Greetings NCAHCS Members

On behalf of the Board of Directors and myself, we hope the annual meeting at Myrtle Beach was enjoyable as well as enlightening.

I would like to thank the NCAHCS Board members and our Vendors for their support and commitment to our association. I’m honored to be your President and I’m personally looking forward to seeing everyone at the August 21st meeting in Winston-Salem.

If I can be of any assistance please feel free to contact me or one of the board members. Our contact information is located on the webpage (www.ncahcs.org).

Sincerely,

Ann Thomas

President
Objectives:
Define microbiology and discuss what role it plays in central sterile processing.
Discuss the various organisms associated with microbiology.
Discuss preventative measures to reduce exposure to harmful microorganisms.
Discuss pathogens common to the sterile processing environment.

Let’s face it! When you initially took a position into the sensational world of central sterile processing; could you have ever imagined that microbiology would be a pertinent source of information critical to your safety as a technician? Maybe you assumed that you would only be delivering clean, “safe” items to various departments. You may have thought that potentially hazardous organisms were only restricted to the operating room professionals. It could very well be that you didn’t know what microbiology was until you entered the healthcare field.

What is microbiology? A simple definition for microbiology would be the study of microorganisms. When we discuss microbiology, we are describing tiny, microscopic organisms that usually can only be viewed underneath a microscope. There are various types of microorganisms that include bacteria, viruses, prions, and funguses, to name a few. It is critical that central processing professionals understand the various types of organisms as they relate to sterile processing and how to protect themselves from these potentially hazardous organisms. Not all microorganisms are dangerous. Before we discuss how you can protect yourself against the dangerous microorganisms, we will first discuss the various types in detail.

Bacteria
Bacteria are unicellular organisms and reproduce by a method referred to as binary fission. Binary fission can be described as “a single cell splitting into two cells” (Zundell, 2015). Bacteria come in various shapes such as rods (bacilli), round (coccii), and spiral (spirochetes). They contain flagella (hair-like structures) that help them to migrate through liquids. There are bacteria that need oxygen to survive (aerobic) and bacteria that cannot survive with oxygen (anaerobic). Spores are specialized structures of bacteria that consist of a hardened shell that make them resistant to sterilization. The appropriate method of sterilization must be utilized to destroy spores. Biological indicators contain about one million spores that verify that items have been effectively sterilized during the sterilization process.

Viruses
Viruses are even smaller than bacteria. They cannot survive without a living host. They do not contain cells. Some common viruses associated in the healthcare environment include the influenza (flu) virus, Human Immunodeficiency virus (HIV), and the Hepatitis virus. HIV and Hep b are the two most common bloodborne pathogens that central processing professionals have to be aware of. Most hosp-
tals offer the Hepatitis B vaccination to protect their staff from this dangerous virus that attacks the liver. It is best practice to treat everything as potentially hazardous to provide extra measures of protection against these blood borne pathogens.

Prions: A prion can be a very fatal disease. Prions are extremely difficult to kill under regular sterilization procedures. This tough organism causes the disease CJD. "Creutzfeldt-Jakob disease (CJD) is a rapidly progressive, degenerative, neurologic disorder of humans with an incidence in the United States of approximately 1 person/million population/year" (Centers for Disease Control and Prevention, 2009). It is critical that central processing technicians understand the correct protocols within their department when potential exposure to prions is of concern. It can mean the life and death of a patient not already infected. Instrumentation exposed to prions should be carefully monitored and/or quarantined. Appropriate sterilization procedures must be followed. If disposable instruments are utilized for potential cases of patients with CJD, those trays must be clearly marked and set aside specifically for those patients. It is important to review all guidelines available within your department regarding exposure to prions.
Common organisms in CS

Look at the chart below to view some of the most common organisms that cause disease within the central processing department and ways in which they are transmitted.

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straphylococci/ Bacteria</td>
<td>Direct contact, Airborne</td>
</tr>
<tr>
<td>Escherichia coli/ Bacteria</td>
<td>Feces, Urine Direct contact</td>
</tr>
<tr>
<td>Streptococci/Bacteria</td>
<td>Airborne, Direct contact</td>
</tr>
<tr>
<td>Tubercle bacillus/ Bacteria</td>
<td>Airborne, Droplet, Direct Contact</td>
</tr>
<tr>
<td>(Mycobacterium tuberculosis)</td>
<td></td>
</tr>
<tr>
<td>Fungi/ Fungus</td>
<td>Airborne, Direct contact</td>
</tr>
<tr>
<td>Spongiform encephalopathies (TSEs)/ Prions</td>
<td>Airborne, Droplet, Direct Contact</td>
</tr>
<tr>
<td>Hepatitis virus/ Virus</td>
<td>Blood borne, Direct Contact</td>
</tr>
</tbody>
</table>

Handwashing

There are several necessary steps a central processing technician must take in order to protect themselves from dangerous microorganism exposure. Exposures to these microorganisms are most prevalent in the decontamination area. Other hazardous areas include dirty closets or patient care rooms in which microorganism can be numerous. Handwashing is the single, most important method used to protect you from dangerous microorganisms. Each time gloves are removed, the technician must thoroughly wash their hands for a minimum of 15 seconds with lukewarm water and soap. Heavily soiled hands must also be washed with soap and water, rather than just sanitized with alcohol-based, waterless scrubs. Hands that are not heavily soiled can be cleaned, however with alcohol-based sanitizers. When working in decontamination, technicians must remember to don the appropriate PPE (Personal Protective Equipment). This includes a mask, impervious gown, shoe covers, thick gloves (non-examine), a disposable cap, and eye shield. If the appropriate PPE is used and handwashing techniques are implemented, it can decrease the potential of harmful microorganism exposure that can cause both the technician and patient disease.

References


A Brief Review: Microbiology Post-Test 2015

1. Microorganisms are very large.
   TRUE   FALSE

2. Round bacteria are also referred to as cocci.
   TRUE   FALSE

3. Viruses do not contain cells.
   TRUE   FALSE

4. Hepatitis can be prevented if exposed to a medical device contaminated with hepatitis B if the healthcare worker becomes vaccinated with the hepatitis B vaccination prior to employment.
   TRUE   FALSE

5. Prions are easy to kill under normal sterilization procedures used to sterilize implants.
   TRUE   FALSE

6. E Coli cannot be transmitted by dealing with instruments contaminated with feces.
   TRUE   FALSE

7. Hepatitis is not considered to be a blood borne pathogen.
   TRUE   FALSE

8. Viruses are larger than bacteria.
   TRUE   FALSE

9. Heavily soiled hands should be cleaned with alcohol-based sanitizers.
   TRUE   FALSE

10. Handwashing can help prevent the spread of microorganisms.
    TRUE   FALSE

To receive one contact hour complete the quiz after reading the article and send the quiz only, via normal mail to:
    Lana Haecherl
    PO Box 568
    Pineville, NC 28134

DO NOT SEND QUIZ CERTIFIED
Your certificate will be sent via email if your score is greater than 70%. If you are not a member of NCAHCSP, please include a fee of $20.00 along with your Membership Application, found on the website (www.ncahcsp.org). Please allow at least six weeks for processing
CEU Expiration Date:       June 30, 2020

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Vendors, Vendors, Vendors the invited guest or the tolerated headache

Where there is a sterile processing department there are vendors. Some are welcome friends and some are the tolerated headache. How a sterile processing department works with them will depend on which you have to deal with.

Let’s review the welcome friend. This vendor will handle their visit as follows: First, he or she will bring in the instrument tray or the equipment in a timely manner. This time frame should be set by a policy and the vendor honors it. Well, we all know that there are some occasions when the tray arrives late but, that vendor will be the one to inform the surgeon that there could be a delay. Then the vendor must work with SPD to get it processed. This should not be a habit but, a rare occasion. Second, a good vendor will provide the instructions for use (IFU’s) when the tray is delivered. The IFU’s can be provided by any of the following methods: vendor will call his company and have them faxed, emailed or, they are on line so the department can print them and have them on file (if needed for a later date). Third, the vendor will provide an in-service if this is the first time this item will be processed by this department. Not all implants are the same nor are all drills the same, there could be an extended exposure time or a washing process that may need to be addressed so that is all the more important reason to have the IFU’s and an in-service if this is an unfamiliar item. Fourth, respect from the vendor. SPD is not there to serve their needs but to serve the patient and the OR. A good vendor will know this and will be willing to work with SPD and understand we have a responsibility to follow policy. They will be grateful for all your efforts and you will look forward to working with them in the future. Good vendors are always welcome guests.

The tolerated guest/vendor. Pretty sure most SPD areas have had to deal with these guys. These are the reps that come in and think that sterile processing is the dish washers they have to do what is requested of them. WRONG! The best way to handle them is through policy and when they cannot follow the rules request they be replaced. Every time their equipment is needed and it arrives late, please reach out to the surgeon. They may not know there is a problem with this vendor. Let them know there could be a delay when this happens and a chance that the tray or item may not be available for the case. If the vendor is pushy to the point they want you to cut corners to process the tray, this must be reported to the OR director. If this will not take care of the issue, report it to the vendor’s company. There is a chance you will see a new rep covering your hospital. If for some strange reason a rep wanted to clean and package their instruments, beware, because, if it is processed incorrectly the SPD area is responsible for that tray or item. There are reps that have the personality of a badger but as long as they follow the rules and provide good service that is all that is required. Remember, you do not have to be their friend, just work with them to provide good patient care. Try to always deal with reps on a professional level and personality will not be an issue. Do not let a vendor become too much of an ongoing problem, stand your ground. Sterile Processing is your expertise and you make the rules and they must be followed. Remember, the vendor is a guest.

Thanks for your time and may all your vendors be welcome guests.

Karen Furr
NCAHCSPO BOD
Dear Steamy,

Sometimes I can’t find the right size clamp or forceps the pick sheet calls for and I put in a substitute. The OR staff gets mad because it might be longer or shorter than the one on the list, but it is all I could find and they don’t want me to put up a tray that is missing instruments. Why can’t they just use to one I give them and stop complaining?

Thank you for your help.

Miss Informed

Dear Miss Informed

Instruments are designed and manufactured to meet the needs of the surgeons. There are specific lengths, widths and weights that work best for the various tissue types in our bodies. An orthopaedic surgeon would not need to use the same tip size forceps as a plastic surgeon. The pick sheets are assembled by experienced operating room personnel (scrub and circulator staff) in conjunction with the specific needs of the surgeon and with regards to the type of case for which the tray will be used. An example of this would be a Major tray used for intra-abdominal surgery. The tray usually has instruments between 6 and 10 inches long. This allows the surgeon to use the shorter instruments as he “opens” then later “closes” the patient’s incision, as he will be working close to the skin. The longer instruments are used to reach down into the cavity to manipulate the tissue for the procedure. It would prove difficult for a surgeon to use a 5 ½ inch hemostat to clamp an artery when a 7 ½ inch tonsil will give him more “reach”. Another example might be him trying to use a 5 ¾ inch suture scissor to cut suture deep in the abdominal cavity. The additional length of a 6 ¾ allows him more control of the instrument, as well as visibility of the field. It is important to know that we are able to substitute instruments in the sets as long as the substitute is able to fulfill the task for which it is intended. It may be a good idea to speak to the service coordinator when making a substitute to be sure it is acceptable.

Steamie
If you want to **BE INSPIRED INSPIRE OTHERS**

*In a perfect world, everything would always go right!*
There would be no disappointments, no trials, no issues, no conflict.
Life would be filled with only sweet, and warm fuzzy feelings for all.

*But how would we know if things were all good if we have no comparison?*
Would we be able to recognize the blessings in our lives without having the opposite to compare them to?
Without failure, we would not appreciate the success.
Without the darkness, we would not appreciate the light.

*There will be experiences in your day to day life that you may want to avoid.*
Those experiences sometimes are the life altering experiences that will probably help to shape you, mold you and create you into the person that you are today.
Going through those experiences will be a life-long lesson that you must decide on how to react in dealing with those particular experiences.

*After you have gone through those experiences and looking back and reflecting on what you have learned and being willing to share those experiences with someone else, you may help to inspire them to go thru their life experiences with grace, dignity, and style, as well.*

*The real lesson to be learned to inspiring is to face our challenges head on!*
And always remember while going thru life experiences:

*You really can change the world if you just let the world see you!*  
*Go on out, BE Inspired and along the way Inspire others!*

Patricia Baldwin  
NCAHCS BOD
Frozen Rainbow Bubbler

YIELD Makes 5 servings

Net Carbs 0g

INGREDIENTS

1 packet (2-quart size) fruit flavored powdered drink mix

2 cups water

1 bottle (2 liters) ginger ale, chilled

PREPARATION:

1. Dissolve powdered drink mix in water, stirring to mix well. Pour into 1-1/2 ice cube trays (should make about 16 ice cubes, each with about 1 ounce liquid). Freeze until solid. Place 3 ice cubes in a tall glass. Fill glass with ginger ale; stir gently.

Prepare ice cubes from 2 or more of your favorite flavors of drink mix and combine for an extra layer of flavor. Keep ice cubes sealed in airtight containers or freezer bags until ready to use to avoid picking up unwanted flavors from the other foods in your freezer.

Tip
North Carolina Association for Hospital Central Service Professionals will establish itself statewide as the leading educational organization through innovative programs that enhance the development of the Central Service Professionals.

Thank you to this vendor and all the other vendors that support the NCAHCS
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