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Managing Sterilant/High Level Disinfectant Fluid

The rate of compliance with all process recommendations has been, at most, 90% for the 2015-2016 study periods.

Overall, staff must understand that this is a critical patient safety issue and that management supports adhering to sterilant/HLD fluid management recommendations.

1. Introduction

In 2015 and 2016, the AAAHC Institute for Quality Improvement conducted national ambulatory esophagogastroduodenoscopy (EGD) studies.

Data was collected on compliance with national guidelines on testing liquid sterilant/high-level disinfectant (HLD) to ensure minimal effective concentration of the active ingredient.

THE PROCESSES INCLUDE:

A. **Using the manufacturer's recommended chemical indicator**

B. **Testing at least every day of use and/or prior to each cycle/use**

C. **Documenting the results of testing**

D. **Discarding the solution if the chemical indicator shows that the concentration is less than the manufacturer's minimum effective concentration**

E. **Discarding the solution if it is beyond the manufacturer's recommended shelf or use-life**

Failure to comply with any component of the recommended endoscope reprocessing processes can lead to opportunities for transmission of viral or other pathogens from patient to patient.

2. Methodology

Organizations were solicited for participation in this study on the AAAHC Institute website and AAAHC accredited organizations were invited to participate via blast emails and faxes.

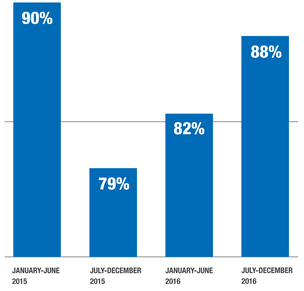
Organizations registering for the studies received study materials to record information on organizational attributes, policies, and procedures, as well as procedure specific information. Organizations then entered this information into online surveys.

	Number of Participating Organizations	Total Annual Volume of EGDs
January-June 2015	31	55,343
July-December 2015	38	42,217
January-June 2016	33	74,555
July-December 2016	26	55,166

Participating organizations provided information on which processes they use for sterilant/HLD testing to ensure minimal effective concentration of the active ingredient. (See Section 1 "Introduction" A-E.)

3. Results

Percent of Organizations Following All Sterilant/HLD Fluid Management Recommendations



The rate of compliance with all process recommendations (even eliminating the last process i.e., discarding the solution if it is beyond the manufacturer's recommended shelf or use-life, which is not universally agreed upon) was 90% in the first half of 2015 and 79% in the second half of 2015. This was 82% in the first half of 2016 and 88% in the second half of 2016. Over the last 4 study periods, compliance with all fluid testing processes did not exceed 90%.

Most would agree that levels of compliance less than 95% for such important processes would indicate areas with opportunities for quality improvement.

For the first half of 2015, both documentation and disposing of fluid that tested as too weak were problem areas. For the second half of 2015, all areas but frequency of testing were less than 95%.

In January-June 2016, using the manufacturer's recommended chemical indicators was excellent but all other processes were under 95% and there were significant problems with documenting results at 85%. In July-December 2016, although compliance was 100% for using the manufacturer's recommended chemical indicators and documenting testing results, and 96% for discarding fluid at manufacturer's expiration dates; for frequency of testing and disposing of fluid which tested as too weak, compliance levels were at 92%.

FLUID TESTING PROCESSES TO ENSURE MINIMAL CONCENTRATION OF THE ACTIVE INGREDIENT	JANUARY-JUNE 2015	JULY-DECEMBER 2015	JANUARY-JUNE 2016	JULY-DECEMBER 2016
	PERCENT (%) OF ORGANIZATIONS INDICATING PROCESS WAS FOLLOWED			
Test at least every day of use and/or test prior to each cycle/use	100	95	94	92
Use manufacturer's recommended chemical indicator	97	89	100	100
Document testing results	94	84	85	100
Discard solution if chemical indicator shows less than manufacturer's minimum effective concentration	90	89	94	92
Discard solution if beyond manufacturer's recommended shelf/use life	97	87	91	96

4. Discussion

Overall, staff must understand that this is a critical patient safety issue and have support from management in adhering to sterilant/HLD fluid management recommendations.

POSSIBLE QUALITY IMPROVEMENT INTERVENTIONS MAY INCLUDE:

TESTING DOCUMENTATION

- Providing reminders/checkoff forms and other tools for reprocessing staff to document testing results. Also impressing on staff that this documentation may help narrow times when lapses occur (if they do), thereby allowing the organization to most effectively target notification/testing.
- Educating reprocessing staff on the importance of documentation to ensure patient safety.
- Obtaining input from reprocessing staff on the testing form design and most convenient location to place the forms.

USE OF MANUFACTURER'S CHEMICAL INDICATOR

- Showing purchasing staff the importance of using a chemical indicator recommended by the fluid manufacturer. These are the chemical indicators that the manufacturer relies on to develop the parameters of what is the minimum effective concentration versus what is not.
- Educating reprocessing staff regarding the implications of a manufacturer's recommended chemical indicator showing less than the minimum effective concentration of the sterilant/HLD fluid for the efficacy (or lack thereof) of the whole scope reprocessing activity:
  - A compromised (less than minimum effective concentration) sterilant/HLD fluid means compromised reprocessing as a whole.
  - Compromised reprocessing means opportunities for transmittal of viral and/or other pathogens from patient to patient.

5. Conclusion

There are opportunities for organizations to not only measure their compliance with guidelines regarding scope reprocessing, including sterilant/HLD fluid management, but also implement interventions to improve compliance, anywhere it is lacking.

These processes deserve consideration for quality improvement, including regular review and interventions to ensure that these occur uniformly and consistently, with management support of compliance.

Institute for Quality Improvement

TITLE: Endoscope Reprocessing - Management of Sterilant/High Level Disinfectant Fluid
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