

Original article:

A qualitative study on perception of health care workers of intensive care unit on infection control in a tertiary care hospital

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Abstract:

Background: Health system today is very dynamic and patients admitted in intensive medical care unit (IMCU) are under the greater risk of morbidity and mortality due to health care-associated infections (HAIs). Rates of HAIs and bacterial resistance in developing countries are 3 to 5 times higher than international standards. Many studies reveal that, Organized infection control (IC) programs have been successful in reducing the HAI with subsequent improvement in the hand hygiene compliance. Understanding the perspectives of infection control practices among health care workers (HCWs) is essential in planning interventions in a health care setting. On this background this qualitative study was carried out.

Aims : To explore perceptions of HCWs of intensive care unit, on infection control and hand hygiene using focus group discussions (FGDs) in a tertiary care hospital in India.

Methods and Materials: The prototype facilitation guide for focus group discussion was prepared. Six discussions were conducted in English and Tamil, were recorded, transcribed verbatim, translated into English and analysed using content analysis. Discussions ranged in length from 30-45 minutes.

Results and conclusion: On thematic analysis two major themes emerged. They are 1.Challenges with practice of infection control and 2. Interventions to improve.

The participants acknowledged the value of Standard Precautions and infection control practices as a means for reducing HAI but perceived practical problems with implementation.

Awareness and preparedness were satisfactory whereas clarity on basic concepts and current updates appeared lacking.

Key words: Focus group discussions, hand hygiene, health care-associated infections, Intensive care unit, Infection control, qualitative study, standard precautions.

Introduction

Health system today is very dynamic and patients admitted in intensive medical care unit (IMCU) often requires a persistent intensified therapy. More serious underlying illnesses makes the patients susceptible to infections.^[1] Also increased use of invasive procedures in modern, sophisticated medicine creates new sources of risk for infection.^[2]

So, health care-associated infections (HAIs) with greater risk of morbidity and mortality are common in IMCU patients.^[3] Many studies reveal that, rates of HAIs and bacterial resistance in developing countries are 3 to 5 times higher than international standards. ^[4, 5] Infections today requires highly individualized treatment, sometimes with multiple therapies, based on the antibiotic susceptibility pattern of the infecting organisms, condition of the patient

and which organ system is affected. The emerging multi drug resistant organism further complicates the picture causing prolonged antibiotic therapy and prolonged hospital stay. The economic, clinical, and social expenses to patients and hospitals are overwhelming.^[6]

Since its recognition by Semmelweis in the 18th century^[7] hand hygiene is judged the most important measure and it is the corner stone for prevention of microbial transmission during patient care. However, hand hygiene is in irregular practice in resource constraint settings, historically reported at rates of less than 20%,^[8-10] - 40%.^[11, 12] Organized infection control (IC) programs have been successful in reducing the HAI with subsequent improvement in the hand hygiene compliance to 50%.^[13] Hence to limit the incidence of IMCU-acquired infections aggressive infection control measures must be implemented and enforced. Understanding the perspectives of infection control practices among health care workers (HCWs) is essential in planning interventions in a health care setting. On this background this qualitative study was carried out to assess the knowledge and attitude of HCWs on infection control and hand hygiene practices.

Objectives

- To understand the perspectives of HCWs working in IMCU, on infection control.
- To assess the knowledge and attitude of infection control among HCWs.
- To explore the problems and challenges involved with infection control practices.

Methodology

With the help of the practical guide for Good Questions proposed by Richard Kruegar and Mary Anne Casey^[14] the prototype facilitation guide for focus group discussion (FGD) was prepared.

The facilitation guide included the following topics: general awareness and knowledge about standard work precaution, infection prevention and hand hygiene, their attitudes regarding their own and others' hand hygiene practice at the site, and their ideas on challenges involved with infection control practices and preparedness for improving infection prevention efforts. Pilot testing, refinement, and validation of the survey questions were conducted.

This study was approved by the Institutional ethics committee. Participants were explained about the purpose of the study and ensured that their responses will be kept confidential. Written consent to participation was obtained from each participant.

Discussions ranged in length from 30-45 minutes. The discussions were conducted in English and Tamil, recorded on tape, transcribed, and, translated into English. Facilitator participated only to keep the discussion active and focused.

On the day of FGD, the facilitator used pre-determined question and established permissive environment. An assistant moderator handled logistics, taken careful notes and monitored recording equipment. After the welcome and the introduction the participants were high lightened about the agenda of the discussion and the guidelines of the FGD were told. The facilitator guided the discussion with the help of the facilitation guide.

Six focus group discussions were held with 12 nurses and 10 emergency care technicians. Transcripts were analyzed by thematic content.

Results

Table: 1 Thematic content of focus group discussion

S.no	Major Theme	Sub Category
1	Challenges with practice of infection control	*Heavy work load *Knowledge of core concepts * Complacency
2	Interventions to improve	*Need for training * Designated infection control personnel * Monitoring

Thematic analysis came out with two major themes

1. Challenges with practice of IC and
2. Interventions to improve. (Table 1)

In challenges, the major sub category emerged was job related, work load and emergency situations. It was evident by the following statements.

“In pressing situations, I rush to attend the patient than to pause for the hand hygiene.”

“Yes. It is good to do surveillance of health care associated infections. But we are afraid to commit this because it will bring more work to us.”

In addition, essential knowledge of core concepts of infection prevention practices seemed lacking and was revealed in terms of beliefs and adaptation to the setting.

Most of the participants felt that following the standard work precaution was a costly affair. One staff nurse stated that, “I do not feel my hands are dirty often to do hand rub.”

Complacency due to prolonged work experience was another challenge. Many admitted that, “We all do correctly by our experience.....”

“We were told to document the number of times the catheter changed. It was hard to follow. We changed the catheter correctly but not documenting.”

In barriers to practice IC, people trafficking in IMCU were another challenge. The following statements revealed this.

“The lab technician and dialysis technician need to be told and trained on IC practices”

“Patient attendees’ are a constant problem to us. Sometimes we may also depend on them for patient care.”

The second major theme emerged was on interventions to improve the IC practices.

All appreciated the administrator for the adequate availability of personal protective equipments. They also insisted on point of care availability of hand rub. The importance of the designated IC nurse and monitoring was insisted by all.

The importance of training to foster behavior change emerged throughout the discussions. Need for training and updating on current guidelines was felt and voiced by everyone.

“Whatever we are doing is by our basic nursing knowledge. We need to have regular training on IC guidelines.”

“The interns are not aware and updated on IC practices”

“We are willing to get trained and practice...”

All of the participants expressed their willingness to change and their preparedness to adapt HH practices. Their openness to accept the change and to evolve out of their perceived preconception was evident by the statement that, “This discussion made us think...”

Discussion

To improve the infection control practices of any setting the first step is to understand the challenges to establish the one. So the perspectives of health care workers will be vital in developing interventions most appropriate to the local context. In this study, the participants acknowledged the value of Standard Precautions as a means for providing protection against occupational exposure to microorganisms and cross contamination. To practice the IC the major challenge observed was job related factors like heavy work load and emergency situations. Many participants described an emergency situation as a major obstacle in following precautions. This is similar to other studies.^[15, 16]

Also in a qualitative study conducted at Vietnam the HCWs expressed frustration with high workload.^[17] Forgetfulness and lack of time was the reason for poor adherence of infection control practices in other studies.^[18, 19]

When nurses gain enough experience, they are very confident about their capabilities. Therefore, they lull themselves to skip certain steps in a guideline, in a study as argued by a nurse with considerable clinical experience: “...the more capable I feel, the less preventive measures I may take.”^[15]

In interventions to improve the IC practices, availability of hand hygiene product at the point of care was suggested by many. As noted by other studies^[20, 21] providing point of care hand hygiene products facilitates integration of hand hygiene in to the natural workflow patterns of health care providers and can contribute to higher hand hygiene compliance. Lack of knowledge, training and education was one of the challenges with the practice of IC. As reported by a study, education had a positive impact on retention of knowledge, attitudes and practices in all the categories of staff.^[22] Similarly, in a study by Naggar RA, emphasis was given for educational and motivational intervention on infection control to target nursing students.^[23] As per a report by WHO, staff education is a key element and basic principles of IC should be included in curricula of doctors, nurses and other health care professions.^[24] So there is a need to develop a system of continuous education for all the categories of staff.

Conclusion

This study provides an insight into what the hospital staff perceives about IC and their current practices, how do they act and react, what are their training and other needs.

Awareness and preparedness were satisfactory whereas clarity on basic concepts, current updates, involvement, and performance appeared lacking which necessitates the system change. The results can be used by nurses, administrators, policymakers, and nurse educators as a means of strengthening the IC practices among nursing personnel.

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