MonashHealth

Clinicians, Consumers, Evidence
Centre for Clinical Effectiveness

Evidence Snapshot

Evidence-based guidelines for reprocessing surgical endoscopes

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Background

The Centre for Clinical Effectiveness was requested by Quality Coordinator, Surgery & Interventional Services, to undertake a review of literature to identify guidelines for the re-processing of surgical endoscopes to inform the development of procedures and guidelines in Monash Health. The PROMPT guidelines that Monash Health currently endorses are based on the Gastroenterological Nurses College of Australia (GENCA) 2010 guidelines. [1]

Objectives

The aim of the evidence snapshot is to provide the most up to date guidelines to inform the development of standardised guidelines and procedures for the reprocessing of endoscopes across all surgical settings in Monash Health.

Scope

Definition for the purpose of the snapshot: Reprocessing refers to all steps that are necessary to make a contaminated reusable medical device ready for its intended use. These steps may include cleaning, functional testing, packaging, labelling, disinfection and sterilisation of all types of endoscope and endoscope accessories (i.e. all devices used in conjunction with the endoscope for the procedure) [5]. The scope of this evidence snapshot will include guidelines for all steps associated with the reprocessing of all types of endoscopes across all surgical settings.

Methodology

Identifying guidelines

Table 1. Search Strategy

Setting	Across all surgical settings
Intervention	Guidelines and procedures for automated or manual reprocessing of all types of endoscopes
Outcomes	All outcomes including the rate, incidence, transmission or outbreak of Healthcare-associated infection (HAI)
Search terms	Terms related to “guidelines for reprocessing endoscopes”
Publications	Include: Guidelines Exclude: All other types of publications
Databases	Medical Services Advisory Committee (MSAC), Royal Australasian College of Surgeons (ASERNIP-S), Gastroenterological Nurses College of Australia (GENCA), Scottish Health Technologies Group, National Health and Medical Research Council (NHMRC), National Institute for Health and Clinical Excellence (NICE), National Guideline Clearinghouse (NGC)
Dates	2014–2017

Once key papers are identified from the database search, references mining will identify additional sources of information that meet the inclusion criteria described in the search strategy. Only the most updated information will be included in the evidence snapshot.

Guideline Quality
Each guideline identified will be appraised on their evidence-based process and content according to criteria 7 and 12 of an internationally recognised appraisal tool, AGREE II. [7] The two AGREE II criteria used are:

- *Were systematic methods used to search for evidence?*
- *Is there an explicit link between the recommendations and the supporting evidence?*

Where required, guidelines, their background documentation and source information were searched to determine if an evidence-based approach was used in the development process.

Each guideline will be given one point for each criteria met, with a possible total of 2 points. If the guideline did not meet any of the criteria, it will be given a zero; this meant that an explicit evidence-based method was not used or information explaining this process could not be explicitly determined.

Search Results

The database search identified a 2016 guideline for processing flexible endoscopes published by the Association of periOperative Registered Nurses (AORN) which provides guidance to perioperative, endoscopy, and sterile processing personnel for processing all types of reusable flexible endoscope and accessories [2]. The AORN guideline summary was included in this snapshot as the full guideline was not available without purchase.

From reference mining, and searching other relevant guideline sources, another four guidelines were identified.

These include an American Society for Gastrointestinal Endoscopy (ASGE) multi-society guideline on reprocessing flexible endoscopes [3], standards of infection prevention in reprocessing of flexible gastrointestinal endoscopes published by the Society of Gastroenterology Nurses and Associates (SGNA) [4], a World Health Organisation (WHO) manual providing guidance on the decontamination and reprocessing of medical devices for health-care facilities [5], and recommendations from the Healthcare Infection Control Practices Advisory Committee (HICPAC) [6].

All four guidelines were published in 2016 except the ASGE multi-society guideline [3] which was published in 2017.

Table 2 presents brief descriptions of the five most recent guidelines identified and their scores according to two AGREE II criteria on whether their content and processes were evidence-based.

Table 2. Guidelines for the reprocessing of surgical endoscopes.

Guideline/Source	Scope	Guideline Quality
Guideline Summary: Processing flexible endoscopes [2] *Association of periOperative Registered Nurses*	Provides guidance to perioperative, endoscopy, and sterile processing personnel for processing all types of reusable flexible endoscopes and accessories.	2
Multisociety Guideline on Reprocessing Flexible GI Endoscopes: 2016 update [3] *American Society for Gastroenterological Endoscopy*	Retains expanded details related to critical reprocessing steps of cleaning and drying and incorporates recent guidance specific to endoscope models with movable elevators at the distal tip. Does not address reprocessing of affiliated devices or flexible, rigid or semirigid endoscopes used in other procedures such as cystoscopy or bronchoscopy.	2
Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes [4] *Society of Gastroenterology Nurses and Associates*	To be used for all settings where gastrointestinal endoscopy is practiced.	1
Decontamination and Reprocessing of Medical Devices for Health-care Facilities [5] *World Health Organisation*	Decontamination of rigid and flexible endoscopes	0
Essential Elements of a Reprocessing Program for Flexible Endoscopes – Recommendations of the Healthcare Infection Control Practices Advisory	Recommendations apply to all settings where endoscopic procedures are performed and where endoscopes are reprocessed.	0

Committee [6] *Healthcare Infection Control Practices Advisory Committee*		

Key: GI – gastrointestinal
Guideline Quality: 2=meets both quality criteria, 1=meets only 1 quality criteria, 0=doesn't meet any guideline quality criteria. See section in Methodology for further explanation.

Only the AORN guideline [2] and the ASGE [3] multisociety guideline achieved a full score of 2, indicating that an evidence-based methodology was used in developing the guidelines and an explicit link to the evidence was provided. The ASGE multisociety guideline did not describe its search methodology however there was a clear indication that recommendations were graded and categorised according to levels of evidence. The other three guidelines and standards either did not describe an explicit evidence-based method in development of the guideline or information explaining this process could not be explicitly determined.

Only two guidelines, namely AORN guideline [2] and ASGE multisociety guideline [3] reported on outcomes such as risk of patient-to-patient transmission of infection and the presence or absence of bacteria or fungi on the endoscope or the rates of transmission of infection.

It is important to note that the AORN guideline summary is intended to be an adjunct to the complete guideline upon which it is based and is not intended to be a replacement for that document. Individuals who are developing and updating organisational policies and procedures should review and reference the full guideline (i.e. Guideline for processing flexible endoscopes. In: Guidelines for Perioperative Practice. Denver, CO: AORN, Inc; 2016:675-758) [2].

Conclusions

The evidence snapshot identified five recent guidelines for the reprocessing of endoscopes, two of which were clearly evidence-based [2, 3], to inform the development of standardised guidelines and procedures for the reprocessing of endoscopes across all surgical settings in Monash Health.

References

1. Gastroenterological Nurses College of Australia. Infection Control in Endoscopy 2010. Third Edition. Reprint 2011.
2. Association of periOperative Registered Nurses. Guideline summary: Processing flexible endoscopes. AORN Journal. 2016; 104(3):p237-242.
3. Petersen B.T. *et al*. Multisociety guideline on reprocessing flexible GI endoscopes: 2016 update. Gastrointestinal endoscopy. 2017; 85 (2): p282-294.
4. Society of Gastroenterology Nurses and Associates, Inc. Standards of Infection Prevention in Reprocessing Flexible Gastrointestinal Endoscopes. 2016. Downloaded from www.sgna.org on 17 March 2017.
5. World Health Organisation and Pan American Health Organisation. Decontamination and Reprocessing of Medical Devices for Health-care Facilities. 2016; p81 – 86. Downloaded from http://www.who.int on 17 March 2017.
6. Healthcare Infection Control Practices Advisory Committee. Essential Elements of a Reprocessing Program for Flexible Endoscopes– The Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC). 2016. Downloaded from https://www.cdc.gov/hicpac/pdf/Flexible-Endoscope-Reprocessing.pdf on 17 March 2017.
7. AGREE II tool. Appraisal of guidelines for research and evaluation II. 2010. Updated 2013. Downloaded from: http://www.agreetrust.org/wp-content/uploads/2013/10/AGREE-II-Users-Manual-and-23-item-Instrument_2009_UPDATE_2013.pdf on 24 March 2017.