Knowledge and Preparedness on Corona Virus Pandemic among Healthcare Workers in Igembe South Health Facilities, Meru County, Kenya

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Authors' contributions

Article Information

Short Research Article

ABSTRACT

Worldwide Corona virus outbreak has cause panic and enormous health and economic effects due to inadequate or lack of appropriate information about COVID -19.
Aims: The aim of the study was to determine the Level of knowledge and Preparedness to Corona Virus (COVID –19) Pandemic among Health Workers in Igembe South, Meru County, Kenya.
Study Design: This was cross-sectional study was conducted to determine their Knowledge and Preparedness among HCWs on COVID-19 pandemic.
Place and Duration of Study: The study was conducted in Igembe South Health Facilities between March and June 2020.
Methodology: A facility based cross-sectional study was conducted in Igembe South Sub County of Meru County from March 2020 to June 2020 among 87 Health Care Workers to determine their Knowledge and Preparedness on COVID-19 pandemic. Data was collected using structured

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Likert's Scale questionnaire. Descriptive analysis was performed to obtain frequencies and distribution of the variables.

Results: The results shows that eight seven (87) health care workers with mean age of 34± 9 (SD) years with a minimum age of 19 years and maximum age of 60 years were recruited responded to the questions of the study. Among the 87 participants, 51 (58.6%) had at least a bachelor's degree, 30 (34.5%) participants had a diploma and 6 (6.9%) participants had a certificate. About 32 (36.8%) of the participants were nurses. Other professional disciplines included nutritionists, records officers, supporting staff, social workers among others. Majority of the facilities acknowledged receiving Ministry of Health guidelines and protocols on COVID-19 case management. Regarding knowledge of COVID -19 Almost half (48.3%) of the participants somewhat agreed that health care workers had knowledge of Corona Virus Pandemic, however, most of the respondents (50.6%) strongly disagreed that they are equipped with adequate Knowledge to manage severe Corona Case compared to (8%) respondents who strongly agreed that Corona Virus Incubation period is an average of 7 days and maximum of 14 days.

Conclusion: The study concludes that knowledge and preparedness level on COVID - 19 was above average, however, there is need for continuous professional development (CPD) training and support supervision for HCWs to ensure maintenance of appropriate practices during the COVID-19 pandemic. The study further concludes that those with knowledge and are conversant with their respective areas of practice are at less risk, considering that inadequate knowledge is not only a risk factor for poor delivery of WHO approved COVID -19 guidelines met to prevent the spread of COVID -19, but also increases the occupational risk to health care workers.

1. INTRODUCTION

COVID-19 pandemic has continued to threaten humanity becoming one of the most fatal and challenging health risk in modern era. The pandemic spread has stirred anxiety and political circus, globally 10% of HCW have already been infected with corona virus, and over 2 million COVID -19 infections have led to breakdown and overwhelming of health care systems, interference of health services delivery, triggering a potential lifelong political realignment and change and need for re orientation of health services delivery protocols [1,2,3]. Frontline health care workers have not been fortunate enough to work from home. The death toll among health workers in Africa as of September 2020 stood at 10,000 plus [1,2,3] with sub Saharan Africa accounting for 5% alone, Kenya has reported over 800 cases of COVID -19 infections and 16 deaths among HCW [1]. Coronavirus outbreak has kept many employees away from work places, offices; however, health care workers have remained on the frontline managing and treating victims of COVID-19. The world governments are desperate to create and develop interventions to contain what has now become a profoundly disruptive outbreak in global history [4,2,3]. Coronaviruses, measures about 100 nm in diameter, are the largest positive strand RNA viruses with the largest genomes. Coronavirus belongs to the order Nidovirales and can infect humans, mammals, and birds [5,6,7,8,9,10]. Coronavirus (CoV) infections are emerging respiratory viruses that are known to cause illness ranging from the common cold to severe acute respiratory syndrome (SARS) [9,4]. Despite multiple epidemic outbreaks back in 2002 (SARS), with approximately 800 deaths preparedness to COVID -19 has not been good, and in 2012 Middle East about 860 deaths due to unpreparedness to Respiratory Syndrome coronavirus (MERS-CoV) were reported [11,2,12]. In January, 2020, a cluster of patients with pneumonia of unknown cause was reported in Wuhan, China. The pathogen was promptly identified as severe acute respiratory syndrome coronavirus two (SARS-CoV-2) which is a novel coronavirus belonging to lineage B beta coronaviruses, a disease which was subsequently named COVID-19 [12,10,13].

The clinical spectrum of COVID-19 varies from asymptomatic or mild symptomatic infections to severe respiratory symptoms and death, with older age groups, those with existing comorbidities generally presenting with more severe disease and higher death rates [14,1,15,16]. Since its identification, SARS-CoV-2 has rapidly spread across the globe. Health care workers (HCWs) are at the forefront of the COVID-19 outbreak response and as such they are exposed to hazards that put them at higher

risk of COVID -19 infection [1,15,2]. By February, 2020, scientist had established that transmission of COVID-19 among HCWs was associated with overcrowding, absence of isolation room facilities, and environmental contamination. However, this is likely to be compounded by the fact that some HCWs are unaware of infection prevention practices [3]. Inadequate Knowledge of a disease may influence HCWs' attitudes and level of preparedness, and incorrect attitudes and practices directly increase the risk of infection [9,1].

Health care workers (HCWs) have the primary role and contact with infected patients who are an important source of exposure to infect health care personnel in health care settings; thus, HCWs are expected to be at high risk of coronavirus infections. By the end of January 2020, the WHO and Centers for Disease Control and Prevention (CDC) had published public health prevention and control recommendations protocols for COVID-19 intervention among HCWs [17,1,16,4,3].

To date, COVID -19 infections has affected and impacted half of the world health care systems, economy and general way of life due to lack or inadequate preparedness planning. Currently, the prevalence and mortality rate varies considerably between different countries in Africa, with South Africa leading the pack. Some nations have reported high mortality while others have reported few cases and deaths due to associated cost of follow up and logistics of testing of COVID 19. This is further complicated by variations in volumes of air travel, differences in coverage of SARS-CoV-2 testing [18]. Health workers have been significantly affected by COVID-19, with 11, 449 (1.9%) being infected in 40 countries as at July 2020, since the beginning of the outbreak. Overall, South Africa is the most affected, with 4, 821 (52%) health workers infected while Guinea Bissau and Mozambique have the highest country specific proportion of health worker infections [15,16]. As much as many countries in Africa are stepping up their preparedness for COVID-19 [18], assessments by WHO point to substantial limitations in response capacity. In particular, there are major shortages of human resources, critical care beds and laboratory capacity [1,19,15,16,3].

Kenya being a middle income country and with challenge of inadequate personnel in health care, there was need to conduct research to authenticate the knowledge and preparedness in handling COVID-19 patients alongside offering the usual health care services with limited resources.

Since 13th March, 2020 when the first case was confirmed in Kenya, a total of 17975 out of 17429 cases (97%) were local transmissions and 546 (3%) were imported cases. In addition, 285 of deaths were reported, giving a case fatality rate of 1.6% [20,1]. The aim of this study was to determine the level of knowledge and preparedness to COVID-19 infections among HCWs to guide future research and policy.

2. METHODOLOGY

2.1 Study Design

A cross sectional study was conducted in Igembe South Sub County among health care workers to determine their level of Knowledge and Preparedness to COVID-19 pandemic.

2.2 Study Population

The HCWs enrolled into the study included medical officers, nurses, clinicians, midwives, internship doctors, pharmacists, nutritionists, records officers, laboratory officers and specialists that practice in any of the health facilities within Igembe south were included in the study.

The data was obtained from health care workers (HCWs) in various cadres by use self-administered questionnaires. The structured questionnaire was validated to address questions about healthcare workers' level of knowledge and preparedness of COVID-19. Knowledge was assessed by questions focusing on COVID-19 etiology, signs and symptoms, transmission, and risk prevention. Each response was scored from "1" to "5", with scores ranging from 1 to 5. Score of one to five score on Likert's Scale was considered to rate the level knowledge about COVID-19 infections whereas any score less than >4 was considered adequate knowledge about COVID-19.

2.3 Sampling Technique and Sample Size Determination

A three stage cluster sampling design used to recruit 87 participants. Every facility selected was considered as a cluster, however, only 87

participants filled the questionnaires. Simple random sampling was used to select six out of 10 Health Facilities in Igembe South Sub - County in Meru County were selected using simple random sampling.

A sampling frame of all Health Facilities owned by the Meru County Government in Igembe Sub County were obtained from the website of e-Health - Kenya updated as at June 2013 [21].

Working together with the Sub County Medical officer, Health Administrator and Health Records Officers, Health facilities were grouped into GoK Public and Private FBOs, that is level one, two, three, four, five and six. From each category, a list of facilities with average monthly Staff reporting of between 2 of 50 and above were obtained from the six selected health facilities.

The number of participants per facility was distributed proportionately based on the average monthly staff reporting (Fig. 1). A list of eligible participants was drawn from the monthly staff returns register and shared with research assistant. The participants were then enrolled after the principal investigator gave the routine briefs about the study and its likelihood to assist in COVID -19 client's management. Those who met the eligibility criteria were interviewed in the study room and enrollment for administration of structured Likert scale based questionnaire.

Eighty seven study participants were finally randomly selected.

Slovin's formula was used for sample size determination as stated below [15],

$$n = \frac{N}{1 + N(e^2)}$$

Where:
n: - is the desired minimum sample size
N: - is population Size of health workers in the sub-county (320 health workers)
e: - is the precision error allowed (10%)
Hence:

$$n = \frac{320}{1 + 320(0.1^2)}$$

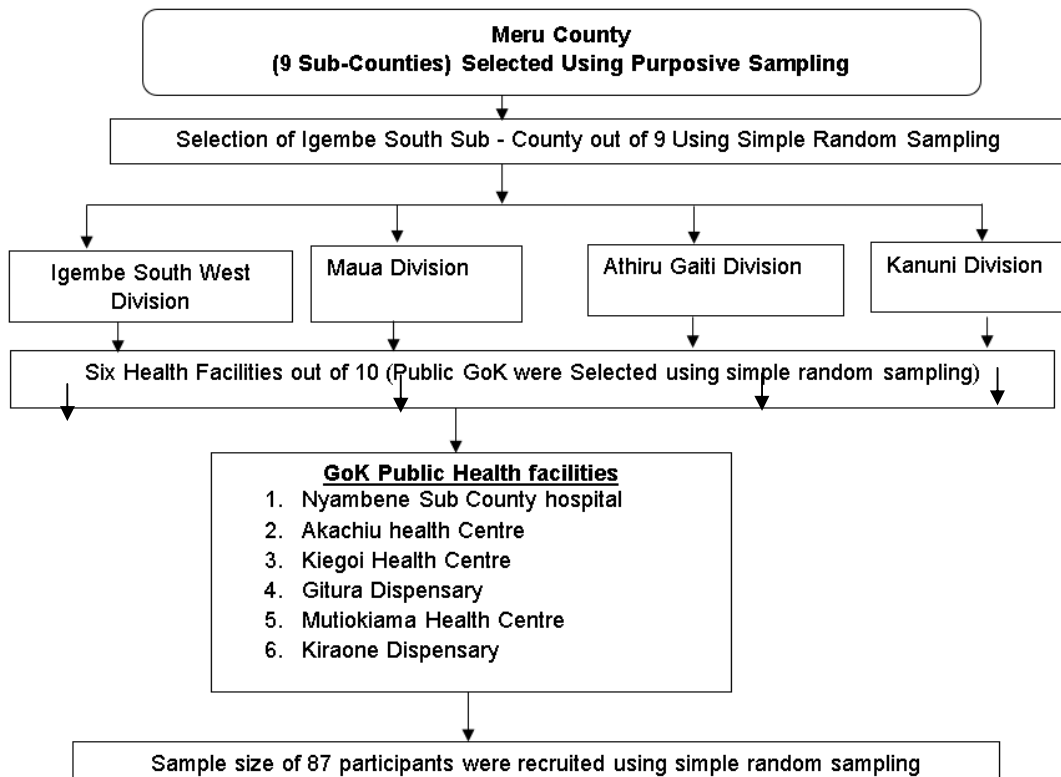$\approx$ 77 health workers

Fig. 1. Shows 3 stage cluster sampling that was be used to recruit 87 participants for this study

2.4 Inclusion Criteria

Health care workers working within Igembe south health facilities who consented to participate in the study.

2.5 Exclusion Criteria

a) Health Care Workers not working in Igembe south
b) Health Care Workers who declined to consent to participate in the study.

2.6 Statistical Analysis

Data entry and analyses were performed using SPSS (IBM SPSS Statistics for Windows, version 25.0; IBM Corp., Armonk, NY). Descriptive statistics were used to describe the study variables. Frequency, percentage, and mean scores were used to report the descriptive analysis. The chi-square test was used to assess the association difference between the groups. Statistical significance was considered for P < 0.05.

3. RESULTS

The study categorized health care workers in two broad categories based on the level of risk to SARS-COV-2 infection. The nurses, doctors, clinicians, laboratory scientist formed the first category of the health workers with high risk for COVID -19 infection while the rest of health care workers formed the group of personnel with low risk for COVID-19 infection.

Out of 87 health care workers recruited, the mean age was 34± 9 (SD) years, participants with minimum age of 19 years and maximum age of 60 years respectively took part in the study. Among the 87 participants, 51 (58.6%) had at least a bachelor's degree, 30 (34.5%) participants had an ordinary diploma and 6 (6.9%) participants had a certificate. Most of the participants that is 32 (36.8%) were nurses. Other professional disciplines included

nutritionists, records officers, supporting staff, social workers among others. Slightly half 49 (56.3%) of the participants were females and 38 (43.7%) males respectively.

The level of preparedness to COVID 19 Pandemic was accessed using items in a 5 score Likert's scale. Majority 71 (81.6%) of the respondents strongly disagreed that nurses are more equipped to handle cases of COVID-19 using Ministry of Health (MoH) IPC guidelines. Most 62 (71.3%) of the respondents strongly disagreed that clinical officers can easily handle the COVID-19 patient's better using WHO IPC principles of emergency management. Similarly, there was an overall high proportion 72 (82.8%) of the respondents strongly disagreeing that the Non-core hospital staff were well prepared to handle COVID-19 pandemic and other emergencies using Ministry of Health and WHO IPC guidelines.

Knowledge and perceptions of COVID-19 varied across different categories of HCWs with greater knowledge and inadequate knowledge being observed on the basis of attendance of any COVID -19 case management workshop or training since the beginning of the pandemic as shown by the level of knowledge among different cadres. Therefore, those who had not been trained on COVID - 19 case management at the time of the commencement of the study were observed as having inadequate knowledge.

HCWs with greater knowledge of COVID -19 believed that they stood a greater risk of infection with SARS-COV-2 from asymptomatic clients than from hospitalized patients. About 70% of the interviewed HCWs were afraid of becoming infected at work but more importantly, 95% of healthcare workers were aware of proper hand hygiene techniques. Almost half (48.3%) of the participants somewhat agreed that health workers have knowledge of Corona Virus Pandemic.
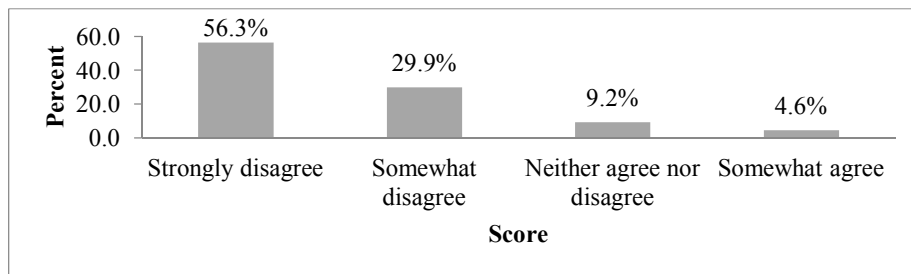

Fig. 2. Preparedness to COVID 19 pandemic among health workers

Table 1. Level of preparedness to COVID 19 pandemic among health workers

Indicators of Preparedness	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Health Care workers in Meru County Have been Trained on Case definition of Corona Virus Infection according to WHO guidelines.	60 (69%)	8 (9.2%)	6 (6.9%)	11 (12.6%)	2 (2.3%)
Nurses are more empowered to handle cases of Corona Virus using WHO IPC principles of emergency management.	71 (81.6%)	4 (4.6%)	6 (6.9%)	3 (3.4%)	2 (2.3%)
Clinical officers can easily handle the Corona Virus patient's better using WHO IPC principles of emergency management.	62 (71.3%)	9 (10.3%)	6 (6.9%)	8 (9.2%)	2 (2.3%)
The Non-core hospital staff have been well prepared to Corona and other emergencies using WHO IPC principles of emergency management	72 (82.8%)	5 (5.7%)	4 (4.6%)	3 (3.4%)	3 (3.4%)
Diagnostic protocols and Manuals have been well disseminated to health care workers.	69 (79.3%)	7 (8%)	4 (4.6%)	3 (3.4%)	4 (4.6%)
Referral system for new cases have been well communicated as per prescribed guidelines.	52 (59.8%)	10 (11.5%)	10 (11.5%)	12 (13.8%)	3 (3.4%)

Table 2. Socio demographic characteristics of respondents (n=87)

Characteristics	Frequencies	Percentages (%)
Gender		
Males	38	43.7
Females	49	56.3
Ages		
20-25	33	37.9
26-30	23	26.4
31-35	15	17.2
36 +	16	18.3
Marital status		
Married	56	64.3
Single	13	14.9
Divorced	9	10.3
Widowed	9	10.3
Level of education		
Masters	3	3.4
Bachelors	4	4.5
Higher National Diploma	17	19.5
Diploma	23	26.4
Certificate	40	45.9
Profession Displine		
Medical doctors	5	5.7
Medical lab scientist	7	8.0
Nurses	38	43.7
Pharmacist	10	11.4
Primary health care Workers	27	31.0
Working Experience		
Five years or less	40	45.9
Over 5 years	47	50.1
Source of Information on COVID-19		
Government sites and media e.g., KDHS, MoH-Kenya	17	19.5
News media e.g., TV, radio, newspaper	14	16.1
International health organization e.g., WHO	18	20.7
Social media e.g., WhatsApp, Face book	30	34.5
Journals	5	5.7
Others	3	3.4

Majority of the respondents (50.6%) strongly disagreed that they are equipped with Knowledge of Severe Corona Case compared to 7 (8%) respondents who strongly agreed that Corona Virus Incubation period is an average of 7 days and maximum of 14 days.

Generally, it was observed that diagnostic protocols and Manuals have been well disseminated to health care workers across board. Referral system for new cases has been well communicated as per prescribed guidelines; however it never equated to desired level of preparedness.

4. DISCUSSION

Health care associated infections in medical institutions happens easily when a new epidemic occurs. The current coronavirus outbreak confirmed that majority of HCWs were poorly prepared and ready to manage the pandemic despite having basic knowledge on the principles of infection prevention and control (IPC) of COVID-19 as envisaged by World Health Organization (WHO). This agrees with WHO, [4,3] guidelines recommends that COVID-19 emergency management principles include: preparedness and mitigation, preparedness and readiness, response and recovery, Curless [22] and WHO, [4,3] further confirms that Coronavirus disease 2019 poses an important occupational health risk to health care workers (HCWs) that has attracted global scrutiny. Therefore, prevention of SARS-COV-2 infections among health care workers in Meru and Kenya at large was paramount for effective intervention of the

pandemic. Sustaining safe and quality health care service delivery amid the SARS-CoV-2 pandemic is dependent on the health and mental wellbeing of frontline health care workers. The front line medical staff faced exhaustion, difficult triage decisions, separation from families, stigma and the pain of losing patients and colleagues, in addition to their own risks of COVID -19 infection. Health-care workers are at increased risk of being exposed to SARS-CoV-2 and could potentially have a role in hospital transmission. Understanding HCWs exposure to COVID-19 virus and how it translates into risk of infection is critical for informing infection prevention and control (IPC) recommendations. The study confirmed that old age and pre-existing health conditions such as hypertension, diabetes mellitus, cardiovascular disease, chronic lung disease, and immunosuppression were important SARS-CoV-2 risk factors identified in this study. Owing to the rapidly evolving nature of pandemics and the frequency with which information changes. The study confirmed that it was necessary for HCWs are aware of which office or which officer to go for up-to-date guidance on COVID-19 information or consultation. It was observed that the greater the HCWs' knowledge, the more confident HCW were in dealing with COVID-19 related cases. From the current study, it was apparent that health care workers below forty years were more knowledgeable about COVID-19 unlike their older colleagues. This was largely attributed to ability of their ability to access a wider variety of sources of information either in hard copy or in soft copy. Adequate knowledge of COVID-19 may influence HCWs' preparedness, whereas incorrect attitudes and practices may directly increase the risk of COVID-19 infection to the HCWs and to the patient or client.

The ministry of health together with WHO have embarked on capacity building for health workers across the country. Initial training was conducted for health promotion officers from Uasin Gishu, Mombasa, Kajiado, Busia and Kisumu County and Sub - County Health Promotion and Community Health Strategy Focal Persons with 109 participants present.

Additional capacity building of the 102 sub – county teams from the remaining 20 counties (Machakos, Makueni, Bomet, Elgeyo Marakwet, Embu, Homa Bay, Kericho, Kirinyaga. Kisii, Laikipia, Lamu, Nandi, Narok, Nyamira, Nyandarua, Samburu, Tharaka Nithi, Trans Nzoia, Vihiga, West Pokot) on rapid response,

contact tracing and use of the data management systems is on course [20,1]. An important component of this preparation was providing staff with the knowledge they require to identify and manage COVID-19 cases. By the time this study was completed, formal guidelines and protocols had been issued by the Ministry of Health to most health facilities [1].

5. CONCLUSION

The Health care workers (HCWs) within Meru County face an unprecedented occupational risk of morbidity and mortality owing to SARS-COV-2 pandemic due to inadequate knowledge and preparedness. Generally, there is increased uptake of IPC measures due to improved awareness levels about the risks of SARS-COV-2 infections among HCWs. Occupational exposure to asymptomatic SARS-COV-2 infected patients, partial adherence to infection prevention and control (IPC) protocols as required by the Ministry of Health, and preexisting medical conditions put HCWs at risk for nosocomial COVID-19 infection. Hence, there is need for development of sustainable approaches to familiarize health care personnel with technical updates on COVID-19 and provide appropriate tools to assess, triage, test, and treat patients, and to share IPC information with patients and the public.

CONSENT

The participants were requested to give consent to participate in the study. Key informant interviews were conducted to 12 consenting participants per health facility, who included Health Administrative Officer, Medical Officer of Health, and Ward in charges, Clinical In charges, and Laboratories in charges among others.

ETHICAL APPROVAL

Ethical approval for this study was obtained from the Kenya Methodist University-Scientific and Ethical Review Committee (KEMU-SERC), County director of Public Health and other relevant institutions. All participants provided consent before participating in the study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ministry of Health. Ministry of Health – COVID-19 outbreak in Kenya, Ministry of Health Kenya, July Daily Situation Reprt-116; 2020.
2. World Health Organization. Health workers exposure risk assessment and management in the context of COVID-19 virus (Interim Guidance 2020); 2020.
3. World Health Organization. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected: Interim guidance; 2020.
   Available:https://tinyurl.com/r7w9key
   [2020-02-12]
4. World Health Organization. COVID-19 Situation up-date for the WHO African Region. External Situation Report 21; 2020.
5. Arabi YM, Balkhy HH, Hayden FG, Bouchama A, Luke T, et al. Middle east respiratory syndrome. New England Journal of Medicine. 2017;376(6):584–94.
6. Backer J, Klinkenberg D, Wallinga J. Incubation period of 2019 novel coronavirus (2019-nCoV) infections among travellers from Wuhan, China, 20–28 January 2020. Euro Surveill. 2020;25(5).
   DOI:10.2807/1560-7917.es.2020.25.5.2000062
7. Corman V, Muth D, Niemeyer D, Drosten C. Hosts and sources of endemic human coronaviruses. Adv Virus Res. 2018;100: 163–88.
8. Kluytmans van den Bergh MFQ, Buiting AGM, Pas SD, et al., Prevalence and clinical presentation of health care workers with symptoms of coronavirus disease 2019 in 2 Dutch hospitals during an early phase of the pandemic. JAMA Netw Open. 2020;3:e209673.
9. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, Ren R, Leung KS, Lau EH, Wong JY, Xing X, Xiang N, Wu Y, Li C, Chen Q, Li D, Liu T, Zhao J, Liu M, Tu W, Chen C, Jin L, Yang R, Wang Q, Zhou S, Wang R, Liu H, Luo Y, Liu Y, Shao G, Li H, Tao Z, Yang Y, Deng Z, Liu B, Ma Z, Zhang Y, Shi G, Lam TT, Wu JT, Gao GF, Cowling BJ, Yang B, Leung GM, Feng Z. Early transmission dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. N Engl J Med. 2020;382(13):1199–1207.
10. Zhu Wu, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. Jama; 2020.
11. Bhagavathula AS, Shehab A. The story of mysterious pneumonia and the response to deadly novel coronavirus (2019-nCoV): so far! NEMJ. 2020;1(1):7–10.
12. Yin Y, Wunderink RG. MERS, SARS and other coronaviruses as causes of pneumonia. Respirology. 2018;23(2):130–137.
    DOI: 10.1111/resp.13196
13. Zhu N, Zhang D, Wang W, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. 2020;382: 727–33.
14. Gorbalenya AE, Enjuanes L, Ziebuhr J, Snijder EJ. Nidovirales: Evolving the largest RNA virus genome. Virus research. 2006;117(1):17-37.
15. Stephanie E. Slovin's formula sampling techniques. Houghton-Mifflin, New York, USA; 2003.
16. World Health Organization. Report of the WHO–China joint mission on coronavirus disease 2019 (COVID - 19); 2020.
    Available:https://www.who.int/publications/i/item/report-of-the-who-china-joint-mission-oncoronavirus-disease-2019-(COVID-19)
17. Centers for disease control and prevention (2019).Update and interim guidelines on outbreak of 2019 Novel coronavirus (2019-nCoV).
    Available:https://emergency.cdc.gov/han/han00427.asp
    [2020-02-12]
18. Gilbert M, Pullano G, Pinotti F, Valdano E, Poletto C, Boelle PY, et al. Preparedness and vulnerability of African countries against importations of COVID - 19: A modelling study. Lancet (London, England). 2020;395(10227):871–7.
19. RNA virus genome Virus Research. RNA virus genome Virus Research 2006;117(1): 17–37. Open Access BMC.
20. McEachan R, Taylor N, Harrison R, Lawton R, Gardner P, Conner M. Meta-analysis of the reasoned action approach (RAA) to understanding health behaviors. Ann Behav Med. 2016;50:592–612.
21. e-Health - Kenya updated as at June; 2013.
    Available:http://ehealth.or.ke/facilitylogin

22. Curless M, Gerland MA, Mangakis LL. IPC module 11: Infection control Program Manual: Rerference for health care facilities with limited resources. John Hopkins Medicine, Jhphiego. 2018;37–52. Open access BMC.

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/61332