Strategies of scaling up health workers distribution in rural public health facilities: A case of Kilifi County, Kenya

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Abstract- Health Workers constitute key component of the national health system thus central to planning, managing and delivering health services. Rarely do concerted efforts get made to address severe staff shortages in many Countries despite being of critical importance to the functioning of health service delivery. In addition to absolute shortage of Health Workers in Kenya, available workforce is often ill-distributed and attrition rates are high. Kilifi County, one of poorest rural Counties in Kenya experienced shortage of Health Workers. The goal of this study was to explore ways and means of scaling up Health Workers distribution in public health facilities to improve Health Workforce in Kilifi County, Kenya. The study was based on Human Resources for Health pillar. The objectives of the study included; to determine characteristics of deployment of Health Workers; and explore factors influencing retention rates of Health Workers. Information generated will be valuable to institutional planners in resolving mal-distribution of Health Workers and reinforce strengths in public health facility hence efficient and effective service delivery resulting to improved health. A descriptive cross sectional study design was used on four public health facilities with a target population of 232 Health Workers. Stratified sampling technique was used on health facilities by proportionately selecting the respondents in their stratified cadres. This resulted in a sample size of 109 health workers in total. Structured questionnaire and the Key Informant Interview guide were employed as data collection tools which attained quantitative and qualitative data respectively. Data analysis was done using SPSS version 20.0 and correlation analysis studied the relationship between staffing issues versus Health Workers distribution. The study found out that, only 35(35.4%) of staff applied tasks shifting while 43(43.4%) were not sure of satisfaction level with positions held. 48(48.8%) of staff disagreed that employees were recognized at individual levels and supportive policy frame work was missing. The study concluded that a supportive policy frame work to guide in job analysis, employee recognition and training needs analysis should be done. The study recommended that more task shifting be encouraged; skills training on retention methods and availability of supportive policy frame work should be put in place. The study also recommended that further research be done on the process of certification to highlight the degree of medical staff involvement in the process, value added to the facility and staff be accredited.

Index Terms- Distribution, health workers, scaling up, strategies

I. INTRODUCTION

The World Health Organization (WHO) identified six building blocks of a health system in its Framework for Action. One of those building blocks was a well performing Health Workforce (others being Health Financing, Leadership and Governance, Health Service Delivery, Pharmaceutical Management and Health Information Systems). Health Human Resources (HHR) also known as Human Resources for Health (HRH) or Health Workforce was defined as all people engaged in actions whose primary intent is to enhance health (World Health Report, 2006).

They included physicians, nurses, advanced practice registered, midwives, dentists, allied health professions, community health workers, social health workers and other health care providers. Also included in this definition are health management and support personnel who may not have delivered services directly but were essential to effective health system functioning, including health services managers, medical records and health information officers, health economists, health supply chain managers, medical secretaries, and others.

The field of human resources for health deals with issues such as planning, development, performance, management, retention, information, and research on human resources for the health care sector. Raising awareness of the critical role of HRH in strengthening health system performance and improving population health outcomes placed the health workforce high on the global health agenda. While many countries had HRH plans, a major reason countries remained in crisis was the lack of sustained implementation to achieve concrete workforce strengthening results (Karen A Grepin & William D Savedoff, 2009).

The World Health Organization (World Health Report, 2006) estimated a shortage of almost 4.3 million physicians, midwives, nurses and support workers worldwide. The shortage was most severe in 57 of the poorest countries, especially in sub-Saharan Africa. The situation was declared on World Health Day 2006 as a health workforce crisis the result of decades of underinvestment in health worker education, training, wages, working environment and management (World Health Report, 2006).

Shortage of skilled birth attendants in many developing countries remained an important barrier to improving maternal health outcomes. Many developed and developing countries

reported mal-distribution of skilled health workers leading to shortages in rural and underserved areas (Wafula J, et al. 2011).

Equitable health coverage depended on having the necessary human resources to deliver health care services. Kenya was among the African countries experiencing crisis in the area of human resources for health (HRH) (World Health Report, 2006). The major causes of the crisis included inadequate and inequitable distribution of health workers; high staff turnover; weak development, planning and management of the health workforce; deficient information systems; high migration and high vacancy rates; insufficient education capacity to supply the desired levels of health workers needed by the market; inadequate wages and working conditions to attract and retain people into health work, particularly in rural underserved areas. This shortage affected most of the available health worker categories. (Kiambati, Caroline & Toweett, 2013)

As a country, Kenya remained committed to making significant improvements in its human resources for health situation. However, the country had not achieved the ambitious health milestones set, including achieving the Millennium Development Goals, without improving the quality, quantity and distribution of the health workforce. Skilled providers, physicians, nurses and midwives, assisted in only 44% of births. Also noted was that there were great inequalities in access to health services across provinces (Obonyo B, 2010).

Kilifi being one of the poorest counties in Kenya was cited to have many serious health challenges. Achieving quality health care services in Kilifi County remained a challenge despite the many interventions put in place by the government and stakeholders (Mwatsuma Kitti Mwamuye 2014). Kilifi County had a total of 406 public health facilities at tier 2 and 3. The doctor/patient ratio was 1:42,625, clinical officer/patient ratio is 1:30,194 while the nurse/patient ratio is 1:3,396. (First Kilifi County Integrated Development Plan 2013-2017).

The most prevalent diseases included Malaria, Pneumonia and diseases of the digestive system. Furthermore HIV/AIDs was a major health and development problem in this County with a prevalence of 10%. The bed occupancy by people affected with HIV/AIDs related illnesses in the various health institutions was about 50%. (First Kilifi County Integrated Development Plan 2013- 2017).

II. Problem Statement

Efforts aimed at strengthening HRH ultimately aim to get the right health workers, in the right place, with the right skills, doing the right things (World Health Report, 2006). Massive geographic and skill mix imbalances were reflected in the perilous undersupply of HRH in most rural areas. (Lemiere. C, et al 2011).

The mal-distribution of health workers within countries was a crucial problem felt most acutely in rural areas. Kenya was a case in point, where rural primary health care facilities were very understaffed (Wafula J, et al. 2011). According to the World Health Organization, one nurse should serve 285 residents. However, in Kenya, seven nurses served 4,000 residents with over 51,455 nurses needed to fill in the ever-growing demand (World Health Report, 2006).

Statistics in Kilifi County indicated that approximately 15 mothers delivered every night in Kilifi County Hospital at the watch of one or two nurses while the proposed number in the norms and standards for health service delivery by Ministry of Health, 2006 should be 12 nurses to serve delivery and maternal and child health (MCH). Overcrowding had put pressure on the County Government to address the shortage of skilled health workers in the County. (Mwachiro A, 2014).

The nurse patient ratio stood at 1:3,396 which in itself was a manifestation of staff shortages in Kilifi County as opposed to World Health Organization recommendation (World Health Report 2006) one nurse to serve 285 residents.

This research study aimed at determining how recruitment, deployment and retention were the strategies of HRH distribution in Kilifi County. The researchers were interested in identifying the selection criteria applied during recruitment and the efforts in human resource planning and management. Furthermore the researchers were interested in identifying the number of HRH recruited within a period of five years (between year 2010 to year 2014), the funded positions, duration of service by health workers, job satisfaction and training offered as well as supportive policy frame work in addition to sustained implementation.

III. Study Objectives

The main objective was to explore the strategies for scaling up health workers distribution in public health facilities to improve health workforce in Kilifi County, Kenya. Specific objectives included: To determine how deployment aspects of HRH affected health workforce distribution in Kilifi County and Explore how retention of HRH influenced distribution of health workers in Kilifi County.

Conceptual framework

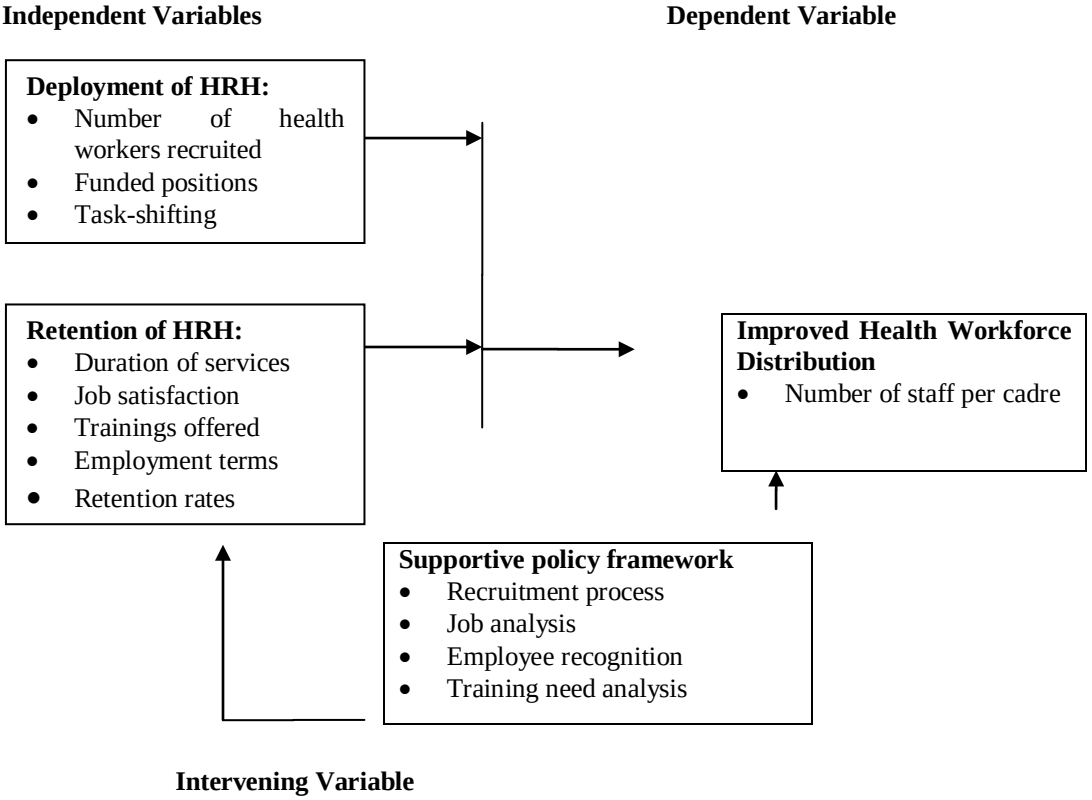

Figure 1: Conceptual Framework

IV. METHODOLOGY

The study involved descriptive cross-sectional research design where potentially related factors were measured at a specific point in time for the defined population. The strategies of scaling up human resources for health distribution in public health facilities in Kilifi County were described by including four public health facilities in the study.

The study took place in Kilifi County located in North Coast of Kenya which had a catchment population of 1,500,000 and a total of 406 public health facilities. The target population was a total of 232 health workers in different cadres who served four public health facilities namely; Kilifi County Referral Hospital (County Referral Hospital), Malindi sub-County Referral Hospital, Gende Health Centre and Pingilikani Dispensary.

The researcher stratified public health facilities according to Tiers of health care system. The four health facilities were randomly selected to represent tier 2 and 3. The respondents were proportionate as per the facility and cadres and randomly selected. The sample size was 109 respondents calculated from a population of 232 health workers using Yamane (1967:886) formulae with a confidence level of 95% and a precision of 0.05.

Table 1: The sample size of respondent

Staff Cadre	Frequency	Kilifi County Hospital	Malindi Sub-Hospital	Gende Health Centre	Pingilikani Dispensary
Doctors	5	3	2	-	-
Pharmacists	3	1	1	1	-
Lab Technologist	6	3	2	1	-
Orthopaedics Technologist	2	1	1	-	-
Radiographer	1	1	-	-	-
Physiotherapist	3	2	1	-	-
Health Records and Information Officer	1	1	-	-	-

Medical Engineering Technologist	3	2	1	-	-
Accountants	1	1	-	-	-
Administrator/In Charge	4	1	1	1	1
Clinical Officer	8	5	2	1	-
Nurses	68	39	21	6	2
Secretarial Staff/Clerks	4	1	1	1	1
Total	**109**	**61**	**33**	**11**	**4**

The questionnaire were administered to the staff to collect information on deployment and retention of health workers while two different key informant interview guide were used on in charge/administrators of the facilities and County health board to collect information on recruitment, deployment and retention of health workers.

V. Findings and Discussion

Table 2: Characteristics of Respondents

Characteristics	Variable	Respondents N (%)
Age Distribution	20-29	4(4.0)
	30-39	52(52.5)
	40-49	25(25.3)
	50-59	18(18.2)
Gender	Male	40(40.4)
	Female	59(59.6)
Level of Education	Diploma	57(57.6)
	Higher National Diploma	25(25.3)
	Graduate	14(14.1)
	Masters	3(3.0)

Deployment of health workers

Regarding task shifting the findings were that majority 64(64.6%) of respondent did not perform other tasks within the organization whereas 35(35.4%) were practicing task shifting. There is no clear guidance from the literature on what the ideal mix of health professionals might be. However, Buchan et al, 2002 concurred with this by indicating that Health care is labour -intensive and managers of health care provider units strive to identify the most effective mix of staff that can be achieved with the available resources.

The study found out that, majority (48.5%) of the staff in the industry were permanent employees, while contractual staff (27.3%) were second in the table. Respondents who were casual workers (24.2%) came in third while none mentioned on other forms of employment. This implied that the people interviewed were fully engaged with organization making them a better reliable choice of information.

Nandan et al 2012 agreed by implying that contractual staff in service delivery and managerial positions could improve the situation of health workers shortage in rural areas.

From the findings, the County does not recruit as per health facility requirements and this contributed to mal-distribution. These findings are supported by literature from Nandan et al. 2012 who noted that despite some improvement in the deployment of HRH in India, the low performing states faced huge shortage of HRH in rural areas.

Respondent also indicated that they provided Skill flexibility. Two strategies were used to promote skill flexibility: role substitution and role delegation. Role substitution involved substituting one health professional for another fully qualified health professional in order to provide a service. This is possible based on the overlapping scopes of practice between many health professionals, as well as the evolution and expansion of scopes of practice over time. Examples include the use of physician assistants or nurse practitioners to provide services traditionally performed by physicians, or using health care assistants to provide non-clinical services that have traditionally provided by registered nurses.

The findings indicated that task shifting was the arrangement at the health facility level and the County directorate was not directly involved. The County directorate decides on the number of staff in each health facilities. The heads of the health facilities did not have a say about the hiring and firing of staff they were supervising, they could only highlight the areas of shortage of staff and request from the Directorate or the Ministry of Health to hire more workers, which usually was a request that was never answered or not answered according to the

requested profile. This negatively affected the productivity of the health centres.

Retention of health workers

Most of the respondents were nurses representing 60.6% whereas Clinical officers and laboratory technologist represented each 6.1% of the respondents. Secretarial and clerk staffs were only four which is 4.0% of total respondents. Lastly 23 (23.2%) staff was on a different category list.

Table 3: Duration of employment

Years Worked	Frequency	Percentage
Less than 6 Months	4	4.0
6 Months to 1 year	14	14.1
1 to 3 years	23	23.3
3 to 5 years	33	33.3
More than 5 years	25	25.3
Total	**99**	**100.0**

As noted by Lemiere C et al 2011, among the factors contributing to staff imbalances in rural workforce are individual preferences for particular working and living conditions. Therefore those respondents who had served more than 5 years probably had preferences for these institutions. In addition Buck and Watson 2002 indicated that human resources turnover costs an organization needless expense. The findings are in agreement since 33.3 % of respondents had served the same institution between 3 to 5 years whereas 25.3% had served more than 5 years.

Table 4: Level of Satisfaction

Factors to Consider	Frequency	Percentage
Very dissatisfied	2	2.0
Dissatisfied	21	21.2
Neutral	43	43.4
Satisfied	29	29.3
Very Satisfied	4	4.0
Total	**99**	**100.0**

Majority of the respondents were in the neutral position with 43.4%, closely followed by a group of those who were satisfied with 29.3%. Respondents who were dissatisfied came in third with 21.2%. Only a few more indicated to be very satisfied than those who were very dissatisfied with 4% and 2% respectively. This therefore indicated that majority of the staff were not sure of the satisfaction in positions they held.

Even for jobs that do not require high level of skills, a retention strategy can positively affect the engagement, turnover and ultimately financial performance, especially, for positions that involve interaction with customers as noted by Hinkin et al (2000). When a significant share of Human Resources only stays for a limited time with an organization that is a pointer toward underlying problems that need to be explored and addressed by determining the most adequate measures.

34.3% of the respondents were not sure if they could recommend their friends to work in the institutions they worked while 23.2% would probably recommend their friends. 21.2% indicated that they would probably not recommend their friends. Further results indicated that, 11.1% of the respondent pointed out that they would definitely recommend whereas 10.1% mentioned that they would definitely not advise them. This implied that since most of the respondents were not sure, there could be some challenges that people would not like their friends go though. This is in agreement with the empirical studies by Kinnear & Sutherland, 2001; Maertz & Griffeth, 2004; Meudell & Rodham, 1998; which revealed that factors such as competitive salary, good interpersonal relationships, friendly working environment, and job security were reported by employees as key motivational variables that influenced their retention in the organizations.

The study found out that 48.5% of the respondents disagreed with the claim that they were recognized at individual levels while 30.3% neither agree nor disagree to be recognized at their work place. The study further found out that 15.2% of the respondents disagreed that they are recognized while 6% strongly disagreed. Surprisingly none of them strongly agreed to be recognized as individual. This implied that the employers needed to improve on employee recognition. As Richard Branson (October, 2015) suggested that one should take care of their employees, and they'll take care of their business.

The findings revealed that the nursing department had the longest serving staff. The possible reasons were that they were nearing retirement age and most of them were commuting from home. Doctors had the highest turnover rate and the possible reasons were career advancement. These findings are similar to the report by World Health Organization Country Office for India (2007) which indicated that doctors were reluctant to be posted in rural areas as they felt isolated and cut off from the medical mainstream.

VI. Conclusion

The main factors affecting health workers motivation and hence level of productivity were; lack of equipment, lack of incentives, the staff working environment, and patients' attitudes. These impediments prevented health workers from doing their jobs, and results in poor quality of health service delivery. Also revealed from the findings is the fact that staff needed to be recognized at individual levels. There is a need to create a conducive working environment for increased productivity. To reduce the burden of mal-distribution, all facilities are encouraged to embrace task shifting and introduce a career development path for individual staff members.

Recommendations

1. There is need for all health facilities to encourage more tasks shifting in all departments while ensuring that the daily routines are not compromised as well as look for funders and partnership to aid in training and development of staff.
2. Regular trainings on retention methods to all managers and supervisors are required to reduce attrition rates.

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References

[1] Buchan J, Mario RDP, Skill mix in the health care workforce: reviewing the evidence. Bulletin of the World Health Organization;80:575-580, 2002.

[2] First Kilifi County Integrated Development Plan (2013- 2017). Towards A Globally Competitive and Prosperous Kenya. Kilifi County.

[3] Hinkin, T. and Tracey, J., "The cost of turnover: putting a price on the learning curve", Cornell Hotel and Restaurant Administration Quarterly, 2000, Vol. 41 No. 3, pp. 14-21

[4] Karen A Grepin & Savedoff W. D, Governance in the Health Sector: A Strategy for Measuring Determinants and Performance. Portland, Maine, Social Insight; 2009.

[5] Kiambati H, Kiio C.K,& Toweett J., Understanding the Labour Market of Human Resources for Health in Kenya: Department for Health Systems Policies and Workforce, Geneva. World Health Organization, 2013.

[6] Lemiere. C et al., Reducing Geographical Imbalances of Health Workers in Sub-Saharan Africa. A Labor Market Perspective on What Works, What Does Not, and Why. World Bank working paper. Washington D,C, 2011.

[7] Maertz CP, Griffeth RW, Eight motivational forces & voluntary turnover: A theoretical synthesis with implications for research. J. Manage, 2004, 30(5): 667-683.

[8] Meudell, K. Rodham, K., Money isn't everything – or is it? A preliminary research study into money as a motivator in the licensed house sector. Int. J. Cont. Hosp. Manage, 1998, 10(4):128-132.

[9] Mwachiro, A., Kilifi County nurses root for more health workforce. Retrieved from Habari Kilifi: http://www.habarikilifi.com, 2014, May 26

[10] Mwamuye M K., Poverty definition' and its contribution to projects failure in Kilifi County, Kenya. United Kingdom. European Centre for Research Training and Development Global Journal of Politics and Law Research, 2014, Vol.2, No.2, pp.27-38.

[11] Nandan. D. and Agarwal. D., Human Resources for Health in India: Urgent Need for Reforms. Santosh University, Indian Journal of Community Medicine, 2012.

[12] Obonyo, B. , Maternal Health; Kenya National Bureau of Statistics (KNBS) and ICF Macro. Maternal Health. Calverton, Maryland: KNBS and ICF Macro, 2010.

[13] Richard Branson, "Taking Care of Business". Located at http://www.virgin.com/richard-branson/taking-care-of-business, 2015.

[14] Wafula J, et al., Attracting and retaining health workers in rural areas: investigating nurses views, career choices and potential policy interventions. Consortium for Research on Equitable Health Systems, London School of Hygiene and Tropical Medicine, London, 2011.

[15] World Health Organization, Working together for health: The World Health Report, 2006.

[16] World Health Organization, Not enough here—too many there: Health workforce in India. India Country Office, World Health Organization, New Delhi; 2007.

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