

HOW DOES IT STACK UP? User Comparison of the Ambu aScope 5 Uretero against Reusable Ureteroscope Platforms

Authors: Ian Haislip, Christina Cool

Objectives:

Single-use (SU) ureteroscopes first became available in the United States (U.S.) in 2015 (FDA approved in 2011¹) alleviating availability issues and repair and reprocessing downtime that are commonly encountered across endoscopy specialties, sometimes causing delays or rescheduling of patient care. This study sought to evaluate the performance of the new aScope 5 Uretero (aSC5) SU ureteroscope from the perspective of predominantly RU ureteroscope users.

Methods:

- From July to September 2024, 39 flexible ureteroscopies utilizing the aSC5 were completed by 11 board-certified urologists who predominantly use RU scopes.
- Participants currently practiced in academic medical centers, community hospitals and surgery centers across the U.S.
- Following each procedure, participants completed a survey to assess the performance of the aSC5 system compared to their current RU platform.
- A 5-point qualitative scale was used to compare the performance from ‘Much worse’ (1) to ‘Much better’ (5) and converted to a numerical scale for analysis where comparable received a rating of 3.
- Mean ratings for comparing the aSC5 and RU ureteroscopes were calculated.

Results:

- Compared to urologist’s RU ureteroscope platforms, the aScope 5 Uretero was rated ‘comparable’ or better for each metric.
- More than half (>50%) of urologist ratings indicated ‘better’ to ‘much better’ performance of the aSC5 than their RU ureteroscope for the following:
 - Image quality
 - Ergonomics (weight and feel)
 - Maneuverability
 - Performance of display & processing unit
 - Overall ease-of-use
 - Overall satisfaction
- See Table 1 for full results.

Survey Metric	Mean Rating	Response Range (n=39)
1 = Much Worse, 2 = Worse, 3 = Comparable, 4 = Better, 5 = Much Better		
Overall Satisfaction	3.82	[2-5]
Overall Ease of Use and Set Up	4.10	[3-5]
Articulation Without Tool	3.69	[3-5]
Articulation With Tool	3.44	[2-5]
Image Quality	3.79	[2-5]
Ability to Aspirate Fluids	3.44	[3-5]
Ergonomics	4.28	[3-5]

Table 1. Ambu aScope 5 Uretero vs. Physician Current Reusable Ureteroscope Platform

How often do availability issues occur? (n=21)

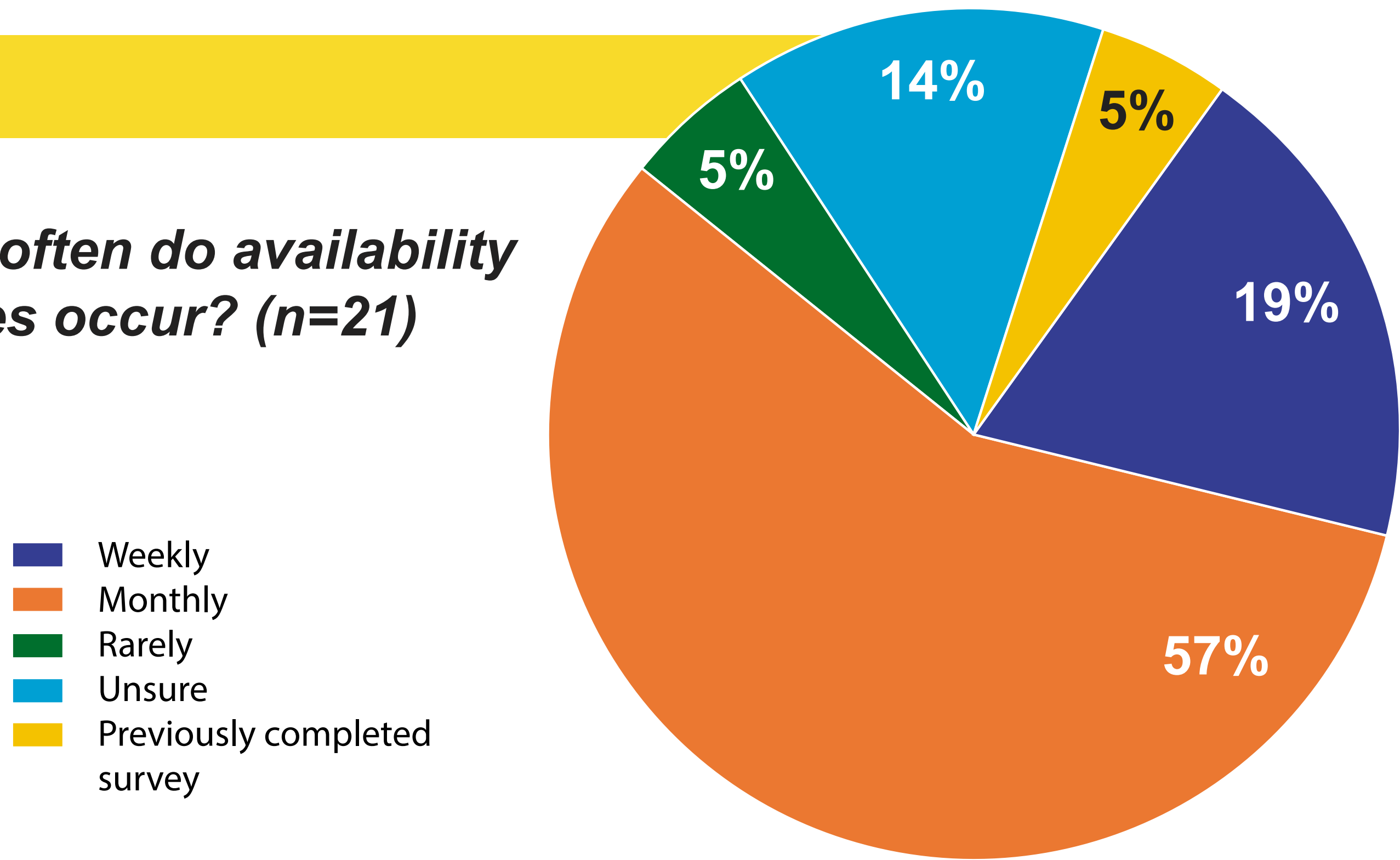


Figure 1. Percent of Respondents and Frequency of RU Ureteroscope Availability Issues

What are the most common reasons you experience procedural delays due to ureteroscope availability? (n=47)

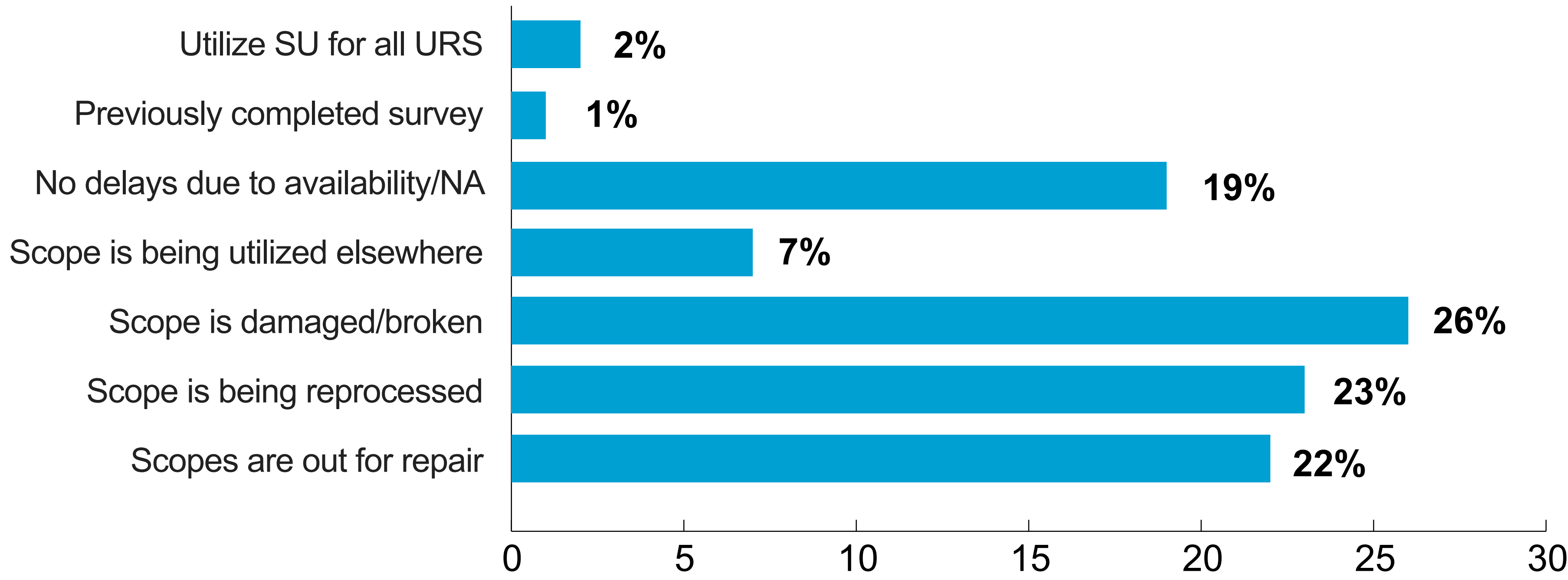


Figure 2. Main Causes of Procedural Delay & Scope Availability Issues

Discussion:

- The aSC5 performed as well as, or better than, participant’s current RU ureteroscope platform.
- With high repair rates and breakage frequency among RU ureteroscopes, the aSC5 may help facilities mitigate the repair costs associated with their RU scope fleet by supplementing aSC5 use in specific cases such as complex anatomies and hard-to-reach stones.
- The single-use nature of the aSC5 eliminates the need for sterilization following patient use and may enable nursing and reprocessing staff to reallocate time to other pertinent tasks, reducing overall burden of reprocessing.
- Facilities should evaluate the performance of the aSC5 to ensure the scope can meet the demands of their urologists.
- Costs associated with RU ureteroscope repairs and reprocessing should be evaluated by each facility, as these costs vary across all facilities.

Conclusion:

The aSC5 SU platform was rated as comparable or better than the current RU ureteroscope platform of participating urologists. By showing that SU ureteroscopes are equivalent or better performing, these scopes may pose a cost-effective alternative for RU, especially when experiencing high breakage rates due to complex cases.

References

1. Mazzucchi E, Marchini GS, Berto FCG, et al. Single-use flexible ureteroscopes: update and perspective in developing countries. A narrative review. Int Braz J Urol. 2022;48(3):456-467. doi:10.1590/S1677-5538.IBJU.2021.0475