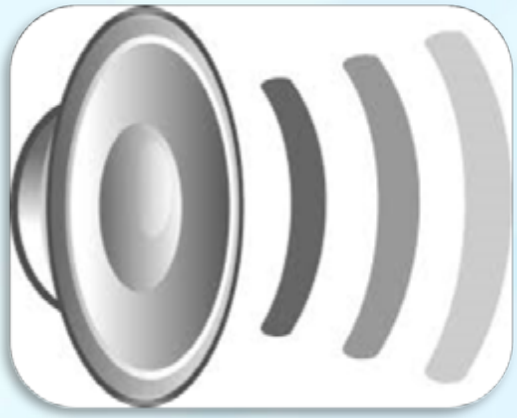
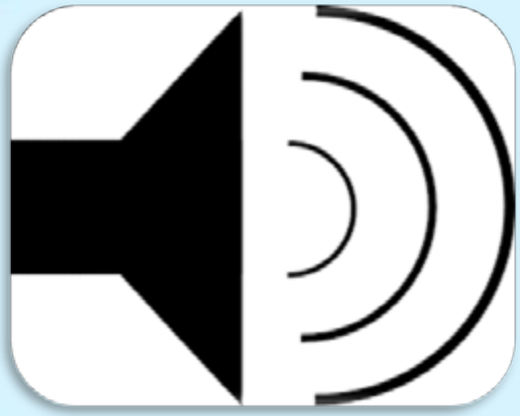
Welcome to

Empowering Nurses to Protect Themselves and Their Patients: Device Reprocessing and Sterilization

The audio for today's conference will be coming through your computer speakers. Please ensure your speakers are turned on and the volume up.



Thank you!



Continuing Education Information

ACCREDITATION STATEMENTS:

CME: The Centers for Disease Control and Prevention is accredited by the Accreditation Council for Continuing Medical Education (ACCME®) to provide continuing medical education for physicians.

- The Centers for Disease Control and Prevention designates this **live activity** for a maximum of (**1**) *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CNE: The Centers for Disease Control and Prevention is accredited as a provider of Continuing Nursing Education by the American Nurses Credentialing Center's Commission on Accreditation.

- This activity provides (**1**) contact hours.

CEU: The Centers for Disease Control and Prevention is authorized by IACET to offer (**0.1**) CEU's for this program.

CECH: Sponsored by the Centers for Disease Control and Prevention, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to (**1**) total Category I continuing education contact hours. Maximum advanced level continuing education contact hours available are 0. CDC provider number **98614**.

Continuing Education Information

ACCREDITATION STATEMENTS:

CPE: The Centers for Disease Control and Prevention is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

- This program is a designated event for pharmacists to receive (**0.1**) CEUs in pharmacy education. The Universal Activity Number is **0387-0000-17-191-L05-P**.
- Category: This activity has been designated as Knowledge-Based.
- Once credit is claimed, an unofficial statement of credit is immediately available on TCEOnline. Official credit will be uploaded within 60 days on the NABP/CPE Monitor.

For Certified Public Health Professionals (CPH)

- The Centers for Disease Control and Prevention is a pre-approved provider of Certified in Public Health (CPH) recertification credits and is authorized to offer (**1**) CPH recertification credits for this program.
- CDC is an approved provider of CPH Recertification Credits by the National Board of Public Health Examiners. Effective October 1, 2013, the National Board of Public Health Examiners (NBPHE) accepts continuing education units (CEU) for CPH recertification credits from CDC. Please select CEU as your choice for continuing education when registering for a course on TCEOnline. Learners seeking CPH should use the guidelines provided by the NBPHE for calculating recertification credits. For assistance please contact NBPHE at http://www.NBPHE.org.

Continuing Education Disclosure Statement

DISCLOSURE: In compliance with continuing education requirements, all presenters must disclose any financial or other associations with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters as well as any use of unlabeled product(s) or product(s) under investigational use.

CDC, our planners, presenters, and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias.

Content will not include any discussion of the unlabeled use of a product or a product under investigational use.

CDC did not accept commercial support for this continuing education activity.

Continuing Education Information

PROGRAM DESCRIPTION:

Patients and providers always face the risk of the introduction of foreign pathogens that lead to infections during surgical and invasive procedures. The proper disinfection or sterilization of equipment utilized in these environments is essential to minimize the breach of host barriers and reduce the risk of person-to-person transmission of disease pathogens. This webinar will discuss the importance of bedside nurses in device needs reprocessing and sterilization, the current state of device reprocessing and sterilization policies and regulations, the bioburden and importance of assembly/disassembly of tools in decontamination, and evidence-based practices for processing flexible endoscopes.

OBJECTIVES:

- Describe infection control techniques that reduce the risk and spread of healthcare- associated infections (HAI).
- Identify unsafe practices that place patients at risk for HAIs.
- Describe best practices for infection control and prevention in daily practice in healthcare settings.

SPECIFIC OBJECTIVES FOR THIS ACTIVITY:

- Discuss evidence-based practices for processing flexible endoscopes.
- Participant will be able to discuss the importance of device reprocessing and sterilization for the front line nurse (RN).

TUNE IN TO SAFE HEALTHCARE: A CDC WEBINAR SERIES

Nursing Infection Control Education NETWORK

Empowering Nurses to Protect Themselves and Their Patients: Device Reprocessing and Sterilization

July 12, 2017

Before We Get Started…

To hear the audio, please ensure your speakers are turned on with the volume up - the audio for today's conference should be coming through your computer speakers.

To submit a question:

- Use the "Chat" window, located on the lower left-hand side of the webinar screen.
- Questions will be addressed at the end of the webinar, as time allows.

To ask for help:

- Please press the "Raise Hand" button, located on the top left-hand side of the screen.

The speakers' slides will be provided to participants in a follow-up email.

Seun Ross DNP, MSN, CRNP-F, NP-C, NEA-BC
Director, Nursing Practice & Work Environment
American Nurses Association

ANA
AMERICAN NURSES ASSOCIATION

ANA: Who We Are

- Only full-service professional organization representing the nation's 3.6 million registered nurses (RNs)
  - Fosters high standards of nursing practice
  - Promotes general welfare of nurses in the workplace
  - Lobbies on health care issues affecting nurses and the general public
  - Advances policy initiatives pertaining to health care reform
- Most trusted profession 15 years in a row
- Spends the most time with patients and their families

(ANA, n.d.)

ANA
AMERICAN NURSES ASSOCIATION

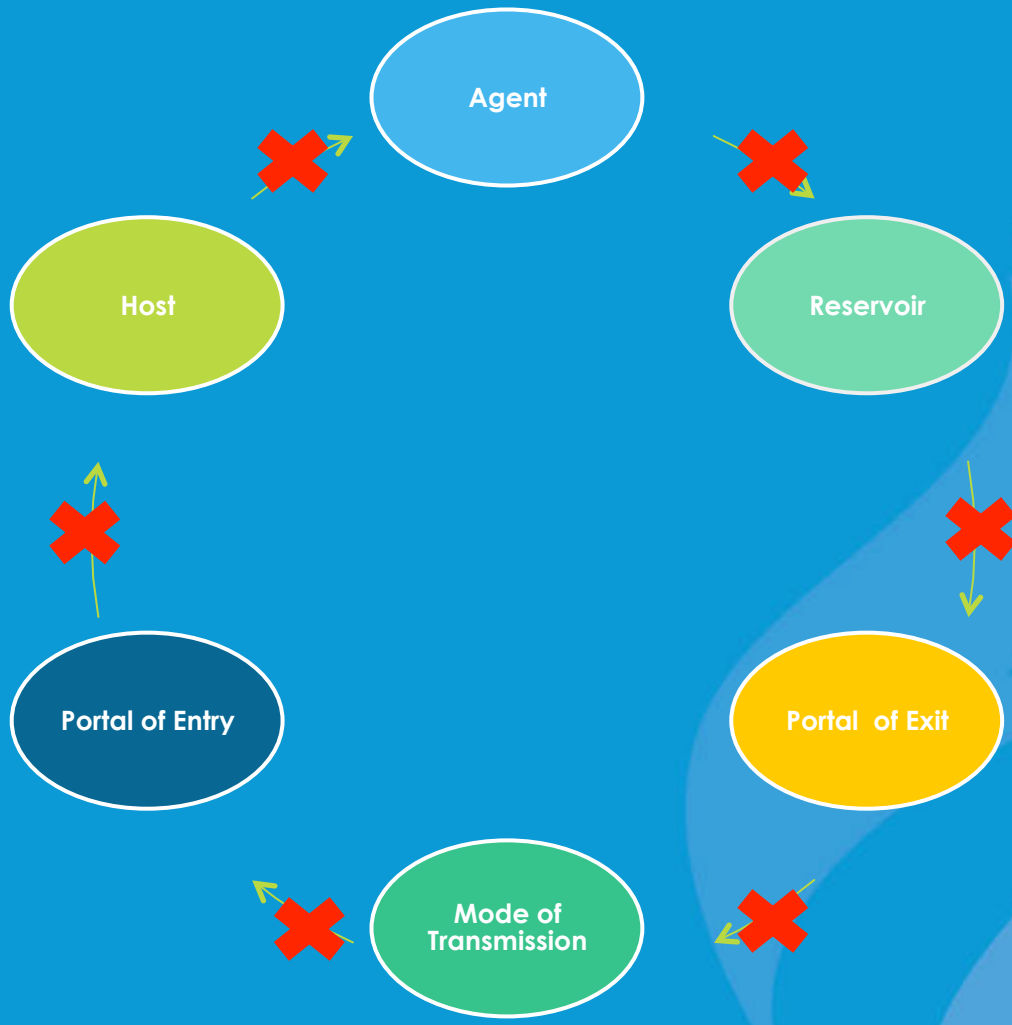
Infection by the Numbers

- At any given time, about 1 in every 25 patients has an infection related to their hospital care
- Antibiotic-resistant germs cause more than 2 million illnesses and at least 23,000 deaths annually in the US

(CDC, 2016)

ANA
AMERICAN NURSES ASSOCIATION

What Can Nurses Do?



ANA
AMERICAN NURSES ASSOCIATION

Nurses on the Frontlines of Infection Prevention

- Enhancing Education and Training on Infection Control for U.S. Nurses
  - $1.4 million contract over two years
  - ANA in partnership with CDC and 20 nursing specialty organizations

ANA
AMERICAN NURSES ASSOCIATION

New Jersey State Nurses Association

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know

Christine Filippone, DNP, MSN, BSN, ANP, CIC

Director, Epidemiology/Infection Prevention, Community Medical Center

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know

Christine Filippone, PhD (c), DNP, MSN, RN, ANP, C, CIC

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- Each year in the United States there are millions of procedures performed in hospitals and out patient centers annually.

- These procedures involve contact by a medical device with a patient's sterile tissue or mucous membrane.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- A major risk of all procedures is the introduction of infectious organism.
- Cleaning is essential before disinfection and sterilization.
- Failure to properly clean, disinfect, or sterilize equipment places patients at risk for infection.
- Cleaning followed by use of effective disinfectants and sterilization practices is essential for ensuring the instruments do not transmit infectious pathogens to patients.
- Nurses need to know what type of reprocessing is required for what type of equipment.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- **Reusable Medical Device** (as defined by the US Food and Drug Administration) are devices that health care providers can reprocess and reuse on multiple patients.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- **Reprocessing**
  - Cleaning: the removal of all foreign material from objects (must precede disinfection and sterilization)
  - Disinfection: a process that eliminates many or all pathogenic microorganisms on inanimate objects with the exception of the bacterial endospore.
  - Sterilization-the complete elimination of all forms of microbial life

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

All reusable medical devices can be grouped into one of three categories according to the degree of risk of infection associated with the use of the device:

- Critical devices: surgical forceps
- Semi-critical devices: endoscopes
- Non-critical devices: stethoscopes

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- **How can we as nurses reduce “risk of exposure”**
  - By prepping surgical equipment after use before reprocessing or sterilization. This process will reduce the retention of blood, tissue, bio- debris which in turn decreases the survivability of micro-organisms
  - Prepping can include spray and proper containment.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

Overview of reprocessing:

- 1. Point-of-Use Processing: Reprocessing begins with processing at the point of use (i.e., close proximity to the point of use of the device), to facilitate subsequent cleaning steps. This step includes prompt, initial cleaning steps and/or measures to prevent drying of soil and contaminants in and on the device.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- 2. Thorough Cleaning: The device should be thoroughly cleaned after the point-of-use processing. Thorough cleaning is performed in a dedicated cleaning area.

- 3. Disinfection or Sterilization: Depending on the intended use of the device, the device should be disinfected or sterilized.

Device Reprocessing and Sterilization: What the Front Line Nurse Needs to Know.

- Failure to comply with evidence based guidelines have led to numerous outbreaks and have placed patients at risk for infection.

- It is your role to advocate and protect our patients.

American Nurses Association\California

Reprocessing and Sterilizing Medical Devices: Regulations, Policies, and Legislations

Aaron McColpin, DNP, RN, FNP, RRT-NPS, CPFT

Assistant Professor of Nursing, California State University Channel Islands

Marketa Houskova, RN, MAIA, BA

State Director, Senior Policy Analyst & Project Liaison, American Nurses Association\California

Brian Harradine, MSN, RN, CNOR, CAPA

Clinical Educator, Perioperative Services, Desert Regional Medical Center

Reprocessing and Sterilizing Medical Devices: Regulations, Policies, and Legislations

July 12th, 2017
8:00 a.m. PST

Marketa Houskova, MAIA, BA, RN
State Director|Senior Policy Analyst
& Project Liaison, ANA\California

Brian Harradine, MSN, RN, CNOR, CAPA
Clinical Educator – Surgery & GI Lab
Desert Regional Medical Center

Aaron McColpin, DNP, RN, FNP, RRT-NPS
Assistant Professor of Nursing
CSU Channel Islands

Organizations that Offer Guidance

Association for the Advancement of the Medical Instrumentation (AAMI)

- ST 79 – steam sterilization and sterility assurance

Centers for Disease Control and Prevention (CDC)

- *Guideline for Sterilization in Healthcare Facilities* (2008)

Joint Commission

International Association Hospital Central Sterile Material Management (IAHCSMM)

Association of periOperative Registered Nurses (AORN)

- *Guidelines for Perioperative Practice* book updated every five years

Food and Drug Administration (FDA)

- Non-binding guidance document to assist manufacturers seeking 510(k) clearance

Goals of the Recommended Practices

- Provide a framework for the safe workflow to reprocess medical instruments
- Set standards for sterility assurance in the healthcare industry
- Offer evidence-based rationale for the practices
- **Prevents** disease transmission or healthcare associated infections
- Receive consistent quality patient care

Single-Use Medical Device Reprocessing

PROS

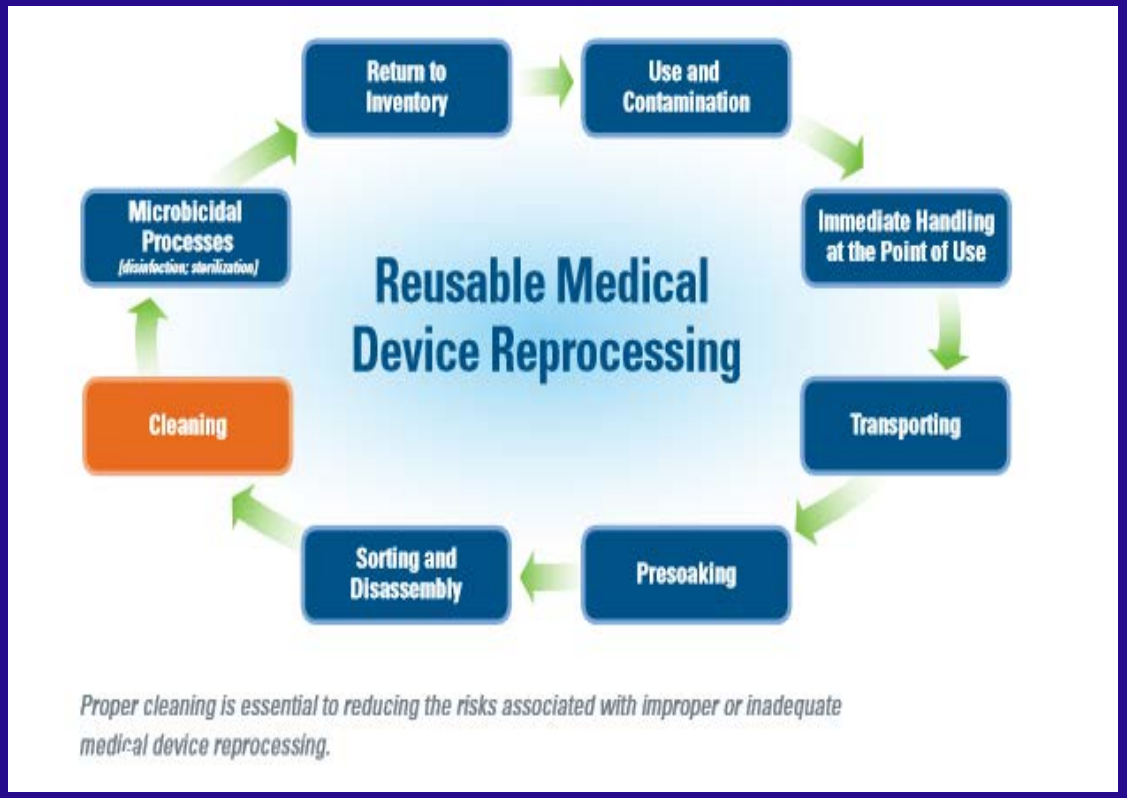
- Produce less medical waste
- Provide cost-effective medical devices
- Have strict control in place by FDA on medical device reprocessors

CONS

- Goes against manufacturer's guidelines for use
- Manufacturer no longer guarantees product after reprocessing
- Providers and frontline staff perceive product of inferior quality

Common Issues with Policies

- Challenges for effective disinfection include
  - Confusion between nursing and environmental services staff over the allocation of cleaning responsibilities
  - Insufficient training
  - Inadequate time to complete cleaning
  - Difficulty ensuring disinfection of mobile equipment
  - Contamination of reusable cleaning supplies with pathogenic bacteria



Proper cleaning is essential to reducing the risks associated with improper or inadequate medical device reprocessing.

Shoemake & Stoessel, 2015

AMERICAN NURSES ASSOCIATION CALIFORNIA

Evidence-Based Practice (EBP) and Policy Recommendations

- Use appropriate PPE
- Advise schools to put greater emphasis on infection control in current curriculum
- Develop an institutional infection control policy based on local, state, federal, accrediting agencies, and professional organizations' recommendations.
  - Get PAs, MAs, MDs, and others involved

Federal Legislation

Photograph By LYLE STAFFORD, Times Colonist

Baseline

- “Enforcement Priorities for Single-Use Devices Reprocessed by Third Parties and Hospitals”

Current legislation

- H.R. 872 DEVICE Act of 2017

California Legislation

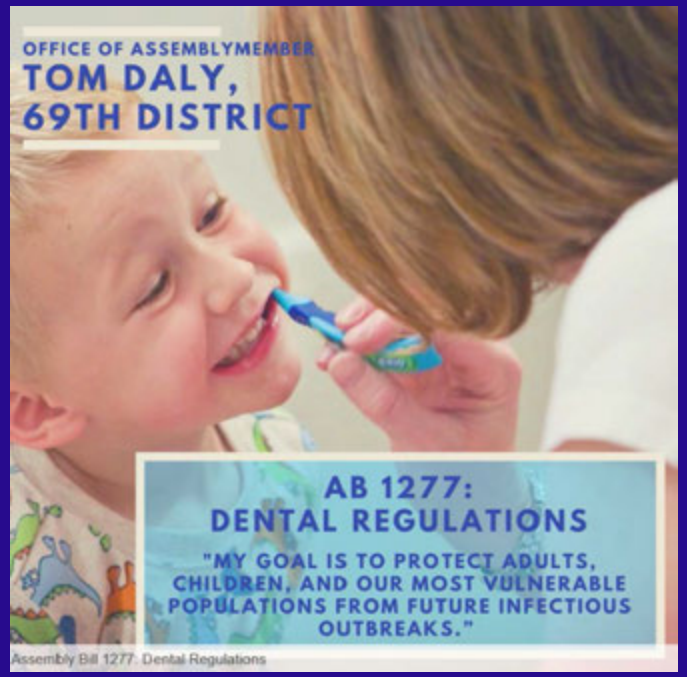


Photo from Assemblymember Tom Daly's page at https://a69.asmdc.org/

S.B. 43 introduced by Senator Jerry Hill

– Establish CA as the **FIRST** state in the nation a system to monitor and track antibiotic-resistant infections and deaths related to those infections

References

- Association for the Advancement of Medical Instrumentation. (2014). *Comprehensive guide to steam sterilization and sterility assurance in health care facilities.* www.aami.org
- Association of periOperative Registered Nurses. (2017). *Guidelines for Perioperative Practice.* Retrieved from www.aorn.org
- CDC. (2015). Prion diseases. Retrieved from https://www.cdc.gov/prions/index.html
- Destache, D. M. (2013, April 30). Hospital policies: Will they be a burden or a benefit to you in litigation? Midwest Legal Advisor. Lamson, Dugan and Murray, LLP. Retrieved from https://www.psqh.com/analysis/policies-and-procedures-f or-healthcare-organizations-a-risk-management-perspective/#sthash.ffUeAgAN.dpuf
- Food and Drug Administration. (2015). *Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling.*
- Ontario Ministry of Health & Long-Term Care. Provincial Infectious Diseases Advisory Committee (PIDAC) Best Practices for Cleaning, Disinfection and Sterilization in All Health Care Settings, 2010. Retrieved from http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/PIDAC/Pages/PIDAC_Documents.aspx
- Magill, S. S., Edwards, J. R., Bamberg, W., Beldavs, Z. G., Dumyati, G., Kainer, M. A., ... & Ray, S. M. (2014). Multistate point-prevalence survey of health care–associated infections. *New England Journal of Medicine*, *370*(13), 1198-1208.
- Rutala, W. A., & Weber, D. J. (2013). Disinfection and sterilization: an overview. *American journal of infection control*, *41*(5), S2-S5.
- S. B. 43 - Antimicrobial-resistant infection: reporting. (2017). Retrieved from http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB43
- Shoemake, S. & Stoessel, K. (2015). Cleaning reusable medical devices: A critical first step. *The Clinical Issue, 2*. Retrieved from https://www.halyardhealth.com/media/1514/c14224-clinical-issue-two-cleaning-medical-devices.pdf
- Vaage, R. (2015). Secrecy increases risks of deadly hospital infections. Retrieved from http://www.vaagelaw.com/Blog/2015/May/Secrecy-Increases-Risks-of-Deadly-Hospital-Infec.aspx

Acknowledgement

Special thanks to the following contributors on this project:

Christine Tarver, DNP, RN, CNS, NEA-BC

ANA\C Nursing Practice Director

Director of Medical/Surgical Services

Magnet Program Director

El Camino Hospital

Rachel Choudhury, MSN, MS, RN, CNE

Associate Dean and Program Director, BSN

Brandman University

Tanya Davis, BSN, RN, PHN

ANA\California Membership Director

Staff RN at Palomar Health Poway

Mary Ann McCarthy, EdD, CNS/NE, RN, PHN

ANA\California Education Director

Traditional BSN Director at Mount Saint Mary's University, Los Angeles

Thao Tran, MSN, RN-BC, PHN, CHISP, CHTS-TR

Quality Improvement and Infection Prevention and Control Coordinator

U. S. Department of Justice

National Association of Orthopedic Nurses

Bioburden and the Importance of Instrument Assembly and Disassembly

Marc Finch, CRCST

Director, Sterile Processing, Jewish and University Hospitals

Crystal Heishman, MSN, RN ,ONC, CIC, FAPIC

Infection Preventionist, University of Louisville Hospital

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Bioburden and the Importance of Instrument Assembly and Disassembly

Marc Finch, CRCST

Director, Sterile Processing Department

Jewish Hospital and University of Louisville Hospital

Louisville, KY

Crystal Heishman MSN, RN, ONC, CIC, FAPIC

Infection Preventionist

University of Louisville Hospital

Louisville, Kentucky

Background

Sterile Processing Issues: Industry Experts Address Persistent Problems

Major article

Microbial contamination of surgical instruments used for laparotomy

Contamination of equipment in emergency settings: An exploratory study with a targeted automated intervention

Hospital replaces all surgical instruments after contamination

Challenging Residual Contamination of Instruments for Robotic Surgery in Japan

Bacterial contamination of inanimate surfaces and equipment in the intensive care unit

Surgical site infections linked to contaminated surgical instruments

Spaulding Classification

- **Critical**: instruments that are introduced directly into the human body and enter or come in contact with the bloodstream or normally sterile areas of the body
- **Semi-critical**: instruments that come in contact with mucous membranes or possibly non-intact skin
- **Non-critical**: intact skin and environmental surfaces

What is Bioburden?

The number of viable organisms in or on an object or surface **OR** organic material found on a surface/object prior to decontamination and sterilization.

- Also referred to as the microbial load or bioload
- Measured in colony-forming units (CFUs)
- Elimination of live microbe shown as “Log reduction”

Cleaning, Disinfection, and Sterilization

- **Cleaning:** mechanical removal of dirt or foreign materials
- **Disinfection:** elimination or destruction of almost everything on a surface or item (high, intermediate, low)
- **Sterilization:** Elimination or destruction of all living organisms on a surface or item

Sterile Processing Overview

Cleaning, decontamination and rinsing are critical and users must follow and complete all required processing steps regardless of the sterilizer exposure parameters being used. The device MFG's written instructions for use (IFU) must be followed.

Manufacturer's Instructions

The device manufacturer's written instructions on cycle type, exposure times, temperature settings, and dry times are available and followed.

To follow these sterilization instructions we must first clean and decontaminate instruments in the proper method.

Decontamination

Items are disassembled and thoroughly cleaned with detergent and water to remove soil, blood, body fats and other substances.

This requires a properly designed decontamination area with approved detergents, cleaning brushes and personal protective equipment (PPE) for staff. With the exception of power equipment, instruments should be washed below the water surface to reduce aerosols when manually cleaned.

Decontamination Area: Facility Considerations

Should be separate from other areas with floors, walls, ceiling and work surfaces made of nonporous materials to withstand frequent cleanings and wet conditions.

Decontamination area should have a minimum of 10 air exchanges, negative air flow and be exhausted outdoors without re-circulation. Temperature should be maintained between 60-65°F.

Personal Protective Equipment in the Decontamination Area

- Hair covering (disposable)
- Face mask (w/plastic eye shield)
- Liquid resistant covering
- Gloves (utility)
- Scrubs
- Shoe covers

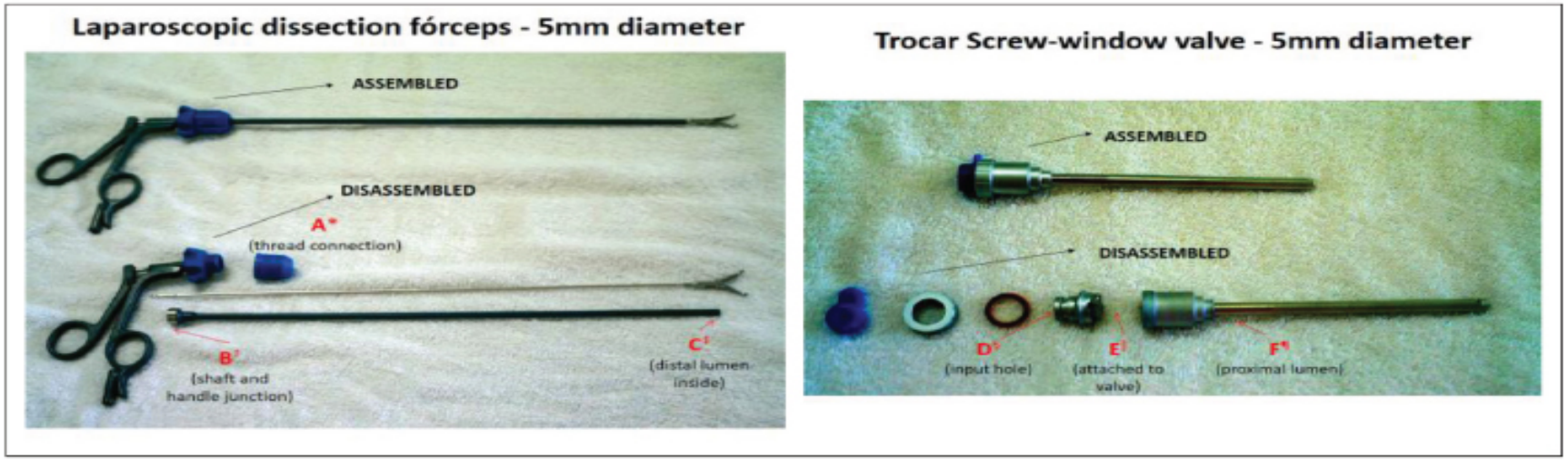
Special Consideration: Lumens

Lumens are brushed and flushed under water with a cleaning solution and rinsed thoroughly.

Lumens are particularly difficult to clean and also difficult to sterilize. It is important to consult with the device manufacturer for information regarding the proper detergent, brush type, brush size, and rinse procedures (treated versus untreated water).

Instructions for Use (IFUs)

Many IFU's require instruments to be taken apart to thoroughly clean the instrument. If this is not followed, bioburden and gross contaminates will remain on the instrument; possibly causing a transfer of these contaminates to a patient.



On a financial note: Not cleaning the instrument properly will shorten the life of the instrument.

References

Association for the Advancement of Medical Instrumentation. ANSI/AAMI ST79: 2010 & A1:2010—Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities. Arlington, VA: Association for the Advancement of Medical Instrumentation, 2010.

AORN Guideline for Cleaning and Care of Surgical Instruments, 2015

AORN Guideline for Sterilization, 2015

CDC Guideline for Disinfection and Sterilization in Healthcare Facilities (2008)

Dancer, S. J., Stewart, M., Coulombe, C., Gregori, A., & Virdi, M. (2012, August). Surgical site infections linked to contaminated surgical instruments. *The Journal of Hospital Infection*, *81*(4), 231 - 238. http://dx.doi.org/10.1016/j.jhin.2012.04.023

Obasi, C., Agwu, A., Akinpelu, W., Hammons, R., Clark, C., Etienne-cummings, R., ... Asiyanbola, B. (2009, July 30). Contamination of equipment in emergency settings: An exploratory study with a targeted automated intervention. *Annals of Surgical Innovation and Research*, *3*(8). http://dx.doi.org/10.1186/1750-1164-3-8

Russotto, V., Cortegiani, A., Raineri, S. M., & Giarratano, A. (2015). Bacterial contamination of inanimate surfaces and equipment in the intensive care unit. Retrieved from http://jintensivecare.biomedcentral.com/articles/10.1186/s40560-015-0120-5

Rutala, W. A., & Weber, D. J. (2016, May 2). Disinfection, sterilization, and antisepsis: An overview. *American Journal of Infection Control* , *44*(5), e1 - e6. https://doi.org/10.1016/j.ajic.2015.10.038

Saito, Y., Kobayashi, H., Uetera, Y., Yasuhara, H., Kajiura, T., & Okubo, T. (2014, January). Microbial contamination of surgical instruments used for laparotomy. *American Journal of Infection Control* , *42*(1), 43 - 47. http://dx.doi.org/10.1016/j.ajic.2013.06.022

Saito, Y., Yasuhara, H., Murakoshi, S., & Komatsu, T. (2017, February). Challenging residual contamination of instruments for robotic surgery in Japan. *Infection Control & Hospital Epidemiology*, *38*(2), 143 - 146. http://dx.doi.org/10.1017/ice.2016.249

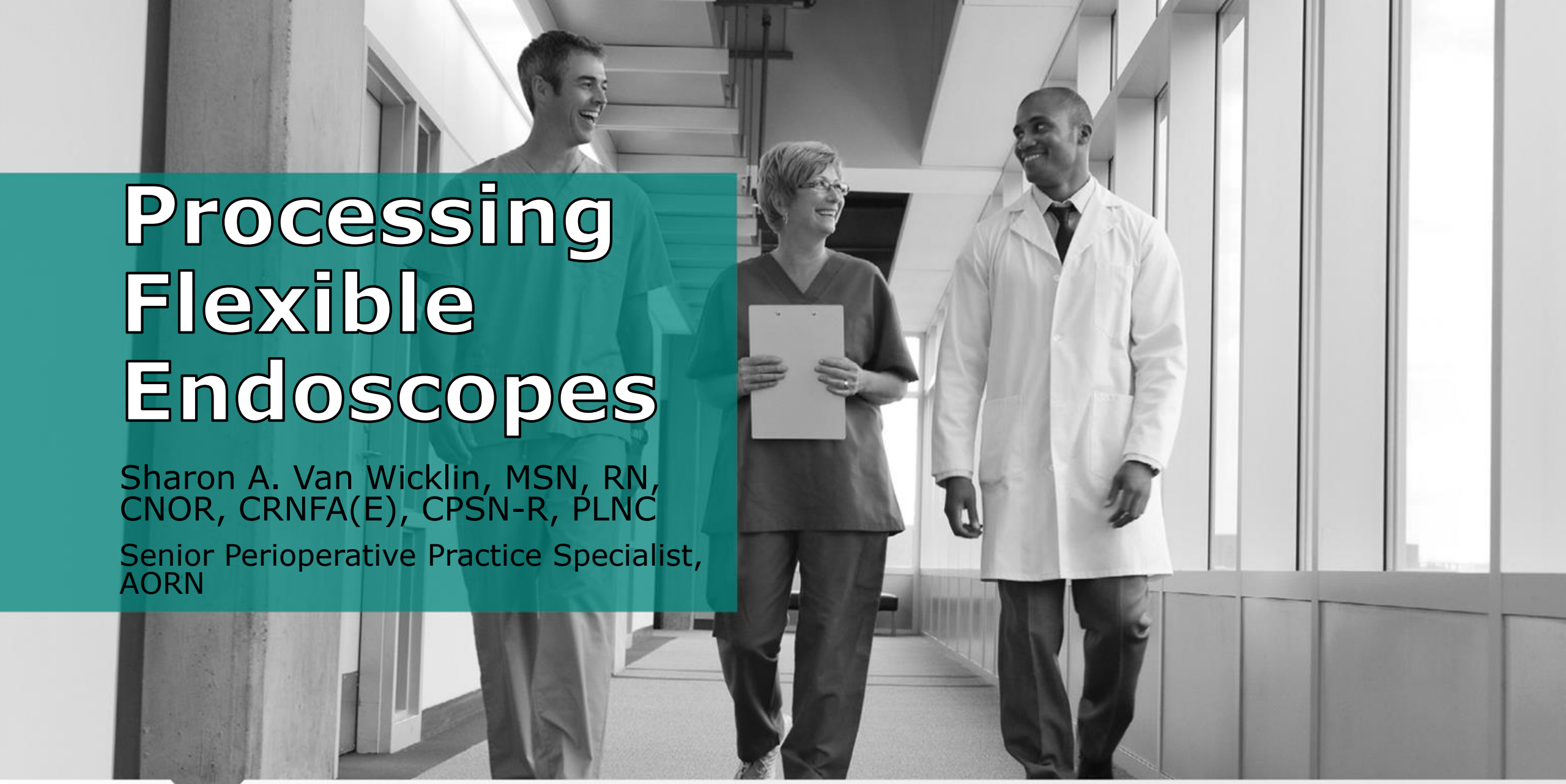
Association of periOperative Registered Nurses

Processing Flexible Endoscopes

Sharon A. Van Wicklin, MSN, RN, CNOR, CRNFA(E), CPSN-R, PLNC

Senior Perioperative Practice Specialist, AORN

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



Processing Flexible Endoscopes

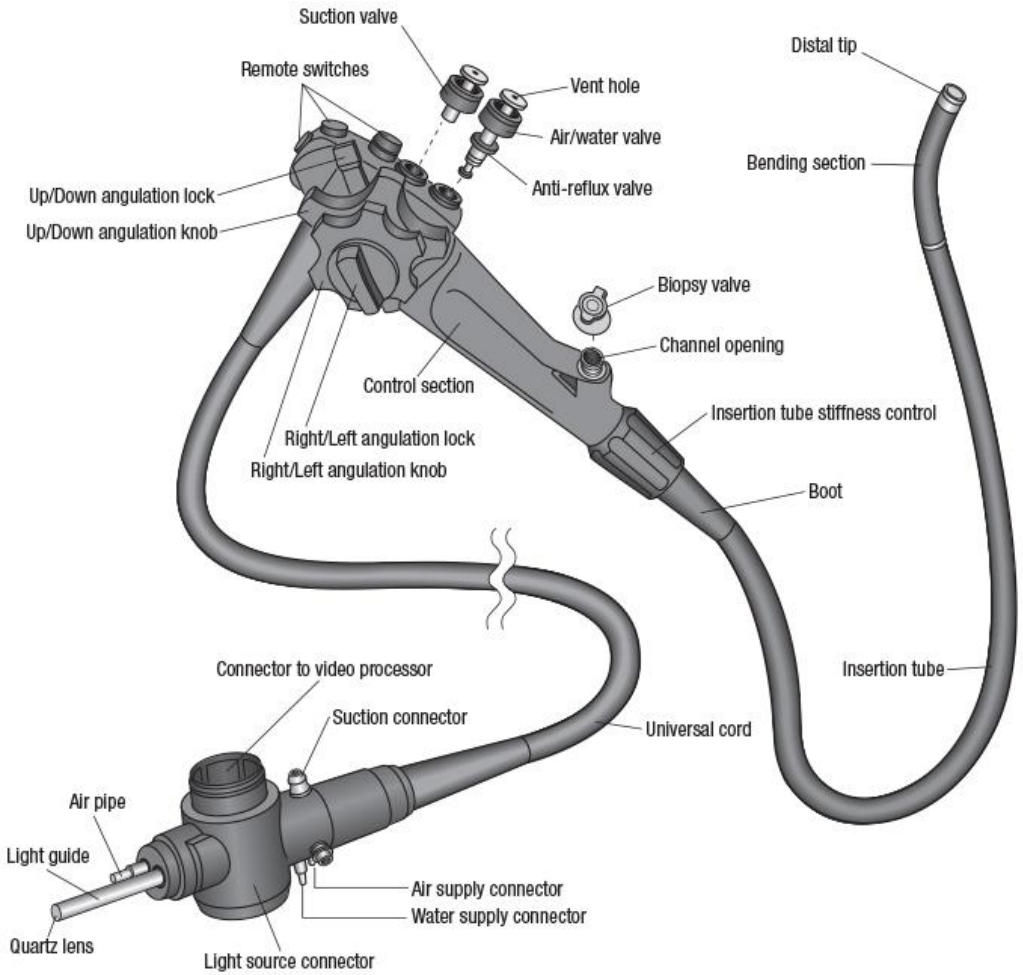
Sharon A. Van Wicklin, MSN, RN, CNOR, CRNFA(E), CPSN-R, PLNC

Senior Perioperative Practice Specialist, AORN

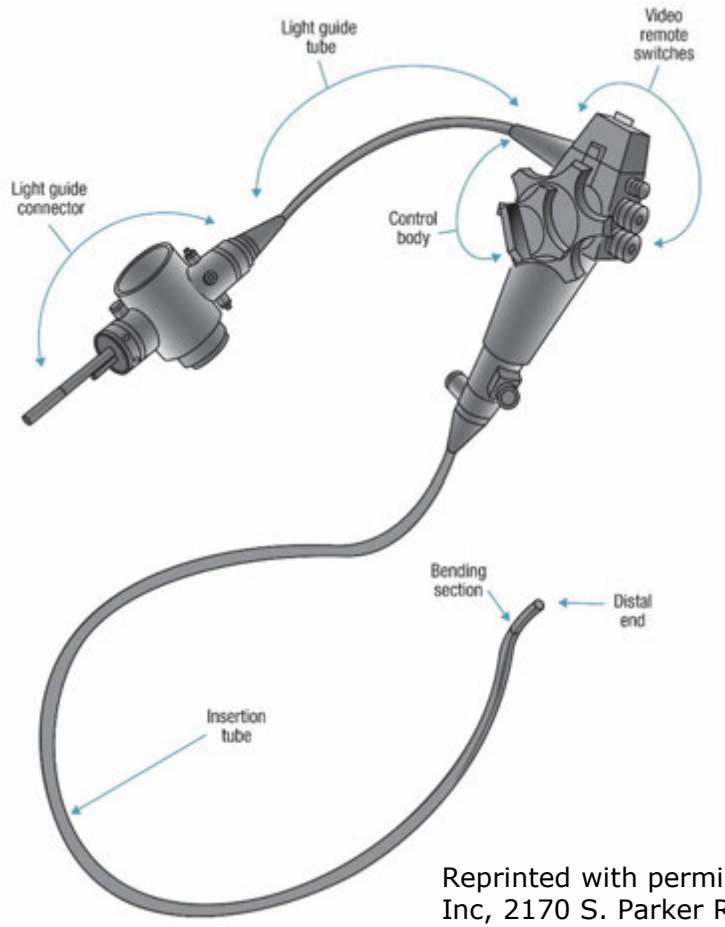
AORN

Objective

1. Discuss evidence-based practices for processing flexible endoscopes



Precleaning



- Preclean as soon as possible after use

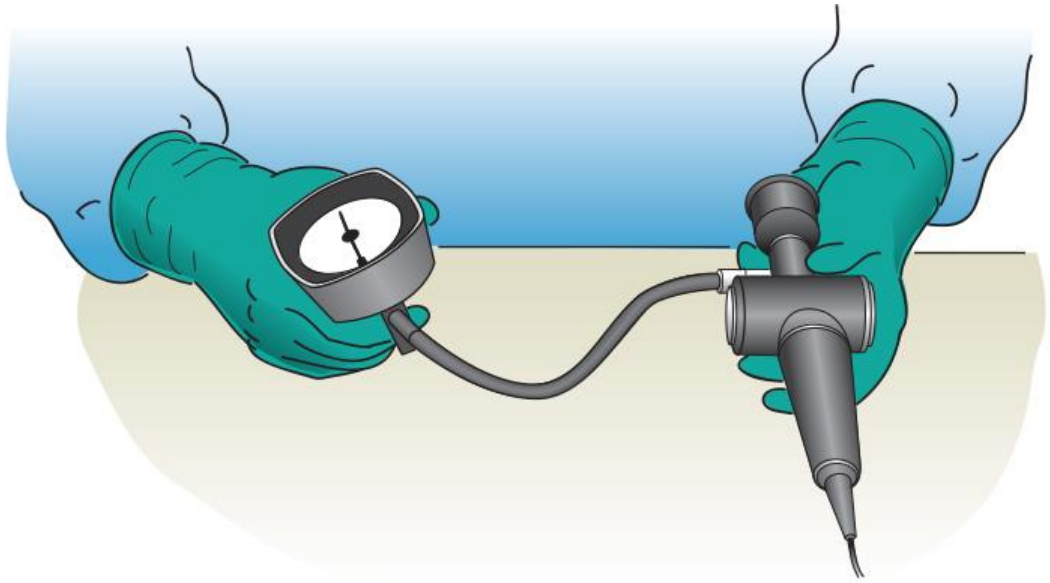
AORN

Transporting

- Transport in a closed container or transport cart that is
  - leak proof
  - puncture resistant
  - large enough to contain all contents
  - labeled with a biohazard legend

- Begin processing as soon as possible
  - If processing is delayed, follow manufacturer's IFU for delayed processing

Leak Testing



- Perform leak testing before
  - manual cleaning
  - placing the endoscope into cleaning solutions

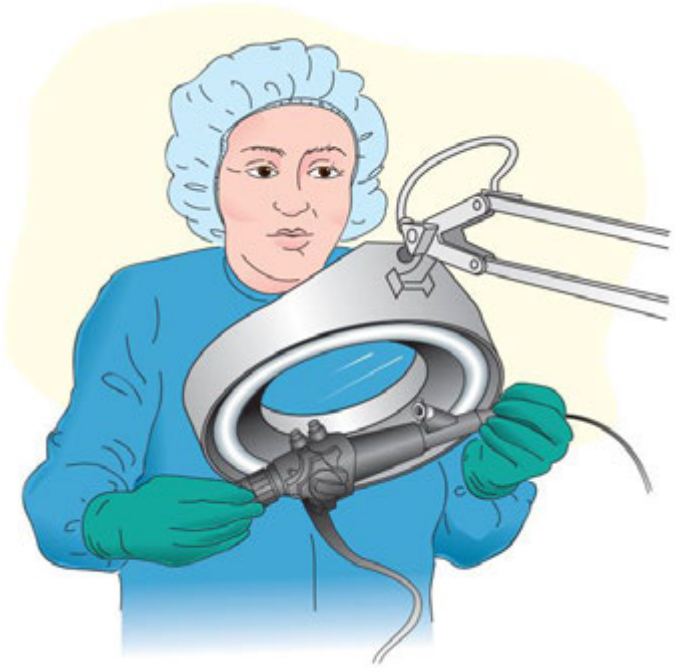
Manual Cleaning

- Begin manual cleaning as soon as possible after leak testing

Cleaning is the most important step in processing flexible endoscopes!

Inspecting

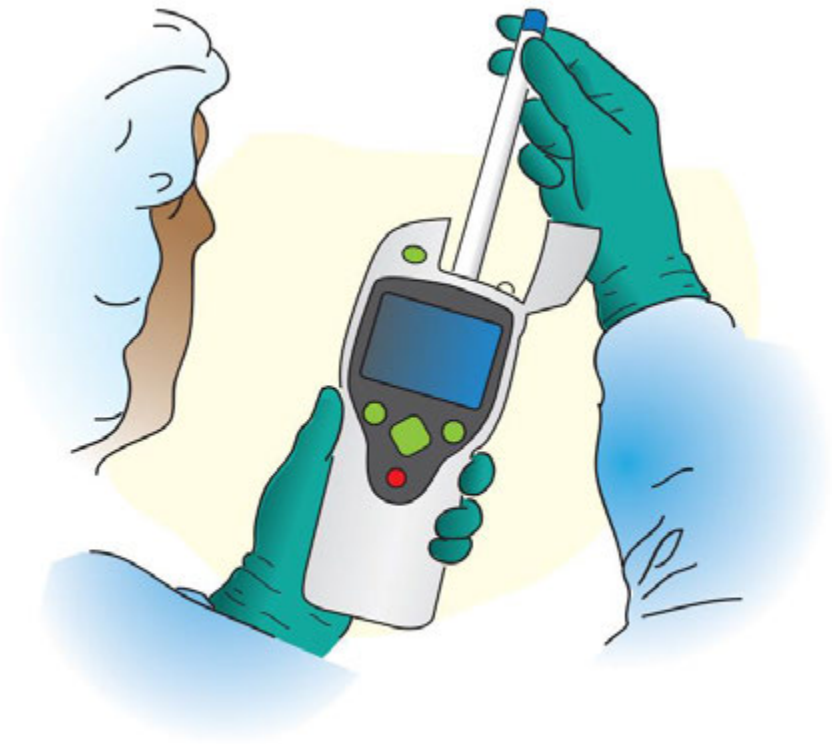
- Use lighted magnification to inspect for cleanliness and damage
  - Use a borescope* to inspect internal channels



**Borescope: A device used to inspect the inside of an instrument through a small opening or lumen of the instrument*

Cleaning Verification

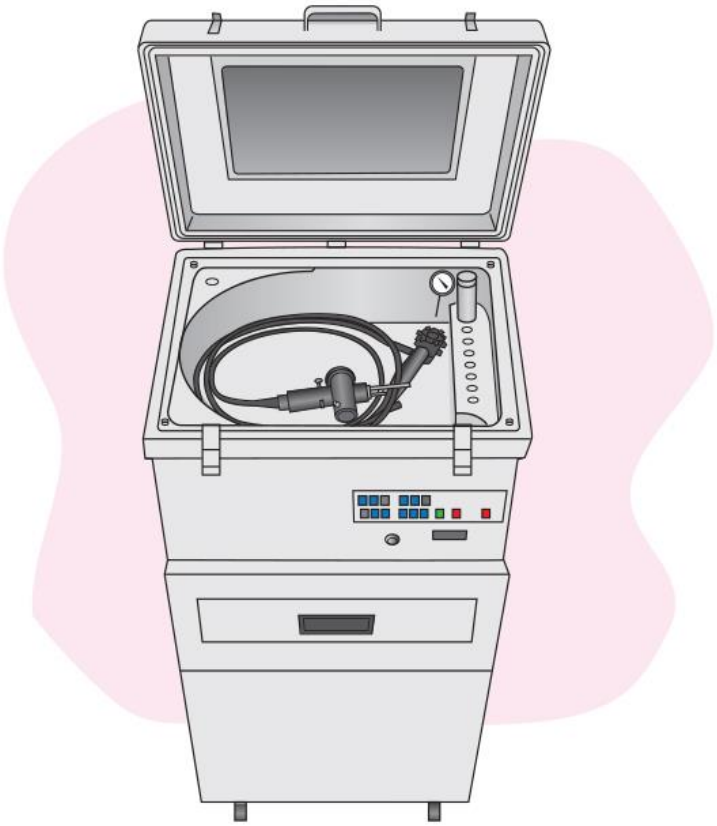
- Verify manual cleaning of flexible endoscopes using cleaning verification tests at established intervals



Cleaning Verification

- Cleaning verification tests include
  - Adenosine triphosphate (ATP)
  - Protein
  - Carbohydrate
- Cleaning verification tests may help reduce errors in manual cleaning and improve cleaning effectiveness

Mechanical Processing



- Mechanically clean and process or mechanically clean and sterilize flexible endoscopes
- Mechanically rinse and flush the endoscope and endoscope channels with critical* or sterile water

**Critical water: Water that is extensively treated to remove microorganisms and other materials*

Alcohol Flush

- Conduct a risk assessment to determine whether endoscope lumens should be flushed with 70% to 90% ethyl or isopropyl alcohol

Drying

- Dry exterior surfaces of the endoscope with a soft, lint-free cloth or sponge
- Dry endoscope channels by purging with instrument air* or with a mechanical processor drying system until bone dry*

**Instrument air: A medical gas that is not respired, is filtered to 0.01 micron, free of liquids and hydrocarbon vapors, and dry to a dew point of -40º F (-40º C)*

**Bone dry: Completely dry. Derived from an allusion to the dryness of bone after being left in the sun to dry*

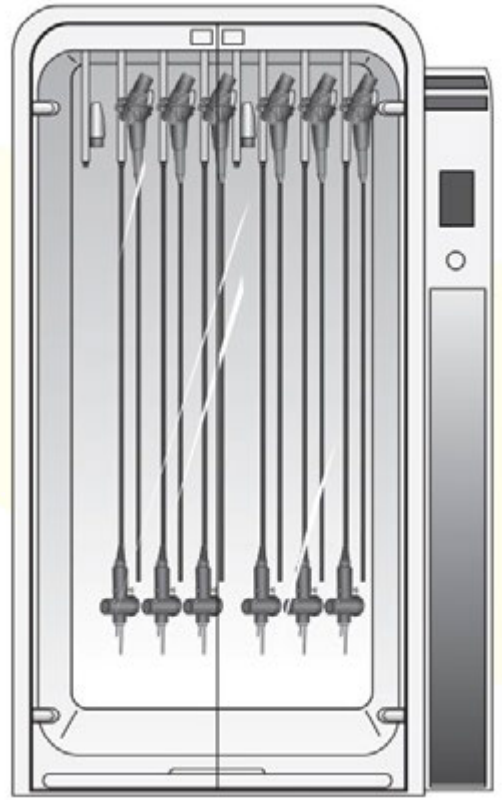
Storage

- Store flexible endoscopes in a drying cabinet*

**Drying cabinet: A medical device designed for storage of flexible endoscopes that circulates continuous HEPA-filtered air through each endoscope channel and within the cabinet*

Storage

- If a drying cabinet is not available, store flexible endoscopes in a closed cabinet with HEPA-filtered air that provides positive pressure and allows air circulation

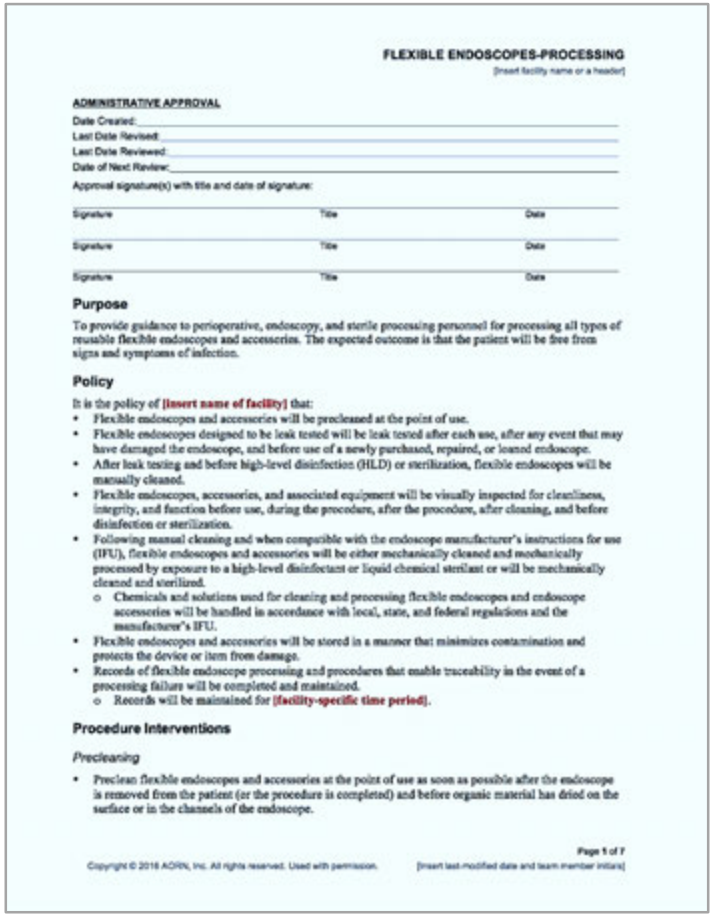


Storage

Professional Organization Recommendations	Studies	Facility Variables
• 3 hours to 1 month	• 48 hours to 56 days	• Type of endoscopes • Processing effectiveness • Compliance with IFU • Storage conditions • Frequency of use • Patient population

Storage

- Establish a policy to determine the maximum safe storage time for processed flexible endoscopes



FLEXIBLE ENDOSCOPES-PROCESSING

[Insert facility name or a header]

ADMINISTRATIVE APPROVAL

Date Created:_____

Last Date Revised:_____

Last Date Reviewed:_____

Date of Next Review:_____

Approval signature(s) with title and date of signature:

Signature	Title	Date
Signature	Title	Date
Signature	Title	Date

Purpose

To provide guidance to perioperative, endoscopy, and sterile processing personnel for processing all types of reusable flexible endoscopes and accessories. The expected outcome is that the patient will be free from signs and symptoms of infection.

Policy

It is the policy of **[insert name of facility]** that:

- Flexible endoscopes and accessories will be precleaned at the point of use.
- Flexible endoscopes designed to be leak tested will be leak tested after each use, after any event that may have damaged the endoscope, and before use of a newly purchased, repaired, or loaned endoscope.
- After leak testing and before high-level disinfection (HLD) or sterilization, flexible endoscopes will be manually cleaned.
- Flexible endoscopes, accessories, and associated equipment will be visually inspected for cleanliness, integrity, and function before use, during the procedure, after the procedure, after cleaning, and before disinfection or sterilization.
- Following manual cleaning and when compatible with the endoscope manufacturer's instructions for use (IFU), flexible endoscopes and accessories will be either mechanically cleaned and mechanically processed by exposure to a high-level disinfectant or liquid chemical sterilant or will be mechanically cleaned and sterilized.
  - Chemicals and solutions used for cleaning and processing flexible endoscopes and endoscope accessories will be handled in accordance with local, state, and federal regulations and the manufacturer's IFU.
- Flexible endoscopes and accessories will be stored in a manner that minimizes contamination and protects the device or item from damage.
- Records of flexible endoscope processing and procedures that enable traceability in the event of a processing failure will be completed and maintained.
  - Records will be maintained for **[facility-specific time period]**.

Procedure Interventions

Precleaning

- Precleanflexible endoscopes and accessories at the point of use as soon as possible after the endoscope is removed from the patient (or the procedure is completed) and before organic material has dried on the surface or in the channels of the endoscope.

Page 1 of 7

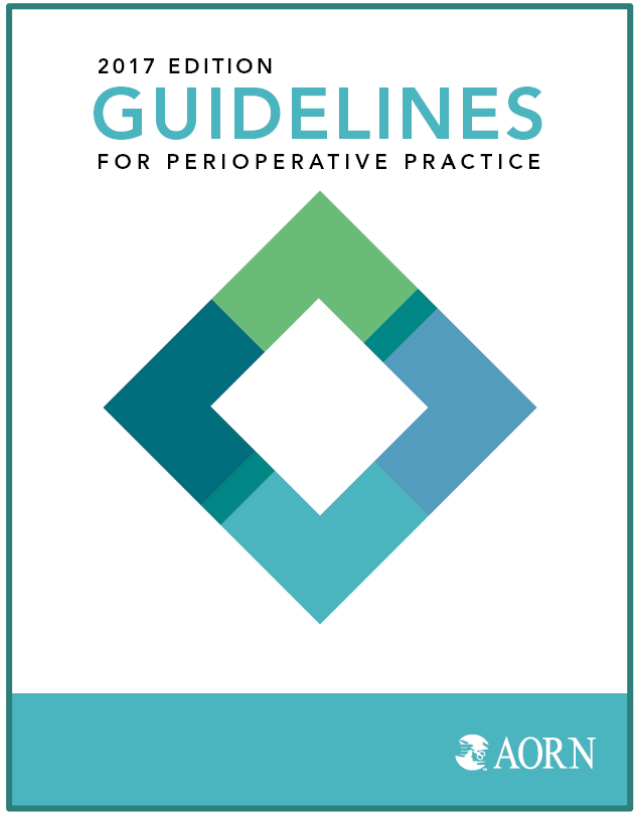
[Insert last-modified date and team member initials]

Thank you!

Photograph courtesy of North Kansas City Hospital, North Kansas City, MO.

References

1. Guideline for positioning the patient. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN; 2017.



www.aorn.org

Question and Answer Session

Please submit your questions via the chat window, located on the lower left-hand side of the webinar screen.

Before We End Today's Webinar…

Continuing Education

- Detailed instructions for taking the post-test and evaluation will appear on your screen as soon as today's webinar concludes.
  - www.cdc.gov/tceonline; Access Code: **DPS0712**

- If you exit out of the webinar prior to taking the post-test and evaluation, you can access the continuing education information in an email that will be sent to you following today's webinar.

THANK YOU