



“Medical Equipment, Hazardous or Not ??” By Diane Fink, RN

Traveling bacteria. Where? Everywhere! They jump on and ride, traveling on wheels, IV poles, pumps, connecting

tubes, hoses and all other medical equipment that is used in the care of patients. You can't see them, you can't feel them, but they are there waiting for the right source to come along for their attack. Scary?? You better believe it is.

Cross contamination is one of the healthcare's worst fears. Nosocomial infections are still around and the patients are even more at risk today as a result of drug resistant organisms that put patients at risk. It is imperative all healthcare workers have a knowledge of how to prevent the unwanted spread of diseases/infections. Having an awareness of infection control, understanding cross contamination and a commitment to patient and employee safety can make a big difference in patient care. Enforcing the CDC's "Standard Precautions" is the first step in helping to reduce the spread of unwanted infections.

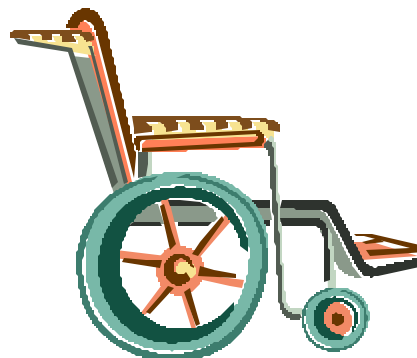
It is the Central Services Technician's responsibility to ensure that each piece of equipment dispensed to a patient is clean and working properly. Each person who has the responsibility for the cleaning and decontamination of equipment needs to ask himself or herself "is the equipment that I cleaned, something I would want to be used on my family or myself?" If the answer is "NO", then it is time for the technician to backup, reevaluate what is being done and review organizational policies that have been established for equipment cleaning and maintenance. It is each person's responsibility to follow procedure correctly to prevent any unwanted infectious transmissions.

Patient care equipment must be cleaned between patients to prevent the risk of infection to other patients and staff. Often in the rush to take care of patients, the nursing staff may grab the first available pump or other medical equipment they see not in use and use it. They often don't stop to consider if

the equipment is clean or dirty. Having a specific procedure in place for the care and handling of equipment will answer some of the following questions. "How will I know if the equipment is clean or dirty"? What do I do if the equipment becomes damaged or malfunctions"? All staff including direct and indirect patient care contacts must understand the answers to these questions and be able to understand the "whys and wherefores" of their job.

Careful thought and consideration must be made to the choice of disinfectant used within the hospital. The choice of the hospital disinfectant is often a joint decision between Infectious Disease, Central Service and Environmental Service Departments. Care must be taken to use the disinfectant as it is intended to be used by the manufacturer. Ready mixed and concentrated disinfectants must be used and or mixed per the manufacturer's instruction. Too much or too little of the disinfectant often renders the product poorly cleaned and poorly disinfected. Central Service staff must also have a good working knowledge of the disinfectant and how it may react to the equipment components. What are the possibilities of potential damage to the external casings/housings, the internal sensors, etc? Will the disinfectant cause cloudiness or yellowing of equipment with plastic or plastic like materials? These issues need to be addressed with the equipment manufacturer to ensure any unwanted physical damage to expensive patient care equipment will not occur.

Gloves must be worn during the transportation and the cleaning and disinfection process of soiled medical equipment. All work surfaces, which have come in contact with the contaminated medical equipment needs to be cleaned and disinfected using



the hospital approved cleaner and disinfectant. Contaminated gloves must be discarded after each use, and hands are to be washed vigorously using soap and water. It has been proven that frequent hand washing is one of the best means of controlling cross contamination. Personal protective equipment should be available for staff to wear when they need to clean equipment that has visible blood, body fluids, secretions and excretions.

There is much more to cleaning and disinfecting than wiping off the external surface of the equipment. Care must be taken to include all parts. Cassette doors / holders, sensors, IV poles, including wheels and bases, must be cleaned in addition to the equipment attached to the IV pole. Connecting hoses / tubing's, electrical cords and even traction knobs are frequently omitted in the cleaning process. Once the electrical cords, tubes or hoses are cleaned; they need to be secured to the equipment to prevent them from becoming contaminated before reissued.

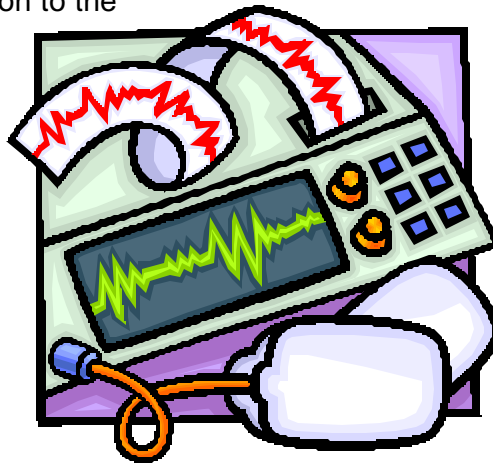
All equipment issued to a patient must be cleaned thoroughly between patients even if the equipment does not come in direct contact with the patient. Nursing staff and other caregivers in direct contact with the patient often have the need to readjust equipment whether it be a pump setting or a traction readjustment after they have been in direct contact with the patient. Failure to remove gloves and practice good hand washing techniques before they make the equipment readjustments thus contaminates the equipment. Failure to clean all the equipment in its entirety just opens the door for bacteria to jump aboard and ride, waiting for their opportunity to strike unsuspecting hosts.

To reduce the chances of cross contamination of medical equipment, it is recommended that soiled and cleaned equipment be kept separately on the nursing units and in storage areas. Nursing staff needs to be able to recognize at a glance when equipment is cleaned or soiled. Hospitals need to have some type of process in place to alert the nursing staff to the status of the equipment. Some hospitals cover the clean equipment with clear plastic equipment covers. It is also

a good idea to attach an initialed inspection card that lets the user of the equipment know that this particular piece of equipment was cleaned and inspected by a specific person. This type of accountability usually ensures that the equipment dispensed will be clean and in good working condition.

Medical equipment even though cleaned and disinfected can pose another potential safety hazard to the patient if it is not working properly or has been damaged in some way. Perhaps the best time to inspect equipment is during the cleaning process where the equipment can be checked in its entirety. All electrical equipment requires a current preventive maintenance or clinical equipment management inspection date. This sticker is visible during the cleaning process and Central Service Technicians can immediately determine if this equipment needs to be pulled from the inventory or dispensed. During the cleaning of the electrical cords, look to make sure there are no tears or cuts in the cord. Check the plug to ensure all prongs are present. Are there any cracked or broken pump housings? Are there breaks or splits in the screen touch pads? Are there any cracked or broken connectors for connecting tubes or hoses? If anything is broken or reported as malfunctioning, these need to be removed immediately and have repaired by the appropriate persons.

Central Service offers a first line of defense in helping to prevent cross contamination. Diligence in following the established cleaning and disinfection processes and thorough inspection of equipment play a vital role in providing the patient with clean and safe equipment to ensure a good outcome. All healthcare workers have a responsibility to the patients. It is one of the patient's rights to expect the care he receives from all his caregivers will keep him or her safe and aid in their recovery. Please don't let them down.



Additional Resources and Reading

"Waging War On Infection", ICST, June 1999, p44-47

"Patient Safety", ICST, February 1998, p 48-52
Training Manual for CS Technicians, ASHCSP, 1997, p 69-105

POST TEST – Medical Equipment

- Maintaining safe and clean equipment plays a vital role in the hospital's infection control plan. **T F**
- Central Service Technicians do not have to worry about cross contamination because they wear personal protective equipment. **T F**
- Equipment with visible blood or body secretions / excretions requires no special personal protective wear. **T F**
- To prevent hospital acquired or nosocomial infections, all medical equipment should be cleaned between patients. **T F**
- It is acceptable to store clean and soiled equipment in the same area. **T F**
- There is no need to clean medical equipment if it has not come in direct contact with the patient. **T F**
- It is a good time during the cleaning process to check medical equipment for unsafe conditions, defects or outdated preventive maintenance stickers. **T F**
- Central Service Technicians must follow Standard Precautions when handling soiled medical equipment. **T F**
- It is not necessary to disinfect equipment electrical cords since this part of the equipment does not come in contact with the patient. **T F**
- Hospitals should have policies and procedures in place to address cleaning and maintenance of medical equipment. **T F**

Please Note - Answer key will be in the **next** issue of the "Steamline"

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