Journal of
Health, Medicine and Nursing
(JHMN)

FACTORS ASSOCIATED WITH PERFORMANCE OF HEALTHCARE WORKERS ON INTEGRATED DISEASE SURVEILLANCE AND RESPONSE SYSTEM IN SELECTED HEALTH FACILITIES IN LARI SUB COUNTY, KIAMBU COUNTY KENYA

Mwega P., Magu D. and Mutai J.

IPRJB
INTERNATIONAL PEER REVIEWED JOURNAL AND BOOK PUBLISHING

Journal of Health, Medicine and Nursing
ISSN 2520-4025 (Online)
Vol.3, Issue 1, No.1, pp 1 - 8, 2018
www.iprjb.org

FACTORS ASSOCIATED WITH PERFORMANCE OF HEALTHCARE WORKERS ON INTEGRATED DISEASE SURVEILLANCE AND RESPONSE SYSTEM IN SELECTED HEALTH FACILITIES IN LARI SUB COUNTY, KIAMBU COUNTY KENYA

[1*]Mwega P.
[1]Post Graduate Student: Jomo Kenyatta University of Agriculture and Technology
[*]Corresponding Author's Email: mwegap011@yahoo.com

[2]Magu D. and [3]Mutai J.
Senior Lecturers: Jomo Kenyatta University of Agriculture and Technology

Abstract

Objective: To determine factors associated with the performance of healthcare workers on integrated disease surveillance and response system in Lari Sub County, Kiambu County.

Materials and methods: This was a cross-sectional study which mainly adopted quantitative and qualitative approach. The study was conducted among the healthcare workers in public and private health facilities in Lari Sub County, Kiambu County. A sample of 103 healthcare workers were recruited in the study. The main methods of data collection used were self-administered questionnaires and an observational checklists.

Results: Approximately 61.2% of healthcare staff were females and 60.1% were nurses. The respondents (36.9%) revealed that the community based disease surveillance system was established in the area, 36.9% of them revealed that they were collecting health information on suspected cases and deaths due to priority diseases, and 35.9% of them revealed that the community based focal persons had been trained on basics of IDSR. 39.8% of the respondents indicated that they held meetings to discuss IDSR issues with the community based disease surveillance focal persons, 35.9% of them gave feedback on IDSR, and 27.2% supervising them.
Conclusion: Community based disease surveillance system has not been established in some areas in the Sub County, training of the community based surveillance focal persons and collection of health information on suspected cases and deaths not done. The study recommends the establishment a community based disease surveillance system in the area, training of the focal persons and regular collection of health information on suspected cases and deaths by them**.**

Keywords: *Performance, healthcare workers, integrated disease surveillance, response system, health facilities, Lari Sub County*

1.0 INTRODUCTION

The community level is where people live. Therefore this is the level at which promotive and disease prevention activities takes place. Public health surveillance is the ongoing systematic collection analysis and interpretation of health data. It includes the timely dissemination of the resulting information to those who need it for action (Nsubuga *et al.,* 2006). Surveillance is also essential for planning, implementation and evaluation of public health practice (WHO, 2014). Establishing a community based disease surveillance system is key step to improving the early detection and assessment of outbreaks (Hall, 2017). According to Rumisha *et al*., (2007) the IDSR strategy is supposed to link the community, health facility, Sub County, regional and national level with the objective of providing epidemiological evidence for use in making decisions, and implementing public health interventions for the control of communicable diseases. The network of lay people involved in the system should be trusted members and have a close understanding of the community they serve (Phalen&Paradis 2015). According to Komakech (2007) the network is usually the first to encounter reports of strange illness and their work mainly is to notify those within the extended healthcare system. The network of lay people involved in a given area are the eyes and ears of control in any potential or confirmed outbreak and function as intermediaries between the community and the institutional healthcare system (Khan, 2008). The community based disease surveillance system is widely accepted due to it being simple, low cost, adaptable or flexible and has been used in polio campaigns,onchocerciais volvus,trachoma programs and in control of acute watery diarrhea outbreak in eastern equatorial (Lado *et al.,* 2012; Hall 2017). A vibrant community based disease surveillance system is an indication of a good active surveillance system (WHO, 2014).

In Kenya integrated disease surveillance system is currently largely health facility based. This therefore means that cases can only be detected when they come to health facilities. Due to poor health seeking habits of some communities in the country, some diseases may be detected late when a significant number of people have been affected or died (Sonoiya *et al.,* 2011).

2.0 METHODS AND MATERIALS

The study was conducted in Lari Sub County, Central Kenya region and based in health facilities (both public and private).The study sites were chosen purposively because it had 2 laboratory confirmed measles outbreak in 2011, 2013 and one measles alert threshold as at 24th February 2015.A cross-sectional study design which mainly utilized quantitative technique. Healthcare workers working in level 2, 3, and 4 from both the public and private health facilities in Lari Sub County, Kiambu County Lari Sub County has a total of 35 health facilities in levels 2, 3, and 4 and approximately 170 healthcare workers who work in private and public health facilities. Only one, level 6 hospital declined to be included in the study. A simple random sampling procedure was used to pick the healthcare workers who participated in the study. According to the Kenya epidemiological weekly bulletin week 38, week ending 20th September 2015, the national performance of the integrated disease surveillance system in Kiambu County was 79% (MOH, 2015).A standard statistical formula used in social science by Fischer (1994) was used to calculate for a small sample size.

$n = \frac{Z^2 p q}{d^2}$

Where

n= the desired sample size (if the target population is greater than 10,000)

z=the standard normal deviate at the required confidence interval

p=the proportion in the target population estimated to have characteristic being measured

q=1-p

d=the level of statistical significance set

$n = \frac{1.96^2 x 0.79 x 0.21}{(0.05)2} = \frac{3.841 x 0.1659}{0.0025} = \frac{0.63732}{0.0025}$

=254.93

=255

Where

nf=the desired sample size (when the population is less than 10,000)

n= the desired sample size when the population is more than 10,000)

N=the estimate of the population size

$nf = \frac{n}{1+n)/N}$

$= \frac{255}{1+n)\ N} \quad \frac{255}{=1+255/170} \quad \frac{255}{=1+1.5=} \quad \frac{255}{2.5}$

=102 healthcare workers

Self-administered questionnaires and observational checklists were used to collect data on performance of integrated disease surveillance and response system in Lari Sub County

Data from the questionnaires and observation checklists were checked for completeness and accuracy of information before being coded and entered into SPSS version 21 for analysis.

Research proposal was presented to the Kenyatta National Hospital/University of Nairobi Ethical review committee for clearance and approval before commencement of field activities. Courtesy call and permission to collect data was sought from the County director of medical services in Kiambu County. Those recruited to participate in the study were requested to give their consent prior to their participation by signing an informed consent. Confidentiality and privacy of the respondents was maintained through the use of codes on the questionnaire.

3.0 RESULTS

3.1 Distribution of Socio-demographic Variables among the Respondents.

Most of the study participants (61.2%) were females while a least proportion 38.8% were males. As regards to cadre of profession, most (60.1%) of the healthcare were the nurses while a small proportion 1% was the nutritionist.

Table 1: Socio Demographic Characteristics of the Respondents.

Socio-demographic characteristics	n=103	%
Gender		
Male	40	38.8
Female	63	61.2
Cadre of profession		
Nurse	62	60.1
Public health officer	8	7.8
Registered clinical officer	14	13.6
Laboratory staff	12	11.7
Nutritionist	1	1
Medical records officers	2	1.9
Pharmaceutical technologists	4	3.**9**

3.2 Community Based Disease Surveillance System

Only 36.9% of the respondents revealed that a community based disease surveillance system had been established in Lari Sub County and about 36.9% of them indicated that the community based disease surveillance focal persons were collecting information on suspected cases and deaths due to priority diseases. About 35.9% of the study respondents indicated that the community based disease surveillance focal persons were trained on the basics of IDSR activities.

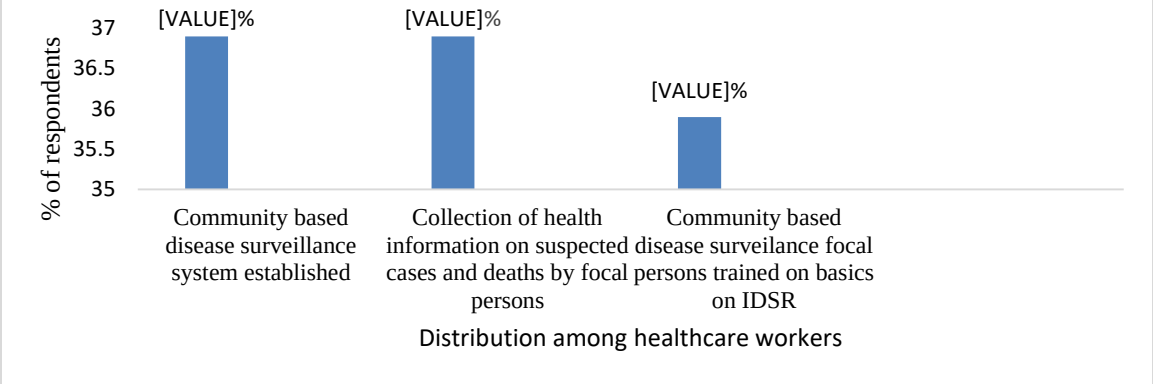

Figure1: Community Based Disease Surveillance System

3.3 Community Based Meetings, Feedback, and Supervision

About 39.8% of the healthcare workers revealed that the community based surveillance focal persons were holding meetings to discuss IDSR issues while 60.2% of them revealed that there were none held in the area. Most of the respondents 35.9% indicated that they gave feedback to the community based disease surveillance focal persons on IDSR. Consequently about 27.2% of the healthcare workers revealed that they were supervising the community based surveillance focal persons in their area.

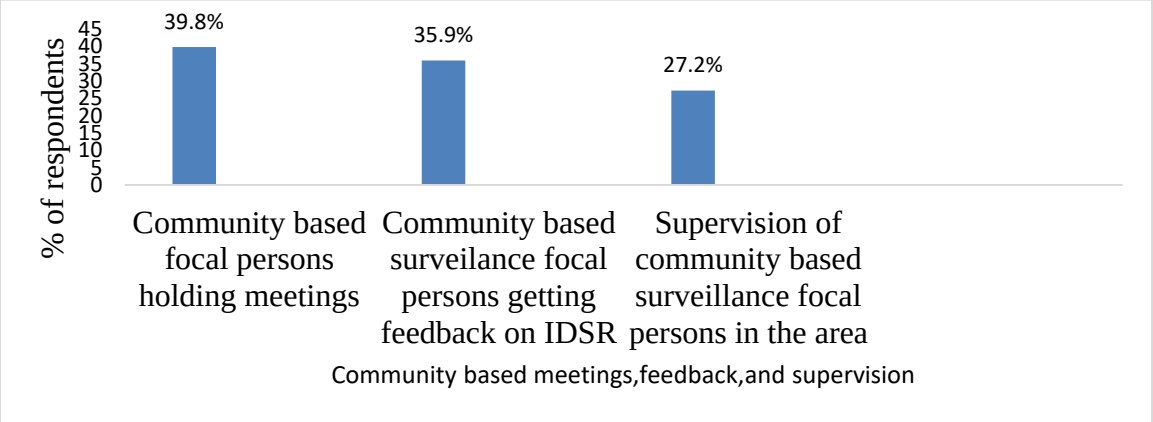

Figure 2: Community Based Meetings, Feedback and Supervision

4.0 DISCUSSIONS

4.1 Socio Demographic Characteristics

As per the gender, majority of the respondents 61.2% were females and 38.8% were males. A study done by Ojakaa *et al.*, (2014) done in three desperate districts in Kenya found out that females working in the health sector were 57.9% and males 42.1 %. A study by Songstad *et al.*, (2012), found out the reasons why females were majority in an area as their preference to stay near where they're husband's workplace are. A related factor pointed out by the study as being important to many health workers was living close to their extended family and the need to take

care of elderly, parents, siblings or other relatives. Jomo *et al.,* (2016), has it that among the factors contributing to staff imbalances in rural area workforce are individual preference for particular working and living conditions.

Moreover, a significantly high proportion 60.1% of the respondents who participated in the study were nurses while the rest of the other cadres were 39.8%. Nurses represent the largest segment of the professional health workforce and their performance has a direct effect on healthcare productivity including also in IDSR (Tesfaye *et al.,* 2015). According to the MOH (2012), nurses provide the bulk of direct patient care. This is especially true in Africa where the number of doctors per population is quite low leaving nurses to fill the gap in levels 2, 3 and 4 health facilities in the lower levels where the community is.

4.2 Community Based Surveillance System in Lari Sub County

Establishing a community based disease surveillance system is a key step to improving the early detection and assessment of outbreaks. A community based disease surveillance system is a public health initiative managed by the community to protect them. Majority of the respondents 63.1% revealed that the community based disease surveillance system in the area was not established. By virtue of the above, collection of health information by them is not done. This resulted to gaps the national health surveillance system where by cases were being missed or not timely detected by the system controlled or prevented or bypassing threshold levels. Among other things as reported by the WHO (2014), a community based disease surveillance will lead to improving relation between communities and their local health system, functions at a higher level of sensitivity for reporting of the targeted diseases and provide an active, rather than passive surveillance system.

A community based disease surveillance system relies on the community member's capacity to identify and report public health problems to the nearest health facility or to the Sub County offices. In Lari Sub County a significantly high proportion of respondents 63.1% revealed that trainings of community based surveillance focal persons have not been done. The village doctors as they are sometimes referred to should be trained on how to identify individuals who present with the community based case definition of a serious illness and require the attention of the health facility (Komakech 2007).Lack of community based approach to disease reporting as well as training acts as constraints to effective disease surveillance in the study area. This finding agrees with Ndiaye *et al.,* (2003) who reported lack of training as the main challenges facing the disease surveillance system.

Majority of the respondents 60.2% revealed that meetings by the community based disease surveillance focal persons are not held in the Sub County. The reason for above is because there is not a community based disease surveillance system established in the Sub County. A meeting is a gathering of two or more people convened for the purposes of achieving a common goal through verbal interaction such as sharing information or reaching an agreement. It's through these forums that feedback is given. Current and accurate two way flow of information among those who need to know or relevant authorities remain the basis of effective disease surveillance. According to Nnebue *et al.,* (2013) feedback serves as a control measure due to that it increases community awareness and participation on pattern of disease.

According to the WHO (2015) supervision of community based disease surveillance system is done to-: know whether the community based surveillance focal persons have the appropriate supplies like the forms and tally sheets and whether they are used properly. A significantly high proportion of respondents, 72.8% indicated that supervision of community based disease surveillance system focal persons in the Sub County is not done and 27.2% of them revealed that it's done quarterly. According to Rowe &Haywood, (2007) the frequency of supervision should be done 2-6weeks depending on the job and individual requirements. Crigler *et al.,* (2013) has that it should be done monthly as it provides an opportunity for regular reinforcement of skills and frequent communication which is important for workers motivation and performance.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Community based disease surveillance system has not been established in some areas in the Sub County, training of the community based surveillance focal persons and collection of health information on suspected cases and deaths by them not done.

5.2 Recommendations

The study recommends that the health sector Kiambu and the Sub County health management teams to establish the community based disease surveillance system in the area, training of the community based disease surveillance focal persons, regular collection of health information on suspected cases and deaths and supervision of them to ensure uniformity of activities carried out by them.

REFERENCES

Hall J. (2017): Community based surveillance. Guiding principles. International federation of Red Cross and Red Crescent societies

Jomo W.J., and Osuga B.O., (2016): Strategies of scaling up health workers distribution in rural public health facilities: A case of Kilifi County, Kenya.

Khan R.G. (2008): Role of community health workers in Northeast Brazil

Komakech I., (2007): Village health team strategy is a most innovative community practice award winner. The experiences of a village volunteer program me in Yumbe District, Uganda. Health policy and development 5(1) 21-27

Lado M., Mackoy S.B., and Rumonu J., (2012): Evaluation of community based surveillance for guinea worm. South Sudan, 2006: South Sudan Medical Journal Vol. 5 No.3

Ndiaye S.M., Quick L., Sanda O. and Niandou S., (2003): The value of community participation in disease surveillance: a case study from Niger. Oxford academic health promotion international 18(2).89-98

Nnebue C.C., Onwasigwe C.N., Ibeh CC. Adogu P.O.U., (2013): Effectiveness of data collection and information transmission process for disease notification in Anambra State, Nigeria. Nigeria journal of clinical practice

Nsubuga P.,White M.E.,Thacker S.B.,Anderson M.A.,Blount S.B.,Chiller T.M.,Espitia V.,Imtiaz R.,Sosin D.,Stroup D.F., Tauxe R.V.,Vijayaragharan M., and Trostle M.,(2006):Public health surveillance. A tool for targeting and monitoring interventions. International Bank for reconstruction and development/World bank group

Ojakaa D. Olango S., and Jarvis J., (2015): Factors affecting motivation and retention of primary health care workers in three desperate regions in Kenya. Human resources for health

Phalen J. and Paradis R., (2015): How community health workers can reinvent. Healthcare delivery in the US. Health Affairs Blog

Rowe A. and Haywood J., (2007): Providing effective supervision: A workforce development tool, including a unit of competence and supporting guidance. Includes examples for organization and managers to adapt for the development of their supervision practice.

Rumisha S.F., Mboera LEG. Senkoro K.P., Gueye D., and Mmbuji P.K., (2007): Monitoring and evaluation of integrated disease surveillance and response in selected districts in Tanzania. Tanzania Health research Bulletin vol.9.No1.

Songstad N.G., Moland K.M., Massay D.A., and Blystad A., (2012): Why do health workers in rural Tanzania prefer public sector employment? BMC Health services research 12:92

Sonoiya S., Ope M., Juma R.J., Thierry N., Peter M., Alex O., Julius J.L., David M. and Dionis N., (2011): East African integrated Disease surveillance Network. (EAIDSnet): Bulletin Jan-March Vol.1, issue 1.

Tesfaye T., Abera A., Baicha F., Nemera G., and Belina S., (2015): Assessment of factors affecting performance of nurses working at Jimma Crigler L., Gergen J., and Perry H., (2013): Supervision of Community Health workers.

University specialized hospital in Jimma Town Oromia Region, South-west Ethiopia. Nurse Care.ISSN:2167-1168 INC, an open access Journal Volume 4 June 6.1000312

WHO, (2014): Integrated disease surveillance and response in the African region: A guide for establishing community based surveillance. World health organization Regional office for Africa. Brazzaville.

WHO, (2015): Integrated disease surveillance and response in the African region: Community based surveillance (CBS) Training manual. WHO regional office for Africa.