

CASE STUDY
Single-use flexible
Gastroscope

SINGLE-USE GASTROSCOPE USAGE AND IMPLICATIONS IN A HIGH PROCEDURE VOLUME FACILITY: A CASE STUDY

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When a hospital's automated endoscope reprocessor went down, the facility turned to the single-use Ambu® aScope™ Gastro to perform the 12 previously scheduled esophagogastroduodenoscopy (EGD) procedures the following day. A case study reports that not only did the single-use scope receive a positive perception of quality and functionality, it provided the facility an estimated cost savings of \$126.23 per procedure — or nearly \$38,000 per year. Additionally, a cost analysis estimated that a single-use gastroscope could enable an additional bariatric surgery each week, or 52 a year.

Case Study - aScope Gastroscope

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INTRODUCTION

A high esophagogastroduodenoscopy (EGD) and bariatric surgery volume (~500 procedures per year) hospital in the southeastern United States had their automated endoscope reprocessor (AER) stop operating the day before twelve patients were scheduled for their procedures. Due to this situation, the facility would not be able to clean their reusable gastroscopes after procedure, thus rendering them unusable. To alleviate the potential backlog in patients, the facility utilized the Ambu aScope Gastro single-use gastroscope to perform all procedures as scheduled. To understand the impact of utilizing single-use more frequently in the facility, a cost analysis was performed to evaluate the impact of switching to single-use gastroscopes.

METHODS

Endoscope-related data from the facility was gathered including, but not limited to the following: procedure volume, quantity and price of gastroscopes and reprocessing equipment, scope reprocessing method, and repair costs. These variables were used to calculate a cost per use for the facility. An estimated number of additional bariatric surgeries single-use gastroscopes may allow due to time and workflow



efficiencies and average reimbursement amount were provided by the facility. Additional reimbursement and costs were calculated given the additional projected bariatric surgeries, and a final cost impact was calculated for a transition to single-use gastroscopes.

RESULTS

The cost analysis found that single-use gastroscopes would provide the facility a cost savings of \$126.23 per procedure, or \$37,867 a year. Per procedure, the facility would incur an additional equipment cost of \$137.93, a reprocessing savings of \$147.12, and a repair savings of \$117.04 (Table 1). Due to increased workflow efficiencies, the facility projected an increase in the total amount of bariatric surgeries performed. This analysis estimated that single-use gastroscopes could allow for 1 additional bariatric surgery per week, or 52 a year. With an average reimbursement of \$15,500, the facility could see an additional \$806,000 in yearly reimbursement for an additional cost of \$23,400 (Table 2).

TABLE 1: COST PER PROCEDURE

Category	Reusable Gastroscopes (current)	aScope Gastro	Net Savings
Equipment	\$312.07	\$450.00	(\$137.93)
Reprocessing	\$147.12	–	\$147.12
Repairs	\$117.04	–	\$117.04
Total Costs per Procedure	\$576.23	\$450.00	\$126.23
Total Costs per Annum	\$172,869.00	\$135,000.00	\$37,869.00

TABLE 2: ADDITIONAL REIMBURSEMENT

Category	Reusable Gastroscopes (current)	aScope Gastro	Difference
Number of Procedures	300	352	52
Cost per use	\$576.23	\$450.00	(\$126.23)
Total Cost	\$172,869.00	\$158,400.00	(\$14,469.00)
Reimbursement	\$4,650,000.00	\$5,456,000.00	\$806,000.00
Reimbursement Minus Total Costs	\$4,477,131.00	\$5,297,600.00	\$820,469.00

CONCLUSION

Switching to single-use gastroscopes may not only provide facilities the ability to meet current demands in a time of need, but also promote cost savings as well as staff satisfaction and retention. Additionally, by allowing facilities to increase their procedure volume by improving workflow efficiency, single-use may also provide potential revenue generation. As the landscape of EGDs and bariatric surgeries evolves, it will become even more important for facilities to evaluate their true cost per use and how single-use gastroscopes may impact it.

1) Hoffman D, Cool C. SINGLE-USE GASTROSCOPE USAGE and IMPLICATIONS in a HIGH PROCEDURE VOLUME FACILITY: A CASE-STUDY. Podium presented at Digestive Disease Week 2023; May 6-9 2023; Chicago, IL; Accessed May 9, 2023.