

Knowledge Attitude and Practice on Prevention
of Surgical Site Infections among nurses
working in the surgical units of Memorial
hospital, Nairobi.

F.A. AFFEY – Lecturer at Mount Kenya University
(MScN, BA, CCN, KRCHN)

RITA. W.GITHUA – Memorial Hospital
BSCN, KRPON, KRCHN

INTRODUCTION

- * A surgical site infection is an infection which occurs within 30 days of surgical procedure and has at least one of the following characteristics; purulent discharge from the wound, pain or tenderness, localized swelling, redness, mal-dour and fever (Nwankwo, Ibeh & Enabulele, 2012).
- * SSI is a major public health problem and it is the third most common health care associated infection which contributes to one-fourth of all of such infections(Mangram *et al.*, 2002).

Introduction cont...

- * SSIs presents a high burden on the patients in hospitals in terms of morbidity, mortality, prolonged hospital stay and additional costs (Liker, Stephan, Robin *et al.*, 2010).
- * Approximately 500,000 SSIs occur annually in the U.S, resulting in 3 Million excess hospital days and \$1.6 billion in extra hospital charges (Marton & Nicholas, 2001).

Introduction cont...

- * In Kenya, a study conducted in AKUH on prevalence of SSI indicates the incidence of SSI as 6.8% among patients admitted for general surgical procedures (Victor, 2009)

PROBLEM STATEMENT

- * SSIs still occur despite the best efforts of infection prevention practices and improvement of surgical techniques, antibiotic prophylaxis and other operating room practices.
- * Most of these infections are caused by commensal organisms from the patients skin or on transient organisms disseminated from health care personnel or surgical instruments (Tanner, Woodings & Moncaster, 2006).

Problem statement cont..

- * Memorial Hospital has large volume of surgical patients.
- * According to Surgical patients register; MH/04/2015, out of the 210 surgeries done between the months of January and March 2015, five developed SSIs that results to prolonged patients' hospital stay.

Justification

- * 60% of SSIs have been estimated to be preventable using evidence based guidelines though clinicians' adherence to SSI guidelines is known to be suboptimal (Humaun, 2010)

Justification cont...

- * Nurses are in an ideal position to participate or play a leading role in initiatives that aim to minimize the risk of SSIs & improve patient outcomes (Labeau, Witdouck, Vandjck *et al.*, 2010), thus the need to assess their gaps in Knowledge on ISS prevention .

Justification cont...

The findings of this study will contribute to:

- * The body of nursing knowledge and practice
- * Stimulate further research in this area
- * To provide baseline information for curriculum development for IPC

METHODOLOGY

- This was a descriptive, cross sectional study which was carried out in the surgical units Memorial hospital.
- A sample of 90 Nurses was selected by simple random sampling method and semi-structured; self- administered questionnaires were used to collect data from the respondents

STUDY FINDINGS

Knowledge of nurses on prevention of SSIs

The knowledge of the respondents on prevention of SSIs was average.

Findings cont..

- 88% of the respondents were able to correctly name the clinical features of SSIs while 12% couldn't differentiate signs of SSIs from those of normal inflammatory process (figure 1)

Findings cont...

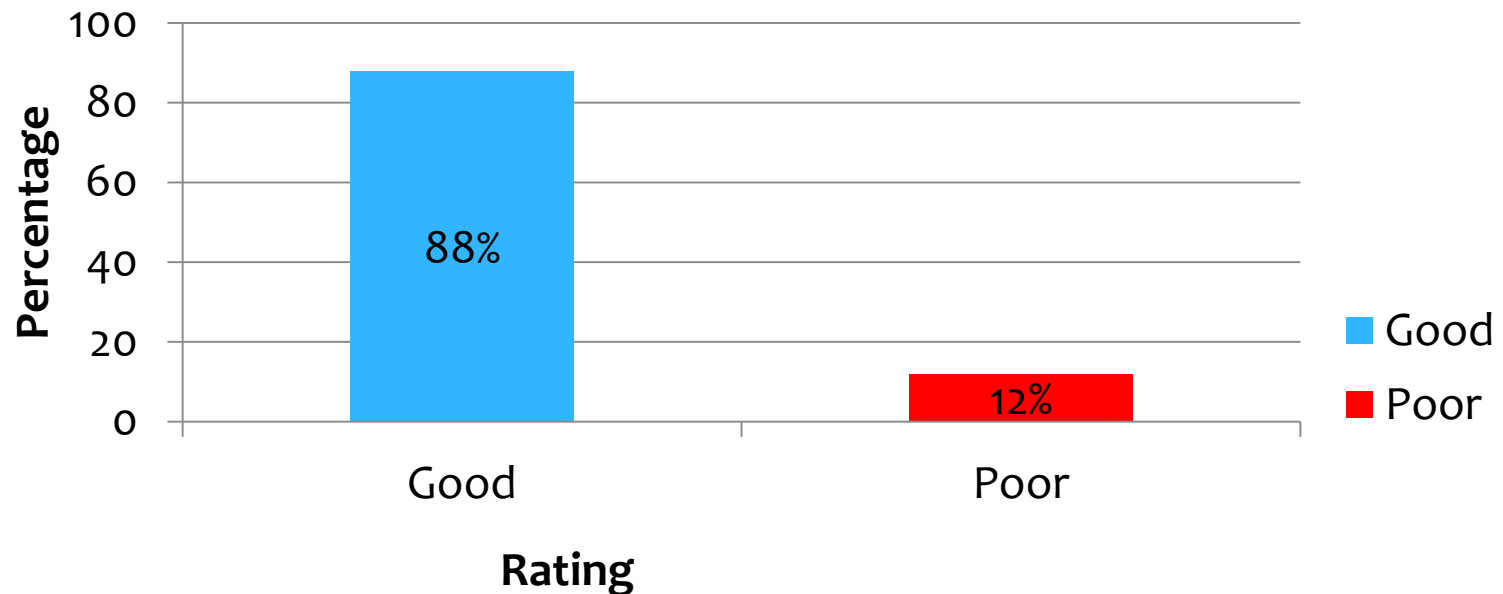


Figure 1 : Rating regarding correct identification of features of SSIs

Findings cont...

- 61% of the respondents strongly agreed that hand washing reduces the risk of SSIs (figure 2)

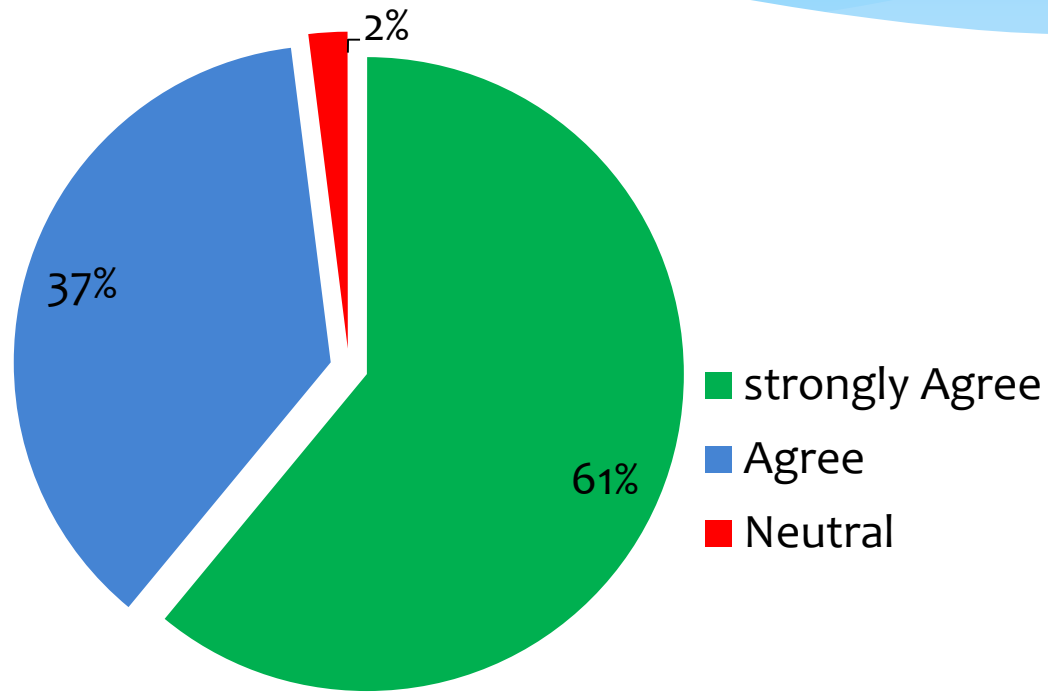


Figure 2: Knowledge on whether handwashing reduces risk of SSIs

Findings cont...

- * 60% of the subjects were not able to identify the correct timing of prophylactic antibiotic administration (figure 3) .

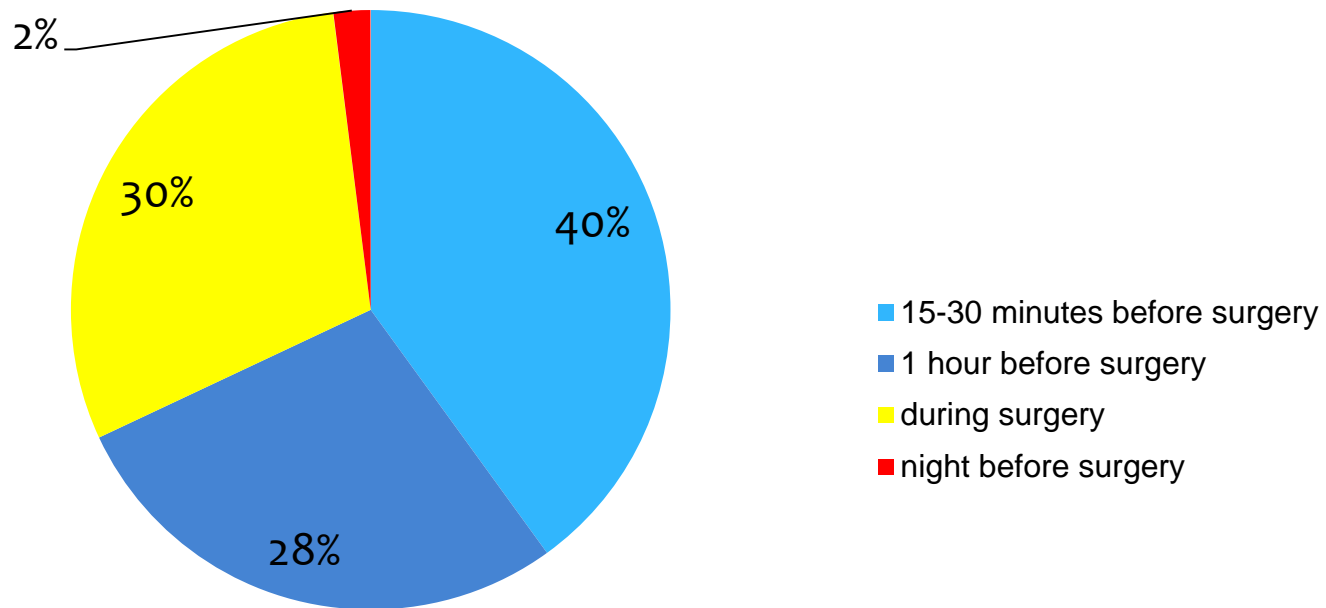
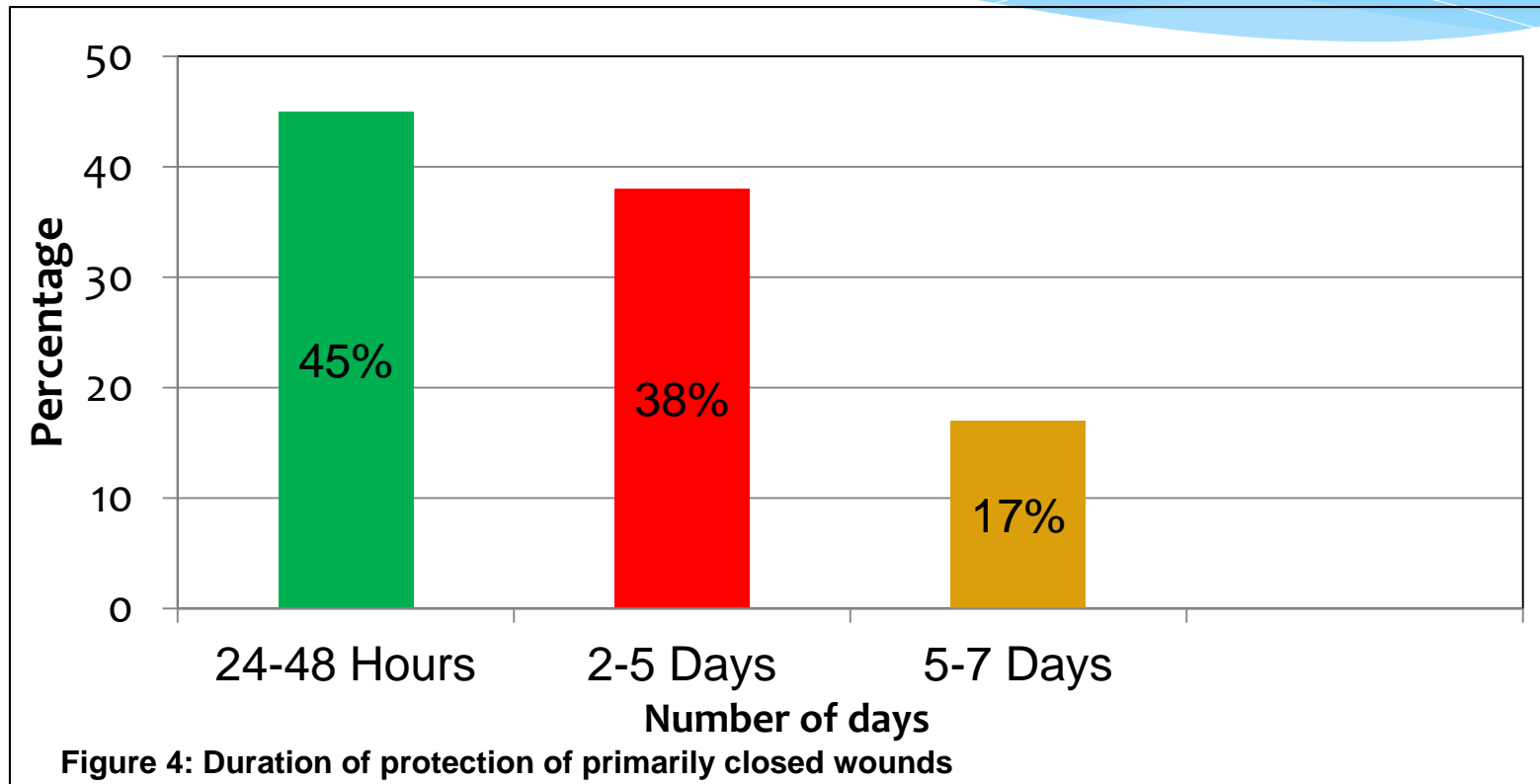


Figure 3: Timing of prophylactic antibiotics

- 
- * 45% knew that primarily stitched wounds should be protected by dressing for 24 – 48 hrs (Figure 4 below)

Findings cont...



Findings cont...

- * 47% knew that elective surgeries for patients with remote infections should be postponed until the infection has resolved.

Findings cont...

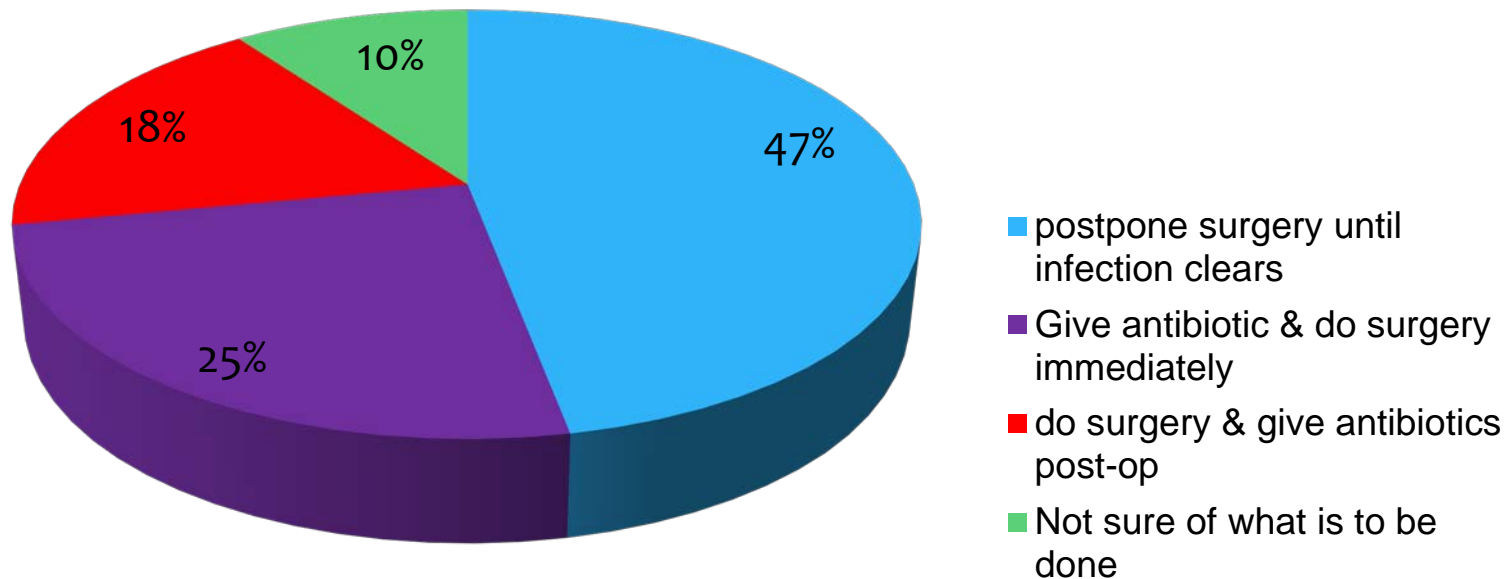


Figure 5: How to treat elective case with remote infection

Findings cont...

This average level of knowledge could be attributed to:

- * rapid shifting of nurses across units thus not allowing them enough time to gain experience in the area of specialty
- * lack of policies and training programs on prevention of SSIs.

Findings cont...

Nurses attitude towards prevention of SSIs

- * 73% were of the opinion that SSIs pose serious patient outcomes and that health care workers could spread SSIs (47%). (Figures 6&7 below)

Findings cont...

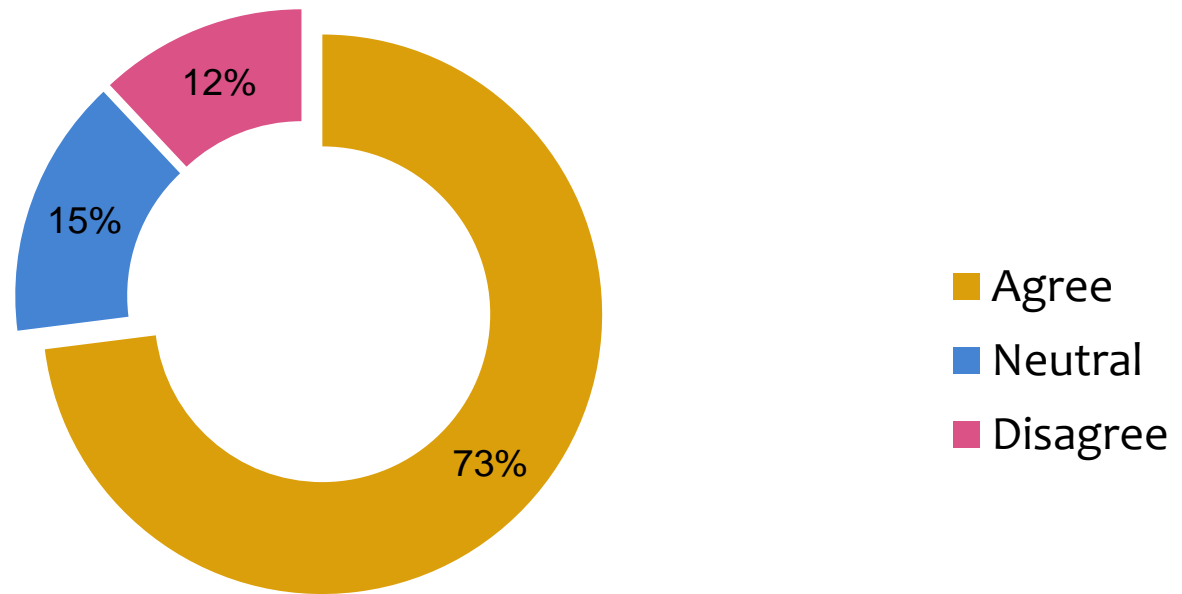


Figure 6: whether SSI poses serious patient outcomes

Findings cont...

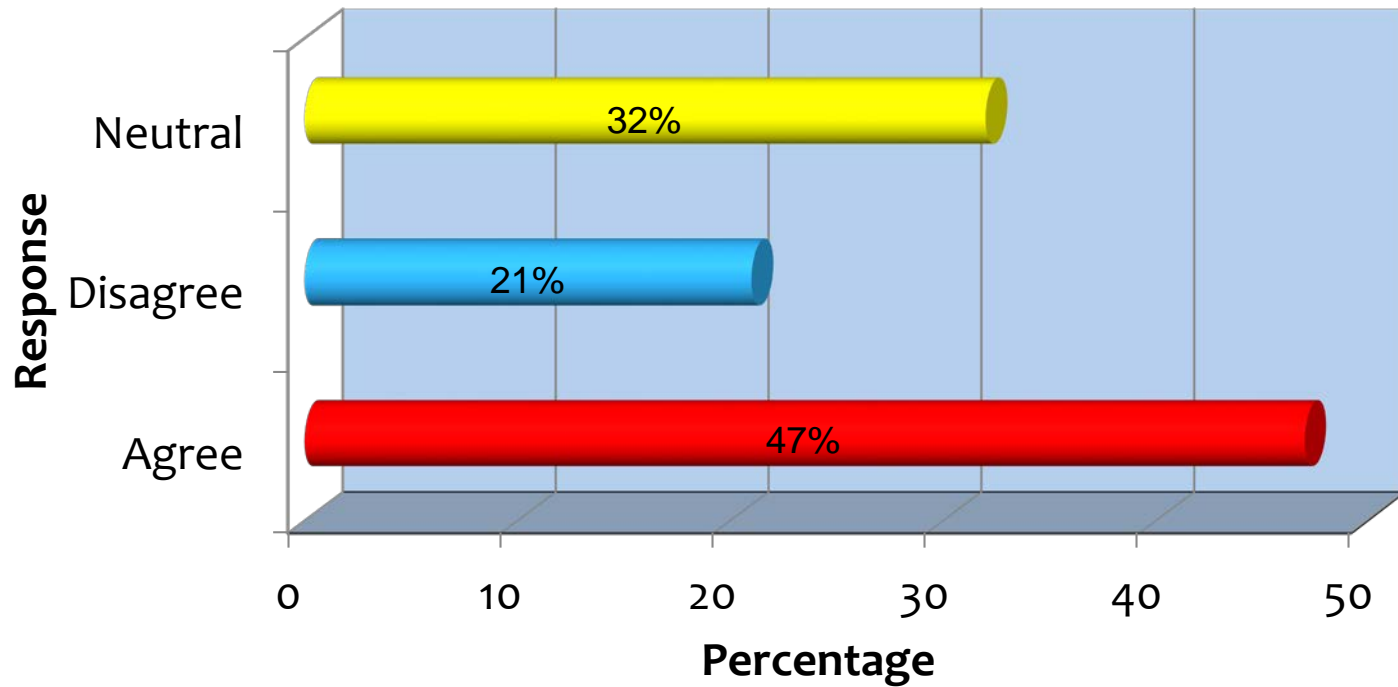


Figure 7: HCWs could transmit SSIs

Findings cont...

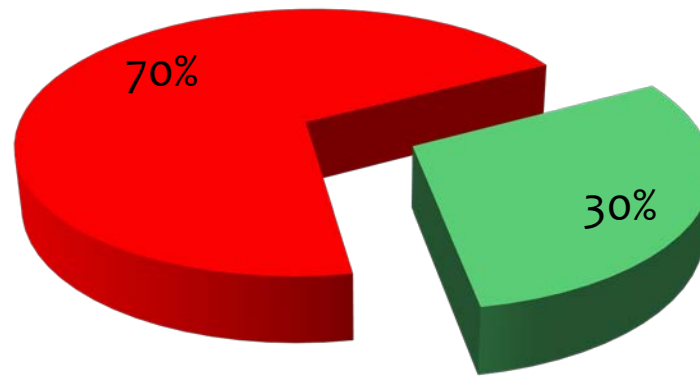
- 11% of the respondents however, expressed the attitude that it is unrealistic to expect health care workers to comply with the recommended guidelines for patients care especially during episodes of increased workload.

Findings cont...

Nurses practice on prevention of SSIs

- * The practice on prevention of SSIs was moderate with 30% of the respondents stating that they were not aware of any institutional policies or guidelines on infection prevention.

Findings cont...



**Awareness on existence of policies and guidelines
on IPC**

Findings cont...

- Only 44% always washed hands before and after wound dressing while 8 % of the respondents seldom washed hands.

Findings cont....

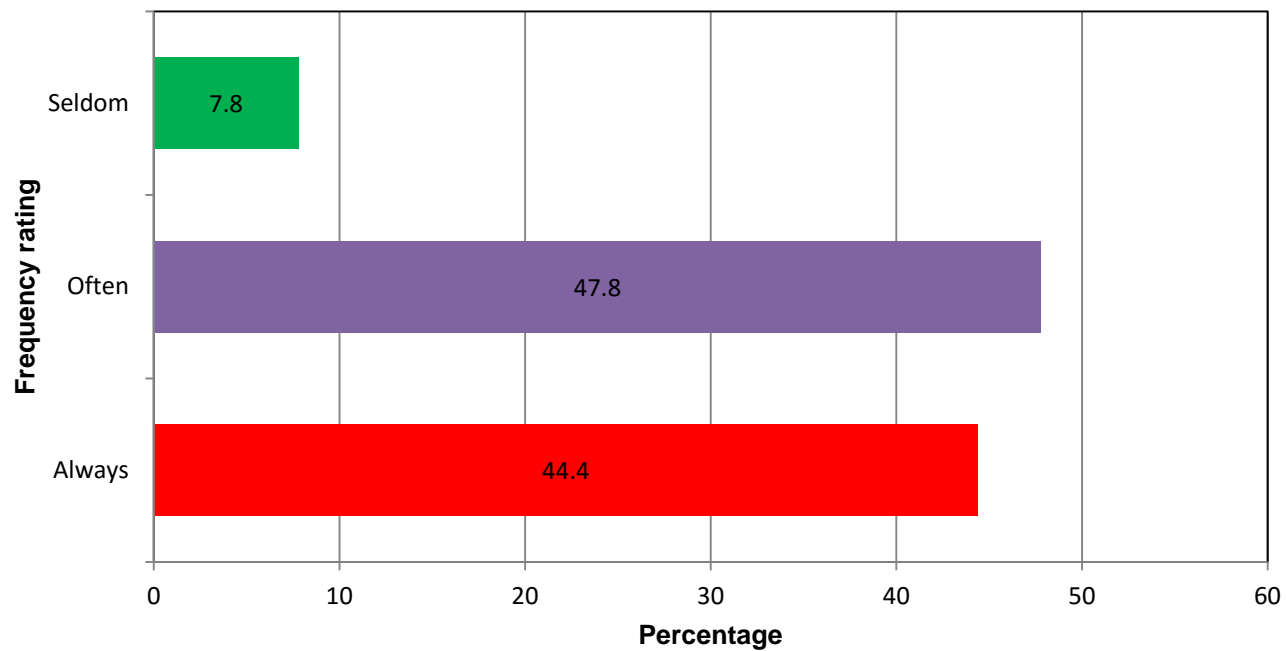


Figure 13: Respondents frequency of washing hands before and after wound dressing

Findings cont....

- * Majority mentioned staff shortage thus high workload, lack of adequate supplies & inadequate training on SSI prevention as factors causing poor adherence on prevention of SSIs.

Findings cont....

Table 1: Factors hindering the practice of SSI prevention

HINDERING FACTOR	FREQUENCY	PERCENTAGE
Inadequate training o SSI prevention	28	31.1
Staff shortage	23	25.6
Inadequate supplies & equipment	19	21.1
Equipment breakdown	9	10
Long working hours	4	4.4
Staff attitude	2	2.2
None	5	5.6
Total	90	100

DISCUSSION

- The findings of this study were similar with the findings of a study done by Labeau et al (2010) among ICU Nurses on Knowledge on guidelines on prevention of SSIs with participants of 650 nurses.
- This study reported nurses' knowledge at 29% . 45% knew that primarily closed wounds must be protected for 24-48 hrs while 35% knew that elective operations should be postponed until infection has resolved.

Discussion cont.....

- Aiken et al (2002), found out that inadequate staffing was associated with increased workload and consequently causing nurses burnout and adverse patient outcome such as increased occurrence of nosocomial infections and patients deaths.

RECOMMENDATIONS

- * In-service training curriculum and refresher courses should be developed for nurses in Kenya. This will provide them with up to date knowledge to understand SSI prevention which can be translated into practice.
- * Hospital policies and guidelines are needed to promote nurses attitudes & practice in r/t SSI prevention.

Recommendations cont....

- * Hospital management should select an IPC team to oversee the IP practices in the hospital
- * The hospital management to address the staffing problem so as to reduce nurses workload
- * Hospital management to provide adequate equipment and supplies so as to enhance practice.

Conclusion

- * Research findings have been shared with colleagues in Memorial hospital and with the head of Nursing department.

REFERENCES

- * Kamunge, E. (2012). Exploring knowledge, attitude and practice of registered nurses regarding the spread of nosocomial infections. Thesis (Msc-Nursing)- Seton hall university
- * Liker, U., Stephen, H., Robin, P., Daniel, L., Pierre, H. & Dider, P. (2010). Preventing surgical site infections. *Journal of Expert Review of Anti-infective Therapy*, 8(6), 657.

References cont....

- * Labeau, s., Witdouck, J., Vandijck, D., Claes, B., Vandewoude, K. & Lizy, C. (2010). Nurses knowledge of evidence based guidelines for the prevention of surgical site infections. *World views Evidence Based Nursing*, 7(1): 16-24.
- * Martone, W. & Nicholas, R. (2001). Recognition, prevention, surveillance and management of surgical site infections: Introduction to the problem and symposium overview. *Clinical Infectious Diseases*, 33, 67-68.

References cont...

- * Tanner, J., Woodings, D. & Moncaster, K. (2006). Pre-operative hair removal to help reduce surgical site infections. *Cochrane Database Sysytem Review*, 2: 4122.
- * Victor, O. (2009). Surveillance of surgical site infection at the Agakhan University Hospital, Nairobi. *JKUAT abstracts of post graduate Theses*.

References cont...

- * World Health Organisation (WHO)
(2002), *Prevention of Hospital acquired infections: A Practical Guide*, 2nd Edition.
WHO/CDS/CBR/EPH/2002.12.

END

THANK YOU