments based on pre-determined tray lists. They must also ensure that instruments are clean and in appropriate working condition.
- *Sterilization* – Professional CS technicians understand different sterilization alternatives and the parameters of each type to ensure that instruments are properly sterilized and not damaged during the process. They know that following the manufacturer's recommendations is critical for sterilization to be successful.
- *Storage* – Professional CS technicians know how to handle and store sterile products. They know, for example, how disposable wrap, containerized trays and peel pouches should be used, and how these items are properly managed.

Errors can be made within any of these four areas if on-going training and education are not an integral part of a CS technician's routine working environment.

In Conclusion

The term "service" is the key to "what CS is all about," and it occurs as CS personnel help or assist the patients and others, including their healthcare peers. CS personnel must remember that they are an integral part of quality patient care. Other departments (customers) within the healthcare facility depend on CS for processed sterile supplies, instruments, equipment, and/or many products provided ready-to-use from the manufacturer. In most cases, the services provided by CS personnel not only assist those in other departments but, rather, are absolutely essential for proper patient treatment.[4]

Endnotes

1. This section is adopted from: Dirty Surgical Instruments, Sara Goldstein, http://ezinarticles.com?Dirty-Surgical-Instruments&id=594048&opt=print
2. From: Central Service Technical Manual. Seventh Edition. Chicago, IL. International Association of Central Service Materiel Management. 2007. (See Chapter 22)
3. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9777
4. This conclusion is adapted from: Central Service Technical Manual. Seventh Edition. Chicago, IL. International Association of Central Service Materiel Management. 2007. (See Chapter 1, pages 8 - 9)

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Quiz No. CRCST 108 (CIRCLE THE CORRECT ANSWER)

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Objective 1:

1. Which is a relatively recent healthcare and societal concern?
   a. Steam sterilization precautions
   b. Sterilization testing procedures
   c. Tissue banking
   d. Personal protective equipment requirements

2. Creutzfeldt-Jakob disease is caused by:
   a. MRSA
   b. VRE
   c. Prions
   d. All of the above

Objective 2:

3. Improperly processed instrumentation _____ cause nosocomial infections.
   a. can
   b. cannot

4. Which can be caused by Central Service staff errors?
   a. Surgery delays
   b. Burns to surgeons
   c. Releases of non-sterile items
   d. All the above

Objective 3:

5. Central Service managers have the most responsibility:
   a. in surgical suites
   b. within Central Service departments
   c. anywhere that instruments are used
   d. on infection control committees

6. The most frequent cause of Central Service errors is probably:
   a. improper instrument transportation
   b. "cutting corners"
   c. incorrect instrument storage procedures
   d. ineffective preventive maintenance

7. If single-use supplies are opened but not used:
   a. they can be reprocessed
   b. unnecessary expenses are incurred
   c. revenue losses accrue
   d. "b" and "c" above
   e. all the above

8. Dirty instruments in a "sterile set:"
   a. should be minimized
   b. can be resolved with duplicate instrumentation
   c. must be avoided
   d. can often be flashed sterilized without difficulty

9. The need for fast processing _____ relate to Central Service effectiveness and efficiency.
   a. does
   b. does not

10. When instrument set limitations occur:
    a. processing procedures should be revised
    b. managers should advocate surgery schedule changes
    c. both of the above
    d. neither of the above

11. Which is true about granulomas?
    a. They can cause cancer
    b. They cannot occur if instruments are properly sterilized
    c. They can be caused by lint remaining on trays
    d. All of the above

12. How frequently are standards of excellence demanded of Central Service personnel?
    a. Some of the time
    b. Whenever possible
    c. Most of the time
    d. All of the time

13. When proper instrumentation is issued:
    a. surgical procedures are less likely to be delayed
    b. there is less inventory waste
    c. instruments are more likely to be properly sterilized
    d. "a" and "b" above
    e. all the above

14. When a surgeon's preference card is incorrectly assigned:
    a. instruments will be issued to the wrong surgical suite
    b. supplies will be unavailable for other surgical procedures
    c. time and supplies may be wasted.
    d. none of the above will likely occur.

15. Central Service departments _____ the only place undetected instrument errors can occur.
    a. are
    b. are not

Objective 4:

16. Professionals are persons with:
    a. extensive education
    b. extensive knowledge
    c. extensive skills
    d. "b" and "c" above
    e. all the above

17. The most significant cause of processing errors is:
    a. lack of proper processing equipment
    b. improperly trained personnel
    c. inadequate Central Service budgets
    d. uncooperative surgical suite personnel

18. Predetermined tray lists _____ required for technicians working in instrument assembly areas.
    a. are
    b. are not

19. Personal protective equipment is required for which activity?
    a. Assembly
    b. Sterilization
    c. Decontamination
    d. Storage

20. Services provided by Central Service personnel are generally:
    a. helpful
    b. of decreasing importance because of automation
    c. absolutely essential for proper patient treatment
    d. affected by fewer guidelines because the profession has matured.

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