FORUM: World Health Assembly

ISSUE: Measures to Protect the Healthcare Workers from Infectious Diseases

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Introduction

Healthcare Workers with Personal Protective Equipment

Over the previous decade, major outbreaks such as Ebola virus disease, Middle East respiratory syndrome, and, most recently, the Sudan virus disease outbreak in Uganda and the pandemic of coronavirus disease (COVID-19), have demonstrated how outbreaks can both spread rapidly through the community, with about 15,000, 3,000, 160, and 770,000,000 confirmed cases respectively. The experiences accumulated in the past years unequivocally show that healthcare workers, along with the patients, can also be at high risk of being infected during healthcare delivery and therefore necessary to be protected.

Healthcare workers are essential for health systems to function. As a result, availability, accessibility, acceptance, and quality are necessary for improving health service coverage and achieving the right to the enjoyment of the best attainable standard of health. The significance of protecting healthcare workers from infectious diseases was confirmed through the overwhelming number of deaths among the workers caused by the COVID-19 pandemic in the period between January 2020 to May 2021, numbering between 80,000 and 180,000. These infectious events have exposed the gaps in infection prevention and control programs that exist in all countries, although they are more serious in low- and middle-income countries. WHO reported that more than 10,000 COVID-19 cases of healthcare workers were from African continent nations, emphasizing the higher risks of low-income countries.

Background

Infectious diseases are caused by exposure to infectious organisms, including bacteria, fungi, viruses, and parasites. It is crucial to protect healthcare workers from infection since they are easily and

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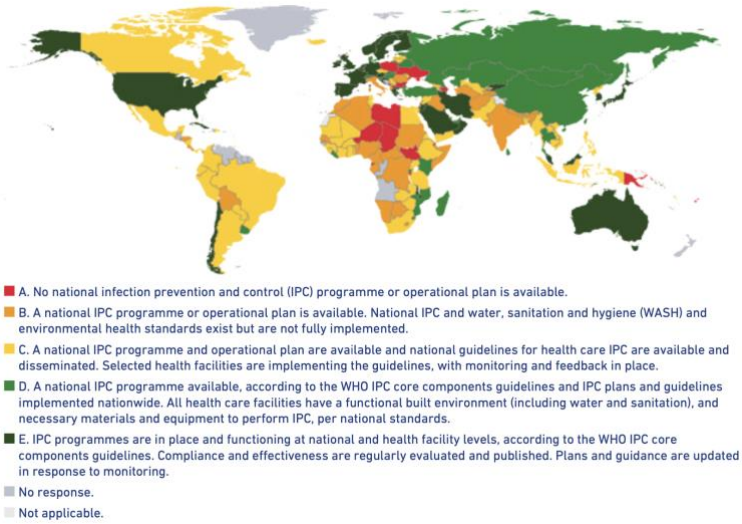
constantly exposed to these organisms in their workplace. Bloodborne Pathogens, Influenza, Methicillin-resistant Staphylococcus aureus, Tuberculosis, and COVID-19 are the most common agents healthcare workers are exposed to and infected, according to the Centers for Disease Control and Prevention (CDC). Healthcare workers can be protected from infectious diseases properly using personal protective equipment (PPE) which is designed to protect from injury or the spread of infection. PPE mainly includes gloves, gowns, shoe and head covers, mask and respirators, and other face protections. Handling and disposing of disposable medical devices, such as needles and sharp instruments, and correct reprocessing of reusable devices are also necessary to prevent the risk of device-associated infections.

Research found healthcare workers are seven times as likely to experience severe COVID-19 as others. Infection Protection and Control (IPC), the scientific approach and practical solution to prevent or reduce infection, is recognized as the crucial point on the issue to protect healthcare workers from infectious diseases. World Health Organization (WHO) claimed that nations and organizations should invest in IPC structured programs to ensure the quality of healthcare workers' safety, directly improve key health outcomes and saves lives, reduce healthcare costs and expenses, implement proven strategies supported by implementation aids, and extensively adapt to local contexts.

Problems Raised

Insufficient Infection Prevention and Control (IPC) Structure



Level of IPC Available in Countries According to 2021-2022

IPC Structure exists to supplement the existing prevention policies and management. With insufficient infrastructures, the healthcare workers are exposed to high risks of diseases in the course of treatment, which can possibly cause long term diseases, disabilities, and unnecessary deaths. Despite the surge in response to the COVID-19 pandemic, it was recently found that in some countries not all the essential IPC human resources, supplies, and infrastructures for COVID-19 response are available, two years into the pandemic. These events revealed that the IPC structure is still non-existent or insufficient in a high proportion of the countries. Furthermore, a significantly lower level of IPC progress and implementation was shown in low-income and lower- middle-income countries across all studies.

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Limited Availability of PPE

Personal Protective Equipment (PPE) is essential to minimize healthcare workers' exposure to infectious organisms, such as bacteria and viruses. According to WHO, over 80% of High-income countries met all built environment minimum requirements, including PPE. On the other hand, healthcare facilities in Low-income countries reported significantly fewer percentages. Water sources are necessary for healthcare workers to sanitize after exposure to potential viruses. However, only 24% of them reported functioning hand hygiene stations, 53.6% for functioning toilets or latrines, and 67.71% for continuously available water services. Additionally, WHO emphasized only about half of the Low-income countries' healthcare facilities have access to PPE.

The problem of limited availability of PPE rose to the surface when the COVID-19 pandemic became severe around the globe. Low-income countries continued their shortage of PPE required to provide care to COVID-19 patients, which resulted in a high risk of virus exposure for healthcare workers. Lack of PPE, or other IPC supplies, and poor application of best practices are stated as major reasons for the disruption of essential health services in workers' infection rate. Professionals have discussed one of the underlying causes to the unavailability of PPE is due to supply chains in most nations are being unable to respond to the rising demand. It highlights the importance of defective IPC implementation on the capacity across the health system, not limited to COVID-19.

Medical Gloves as PPE

International Actions

National IPC Programs

National IPC Programs were created to solve the issue of the rapid spread of infectious diseases among healthcare workers. They play a significant role in WHO strategies to reduce the risk of infectious diseases like Ebola in the present and the future, enhance the overall standard of healthcare delivery, and combat antimicrobial resistance (AMR). They are also designed to assist nations in creating their own national protocols for IPC and AMR action plans, as well as to assist medical facilities in establishing or

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improving their own IPC strategies. The programs, such as IPC-trained focal point, IPC dedicated budget, and in-service IPC curriculum, showed a remarkable increase in the past few years. The potential for improvement in all National IPC Programs is considerable and therefore requires enough financial and workforce support.

Global Report on Infection Prevention and Control

WHO published the Global Report on Infection Prevention and Control which highlights the burden of infection related to health workers in health care settings. It provides an overview of the strategies and resources that are available to help countries in need of improvement, as well as a global situation analysis of the implementation of IPC programs. Providing a report concentrated on IPC Networks shows a significant action to protect healthcare workers from infectious organisms in their workplace.

Key Players

World Health Organization (WHO)

WHO is the United Nations agency that links countries, partners, and individuals to advance health, ensure global security, and assist the vulnerable. It stands as one of the chief players in the issue of healthcare workers' infection prevention which provides full support towards the implementation of IPC all around the member states. The health workforce and the workers are emphasized by WHO as having a vital role in the building resilience of communities and health systems thus important to protect them from other infectious materials.

Along different mechanisms, the Global Health Workforce Network (GHWN) works for the health workforce agenda to progress toward universal health coverage and the Sustainable Development Goals. The Sustainable Development Goals are 17 goals and 169 targets agreed by all 191 UN Member States to ensure healthy lives and promoting well-bring for all at all ages. The Network operates within WHO on comprehensive and coherent health workforce policies in support of the implementation of the Global Strategy on Human Resources for Health and the recommendations of the Commission. GHWN involves in this issue by

The 17 Sustainable Development Goals with Symbols

directly relating to the healthcare workers and their rights to be protected with actions including a platform for enhanced collaboration and dialogue with the key technical agencies with a mandate that goes beyond the health sector focus of WHO.

Centers for Disease Control and Prevention (CDC)

CDC is a science-based organization that protects public health with the role of detecting and reacting to emerging health threats, promoting healthy and safe behaviors, communities, and environments, and developing and educating leaders in the public health workforce. It provides resources to support occupational infection prevention and control in healthcare settings and to protect the health and safety of healthcare workers.

Centers for Disease Control and Prevention (CDC) Museum in Atlanta

CDC works in more than 60 countries and owns six regional offices for international support and programs. For example, in July of 2023, Africa CDC have launched a Health Security Partnership with WHO and the Robert Koch Institute (RKI) regarding the issue to strengthen disease surveillance and epidemic intelligence in Africa. The Health Security Partnership in Africa is delivering concrete results in the areas of emergency preparedness and response, surveillance and laboratory capabilities, and help protect the health of people in Africa through a better coordinated and more resilient health system.

Global Infection Prevention Control (GIPC)

The GIPC Network is a collaborative mechanism between the interested parties administered by the WHO, which aims to enhance IPC coordination and collaboration between Member States and the globe. It also works to support WHO's and nations' efforts on IPC through preparing, strengthening, and capacity building for surveillance. The key focus of the GIPC Network is on basing the needs of countries with low- and middle-income healthcare settings to contribute evidence-based recommendations and provide scarce resources.

Possible Solutions

Political Commitment and Policies

The Need for Water, Sanitation and Hygiene (WASH) System

Every Member State should work towards scaling up and enforcing the core components of IPC programs and the related minimum requirements, including through sustained financing, legal frameworks, and accreditation systems. Through health facility accreditation programs and other worldwide accountability mechanisms, regulations and legal frameworks should implement IPC requirements and policies by localizing them to each environmental setting. The procedures should enforce important infrastructure minimum standards, such as those relating to congestion, understaffing, and the built environment, including Water, Sanitation, and Hygiene (WASH). Information about progress towards achieving these targets can be publicly available.

IPC Capacity Building and IPC Expertise Creation

Active IPC programs could be developed as a clinical and public health specialty, including through IPC training and continuous education across different levels and health disciplines, and career pathways for IPC professionals. Through the development, the measures to prevent infection in the healthcare workforce among workers would decrease.

Programs Integration and Alignment

Integrating and collaborating with different programs that also aim to protect workers and patients from other harmful infectious diseases can provide deeper IPC support to them. For instance, aligning with programs focused on AMR, patient safety, or child health programs will avoid the repetition or duplication of same-purposed programs that requires additional resources.

Glossary

Infection Prevention and Control (IPC)

IPC is a scientific approach for practical solutions to prevent or reduce the risk of transmission of microorganisms to patients, healthcare workers, and visitors. Effective IPC requires ongoing efforts from

policymakers, facility managers, healthcare workers, and other key stakeholders, in addition to all individuals who utilize healthcare services and their families.

Reprocessing

Reprocessing refers to the movement of blood, tissue, and other biological debris and to inactivate infectious microbes so that devices are safe for the next patient. It includes cleaning, disinfection, sterilization, and related procedures, as well as inspecting and reestablishing the technical and functional safety of the utilized device.

Infectious Diseases

Infectious Diseases Infectious diseases caused by pathogenic microorganisms, such as bacteria, viruses, parasites, or fungi, can be spread, directly or indirectly, from one person to another. The health sector has little direct control over many of the important factors that affect health and the factors that lead to infectious diseases.

IPC for COVID-19 virus

Healthcare-associated Infections (HAI)

An HAI is an infection that is acquired by a patient during care delivery in a hospital or other healthcare facility that was not present or incubating on admission. HAIs can potentially infect family members, coworkers in the medical field, and visitors. Microorganisms that are resistant to one or more common antibiotics are the main cause of HAIs.

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