

Endoscopy is a common high volume procedure often performed on an outpatient basis. Due to its design, flexible endoscopes are fundamentally difficult to clean and disinfect or sterilize. A large number of people can be exposed to body fluids and tissue from prior patients increasing the risk for person-to-person transmission (e.g., hepatitis B virus) and transmission of opportunistic environmental pathogens (e.g., *Pseudomonas aeruginosa*) if contaminated endoscopes are not reprocessed according to manufacturers' instructions. When there have been incidents of infection, root cause can be traced to some omission or error in the reprocessing process.

Rinse water is another identified source of contamination in endoscopes and has been linked in the following two scenarios:

- a) rinsing a disinfected endoscope with unfiltered tap water, followed by storage of the instrument without drying out the internal channels and
- b) contamination of AERs (automatic endoscope reprocessor) from tap water inadvertently introduced into the equipment.

Work Practices

- **Clean:** The internal operating channels and external surface are washed thoroughly with a detergent or enzymatic cleaner, and brushed with special cleaning instruments.
- **Disinfect:** Next, the endoscope is completely immersed in a FDA-approved high-level disinfectant (or chemical sterilant) for the amount of time specified by the product manufacturer.
- **Rinse:** The instrument's internal chambers and external surface is irrigated with water to remove residual chemicals. (Rinse 2-3 times during manual reprocessing.)
- **Dry:** The internal channels are flushed with alcohol and dried with forced air.

Most AERs are attached to a filtration system that meets the water quality standard. The water quality of the rinse following disinfection should be:

- sterile water, optimal choice for rinse water,
- filtered water that has been passed through filters with a pore size of 0.2 microns or,
- tap water, characterized as high-quality potable water that meets federal clean water standards at the point of use.

As an added level of quality assurance, some healthcare facilities are conducting random microbiological testing of the final rinse water from the automatic reprocessor.



References:

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