# Clinical Issues 1.5 CE

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## Purpose/Goal

To provide the learner with knowledge of AORN's guidelines related to using one flexible endoscope for an upper and lower gastrointestinal (GI) endoscopy procedure; enhanced methods for processing flexible duodenoscopes; modification of the Spaulding classification; flushing flexible endoscope lumens with alcohol; and using chlorine dioxide wipes for nonchanneled flexible endoscopes.

## Objectives

1. Discuss practices that could jeopardize safety in the perioperative area.
2. Discuss common areas of concern that relate to perioperative best practices.
3. Describe the implementation of evidence-based practice in relation to perioperative nursing care.

## Accreditation

AORN is accredited with distinction as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

## Approvals

This program meets criteria for CNOR and CRNFA recertification, as well as other CE requirements.

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## Conflict-of-Interest Disclosures

Sharon A. Van Wicklin, MSN, RN, CNOR, CRNFA(E), CPSN-R, PLNC, has no declared affiliation that could be perceived as posing a potential conflict of interest in the publication of this article.

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## Disclaimer

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## THIS MONTH

Using one flexible endoscope for an upper and lower gastrointestinal (GI) endoscopy procedure
Key words: *flexible endoscope, esophagogastroduodenoscopy, colonoscopy, enteroscope, risk assessment.*

Enhanced methods for processing flexible duodenoscopes
Key words: *flexible duodenoscopes, liquid chemical sterilization, ethylene oxide sterilization, low-temperature sterilization, risk assessment.*

Modification of the Spaulding classification
Key words: *Spaulding classification, critical items, semicritical items, mucous membranes, risk assessment.*

Flushing flexible endoscope lumens with alcohol
Key words: *flexible endoscopes, isopropyl alcohol, ethyl alcohol, fixative, risk assessment.*

Using chlorine dioxide wipes for nonchanneled flexible endoscopes
Key words: *nonchanneled flexible endoscopes, high-level disinfectant, chlorine dioxide, risk assessment.*

# Using chlorine dioxide wipes for nonchanneled flexible endoscopes

## QUESTION:

**Does AORN recommend using chlorine dioxide wipes for processing nonchanneled flexible endoscopes?**

## ANSWER:

AORN recommends that a multidisciplinary team that includes infection preventionists, endoscopy and perioperative RNs, endoscopy processing personnel, endoscopists, and other involved personnel conduct a risk assessment to determine whether chlorine dioxide wipes may be used for disinfection of nonchanneled flexible endoscopes when they are compatible with the endoscope and are used in accordance with the disinfectant manufacturer's instructions for use.[1]

Chlorine dioxide wipes incorporate a three-step process that includes cleaning, disinfection, and rinsing for processing nonchanneled flexible endoscopes; however, chlorine dioxide has not been cleared by the US Food and Drug Administration as a high-level disinfectant for processing reusable medical equipment.[2] Nonchanneled flexible endoscopes contact mucous membranes and are considered semicritical items requiring a minimum of HLD.[3] They can become contaminated with mucus, debris, microorganisms, or blood during use.[4] Protocols for processing nonchanneled flexible endoscopes are derived from protocols for processing channeled flexible endoscopes, which carry a much higher bioload after use and have design properties different from those of nonchanneled endoscopes;[4,5] therefore, it is conceivable that other technologies may be effective for processing nonchanneled endoscopes.

In a nonexperimental study to evaluate the efficacy of chlorine dioxide wipes for disinfection of flexible nasendoscopes, Tzanidakis et al[6] randomly sampled the handles and distal tips of 31 endoscopes from a number of otolaryngology outpatient clinics. The samples were taken immediately before and after use on patients and immediately after cleaning. The researchers cultured the samples and found that none of the samples were culture-positive after disinfection with the chlorine dioxide wipes. Three of the samples from the handles of the nasendoscope were positive for *Staphylococcus aureus* before use on the patient, demonstrating the potential for contamination of the area of the nasendoscope handled during transport after cleaning and before use. The researchers concluded that the chlorine dioxide wipes provided a safe and effective alternative to mechanical processing but recommended that personnel perform hand hygiene and don gloves before handling flexible endoscopes.

Javed et al[4] conducted a survey of personnel from 121 otorhinolaryngology outpatient departments in the United Kingdom to investigate practices for the disinfection of flexible nasal endoscopes. The researchers found that the preferred method for disinfection of nasal endoscopes was chlorine dioxide wipes (58%; n = 70); however, mechanical processors were also used (34%; n = 41), as were flexible endoscope sheaths (7%; n = 8). Notably, the researchers found the use of 2% glutaraldehyde as a high-level disinfectant was rare (0.8%; n = 1). ●

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