01.10 Endoscopes

Purpose

To assure proper use and processing of endoscopes between patients

Audience

Endoscopists, endoscopy nurses and endoscopy staff who clean and disinfect/sterilize endoscopes.

Personal Protective Equipment

- Clean gloves, gown and face shield will be worn by all healthcare workers involved in the endoscopy procedure.
- Hands will be washed just prior to donning gloves and again when doffing gloves.
- Gloves will be changed if hands touch a contaminated surface during the procedure.
- If the nurse assigned to the procedure is responsible for only delivering medication to the patient and circulating during the case, gloves only are required.

Scope Cleaning

- Immediately after use, the contaminated endoscope will have water suctioned through it until secretions are no longer present in the water. The air water channel will be cleared by depressing the air/water valve.
- If endoscopes and/or accessories cannot be processed immediately, they will be placed in a container of enzymatic cleaning solution until they can be cleaned according to established procedure.
- An enzymatic detergent will be utilized for cleaning all endoscopes and accessories, following manufacturer's guidelines for use.
- An EPA-registered liquid cold sterilant/disinfectant solution will be utilized for all endoscopes and compatible accessories for high level disinfection.
- Endoscopes shall be sterile when introduced into a sterile field in open abdominal procedures.
- Accessories not processed with a cold sterilant/disinfectant will be steam autoclaved or exposed to peracetic acid in the appropriate chamber as per departmental procedure.
- All UTMB employees responsible for endoscope reprocessing will receive in-depth training on cleaning and processing endoscopes and accessories as part of the orientation to the department. Staff members involved in processing of endoscopes and ancillary

equipment will wear gloves, fluid resistant gowns, face protection and protective eyewear.

- All endoscopes and accessories will be thoroughly cleaned prior to application of any method of high-level disinfection and/or sterilization.
- All endoscopes and accessories will be inspected for damage and/or water leaks and will be removed from service if damage has occurred that renders the equipment inoperable or poses a threat to the well-being of patients.

Procedure for Reprocessing

OES Endoscopes and Video Endoscopes

- Attach scope leak tester and check for leaks.
- Connect the suction tubing to the endoscope.
- Place the immersible endoscope in the enzymatic cleaning solution.
- Depress the suction valve to suction the solution through the channels of the endoscope.
- Using a cloth soaked in the cleaning solution, thoroughly wash the entire length of the endoscope tube, beginning with the area nearest the control body.
- Remove the biopsy valves, and clean the various orifices with a cotton tip applicator until clean. Place the air/water valve, suction valve and biopsy forceps cover in the cleaning solution.
- Utilizing a cleaning brush, insert the brush through the biopsy channel and brush through the entire length of the channel. When the brush protrudes from the distal end of the insertion tube, clean the brush in the cleaning solution and withdraw the brush. This process should be repeated at least twice or until no particulate matter is noted on the brush. Repeat the procedure for the umbilical cord and the distance from the suction channel to the biopsy channel.
- Connect the all channel irrigator to the endoscope, remove the leak tester from the maintenance unit and completely immerse the entire endoscope (including umbilical cord) in the cleaning solution and suction solution until clear.
- If an automatic scope washer is to be used, place the scope into the washer and cycle per manufacturer's specifications.

- Clean and rinse the air/water valve, biopsy forceps cover, and suction valve.
- Remove the endoscope from the cleaning solution and place in clean water for rinsing.
- Follow the same steps for rinsing the endoscope as those used for cleaning the endoscope. Use clean, fresh water for each step.

High level Disinfection

- Place the endoscope in the cold sterilant/disinfectant solution, and utilizing the all channel irrigator, fill all the channels with the solution by flushing them with at least 100cc's of the solution.
- Soak the endoscope in a disinfectant (Cidex OPA) according to manufacturer's recommendations (see policy: Reprocessing of Patient Care Equipment and Medical Devices).
- After the recommended exposure time is completed, remove the endoscope from the cold sterilant disinfectant solution and repeat the steps for rinsing the endoscope.
- Remove the excess water from the suction channel and biopsy channel by connecting the suction tubing to the endoscope and suctioning while holding the top of the endoscope out of the water.
- Use alcohol to aid in the drying process. Utilizing the all channel irrigator, fill all the channels by flushing them with at least 100cc's of alcohol.
- Hang the scope on the rack and attach the light guide to the maintenance unit. Attach air/water cleaning device to blow alcohol from the channels. High pressure air supply from the wall may also be used.
- Manually dry the endoscope and hang to store.

Sterilization

- An endoscope shall be sterilized using the Steris System processor.
- The endoscopes shall be sterilized immediately prior to introduction to the sterile field. The Steris processing system shall be used by following the manufacturer's recommendations.
- The Steris portable case that contains the sterilized endoscope shall be retrieved by the scrub person from the Steris Room and

transported directly to the operating suite. The lid shall be removed only when the endoscope is ready to be taken out of the case.

- The sterilized endoscope inside the sealed Steris portable case is considered sterile for immediate patient use only. The endoscope shall be processed again if humidity is allowed to build up inside the container.

Fluid Containers/Water Bottles

- Wash and rinse disassembled fluid containers/water bottles.
- Submerge fluid containers in Cidex OPA for high-level disinfection.

Mouth Guards (Bite Block)

- If the guard is disposable, discard after procedure.
- Reusable guards should be processed as follows:
    - Place in enzymatic cleaning solution.
    - Utilizing a brush, brush all surfaces thoroughly.
    - Rinse thoroughly in clean water. Inspect for damage and or cracks.
    - Send to Sterile Processing for sterilization.
    - As an alternative, in addition to cleaning and rinsing steps as described, the mouth guard may be processed through the ultrasonic system.
    - Mouth guards may also be reprocessed using high-level disinfection (Cidex OPA) instead of steam sterilization.

Air/Water Valves, Suction Valves, Biopsy Channel Covers

- Place in enzymatic cleaning solution.
- Utilizing a cleaning brush and/or Q-tip, brush all surfaces thoroughly and remove debris from holes and crevasses.
- Remove and rinse thoroughly with clean water.
- Place in cold sterilant/disinfectant solution per manufacturer's recommendations (Cidex OPA).

- After the recommended exposure time, remove from solution and rinse thoroughly in tap water.
- Dry thoroughly and inspect for excessive wear and/or damage.
- Using silicone oil, place a drop of oil on the slide mechanism and the O rings of the valves.
- Store in appropriate areas.

Biopsy Forceps, Hot Biopsy Forceps and Rat Tooth Forceps

- Place in enzymatic cleaning solution.
- Using a cloth saturated in cleaning solution, thoroughly wash down the length of the forceps, beginning with the handle.
- Open the cups and gently brush the inside of the cups.
- Rinse thoroughly in clean water.
- Using silicone oil, place a drop of oil on cup hinges and slide mechanism of handle and work the oil in by opening and closing the cups.
- Send to Sterile Processing for sterilization.

Snares

- Most snares are disposable. They are patient specific and are not reused.

Tripods, Grasping Forceps and Baskets, reusable snares

- Place in enzymatic cleaning solution.
- Disassemble if structure allows.
- Using a cloth saturated in cleaning solution, thoroughly wash down the length of the forceps, beginning with the handle.
- Move handle to open position and gently brush the exposed wires.
- Remove and rinse thoroughly in clean water.
- The items are then sent to Sterile Processing for sterilization.

Endoscope Care Check-off form

Processing Steps:	Date:	By Whom
Gross Preliminary Cleaning - Used endoscopes shall be pre-cleaned for gross contaminants in the operating room, whenever possible. Water should also be suctioned through the scope until clear.		
Delayed cleaning – If the endoscope and/or accessories cannot be processed immediately: they are placed in a container of enzymatic cleaning solution until they can be cleaned.		
Leak Testing – Attach scope leak tester and check for leaks (visible bubbles when submerged). Remove leak tester when finished task.		
Disassembly - Disassemble all components of the endoscope and immerse in enzymatic cleaner.		
Exterior cleaning – Clean exterior of scope with sponge/cloth soaked in cleaning solution.		
Cleaning Brush – Insert the cleaning brush through the biopsy and suction channels and brush the entire length of the channels. When the brush protrudes from the distal end of the insertion tube, clean the brush in the cleaning solution and withdraw the brush. This process is repeated until no particulate matter is left.		
Flushing/Suction – Flush all channels with syringes (60cc) of enzymatic cleaner, followed by suctioning cleaning solution through channels until clear.		
Valve cleaning – Clean the various orifices and valves with cleaner soaked cotton tip applicators or smaller brushes until clean.		
Rinsing – Remove the endoscope from the cleaning solution and place in clean water for rinsing. (Uses same steps as cleaning with fresh water for each step) Repeat for all plugs, valves, forceps brushes and any other pieces.		
Discard used cleaner solution – Used enzymatic cleaner is discarded.		
High Level Disinfecting (HLD) – The clean endoscope is processed in the automated Olympus (HLD) processor according to manufacturer's instructions. The proper steps have been demonstrated according to attached HLD check-off.		
Final Rinsing/Drying – Remove scope and repeat water rinsing process, flush channels with at least 100 cc's of alcohol, then dry with forced air.		
Steam sterilized items – If applicable, any used biopsy forceps or grasping forceps are packaged and steam sterilized. Any water bottle used will be steam sterilized.		
Storage – Endoscopes shall be hung in a vertical position to ensure adequate drying and the least damage to the endoscope.		
Documentation – The disinfection process is documented in the appropriate log book to include scope identification, date, process, and staff name.		

I have completed the endoscope care validation process and understand the steps of proper care:

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Check-off for High Level Disinfectant of Endoscopes:

Processing Steps:	Date:	By Whom
Confirm readiness for HLD – Confirm that the basic cleaning steps have been performed and that all valves have been removed from scope. Discard any **disposable** valves as needed.		
Connecting ports – Connect scope ports with appropriate connectors (see DSD Connector Guide Illustration).		
Basin Positioning – Place endoscope in reprocessor's basin with loose coil of cord; control section in right rear of basin, light guide approximately left front of basin, and distal end in right front of basin. (The floating lid must rest properly on the basin's ledge without protrusion.		
Basin connector – Attach endoscope connector to basin connector with no kinks or bends in tubing (see illustrations).		
Connection of leak test adaptors and any waterproof caps – Connect leak tester between endoscope and basin outlet. Place any necessary waterproof caps on scope (see illustrations).		
Lid closure – Check that connections and plugs are secure (not protruding) and close floating lid then basin cover.		
Station Select – Choose station A or B.		
ID Data Entry – Enter endoscope serial number, then operator, patient, and physician ID numbers.		
Selects Disinfection Program – Select) for default or 1 – 9 for custom disinfection.		
Start Disinfection – Press start key.		
Completion – Open cover, remove lid. Remove connectors then endoscope.		