

The Cost of Reusable Cystoscopy: A Microcosting Evaluation at a U.S. Academic Medical Center

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INTRODUCTION and OBJECTIVES

- Flexible cystoscopy is the most common office procedure performed by urologists.
- Single-use flexible cystoscopes offer an alternative to the traditional reusable scope.
- The most important differentiator: cost and time associated with reprocessing reusable scopes.
- Costs can vary significantly based on many variables at a given facility.
- The aim of this study was to estimate the cost of performing cystoscopy at a mid-volume, U.S. academic medical center.

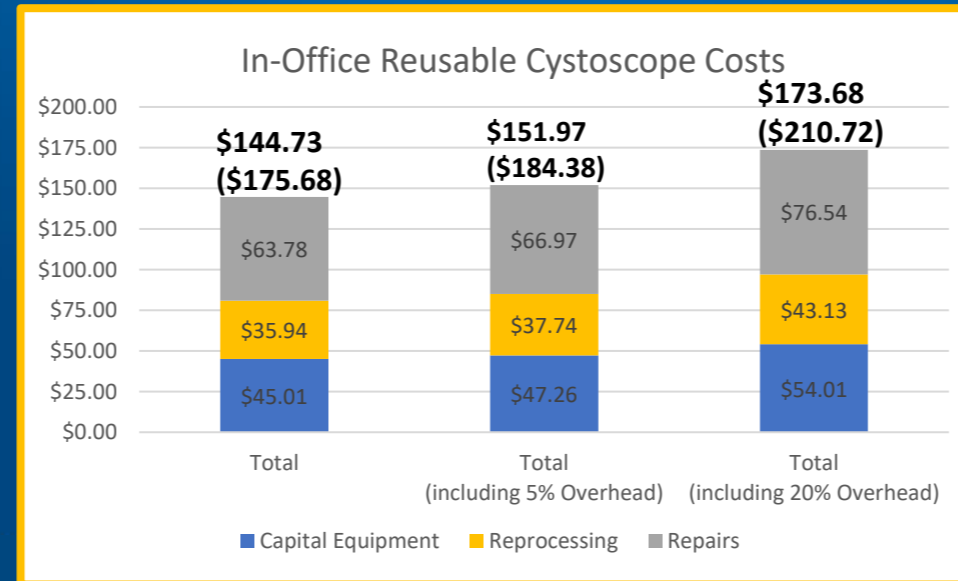
METHODS

- Data was collected from a two-week period in November of 2019.
- Repair costs per scope were totaled and divided by the number of months the scope was in service, followed by extrapolation across a 1-year horizon.
- Fixed costs of consumable reprocessing items were calculated following 6 reprocessing cycles.
- Staff costs were included to account for person-hours required during handling/reprocessing.
- Capital equipment was depreciated over 5-year useful lifespans.
- Overhead was included by taking 5-20% of the total cost per use of reusable capital, reprocessing, and repairs.

RESULTS

- The total cost per use of reusable flexible cystoscopy **amounted to \$144.73**. (or **\$175.68**, when adjusting for inflation in 2024)
- To account for uncaptured costs (hands-on labor, water, electricity, etc.), overhead was included, resulting in a total cost per use of **\$151.97 (5% overhead)** and **\$173.68 (20% overhead)** (or \$184.47 and \$210.82 when adjusting for inflation in 2024, respectively).
- Cost breakdown can be found below in Figure 1.

Figure 1. In-Office Reusable Cystoscope Costs. Total costs adjusted for 2024 inflation in parentheses.



CONCLUSIONS

- A 2023 systematic review found that the average total cost per use of performing cystoscopy with reusable scopes amounted to \$178.28, which is in line with the findings from this study (especially when considering ever increasing costs).¹
- Given the differences in costs across institutions, each facility should consider their respective inputs when examining a possible conversion to single-use cystoscopes.
- Though not accounted for in this costing analysis, ready access to consistently functional equipment is also important in preventing office burnout and frustration and should not be underestimated.
- Limitations:
 - Identifying the total cost of performing flexible cystoscopy encompasses many variables pertaining to the reusable capital, reprocessing of the scopes, nurse or reprocessing tech labor and the total cost of equipment repairs.
 - This prospective study was conducted in 2019, prior to major reprocessing guideline updates by AAMI and AORN, which may increase the costs due to additional necessary reprocessing steps.
 - Additionally, these costs are likely higher due to inflation and rising healthcare supply costs since 2019.

1. I. Haislip, C. Cool, D. Hoffman, E. Matz. EE325 The Cost of Reusable Cystoscopy in the US: A Systematic Review, Value in Health, Volume 26, Issue 6, Supplement, 2023, Page S119, ISSN 1098-3015, <https://doi.org/10.1016/j.jval.2023.03.626>.

