

CORONA VIRUS DISEASE CHALLENGES IN AFRICA: THE ROLE OF ENVIRONMENTAL HEALTH

Introduction

Covid 19 is an infectious disease that is affecting almost all parts of the world. The World Health Organisation (WHO) declared Covid 19 disease a global pandemic on 11 March 2020.

On 30 March 2020, forty six (46) countries in Africa had officially reported cases of Covid 19 with 4857 confirmed cases, 155 death and 285 full recoveries.

The initiative of fighting this pandemic in Africa is coordinated and spearheaded by the Africa Center of Communicable Disease. A task force for Novel Coronavirus (AFCOR) was established to oversee preparedness and response to the global pandemic. AFCOR is fully supported by the African Academy of Sciences to strengthen AFCOR in the delivery of its mandate. There is however a greater need for African Scientists to engage and work together to provide this support. A virtual meeting was held by the Academy to look at research projects and developmental goals for the current Covid 19 outbreak.

The Covid 19 pandemic was confirmed to have spread to Africa on 14 February 2020. The first confirmed case was in Egypt and the first Sub -Saharan case was in Nigeria.

The Environmental Health profession in Africa as is the case globally is in the forefront of the prevention of communicable disease.

All of the IFEH member countries in Africa are affected by the Covid 19 pandemic, with South Africa being the epicentre of the disease on the continent. The following statistics are provided for the IFEH African Countries, in terms of the highest number of confirmed cases. Statics are provided **as of 01 July 2020**:

| Country | Confirmed Cases |
|-----------------|------------------------|
| 1. South Africa | 159 330 |
| 2. Cameroon | 12 592 |
| 3. Kenya | 6 925 |
| 4. Ethiopia | 5 673 |
| 5. Zambia | 1 632 |
| 6. Malawi | 1 342 |
| 7. Zimbabwe | 591 |
| 8. Tanzania | 509 |
| 9. Uganda | 654 |
| 10. Nigeria | 26 484 |
| 11. Botswana | 49 |

The purpose of this first article is to outline the critical role played by the Environmental Health Profession in Africa in the prevention and the control of the spread of the Covid 19 disease to its communities.

Role of Environmental Health professionals in the prevention and control of Covid 19 disease; the African perspective

The following are the critical role played by Environmental Health:

Rapid response teams

Environmental Health Professionals form part of a team of multi professionals in the health sector that meet periodically to plan on measures of prevention of this communicable diseases. These outbreak response teams are formed at districts level, provincial levels and national levels. The outbreak response teams comprise of environmental health professionals, nursing professionals, medical doctors, pharmacists, etc. In these planning meetings, the role of each professional is outlined in a joint effort to develop plans and ensure that these plans are implemented by the district uniformly in addressing the challenges of Covid 19 in a district set up. Government to ensure that those teams are able to reach its objectives also provides resources. These meetings are convened as and when the need arise and are a central point in planning and ensuring that appropriate services are discharged to combat the spread of this disease.

The outbreak response teams plans involve contact tracing and listing, testing for the SARS – Covid-2, education and awareness, quarantine and isolation of persons under investigations (PUI'S) and those that tested positive, determination of quarantine sites which is a function led by Environmental Health especially regarding the requirements for these sites and the periodic monitoring of these sites. This plans also involve resources required as well as resource allocation e.g. PPE, vehicles, medication, human resources, etc. Outbreak response meeting are also usually convened and chaired by the most senior official in the district, at provincial or county level and at the national level. The role of Environmental Health professionals are of great importance at these planning meetings to ensure that matters of prevention of the spread of the pandemic are adequately addressed.

Screening of travellers at the point of entry and at various health institutions

Environmental health professionals play a major part in the screening of travellers at all points of entry into our respective countries, being it at airports or land ports of entry. The screening involve taking of temperatures of travellers to ensure that those with abnormal temperatures are isolated and kept in quarantine for further testing for the SARS – Covid -2. The main objective is to ensure that the spread of Covid 19 is curbed from spreading through travellers from different countries. This function is led by Environmental Health in different African countries to prevent and control the spread of the Covid 19 disease.

Environmental Health Professionals are also posted at different health institutions, especially those that are employed by national governments in Africa, to conduct screening of community members visiting these facilities for different conditions. The screening is conducted to isolate those that are suspected to be having the disease, and channelling them for testing. Environmental Health Professionals also conduct education and awareness at these health institutions to capacitate communities to identify signs and symptoms of the disease to ensure early detection of the disease.

Contact tracing

Where patients are detected through testing, the Environmental health professionals are tasked with contact tracing of close contacts and referring of casuals contacts for further screening. In African countries where the number of Covid 19 cases are low, like in Uganda, contacts are physically visited at homes for further questioning and assessments of home

Environmental Health conditions that may contribute to the spread of the disease. Close contacts are then referred for further testing. In African countries where Covid 19 infections are high, like in South Africa, contact tracing is conducted through telephone calls and the contacts are monitored daily for the duration of fourteen days, which is the incubation period of the disease. Should the contacts report any signs and symptoms of the disease during the fourteen days monitoring, Environmental Health Professionals then refer them for testing at the nearest health facilities. In some cases, the testing teams, which include nursing staff, are then activated to go on site for testing of contacts. Environmental health professionals ensure that the contacts including the patients are trained on measures of combating the spread of the disease throughout the recovery period.

Quarantine and isolation

Environmental Health Professionals have an important role to play in the quarantine and isolation of people requiring this service. Environmental Health Professionals are able to establish the need of quarantine and or isolation during the assessment period of the contacts of the person that tested positive. Should Environmental Health conditions pose a challenge of further infections at home the positive person is referred to self-isolation or isolation at government sites. Quarantine sites are also set aside for those who are asymptomatic and those that have been tested and waiting for result.

Environmental Health Professionals also ensure that these Quarantine and Isolation sites are monitored regularly to ensure that they comply with minimum health requirements and that they do not become breeding grounds for the spread of the disease. Medical Health Care risk waste generated at these sites become an area of concern for Environmental Health Professionals. This is strictly monitored to ensure that they do not pose a health hazard from the point of generation to its safe disposal.

Some African countries, like South Africa, developed their own protocols on quarantine and isolation in relation to Covid 19 exposure and infection, to guide Environmental Health Professionals in the management of these sites.

Education and awareness

Environmental Health 'professionals play a major role in the education and awareness programmes on Covid 19 disease to communities. IEC materials are also widely distributed to communities during these programmes. Communities that are targeted for education awareness programmes are mainly high risks communities i.e. workers at different working environments, taxi ranks, informal settlements, churches, etc. Concerns of communities are also recorded during the education and awareness programme implementation sessions. These concerns help in planning and improvement of education and awareness to communities by Environmental Health Professionals. These sessions also help communities to be referred to services near where they live where they can get further assistance.

In some African countries, other forms of reaching larger community stakeholders when discharging education and awareness is through radio programmes and television. These channels of communication was found to be very effective to reach the deep rural African villages as well as different ethnics groups as these are transmitted in their own home languages.

Surface and open space disinfections

Environmental Health Professionals in African countries like Zimbabwe and Zambia conduct the disinfection of surfaces and open spaces. This exercise is conducted to minimise the SARS – Covid – 2 virus on surfaces and spaces thus preventing the spread of the disease. In other African Countries like South Africa, the function of decontamination is outsourced to different companies with relevant expertise but this is supervised and monitored by the Environmental Health Professionals. In this regard, care is taken that deep cleaning is conducted before disinfection and surfaces are adequately covered during the disinfection exercise. The use of appropriate PPE in disinfection is also monitored as well as the use of correct disinfectants for the SARS – Covid -2 virus.

Some of the African Countries also developed own disinfection protocols in line with WHO protocols. The use of appropriate PPE by the Environmental Health Professionals during disinfection, in those African Countries where our professionals carry out disinfection, is also strictly observed and implemented.

Law enforcement

Environmental Professionals are trained as law enforcement officers, especially in the South African context. They are therefore empowered to discharge function of enforcing the law mainly in areas of ensuring that business and other companies adhere to social distancing, sanitisation of customers entering and leaving the premises, compliance to the use of masks, etc. Environmental Health Professionals also work closely with other law enforcement structures like Police and Municipal Police Structures in most of the African Countries, in enforcing Covid 19 Regulations and Protocols. Community law enforcement blitz operations are also initiated and implemented in most of the African Countries where Environmental Health Professionals are actively involved and in some areas, take the lead in joint blitz operations.

Environmental Health Professionals also conduct their own law enforcement operations in different companies and business to ensure that Disaster Management Regulations are adhered to.

Major highlights by the African Environmental Health professionals

The following are the highlights:

- Environmental Health Professionals received prominence in most of the African Countries due to their active and visible role in the Covid 19 projects and programmes.
- Many employment opportunities for the unemployed Environmental Health Professionals opened up. In Zimbabwe, the government took services most of the unemployed Environmental Health Professionals. In South Africa, most of the newly qualified Community Service Environmental Health Practitioners were placed by the Department of Health at different municipalities where the need was high to assist with the Covid 19 pandemic whilst they are also doing their one – year community service which is a requirement before they can be registered as independent Practitioners with the Health Professions Council of South Africa and therefore becoming legible to practice independently anywhere in the Republic of South Africa.
- Zimbabwe Environmental Health Practitioners are now legible to be paid Covid – Risk allowances which will improve their remuneration. Some of the municipalities in

South Africa are also paying their Environmental Health Practitioners danger allowances due to the Covid 19 risks.

- Regular training on Covid 19 updates is conducted for Environmental Health Practitioners in countries like Zambia, Zimbabwe, South Africa and Botswana. This help in keeping our professionals up to speed with the latest development on Covid 19 and therefore sharpening their skills and improving knowledge on how to combat the spread of the pandemic.

Conclusion

The outbreak of Covid 19 disease resulted in a huge burden on Environmental health professionals in Africa. The challenges of the low staffing levels continue to affect delivery of environmental health services negatively where most of the functions of environmental health cannot be carried out as all human resources are directed towards the prevention of the spread of the pandemic on the continent. African governments need to invest in improving the WHO ratio of 1: 10 000 Environmental health staffing levels.

The follow – up articles will dwell into individual African countries experiences on Covid 19 as well as how our member countries are managing to prevent the spread of the disease.

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