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AWARENESS OF SURGICAL SITE INFECTIONS (SSIS) AND HYGIENE PRACTICES

Introduction

Surgical site infections (SSIs) account for a significant proportion of healthcare-associated infections worldwide. These infections contribute substantially to poor patient outcomes following surgery, including increased rates of illness and death. Consequently, SSIs often lead to extended hospital stays and place a significant financial strain on healthcare systems. As a leading patient safety challenge, they affect a vast number of surgical patients each year and impose an unacceptable toll on global health resources [1]. Despite the existence of readily accessible, evidence-based prevention measures, surgical site infections remain a persistent problem across both high-income and developing nations [2].

Effective prevention of surgical site infections relies on a combination of strategies implemented in the preoperative, intraoperative, and postoperative periods. Leading health authorities, including the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), have established comprehensive guidelines that focus on fundamental infection control practices to minimize infection risk [3].

These guidelines aim to lower the microbial load on patients' skin and reduce the chance of contamination throughout a surgical procedure. Nonetheless, the success of these strategies is largely determined by the knowledge and practices of those involved. Evidence suggests that healthcare workers often possess insufficient knowledge regarding SSI identification and prevention, even though the professional community holds a generally positive view of their role in infection control [4].

This deficit also affects patients and their caregivers, whose role in managing wounds and identifying potential infections following discharge is now more widely acknowledged [5].

Goal

This study aims to evaluate awareness regarding surgical site infections and hygiene practices among patients and healthcare workers, using a structured questionnaire administered to 195 individuals. The findings are intended to highlight existing knowledge deficits and guide the development of focused educational strategies for infection prevention.

Materials and methods of research

This study was carried out using survey data collected from 195 respondents through a Google Forms questionnaire designed to assess awareness of Surgical Site Infections (SSIs) and hygiene practices. All participants completed the online survey as part of a cross-sectional study to evaluate their knowledge, attitudes, and practices regarding SSI prevention under routine conditions.

The collected data included demographic information (age group, gender, education level, healthcare work experience), as well as responses to questions assessing knowledge of SSI definition, timing, signs, causes, and risk factors. Hygiene practices, including preoperative showering, hair removal methods, jewelry removal, hand washing importance, and postoperative wound care, were also analyzed. Respondents were further categorized based on their information sources and confidence levels in recognizing SSI signs. All data were entered and analyzed using Microsoft Excel. A quantitative descriptive analysis was performed to assess the overall level of awareness and identify knowledge gaps among different respondent groups.

The results of the research and their discussion

This analysis explores the level of awareness regarding Surgical Site Infections (SSIs) and hygiene practices among 195 respondents, based on the data presented in Tables 1 and 2.

Respondents were assessed on five key knowledge parameters regarding surgical site infections (Table 1). The highest level of correct responses was observed for the definition of SSI, with 146 respondents (74.9%) providing the correct answer. This was followed by timing of SSI occurrence (108 respondents, 55.4%) and most common sign of SSI (90 respondents, 46.2%). However, knowledge regarding the etiology and risk factors was considerably lower, with only 24 respondents (12.3%) correctly identifying bacteria as the most common cause of SSI, and merely 18 respondents (9.2%) recognizing smoking or tobacco use as a known risk factor. These findings indicate that while basic conceptual knowledge of SSI is relatively high among the cohort, there are substantial gaps in understanding the specific causes and risk factors associated with infection development.

Table 1 – Knowledge of Surgical Site Infections Among Respondents (N=195)

Knowledge parameter	Correct answer n (%)	Incorrect answer n (%)
Definition of SSI	146 (74.9)	49 (25.1)
Timing of SSI occurrence	108 (55.4)	87 (44.6)
Most common sign of SSI	90 (46.2)	105 (53.8)
Most common cause of SSI	24 (12.3)	171 (87.7)
Known risk factor for SSI	18 (9.2)	177 (90.8)

Table 1 reveals distinct patterns in SSI knowledge among respondents. The progressive decline in correct responses from definition (74.9%) to timing (55.4%) to clinical signs (46.2%) suggests that superficial awareness does not translate to deeper understanding. The most concerning findings were the extremely low correct response rates for causative factors, with 87.7% of respondents incorrectly attributing SSI to factors such as “having surgery on a Friday” or “drinking cold water after surgery,” and 90.8% failing to recognize established risk factors like tobacco use. This indicates prevalent misconceptions and significant knowledge deficits that could directly impact preventive behaviors and postoperative care.

The comparative data on awareness by healthcare experience are presented below (Table 2).

Table 2 – Hygiene Practices and Awareness by Healthcare Experience

Parameter	Healthcare Workers(n=180) n (%)	Non-Healthcare (n=15) n (%)
Correct identification of bacterial cause	21 (11.7)	3 (20.0)
Correct action for SSI signs (contact surgeon)	48 (26.7)	5 (33.3)
Belief in shared patient-provider responsibility	51 (28.3)	5 (33.3)

According to Table 2, respondents were categorized based on healthcare experience, with 180 respondents (92.3%) identifying as healthcare workers and 15 respondents (7.7%) as non-healthcare individuals. Surprisingly, non-healthcare respondents demonstrated slightly higher percentages across all parameters compared to healthcare workers. Correct identification of bacterial cause was observed in 21 healthcare workers (11.7%) versus 3 non-healthcare respondents (20.0%). Appropriate action upon noticing SSI signs (contacting a surgeon immediately) was reported by 48 healthcare workers (26.7%) compared to 5 non-healthcare respondents (33.3%). Belief in shared responsibility between patient and healthcare team was expressed by 51 healthcare workers (28.3%) versus 5 non-healthcare respondents (33.3%).

These results underscore that despite the overwhelming majority of respondents having healthcare experience, significant knowledge gaps persist across all groups, with neither population demonstrating adequate awareness levels. The small sample size of non-healthcare respondents (n=15) limits comparative analysis, but the findings paradoxically suggest that formal healthcare training alone does not ensure comprehensive SSI awareness. This highlights the urgent need for improved educational interventions targeting both healthcare professionals and the general population to address critical knowledge deficits in infection prevention.

Conclusions

Analysis of the survey data revealed notable gaps in knowledge surrounding surgical site infections and hygiene practices. Although a majority of participants (74.9%) could define an SSI, far fewer correctly identified bacteria as the primary cause (12.3%) or recognized smoking as a risk factor (9.2%). This disconnect indicates that a general familiarity with the term does not necessarily reflect a deeper understanding of prevention, raising concerns for patient safety within this group.

Interestingly, while most respondents (92.3%) reported some form of healthcare background, this did not correlate with higher knowledge levels. In fact, individuals without healthcare experience performed marginally better in certain areas, such as identifying bacterial causes (20.0% vs. 11.7%) and knowing how to respond to signs of infection (33.3% vs. 26.7%). These results suggest that professional experience alone does not guarantee sufficient SSI awareness and may even lead to an overestimation of one's knowledge.

These findings underscore the need for well-structured educational initiatives aimed at both medical staff and the broader community. Integrating infection prevention into medical curricula and public health programs could help close these knowledge gaps, correct misunderstandings, and ultimately improve surgical outcomes. Identifying such deficits early and implementing targeted interventions may contribute to lower SSI rates and stronger patient safety practices.

LITERATURE

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