

# Knowledge, Perception and Practices Towards Covid-19 Among HCW

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## ABSTRACT

**Background:** In underdeveloped nations like Pakistan, nosocomial infections are a leading cause of high morbidity and death. Nosocomial infections may be reduced with the use of standard precautions based on appropriate self-care practises, proper information, and a positive attitude.

**Objective:** The objective of the study is to know about the knowledge, attitudes and practices of health care providers regarding infection control.

**Study Design:** Cross-sectional

**Place and Duration:** Mayo Hospital Lahore. Jan-2021-July 2021

**Material and Method:** We interviewed a total of 100 health-care professionals, including physicians, nurses, pathologists, and paramedics. A sampling procedure that was convenient was chosen. Following the receipt of informed permission, participants were asked to complete the questionnaires that had been developed to assess their knowledge, attitudes, and behaviors in the area to control infection. SPSS 21.0 version was used to analyze data.

**Results:** There were 65 (65%) men and 35 (35%) women among the total of 100 health-care personnel. Eighty-five percent of those polled have a basic understanding of how infectious diseases are spread, and ninety-four percent believe that transmission-based precautions are effective in preventing infection. However, ninety-six percent of those polled believe that personal protective equipment (PPE) and strict adherence to standard precautions are essential in preventing infection. Health care workers (HCWs) on average report a shortage of PPE and 90.6% of HCWs wash their hands before and after the process. 71% of healthcare workers used PPE, yet only 78% of those workers recapped needles after using them.

**Conclusion:** We found in this study that there was a high level of general knowledge, attitude, and behaviors among the responding health-care practitioners.

**Keywords:** Nosocomial infection, Knowledge, Practices Attitude

## INTRODUCTION

COVID-19, the coronavirus illness of 2019, has officially been declared an international public health emergency [1]. The first pandemic of severe respiratory disease caused by coronavirus was documented in 2003 [2]. Hubei Province in China became the centre of an outbreak of pneumonia in December 2019 that was later identified as COVID-19. COVID-19's load has increased in illness, death, and economic crises. Injuries and deaths will reach 31,867,173 by September 24th, 2020 [6]. There were more than a million cancer patients in Africa as of September 24, 2020 [6]. As of March 13, 2020, Ethiopia has had its first confirmed case of coronavirus infection. [7] 71,083 confirmed cases and 1,141 confirmed deaths have been recorded as of 23 September 2020 in Ethiopia (8). Tigray has 5,316 cases and 27 deaths as of September 23, 2020 [9].

Corona virus is well-known for its prevalence, pathogenicity, and possible impact on human health. Yet COVID-19 and its potential effects on human health are still little understood.

Healthcare practitioners' thoughts and attitudes must be correct as the first line of defence against the ongoing COVID-19 outbreak. As a result of the possibility for malpractices in the treatment of COVID-19 patients, this is an essential issue. [11] According to the most current statistics, HCPs were home to 4% of all COVID-19 cases as of March 2020. [12] Since the introduction of COVID-19 in Pakistan, medical workers there have been subjected to a great deal of physical and psychological stress. Up to 20% of Pakistan's population may be infected with the illness, according to preliminary study. The primary causes were a lack of knowledge, a lack of personal protective equipment (PPE), and an absence of psychological stress. [13]

There are a variety of self-defense tactics that health care personnel need to be familiar with. The most efficient way to prevent infection is to change the attitudes of healthcare workers. In terms of infection prevention, dental professionals with less experience performed better than those with more experience in terms of knowledge, attitudes, and behaviours. [14] Of those who took part in the study, 42.2% followed conventional precautions, 56.6% went to training sessions, 43.7% disposed of the needle or other sharps properly, and 62.5 percent recapped the needles

appropriately after usage. There is a high level of knowledge (84.5 percent), safe behaviour (54.2 percent), and an optimistic attitude among the participants (55.6 percent). In spite of the participants' good knowledge, attitude, and practise, they still need to improve their knowledge, attitude, and practise in accordance with the national guide lines. Patients' health and well-being were a primary focus of the research, which examined the knowledge, attitudes, and practises (KAP) of health care workers on infection control.

## MATERIAL AND METHODS

The study was cross-sectional conducted at Mayo Hospital Lahore. All medical professionals, including physicians, nurses, paramedics, and health technologists, made up the study's target audience. This research involved 100 people in total. Collecting the data required the use of a convenient sampling strategy. Two portions of a self-administered validated instrument were used. The participants' demographics, such as gender, age, and occupation, were covered in the first section. Sub-sections included Knowledge, Attitude and Practice in the second half of this paper. Participants in the research were given hard copies of printed questionnaires in English. The study was approved by the Institutional Review Board and the participants provided informed permission. SPSS version 21 was used to analyse the data. When dealing with categorical data, we tallied up the occurrences and percentages in order to create tables. We used mean, median, mode, SD, and range to summarize continuous values.

### Operational Definition

**Good knowledge:** As long as the healthcare staff successfully answered at least 70% of the knowledge questions,

**Poor knowledge:** If the healthcare staff properly answered at least 70% of the questions.

**Favorable attitude:** Only around two-thirds of the attitude tests' items were answered properly by healthcare professionals.

**Unfavorable attitude:** Assuming that 70% of the attitude questions were answered properly by the medical staff.

**Good practice:** If healthcare personnel were able to answer at least 70% of the questions correctly.

**Poor practice:** 70% of the practice questions would have been completed by the healthcare professionals.

## RESULTS

In this study, totally 100 participants were included. There were 65% males and 35% female participants, while the age of the participants shows that 68% were in between 20-30 years of age, 18% were between 30-40 years of age and 14 % were between 40-50 years of age. The profession of the participants shows that 36 % were doctors, 44% were nurses, 8 % were pathologists and 12% were paramedics. (Table 1)

Table 1: Demographic features of the participants

Variables	Frequency	Percentage
Gender		
Male	65	65
Female	35	35
Age		
20-30yrs	68	68
30-40yrs	18	18
40-50yrs	14	14
Profession		
Doctors	36	36
Nurses	44	44
Pathologists	8	8
Paramedics	12	12

Eighty-five percent of those polled have a basic understanding of how infectious diseases are spread in which droplets, direct contacts and indirect contacts were the reason.(table 2)

Table 2: Ways through infection can be spread

Variables	Frequency	Percentage
Awareness		
Yes	85	85
No	15	15
Reasons of Disease		
Droplets	40	40
Direct contacts	35	35
Indirect contacts	25	25

In health care centers, severe risk of infection was found among 61% cases, moderate risk in 30% and minimum risk was found among 9% cases.(table 3)

Table 3: Association of risk in health care centers

Variables	Frequency	Percentage
Risk		
Severe	61	61
Moderate	30	30
Minimum	9	9

However, ninety-six percent of those polled believe that personal protective equipment (PPE) and strict adherence to standard precautions are essential in preventing infection. Among these face mask, hand wash and gloves use were the equipments. (table 4)

Table 4: Use of PPE among participants

Variables	Frequency	Percentage
Personal protective equipment (PPE)		
Yes	96	96
No	4	4
Types of PPE		
Face mask	45	46.9
Hand wash	87	90.6
Gloves use	85	88.5

In our study lack of PPE in health care centers were the most common cause found in 57 (57%) cases and 43 (43%) cases were careless in using safety precautions.(fig 1)

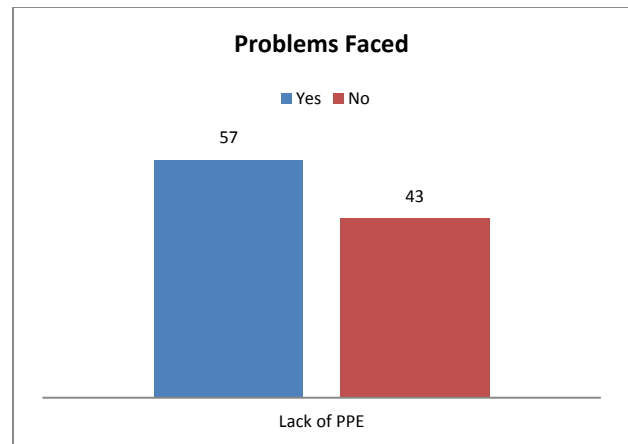


Figure 1: Participants response about problems faced in daily practice

## DISCUSSION

All across the world, people become sick at the hospital because they are exposed to germs. Health care providers' attitudes and behaviours toward infection control are little documented in the scientific literature. Consequently, health care personnel need fresh knowledge, proper practises and a positive mindset to successfully treat the illness. Studying health-care workers' infection-control attitudes and behaviours was the primary purpose of this investigation.

90% of healthcare practitioners wash their hands both before and after conducting the procedure, according to the findings of our research.... (Yakob, E. et al. 2015) found that 68.7 percent of health care professionals wash their hands before and after operations, which is consistent with our findings. Our results have been backed up by a second investigation. This survey found that 99 percent of health care professionals wash their hands. According to our findings, 75% of health care practitioners recapped their needles after use, and another research corroborates this figure (Yakob, E. et al. 2015) Recapping of needles is performed by 62.5 percent of healthcare practitioners, according to [15]. 88.5 percent of healthcare professionals used gloves, masks, and hand washing during patient treatment to avoid cross-infection. Our data suggest that 88.5 percent There is a 97% similarity between this study's findings and those of another. [16] Results from our survey suggest that the utilisation of personal protection equipment in the hospital's various health care units is 96%. However, a separate survey found that just 35.6 percent of people used personal protection equipment. [17] The minimal number of participants in our research is a significant drawback. More than one research should be undertaken to achieve the most accurate findings.

After exposure to a COVID-19 patient, there was a lack of understanding among healthcare workers (HCWs) of the same hospital and between the participating institutions. Although the indicated readiness for COVID-19 immunisation was greater than in previous European research [18,19], which found a willingness of approximately 50% among healthcare workers, this study found a willingness of around 71%.

Patients with bacterial co-infection were overestimated by physicians, even though they were aware of criteria for prescribing antimicrobials in COVID-19 patients According to earlier research, only a minority of doctors noticed that co-infections were present in fewer than 10% of patients at the time of COVID-19 diagnosis [21,22]. Antimicrobial stewardship education might begin in the pandemic period as a result of this. There was a wide range of opinions among doctors on how to handle patients who tested positive for COVID-19 but did not exhibit any symptoms, indicating a need for more targeted interventions based on the National Public Health Organization's local guidelines for improved education.

It was found that the health care professionals of the responder were knowledgeable, kind, and competent. There is excellent awareness of infectious diseases and the need of hand washing and the use of personal protective equipment (PPE) among them. It is clear that they have a favourable outlook on infection and control. Hand cleaning before and after the surgery, the use of PPE while caring for patients, the recapping of needles, and the correct disposal of syringes are among the excellent practises reported by the respondents. The lack of readily available personal protection equipment (PPE) for health care professionals during patient care was also a factor in our findings.

## CONCLUSION

We found in this study that there was a high level of general knowledge, attitude, and behaviors among the responding health-care practitioners.

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