



Knowledge, Attitude and Practices of Health Care Providers Regarding Infection Control in Tertiary Care Hospital Peshawar Pakistan

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ABSTRACT

Background: Nosocomial infections are the major cause of high morbidity and mortality in developing countries like Pakistan. Standard precautions; Based on good self-care practices, adequate knowledge and positive attitude can decrease the consequences of nosocomial infections.

Objective: To know about the knowledge, attitudes and practices of health care providers regarding infection control in Hayatabad Medical Complex Peshawar.

Method: Descriptive cross-sectional study was conducted. Health care providers were included like Doctors, Nurses, Pathologists and Paramedics. Consecutive sampling technique was used. After taking informed consent, adopted questionnaires were filled from participants regarding knowledge, attitudes and practices about infection control.

Results: Out of total 88 health-care workers, 44.3% were male and 55.7% were females. On average, 83% of the participants are knowledgeable about the mode of transmission of infectious diseases while 96.6% of the participants responded that transmission based precautions help in infection control however, 98.9% of the respondents say PPE and following of standard precautions play a vital role in infection control. On average, 56% of health care workers say that there is a lack of PPE and 92% of HCWs wash their hands before and after the procedure. The overall use of PPE is 80.7% however 75% of the HCWs did the practice of recapping the needles after using.

Conclusion: The overall knowledge, attitude and practices of the responding health care providers were good. They all have good knowledge level like awareness about infectious disease, awareness about the role of hand washing and use of personal protective equipment's in infection control. They have positive attitude toward infection control. The respondents have good practices like hand washing before and after the procedure, use of PPE while caring the patients, recapping of needles and proper dispose of used syringes. We also concluded that there is un-availability of personal protective equipment's for the health care workers for use during the caring of the patient.

Keywords: Health care providers; Infectious disease; Paramedics; Hospitals; Knowledge; Low middle-income country

INTRODUCTION

Nosocomial infections or hospital acquired infections are infections that affect patients in a hospital facility or other health-care facility and that they are not present or incubating at the time of admission to a hospital or the health-care facility. The purpose of infection control practices is to reduce the incidence of nosocomial infection. The disease that is caused by bacte-

ria, fungi, virus or parasites is called infectious disease. In the developed countries, the prevalence rate of hospital acquired infection ranges from 3.5% to 12% and it ranges from 5.7% to 19.1% in the less developed countries. Sufficient knowledge, positive attitude and good practices in infection control and prevention by the nurses can decrease the infection rate in hospitals. Oxford dictionary defines knowledge as information,

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facts and skills acquired through experience or education; the theoretical or practical understanding of a subject, in that circumstances knowledge is about infection control. Nurses needs training, workshop programs and specific education sessions for their practical job skills improvement as they are lacking knowledge. According to Oxford dictionary defined attitude “is the way you think, feel and behave about something in that circumstances attitude is about infection control. The chief source of the cross infection is the hands of the working staff and are controlled by good hand hygiene practices is to do something regularly as part of your normal behavior in that circumstances practice is about infection control”. Various infectious diseases like HBS, HCV and HIV spread between the patients when the practices of the injection protocol are not safe. The rate of the nosocomial infection will be high when inadequate knowledge, bad attitude and poor practices towards infection control is practiced. Health care professionals must have sufficient information about numerous methods for their self-protection [1].

The best way of prevention of infection is bringing changes in the attitude of health care workers. The overall knowledge, attitude and practices regarding infection control of the less experienced professionals and house officers were good then those of more experienced dental professionals. There are 42.2% of the participants follows standard precaution, 56.6% contributed in training and workshops program, 43.7% discard the needles and other sharps, 68.7% done hand washing before and after procedures and 62.5% recapped the needles after usage properly. The participants have adequate knowledge level (84.5%), safe practices (54.2%) and positive attitude (55.6%). The participants need to improve their knowledge, attitude and practices to the level of national guide lines in spite good knowledge, attitude and practices. The purpose of the study is to evaluate the knowledge, attitude and practices of the health care providers towards infection control; because, if we improve KAP of health care providers regarding infection, we can control the infectious diseases and improve the health of the people.

MATERIALS AND METHODS

Study Area and Study Duration

The study was conducted at a major tertiary care hospital (Hayatabad Medical Complex) of Peshawar, KPK. The study duration was five months, from September 2017 to January 2018.

Study design: This was a descriptive cross sectional study.

Population: The study population was all the health-care workers including doctors, nurses, paramedical staff and health-technicians.

Sample size and sampling technique: A total of 88 participants participated in this descriptive cross-sectional study. Consecutive sampling technique was used for data collection.

Data Collection Procedure

A self-administered validated tool was adopted comprising of two sections. The first section was covering the participants background information; gender, age and profession. The second section was comprised of three sub-sections including Knowledge section, attitude section and practice section. Hard copies of printed questionnaires were distributed among the

study participants. IRB approval was secured and informed consent was taken from the participants. Data was analyzed with SPSS version-22.

RESULTS

The data was analyzed by using SPSS-22 version. For categorical variables; we calculated frequency and percentage and draw tables. For continuous variables we took mean, median, mode, standard deviations and range and draw tables.

Demographic Question

The Table 1 show the gender of the participants in which we have 44.3% males and 55.7% female participants, while the age of the participants shows that 69.3% are in between 20 years-30 years of age, 19.3% are between 30-40 years of age and 11.4% are between 40-50 years of age [2]. The profession of the participants shows that 37.5% are doctors, 50.0% are nurses, 3.4% are pathologists and 9.1% are paramedics (Table 1).

Table 1: Demographic variables.

Variable	Frequency	Percentage
Gender		
Male	39	44.3
Female	49	55.7
Age		
20 yrs-30 yrs	61	69.3
30 yrs-40 yrs	17	19.3
40 yrs-50 yrs	10	11.4
Profession		
Doctors	33	37.5
Nurses	44	50
Pathologists	3	3.4
Paramedics	8	9.1

Knowledge Section

He results show the awareness of the participants about the infectious diseases that reflects that 98.9% of the participants are aware of the infectious diseases while 1.1% of the participants were unaware of the infectious diseases. The opinion of the participants about transmission based precaution, 96.6% participants have the opinion that infection can be control through application of transmission based precaution while only 3.4% of the participants have the opinion that infection cannot be control by following transmission based precaution [3]. The results show that 98.9% of the participants say that hand washing help to prevent the infection, but 1.1% of the participants says that hand washing cannot help in infection control. According to the participants that among the health care providers who are more prone to the infectious diseases that nurse 53.4%, doctors 13.6%, paramedics 14.8% and pathologist 18.2% are prone to infectious diseases [4]. 98.9% of the participants say that PPE and standard precautions have vital role in infection control but 1.1% of the participants say that PPE and standard precautions have no role in infection control [5]. The participant's opinion about the ways through which the infectious diseases can be transmitted from person to person that 8% infection through droplets, 8% infection through

direct contact, 1.1% infection through indirect contact and 83% infection can spread through all of them i.e. droplets, direct contacts, indirect (Figure 1).

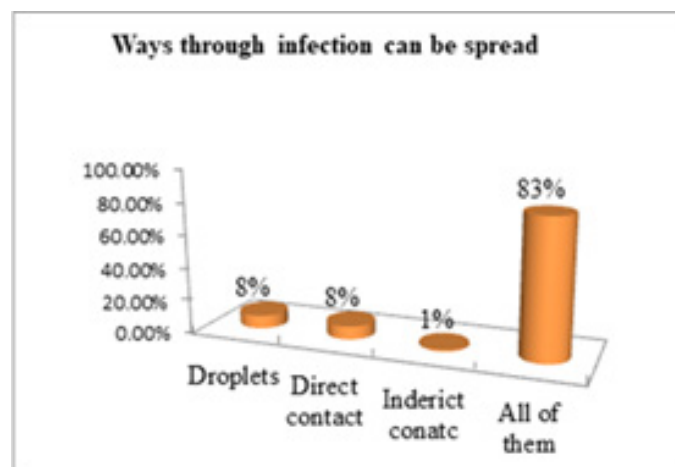


Figure 1: Ways through infection can be spread.

Attitude Section

According to the 98.9% of the participants that aseptic technique is necessary to control the infection while 1.1% of the participants say that aseptic techniques are not necessary to over infection. 91% of the participants have positive attitudes towards the use of PPE, hand washing and face mask during the care of the patient while 9% have negative attitudes towards the use of PPE, hand washing and face mask during of the patient. The opinion of the health care providers about necessity of PPE by laboratory staff for their self-protection show that 56.8% of the participants were agree while 22.7% of the participants were strongly agree and 20.5% of them were disagree. The results show the opinion of the health care workers about those health care works who more prone to the infection, 10.2% have the opinion that they have less chances of getting infection and 89.8% have opinion that have high chances of getting infection [6]. The feelings of the health care providers about getting infections while working in the health care facilities show that 11.4% feel that they are at minimal risk while 31.8% feel that they are at moderate risk and 56.8% of the health care providers feel that they are higher risk of getting infection (Figure 2).

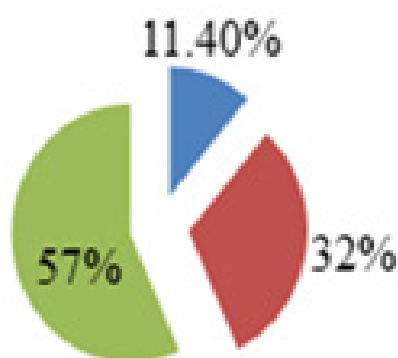


Figure 2: Feelings of risk of getting infection while working in a health care centre. Note: (■) Minimal risk-11.40%, (■) Moderate risk-32%, (■) High risk-57%

The results show the use of universal precautions that is followed by health care providers during their procedure in which, 2.3% use PPE and face mask while 5.7% wash their hand, 6.8% wears gloves and 85.2% use all of them (PPE and face mask, washing hand and wearing gloves) (Figure 3).

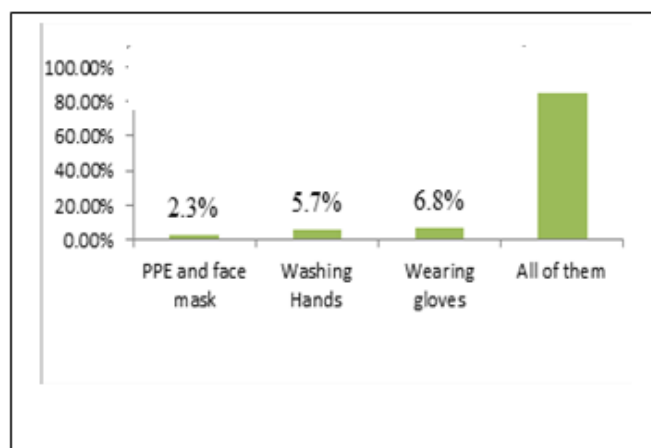


Figure 3: Universal precautions that is followed by health care provider during caring.

Practice Section

When asked from the participants about the application of infection control concept in professional practice, 62.5% of the participants were agree while 20.5% of the participants were strongly agree and 17.0% of the participants were disagree about the application of infection control concept in professional practice [7]. The problem that is faced by the health care providers in their daily practice, the results show that 36.4% of the health care workers forgot to use personal protective equipment's and 63.6% of the health care has unavailability of personal protective equipment's for their use in daily practices (Figure 4). According to the participants about practice hand washing 92% of the health care workers wash their hands before and after the caring of patient or procedure but 8% of the participants do not wash their hand before and after the caring of patient or procedure. The use of personal protective equipments in various hospital units the results show that 9.1% use in ICU and wards, while 6.8% use in minor OT, 3.4% use in labor room, and 80.7% use in all of them [8]. The practice of disposing syringes by health care workers after using, 89.8% of the participants done the disposing of syringes while 9% of the participants did not practice the disposing of syringes after using. According to the participants their satisfaction from work environment regarding hygiene, 55.7% of the them were fairly satisfied regarding hygiene, 22.7% of the them were strongly satisfied and 21.6% of the them were not satisfied from their working environment regarding hygiene [9]. The result shows that 75% of the participants done the participants of recapping needles after using while 25% of the participants did not done practice of recapping needles. When asked about practice of standard precaution, 43.2% of the health care workers say that they have got infection while not practicing standard precautions in their daily practice while 56.8% have not get infection while not practicing standard precautions.

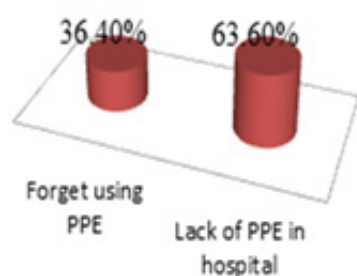


Figure 4: Problem is faced by health care members in daily practice.

DISCUSSION

There were few studies on knowledge, attitude and practices regarding infectious diseases like HIV, HBV and HCV in tertiary care hospitals like HMC, LRH and KTH in Khyber Pakhtunkhwa. All over the world the common problem is the hospital acquire infection [10]. That is why new knowledge, good practices and positive attitude are necessary for the health care providers to control the infection. In this study we assessed the knowledge, attitude and practices among health care providers regarding infection control in Hayat Abad Medical Complex Peshawar.

The results of our study show that 92% of the health care providers wash their hands before and after performing the procedures. The results of our study are supported the finding of their study shows that 68.7% health care workers done hand washing before and after procedures [11]. Another study supports our findings the result of this study show that 99% of health care workers perform hand washing practices. The results of our study show that 75% of the health care providers done recapping of needles after using and another study support our results shows 62.5% health care providers performs the recapping of needles. The results of our study show that 91% health care providers using gloves, masks and performing hand washing during caring the patient to reduce the cross infection [12,13]. This study result show resemblance to another study results which is 97%. The results of our study show that overall use of personal protective equipment's is 80.7% in different health care units of the hospital. But according to another study the overall use of personal protective equipment was 35.6%.

CONCLUSION

The overall knowledge, attitude and practices of the respondent's health care providers were good. They all have good knowledge level like awareness about infectious disease, aware about the necessity of hand washing and personal protective equipment's in infection control. They have positive attitude toward infection and control. The respondents have good practices like hand washing before and after the procedure, use of PPE while caring the patients, recapping of needles and proper dispose of syringes. We also concluded that there is unavailability of personal protective equipment's for the health care workers to use during the caring of the patient. Training and workshop sessions should be arrange with time for the health

care workers about infection control. The hygienic care should be maintained. All the facilities and equipment's like gloves, masks, gowns or lap quotes, sanitizers and antiseptic solutions for hand washing needed for infection control should be properly available for the health care providers in order to control the infection.

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