SteelcoBelimed Miele Group Member

Best Practices for the Healthcare Provider when processing Flexible Endoscopes

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Who am I…….Randalyn Harreld

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The **big** "why"?

One of the most complex & expensive Medical devices found is flexible endoscope

The Public Eye……

January 2014 article in Seattle Times more than 100 patients underwent colonoscopies, tested for HIV and Hep B/C due to cleaning failures

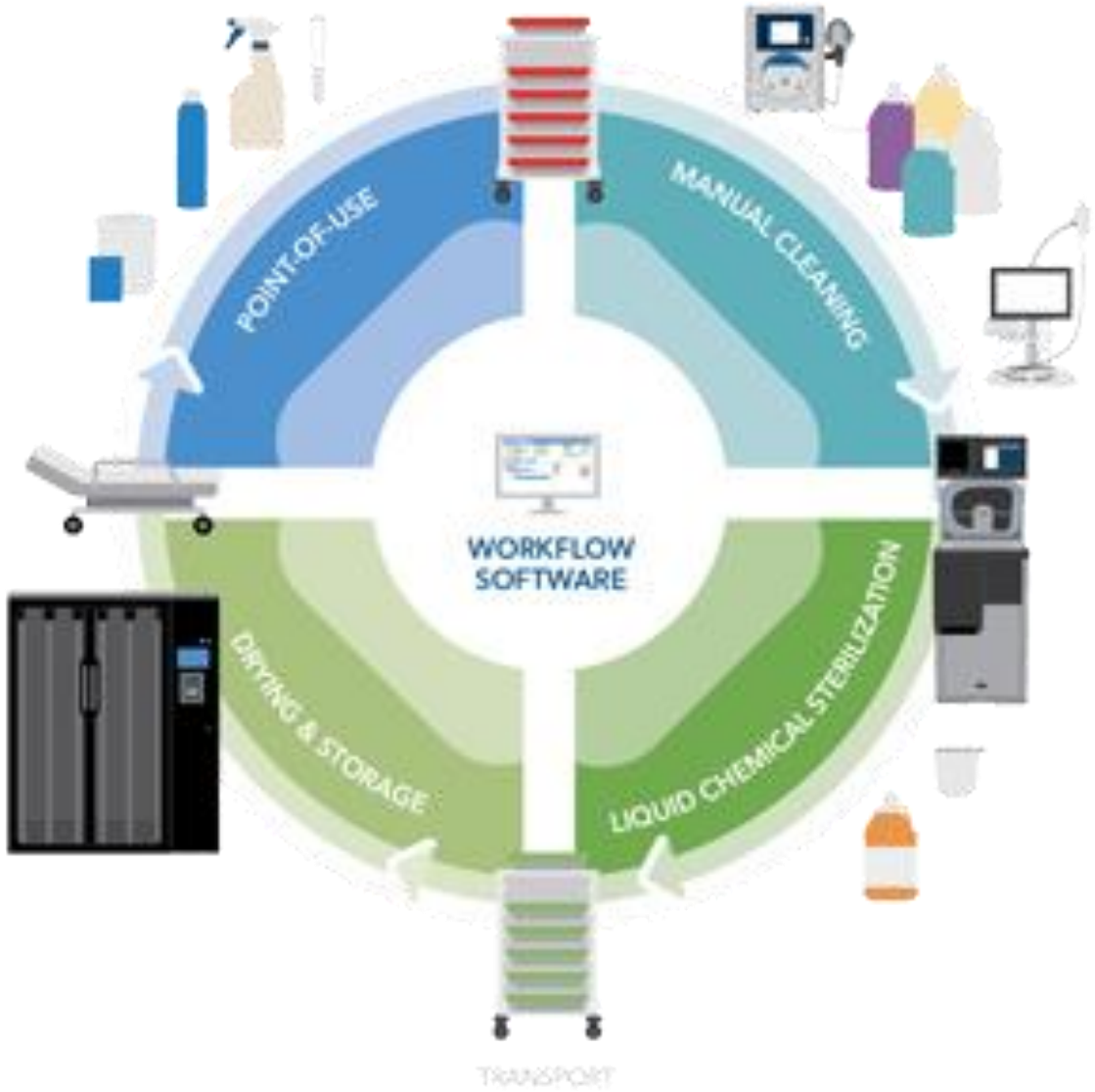
2015 - Los Angeles Times reported 2 patients died and 5 infected with CRE superbug after contaminated endoscope, 179 more were tested

"When Medical Negligence in Processing of Devices Leads to Surgical Complications"

2016 University of Colorado, resulted in 3 deaths and 9 infected patients due to ERCP, duodenoscope not processed properly

Index

Terms & Flow



Endoscopy

- To look inside

MIS

- Minimally invasive procedure

Deflection

- the ability of the tip of the endoscope to bend increasing the area that can be accessed visually or within instrument

Fluid Invasion

- a situation where fluid invades internal sections of the endoscope causing damage to the working components and creating an environment where micro-organisms can live

Terminology

Borescope

- To look inside

Endoscopy

- To look inside

MIS

- Minimally invasive procedure

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Let’s play a quick game

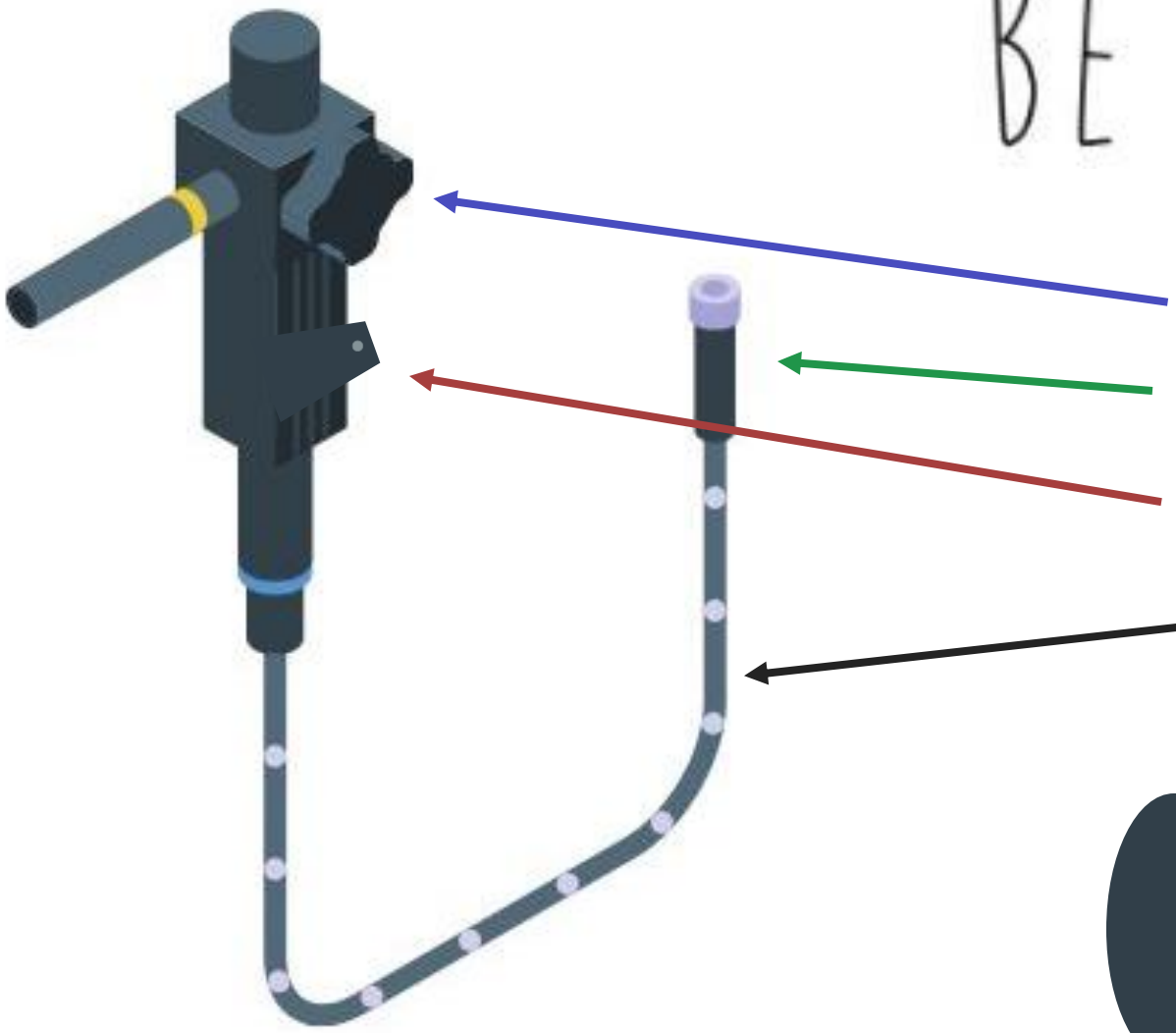
Medical Endoscopes Quiz - Details - Kahoot!

1. Have your phones ready
2. Have on wifi
3. Sit where you can see the screen

Spaulding

Class Equipment/Device	Definition	Levels of Reprocessing	Examples
CRITICAL	Enters sterile tissues including the vascular system	1. Cleaning 2. Followed by sterilization	• Surgical instruments • Implants • biopsy instruments • foot care equipment • eye and dental equipment
Semi-CRITICAL	Comes in contact with non intact skin or mucous membranes but does not penetrate them	1. Cleaning 2. Followed by high level disinfection as a minimum (sterilization is preferred where approved & applicable)	• respiratory therapy equipment • anesthesia equipment • Tonometer • ultrasound probe
NON-CRITICAL	Touches only intact skin and not mucous membranes or does not directly touch the client patient or resident	1. Cleaning 2. Followed by low level disinfection (in some cases, cleaning alone is acceptable)	• ECG machines • oximeters • bedpans urinals commodes

Control body/section



BE FLEXIBLE

Angulation Control Knob

Bending Section

Forceps Channel

Insertion Tube or section

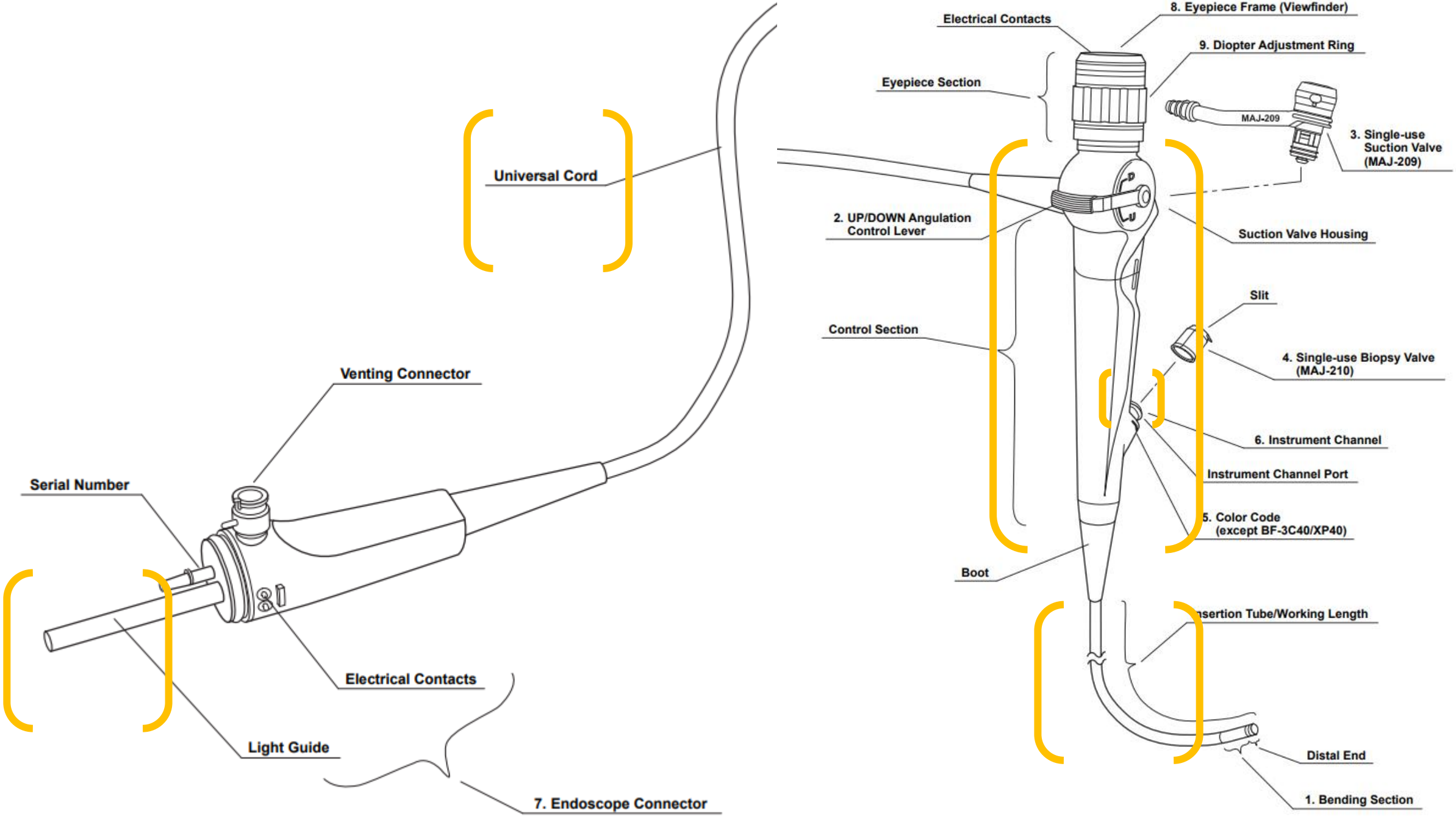
Light guide lens

Water Jet

Objective Lens

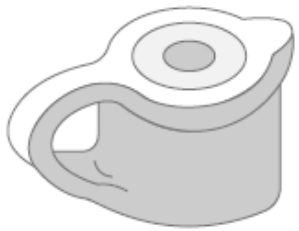
Air/Water Nozzle

Biopsy Channel

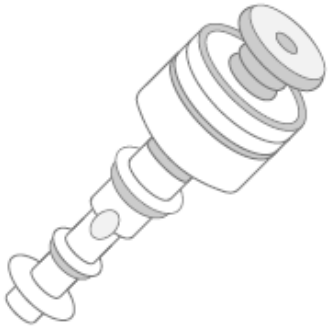

Universal Cord
Venting Connector
Serial Number
Electrical Contacts
Light Guide
7. Endoscope Connector
Electrical Contacts
8. Eyepiece Frame (Viewfinder)
9. Diopter Adjustment Ring
Eyepiece Section
MAJ-209
3. Single-use Suction Valve (MAJ-209)
2. UP/DOWN Angulation Control Lever
Suction Valve Housing
Slit
Control Section
4. Single-use Biopsy Valve (MAJ-210)
6. Instrument Channel
Instrument Channel Port
5. Color Code (except BF-3C40/XP40)
Boot
Insertion Tube/Working Length
Distal End
1. Bending Section

Necessary reprocessing accessories

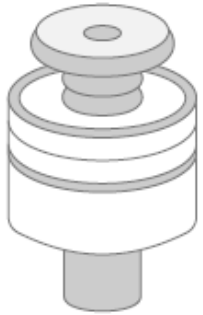
Examples*:



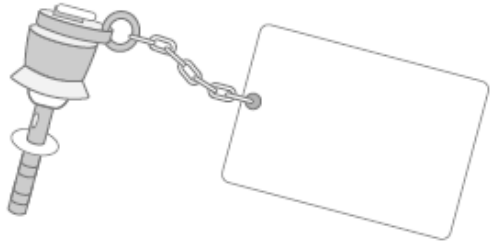
Biopsy valve
(MB-358)



Air/water valve
(MH-438)



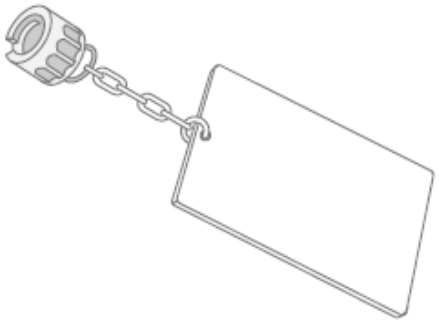
Suction valve
(MH-443)



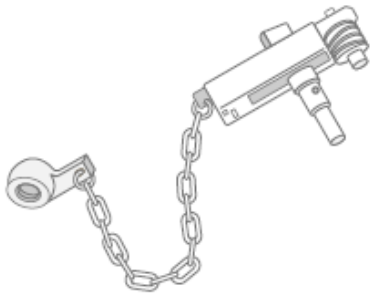
AW channel cleaning
adapter (MH-948)

Mouthpiece
(MB-142)

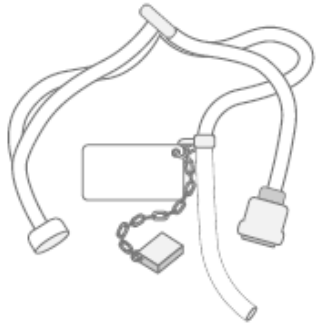
Suction cleaning adapter
(MH-856)



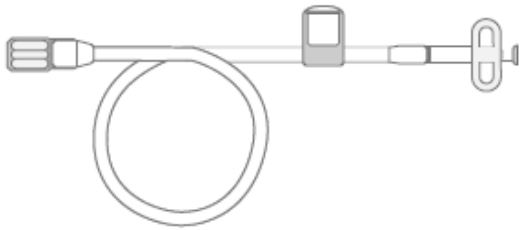
ETO cap
(MB-156)



Channel plug
(MH-944)



Injection tube
(MH-946)



Auxiliary water tube
(MAJ-855)

*Source: Olympus

Adhering to guidelines and IFU’s during scope reprocessing

Let’s talk about the IFU

WARNING:	**High level disinfection (minimum requirement) is recommended ONLY for “semi-critical” instruments which come into contact only with intact mucous membranes or non-intact skin.**
	High level disinfection is NOT recommended for “critical” instruments to be used for Hysteroscopy, Neuroendoscopy, Arthroscopy, or Laparoscopy.
WARNING:	**Refer to CIDEX OPA labeling for important contraindications regarding the use of CIDEX OPA on instruments that will be used for patients with bladder cancer.**
CAUTION:	Any deviations from the recommended disinfection parameters must be validated by the user.
CAUTION:	Before disinfection, the instruments must be thoroughly cleaned, rinsed, and dried if applicable.
CAUTION:	To avoid damage to the instruments, do not immerse the devices in disinfectant solution for longer than one hour.
CAUTION:	To avoid damage, ensure that resectoscope working elements are completely dry after disinfection and before use in the surgical field.
CAUTION:	For flexible endoscopes, remove pressure compensation cap (#11025E, #11025XE, #Z10455, #Z10456, or #Z11457) on vent port before immersion in liquid.
CAUTION:	Do not immerse eyepiece section of HAMOU rigid telescopes.
CAUTION:	KARL STORZ recommends the use of one cleaning agent and one sterilization method to prevent the unknown rate of material degradation due to material-chemical interactions from various cleaning and sterilization processes.
CAUTION:	Do NOT mix peracetic acid-based solutions with hydrogen peroxide agents for reprocessing flexible endoscopes.

Equipment Needed

Prepare the following equipment:

- Personal Protective Equipment
- Sponge
- Clean, Lint-free Cloths
- Large Basins
- Low-foaming Detergent Solution
- Clean Water
- Suction Cleaning Adapter (MAJ-222)
- Channel Cleaning Brush (BW-15B, except BF-3C40/XP40)
- Channel Cleaning Brush (BW-7B for BF-3C40/XP40)
- Single Use Single-ended Cleaning Brush (BW-400B for BF-3C40/XP40)
- Suction Connector Cleaning Brush (BW-15SH for BF-3C40/XP40)
- Channel-opening Cleaning Brush (MH-507)

Warnings and Cautions

Follow the warnings and cautions described below when handling this instrument. This information is supplemented by the warnings and cautions described in each chapter.

WARNING

- Never perform electrosurgery with BF-3C40/XP40, because the Distal End of this instrument is not insulated. Patient injury can result.
- Do not strike, bend, hit, pull, twist, or drop the endoscope's distal end, insertion tube, bending section, control section, universal cord, or endoscope connector with excessive force. The endoscope may be damaged and could cause patient injury, such as burns, bleeding, and/or perforation. It could also cause parts of the endoscope to fall off inside the patient.
- Never perform angulation forcibly or suddenly. Never forcefully pull or twist the angulated bending section. Patient injury, bleeding and/or perforation can result. It may also become impossible to straighten the bending section during use and/or to withdraw this instrument from the patient. Particular caution is required in the tracheal bifurcation region.
- Never operate the bending section, perform suction, insert or withdraw the endoscope's insertion tube without viewing the endoscopic image. Patient injury can result.
- Never insert or withdraw the endoscope while the endoscope's bending section is locked in position. When withdrawing the endoscope, the bending section should follow the form of the body cavity as much as possible. Otherwise, patient injury, bleeding and/or perforation can result. It may also become impossible to straighten the bending section during use and/or to withdraw this instrument from the patient.
- Do not touch the Light Guide immediately after removing it from the Light Source because it is extremely hot.
- Although the illumination light emitted from the endoscope's distal end is required for endoscopic observation and treatment, it may also cause alteration of living tissues such as protein denaturation of liver tissue and perforation of the intestines by inappropriate using.
Observe the following warnings on the illumination.

7.2.2 Procedure

The steps listed below are typical of the overall process for point of use treatment of a flexible or semi-rigid endoscope. Actual instructions for cleaning an individual endoscope will vary based on manufacturers' written IFU. Before the endoscope is detached from the light source and/or video processor:

a) Don PPE. Personnel performing point of use treatment and handling contaminated flexible endoscopes should wear PPE that includes

   1) fluid-resistant surgical masks in combination with eye protection devices, such as goggles, glasses with solid side shields, or chin-length face shields;

   2) fluid-resistant gowns (see ANSI/AAMI PB70 [9]);

   3) general purpose utility gloves fitted at the wrist or above; and

   4) liquid-resistant shoe covers (if there is potential for shoes becoming contaminated and/or soaked with blood or other bodily fluids, see 6.6.1 and ANSI/AAMI ST79 [17]).

b) Prepare a cleaning solution. The endoscope manufacturer's written IFU should be referenced for types of compatible cleaning agents, and the solution manufacturer's written IFU should be referenced for preparation of the chosen cleaning solution.

c) Wipe the insertion tube according to the manufacturer's written IFU with a clean, non-linting cloth or wipe or a non-abrasive sponge soaked in water or freshly prepared cleaning solution as soon as possible after the endoscope is removed from the patient or the procedure is completed. Ensure that all endoscope controls are in the free and unlocked position. The cloth or sponge should be single-use and disposed of after use.

d) Place the distal end of the endoscope in the cleaning solution and suction the solution through the instrument/suction channel as indicated in the endoscope manufacturer's written IFU.

e) During point of use treatment of an endoscope with an elevator mechanism, while continuing the immersion and the aspiration, raise and lower the forceps elevator three times by turning the elevator control level or as per the manufacturer's written IFU for the endoscope.

f) Flush the air/water channels with solution using the endoscope's cleaning adapter or by IFU-instructed air/water flow.

g) Flush any other channels (e.g., auxiliary water or elevator channels) with solution.

h) Flush each lumen as directed in the manufacturer's written IFU and until clear.

i) Detach the endoscope from the light source and suction pump.

j) Remove disposable accessories, if used.

k) Attach a fluid-resistant cap over any electrical components, if applicable.

l) Visually inspect the endoscope. If there is any evidence of damage, refer to the manufacturer's written IFU for further processing instructions. Tag the endoscope for further review. Refer to Section 14.

m) Sinks should be cleaned, disinfected, and rinsed between uses with a disinfectant approved by a multidisciplinary team (see Section 5) and in accordance with the IFUs for the disinfectant and the sink.

Hand-off communication from point of use to the decontamination area shall include at minimum, patient identifier, date of procedure, and time of point of use treatment was completed. Other information that may be helpful is the completed procedure time, location of the procedure, and employee contact.

AORN III.a. *"Precleaning of flexible endoscopes and accessories at the point of use should occur as soon as possible after the endoscope is removed from the patient or procedure is completed."*

HSPA: *"Pre-cleaning begins in the procedure room immediately after removal of the insertion tube from the patient and before disconnecting the endoscope…."*

"Inadequate pre-cleaning can be a factor in patient infections. POU cleaning helps remove organic materials and reduces the likelihood of biofilm formation."

AAMI: *"To prevent buildup of bioburden, development of biofilms and drying of secretions, POU treatment is performed immediately after completion of use of the device."*

*****STEPS LISTED TO THE LEFT*****

SGNA: *"POU pre-cleaning is an essential steps to remove gross soil immediately after use. Per SGNA standards…. "manual cleaning of endoscopes is necessary prior to automated methods…"*

APIC: *Guidelines emphasize the importance of POU cleaning for endoscopes, including documentation of POU cleaning, Education, and clearing the channel and adaptors.*

Cleaning Protocols

Point of Use Care (known as precleaning)
Steps 1 -14

Prepare
- POU cleaning solution
- Disconnect scope, attachments etc.

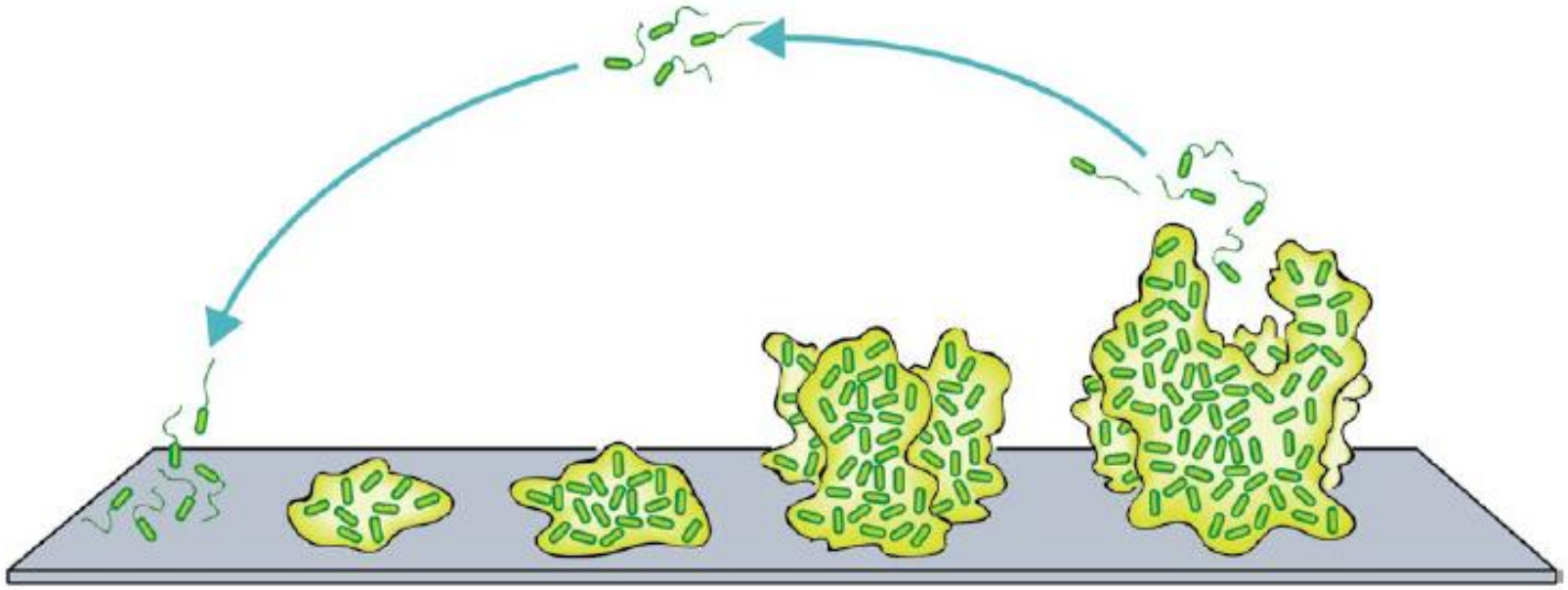
Wipe
- Insertion tube, lint free cloths
- Sponges, cleaning brushes, spray

Aspirate
- Cleaning solution from distal end of insertion tube, suction pump on

Remove
- Accessories
- Attachments
- Console

AORN Guidelines Figure 4. I-07

Figure 4. Biofilm Formation[1,2]



References

1. *Roberts CG. The role of biofilms in reprocessing medical devices.* Am J Infect Control. *2013;41(5 Suppl):S77-S80.*
2. *Pajkos A, Vickery K, Crossart Y. Is biofilm accumulation on endoscope tubing a contributor to the failure of cleaning and decontamination?* J Hosp Infect. *2004;58(3):224-229.*

Transportation
Step 15

As soon as possible after procedure
Kept moist but not submerged

Remember pre-cleaned are still considered contaminated

Keep each scope isolated with its accessories

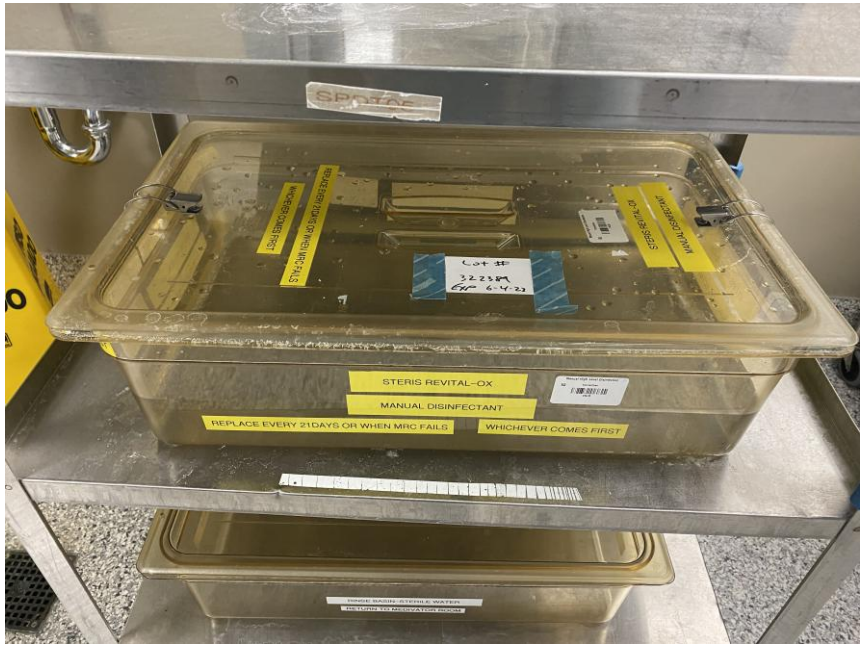
Do not transport vertically

In a safe manner to protect scope from damage

Contained, leak resistant, puncture resistant

I spy with my eye…..

Transportation In the Field……



Leak Testing
Steps 16-27

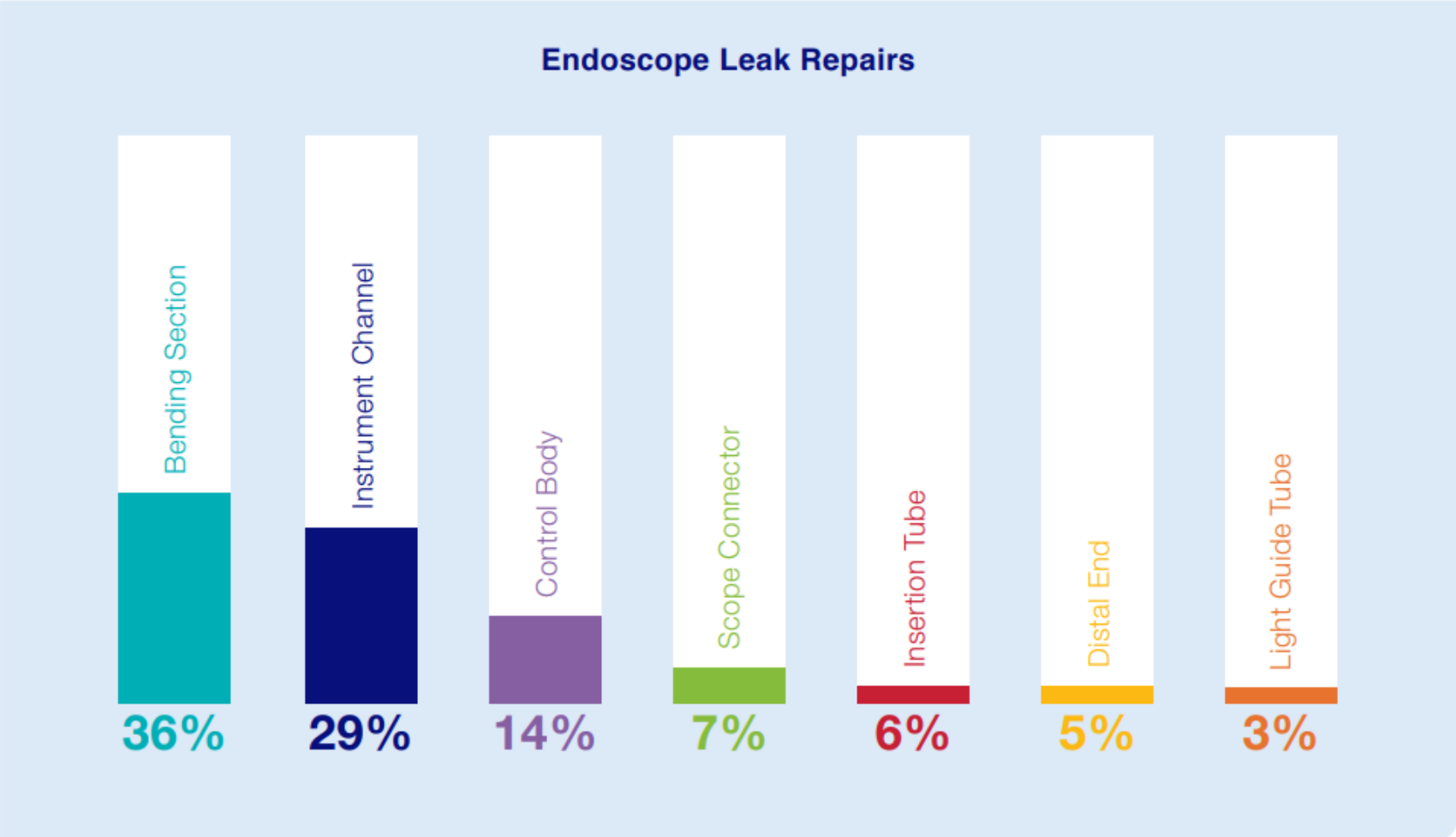
Manual

Dry or Wet

Auto

- ✓ Before immersion
- ✓ As soon as it arrives
- ✓ Calibrate all automatic testers
- ✓ Document test results
- ✓ Mandatory to ensure fluid invasion doesn't occur
- ✓ Follow the IFU
- ✓ Use large space
- ✓ Complete for accurate amount of time
- ✓ Clean water, no detergent
- ✓ Check connections

The chart below is a damage analysis of common leaks that occurred in endoscopes in 2019. These leaks can cause fluid invasion, which can lead to more costly repairs.

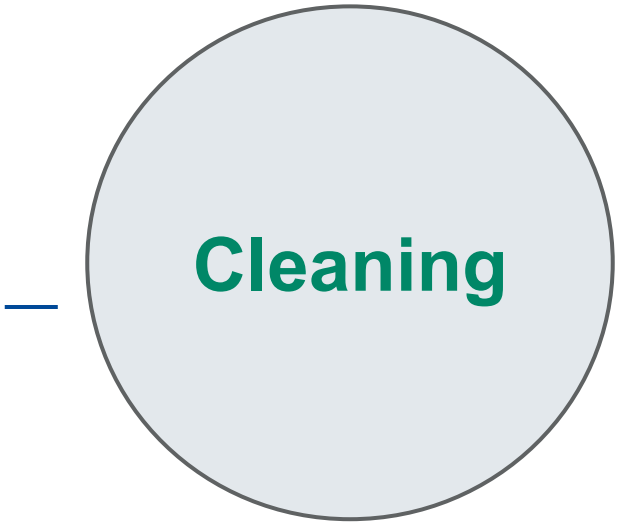


Manual Cleaning
Steps 28-84

Purpose

Remove any organic residues & OPIM from device

- ✓ Clean
- ✓ Rinse
- ✓ Remove so HLD is effective or sterilization



Methods

Automated
- ✓ In a washer disinfector
- ✓ In an AER/EWD

Manually
- ✓ At room temperature with chemicals approved
- ✓ Enzymes or alkaline
- ✓ Always follow the IFU for exposure time, concentration, temperature
- ✓ Rinse with critical is key

Whenever possible and in accordance with the IFU: Automated reprocessing is the preferred method!


Automated Cleaning

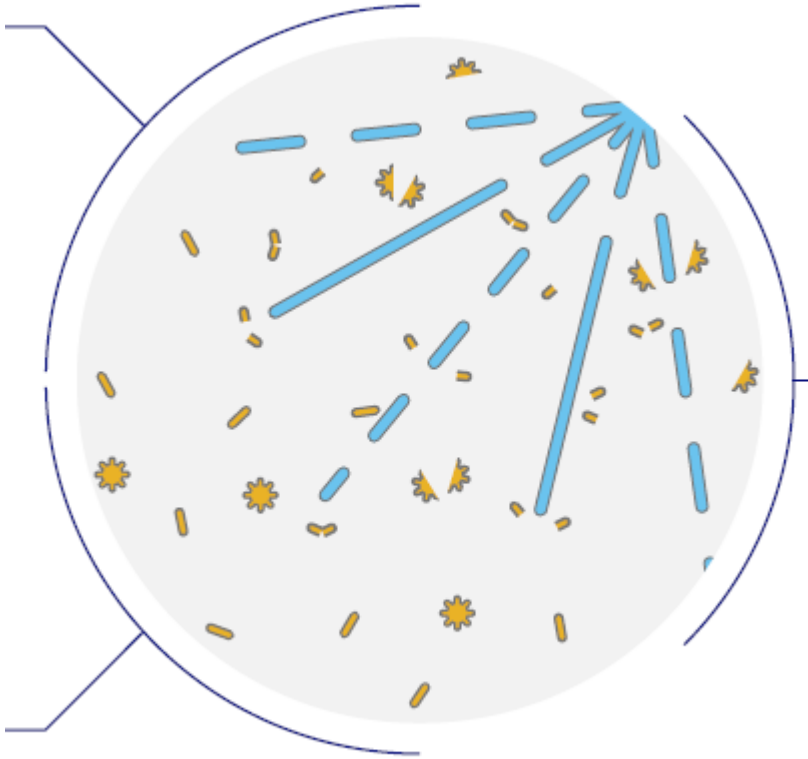
AER

1. “ Per the SGNA standards of infection prevention in reprocessing flexible endoscopes, the FDA has approved labeling some AERs as washer disinfectors, which do not require a manual cleaning and channel brushing.”
2. Offer validated cleaning and HLD processes and cycles
3. No touch workflow to reduce cross contamination (pass through models)
4. Convenient transport with basins and cassette that match up to the machine (cleaning, transport, and HLD) (no touch)
5. Visual displays, and traceability options with printers for tracking
6. Automated leak testing included in many models

High Level Disinfection
Manual or automated

Purpose

Killing or inactivating microorganisms except for large numbers of bacterial spores



Methods

Automated
- ✓ In an AER/EWD
- ✓ EN ISO 15883
- ✓ Thermal Disinfection can be achieved in some WD

Manually
- ✓ Bactericidal
- ✓ Fungicidal
- ✓ Virucidal
- ✓ Sporicidal

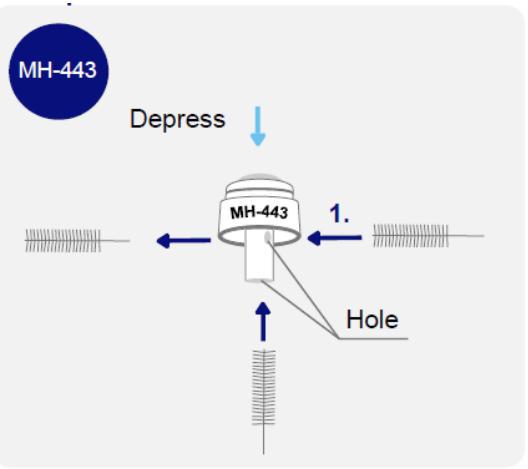
Glutaraldehyde
Peracetic Acid

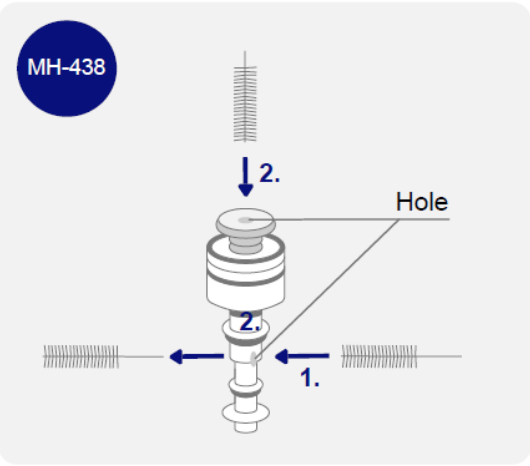
- ✓ Always follow the IFU for exposure time, concentration, temperature
- ✓ Proper rinsing is key

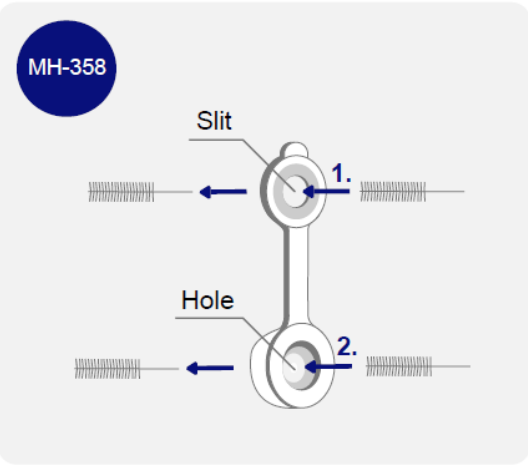
Sterilization
When applicable

Cleaning the accessories is just as tedious

Multiple steps, multiple parts



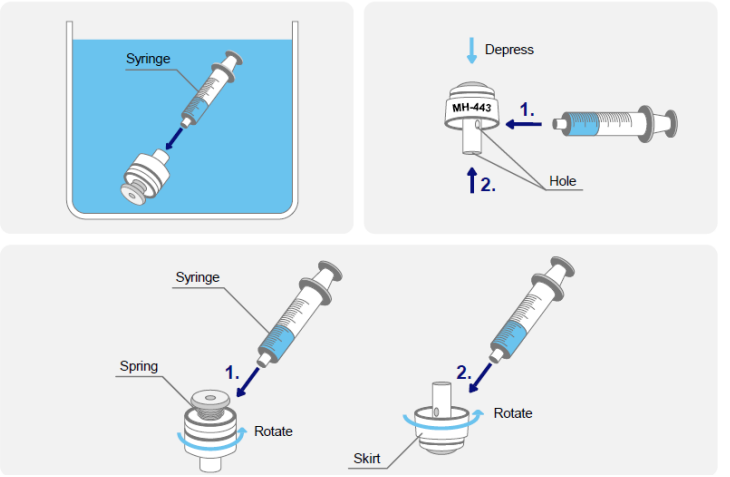




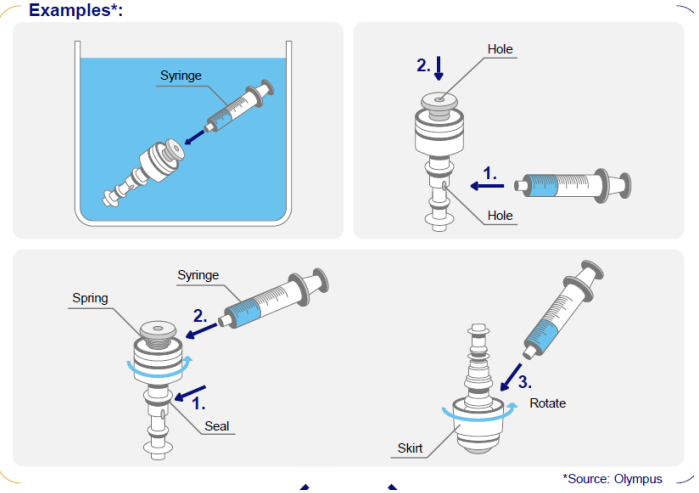
MH-443
MH-438
MH-948
MH-358
MH-856
MH-946
MH-944

*Source: Olympus

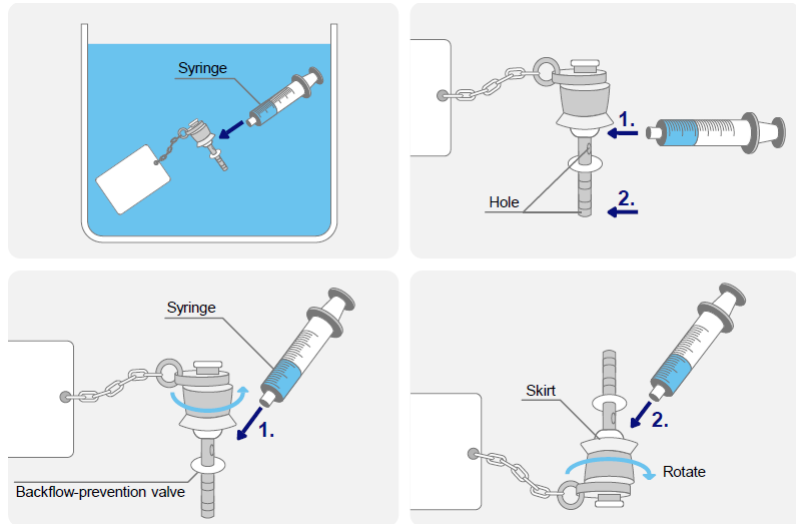
Examples*:



Examples*:



*Source: Olympus



Practical Tips

- ✓ Follow the IFU
- ✓ Use model specific cleaning adaptors that are compatible and validated
- ✓ Connections are secured
- ✓ Fresh cleaning solutions
- ✓ Flow through each lumen
- ✓ Flushed in channels
- ✓ Clean the connection tubing and equipment (flushing equipment)
- ✓ Complete quality assurance checks
- ✓ Use properly labeling and tracking practices to ensure each scope is traced to the patient

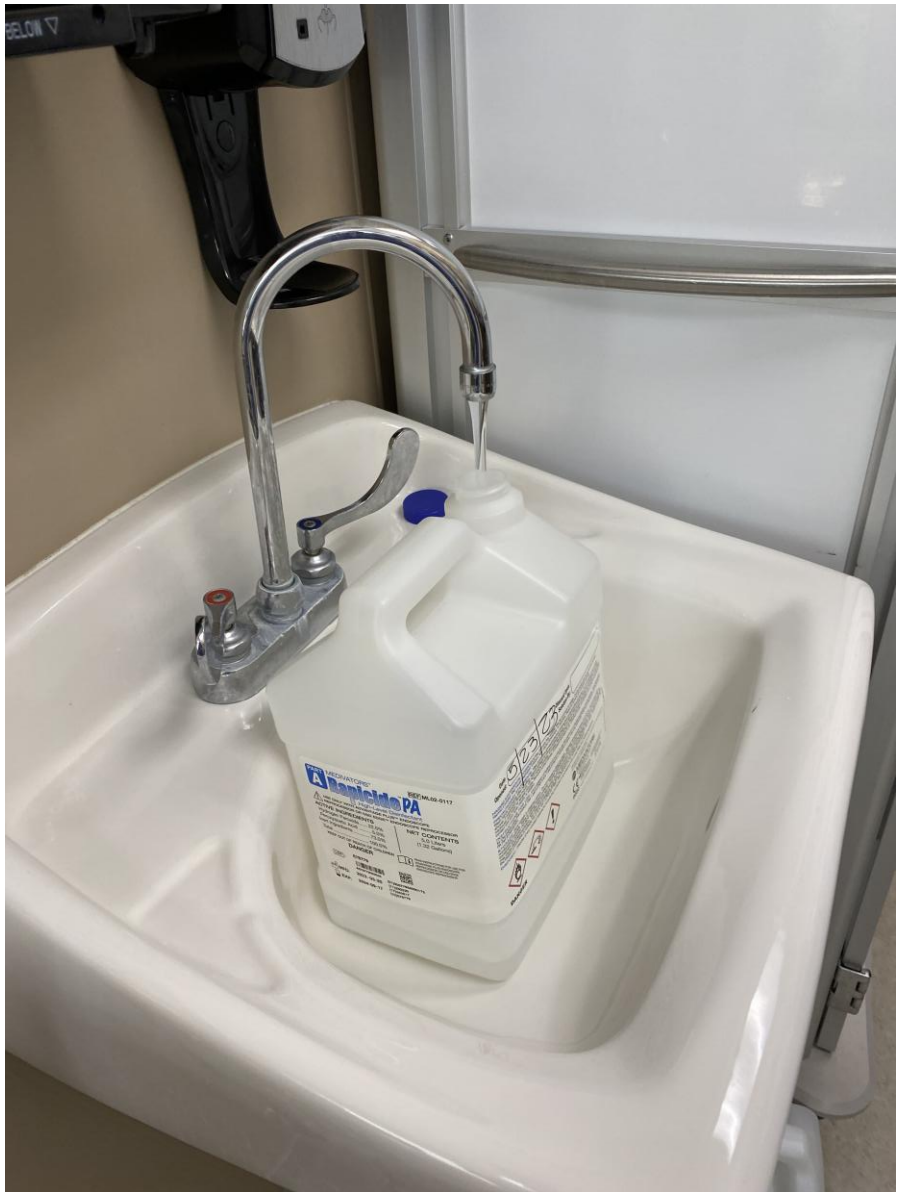
Understanding reprocessing differences in workflow


ENDOSCOPY
ENDOSCOPY
EQUIPMENT
ADVANCED ENDOSCOPY
ADVANCED ENDOSCOPY
EQUIP ALCOVE
EXISTING SOILED
RECOVERY ISOLATION
RECOVERY ISOLATION
ANTE ROOM
NURSE OFFICE
INSTRUMENT PROCESSING
DECON
SUPPLY
LOCKERS
CHANGE
HOUSE KEEPING
STAFF LOUNGE
STAFF KITCH
RECOVERY
RECOVERY
RECOVERY
RECOVERY
NURSE STATION
NOURISH
PREP
EQUIP
EQUIP
EQUIP
CLEAN SUPPLY
INTAKE
PREP
PREP
PREP
CONSULT
RECEPTION
MULTI-PURPOSE
LOBBY
VESTIBULE
WAITING

What does the SPD have that smaller areas may not?

- ❑ Air, temperature and humidity controls
- ❑ Working surfaces that nonporous! (clinics usually cannot support this)
- ❑ Instrument Air
- ❑ Critical Water
- ❑ Separation from dirty and clean areas (HLD not side by side to cleaning)
- ❑ Emergency eye wash stations (we need these more than ever with HLD & Scopes)
- ❑ Sinks large enough to clean transport bins (3 sink method)
- ❑ Working surfaces large enough to support the flow
- ❑ Donning / Doffing areas
- ❑ Transport that eliminates the risk to patient exposure
- ❑ Storage and ability to properly dry scopes
- ❑ Tracking software and traceability of inventory


OLYMPUS
ENDOSCOPE CLEANING WORKFLOW


Rapicide PA

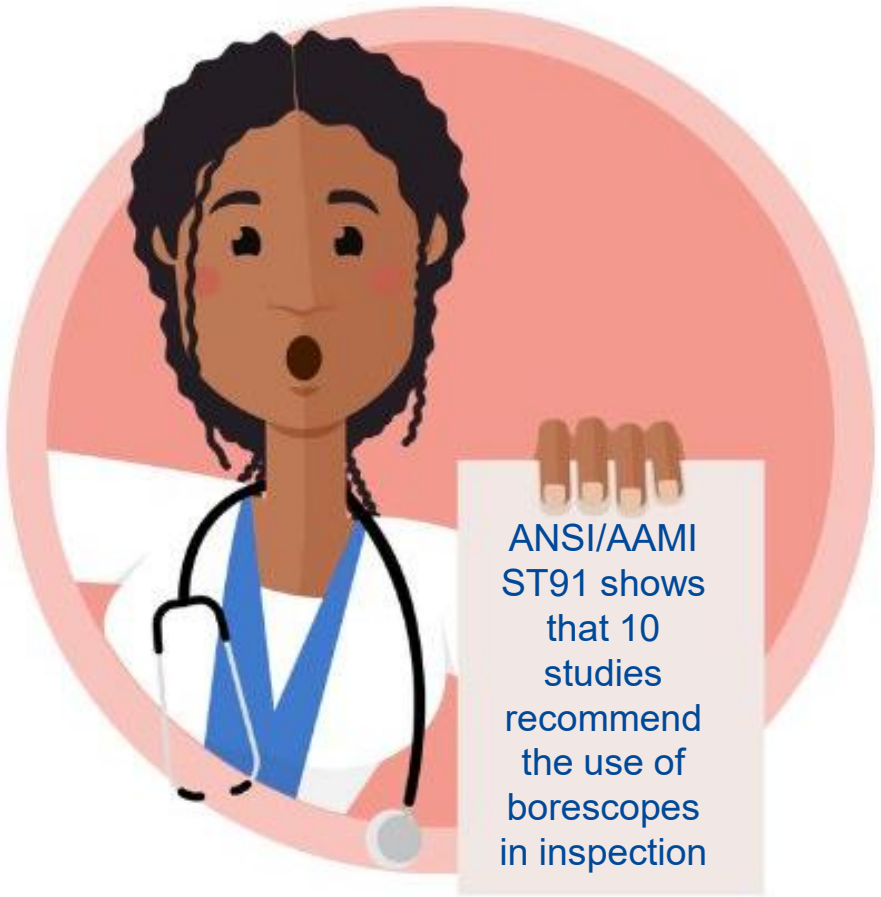

OLYMPUS
ENDOSCOPE CLEANING WORKFLOW

The almost mandatory tools, but not so mandatory

Table K.1

Lumens and Channels must be seen

Borescopes



ANSI/AAMI ST91 shows that 10 studies recommend the use of borescopes in inspection

When using a borescope, there are many areas in an endoscope to inspect for damage or retained debris, including the instrument/suction channel, channel openings/valve housings, distal tip, and forceps elevator recess.

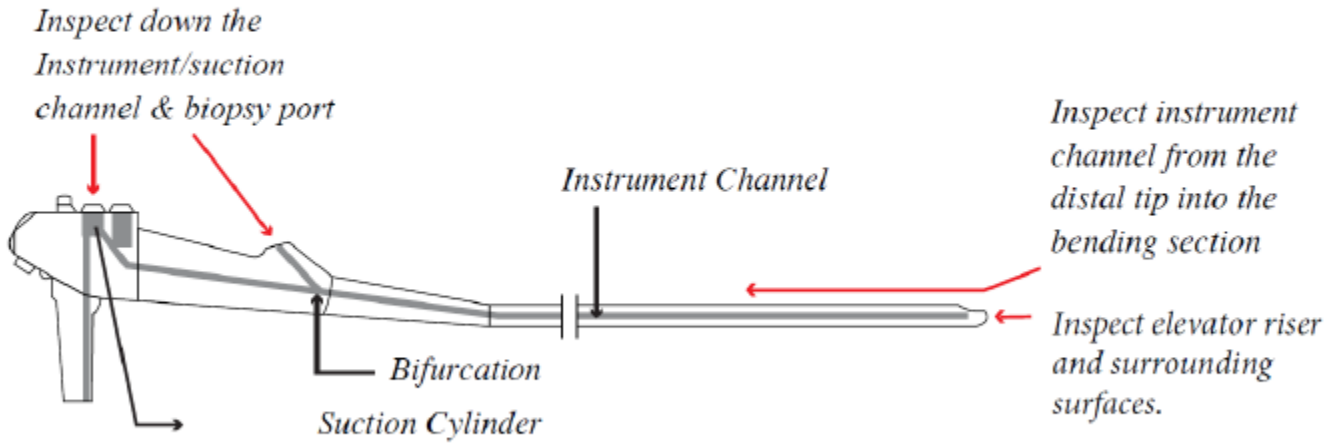


Figure E.3—Areas to inspect for damage on endoscope

How are we flushing without pressure?
Flushing Aides

Water Water, Water……

“at minimum water used for endoscope reprocessing meets the specifications that are recommended by the device IFU”

ST91: Instruments

- IFU #1 Olympus BF Type 40 bronchofiberscope

Section 6.4 Rinsing Water – sterile water to be used once removed from HLD solution. If sterile water not available, flush channels with 70% alcohol

- IFU #2 Stryker Endoscopy

Section 4: Cleaning was validated using only reverse osmosis and deionized water for all cleaning steps

- IFU # 3 Olympus CYF 5R

Section 7.7 After HLD rinse the scope using water of appropriate microbiological quality. Must be rinsed with sterile water. Clean potable water processed and filtered. (consult your IP department)

Brush….to and fro

Because nothing works like friction

Why Inspection is so important

Bending Section Damage

All images thanks to Olympus America

Small Hole

Rupture

Cause of damage

Stacking scopes on each other or with sharp accessories

Lens Damage – Distal End

All images thanks to Olympus America

Cause of damage

Allowing this to hit hard surfaces, the floor, the table, swinging the scope from side to side, fluid invasion, and sharp instruments

Chipped or Cracked Lenses

Chipped or Cracked Lenses

Damaged Distal Tip Cover

Insertion Tube/ Light Guide Damage

All images thanks to Olympus America

Compressed

Buckled

Cut

Cause of damage

Storing, carrying ,or cleaning while overly coiled
Pressing the scope against the operating table, or bed

Storage and Transportation Practices


EIN 69991
GIF 180/190


Dri-Scope Aid
0.8
1
2
4
5


MEDIVATORS
ENDODRY

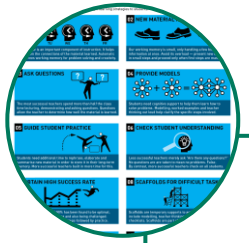

ims


PREOP
GEN. SURG.

Education & Training

Competencies for HLD Technicians or Nurses

Ongoing Training and continuous education



Benefits of work instructions

Understand core components of competency program

Identify Key aspects of onboarding

Anesthesia Tech Education Checklist

Creation Date	10/20/2020	Revision Date	
Date		Revision #	
Employee			
Evaluator			

Competencies are to be completed by Supervisor, Manager or Educator. Competencies should be completed annually, and whenever a new process, product or practice is put into place.

Task		Competent in Task Y/N	Date of Return Demonstration	Verified By
1	Leakage Test Competency Checklist Completed in accordance to the Karl Storz Recommendations for scopes, Lumen, T-Luer, Cartridge Connector			
2	Manual Cleaning Competency Completed			
3	Detergent Cleaning Competency Completed per Karl Storz Recommendations			
4	Water Quality Recommendations identified for cleaning process Water Rinsing Competency Completed per Karl Storz Checklist			
5	Drying Competency completed in accordance with Karl Storz			
6	Inspection Competency Completed in accordance with Karl Storz Competency Checklist			
7	Proper Storage of Processed Scopes reviewed and return demonstration completed			
8	Proper Transport of Processed Scopes reviewed and completed Proper Transport of Used Scopes reviewed and Completed			
9	Proper Cleaning techniques for CMAC Blades and Anesthesia blades in accordance to Karl Storz Recommendations			
10	Proper Storage techniques for CMAC Blades and Anesthesia Blades in accordance to Karl Storz Recommendations			
11	Proper Transport and inspection techniques for CMAC Blades and Anesthesia Blades in accordance to Karl Storz Recommendations			

Standard Work

Anesthesia Work Room

LEXINGTON MEDICAL CENTER

How to Process Video/Fiber Scopes

STORZ

Cleaning and Sterilization/Disinfection Instructions

Note: Complete cleaning of the patient-used flexible endoscope should be started **within two hours** of the bedside pre-cleaning. If transit time is greater than **2 hours**, ensure that additional manual cleaning (see Manual Cleaning Section) is performed if visible residual debris is still present.

The following instructions are for the inventory of CMAC blades and intubation scopes listed in the inventory of this binder. All other items must follow manufacturer's instructions for use.

BED SIDE CLEANING

1. Pre-Cleaning must take place immediately after use of scopes
2. Complete Cleaning Steps should be started within two hours of bedside cleaning protocols.

TRANSPORTATION

1. Intubation Scope to be transported to the decontamination work room by use of the designated transport tube cover.

2. All Scopes are to be handled with care, and while donning gloves. Contaminated scopes must be contained during transport.
3. Pro Shield scope covers must be marked as "dirty" prior to transport and completely cover the scopes distal working end.
4. Pro Shield scope covers are Single Use and not for reprocessing or reuse at any time.

LEAKAGE TEST

1. By utilizing the Karl Storz manual leak tester [P/N 13242XL] make sure the scope is handled with care and the pressure testing seal

is intact.

2. Connect the manometer to the scope via the testing seal and tighten the green piece
3. Pump the manometer until the gauge is in the BLUE range [140-200 mm]
4. Articulate the tip of the scope back and forth 5 times, carefully
5. The needle should not drop rapidly, the scope should be able to maintain pressure at 160mmHg. Once you have confirmed the pressure stays stable you can depressurize the tester
6. Release the air by pushing the release button, and allow all the air to remove from the channel

NOTE: Document all failed leak tests and remove scopes from service immediately. Submit request to manager for repair and contact Storz for inspection of the product. Leak Testers should be disinfected prior to use by wiping down with 70% alcohol wipe.

MANUAL CLEANING

1. Don PPE prior to starting the cleaning process
2. Disinfect the sink to be used for cleaning with approved disinfection wipes, and be sure to rinse the sink thoroughly before starting the cleaning process.
3. Soft, lint-free clothes and/or sponges should only be used to clean the video scopes, along with approved KARL STORZ Long channel brush. [11276 CL2]

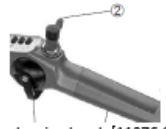
4. Prepare the enzymatic INTERCEPT solution with 1/3oz per 1 gallon of water.
   a. 1 full stroke of the hand pump = 1 oz. / 3 gallons of water
   b. Fill Sink with minimum of 3 gallons of water to ensure full immersion of the scope

NOTE: INTERCEPT has a 2 year shelf life from date of manufacture, open or unopened.

5. Water temperature should be cool to warm water **[68°F -95°F]**
6. The Cleaning cap [8403 YZ] **must** be in place on the video pin connector before immersing in liquids. Wipe video cable with lint-free soft cloth and secure the cap in place.

7. Remove the pressure compensation cap [11025 E] from the scope prior to immersion in any liquids.

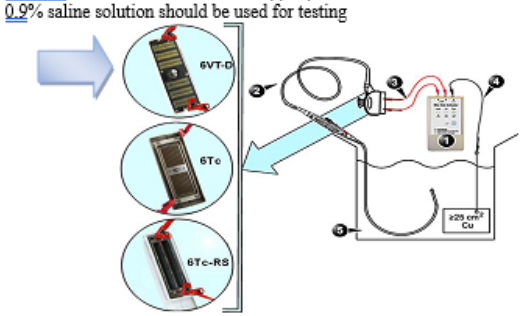
8. Attach rinse tube assembly to the cleaning adaptor and attach the cleaning adaptor to the suction port. Using a 60 cc Syringe to rinse tube assembly.
9. Completely immerse the scope in the enzymatic solution.
10. While immersed suction a minimum of 100 ml of cleaning solution through the channel using the 60 cc syringe. Discard the solution drawn through the channel down the drain, separate from the immersion solution sink.
11. While immersed wipe the exterior of the entire video scope, a minimum of **one complete wipe** should be performed.
12. Using a small, flat cleaning brush to clean the surfaces of the scope handle. Brush scope handle a minimum of **3 times**.
13. Clean the suction outlet and instrument port with the short cleaning brush. Insert the brush and rotate **3 times**.
14. Insert the long cleaning brush [11276 CL2] into the suction port and push through the channel until the brush exits the distal end. Remove debris from the bristles prior to pulling the channel brush back through. Repeat 2 times for a minimum of 3 brush passes.



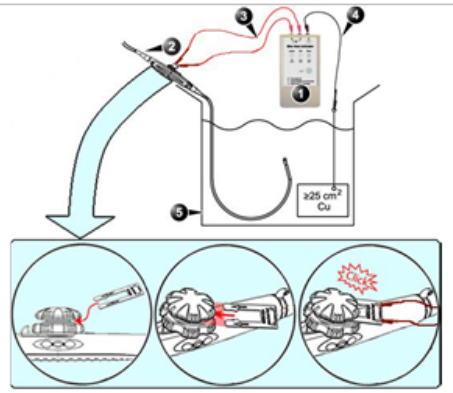
15. Insert the long cleaning brush [11276 CL2] into the Instrument port and push through the channel until the brush exits the distal end. Remove debris from the bristles prior to pulling the channel brush back through. Repeat 2 times for a minimum of 3 brush passes.

Cover all devices

Transesophageal Probe Handling and Processing Competency Check-off

	Technicians Name:	Initials	Date
	TEE Transportation and Prep		
1.	Wash hands		
2.	Put on gloves		
3.	Retrieve clean probe from probe cabinet		
4.	Visually inspect the probe confirming that it is free of debris, and functioning		
5.	Place in approved cover/shield or clean impervious container. Transport safely to OR room, carrying case carefully and ensuring contamination does not occur.		
6.	Leave Transport Container or designated transport bag in the OR room, with cover, and sponges for post case care.		
	TEE Probe Pre-Cleaning & Containment of DIRTY Probe		
1.	Don appropriate PPE (clean gloves, eye protection, gown) prior to receiving the probe from the physician, upon completion of use retrieve probe from care team		
2.	Clean surface of the probe using the designated PRE clean Enzyme Sponge from the transporter Kit. Dispose of sponge upon completion of Pre cleaning step.		
3.	Place the Probe into the designated transport cover/bag or over the Probe with the Biohazard probe cover. Seal the bag/container. Remove Dirty Gloves and discard		
4.	Carry the TEE probe to reprocessing room		
	TEE Probe Cleaning – Designated Processing Area		
1.	Put on gown, face shield and designated clean gloves (PPE), , prepare supplies		
2.	Fill blue tub or sink with 1 fluid oz. of enzyme cleaner to 1 gal. of water (per manufacturer's instructions on selected approved detergent)		
3.	Remove TEE probe from impervious container/bag and rinse with large amount of lukewarm running water. Approximately 1 minute.		
4.	Submerge TEE probe (*distal end and submersible tip*) in saline solution for testing.		
5.	With transducer in saline solution, do conductivity test, flexing probe following manufacturer's instructions (see GE TEE Probe User Manual) • Using the GE Bite Hole Indicator Device place the RED Leads onto the metal around the pins of system connector (6T/6Tv/9T) • Connect the BLACK leads to the copper plate immersed in saline solution, 0.9% saline solution should be used for testing  • Using the Bite Hole Detection device complete the endoscope integrity test by placing RED leads connected to the test fork. The test fork is snapped in place between the deflection wheels. Place the BLACK Lead on the copper plate immersed in the saline solution.		

Transesophageal Probe Handling and Processing Competency Check-off

	 ✓ Immerse Probe into saline solution above the 40 cm mark and secure the probe ✓ The probe endoscope must be immersed for at least one minute before running the test ✓ Connect the indicators as shown above to run 2 of 2 tests for 6VT-D model.		
6.	Once testing is completed place probe in prepared enzymatic solution and follow soaking parameters set by the detergent manufacturer. *(Over exposure to the cleaner can damage the probe. Do not submerge probe control apparatus in cleaner)* Use clean lint free cloth/sponge to clean head of probe after soak time completed.		
7.	Rinse the probe thoroughly with large amounts of water to remove all detergent solution and cleaning solution, debris or soil.		
8.	Dry the flexible shaft of the probe with a soft towel or drying cloth, lint free.		
9.	Clean the probe cable, handle & control apparatus; by wiping the cable with soft cloth lightly moistened with enzymatic detergent and water. Always clean the cable from connector toward the middle of the cable. Hold the connector at a higher level than the cable to prevent fluid invasion. Rinse the cable by wiping with another cloth lightly wet with water. (*Probe handle is not submersible or water proof and attention to avoid fluid ingress in any parts of this during cleaning or disinfection procedures)*		
10.	Disinfect the handle and cable by using approved low level intermediate disinfection wipes approved by facility. *(recommended germicides are listed in the probe care card)*		
11.	Disinfect the control apparatus and adaptor by wiping with approved low level intermediate disinfection wipes approved by facility.		
12.	Place probe on lint free linen or designated clean cloth/workspace. Dry with approved lint free cloth or drying cloth to ensure all parts of probe are completely dried.		
13.	Visually inspect that the probe is clean and has no debris. If any debris is noticed repeat soak and cleaning. If probe is still not clean, disinfect and notify Bio-Med. If probe is visually clean you can now move to the disinfection steps.		
14.	Place linen in hamper and drain and disinfect tubs/sinks with approved wipes. Clean area and disinfect counter tops. Ensure supplies are put away and PPE is donned.		

The Good the Bad and the Ugly Nightmares from the field


SP
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MEDIVATORS
AL
AU
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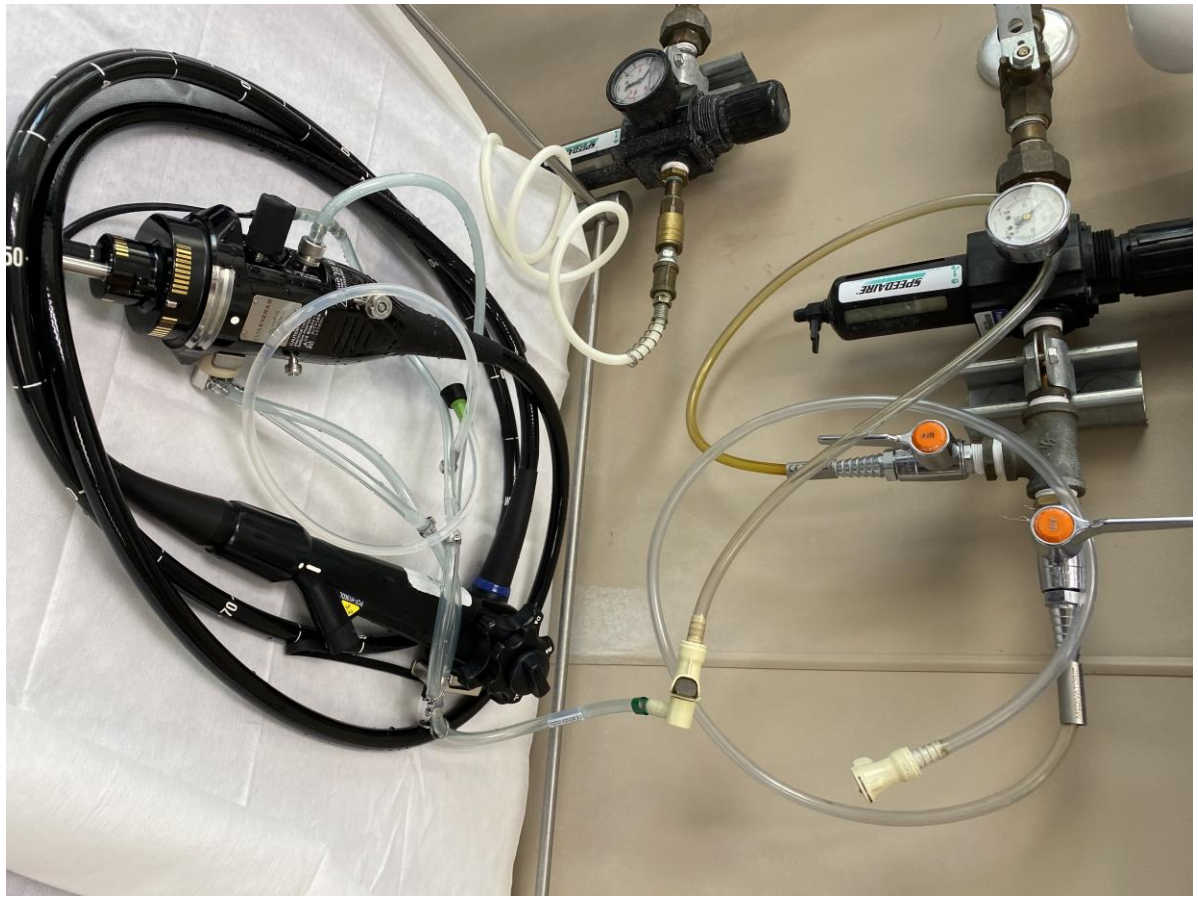
SPEEDAIRE
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A
B
C
D
E


10M
PREOP
GEN. SURG.


CAUTION
OLYMPUS MU-1
ON
OFF


CUSTOM
ULTRASONICS
BAY 1
Cidex OPA changed on
5/12/23
Do NOT use after
5/26/23

All the Questions asked.....

SNGA's Response

Society of Gastroenterology Nurses and Associates, Inc.

FAQ Webinar

Is it acceptable to store endoscopes in clean container, covered in the procedure room for future procedures?

- Per SGNA Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes, "Endoscopes must be stored in an area that is clean, well-ventilated and dust-free in order to keep the endoscopes dry and free of microbial contamination. An endoscope that is not dry must be reprocessed before use. Endoscopes should also hang freely so that they are not damaged by physical impact. Endoscopes should be stored in accordance with the endoscope and storage cabinet manufacturers' IFU."

What is rational for scopes not touching each other when hanging in cabinets?

- Per SGNA Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes, "In conventional storage, hang endoscopes in a vertical position (with caps, valves, and other detachable components removed) to prevent moisture accumulation and subsequent microbial growth. Make sure that they hang freely so they are not damaged by contact with one another."

Society of Gastroenterology Nurses and Associates, Inc.

FAQ Webinar

What is the alcohol concentration we should use for flushing? 70%?

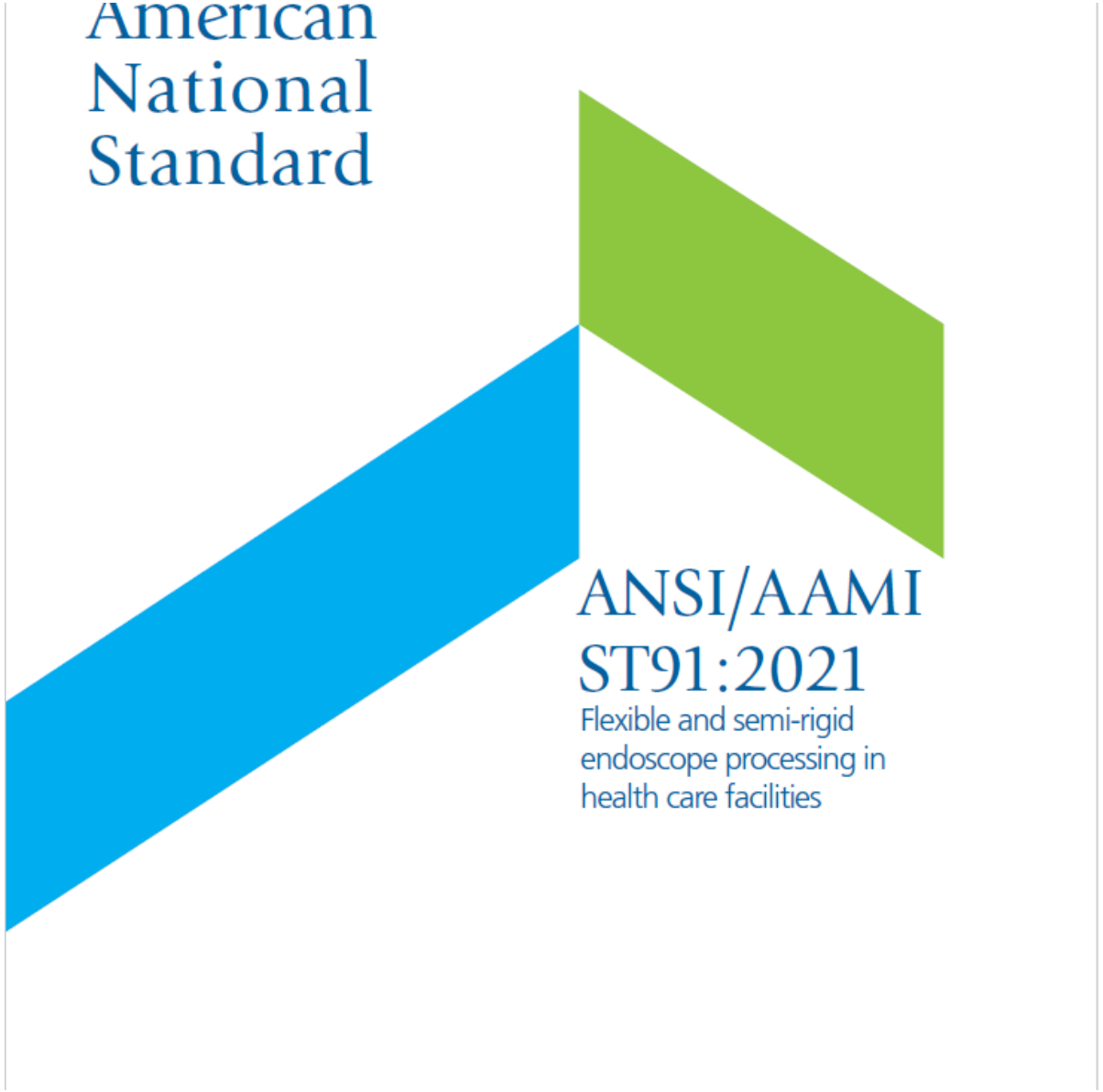
- Correct. Refer to endoscopy manufacturer's instructions.

Why is pre cleaning not the most important step?

- Pre-cleaning is an essential step to remove gross soil immediately after point of use. The mechanical activity of manual cleaning (where brushing occurs) is most important because it completes cleaning. Per the SGNA Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes, "Manual cleaning of endoscopes is necessary prior to automated/manual high-level disinfection or sterilization. This is the most important step in removing the microbial burden from an endoscope. Retained debris contributes to biofilm development (Fang et al., 2010) and interferes with the HLD capability to effectively kill and/or inactivate microorganisms (Roberts, 2013). Manual cleaning and thorough brushing of channels are required even when AER manufacturers claim that manual cleaning is unnecessary (FDA, 2009)."

References and Resources

1. *Flexible and Semi-rigid Endoscope Processing in Health Care Facilities*. (2022).
2. *Flexible Endoscope Reprocessing | HICPAC | CDC*. (2019, May 24). Www.cdc.gov. https://www.cdc.gov/hicpac/recommendations/flexible-endoscope-reprocessing.html
3. Service, C. (2017). *HSPA Endoscope Reprocessing Manual Workbook*.
4. Bashaw, M. A. (2016). Guideline Implementation: Processing Flexible Endoscopes. *AORN Journal*, *104*(3), 225–236.
5. *Essential elements of a reprocessing program for flexible endoscopes, recommendations of the healthcare infection control practices advisory committee, 2016. CDC.*
6. *Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes, SGNA, February 23, 2016*



Unseen threats:
lumens 2.0 study”