
REVIEW ARTICLE

Role of community health professionals in the prevention of human acquired Corona Virus

¹Faseeha Aman, ²Sadia Masood

¹Department of Clinical Nutritionist, Aga Khan University, Pakistan

¹Centre of advanced studies in Health and Technology, Rawalpindi, Pakistan

²Department of Medicine, Aga Khan University Hospital, Karachi, Pakistan

Corresponding Author's Email: Faseehaaman.casht@gmail.com

ABSTRACT

Currently different infectious diseases are emerging and such kind of diseases have a strong impact on global health matters. According to research, these novel infectious diseases are harmful to human health and the community. With the passage of time globalization has changed the mode of transmission of these diseases. Therefore, it is essential to understand the relationship between the spread of infectious diseases and the public health sector. This article covers the important aspects of the role of community health professionals during this time of crisis and various community health interventions to effectively fight against this pandemic. Also this article explores the importance of community health with some professional and authentic guidelines about safety to withstand COVID-19.

Key Words: Health communication, Prevention, Intervention, Corona pandemic

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INTRODUCTION

Currently different infectious diseases are emerging and such kind of diseases have a strong impact on global health matters. According to research, these novel infectious diseases are harmful to human health and the community. With the passage of time globalization has changed the mode of transmission of these diseases. Therefore, it is essential to understand the relationship between the spread of infectious diseases and the public health sector [1]. This article covers the important aspects of the role of community health professionals during this time of crisis and various community health interventions to effectively fight against this pandemic [2]. (Figure-1).

The COVID-19 pandemic outbreak has created a global health crisis and it has the worst impact on daily lives. In the current scenario, the role of community health workers is very crucial. It is the core responsibility of community health workers to minimize the transmission of infection. There is a strong relationship between health and community [3]. Public health is the field of allied health sciences that deals with the provision of protective measures and also keep an eye on the wellbeing of the community. In the current situation, community health professionals worked by keeping their lives at risk to detect, prevent, and protect the local community from this pandemic. Community health workers help to flourish the health care accessibility for everyone [4].

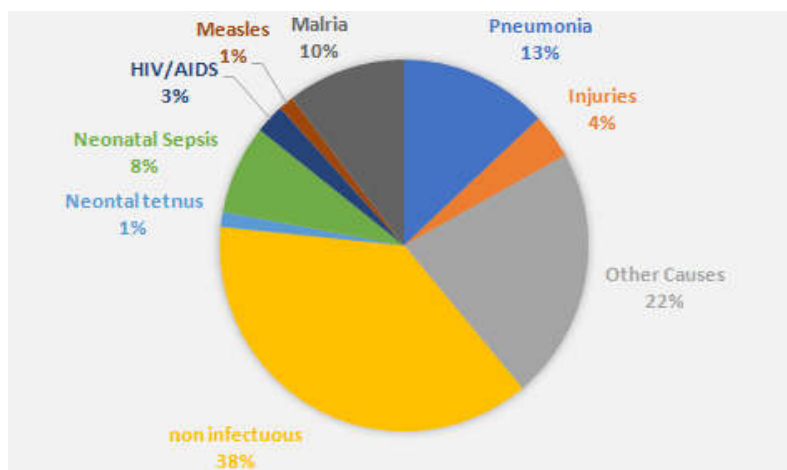


Figure 1: The global burden of infectious disease. [3]

Coronaviruses are a large family of viruses that mainly came from animals but the human is most susceptible to it. The human coronavirus can cause upper respiratory tract infection and can spread from person to person. ⁵It should be detected in patients with fever and respiratory tract symptoms and who have travel or contact history. Its detection can be done by reverse transcriptase-polymerase chain reaction and immunofluorescence antigen detection assays through nasopharyngeal samples [6].

Pneumonia, Influenza, and other diseases like acute respiratory infections (ARIs) usually ignored but ARIs is the leading cause of death among infectious causes worldwide [7]. Pneumonia is the largest infectious disease and the commonest cause of death among young individuals. According to the World Health Organization almost up to 16 million episodes of Respiratory Syncytial Virus disease and about 18 million episodes of the pneumococcal disease occurs every year globally [8].

Public health systems are facing new challenges of controlling new infections which are spreading worldwide in a limited period. [1] Trade routes also transported infected goods within various continents. Globalization (international trade) needs responses to prevent infectious disease pandemics. In recent years, more unknown human pathogens are identified [9]. The main purpose of the involvement of community health professionals is to protect and prevent against Covid-19 pandemic. They also provide a community health response to the international spread of disease in different ways that are commensurate with and restricted to community health risks [10].

COMMUNITY HEALTH THREATS FROM URBANIZATION AND INDUSTRIALIZATION IN THE CURRENT CONTEXT

Sanitarianism is the situation that shows reality to the community. The first community health precautions were taken in the 19th century in the UK in response to the high death rate from viral infection in urban slums and crowded buildings that were assigned to the workers during the Industrial Revolution. [11]

Quarantine is a duration of obligatory isolation or omission of any kind of activity, either it is a travel or social gathering. It is the most medieval forms of community health intervention. In the early centuries, TB sanitariums and hospitals for fever called 'fever' hospitals were made outside the residential areas to protect the local community by quarantine those patients [12]. Such approaches are still being applied in the modern era and followed by the current situation like an isolation hospital was established in China to quarantine the people affected with COVID-19.

Epidemiology used to support community health policies to tackle infectious disease promoted an approach based on evidence, collection of data on the incidence and occurrence of indisposition, socio-economic circumstances and conduction of cases, and the impact of the intervention on subsequent rate of ailments. The discipline of epidemiology helps to collect, analyze, and interpret data on the incidence of disease and death rate due to disease. Epidemiology is crucial to modern community health in the 21st century, but the data collection methods now include surveillance networks, global monitoring, and huge online databases. [13]

COMMUNITY ACTIONS AGAINST NCOVID-19 PANDEMIC

According to Winslow (1920), organized community efforts are a necessary component to fight against any kind of infectious disease. Such strategies are more effective in rural areas where the community is

unable to understand even basic hygienic practices. Raising the standards of community is not a simple matter, as it needs to train doctors, nurses, building infrastructure and generate funds for vaccines and treatment. All these factors are substantial contributors but community awareness is a vital part of this strategy. The mobilization of community health workers is compulsory in the current scenario of Covid-19. It is the responsibility of community health workers to design specific preventive measures and introduce health strategies against nCOVID for the local community [2]. They need to initiate various awareness campaigns such as the use of hand sanitizers, frequent hand washing, a minimum social distance of 6 feet, etc. Public health success in controlling viral diseases can be explored by the success of following public health measures to control the disease process:

INFECTION PREVENTION AND CONTROL SERVICES

During the current pandemic every health care system around the world has taken preventive measures. The infection prevention control services are responsible for the assessment, prevention, protection, surveillance, and evaluation of disease spread.⁵ It is also accompanied by mandatory education and the creation of successful policies, tactics, and procedures.

b. Community Health interventions:

It is an effective approach to think about direct health interventions to control the current pandemic. Following are some strategies to overcome such circumstances:

- Strengthening the educational support system, it can bring behavioral change among the community to protect from coronavirus.
- Improve the immunity system of humans through diet and other measures.
- Keep away from the source of the coronavirus, maintain social distancing, and stay at home.
- Tackle an environmental source of viral disease.

c. Level of infectious diseases prevention:

There is an impact on community health by preventing diseases more than medical treatments.⁷ It is an integral part of community health intervention, which are considered to operate at various levels.

- **Primary Prevention Strategies:** In this strategy, we are seeking to prevent new cases of pathogens being transmitted to human hosts. There are **two** ways of vaccination operation at this level:

Direct: Production of vaccine from the unaffected population by increasing their resistance.

Indirect: By increasing exposure to pathogens. Many people contract the disease and in time build up an immune response to it.

This protective effect is known as **herd** immunity. This level reached when the ratio of immune-to-non-immune peoples is high enough to stop viral diseases.

- **Secondary Prevention Strategies:** It aims to identify new cases of infections at the earlier stage and reduce the spread of causative agents.
- **Tertiary Prevention Strategies.** Medical care to avoid the worse consequences of an individual's illness is termed tertiary prevention, like physical therapies that support children's rehabilitation who suffer from paralytic polio.

d. Education and health-related behavior modifications:

The coronavirus has become pandemic, it is essential to isolate the (quarantine) infected persons. They must be educated enough about how to prevent the risks of transmission of infection to others. The education of infected and non-infected people leads to health-related behavior modifications within the community. It includes various personal actions, associated with personal hygiene practices like the washing of persons, clothing, and preparation of food and handling of domestic pets. This is an important hygiene-behavior that cannot be ignored.

e. Screening

Through various community-acquired screening programs, we can identify the infected people before they develop symptoms. Screening services can target groups of high risks [8].

The community health component is the first line of defense against the threat of infections. Strengthening public health resources should be the priority for governments and the global communities to fight against the COVID pandemic. At a time of unprecedented disruption caused by the pandemic, an organized public health program initiative with protocols and guidelines for diagnosis, screening, quarantine, isolation, and contact tracing would be helpful. Strengthening of the public health systems will not only prevent the future outbreak from spinning out of control, but it will help the other critical efforts to fight against global health threats.

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