



Stethoscope Sanitation: Current Knowledge and Practices

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Background

The stethoscope is a necessary tool of medical care and has the potential to transmit infection from one patient to another when not properly sanitized (Datta, 2018). While hand sanitation rates are improving, stethoscope sanitation rates remain low (Bansal, 2019). It is unclear whether the disparity in sanitation effort represents a lack of knowledge regarding the risks of bacterial transmission by stethoscopes or whether it is the result of a structural disparity inherent in medical facilities. While hand sanitation options are widely available inside and outside patient rooms, at workstations, and in hallways, sanitation options for stethoscopes are not always widely available.



Aim

The aim of this project was to better understand current knowledge and practices regarding stethoscopes as a mechanism of infection transmission at two community hospitals (UC Health Memorial Central and Memorial North) with the long-term goal of improving stethoscope cleanliness through education and availability of appropriate cleaning supplies.

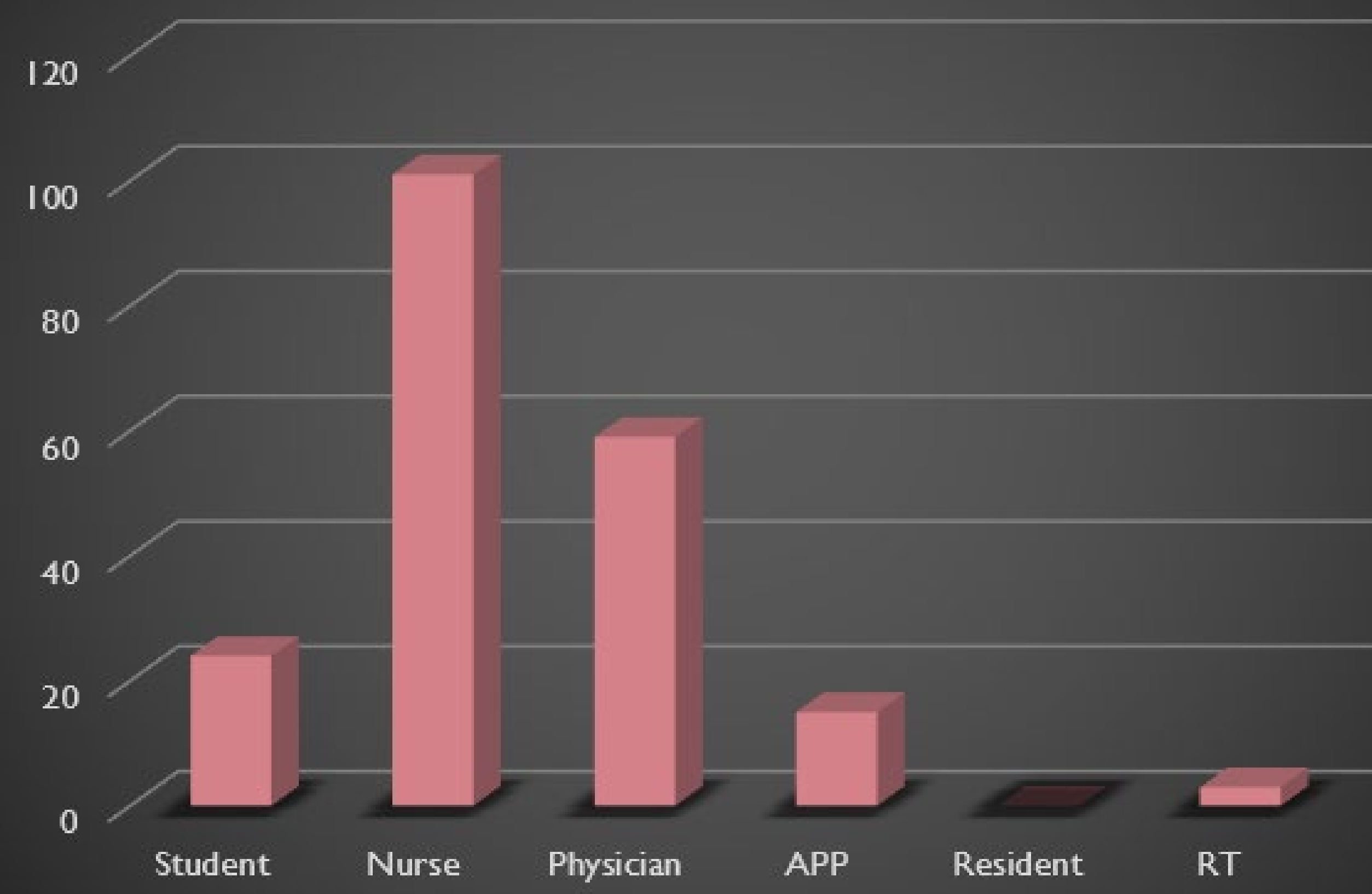
Methods

An anonymous nine question <1 min electronic survey was distributed in a nodal fashion to several CSB physicians, who then forwarded it broadly within their respective departments. The survey was electronically distributed to the CSB MD class of 2022 directly. It was also distributed and collected in person on the Memorial Central and Memorial North campuses. As of the collection date on 4/5/21, there were 168 respondents to the electronic version and 34 responses in person. The in-person responses were then manually added to the electronic excel data.

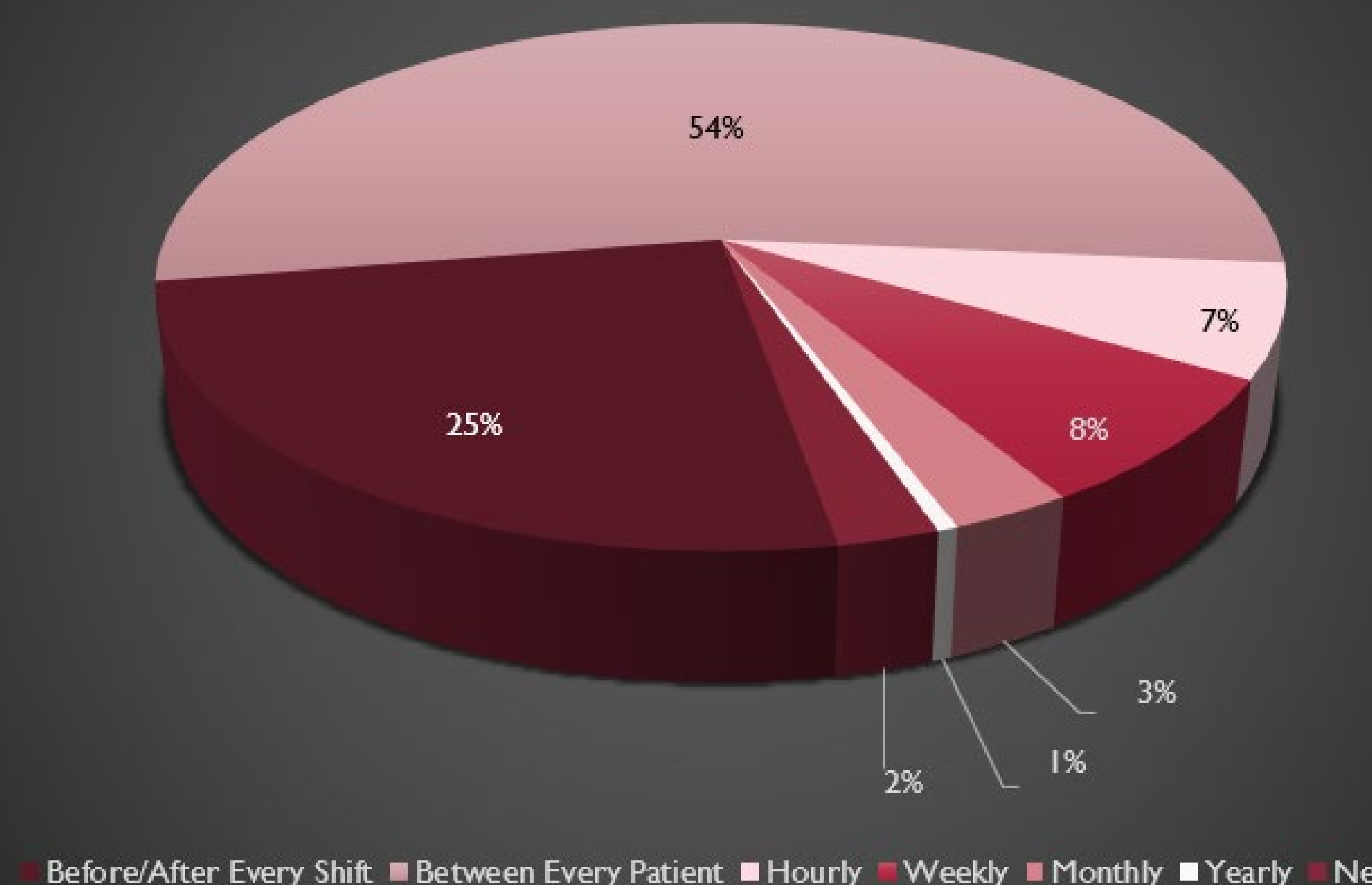
Results

A total of 202 employees responded to the survey (50% Nurses, 29% Physicians, 19% Students, with the remaining representing APPs and RT). Noteworthy values include 46% of respondents saying they do not clean their stethoscope between every patient with 25% averaging once per shift and 6% averaging less than once per month.

Number of Responses by Title



Distribution of Sanitation Frequency



Results Continued

Of 202 responses, 201 reported they were aware that stethoscopes could transmit infection, only 17 reported they knew how to clean their stethoscopes, and 4 indicated that UC Health provided education about the topic. Importantly, of the 17 individuals who indicated they know how to properly clean their stethoscopes, 12 reported cleaning it between every patient. These data represent a 70% successful cleaning rate among those who indicate they know how compared to a 51% success rate among those who indicate they do not.

Discussion

A major drawback to the method used is that these data are entirely self-reported and therefore accuracy cannot be confirmed. Though the survey was anonymous, we all possess biases that lead us to portray ourselves in a more favorable light. However, there is value in elucidating how an organization feels they are performing a given task, independent of how well the task is actually performed. For data collected in this manner, it may be appropriate to interpret the results as perceived room for improvement. These data suggest that nearly half the surveyed patient-facing staff indicate that there is room for improvement in both education about and execution of stethoscope sanitation. Importantly, these data also suggest that UC Health has the potential to improve sanitation efforts by as much as 19% simply through education.

References

- Bansal A, R S S, Bhan BD, Gupta K, Purwar S. To assess the stethoscope cleaning practices, microbial load and efficacy of cleaning stethoscopes with alcohol-based disinfectant in a tertiary care hospital. *J Infect Prev.* 2019 Jan;20(1):46-50. doi: 10.1177/1757177418802353. Epub 2018 Nov 7. PMID: 30719088; PMCID: PMC6346325.
- Datta P, Kaur M, Rawat S, Gupta V, Chander J. Stethoscope, "the friendly foe" - A study to evaluate bacterial contamination of stethoscopes and disinfection practices. *J Infect Dev Ctries.* 2018 Oct 31;12(10):887-893. doi: 10.3855/jidc.10128. PMID: 32004158.
- Ghumman GW, Ahmad N, Pop-Vicas A, Iftikhar S. Stethoscope Cleaning During Patient Care. *R I Med J* (2013). 2018 May 1;101(4):18-20. PMID: 29703070.
- Leprat R, Minary P, Devaux V, de Wazière B, Dupond JL, Talon D. Why, when and how to clean stethoscopes. *J Hosp Infect.* 1998 May;39(1):80-2. doi: 10.1016/s0195-6701(98)90250-x. PMID: 9617692.
- O'Flaherty N, Fenelon L. The stethoscope and healthcare-associated infection: a snake in the grass or innocent bystander? *J Hosp Infect.* 2015 Sep;91(1):1-7. doi: 10.1016/j.jhin.2015.04.010. Epub 2015 May 1. PMID: 26092471.
- Scott-Rimington B, Klim S, Kelly AM. How clean is your stethoscope? *Emerg Med Australas.* 2017 Feb;29(1):122-123. doi: 10.1111/1742-6723.12729. Epub 2017 Jan 10. PMID: 28073168.