

SUMMER TRAINING RESEARCH PROJECT

Assessment of knowledge, practices and barriers in prevention of Surgical Site infection among healthcare workers in private hospital of Sehore district

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INTRODUCTION

- Surgical site infection refers to an infection that occur after surgery in the part of body where surgery took place. It is one type of nosocomial infection in which a surgical infection occur after invasive procedure.
- SSI accounted for 14-16% of all nosocomial infection. SSI is a significant clinical problem leading to morbidity and mortality. Patient with SSI has 2-11 times higher risk of death compared to patient without SSI.

- SSI also causes unnecessary increased healthcare cost resulting in financial constraints to both patient and health care system as a whole.
- Among all contributing factors to SSI, healthcare workers responsible factors seen to be a significant importance, particularly nurse's lack of knowledge and practice.
- Healthcare employees have a chance to scale back prevalence of SSI's, they could assist the patient in their recovery and scale back the compliances related to infection by utilizing their knowledge and by doing sensible practices
- For the prevention of SSI, healthcare workers should have proper knowledge and they should have skills on this matter during pre-operative, intra-operative and post-operative period.

PROBLEM STATEMENT

Infection control is significant worry for any healthcare unit. Healthcare workers assumes significant job in forestalling infection. In many studies, it has been discovered that because of insufficient information among healthcare workers results in prompts increment in the SSI. HCW have a lots of roles to play in prevention of SSI , thus there is a need to access their state of knowledge and practice. In this manner the Healthcare workers are the primary objective of our examinations. They are the person who can restrain the spread the contamination.

PURPOSE OF THE STUDY

The purpose of this study was to access the knowledge and practices being performed by healthcare workers in a district hospital to prevent surgical site infection. Also to search for the barriers which inhibit them to perform good practice to limit the infection. Moreover the research would be helpful for further research in healthcare professionals.

OBJECTIVES OF THE STUDY

- To study the degree of knowledge among healthcare workers regarding prevention of Surgical site infection in patients
- To study the extent of practice being performed by healthcare workers in hospital
- To access the barriers to SSI's prevention

LITERATURE REVIEW

Many studies discussed healthcare professional's knowledge and practices on eliminate/limit Surgical site infection. Different methodologies are used in different studies, some studies focus only on knowledge of Healthcare workers regarding spread of infection while some studies focus on type of practices being performed by them. Unfortunately there is no study which focuses on barriers which healthcare workers face on practicing standard practices.

- A cross sectional examination was done in fauji emergency clinic in 2014 to see the Gapes in practices and information among 300 healthcare workers. Most participants were Nurse. It was discovered that Knowledge was sufficient however practices being performed were wrong.
- An investigation was directed in National instructing clinic to asses the practices being performed inside the emergency clinic room. Assesment of sterlization process, clinical guide and so on all were done. It was discovered that a large portion of healthcare workers were performing insufficient practices and they need fitting information with respect to contamination control
- A study done to asses the Nurses's data and evaluate the sterlization Techniques being performed by them. Complete 21 Nurses were included in study. It was discovered that under 50% of medical caretakers didn't know about appropriate Sterlization Technique. Most of them had no reasonable information in regards to anticipation of contamination. **(Dhakal, Angadi, and Lopchan, 2016)**
- The study was conducted in Ethiopia among nurses to check the knowledge and practices regarding prevention of Surgical site infection. It was found that more than half of the participants had no proper knowledge regarding prevention of SSI's and they were doing wrong practice. **(Eshetu Haileselassie Engeda, and Workie Zemene Worku, 15 Dec 2015)**

- Another study was conducted in KFSH and BCH hospital of Buraidah city with the aim to evaluate the Knowledge and practice of healthcare professional towards preventing SSI's. Total 218 professionals were included in the study. It was found that only 25% in KFSH and 18% in BCH were knowledgeable while rest participants had inappropriate knowledge. While practice level was seen good. (**Elaf Alabdulrazaq, Hanadi AL Mutairi, Mnahal AlHaon, Sultan Alsaigh, 2017**)
- A descriptive cross sectional Study was conducted in Faisalabad among 111 Nurses. Study was conducted to assess nurses knowledge and practice regarding Surgical site infection. All participants were female nurse and convenient sampling method was used. The study revealed that nurses had poor knowledge regarding infection and most of them were doing low level practice. (**Sadia Sadaf, MS Shafqat Inavat, M. Afzal, Muhammad Hussain**)
- A descriptive study was done with the aim to examine the level of knowledge and level of practice among nurses and to examine the association between practice and knowledge regarding prevention of surgical site infection. Participants were Bangladeshi Nurses working in Surgical wards. Questionnaire were used for analysis. The finding revealed that nurses had low level of knowledge and high level of practice. Negative association was seen between knowledge and practice. (**Humaun Kabir Sickder, Asst. Prof. Dr. Wipa Sae-Sia, Asst. Prof. Dr. Wongchan Petpichetchian**)

MATERIAL AND METHODS

- A Descriptive study was conducted to assess knowledge and practices and to evaluate the barriers that hinder in performing standard practices. Data was collected from surgical wards of two private hospitals “Nidaan Hospital” and “Jaiswal Hospital” of Sehore district(MP). Convenient sampling techniques was used in this study and sample size was 57
- Healthcare workers of age 20-55 years were included in the study, with at least 6 months of practice experience. They all voluntarily participated , informed consent were taken. Healthcare workers with less than 6 months of work experience and with age more than 55 years were excluded from the study.
- Research tool: online closed ended Questionnaire



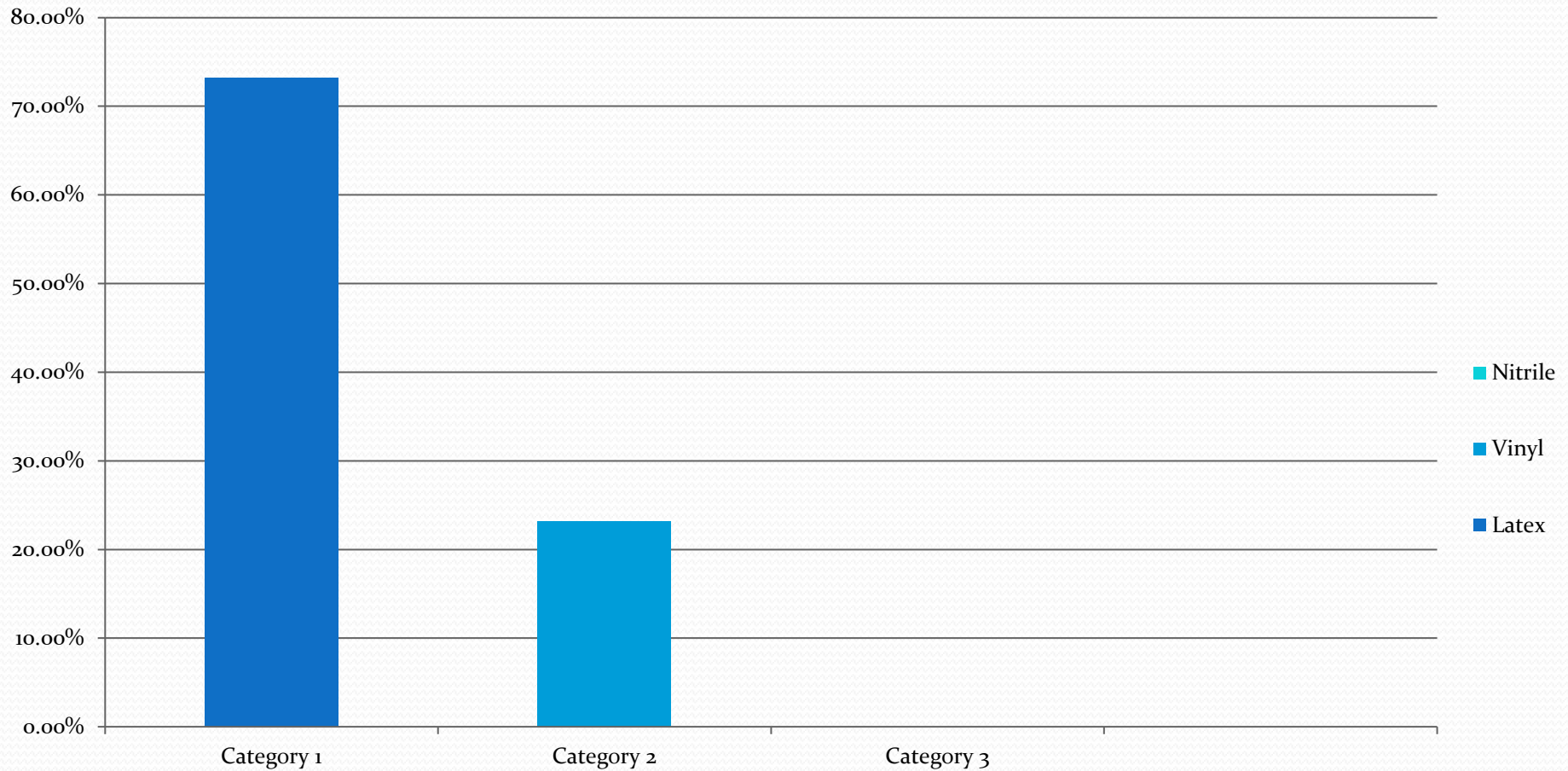
RESULTS AND DISCUSSION

PRACTICE ASSESMENT

S No.	Question	Answer		
		Yes	No	Sometimes
1.	Do you use antiseptic solution /sanitizer to wash hands	n=32 56.1%	n=25 43.9%	
2.	Do you perform glucose test before and after surgery	n=47 83.9%	n=9 16.1%	
3.	Do you separate infected dresssing from non infected dressing	n=51 91.1%	n=5 8.9%	
4.	Do they perform preoperating shaving right before Surgeries	n=19 33.3%	n=2 3.5%	n=36 63.2%
5.	Do you wash your hands after removing gloves	n=21 36.8%	n=3 5.3%	n=33 57.9%

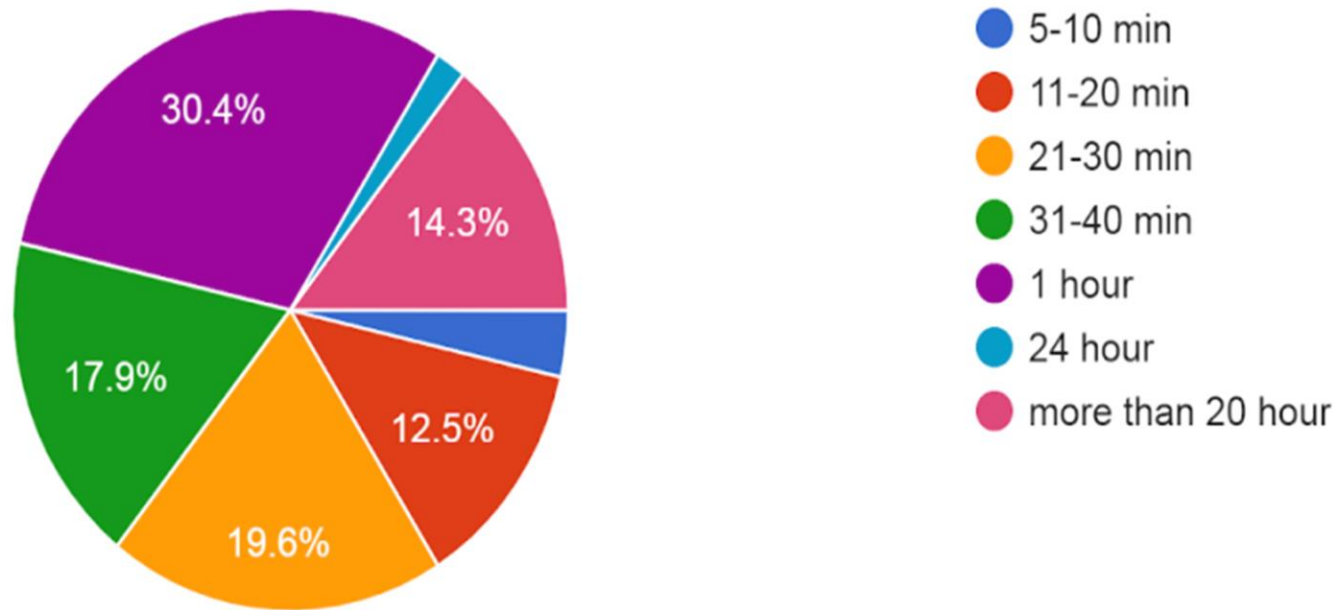
S No.	Question	Answer		
		Yes	No	Sometimes
6.	Do you disinfect the surface of dressing trolley with antiseptic solution	n=17 29.9%	n=2 3.5%	n=38 66.7%
7.	Do you use sterilized dressing material for cleaning surgical wound dressing	n=32 58.2%	n=23 41.8%	-
8.	Do you wash your hands before and after changing wound dressing and touching surgical site	n=45 83.3%	n=9 16.7%	-
9.	Do you use providine-iodine and saline for surgical wound dressing	n=40 72.7%	n=15 27.3%	-
10.	Do you use face mask during cleaning surgical; site infection	n=37 66.1%	n=19 33.9%	-

TYPES OF GLOVES USED BY HEALTHCARE WORKERS



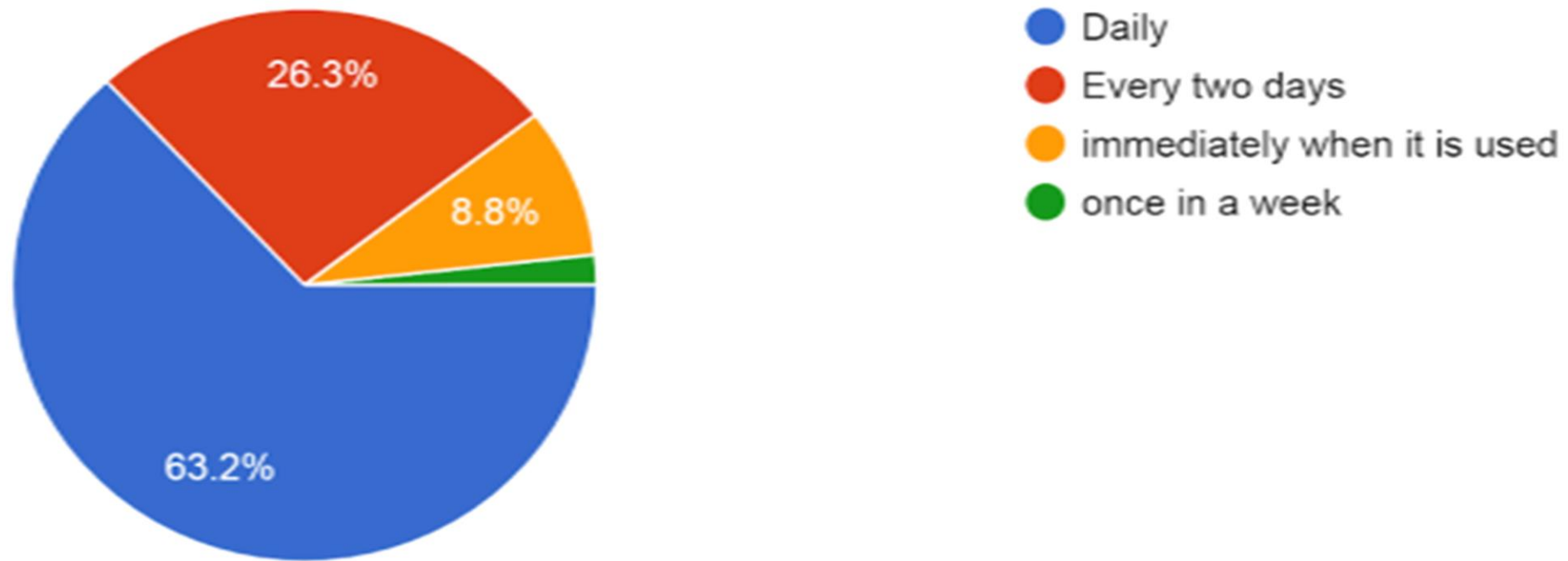
Best Gloves: Nitrile

HOW OFTEN DO THEY PUT REUSABLE MEDICAL INSTRUMENT IN CHLORINR SOLUTION



Ideal time: 21-30 min

How often they change chlorine Solution which is used for sterilization purpose

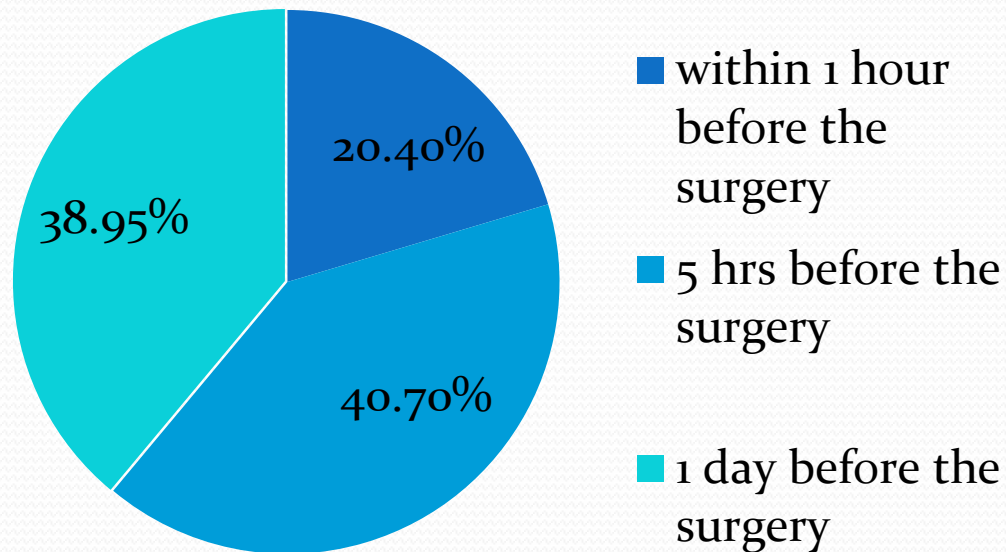


KNOWLEDGE ASSESSMENT

S NO.	Question	Yes	No	May be
1.	Do you know best method of pre-operative shaving	n=37 66.1%	n=19 33.9%	
2.	Are you aware about standard isolation precautions of healthcare setting	n=17 31.5%	n=37 68.5%	
3.	Does contaminated patients care equipments could lead to spread of infection	n=23 42.6%	n=29 3.7%	n=29 53.7%
4.	Does pre-operative showers with antiseptic are cost effective in limit surgical site infection.	n=17 30.9%	n=3 5.5%	n=35 63.6%
5.	Does removal of accessories like nail paints, jewelry etc could reduce chances of SSI	n=29 56.9%	n=22 43.1%	
6.	Does puncture in Surgical gloves could lead to SSI	n=17 30.9%	n=1 1.8%	n=37 67.3%
7.	Does administration of prophylactic antibiotics could prevent SSI	n=14 25.5%	n=1 67.3%	n=32 72.7%
8.	Does prolong pre-operative hospitalization associated with occurrence of SSI	n=20 36.4%	n=3 5.5%	
9.	Do you know the best method for pre-operative shaving	n=11 20.8%	n=42 79.2%	
10.	Are you aware about method of gloving in special cases	n=11 20%	n=44 80%	

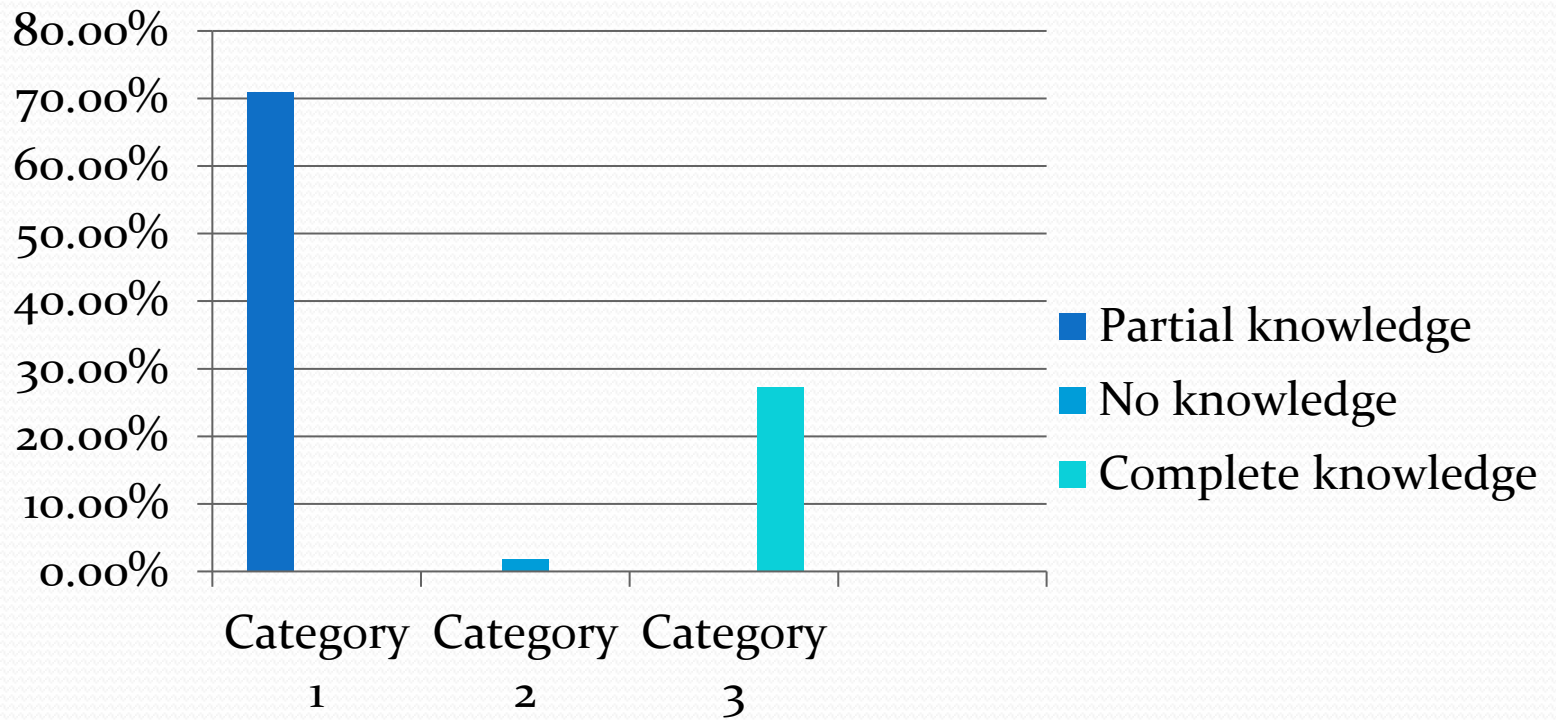
Right time of giving pre-operative prophylactic antibiotics

Right time of giving pre-operative Shaving

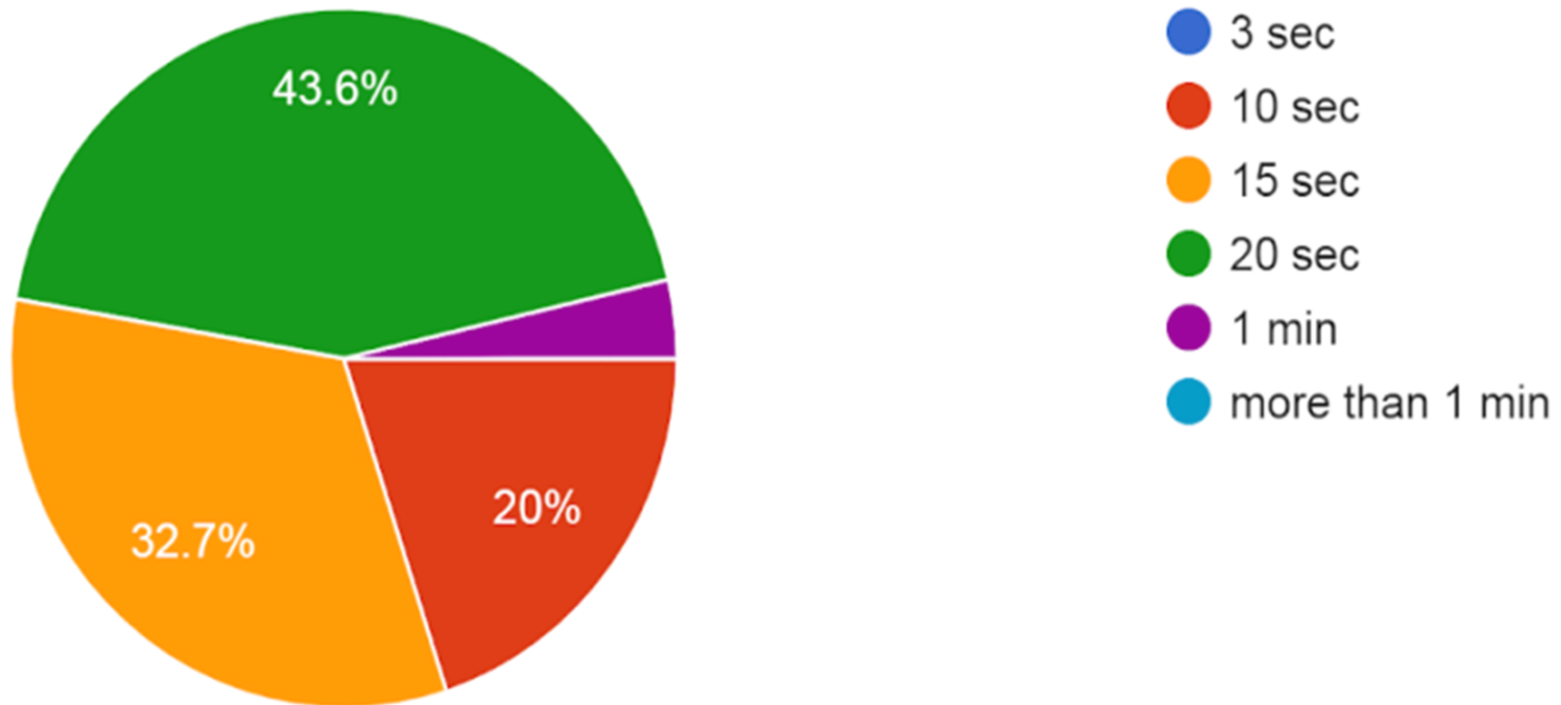


Right answer: 1 hour before the Surgery

knowledge regarding hand hygiene

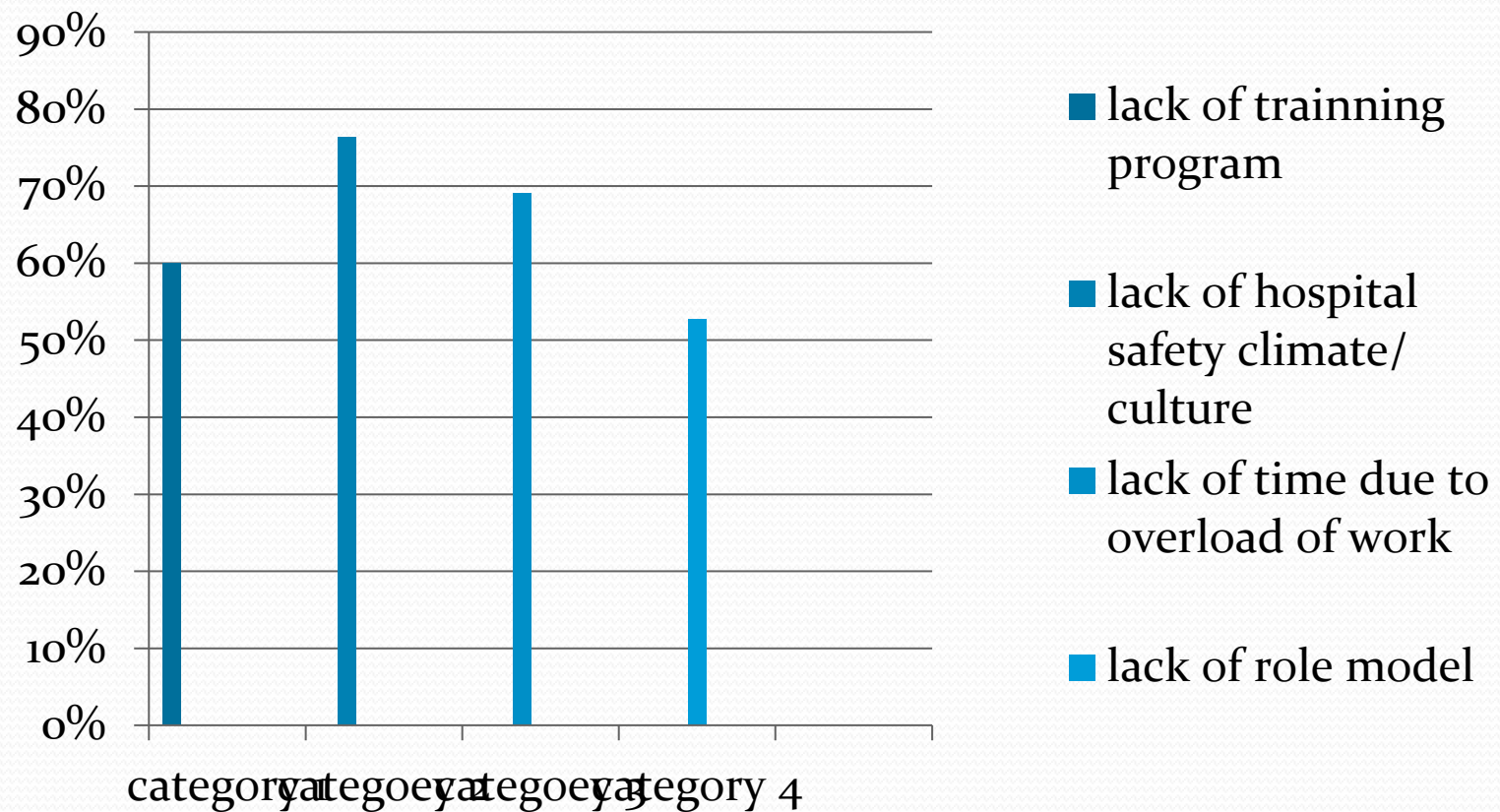


For how long do healthcare workers wash their hands



Ideal time : 20 Sec

Barriers that hinder healthcare workers in performing standard practices



CONCLUSION AND RECOMMENDATION

- Most of the healthcare workers have no complete knowledge and they are doing wrong practices in their work place.
- The study reveals that there are various barriers like lack of resources, lack of training, lack of safety climate, lack of role model and lack of any scientific knowledge which hurdle workers to perform ideal practices.
- There should be availability of proper resources in the hospital. The hospital should organize Training programs regarding prevention of SSI.

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- The climate and culture of hospital plays a crucial role in preventing infection. So there should be safe climate and culture within the workplace.
 - It is recommend to improve patient care and safety from struggling of SSI, Healthcare training and programs should be carried out by the hospitals.
 - Hospital administration must offer standard Guidelines and appropriate resources for prevention of SSI for healthcare workers in sanatorium.

Limitation of Study

- One of the drawback of this study is convenient sampling technique was used. Results are totally dependent on respondents subjective self-assessment.
- Respondents behavior should have been analyzed via checklist rather than to rely on the respondents subjective self assessment completely. The respondents might had not reflected their true practices.
- But due to current situation of a country it was not possible to do so.

Thank
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