OLYMPUS

Society Guidelines Compilation

AER

Drying

Education

Manual Cleaning

Physical Separation

Record Keeping

Storage

Traceability

Transport

LCR28483V01

Automated Endoscope Reprocessors (AER)

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Connectors	If an AER is used, place the endoscope and endoscope components in the reprocessor and attach all channel connectors according to the AER and endoscope manufacturers' instructions to ensure exposure of all internal surfaces with the high-level disinfectant solution. Only approved connectors should be used. Category IB (pg 8)	Follow the manufacturer's instructions to ensure exposure of all internal surfaces with the high-level disinfectant solution… Place the endoscope in the reprocessor, and attach all channel adapters according to the manufacturer's instructions...Users should check with their endoscope manufacturer for model-specific information such as the elevator position on duodenoscopes during HLD...Place valves and other removable parts into the soaking basin of the reprocessor. Unless the reprocessor has a dedicated space for accessories, reprocess these items separately. (pg22-23)	Processing personnel should ensure all connectors between the endoscope and the mechanical processor are connected correctly. (VIII.c.3.)	When an endoscope is to be processed in an AER using an LCS/HLD (including multi-use or single-use), the device connectors should be correct for the specific brand and model of endoscope. Personnel should ensure that all endoscope channels are connected according to the manufacturer's written IFU, and that any support tray or accessories used are for the endoscope brand and model being processed. (5.7.3.)
Interruptions in Cycle	If an AER cycle is interrupted, HLD or sterilization cannot be ensured; therefore, the cycle should be repeated. Category II (pg 8)	If the AER cycle is interrupted, HLD or sterilization cannot be ensured; therefore, the cycle should be repeated (Peterson et al., 2011). (pg 22)	Processing personnel should monitor mechanical processing cycles to verify they are completed as programmed. If a mechanical processing cycle is interrupted, the entire cycle should be repeated. (VIII.c.4.)	If an AER cycle is interrupted, liquid chemical sterilization/high-level disinfection of the device cannot be ensured; therefore, the cycle should be repeated. (6)
Manual Cleaning	There are new high-level disinfectants and agent specific machines in the marketplace. Information regarding these technologies should be obtained from the FDA website and independent peerreviewed publications. Use a high-level disinfectant and compatible reprocessing machine cleared by the FDA for their respective HLD claims (pg 7)	The FDA has approved labeling some AERs as washer-disinfectors, which do not require prior manual cleaning and channel brushing. While the introduction of automated, brushless washing of endoscope channels represents a potentially significant advancement, the existing multi-society guideline (Petersen et al., 2011) and other international standards emphasize that manual cleaning and brushing are still necessary when a washer-disinfector is used in order to assure the overall efficacy of HLD. The redundancy achieved by adding an automated washing step following manual cleaning can undoubtedly provide an extra level of safety. Users are cautioned about dispensing with manual cleaning endoscope reprocessing and brushing steps before the capabilities of the new machines are confirmed in independent studies and in clinical practice (Alfa, Olson, & DeGagne, 2006; ASGE, 2008). Further studies in clinical settings are warranted for these technologies (Petersen et al., 2011). (pg 21)	After precleaning and leak testing, and when directed by the mechanical processor manufacturer's IFU, mechanical processing may be accomplished without manual cleaning. (VIII.b.1.)	Some AERs use high pressure and flow rates to perfuse the endoscope channels, bathe the exterior of the endoscope, and circulate the LCS/HLD solution continuously during the exposure period. Most AERs also include automated cleaning and rinse cycles. The automated cleaning cycle is not intended to replace point of use precleaning or thorough manual cleaning of the endoscope prior to placing it into the AER. The AER manufacturer's written IFU should be compared to the endoscope manufacturer's written IFU. If there are discrepencies between the two, a decision should be made based on information that can be acquired from both companies. (6)

Drying

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Drying Cabinet	No position	Endoscopes should be stored in accordance with the endoscope and storage cabinet manufacturers' IFU. (pg 25) When using drying cabinets, follow the cabinet manufacturer's instructions. (pg 26) When using drying cabinets, follow the cabinet manufacturer's instructions. Since drying does not rely on gravity, the endoscopes can be stored horizontally or vertically depending on the design of the cabinet. (pg 26)	Flexible endoscopes should be stored in a drying cabinet. (IX.b.1.) If a drying cabinet is not available, flexible endoscopes may be stored in a closed cabinet with HEPA-filtered air that provides positive pressure and allows air circulation around the flexible endoscopes (IX.b.2.)	Special storage cupboards or cabinets designed for endoscopes are commercially available that assist the drying process by means of special ventilation methods, using filtered air or container systems. Regardless of whether a special cabinet is used, the temperature and humidity in the area where the scopes are stored should be monitored. (10.1)
Drying with Alcohol	Flush the channels with 70% to 90% ethyl or isopropyl alcohol and dry using filtered forced air. The final drying steps greatly reduce the risk of remaining pathogens and the possibility of recontamination of the endoscope by waterborne microorganisms. Some organizations stipulate use of "instrument air," which is further characterized relative to humidity, vapors, and so on. Category IA (pg 8)	In order to ensure that endoscopes are thoroughly dried, they must be flushed with 70% to 90% isopropyl alcohol and dried with pressurized, filtered, air (either by AER or manually) (page 24)	A multidisciplinary team that includes infection preventionists, endoscopy and perioperative RNs, endoscopy processing personnel, endoscopists, and other involved personnel should conduct a risk assessment to determine whether endoscope lumens should be flushed with 70% to 90% ethyl or isopropyl alcohol. (VIII.g.)	Drying should be facilitated by using 70–80% ethyl or isopropyl alcohol. When using alcohol, personnel should follow the manufacturer's written IFU on the volume of alcohol and method to be used for each endoscope lumen and ensure any remaining alcohol is removed with medical-grade forced air until no visual signs of moisture remain (or as otherwise recommended by the endoscope manufacturer). (5.7.4.3.)

Education

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Reprocessing Competencies	All healthcare personnel in the endoscopy suite should be trained in and comply with standard infection prevention and control recommendations (eg, standard precautions), including those to protect both patients and healthcare workers. Category IA (page 7) Personnel assigned to reprocess endoscopes should receive device-specific reprocessing instructions (ie, endoscope and/or AER manufacturer, as needed) to ensure proper cleaning and HLD or sterilization. Competency testing of personnel that reprocess endoscopes should be performed and documented on a regular basis (eg, commencement of use, at least annually, any time a breach is identified, when a major technique or new endoscope or reprocessing equipment is introduced, and in the context of local quality control efforts). Training and competency testing should include recognition of excessive wear or damage to instruments. Temporary personnel should not be allowed to reprocess endoscopes until competency has been established. Category IA (pg 8)	Reprocessing personnel should accomplish the following: Understand the rationale and importance of each step in reprocessing; Be able to read, understand, and implement the manufacturer's instructions on the proper cleaning and high-level disinfection of gastrointestinal endoscopes and accessories (ASTM International [ASTM], 2007; AAMI, 2010) Demonstrate competency for all steps of endoscope reprocessing, including proper use of automatic endoscope reprocessing systems and other equipment at least annually (AAMI, 2015; AORN, 2015; Petersen et al., 2011; Rutala & Weber, 2014); Undergo more frequent validation of competency for specialty endoscopes that are used infrequently; Complete reprocessing training with documented competency for new models of endoscopes, accessories, valves, and automatic endoscope reprocessors as soon as they are introduced in the facility (AAMI, 2015; AORN, 2015); Complete all endoscope reprocessing meticulously and efficiently, maintaining strict adherence to reprocessing protocol (Edmiston & Spencer, 2014). Immediately report any breaches in reprocessing according to facility policies and protocols. Understand the safety hazards of endoscope reprocessing and take appropriate action to protect oneself and others. (pg 9)	Flexible endoscopes and endoscope accessories should be cleaned and processed by individuals who have received education and completed competency verification activities replated to endoscope processing. (II.k.) Education and competency verification activities related to processing flexible endoscopes and accessories should include: controlling and maintaining an environment that supports processing actions, precleaning at the point of use, transporting, leak testing, manual cleaning, inspecting, HLD, liquid chemical sterilization, packaging and sterilization, storage, maintaining records of processing and procedures for traceability, and quality assurance measures. (XI.b.)	It is recommended that all personnel performing processing of endoscopes be certified as a condition of employment. At a minimum, personnel should complete a certification exam.(4.3) Competency verification activities should include monitoring processing personnel for their: n) compliance with facility policies and procedures and manufacturer's written IFU for each type of endoscope reprocessed at the facility, and o) level of proficiency in processing procedures. (4.3) Personnel involved in endoscope processing should be provided education, training, and complete competency verification activities related to their duties upon initial hire; annually; at designated intervals; or whenever new endoscopic models, new processing equipment, or products such as new chemicals are introduced for processing. Processing activities should be closely supervised until competency is verified and documented for each processing task, from cleaning through storage of the endoscope. (4.3) Education, training, and competency verification activities should be provided and documented for all processing personnel on procedures for processing of all endoscopes, and use of all AERs and sterilizers used at the facility. (4.3.)

Manual Cleaning

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Brushes	No Position	Clean and high-level disinfect reusable brushes between cases. Note that reusable brushes should be inspected between uses and replaced when worn, frayed, bent, or otherwise damaged. Worn bristles are ineffective in cleaning, and damaged brushes may damage endoscope channels. (pg 17)	A clean brush should be used for each endoscope cleaning. Brushes and other items used to clean endoscope channels should be visually inspected before use and should not be used if the integrity of the brush or other cleaning item is in question (VI.g.2.)	Cleaning brushes should either be single use and disposed of or reusable and receive high-level disinfection or sterilization after each use, according to their written IFU. (5.5)
Brushing Channels	Flush and brush all accessible channels to remove all organic (eg, blood or tissue) and other residues. Repeatedly actuate the valves during cleaning to facilitate access to all surfaces. Clean the external surfaces and components of the endoscope using a soft cloth, a sponge, or brushes. Category IB (pg 7)	Brush all accessible endoscope channels, as well as the body, insertion tube, and the umbilicus of the endoscope. Use a brush size compatible with each channel. All internal and external surfaces of the endoscopy and its removable parts must be thoroughly cleaned, and all auxiliary channels (even if not used) must be brushed and flushed according to the manufacturer's specific instructions for each endoscope model (Peterson et al., 2011; SGNA, 2013). (pg 17)	The accessible channels of the endoscope should be brushed multiple times until no debris appears on the brush. Debris should be removed from the brush before the brush is retracted back through the channel and after each pass by swirling the brush in the cleaning solution and rinsing it. (VI.g.3.)	Brush all channels according to the endoscope manufacturer's written IFU until there is no visual debris (5.5)
Drying Exterior	No Position	Dry the exterior of the endoscope with a soft, lint-free cloth to prevent dilution of the HLD used in subsequent steps. (pg 18)	The exterior surfaces of the endoscope should be dried with a soft, lint-free cloth or sponge and all channels purged with instrument air. (VI.j.)	Dry the exterior of the endoscope with a lint-free cloth or sponge. (5.6.)
Temperature	No Position	Reprocessing has certain characteristics that impede its effectiveness, which include:... Inadequate enzymatic concentration, temperature, or time (pg 8)	Cleaning solutions should be changed when the temperature of the solution does not meet the temperature specified in the manufacturer's IFU. A digital temperature measuring device may be used to monitor the temperature of the cleaning solution. (VI.d.6.)	The temperature of the cleaning solution should be monitored and documented. (5.5)
Timing	Manual cleaning should occur within the manufacturer's recommended time frame. When cleaning is delayed beyond this interval, the manufacturer's directions for delayed processing should be followed.	All steps should be completed sequentially and immediately following the procedure. Refer to the manufacturer's recommendations for delayed re-cleaning and reprocessing. (pg 18)	Manual cleaning should occur as soon as possible after leak testing (VI.a.)	Manual cleaning starts after confirming that the endoscope does not have any leaks and should be conducted as soon as possible after use to prevent soil from drying on the device (5.5.)

Physical Separation

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Manual Cleaning	It should be noted that infection control and the architectural layout of the endoscopy unit are intertwined. Endoscopy unit infection control policies should address procedure room work areas, reprocessing rooms, the separation of soiled and clean tasks and the flow of soiled and clean equipment through the unit, and the handling of specimens, tissues, soiled linens, and contaminated wastes should conform to both state and national regulatory guidelines. The physical design of the endoscopy unit and rooms significantly influences whether these infection control issues can be adequately and efficiently addressed.	The reprocessing area should be physically separated from the patient procedure rooms (AAMI, 2015; Alvarado & Reichelderfer, 2000). The area must be specifically designed and dedicated to address reprocessing activities of decontamination and disinfection (Beilenhoff et al., 2008; Facilities Guidelines Institute [FGI], 2014; Joint Commission, 2014). The area should be restricted to authorized personnel. The physical space should be an appropriate size in relation to the volume of equipment processed and the reprocessing equipment specifications. Space should be adequate to allow for the manual cleaning and rinsing of devices during decontamination. The work area identified should be sufficient so that “dirty” areas are physically separated from “clean” areas. The reprocessing work flow should be from dirty to clean to avoid cross-contamination (Petersen & Ott, 2008). There should be clean and soiled utility areas located outside of the reprocessing room.	Limiting endoscope processing activities to designated processing rooms may help prevent contamination of procedure rooms and patient care areas. I.b. Endoscope processing may occur in a single endoscopy processing room or in two separate rooms (ie, decontamination room, clean work-room) as shown in Figure 3.11 [3: Moderate Evidence] During the infection control risk assessment, a multidisciplinary team that includes infection preventionists, endoscopy and perioperative RNs, sterile processing personnel, endoscopists, and other involved personnel should determine the potential harms compared with the benefits of performing decontamination and clean activities in separate rooms. I.b.2. An endoscopy processing room with a one-room design should provide a minimum of 3 ft (0.9 m) between the decontamination area and the clean work area and either a separating wall or a barrier that extends a minimum of 4 ft (1.2 m) above the sink rim to separate soiled work areas from clean work areas. [3: Moderate Evidence] Having a wall or physical barrier for separation of the decontamination area provides protection and minimizes the potential for contamination of clean and processed flexible endoscopes.	"Adequate space shall be provided to allow for the manual cleaning and rinsing of devices during decontamination. Although a number of automated endoscope reprocessors (AERs) or washer-disinfector designs claim to be able to clean and disinfect in one processing cycle, many endoscope designs may still require a point-of-use precleaning step and cleaning (to include lumen brushing) according to the endoscope manufacturer’s or AER manufacturer's written IFU. If the AER is cleared for cleaning and high-level disinfection, consult with the AER manufacturer and the health care facility’s infection preventionist for guidance on the location of the AER. It is optimal that the manual cleaning area is physically separated by walls or partitions to control contaminants generated during manual cleaning. Doors and pass-through windows separating the decontamination area from the adjoining disinfection/sterilization area should remain closed. An area should be defined for disinfection/ sterilization that is separate from the manual cleaning/processing area. For manual processing, this could include a designated area for the immersion of the device for disinfection followed by rinsing in accordance with the disinfectant manufacturer’s written IFU. For automated processing, the AER, washerdisinfector, or sterilizer forms an essential barrier between the dirty and clean areas of the processing area. Strict unidirectional processing procedures should be in place to reduce risks of cross-contamination following an antimicrobial process. This should include a designated drying area, when applicable, to dry the device prior to patient use, storage, or in preparation for packaging and gaseous sterilization."
Unidirectional Flow	It should be noted that infection control and the architectural layout of the endoscopy unit are intertwined. Endoscopy unit infection control policies should address procedure room work areas, reprocessing rooms, the separation of soiled and clean tasks and the flow of soiled and clean equipment through the unit, and the handling of specimens, tissues, soiled linens, and contaminated wastes should conform to both state and national regulatory guidelines. The physical design of the endoscopy unit and rooms significantly influences whether these infection control issues can be adequately and efficiently addressed.	The reprocessing area should be physically separated from the patient procedure rooms (AAMI, 2015; Alvarado & Reichelderfer, 2000). The area must be specifically designed and dedicated to address reprocessing activities of decontamination and disinfection (Beilenhoff et al., 2008; Facilities Guidelines Institute [FGI], 2014; Joint Commission, 2014). The area should be restricted to authorized personnel. The physical space should be an appropriate size in relation to the volume of equipment processed and the reprocessing equipment specifications. Space should be adequate to allow for the manual cleaning and rinsing of devices during decontamination. The work area identified should be sufficient so that “dirty” areas are physically separated from “clean” areas. The reprocessing work flow should be from dirty to clean to avoid cross-contamination (Petersen & Ott, 2008). There should be clean and soiled utility areas located outside of the reprocessing room.	I.c. The endoscopy processing room should be designed to facilitate a unidirectional workflow from the decontamination area or decontamination room to the clean area or clean workroom and then to clean storage in a separate location. [2: High Evidence] A unidirectional flow improves efficiency and helps to contain contaminants within the decontamination area or decontamination room.	An area should be defined at the incoming end of the unidirectional flow process for the receipt and temporary holding of devices before cleaning. If a lift is used for transport, it should be dedicated to the transport of either clean or contaminated items only.

Record Keeping

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Record Types	Maintain a log for each procedure indicating the patient's name and medical record number (if available), the procedure and serial number or other identifier of the endoscope (and AER, if used), the date and type of the procedure, along with the name of the person performing the cleaning and HLD/sterilization process to assist in an outbreak investigation. Logs for transmission identification and reporting should include identifiers and use of specific loaner endoscopes that may be added to local inventories on a temporary basis. Category II	Quality assurance is essential to the continued safety and effectiveness of endoscope reprocessing. Health care facilities must have documentation that may include but is not limited to the following: procedure date and time, patient's name and medical record number, endoscopist's name, endoscope model and serial number or other identifier, AER (if used) model and serial number or other identifier, names of individuals who reprocessed the endoscope (Peterson et al., 2011). Other documentation essential for infection control includes information and audits about reprocessing activities, equipment performance and maintenance records, and records verifying that high-level disinfectants were tested and replaced appropriately. Maintaining documentation of reprocessing activities (e.g. AER maintenance records; test results verifying HLD concentration, reuse life, etc.) (CDC 2015). Detailed records are essential for recognizing a reprocessing error, identifying all endoscopes affected by that error, naming individual patients who could be at risk (Weber & Rutala, 2013); (pg 10)	Records related to flexible endoscope processing should include the: date and time, identity of the endoscope and endoscope accessories, method and verification of cleaning and results of cleaning verification testing, number or identifier of the mechanical processor or sterilizer and results of process efficacy testing, identity of the person(s) performing the processing, lot numbers of processing solutions, disposition of defective items or equipment, and maintenance of water systems, endoscopes and endoscope accessories, and processing equipment (X.a.)	Maintain records of the use of each endoscope, including model, serial number, and unique facility identifier or standardized UDI. • Records should document the patient upon whom the endoscope was used, the date and time of use, the location of use, and the type of procedure performed. • Records should also show the system (model and serial number of the AER or sterilizer if applicable) used to reprocess the endoscope and the identification of the person(s) responsible for processing the endoscope. (12.1)

Storage

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Accessories	When storing the endoscope, hang it in a vertical position to facilitate drying (with caps, valves, and other detachable components removed as per manufacturer instructions). Category II	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. (pg 25-26)	Flexible endoscopes should be stored with all valves open and removable parts detached but stored with the endoscope. (IX.d.)	Caps, valves and other detachable components should not be installed on the endoscope during storage. (10.2)
Cabinet Ventilation	Endoscopes should be stored in a manner that will protect them from contamination. In the absence of data linking infection outbreaks to transport or storage and given the limited data on this issue, equipment and practices for storage and equipment for transport should be addressed at the facility level in conjunction with the infection prevention department or consultants. Category II (pg 8)	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. (pg 25)	Storage cabinets should have doors,23 and be located at least 3 ft (0.9 m) from any sink (IX.a.1.) If a drying cabinet is not available, flexible endoscopes may be stored in a closed cabinet with HEPA-filtered air that provides positive pressure and allows air circulation around the flexible endoscopes (IX.b.2.)	Special storage cupboards or cabinets designed for endoscopes are commercially available that assist the drying process by means of special ventilation methods, using filtered air or container systems. Regardless of whether a special cabinet is used, the temperature and humidity in the area where the scopes are stored should be monitored. (10.1)
Hang Time	Although reuse of endoscopes within 21 days of HLD appears to be safe, the data are insufficient to proffer a maximal outer duration for use of appropriately cleaned, reprocessed, dried, and stored flexible endoscopes. This interval remains poorly defined and warrants further study. As noted in the discussion above, some organizations advise shorter intervals. (pg 8)	Length of storage is a controversial issue. A number of researchers have investigated the safety of various lengths of storage. SGNA supports a 7-day storage interval for reprocessed endoscopes-but only if they were reprocessed and stored according to professional guidelines and manufacturer instructions. (pg 25-26)	A multidisciplinary team that includes infection preventionists, endoscopy and perioperative RNs, endoscopy processing personnel, endoscopists, and other involved personnel should establish a policy to determine the maximum storage time that processed flexible endoscopes are considered safe to use without reprocessing. (IX.h.) (Note: no specific storage time referenced.)	Based on the results of the risk assessment, the health care facility should develop policies and procedures to address the maximum endoscope storage time. The facility should define circumstances or conditions that may occur during storage in which an endoscope should be reprocessed before use on the next patient (i.e., likely contamination with a water source, contact with surrounding environment, etc.). Health care facilities should address cases where processing is to be done when the established maximum storage time has been exceeded (i.e., immediate processing or processing before the next patient use). Currently, there are limited data to give a definitive answer as to best practices for this question. Health care facilities should consider the likelihood and the ease of compliance with increased processing and additional wear on the endoscopes. (10.4.3.)
Physical Separation	Endoscopes should be stored in a manner that will protect them from contamination. In the absence of data linking infection outbreaks to transport or storage and given the limited data on this issue, equipment and practices for storage and equipment for transport should be addressed at the facility level in conjunction with the infection prevention department or consultants. Category II (pg 8)	Current local regulations, state codes, and federal guidelines should be incorporated into the design of any reprocessing area. Considerations include adequate space for reprocessing activities, proper airflow and ventilation requirements, work flow patterns, work surfaces, lighting, adequate utilities such as electrical support and water, hand washing and eye washing facilities, air drying capability, and storage.(pg 11)	"Cabinets used for storage of flexible endoscopes should be situated in a secure location in the clean workroom of the endoscopy processing room in a two-room design or in a separate clean area close to, but not within, the endoscopy procedure room (IX.a.) "	A separate area should also be defined and controlled for the storage of devices, either temporarily or more longterm, before patient use. Physical separation of this area from the main processing area is preferred to minimize any risk of cross-contamination during storage. (3.2.2)
Position	When storing the endoscope, hang it in a vertical position to facilitate drying (with caps, valves, and other detachable components removed as per manufacturer instructions). Category II	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. (pg 25-26) When using drying cabinets, follow the cabinet manufacturer's instructions. Since drying does not rely on gravity, the endoscopes can be stored horizontally or vertically depending on the design of the cabinet. (pg 26)	Flexible endoscopes that have been mechanically processed should be stored in a cabinet that is either: designed and intended by the cabinet manufacturer for horizontal storage of flexible endoscopes or of sufficient height, width, and depth to allow flexible endoscopes to hang vertically, without coiling and without touching the bottom of the cabinet. (IX.c.)	The endoscope should be hung vertically with the distal tip hanging freely in a well-ventilated, clean area, following the endoscope manufacturer's written IFU for storage (10.1.) Endoscopes should be stored suspended vertically in a way to allow circulation of air. Endoscopes should hang freely. (10.2)

Traceability

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Single-Use Valves	No Position	Some types of valves are now available as single-use, disposable products (e.g., bronchoscope valves) or steam sterilizable products (e.g., gastrointestinal endoscope valves). (pg 15)	Single-use parts, accessories, and cleaning implements may be used when compatible with the endoscope. (VI.l.)	...consider the use of single-use, disposable valves. (9)
Transport	Endoscopes should be stored in a manner that will protect them from contamination. In the absence of data linking infection outbreaks to transport or storage and given the limited data on this issue, equipment and practices for storage and equipment for transport should be addressed at the facility level in conjunction with the infection prevention department or consultants. Category II (pg 8)	No Position	Keeping the accessories with the endoscope helps prevent them from being lost or misplaced and supports traceability of the endoscope and accessories as a single unit.	Each endoscope should be isolated and transported with its components in its own closed system to the next stage of processing, as it is considered contaminated.
Valves	No Position	Literature suggests that reusable buttons and valves should be reprocessed and stored together with the endoscope as a unique set for tracking purposes (BSG, 2014). (pg 26)	Flexible endoscopes should be stored with all valves open and removable parts detached but stored with the endoscope. (IX.d.)	After cleaning, all detachable valves should be kept together with the same endoscope as a unique set.(5.6.)
Timing	Manual cleaning should occur within the manufacturer's recommended time frame. When cleaning is delayed beyond this interval, the manufacturer's directions for delayed processing should be followed.	All steps should be completed sequentially and immediately following the procedure. Refer to the manufacturer's recommendations for delayed re-cleaning and reprocessing. (pg 18)	Manual cleaning should occur as soon as possible after leak testing (VI.a.)	Manual cleaning starts after confirming that the endoscope does not have any leaks and should be conducted as soon as possible after use to prevent soil from drying on the device (5.5.)

Transport

Guideline Area	Society			
	ASGE	SGNA	AORN	AAMI
Transporting HLD endoscopes	No Position	No Position	No Position	Determine in advance whether the endoscope is to be used immediately after processing. If it is to be used immediately, it should be unloaded from any AER, transferred directly into an aseptic transport device and sent to the intended point of use…Endoscopes intended to be used in a normally sterile area, should be reprocessed with LCS/HLD immediately before use and be transferred in an aseptic transport container or device with sterile technique to the patient and used immediately. 11 Transport of high-level disinfected endoscopes When transporting an endoscope that has been high-level disinfected, the endoscope should be protected from recontamination. Before removing the endoscope from the storage cabinet, don new exam gloves. Then transport the endoscope using an impervious barrier method that will prevent re-contamination. Examples would be a clean plastic bag, endoscope transfer system (scope in a tote bin with a cover), or similar method. The endoscope should be loosely coiled to prevent damage. The transport system should not be reused for clean transport. Rationale: Disinfected endoscopes can become recontaminated by hands and or communication with surfaces while being handled and transported. Use of a barrier system can prevent recontamination.
Transporting Used Endoscopes	After point-of-use precleaning, transport the soiled endoscope to the reprocessing area for subsequent steps in high-level decontamination before remaining soil has an opportunity to dry. During transportation, soiled endoscopes should be contained in a manner to prevent exposure of staff, patients, or the environment to potentially infectious organisms. An open container can suffice for transport to immediately adjacent reprocessing rooms, but fully enclosed and labeled containers or bags should be used for transportation through corridors used for other patients, staff, or visitors to reprocessing areas. AORN provides additional guidance on this issue.	Transport the soiled endoscope to the reprocessing area in a closed container that prevents exposing staff, patients, or the environment to potentially infectious organisms (Petersen et al., 2011). The transport container must be labeled to indicate biohazardous contents (ASGE, 2011; AAMI, 2015). Containers should be large enough to prevent damage to the endoscope by being coiled too tightly.	IV.c. Contaminated endoscopes and accessories must be transported to the decontamination area in a closed container or closed transport cart. The container or cart must be: • leak proof • puncture resistant, and • large enough to contain all contents IV.c.1. The container should be of sufficient size to accommodate the endoscope when the endoscope is coiled in large loops. IV.c.2. The transport cart or container must be labeled with a fluorescent orange or orangered label containing a biohazard legend Biohazard labels must be securely affixed so as to prevent separation from the contents. V.c.3. Flexible endoscopes should be transported in a horizontal position and not suspended. IV.c.4. Endoscope accessories should accompany the endoscope but should be contained separately. IV.e. Transport carts or containers used for flexible endoscopes should be mechanically cleaned and thermally disinfected or manually cleaned and chemically disinfected with a compatible Environmental Protection Agency (EPA)-registered hospital grade disinfectant after each use. [2: High Evidence]	5.3 Transporting used endoscopes Each endoscope should be isolated and transported with its components in its own closed system to the next stage of processing, as it is considered contaminated. To avoid puncture and penetration damage to the endoscope, devices such as forceps and wires used in the procedure should be transported in their own containers. The system should be marked with a biohazard label and must meet OSHA (29 CFR 1910.1030) requirements for transporting hazardous items. The system should be large enough to accommodate a single endoscope without the need to over-coil the insertion or light guide tubes. Transporting steps: a) Isolate and immobilize a single endoscope in a container by naturally coiling it in large loops. b) Separate endoscopy accessories from the contaminated endoscope to prevent puncture and penetration damage.