

Healthcare Associated Infections

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Abstract

Surgery is a large revenue generator in hospitals, it is also a costly affair for the patient. Patients, depending on health insurance, can pay zero to thousands of dollars in surgery each year. One thing a patient should never have to expect, even after being told of the possibility, is the contraction of infection from the surgery. Infections include infections of the blood, urinary tract, lungs, skin, and surgical sites (Virginia Department of Health, n.d.). Thompson, Oldenburg, Deschamps, Rupp and Smith (2011) estimated that healthcare associated infections account for 1.7 million infections and 99,000 associated deaths each year, with annual direct medical costs of up to \$45 billion. Therefore, the purpose of this research was to find those who have been exposed to surgery; how many have had or known about healthcare associated infections (HAI) and the likelihood of HAI due to something that would have been contracted due to carelessness of the hospital or perhaps improper practice that led to a HAI. This research surveyed 52 participants aged 17 to 34. The results indicated that 98% of the participants have had surgery; nearly half of them knew instrumentation was reused, only 17% were aware of what a HAI is, and only 2% had ever contracted a HAI.

Keywords: Health care, infections, instrumentation, surgical site

Introduction

Surgery is a large revenue generator in hospitals, it is also a costly affair for the patient. Patients, depending on health insurance, can pay zero to thousands of dollars in surgery each year. One thing a patient should never have to expect, even after being told of the possibility, is the contraction of an infection from the surgery. Infections include infections of the blood, urinary tract, lungs, skin, and surgical sites (Virginia Department of Health, n.d.). Infectious Disease Advisor (n.d.) indicated that In the United States, “patients with surgical site infection (SSI) are twice as likely to die, 60% more likely to be admitted to the intensive care unit, and more than five times more likely to be readmitted to the hospital after discharge. In 2002, SSIs contributed to 8205 deaths.” In 2009, the Virginia Department of Health branch of the Healthcare Associated Infections (HAI) and Antimicrobial Resistance (AR) Program hired staff to enhance surveillance activities, and to participate in prevention collaboratives and educational activities (Virginia Department of Health, n.d.).

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Literature Review

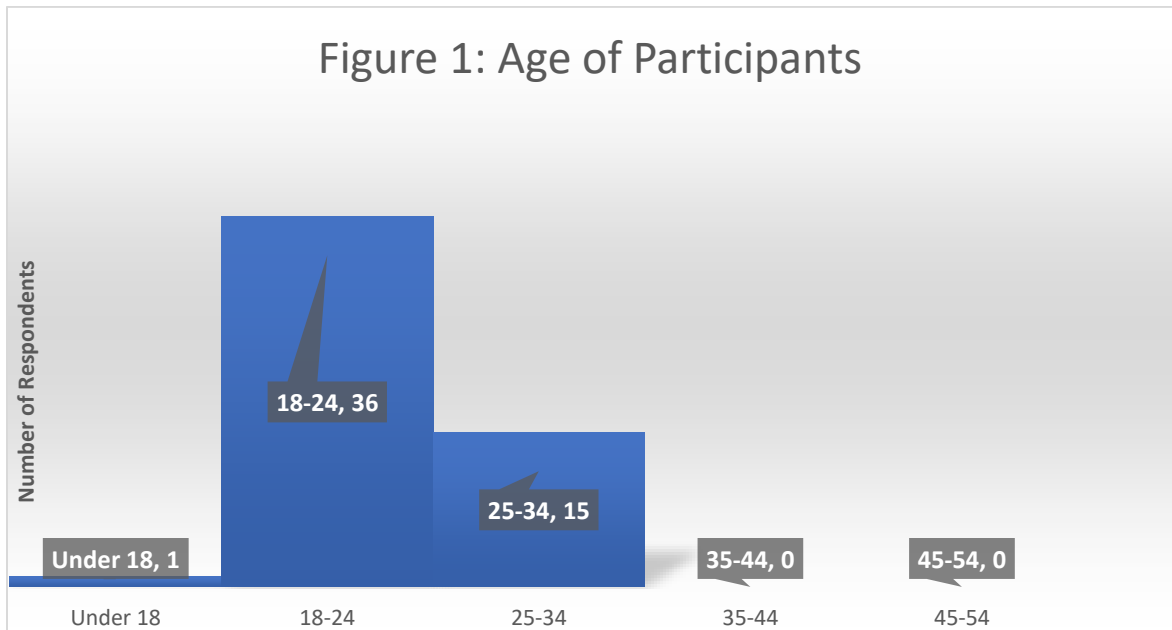
Thompson et al. (2011) estimated that healthcare associated infections account for 1.7 million infections and 99,000 associated deaths each year, with annual direct medical costs of up to \$45 billion. Surgical site infections account for 17% of HAIs, an estimated annual cost of \$3.5 to 10 billion for in United States. Thompson et al. (2011) conducted a research to eliminate SSI. The research was conducted at a top rated academic health center. Existing interventions and known SSI reduction and best practices were used. Data from 2008 to 2010 were collected and analyzed. Thompson et al. (2011) “found that committed leadership, transparency to achieve high levels of staff engagement, and centralization of critical surgical activities result in significant declines in SSIs with resulting substantial cost savings.”

Data Collection

On October 26, 2019 data was collected regarding common knowledge of healthcare associated infections. The data was collected through a third-party site, Survey Monkey. The data was an open survey link open for anyone to take, distributed through a profile link on Instagram. The population of the study consisted of males and females from aged 17 to 34. The survey link was open for 24 hours. Those who did the survey numbered 52. The data collected was data analyzed and presented in the next section.

Data Analysis

Figure 1 shows the ages of the research 52 participants. There was one participant who was below the age of 18; this participants was 17 years old. There were 36 participants within the age range of 18-24 years. There were 15 participants within the age range of 25-34. There was no participant above of 34 years.



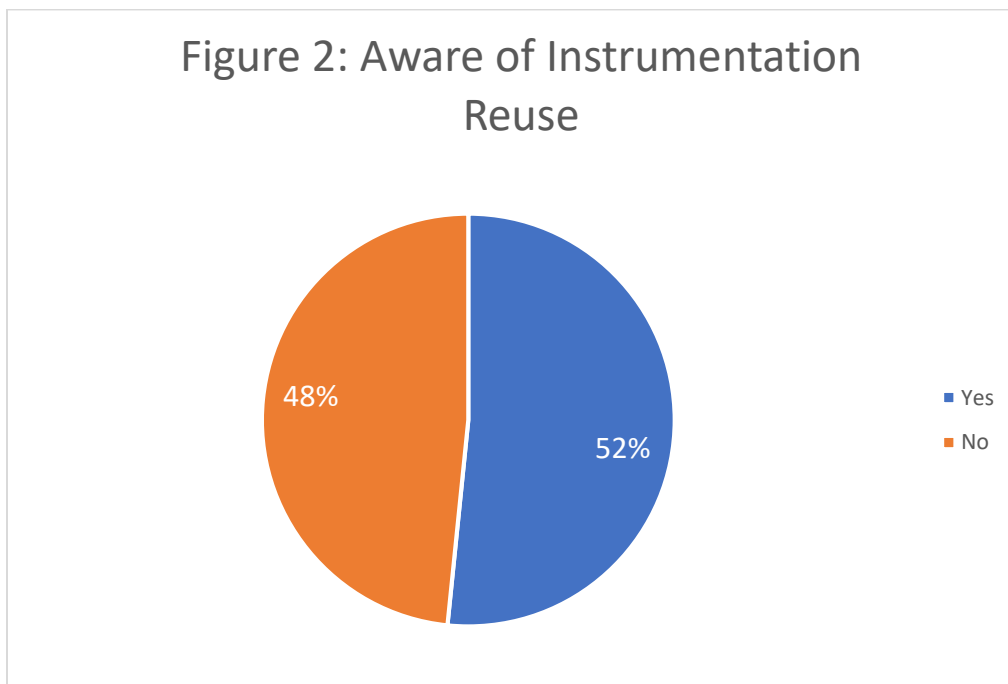
We hypothesized that at least 20% of the participants have heard of a healthcare associated infection. We used a testing of the hypothesis where the distribution of the data is normal (Lind, Marchal & Wathen, 2018). The hypotheses,

$$H_0: p > 0.20$$

$$H_a: p \neq 0.20$$

where p is the percentage of people in the given sample size that have heard of a HAI with a significant value being below 0.05. The p -value of 0.632 was above 0.05. We found the p -value using a z -score. When the p -value is above the significance level we do not have sufficient evidence to reject the null hypothesis. Therefore, we failed to reject the null hypothesis. The data is not statistically significant.

Figure 2 shows that 48% of the participants were aware that surgical instruments are reused in surgical sites. That 52% of the participants were not aware.



The results indicated that 98% of the participants have had surgery; nearly half of them knew instrumentation was reused, only 17% were aware of what a HAI is, and only 2% had ever contracted a HAI.

Conclusion

Surgery is a large revenue generator in hospitals, it is also a costly affair for the patient.

Patients, depending on health insurance, can pay zero to thousands of dollars in surgery each year. One thing a patient should never have to expect, even after being told of the possibility, is the contraction of an infection from the surgery. Infections include infections of the blood, urinary tract, lungs, skin, and surgical sites (Virginia Department of Health, n.d.). Thompson et al. (2011) estimated that healthcare associated infections account for 1.7 million infections and 99,000 associated deaths each year, with annual direct medical costs of up to \$45 billion.

Therefore, the purpose of the research was to find those who have been exposed to surgery; how many have had or known about healthcare associated infections (HAI) and the likelihood of HAI due to something that would have been contracted due to carelessness of the hospital or perhaps improper practice that led to a HAI

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Recommendations for Practice

This research provided information about the seriousness of healthcare associated infections. The results indicated that 98% of the participants have had surgery; nearly half of them knew instrumentation was reused, only 17% were aware of what a HAI is, and only 2% had ever contracted a HAI. It is recommended that non-healthcare people are educated or trained about HAI so they know how to prepare to avoid HAI. It is also recommended that healthcare professionals are made aware of the results so that they can better work with patients to avoid HAI and related cost.

Recommendations for Further Research

The research data was collected from participants aged 17 to 34; it is recommended that further research be conducted to survey participants aged 18 to 70. This population has had surgery. Also it is recommended to extend the time to collect more data to increase the number of participants and get better data analysis results.

References

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