RISKS ASSOCIATED WITH SURGICAL INSTRUMENT PROCESSING

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Our objectives in this subject are concentrated in several points as follows: P1

1 To better understand the concept of sterilization & sterilization cycle.

2- How to deal with contaminated surgical instruments.

3- To knowledge the cleaning processes, methods of cleaning & chemicals used in the cleaning process.

4- To knowledge the methods of disinfection, levels of it & chemicals used in the disinfection process.

5- How to deal with surgical instruments that need special care.

6-To understand the importance of packaging of sterile materials & the materials used in packaging and know the wrapping techniques.

7- To know the sterilization methods used in hospitals & their applications.

Our objectives in this subject are concentrated in several points as follows: P2

8- To understand the conditions needed for proper storage of sterilized surgical instrument , the principles of storage and distribution of sterile materials.

9- How to achieve quality control in CSSD.

10- To understand what makes instruments dirty and unsafe to use on patients

11- To knowledge the risk associated with broken rigid containers and wraps.

12- To know the risks to surgical instruments in the placement of surgical count sheets inside instrument sets.

According to The Consortium of Sterile Sciences

The main function of sterile sciences is:

The systematic removal of disease-causing organisms

And potential toxins on medical devices to render them safe for surgical purposes.

This means ?

must be ?

Clean

Sterile

functional and relevant in each surgical procedure

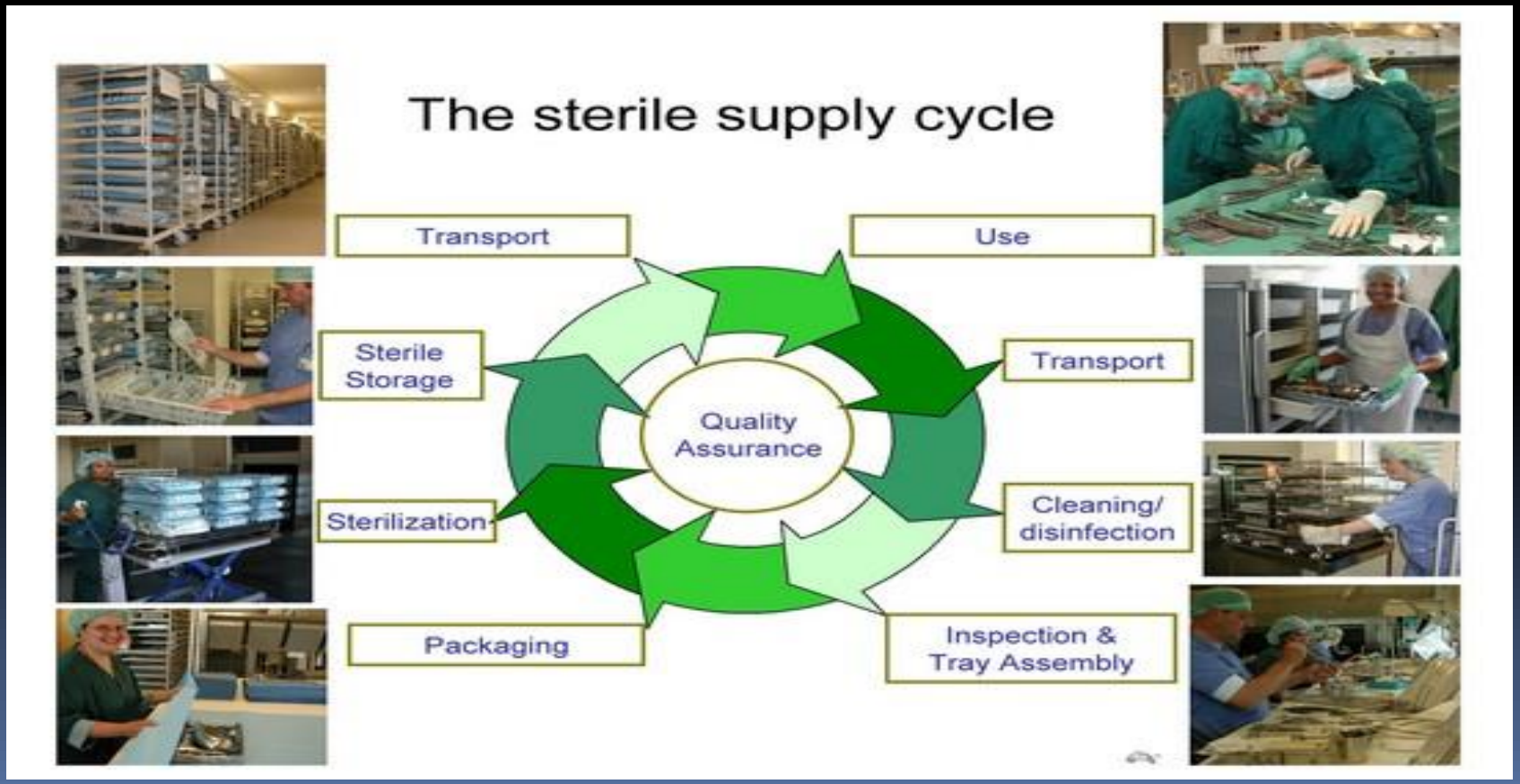
To ensure instruments cleanliness

We must first understand what makes instruments dirty and unsafe to use on patients

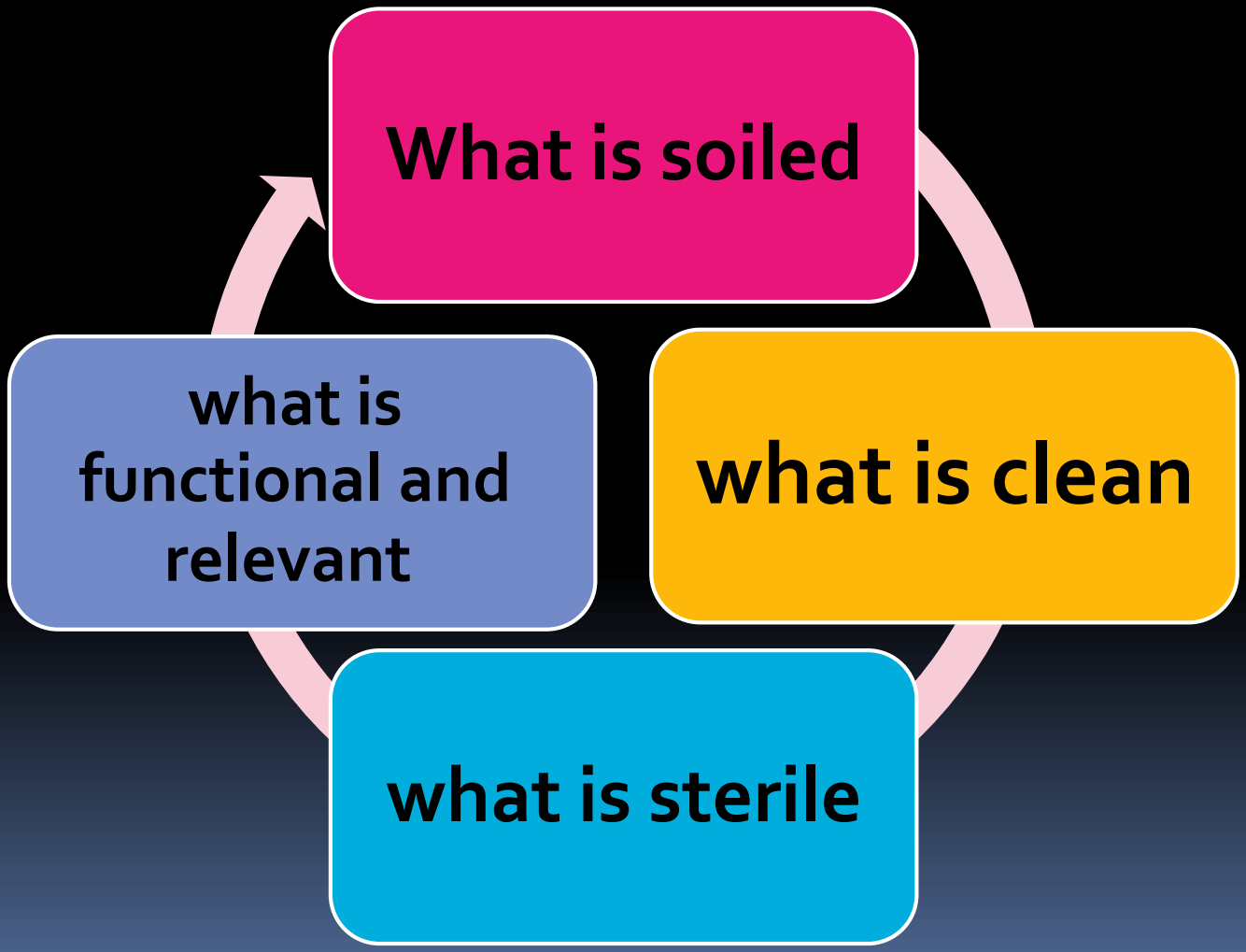
Which begins with the residue that is potentially left on instruments during usage and processing, to bioburden and disease-causing organisms

So, the risk associated with surgical instruments is not simply about what an instrument is

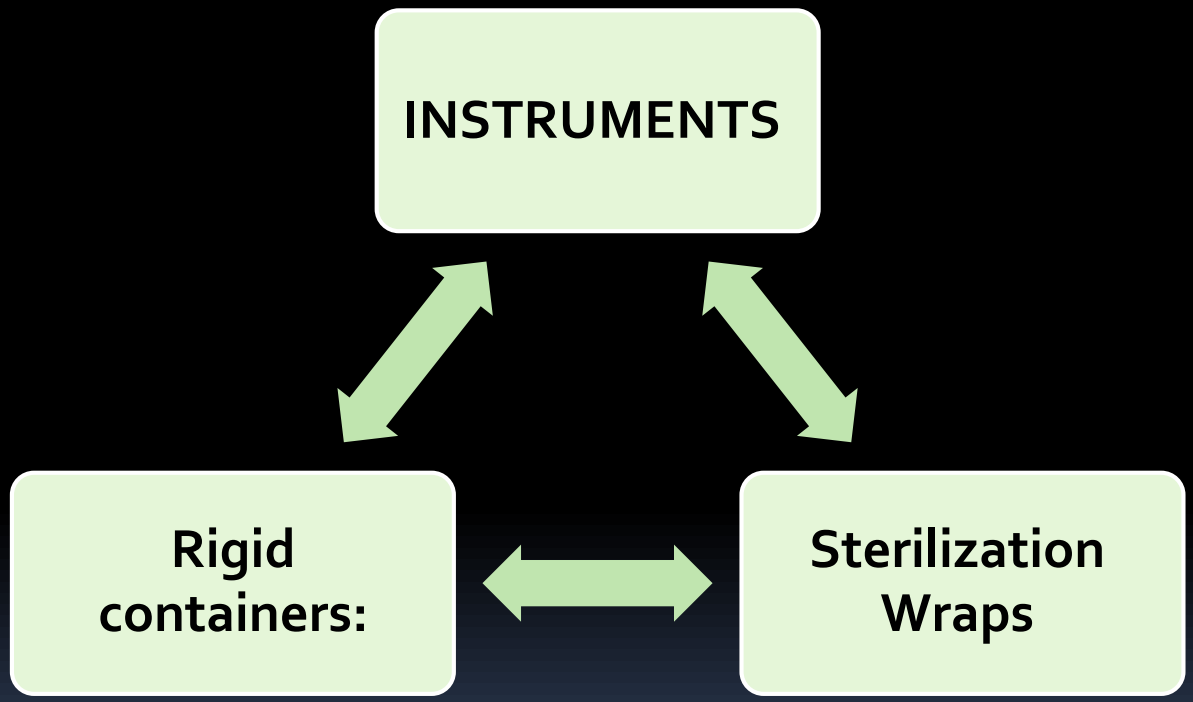
but how it is aseptically processed and the availability of suitable technology



For that, the Sterile science technicians must be guided



So, we can highlight about three main axes which are:



Each one of them has important points should caring from the Sterile science technicians, which are:

INSTRUMENTS

1- The instrument can not be sterilized without proper cleaning.

2- As we know, surgical implants, cannulated instruments, lumens, serrations, box locks and crevices pose greater challenge in cleaning.

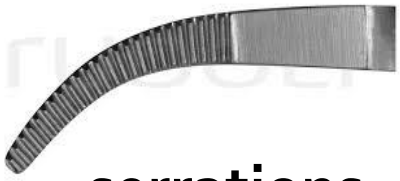
3- Therefore, Critically inspect all areas of the devices for E.g. box joints, serrations, and crevices, for cleanliness.

Surgical Implants

Cannulated Instruments

Lumens

serrations



box locks and crevices

As we know

They will make pose greater challenge in cleaning.

Therefore, we should inspect all areas of the devices for E.g. box joints, serrations, and crevices, for cleanliness.

Sterilization Wraps

1- The packaging material and packaging techniques are designed to hold and protect the devices to facilitate sterilization and to maintain sterility.

2- Packaging materials should have good qualities such as:

A- An effective barrier to microbial penetration.

B- Protect the packaged items from contamination during handling.

C- Allow aseptic delivery of the contents of the sterile field.

3- Protect the contents of the package from physical damage as far as possible

4- Maintain the sterility of the contents until the package is opened. Therefore, wrapped instrument sets must always be supported from the outside to prevent holes.

Rigid containers:

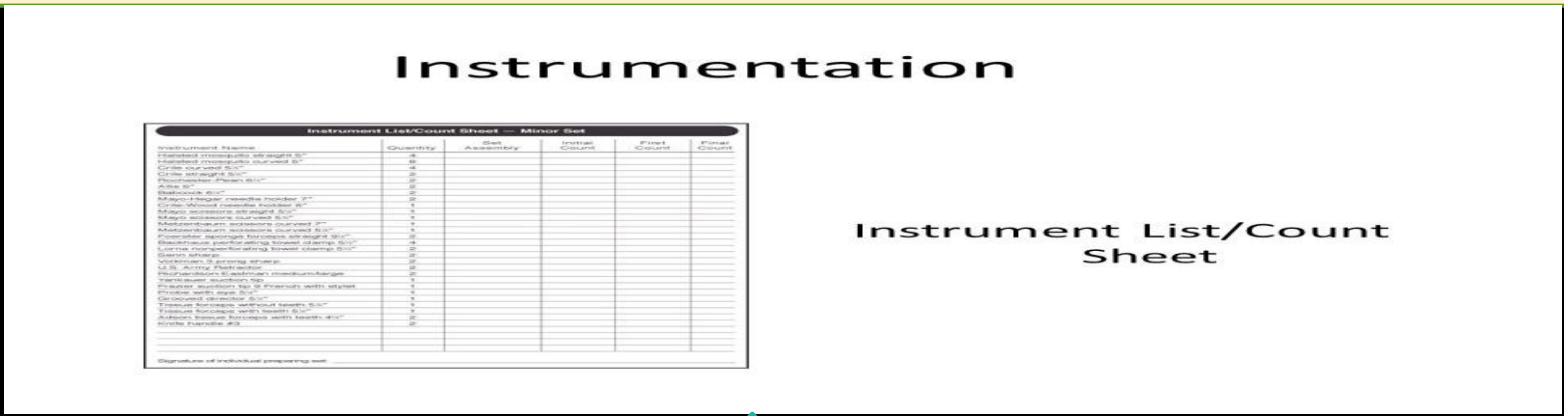
1-Rigid containers should be clean between each use.

2- Easily disassembled for cleaning, drying, and storage.

3- Rigid containers must be routinely repaired to be sure no Leak

Also, there are other reasons related to risks of surgical instruments

The placement of surgical count sheets inside instrument sets.



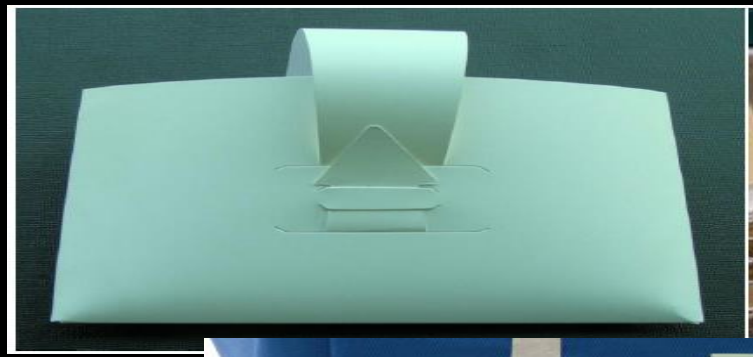
should not placed inside wrapped trays

Or rigid containers

Why ??

because of ink is a known carcinogen

using
Alma Sac Surgical Count Sheet Holders or outside wrap



Why ??

To help technicians take out toxic surgical count sheets from instrument sets to avoid fine paper particles and carcinogenic ink on surgical instruments.

References

1- The consortium of sterile sciences www.coss.us
2- Sterile instrument system
www.sterileinstrument.com

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