Original Research Article

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Status and effects of health workforce related factors on implementation of universal health care in Nakuru West Sub County, Nakuru, Kenya

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ABSTRACT

Background: Globally, due to low health care coverage, there have been continued efforts to ensure that there is increased accessibility to quality, affordable and equitable universal health care (UHC) services in most parts of developing countries, such as within Nakuru county in Kenya.

Methods: The study focused on determining health workforce gaps in health care facilities that might affect the implementation of UHC in Nakuru West Sub County. Cross-sectional study design was applied, data was collected using structured questionnaires, analyzed using statistical package for social sciences 23rd version and presented in charts for ease comparison.

Results: The findings of this study indicated that there was shortage of HWCs. This implies that the staffing in the facilities located in Nakuru West Sub-County is inadequate for the implementation of the Kenyan government UHC and it was evident that the mostly affected sections were the nursing, public health officer (PHO), pharmacy, clinical officers and laboratory in that order. Most alarmingly, majority of the HCWs (58.2%) were not being appreciated for good work, despite the fact that they play a key role in the implementation of UHC.

Conclusions: It is therefore imperative for the county government which is the arm of the Kenyan government to ensure that they recruit adequate health care workers in all cadres to serve the continuously rising population and HCWs should have adequate level of education, acceptable training skills and be well-motivated.

Keywords: Universal health care, Health workforce gaps, Shortage of HCWs

INTRODUCTION

Globally, 400 million persons cannot access the health care services of the quality that they need while 5 billion people are unable to get affordable, safe, equitable health services despite world health organization (WHO) putting a lot of effort to support healthy life style. The report by WHO has shown inadequate number of 7.2 million health care workers from 83 nations globally, which do not meet the current required number of skilled health workers.

Indeed, the government of Brazil has put efforts to fill the gaps in healthcare workforce by improving human resource health (HRH) management and policy-making, which has so far boosted their working conditions, trainings of health care workers and in return increased the numbers of physicians by 66% and nurses by 500%, which led to quality health care being offered to the community, and as a result boosted health care access by the under privileged population.³

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According to the international labour organization (ILO) report of 2014, it estimated the global gap of health care workforce to be 10.3 million. Additionally, recent analysis by WHO estimate inadequacy of 18 million health workforce by 2030 which might lead to challenges in achieving sustainable development goals (SDGs). Global leaders agreed to existing challenges in the shortage of health workforce, a situation that has been confirmed by the WHO, and being considered under WHO's 2030 vision pillars through its adoption in May 2016.⁴ The international policy professionals, researchers and national bodies have decided to put more focusing finding solution to the global inadequate and poor distribution of health care workers.⁵

Sub-Saharan region has the highest shortage of nurses, midwives, doctors, laboratory technicians, common health workers, and health professionals within the few available health care facilities The population of health care workers is at 2.28 per 1000 population, this law number is due to poor working conditions, under funded healthcare facilities, low salaries and few opportunities for career advancement.⁶ The shortage in health care within this region has been connected to lack of enough resources to support employment of health care workers, poor imbalances and low distribution of the health care workers. Therefore, to works towards achieving the SDGs, the countries on Sub-Sahara Africa need to improve on equitable deployment of health care workers in their countries.^{2,7} Rwanda being one of the countries with shortage of health care workers have tried to bridge the gap by fully engaging nurses and community health workers, ensuring that services are availed to every corner of the communities Additionally, they came up with ways of increasing the numbers of health care workers by partnering with academic medical centers in the USA for training of health care workers and upgrading them from certificate to diploma and degree levels. This has developed knowledge and brought in exchange programs which developed more skills in different areas of medical specialization. Indeed, Ethiopia have increased their health care workers by increasing medical universities also help in paying tuition and accommodation fees for their doctor student. Upon graduation, they trained doctors are deployed to render health services to public hospitals, and through this, medical doctors increased from 150 in 2004 to 3000 in 2016.8 A report from Sub Sahara Africa shows that 36 out of 47 countries are experiencing real inadequacy in health workforce while Malawi's health surveillance revealed the same shortage, which is as a result of the health care workers' migrating to other countries. The government of Thailand being more advanced in achieving UHC, increased recruitment of health care workers by allowing 10,678 health care students to join in 2005, and in 2008 they started training doctors in private and public universities. 9 Such commitments from Rwanda, Ethiopia, Thailand and other countries encouraged other countries to adapt their strategies to implement UHC and put more resources in training and preparing for future needs and demand for health care workers.

Even though WHO recommends a minimum of 21.7 doctors per 100,000 populations and 228 nurses in 100,000, but Kenya by the year 2016 had 42 nurses and 14 doctors per 100,000 populations. 10-12 About 66.3% of the human population in Nakuru county travel long distances to access health facilities. Indeed, Kenya as a country has inequitable distribution and deployment of health worker as per 2018 MOH report.¹³ Despite Investment in motivation and support to health care workforce, there is shortage which does not match supply and demand as required by policies and regulatory framework in relation to planning, budgeting at national, regional and international levels.¹⁴ Despite the support, there is still severe investment inadequacy in all cadres, maldistribution of gender imbalances and poor working environment that has caused crises in rural areas and even immigrations to developed countries.¹¹ Therefore, there is need for the right mechanism to be put in place to a vert global shortage of health workforce, especially in economically changed regions.¹⁵

In Kenya the number of health care workers employed currently in the county governments is approximately 31,412, and this is still below the required number of 138,266 given in norms and standards guidelines by (MOH). In the month of April through the month of June 2015 a study was done on assessing the status of health training, with the main focus being, looking into skilled gaps of specialized health care workers in public and private hospitals in 46 counties. Several bodies were involved in this study which included HRH, Republic of Kenya (ROH), United States agency for international development funded Funzo Kenya program and ROH/Japan international co-operation agency HRH, USAID, WHO, 2014-2018.7 The result reflected Kenya's shortage in specialized health care workers which could cause problems in progressing towards attaining UHC.⁷

Despite the country's efforts to employ specialized health care workers from other countries, there are still some gaps and the report on attrition is not well captured in Kenya.¹⁶ According to Kenya health labour market assessment of 2015, more than 5000 Kenyan specialized doctors have moved to developed countries due to low pay and 3000 to other sectors, living only 3,440 doctors to serve a population of 46 million Kenyans.¹⁷ WHO allows 21.7 doctors and 228 nurses per 100,000 but Kenya has 42 nurses and 14 doctors which is very low as per 2016 report.¹⁸ Based on this discrepancy, this study was designed to evaluate the effects of health workforce related factors such as gender balance, level of training, distribution of health workers and the nature of work environment on the implementation of Universal Health Care in Nakuru West Sub County, Nakuru, County in Kenya.

METHODS

Study area and period

The study was undertaken in Nakuru West sub County in Nakuru County, Kenya. The sub-county is divided into six wards with a total of 45 health care facilities, consisting of 11 government facilities, 5 faith-based facilities, 29 private facilities and a total of 332 health care workers. The study was undertaken between the month of November 2019 to February 2020.

Research design

The study adopted a cross-sectional design. It involves looking at people who are similar in characteristics but different interests that allows the researcher to look at numerous characteristics at once while providing information about what is happening in a current

population.¹⁹ The design entailed both quantitative and qualitative research approaches to gather feedback from different categories of respondents. Clustered random sampling was used on the selected facilities to pick the required samples from six wards in Nakuru west, whereas stratified sampling was used for the selection of the health care workers from different cadres who served as the respondents to the structured questionnaires. 85 HCWs was sampled using stratified sampling from different cadres to provide responses on the structured questionnaires.

Target population and selection criteria

The inclusion criteria involved selection of health care workers and management staff in Nakuru west health facilities. Health care workers and management staff in Nakuru west are estimated at 332 in number. Target population of study area comprises of 45 health facilities (Table 1).

Table 1: Target population.

Ward	Population	No of hospitals	No of HCWs	No of CHVs
Barut	11899	4	6	30
Kaptembwo	85144	7	19	45
Kapkures	16470	4	16	12
Rhonda	29071	4	20	48
London	34375	15	28	45
Shaabab	29739	11	13	50
Total	206698	45	102	230

Table 2: Distribution of the sample size.

Ward	Number of hospitals	Sampled hospitals	Sampled KIs	Sampled HCWs	Sampled CHVs	Sampled community members
Barut	4	1	1	6	10	22
Kaptembwo	7	3	3	15	15	154
Kapkures	4	1	1	13	4	30
Rhonda	4	1	1	18	16	53
London	15	5	5	24	15	62
Shaabab	11	4	4	9	17	54
Total	45	15	15	85	77	374

Determination of sample size

The researcher adopted Fishers et al formula as cited by Mugenda and Mugenda to determine a sample size.^{20,21} The sample size distribution is provided in Table 2.

$$n = \frac{N}{1 + Ne^2}$$

Where n is the sample size, N (207075) the targeted population and e (5%) the desired level of precision or confidence level.

The calculations for the sample size are displayed as follows;

$$n = \frac{207075}{1 + 207075(0.05)^2} = 399.2 \approx 399$$

The researcher considered to add 25% of the sample size to cater for non-response. Therefore, the sample size for the study was 500 respondents.

Data analysis

Quantitative data collected was coded, entered into statistical package for social sciences (SPSS) computer software of 23rd version and analyzed through descriptive statistics.

Ethical approval

The study was approved by the Mount Kenya university institutional ethics committee, department of health services of ministry of health, Kenya, as well as the ministry of interior and co-ordination of national government.

RESULTS

Gender proportion, profession cadre and education level of the HCWs

Based on the study results, majority (69 %) of the HCWs respondents were female, whereas 31% were male (Figure 1). The results imply that there is imbalance in the representation of gender among employees in health facilities within the study area. However, this could also be a true reflection of the fact that women tend to have a higher preference to work in the nursing sector as compared to male counterparts, and particularly within the nursing profession. Additionally, As presented in Figure 2, it indicates that majority (38.5%) of the HWCs in health facilities were nurses, whereas clinical officers and pharmacists constituted the least cadres.

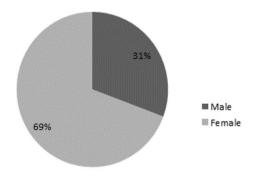


Figure 1: Gender distribution of HCWs.

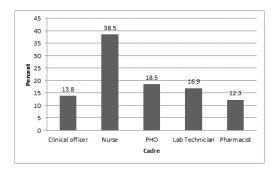


Figure 2: The proportion of HCWs profession cadre.

The study also sought to establish the level of education of the HCWs. Based on this, the education levels of the health workers were categorized as certificate level, diploma level, bachelor degree level and master degree level. The study revealed (Figure 3) that majority (66.2%) of the HCWs had diploma qualification whereas 19.5 % had attained Bachelor's degree qualification and only

14.3 % had attained certificate training. However, there was none with master degree qualification.

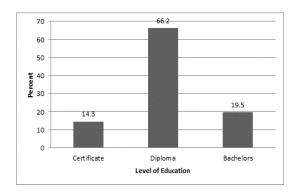


Figure 3: HCWs education level.

Level of experience and adequacy of HCW

On the level of experience, there were five experience categories; less than 3 years, 4-6 years, 7-18 years, 19-30 years and above 30 years. The study findings (Figure 4.), indicated that majority (59.2%) of HCWs had less than 3 years of working experience, whereas 26.3% had 4-6 years' experience, 11.8% 7-18 years, 1.4 % had served for 19-30 year and only 1.3% for more than 30 years. This implies that the duration of experience for the HCWs was relatively low. Furthermore, it was also indicated that 91.7% of the HWCs alluded to the fact that there is shortage of staff, whereas only 8.3% indicated there the numbers are adequate. This implies that the staffing in the facilities located in Nakuru West Sub-County is extremely inadequate for the implementation of UHC (Figures 5 and 6).

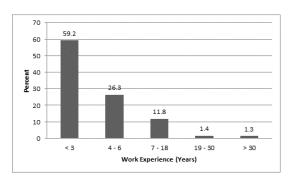


Figure 4: Information on the HCWs working experience.

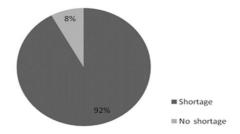


Figure 5: The level of HCWs shortage.

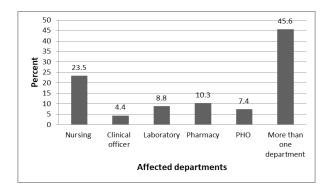


Figure 6: Information on the level of staffing at departmental level.

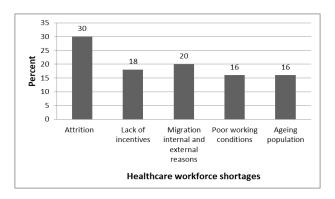


Figure 7: Causes of healthcare workforce shortage.

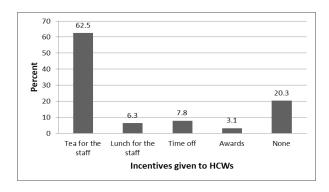


Figure 8: The forms and levels of incentives given to HCWs.

Factors for low numbers of HCW and the available incentives

The study also established the causes of low numbers of HCW. Based on the result in (Figure 7), majority of HCWs 15 (30%) who participated in the study stated that attrition is the main cause of healthcare workforce shortage, followed closely by 10 (20%) who cited migration as the other cause. Additionally, (18%) of the HCWs pointed out that lack of incentives was the reason for healthcare workforce shortage while an equal proportion of (16%) cited poor working conditions as well as ageing population as the other reasons. Based on the findings in Figure 8 revealed that majority (62.5%) of the HCWs considered the provision tea for the staff as the

leading incentive given to HCWs in their facilities, 7.8% had time off the duty as the form of incentive, whereas 3.1% indicated that they are given other awards as form of incentive. However, 20.3 % stated that there are no incentives being given to motivate HCWs. On the other hand, the findings of the study (Figure 9) show that 58.2% of the HCWs indicated that they do not get any form of appreciation/incentive for well work they render, whereas 41.9% indicated that they are appreciated. This implies that little is done to recognize and appreciate HCWs, especially those whose performances are outstanding in the implementation of UHC.

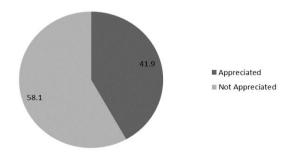


Figure 9: Appreciation for work well done.

DISCUSSION

Gender proportion, profession cadre and education level of the HCWs

The on the gender proportion, profession cadre and education level of the HCW were in agreement with studies which highlighted that males and females differently face unfair expectations and stereotyping challenges and, in most cases, different occupations have different gender preferences. Additionally, the study concurs with the other findings that postulate severe investment, inadequacy in all cadres, maldistribution of gender imbalances exists in many professions and such imbalances may be resulting from factors such as immigration to developed countries among others. 11,12 The results on the proportion of the professional indicated that nurses are always required in highest proportion in any health facility as they play a vital role in the implementation of health services and programs such as the UHC, this also makes them to be deployed in different sections within a health facility. This finding agrees with the report by the WHO (2010), which recommended a minimum of 21.7 doctors per 100000 population and 228 nurses in 100000.12 Indeed, it is therefore worth elaborating that more nurses need to be employed in the health facilities, especially within the area where UHC is being implemented by the Kenyan government. The finding on the level of education indicated that most HWCs only have moderate academic qualification, and according to the recommendation by Kabene, HCWs in many parts of the county need to be empowered in terms of education to fill the available gaps and also provide quality services to the patients.²²

Level of experience and adequacy of HCW

The findings on the levels of experiences was in agreement with the WHO which recommended the need for timely, comprehensive and reliable information in terms of human resource that is relevant to health matters, that is, numbers of health workers, level of skills, population requiring health services, and the retention and recruitment of staff should be given a priority. 12 Indeed, for any country to have the capacity to meet the health needs, the goal relies on skills, motivation, deployment and knowledge of health care workers delivering and organizing health care services. However, most countries have inadequate, less skilled and low experienced human resource that is required to provide essential intervention in health matters, this may be due to migration of experienced and highly educated and skilled health professionals to other cadres, inadequate capacity to produce skilled professionals, poor mix of skills, retirement, imbalances in demographic and death of health workers who are not replaced in time. Therefore, before the implementation of UHC, a lot needs to be done by the county government to make sure that the health care workers employed be made to feel comfortable in their salaries, working environment to be made conducive, and proper trainings availed to the health care workers so that they may gain experience in their area of specialization.

These finding on the adequacy level of the HCWs shows that the Kenyan scenario is not unique as observed by a report from WHO in 2016, which showed low numbers of health care workers from 57 countries in Africa.²³ Indeed, WHO (2010), recommends a minimal of 21.7 doctors per 100000 and 228 nurses in 100000 populations, but in Kenya by 2016 only had 42 nurses and 14 doctors per 100000 populations. 12 From this perspective, a lot has to be done to improve the number to meet the everincreasing number of populations. Indeed, the most affected departments are nursing, pharmacy, laboratory public health officers and clinical officers. Miseda et al and Odhiambo showed that health care workers shortage is due to poor imbalances, and low distribution of resources to employ them, hence, for the success in the implementation of UHC, the county government has to address these gaps before its roll out.2 These findings also agree with report by ROK in 2013 which reported that as a country, there is shortage of health care workforce, a situation which has continued to create a challenge and resulting from uneven remuneration among cadres, poor attraction and retention, poor working conditions, and lack of continues training.¹⁶

Factors for low numbers of HCW and the available incentives

Staff motivation have been found to be a key factor in the successful implementation of UHC, as this will enable the low number of HCWs to be willing and ready to put extra effort and time at places of work for maximum productivity. The findings agree with those of WHO report of 2006, which postulates that health care workers

are skilled professionals involved in delivering health services to the community they serve and encourage people to practice health behaviors like eating a wellbalanced diet, use condoms when engaging in sexual behavior, regular check-ups, immunization of children and use of family planning methods, and to enhance their services on such matters, motivation remains key.²⁴ Furthermore, the findings also agree with that of Ghebreyesus in 2016, which postulates that Ethiopia on the other hand motivated their health care workers by increasing more medical universities, assisted paying their tuition fee, provide accommodation for their medical students and upon completion they rendered their services back to the community.8 This should also be copied by the Kenyan government to support the UHC implementation. Indeed, others reported that devolution of health care workers from the government to county government has negatively affected health care service deliveries, due to delayed salaries, lack of continues medical trainings, lack of harmonization of salaries and lack of harmonized schemes, a situation which has killed the morale of the health care workers, thus making them feel less appreciated by their employers.²⁵ The ROK also shares the same concerns that the health workers are faced with poor attraction and retention, poor working conditions and lack of continued training. This clearly shows that the health care workers are not well appreciated and a lot needs to be done before the implementation of UHC in terms of workload in health facilities, harmonization of salaries and provision of incentives.16

Limitations

The study was limited to Nakuru West Sub County, Nakuru County, Kenya and was undertaken between the month of July 2019 to February 2020. There was a language limitation where the some of the respondents had challenges of understanding the English language used on the questionnaire, some of the locals were tasked with language translation.

CONCLUSION

Based on the study findings, it can be concluded that the female gender was the majority as compared to the male gender, and in terms of cadres the nurses were more in health facilities than other cadres within the HCW force. Based on professional level, most HCWs were educated up to diploma, indicating that the healthcare workforce as it is constituted does not have the capacity to implement the UHC in most effective and professional way. The implementation of UHC is faced with various barriers and challenges, most critical of ones being shortage in healthcare workforce and the was need for sensitization of UHC.

Therefore, the county government should have policies that support HCWs to proceed academically in their professions. Additionally, the county government should adequately recruit more health care workers to serve the population and they should be provided with adequate

training opportunities to acquaint them with necessary skills to help them effectively implement the UHC.

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Institutional Ethics Committee

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