



CPD TECHNICIANS – EDUCATION/STANDARDS/RISK

It is the hospital's requirement according to the ISO 4000 Standards to ensure that qualified staff works in CPD. These staff must receive the proper training and orientation to perform their job effectively, efficiently, correctly meeting all standards. In order to ensure that CS staff are properly educated the Central Service Association of Ontario has invested the last three years and many dollars to offer a certified course with a published workbook. This covers Microbiology, Infection Control, Decontamination of Instruments & Equipment, Assembly, Wrapping, Sterilization (Steam, Ethylene Oxide, Other Methods), Storage, Occupational Health & Safety, Quality Control, Risk Management, Communication and Legal Aspects of Central Service. The Central Service Association (CSAO) is an Allied Group of the Ontario Hospital Association & is sanctioned by the OHA. Our course certificates for the CSAO Techniques course are honored throughout Canada as we are affiliated with Vancouver College for our course. This course does not replace the need for staff orientation, which can vary from 8-12 weeks in different hospitals. During this time intense learning occurs in techniques, decontamination, protective equipment, decontamination and sterilization equipment, instrumentation and processing under the direct guidance of the Manager or senior staff member or qualified educator. In many facilities staff are not allowed to work alone & without supervision for up to six months & in some facilities one year. This occurs, due to the complex instrumentation, risk to the hospital and patient due to the responsibility the CPD Technician has in the processing of instrumentation and patient reusable medical devices.

Over 65% of Ontario Hospitals have the CSAO course or a college course as a requirement to work in a CS department. The staff are categorized as CPD Technicians. They have a great responsibility for the welfare of patients. The expertise needed to work in a CS department has increased greatly in the last ten years. During this time OR instrumentation has been transferred to CS departments from the OR in almost all Ontario hospitals. New developments in surgical techniques have occurred such as Endoscopy surgical procedures & Laser Surgery. This has made instrumentation more complex and more difficult to disassemble, clean & process. The expertise needed to work in a CPD has become so complex these staff need updates on education on an ongoing basis. The CSAO executive have added two modules to the workbook (Instrumentation for Invasive Surgery and Flexible Endoscopy) and are looking at setting up a re certification program so staff remain current in their knowledge. Some of the needed knowledge needed will be covered in a very minute portion in the following sections.

Decontamination of Reusable Medical Devices:

This process is very important as "if you cannot clean an item then you cannot disinfect or sterilize the item". The new Canadian Standard Z314.8 has just been released and covers the requirements for the safe handling, transportation and decontamination of medical devices. The Modules in the CS course cover the requirements for decontamination in facilities of all equipment, the selection and use of disinfectants, personnel training and infection control precautions. It focuses on endoscopes, respiratory and anesthesia equipment as well as powered and electronic medical devices. Departmental procedures for the Decontame area of CPD must incorporate the standard to ensure that the critical elements and methods of decontamination are performed correctly within the CSA Standard. Personal protective equipment, immunization, staff attire, hand washing, and other infection control details are covered, as these are all infection control issues.

The risk if these processes are not performed properly, is the exposure of staff to disease and the patient to infection. These put the Health Care Facility at risk of legal suite and put patient's lives at risk.

With the new strains of microorganisms being discovered every day that are resistant to antibiotics, disinfectants and processes, all material handled in a CPD must be treated with " Universal Precautions" (all items treated as if they contained disease microorganisms). Also, the understanding of diseases such as MRSA and VRE and Hepatitis being transmitted from person to person by poorly processed devices is essential i.e. MRSA being transmitted by an IV pole.

Understanding the instrumentation disassembly, proper cleaning and processing is essential to quality patient care. Proper working equipment that has documented quality controls such as washer decontaminators and pasteurmatics are required in order to kill organisms for the safe handling of instruments, properly decontamination of respiratory and reusable patient goods i.e. urinals and bedpans. Temperature records for this equipment and accurate records are required to prove that the processes were completed.

The new era of surgical procedures has brought with it Endoscopy surgical procedures. This reduces the patient's length of stay and reduces the size of the incision but in order to perform this surgery expensive complex equipment is needed that requires highly complex cleaning and processing. It involves telescopes, graspers, scissors, suction, cautery forceps, etc. that are delicate, long and hard to clean. Many of these items must be disassembled prior to cleaning and have ports that have to be flushed and brushed as they are so minute in size. This highly expensive and technical equipment will not function properly if not cleaned and maintained properly. This effects the patient and also the cost to the facility.

Assembly and Wrapping of Reusable Medical Devices

The Canadian standard for these processes is technical and must be followed by the CPD staff. All procedures in these tasks must be written so that staff can perform these processes correctly so that the sterilization of an item is not impeded. The quality for the cloth and paper wrapper, peel pouch wrapper are outlined in these standards. It demonstrates the correct technique in wrapping to ensure the patient receives a sterile product. Standards for "Quality Control" of both external and internal indicators are explained and must be understood by the CPD staff. They need this knowledge to define if the item being issued for patient use is sterile and has been processed correctly to kill all organisms. Biological indicators, integrators are covered in other standards. Staff must ensure that these are used correctly and documentation kept ensuring quality control.



These records have been used in legal cases to prevent liability to hospitals. The standard requires hospitals to keep these records for two years and is covered in the standard & the Hospital Act.

“The Processing of Reusable Goods” makes the hospital a manufacturer. The present standards for hospitals are not as stringent as those standards for manufacturers of health care goods but some day this will change. It is required that health care workers to be educated and responsible for their actions and hospitals responsible to supply the same quality products to all patients. All consumers are entitled to the same quality care. This ensures that patients are not put at risk due to instrument shortage, scheduling of cases or physicians convenience. The new informed consents require that a patient booked at 1200 with a disinfected telescope and flashed instruments should receive the same quality product as the 0800 booked patient that receives a sterile scope, and all totally processed instruments. A patient can demand that no reprocessed single use items, no flashed instruments and a sterile scope when they sign their consent as that is the standard.

What would you or I want? Whatever we want is what every patient should receive, as we never know when you or one of our families could be the patient.

Many short cuts occur because of the lack of instruments, scheduling or convenience. The standard for “Flashing” (quick sterilization of an item not wrapped, not dried and no assurance that it is sterile) instruments is very specific. It states “ flashing is only to occur in an emergency situations (life or death) and only for single items not total sets. No implant (item that remains in the body) should ever be flashed. (AORN) This means that in any OR of any hospital no more then one or two flashing should occur. Do you know how many occur in your OR? Are there records? Are these loads biologically spored? In order to save time, a dirty used instrument off one set, wash it in the scrub sink quickly, flash it for the next patient booked. Does the Physician know? Does Infection control know? For these reasons many newly designed OR theatres in the world will no longer have flash sterilizers.

All of these situations occur due to lack of knowledge, lack of time, lack of education putting the patient, the hospital and them at risk.

In the wrapping process all items must be labeled, ticketed with the date sterilized, load number and autoclave number so that records are available for “Recall” if sterility did not occur and documentation to ensure sterility. As you can see this process is complex and needs education and staff that are dedicated to reprocessing.

Sterilization:

This process can occur by steam, ethylene oxide, hydrogen peroxide, and other chemicals. All of these processes have standards that outline the parameters for each process, equipment requirements to ensure sterility so that infection control is maintained. Each process has factors that are controlled such as time, temperature, pressure, drying, and aeration. These parameters have been studied and microbiology test performed for the patient’s safety. This ensures that all microorganisms are killed & the product is safe to be used.

The operation of all of this equipment is complex and must be understood to ensure that the parameters are met so the patient is not put at risk. Computer read outs recording all these parameters must be examined and initialed as accurate before the load is removed from the equipment. These staff must understand what they are looking for on each piece of equipment, as they are all different. Records are to be kept for two years and have been used in legal courts. All of these processes are complicated and the staff must be highly trained to ensure patient quality care. Items processed by ETO must be totally aerated (the removal of all gas from the product) and not removed before or the patient or staff may be placed at risk. Staff must understand why this has to occur as when you know why something is necessary short cuts are not taken.

Storage:

Standards on storage cover proper handling of sterile goods, shelf height; air exchanges in the storage areas, and events that effect the sterility of the product must be understood. The staff must understand the events that can affect the sterility of a product, as they will be the person to identify the event that requires the removal of the product as unsterile.

Infection Control and Risk:

From the information provided in the previous sections, you can see all the different areas where risk and infection can occur. CPD Technicians that are qualified, educated, current, recertified and responsible are required to ensure a “Quality Product” for all patients. If an instrument does not receive proper cleaning, disassembly, decontamination, assembly, wrapping, control, sterilization and storage puts the patient and the hospital at risk. Staff dedicated to these processes has become a requirement over the last 5 years. The reprocessing of instruments used to be found in the OR performed by the RN. I come from that era. Changes have occurred in instrumentation, standards and the responsibility the RN has in the OR. Due to all these changes and the important role the RN has with the patient, most hospitals have moved the instrumentation processing to a centralized CPD.

The complexity of all processes & the ability to have staff that can make sound decisions which are educated based. These are some of the reasons that all staff working in the reprocessing area, handling sterile supplies should be trained and educated and kept current. Does your facility require the CS/SPD staff to have a course and recertify to keep current? If not then maybe your facility needs to change? Remember that you as Technicians not only have to be knowledgeable but you also must accept the responsibility and act as professionals. With the job not only salary benefits occur but also responsibility and the need for you to take responsibility for your own updates and education to keep current.