Instrumentation 101 For all learners across Inpatients, Clinics, & Periop/Procedural areas
INTRODUCTION

- A system review has identified compromised reusable instruments being reprocessed for patient use.

- Compromised reusable instruments should NEVER be reprocessed for patient use. This is a patient safety risk that could potentially cause harm.

- Compromised reusable instruments MUST be removed from service and given to your Supervisor/Team Leader or notify CSPD for repair or disposal.

WHAT ARE COMPROMISED INSTRUMENTS?

A compromised reusable instrument is any reusable instrument that has, but not limited to:

- Pitting/ Chipping
- Rusting
- Corrosion
• Worn

• Instrument Tape
  ◦ Peeling/Cracking/Flaking
  ◦ Bubbling
  ◦ Chipped
  ◦ Burned
  ◦ Overlapping
  ◦ Gapping
  ◦ Indentation
  ◦ Discolored/Worn
2 - Corrosion

3 - Taped incorrectly
4 - Worn normal wear and tear
5 - Broken and rusted
USE OF INSTRUMENT TAPE

Surgical instrument tape is intended to adhere to a reusable stainless-steel surgical instrument(s) or sets to aid with identification (ID) by using assigned colors or combination of colors/patterns.

These will include reusable instruments or sets that are:

- Critical instruments or trays
• Department/Clinic specific
• ID peel pack/wrapped instruments
• ID Trays (Dr. trays, specialty trays, service lines, etc.)
• Instrument tape should be wrapped around a reusable instrument in a single thickness manner with each end of the tape coming in complete contact with each other. There should be no gaps present
• If there is any defect to the instrument tape, remove the instrument/set from service to be re-taped.

***Instrument tape should be used sparingly due to the high potential risk of flaking/chipping off during a surgical procedure and the extensive management to maintain tape integrity.

Here are some examples of compromised taped instruments
INSPECTING REPROCESSED INSTRUMENTS

1. During the inspection process, one should examine *reusable* instrumentation for:
   • Cleanliness
   • Completeness (no missing parts)
• Correct alignment
• Surface Integrity (free from visible cracks and pitting)
• Sharpness of cutting edges
• Integrity of insulation on insulated devices
• Integrity of cords and cables
• Clarity of lenses
• Integrity of seals and gaskets
• Integrity of instrument labels (instrument tape), if present
• Correct functioning

2. Absence of
• Corrosion, pitting, burrs, nicks, and cracks
• Wear and chipping of inserts and plated surfaces
• Moisture
• Any other defects

***Using reusable instruments that are not thoroughly cleaned, are damaged, or do not function correctly poses a risk to patients.***
HOW DO WE TELL THE DIFFERENCE BETWEEN *DISPOSABLE* AND *REUSABLE* INSTRUMENTS?

- A recent review of reprocessed instrument packs has found *disposable one time use instruments* being sterilized.
- Reprocessing disposable instruments is against manufacturer guidelines and FDA regulations. Reprocessing disposable instruments is a risk of harm to patients.
- Disposable instruments are **NEVER** reprocessed and should be disposed in the sharps container after their point of use.

**SINGLE-USE / DISPOSABLE INSTRUMENTS**

- Made of low-grade materials that cannot undergo the high temperature and chemicals needed to sterilize
- Often used in manufactured single-use kits; for example, but not limited to:
  - Central line kits
  - Suture kits
  - Spinal kits
  - Lumbar puncture kits
- Instruments are stamped with country of origin without manufacture or reference #
- Pakistan
- SS Pakistan
- Taiwan

- Packing may include symbols that indicate single-use and/or cannot be sterilized

**WHAT DO SINGLE-USE/DISPOSABLE INSTRUMENTS LOOK LIKE?**

SS Pakistan -> throw away in sharps

![Image of SS Pakistan instrument with symbol circled]
These instruments are REUSABLE AND NEED TO BE REPROCESSED. They will need to follow the Point of Use cleaning procedures so they can be sent for processing correctly. Once packaged—they will be labeled and placed into a proper sterilizer. The Sterile Processing Management sticker indicates they have been processed and identified as being sterile and ready for use.
- Reusable instruments are made from a higher grade of stainless-steel allowing for repeated sterilization
- Markings are laser etching with the name of the manufacture and a reference/catalog#
  - Sometimes “German Stainless” is also marked
- Reusable instruments are sent to CSPD in a container with a lid after an initial cleaning is completed at the point of use
  - Call CSPD if you’re unsure if an instrument is disposable or reusable
  - Sending disposable instruments to CSPD delays processing and increases the risk of disposable instruments being reprocessed
PEEL PACKS AND WRAPPED PACKS INTEGRITY

STERILE PACK/WRAP INTEGRITY

- Inspect integrity prior to accepting for use
- Look for external tape change of color (white --> black)
- Always rotate the stock
- Oldest is used first
- Hold open wrap to light and look for:
  - Tears/abrasions
  - Holes
  - Wetness
- Storage life
  - Best practice is to only maintain enough sterilized instrument inventory so instruments are used and reprocessed on a regular basis
  - Instruments may be used as long as the package integrity has not been compromised
CSPD Processing - What are you looking for?

Chemical Indicators will be inside the trays. Look to see if they processed and be able to tell the difference.

11 - UNPROCESSED
CSPD Steam Processing- What will the tape look like? Watch for the appropriate color changes.

CSPD Sterad Processing- What will the tape look like? Watch for the appropriate color changes.
Indicator tape will change colors depending on the type of equipment is used to sterilize certain instruments. You will need to confirm that it

Look for blue to pink for a correctly processed package

OR

Look for white to black for a correctly processed package
16 - **Unsterile** - This has not been processed

17 - **Sterile** - This is an example of a **PROCESSED** package.

18 - **Sterile** - This is an example of a **PROCESSED** package.
PEEL POUCH INTEGRITY

- Inspect integrity of peel pack prior to accepting for use
- Hold package up to light and look for:
  - Cuts
  - Holes
  - Tears/abrasions
  - Peel pouch not sealed
  - No indicator–Internal/external wetness
- Always rotate the stock
  - Oldest is used first
- Storage life (event related)
- Compromised peel pouch items should not be used and should be returned to SPD immediately to ensure follow up
OPEN INSTRUMENTS IN PACKS, USE OF TIPS AND HOLDERS
USING TIP COVERS TO MAINTAIN AN OPEN POSITION

- Peel-Pouched instrument per standards need to be packaged so that the working end remains open and for ratcheted instruments, so they do not become locked with handling and storage.
- Tip covers made of latex rubber may be used
- Paper type tip covers may also be used as shown in presentation.

**Method one:** Caps on the tips that will support opening of the instrument during sterilization process
**Method two**: Tip covers used for ratcheted instruments

(Tip is cut off to cover and affix to ratcheted handle area)

Long Instruments will need a second tip cover over each tip. One instrument per pouch is acceptable.

- Method 3- Paper holders or foam covers are cradles for inside the peel pouch. Please notice the correct versions you should find your instruments. Integrity of package cannot be guaranteed if done, incorrectly. Please refer to images.

- Instrument holder and tip protectors are:
  - Recommended for instruments sterilized for clinics and departments to maintain open and un-ratcheted for sterilization and storage.
  - A Type-1 steam internal indicator is imprinted on the holder. No other indicator needed inside peel pouch.

- No tape should be used within peel pouch

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20 - Do NOT use tape to secure tab. This would not authenticate the sterility.
21 - Paper holders - correct steps in placing instrument into pouch

22 - Foam covers - correct steps to application

POINT OF USE CLEANING AND TRANSPORT
WHAT IS POINT OF USE CLEANING?

- It is a step-by-step process for the initial cleaning of soiled reusable instruments returning to sterile processing.
- This process is outlined in the Banner Health Policy: **CSPD Surgical Instrument Point-of-Use Cleaning and Transport**

HOW DO YOU PERFORM POINT OF USE?

- Don personal protective equipment (PPE)
  - Gloves
  - Eye protection with mask

*23 - Eye protection with mask*
CLEANING

• Remove ALL sharps and dispose of in an approved sharps container.

• Dispose of any disposable instruments from pre-packaged kits in an approved sharps container, i.e. spinal kit, suture kit, etc.

• ALL reusable instrumentation and other reusable medical devices MUST be wiped down with a lint free towel/wipe/gauze moisten with sterile water (NO SALINE) during the procedure to remove visible gross soil including, but not limited to blood, mucous, tissue and/or any other Bio burden.

• Reusable instruments with lumens (cannulated) MUST be irrigated with sterile water, as needed.
PREPARATION OF INSTRUMENTS

- Ensure **ALL** locked *reusable* instruments are unlocked and those requiring disassembly are taken apart.

- Used and unused *reusable* instruments after the procedure should be:
  - Separated used (soiled) from unused (non-soiled) with a lint free towel moistened with water (**NO SALINE**) within the original set/tray and/or on the bottom of a biohazard labeled leak-proof container
  - **ALL reusable** instruments **MUST** be placed in an **OPEN** position
PRE-TREATMENT OF INSTRUMENTS

- After procedure, **ALL** used (soiled) *reusable* instruments MUST be sprayed with an enzymatic solution according to manufacturer instructions.

- Cover with a lint free towel moistened with water *(NO SALINE)* prior to transport.
TRANSPORTATION OF INSTRUMENTS

Non-Perioperative, Non-Procedural Departments:

- Place ALL soiled reusable instrumentation in a Biohazard labeled leak-proof container with a secured lid to cover.
- Complete an Instrumentation Sterilization Request form prior to transport.
- Transport the biohazard container with a completed Instrumentation Sterilization Request form to the decontamination area as soon as possible.

Perioperative-Procedural Departments:

- Place ALL soiled reusable instrument trays in a covered/closed case cart with a “Red Sheet” completed per policy.
- "Red sheet" should be secured to outside of the cart, outside of the clear bag cover.

***DO NOT leave contained soiled reusable instruments overnight as this may result in corrosion and damage to the surface integrity to the instruments.***