

An Overview Of Infection Control Measures Awareness Among Nurses, Family Medicine, General Practitioners, Optometrist, Clinical Laboratory, Pharmacist, Paramedic, And Dental Teams

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Abstract

There is a lack of information regarding adherence to infection control measures in dental facilities in the Middle East. The objective of this study was to examine the existing literature on the knowledge and practices related to infection control among various healthcare providers, such as nurses, family medicine practitioners, general practitioners, optometrists, clinical laboratory professionals, pharmacists, paramedics, and dentistry teams. Proficiency in infection prevention and control (IPC) protocols among healthcare workers (HCWs) is essential for the successful implementation of IPC measures. Adhering to IPC guidelines has crucial ramifications for the safety of healthcare workers, the protection of patients, and the overall care environment. It is highly recommended to adopt a comprehensive approach to enhance IPC-intervention tactics. It is vital to enhance compliance among healthcare workers (HCWs) with infection prevention and control (IPC) methods.

Keywords: *healthcare workers (HCWs), infection prevention and control (IPC).*

Introduction

As a result of the fact that healthcare-associated infections (HAIs) pose a significant threat to the well-being of both patients and healthcare workers (HCWs), the prevention of these diseases need to be high on the list of priorities for healthcare systems and organizations. In hospitalized patients, the prevalence of healthcare-associated infections (HAIs) ranges from 5 to 15%, and they can impact 9–37% of those who are admitted to intensive care units (ICUs) [1]. One healthcare-associated infection (HAI) affects one out of every twenty-five hospitalized patients in the United States (US) at any given moment [2].

The infected individual may experience a decrease in their quality of life or possibly a reduction in their life expectancy caused by HAIs, in addition to incurring significant costs over the course of their lifetime. For instance, the probability of hepatitis-associated infections (HAIs) following a needle-stick injury with a needle from an infected source patient was zero percent for HIV, three percent for hepatitis C, and six to thirty percent for hepatitis B [3]. It has also been claimed that HAIs play a role in the development of major mental health conditions, such as anxiety, depression, adjustment disorder, panic attacks, and post-traumatic stress disorder. It seems that the magnitude and extent of the burden caused by HAIs around the world are rather significant, but they are also quite underestimated. However, in order to make these tools more accessible and inexpensive in contexts where resources and data sources are limited, they need to be reduced and altered. There are methods that may be used to evaluate the magnitude and type of the problem. Similarly, preventative steps, such as practicing proper hand hygiene, are frequently easy to put into action. The International Population Control (IPC) needs to be elevated to a higher place among the main priority in national health programs, particularly in countries with limited resources [4].

Based on the outcomes of the research, it was determined that the procedures that healthcare practitioners conducted in general that involved COVID-19 were acceptable. Primary care

nurses and other members of the healthcare workforce ought to place a stronger premium on preventative measures, such as wearing personal protective equipment (PPE). Patients and members of the general public should look up to those who stick to these preventative measures as models to emulate. Healthcare workers are required to wear personal protective equipment (PPE), which includes gloves, an apron, a gown, and a mask. Additionally, nurses and other professionals working in the healthcare industry should get familiar with the COVID-19 practises. It is necessary for them to put this newly acquired knowledge into exercise on a consistent basis. Based on the findings of this research, there are a number of recommendations that can be made to guarantee that primary healthcare professionals comply with safety regulations while they are on the job at this unprecedented moment. Providing frontline healthcare workers with personal protective equipment (PPE) that is appropriate and complies with quality standards, as well as a safe working environment, can help alleviate the psychological stress that is created by this epidemic, while also maintaining the workforce in the healthcare industry [5].

Review:

In today's increasingly complicated healthcare systems, clinical laboratories offer diagnostic testing services to support the efficient delivery of treatment to patients. Microbiological, serological, biochemical, haematological, cytological, and pathological investigations of clinical specimens obtained from patients are included in this category. The objective of these examinations is to provide information that can be used for the diagnosis, treatment, or prevention of any disease. Approximately seventy percent of clinical choices are made on the basis of information obtained from laboratory measurements [6].

The processing of clinical material, as well as the use of chemicals or radiation, provides laboratory workers with the possibility for exposure to risks originating from both biological and chemical sources. Inhalation of

aerosols, percutaneous inoculation (needlestick injuries and cuts from contaminated items), contact between contaminated materials (surfaces, hands) and mucous membranes, and ingestion (smoking or eating, aspiration through a pipette) are some of the ways in which laboratory workers are at risk of being exposed to biological hazards. A variety of other ways include inhalation of aerosols. The hepatitis B and C viruses (HBV and HCV), human immunodeficiency viruses (HIV), Middle East Respiratory Syndrome, and Severe Acute Respiratory Syndrome Coronavirus 2 are among the pathogens that are of special concern when it comes to laboratory-acquired infections [7]. In addition, needlestick injuries, which can occur at any stage of the needle use process, are the primary cause of the majority of hepatitis and HIV infections that occur among healthcare practitioners. Erroneous practices, the inability of processes to effectively eliminate or limit the risk, inadequate communication regarding high-risk patients, a lack of compliance, inexperience, ignorance, and the failure to follow recognized procedures and recommendations are all potential causes of occupational risk and occupational illnesses. On the other hand, the laboratory has the potential to be a secure place of employment if the potential dangers are recognized, and if clear guidelines, safety norms, and infection prevention and control (IPC) precautions are implemented and adhered to [8].

A practical and evidence-based method to preventing patients and health professionals from being injured by preventable infections and potential dangers is provided by the implementation of IPC recommendations. [9] It is a collection of recommendations that were developed with the intention of minimizing and preventing the harm that can be caused to patients and healthcare professionals as a result of exposure to infectious pathogens. All laboratory workers and other healthcare professionals are required to get familiar with the standard and transmission-based precautions that are included in the infective disease control programs. The practices of hand hygiene, the utilization of personal protective equipment (PPE) (gloves, gowns, masks (N-95, paper, etc.),

plastic aprons, face shields, and protective eyewear), the safe utilization and disposal of sharps, frequent environmental cleaning, and waste management are all included in these measures [10].

It is essential for effective IPC to have sufficient knowledge of HCWs. Barriers to IPC compliance include a lack of knowledge of recommendations for infection prevention and control (IPC), as well as an ignorance of preventative indications during everyday patient care and the potential dangers of microorganism transfer to patients. Poor compliance is determined by a lack of understanding regarding the appropriateness, efficacy, and utilization of integrated pest control measures. Education and training are the cornerstones of development in IPC practices, and they are essential resources for overcoming these obstacles. That information is power is something that healthcare workers ought to be aware of. However, despite receiving instruction and training, it has been demonstrated time and again that individuals lack awareness of IPC measures [11]. Issues concerning hand hygiene, the use of personal protective equipment (PPE), immunization for the prevention of communicable diseases, modes of infection transmission, the evaluation of patients for infection, medical instrument decontamination, healthcare waste handling, and needle stick and sharp safety policy should be included in the awareness of healthcare workers (HCWs). More importantly, healthcare workers should comply with these IPC precautions, procedures, and tactics in order to guarantee a reduction in the number of healthcare-associated infections (HAIs) in healthcare settings [11].

HCWs have been reported to have a wide range of compliance with IPC practices, which includes the use of personal protective equipment (PPE) and proper hand hygiene. This compliance is likely influenced by an individual's understanding on infection risk and behaviors. To be sure, having a solid knowledge does not automatically guarantee having a good IPC practice. Even though there are well-established standards for the prevention of healthcare-associated infections (HAIs), it has been discovered that healthcare workers

(HCWs) demonstrate low compliance with hand hygiene procedures [12].

One study found that the most common practice among healthcare workers was to use face masks. This new finding was in line with those findings in another study that found that the most common practice among healthcare workers was to use face masks. The most common technique for preventing infection among healthcare workers and nurses was using a face mask in a crowd (91.4%). These findings were also comparable to the ones that are currently being presented. In relation to the COVID-19 pandemic, it was discovered in a prior report that 89.7% of health care personnel adhered to the appropriate protocols for infection and preventive control [13].

Conclusion:

Healthcare providers, especially nurses, face a heightened risk of infection due to their involvement in containing the COVID-19 epidemic. To effectively manage the spread of infection, it is important to identify the factors that increase the risk of infection and adopt appropriate measures to minimize these risks. Every possible effort should be made to prevent the transmission of infection to individuals. In summary, the implementation of preventative measures by healthcare professionals in primary healthcare centers in Saudi Arabia to combat the development of infectious diseases such as COVID-19 was highly significant. The Ministry of Health should closely oversee the implementation of preventive measures for COVID-19 infection among healthcare providers in various facilities. Clinical laboratories offer diagnostic testing services to facilitate the efficient provision of treatment in modern, intricate healthcare systems. Laboratory workers face possible hazards from both biological and chemical sources when processing clinical material and using chemicals or radiation. However, the laboratory, nursing, optometrist, pharmacist, and dentistry team can be a safe workplace if they identify potential hazards, adhere to clear guidelines, follow safety

standards, and implement infection prevention and control (IPC) safeguards.

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