Assessing Healthcare Provider's Skills in the Management of COVID-19 Infection at Busia County Referral Hospital, Kenya

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ABSTRACT

Context: The zoonotic coronavirus of 2019 (COVID-19) was caused by an enveloped Ribonucleic Acid (RNA) virus from the Coronaviridae family in the Sarbecovirus subgenus and Severe Acute Respiratory Syndrome – Coronavirus – 2 (SARS-Cov-2) organism. The index case was believed to have originated and transmitted from animals (bats) to humans in November 2019 at the Wuhan live market in China, and subsequently, transmissions were among the human race through direct and indirect contact with respiratory droplets from an infected person(s) to the vulnerable person(s), while talking, sneezing, or coughing. World Health Organization (WHO) declared it a pandemic on March 11, 2020, while in Kenya, it was on March 20, 2020, and by June 11, 2021, Busia County had 3,982 infected individuals, with a positivity rate of 3.9%, 157 being health care providers across all cadres were infected and two deaths reported. Busia County Referral Hospital contributed 30% of the total infected healthcare providers across the seven sub-counties due to non-adherence to standard and transmission-based precautions as guided by the World Health Organization.

Aim: The study assesses the healthcare provider's skills in managing COVID-19 infection at Busia County Referral Hospital in Kenya.

Methods: The study utilized a descriptive cross-sectional study design, using a semi-structured questionnaire to collect qualitative and quantitative data from 153 study subjects stratified per cadre. The data collection tool was adapted from the facility readiness assessment questionnaire for COVID-19 (Centre for Disease Control and Prevention) and the risk assessment and management of exposure questionnaire of healthcare workers in the context of COVID-19 (World Health Organization).

Results: The study reveals that respondents who had worked for shorter duration (1 to 3 years) and were taken through shorter training sessions (1 to 2 days) had higher odds 2.3 and 2.1 ($p = 0.03$) and $p=0.04$), respectively to demonstrate good skills in the management of COVID-19, which was statistically significant. Furthermore, knowledge of five moments of hand hygiene had $p=0.007$, with a higher odds ratio on availability of essential commodities such as gloves 2.5 odds, surgical face masks 3.8 odds, thermos-gun 3.8 odds, designated focal person at triage 6.1 odds and screening checklist 3.2 odds with p-value ≤ 0.05 enhanced good skills required to curb the pandemic.

***Conclusion*:** Frequent shorter periods of training of the health care providers and the availability of essential commodities for managing COVID-19 enhanced good skills to curb the pandemic infection. Knowledge of the five moments of hand hygiene influences good skills to prevent the spread of COVID-19 infection. The study recommended regular drills on appropriate use of personal protective equipment and adherence to five moments of hand hygiene by healthcare providers as key skills in managing COVID-19 infection. It further recommends establishing and disseminating policy on an essential list of health products and technologies required to manage COVID-19. In addition, the study recommends a further in-depth study on the impact of the mitigation strategies put in place to manage the pandemic.

Keywords: Management, COVID-19, health care providers, skills, Busia County referral hospital

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1. Introduction

Coronavirus 2019 (COVID-19) infection is a zoonotic viral infection caused by Severe Acute Respiratory Coronavirus 2 (SARSCov2) that was initially detected in the Huanan seafood and animal market in Wuhan, Hubei province in China on December 29, 2019 *(Habibzadeh & Stoneman, (2020).* The infection spreads through droplet infection for the exposed who did not adhere to standard and transmission-based precautions by WHO, and it was identified as an infection of public health concern within a short span *(WHO, 2020a).* There was scanty knowledge on COVID-19 management, transmission mode, and prevention, which exacerbated its spread. The initial investigations named the etiological agent as the 2019 novel coronavirus. Later, it was designated as SARS-CoV-2, and WHO coined the disease to be Coronavirus disease 2019 (COVID-19) *(Hasöksüz et al., 2020b).*

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