

THE EVOLUTION OF SINGLE-USE URETEROSCOPE USE IN THE UNITED STATES

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INTRODUCTION AND OBJECTIVE

A 2023 study investigating the current rate of single-use (SU) ureteroscope (URS) usage within the United States (U.S.) found that 68% of respondents utilized SU in some capacity and evaluated the main drivers and barriers to adoption.¹ Multiple SU URS have entered the market since this investigation. This analysis gives insight to recent SU URS usage and updated drivers and barriers of SU adoption in the U.S.

METHODS

- To evaluate the current SU URS usage and adoption drivers and barriers, a survey was administered to 106 urologists across 83 facilities in the U.S. between December 2023 and June 2024.
- Care settings included academic medical centers (AMCs) (n=31), community hospitals (n=35), ambulatory surgery centers (ASC) (n=14) and Veterans Affairs (VA) hospitals (n=3).
- Results were analyzed and the percent of SU users was calculated, along with the top drivers and barriers to adoption.

RESULTS

- 69% of respondents indicated they have SU URS in their practice currently
- Of those who indicated having SU URS available in their practice, **48% of all ureteroscopy procedures were performed with SU URS**

Figure 1. Total Proportion of Respondents Who have SU URS Available

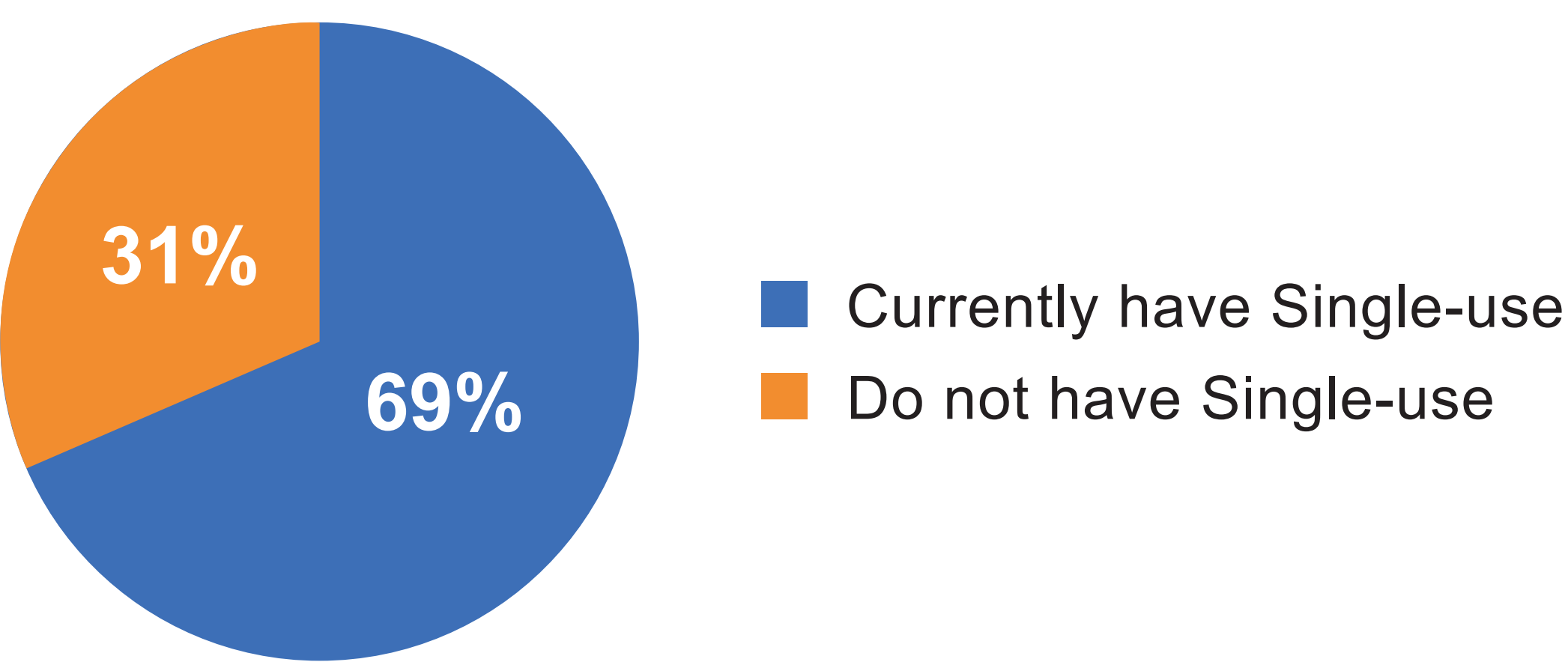


Figure 2. Percent of Respondents with SU URS Available by Care Setting

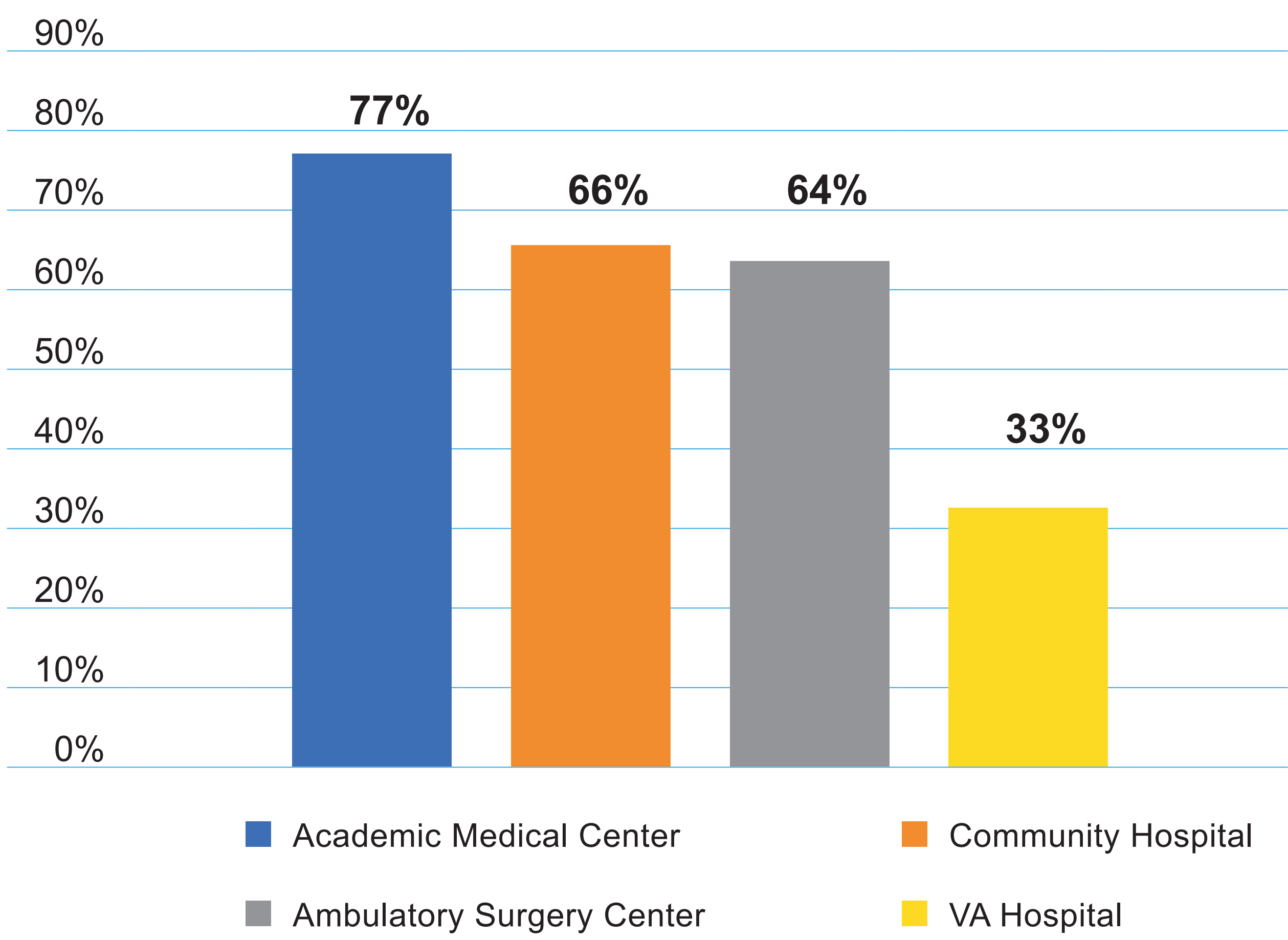
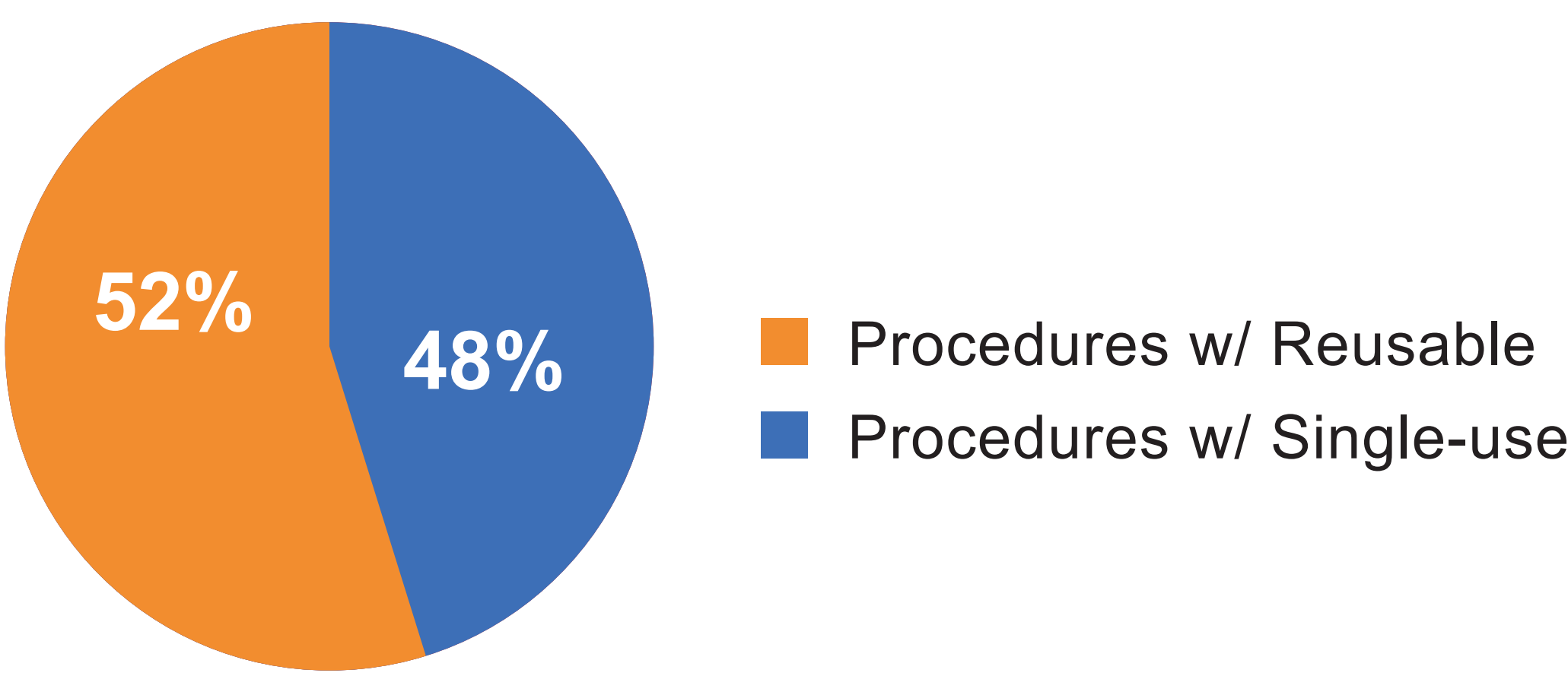


Figure 3. Proportion of Ureteroscopy by URS Type



The top drivers of SU URS adoption (without considering costs), were reported as:

- Fear of breaking reusable ureterscope
- Operational efficiency
- Predictable performance

Conversely, the top barriers of SU URS adoption (without considering costs) were reported as:

- Bad image quality
- Fiberoptic URS is smaller/easier to navigate
- Environmental impact

DISCUSSION

- SU URS have been an available alternative to reusable (RU) flexible URS for over 7 years, with new SU URS continuing to enter the market. SU URS eliminate the need for reprocessing and disinfection between patient use and avoid availability concerns due to reprocessing turnaround or damaged scopes.
- The proportion of urologists who have SU URS in their practice was comparable to previous published data from 2023,¹ with 69% of current respondents indicating they have SU URS currently. Respondents indicated that bad image quality, easier navigation of fiberoptic RU URS, and the environmental impact of SU URS as the main barriers of adopting SU URS.
- As new SU URS are brought to market, manufacturers continue to improve the performance of these endoscopes with new technology. Recent evidence evaluating the performance of a new SU URS showed urologists rated the image quality of this scope an 8.6 out of 10, indicating this new SU URS exceeds the image performance of their current platform.²
- Additionally, research has shown that the total carbon footprint of SU URS is comparable to RU URS, especially when considering reprocessing, repairs, and waste generation per procedure.³⁻⁵ Facilities should continue to evaluate their cost and consumable components for RU URS to grow their understanding of the total economic and environmental impact of their current URS platform.

CONCLUSION

SU URS utilization continues to grow across care settings due to the benefits and drivers. Excluding costs, respondents highlighted the environmental impact of SU as a key barrier to utilizing SU despite published literature noting similar, or even less impact on the environment compared to RU scope reprocessing.^{4,5} These results signal the need for facilities to investigate their own reprocessing processes and grow their understanding of the environmental impact of their current URS platform.

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