

# SINGLE-USE vs. REUSABLE ENDOSCOPY REPROCESSING:

## An Efficiency Survey of Nurses and Technicians

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### BACKGROUND

Numerous studies have highlighted the potential time savings single-use endoscopes (SUEs) may afford facilities when compared to reusable endoscopes (REs) due to their ability to eliminate post-procedure cleaning. This time savings may not only allow for more procedures to be performed, but free up the resources and time of individuals responsible for cleaning both the procedure rooms and REs. Additionally, studies have examined the efficiency impacts SUEs may provide facilities and found that SUEs may save over 9 minutes of hands-on staff time per procedure when compared to REs.<sup>1,2</sup> The purpose of this survey was to evaluate the impact SUEs could have on the individuals responsible for procedure room turnover and RE reprocessing.

### METHODS

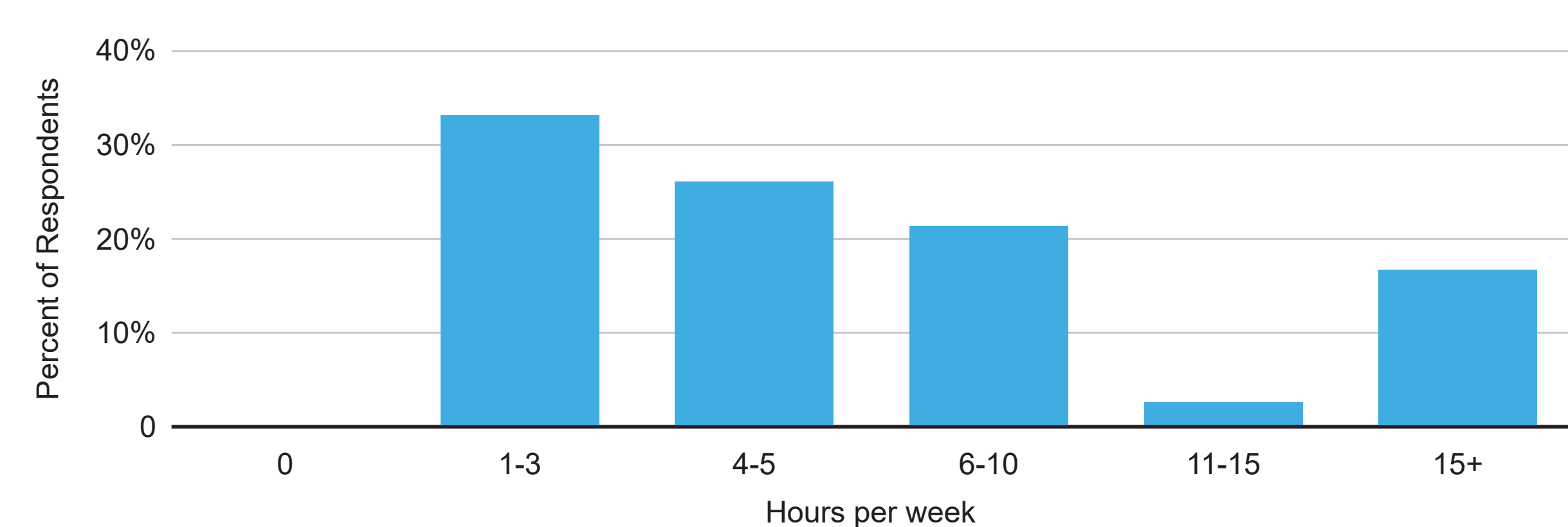
- Clinical training specialists across the United States distributed surveys to nurses, reprocessing technicians, and others involved in endoscope reprocessing.
- Data collection took place from September 2022 to February 2023.
- Survey data was cleaned for incomplete responses and proportions were calculated using each question's applicable respondents.

### RESULTS

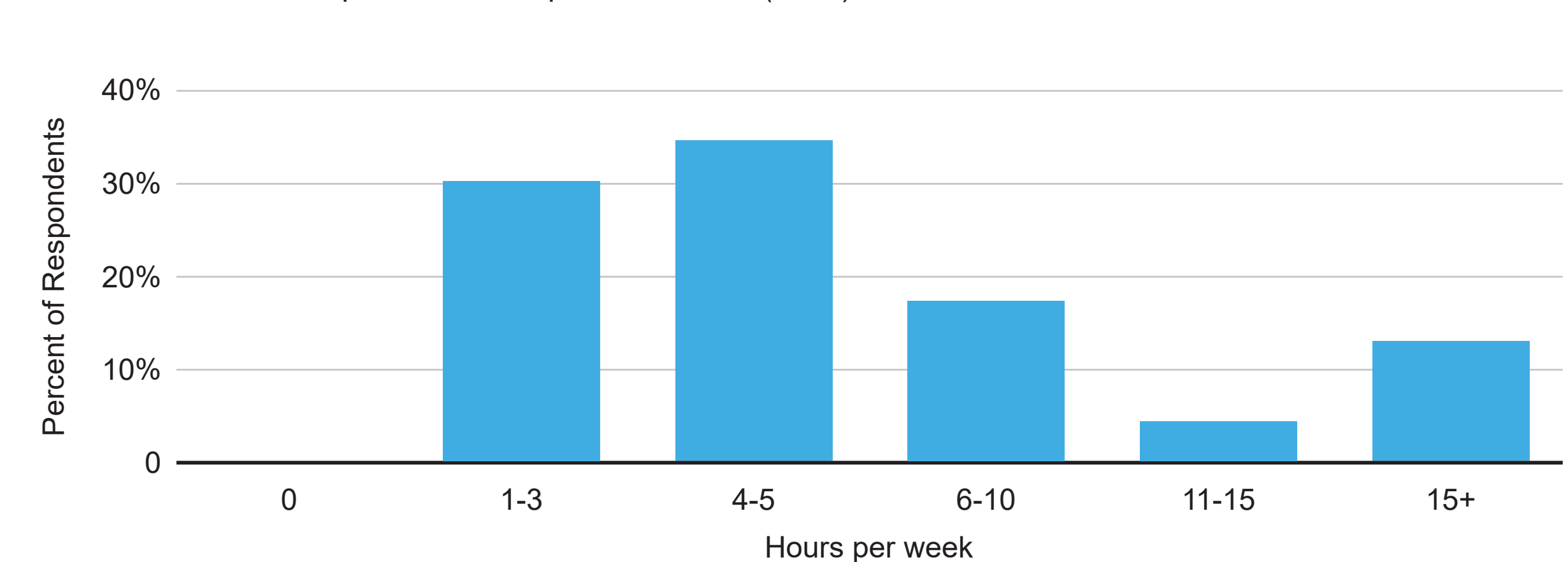
52 respondents were included in the survey (not all questions were completed by each participant depending on their experience and role).

- **100% believed using SUEs instead of REs could save time** and allow them to spend more time on imperative tasks, with 66% saving 4+ hrs/week and 17% saving 15+ hrs/week.
- **70% believed they would be able to reallocate 4+ hrs/week** and 13% believed they could reallocate 15+ hrs/week to more important tasks.
- **36% stated that reusable scope cleaning created unscheduled after-hours work.**
- 11% of individuals felt that SUEs could reduce 6+ hrs/week of after-hours and/or weekend time.
- **89% of reprocessing technicians felt that eliminating the reprocessing of just one type of scope would reduce the pressure to keep up with the demands of cleaning/reprocessing other types of scopes and equipment.**

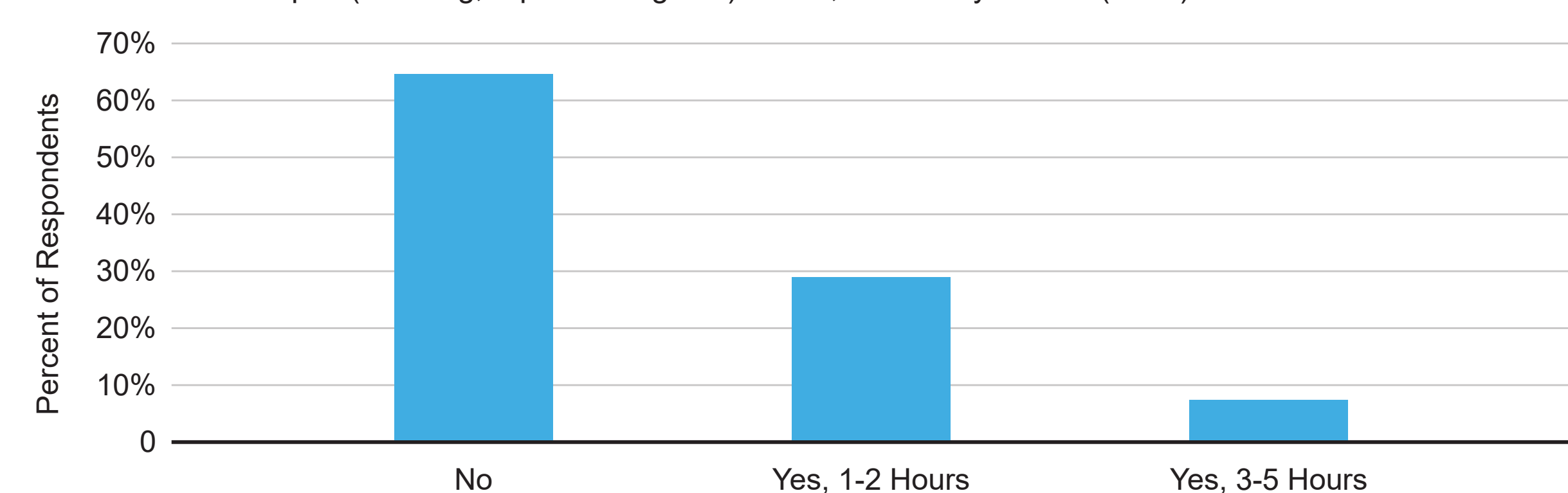
**FIGURE 1**  
If all procedures are/were performed with single-use scopes, what would be the estimated time savings per week (compared to all procedures being performed with reusable scopes where cleaning bedside, reprocessing etc. is done)? (n=42)



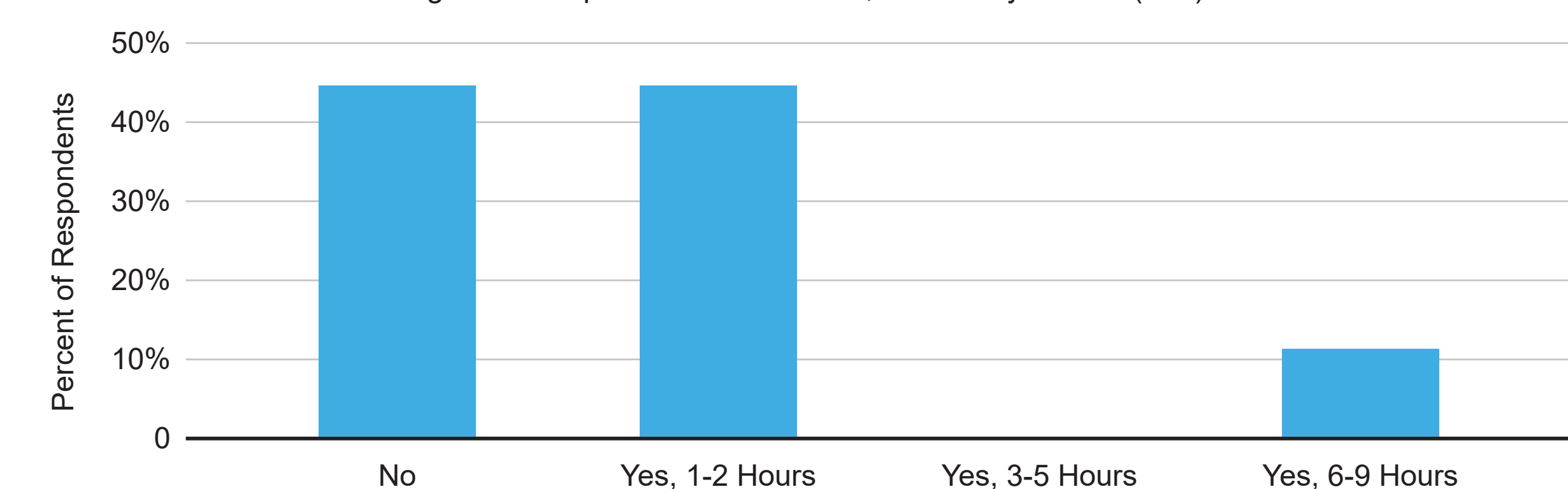
**FIGURE 2**  
Of the hours saved above (if all scopes were changed to single use), how many hours do you estimate could be reallocated to more "important" and imperative tasks? (n=46)



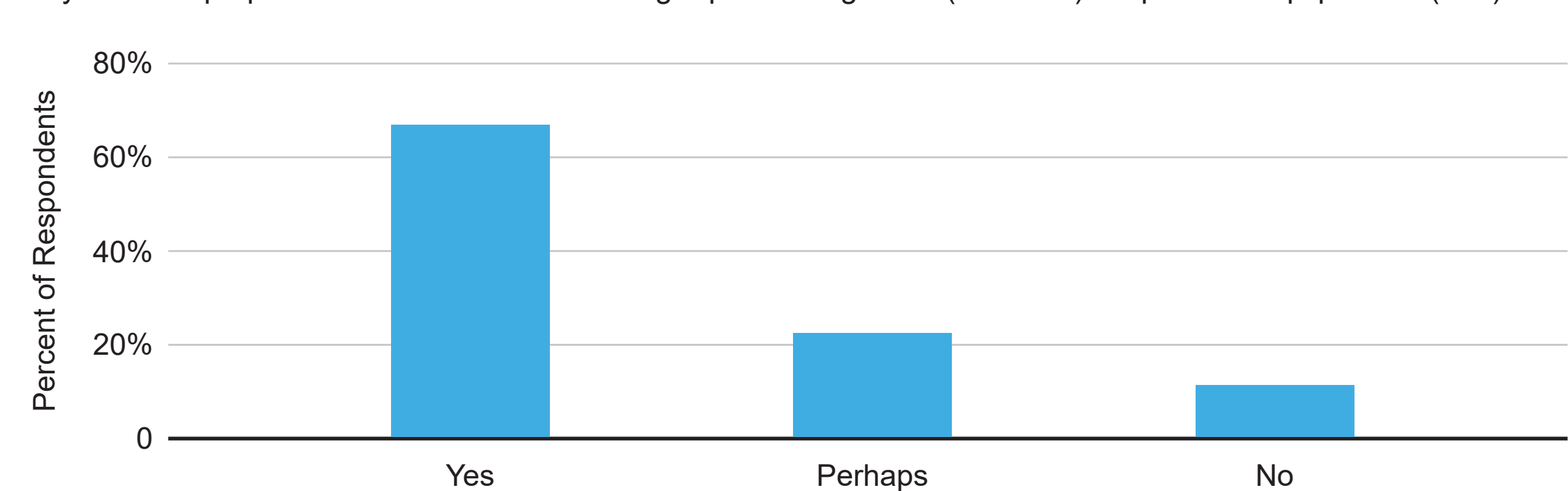
**FIGURE 3**  
If you are NOT scheduled to work after hours and/or weekends, do you currently work after hours or weekends due to reusable scopes (cleaning, reprocessing etc.)? If so, how many hours? (n=14)



**FIGURE 4**  
If you ARE scheduled for after hours and/or weekends, do you think you could reduce time spent working after hours and/or weekends if single-use scopes were used? If so, how many hours? (n=9)



**FIGURE 5**  
If you are a reprocessing tech, and didn't have to reprocess a given type of scope, would there be less pressure on you to keep up with the demands of cleaning/reprocessing other (reusable) scopes and equipment? (n=9)



### DISCUSSION

An increase in staff morale may also be seen if facilities switch to single-use endoscopes. This is of particular importance given increasing shortages in nurses and technicians in the United States. As expectations, caseloads, and pressure on hospital staff increase, single-use endoscopes may provide relief given their ability to save staff time and allow for reallocation to more imperative tasks, as supported in Figure 5 which showed that 89% of respondents felt that eliminating the reprocessing of just one type of scope would reduce the pressure to keep up with the demands of cleaning/reprocessing other types of scopes and equipment. If left unaddressed, these issues may lead to turnover, and in turn, even more costs the facility must assume. The 2023 NSI National Health Care Retention & RN Staffing Report found that the average cost of replacing just one staff registered nurse (RN) can be as high as \$64,500 and that every percent change in RN turnover can cost or save the average hospital \$380,600 per year.<sup>3</sup> Additionally, these additional costs can compound quickly if travel nurses must be hired to fill vacancies.

### CONCLUSION

- Single-use endoscopes may not only save employees time by eliminating endoscope reprocessing, but allow them to spend time doing more imperative tasks and reduce job pressures.
- All respondents felt that utilizing only SUEs could save time and over 17% felt they could save 15+ hrs/week.
- If widely adopted, facilities may not only see a reduction in costs, but an increase in time savings, employee morale, and elimination of reprocessing-related risks. Additionally, switching to single-use endoscopes may save the facility additional costs if they have to hire replacement staff or travel nurses.

### SOURCES

1. Medeiros R, Soto-Palou F, Dionise Z, et al. The Impact of Single Use Cystoscopes on Clinical Workflow in an Outpatient Setting. AUA Southeast Sectional Meeting. Published online March 2023:265. <https://sesaua.org/docs/meetings/ses2303/2023-sesaua-program-book.aspx>
2. Butaney M, Wilder S, Tinsley S, et al. MT16 efficiency and user satisfaction of single-use vs Reusable Cystoscopes in a high-volume Urology Clinic. Value in Health. 2023;26(6). doi:10.1016/j.jval.2023.03.1663
3. Gamble, M. The Cost of Nurse Turnover in 24 Numbers. Becker's Hospital Review. Published online April 2023. Available at: <https://www.beckershospitalreview.com/workforce/the-cost-of-nurse-turnover-in-24-numbers-2023.html>.