



Research Article

ROLE OF ENVIRONMENTAL HEALTH OFFICER IN THE CONTAINMENT OF COVID19: A NIGERIAN PERSPECTIVE

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ABSTRACT

Environmental Health Officer play a critical role in the containment of COVID19 in view of Outbreak of COVID 19 in Nigeria, Environmental Health Officer has numerous role to play ranging of health education, management of medical generated from treatment COVID Patient, disinfection and decontamination of environment, ensuring health worker in the frontline of management of COVID patient follows safety protocol in the course of discharging their duty and also help in investigation of people who are exposure to the disease through contact tracing,. Environmental health Officers ensure environmental sanitation is being practiced so as to strengthen environmental hygiene in an effort to contain the spread of COVID 19. This study adopted a qualitative approach, primary and secondary data were used for the purpose of data collection for the study.

Keywords: COVID-19, Role Environmental Health, WHO, Nigeria.

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered Corona virus. The Niger State Government has commenced a process to address growing concern of poor environmental health and sanitation in the State (Abdulkarim *et al.*, 2021b). Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. The best way to prevent and slow down transmission is being well informed about the COVID-19 virus, the disease it causes and how it spreads. *Banditry* is characterized as an organized crime committed by outlaws typically involving the threat or use of violence. A bandit is the name of a person who commits or engages in the crime of banditry (Abdulkarim *et al.*,

2021a) Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow). At this time, there are no specific vaccines or treatments for COVID-19. However, there are many ongoing clinical trials evaluating potential treatments. WHO will continue to provide updated information as soon as clinical findings become available (WHO, 2020). India still needs more sophisticated rapid viral testing kits and potential medication for treating the infected patients in order to overcome this national emergency (Tamizhazhagan *et al.*, 2020).

With the high population and high population density in most part of the country, the risk of transmission and

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spread of the virus can never be overemphasized. If urgent and deliberate steps in the right direction are not taken by the various stakeholders, the health system is at the verge of total collapse (Onwujekwe *et al.*, 2020). Nigeria announces the first COVID-9 case on February 27, 2020 which was imported into the country by an Italian national; it is in view of this development Nigeria Centre for Disease Control (NCDC) swing into action to control the spread of this deadly virus. Among the action taken by the Federal government of Nigeria to contain the spread of the virus was announcing at first, restriction of movement, then total lockdown in three cities namely Lagos, Ogun and Abuja, this is in line with global best practice in contain the spread of the disease (NCD, 2020). "Environmental health has been defined recently as comprising of those aspects of human health, including quality of life, which is determined by physical, biological, chemical, social and psychological factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing these factors that can potentially affect, adversely the health of present and future generations. Environmental health programmes are organized community efforts to monitor and modify man environment relationships in the interest of better health (EHORECON, 2020).

Environmental Health Officers (also known as Public Health Inspectors or Environmental Health Practitioners) are responsible for carrying out measures for protecting public health, including administering and enforcing legislation related to environmental health and providing support to minimize health and safety hazards. Environmental Health Practitioners are multi-skilled in many areas with individuals being highly trained, usually to degree level, and often requiring additional professional training, professional competency assessment and continuing professional development in order to continue to practice in the field. They are involved in a variety of activities, for example inspecting food facilities, investigating public health nuisances, and implementing disease control, conducting work place safety assessments and accident investigation (EHORECON, 2020).

EHOs bring to the position an understanding of microbiology, risk assessment, environmental science and technology, food science, knowledge of the built environment as well as the skills and knowledge related to the tracking and control of communicable disease, investigation of environmental health related incidents and criminal investigations. They therefore must also have strong investigative skills and a thorough understanding of the application of legislation related to public health, the built environment, pollution control and workplace safety. Some past/historic titles include inspector of nuisances, sanitarian, and sanitary inspector. Other titles that currently exist include environmental health specialist/practitioner/professional, public health officer, health officer, health inspector, and health official. The legal title used will depend on the definitions found in local legislation/jurisdiction (WHO, 2020). One of the challenges currently facing humanity is the spread of infectious

diseases that emerge or re-emerge. It is estimated that at least 75% of emerging and re-emerging diseases are either zoonotic (spread between humans and animals) or vector-borne (carried from infected animals to others through insects). A number of well-known and preventable zoonoses continue to occur in many countries, especially in the developing world including Nigeria where they mostly affect the poorest segment of the population.

In recent time coronavirus has taken over the stage of emerging disease which is highly contagious, however Environmental health officer play vital role in preventing the spread of such disease and containing the disease. "Climate can affect disease transmission in a variety of ways. The distribution and population size of disease vectors can be heavily affected by local climate. Flooding after heavy rains can result in sewage overflow and widespread water contamination. In addition, there is some evidence to suggest that pathogens can be spread from one region to another along air streams or by wind" (WHO, 2020). Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as it relates to health, as "all the physical, chemical, and biological factors external to a person, and all the related behaviors." Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment (UNEP, 2016). "Maintaining a healthy environment is central to increasing quality of life and years of healthy life. Globally, 23% of all deaths and 26% of deaths among children under age 5 are due to preventable environmental factors. Environmental factors are diverse and far reaching. They include: Exposure to hazardous substances in the air, water, soil, and food, Natural and technological disasters, Climate change, Occupational hazards, The built environment (UNEP, 2016).

In view of current global pandemic of COVID19 it imperative to noted that the role of environmental health officer in containing the spread of coronavirus cannot be over emphasis, however "according to Division of Intramural Research, National Institute of Allergy and Infectious Diseases, in Hamilton, Montana research has vindicated that virus can stay up to 72 hours on surface or on air" (Medicine net, Retrieve, 28 May 2020). Improving human health and well-being through integrated environmental sustainability (protection, conservation, restoration) and policies provides a unique opportunity for meeting the goals and targets set out in the 2030 Agenda for Sustainable Development at both the national and global levels (UNEP, 2016).

MATERIALS AND METHODS

The study design adapts cross sectional survey method and employ qualitative approach so as to adequately describe the study aims and objectives with the view to ascertain the role of environmental health officer in containment novel coronavirus This report was carried out according to a

method (York Methodology) outlined by Arksey & O'Malley (2005) from the University of York, United Kingdom. The study was based on both primary and secondary data. The data for this study were collected through scientific database sources, web search engines, direct observation and relevant documents, this research utilized observation as instrument for data (Arksey & O'Malley, 2005).

RESULTS AND DISCUSSION

It is in light of this, investing in a healthy environment is investing in the health and wellbeing of current and future (UNEP, 2016). However, the environmental health officer come into action by the ensuring the environment is healthy and public health is safe guide so as to contain the menaces of global pandemic of COVID19. Through: Decontamination or Disinfection of Environment through Fumigations: Environmental Sanitation Personnel Hygiene, Health education. Occupational health safety Investigation of coronavirus exposed individual, proper management of medical waste generated from the treatment of COVID19 patient. Environmental health officer direct and monitor the fumigation exercise in public places, such school, market, offices and residential areas an effort to disinfect the environment against the possible COVID19 pathogens with the to prevent the further spread of the deadly disease. While research into the COVID-19 virus is ongoing, we know the virus is transmitted through direct contact with respiratory droplets of an infected person (through coughing and sneezing), and touching surfaces contaminated with the virus. The virus may survive on surfaces for a few hours up to several days the good news? Simple disinfectants can kill it.

Environmental sanitation is another significant role environmental officer play to ensure environment is keep clean through monitoring and enforcement; furthermore environment sanitation is the control of environmental factors that form links in disease transmission. This category includes solid waste management, water and wastewater treatment, industrial waste treatment, noise and pollution control. Directly tackling the inter-linkages between the environment and human health presents new and interwoven key opportunities to meet these Goals in a more cost-effective and beneficial manner. To “ensure healthy lives and promote well-being for all at all ages” (UNEP, 2016). Environmental health officer in an effort to contain the community transmission of COVID19 advocate and promote personnel hygiene through health education via community, mass media, and the term hygiene refers to the set of practices associated with the preservation of health and healthy living. The focus is mainly on personal hygiene that looks at cleanliness of the hair, body, hands, fingers, feet and clothing, and menstrual hygiene. The provision of safe water, sanitation and hygienic conditions is essential to protecting human health during all infectious disease outbreaks, including the COVID-19 outbreak. Ensuring good and consistently applied WASH and waste management practices in communities, homes, schools, market places and prisons. Health care facilities will further

help to prevent human-to-human transmission of the COVID-19 virus (WHO, 2020). Current evidence indicates that the COVID-19 virus is transmitted through respiratory droplets or contact. Contact transmission occurs when contaminated hands touch the mucosa of the mouth, nose, or eyes. The virus can also be transferred from one surface to another by contaminated hands, which facilitates indirect contact transmission. Consequently, hand hygiene is extremely important to prevent the spread of the COVID-19 virus. It also interrupts transmission of other viruses and bacteria causing common colds, flu and pneumonia, thus reducing the general burden of disease (WHO, 2020).

Environmental health officer provide the protocol and guideline to health workers (medical doctors and nurses) in frontline of COVID19 patient's management, furthermore it is made in an effort to prevent disease transmission among health workers. The protection of health workers is one of the priorities for the response to COVID19 outbreaks. Occupational health services in health care facilities have an important role for protecting health workers and ensuring the business continuity of health care services (WHO, 2020). Environmental and health education and communication is key to social and behavioral change and to incentivize more sustainable lifestyles. Communication and education strategies need to be put into place in order to equip people of all ages and at all levels, including in schools, graduate studies, professional associations, tertiary curricula, as well as vocational and industrial training, for example, with the opportunity to acquire the knowledge, skills, values and attitudes which empower them to interpret scientific evidence and to contribute to improving the quality of the environment and of their lives. This needs to be at various levels (UNEP, 2016). In view of this environmental health officer educate and create awareness on mode of transmission of the virus, personnel hygiene, reason for staying at home, social distancing and use of face masks, thereby ensuring they prevent the spread of the disease among people.

Disease surveillance and investigation is one of the role of environmental health officer, however contact tracing of exposed person and subsequent investigation of source of the infection with the view to isolate the confirm cases and quarantine the suspected cases in order to contain the spread of the disease, thereby monitoring trend of the disease pattern through surveillance. CDC has an overarching strategy for learning more about how many people have been infected with SARS-CoV-2, the virus that causes COVID-19, and how it is spreading through the U.S. population. This strategy includes using serology testing for surveillance to better understand how many infections with SARS-CoV-2 have occurred. Environmental health officer play key role in the management of the medical waste furthermore with COVID19 global pandemic environmental health officer monitor and advice on possible method of disposal of the waste generated in the course of treatment of COVID19 patient, the waste is being carefully manage right from generation, storage, collection, transportation to final disposal with view to adapted global best practice in treatment and disposal highly contagious

waste. Maintain a separate record of waste generated from Covid-19 isolation wards. Use dedicated trolleys and collection bins in Covid-19 isolation wards. The (inner and outer) surface of containers/bins/trolleys used for storage of Covid-19 waste should be disinfected with 1 per cent sodium hypochlorite solution daily. Collect and store biomedical waste separately prior to handing over the same to Common Bio-medical Waste Treatment and Disposal Facility (Cohen *et al.*, 2020).

CONCLUSION

Environmental health Officers has role to play in the containment of the global pandemic of COVID19 in Nigeria as the confirmed case of COVID19 in Nigeria clock to 30,000, with about 700 death, it is indeed high time for the government at all level to engage the environmental health officers as critical stakeholders in the fight against COVID19 meanwhile with high cases of community transmission of infection in recent, this is call for total re-enforcement of COVID19 task force and health term in the frontline of fight against COVID19 which need to integrate environmental health officer in view it multipurpose approach in address health problem.

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