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Research Article

Perceived Effects of Informal Task-Shifting in HIV/AIDS and Reproductive and Child Health Service Delivery in Tanzania

Jonathan M Mshana[1]*, Julius J Massaga[1], Sia E Malekia[1], Vitus A Nyigo[1], Andrew M Kilale[2], Michael A Munga[1], John S Kunda[2], Adiel K Mushi[1], Godfrey M Mubyazi[1], Angela E Shija[1], Judith Msovela[1], Tina A Mtui[1], Stella P Kilima[1], Thuwein Y Makamba[1] and Mwelecele N Malecela[1]

[1]National Institute for Medical Research (NIMR) Headquarters, Dar es Salaam, Tanzania
[2]NIMR-Muhimbili Research Centre, Dar es Salaam, Tanzania

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***Corresponding author**

Jonathan M Mshana, National Institute for Medical Research (NIMR), Dar Es Salaam, Tanzania, Email: jmshana@nimr.or.tz

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Abbreviations FBO: Faith Based Organization; MA: Medical Attendants; RCH: Reproductive and Child Health; CTC: Care and Treatment Centre; OPD: Outpatient Patient Department; WHO: World Health Organization; MoHSW: Ministry of Health and Social Welfare; PEPFAR: The US President's Emergency Plan for AIDS Relief

Abstract

Background: Shortage of health workers in developing countries including Tanzania is a major obstacle to the scale-up of HIV/AIDS care, and implementation of health interventions toward achieving the Sustainable Development Goals (SDGs). This situation has necessitated informal task shifting practices that might compromise the quality of health care services. In this paper, we report Health Workers (HWs)'perceived effects of task shifting on HIV/AIDS and Reproductive and Child Health (RCH) service delivery in Tanzania.

Methods: A cross-sectional study was conducted in nine randomly selected districts identified in nine regions, Tanzania. Data were collected from HWs through interviews conducted using a structured questionnaire. This was achieved in 57 Health Facilities (HFs) including government (public) owned and faith-based ones. Data were double entered into computer using EpiData (3.1) before the analysis that was conducted with support of STATA (11) software.

Results: A total of 566 HWs participated in the study. Of these, 412 (72.8%) were females. Four hundred and forty-three (76.5%) workers reported to know others who were involved or had personal experiences in practicing duties that were beyond their official job descriptions and this is what was referred to as a kind of 'Informal Task-shifting'. Most (n=439, 77.6%) of staff reported the latter task shifting practice to have had a positive effect on the health service delivery; ensuring continuity of health care service provision was reported by 292 (66.5%) of the respondents. Meanwhile, 281(49.6%) of the reporters claimed that informal task shifting practices had negative consequences. Of the most frequently mentioned to be negative effect was the provision of poor quality health care services to patients, as reported by 166 (n=281, 63.8%) of the workers.

Conclusion: Given the persistent HWs crisis situation in Tanzania, task-shifting was found to be highly welcome and valued among the HWs visited as it was seen as an alternative initiative for continuation of health service delivery at Health Facility levels. This informs the government of Tanzania to consider officially approving the initiative and continue monitoring its implementation in order to maintain the quality of health care services.

Introduction

Shortage of Human Resources for Health (HRH) in terms of numbers and skill-mix is a major problem in developing countries including Tanzania [1,2,4,8,10]. This situation has forced the few available Health Workers (HWs) to assume responsibilities beyond the scope of their job descriptions. To overcome the problem, various substitutions have been taking place in health service delivery, and these include direct and indirect substitution/task delegation between different cadres. At times, the delegation of non-technical tasks occurs to relieve professionals of unwarranted workloads, hence the concept of task delegation. Similarly, there is intra-cadre skills delegation in which specific tasks outside the norm occur within the same category of cadre, whereby less trained HWs assume tasks of more qualified cadre [3].

Due to the increased demand for HIV/AIDS care and treatment services, the World Health Organization (WHO), during its technical consultation meeting concluded that task shifting was inevitable [8,23]. Hence, task shifting has been recommended as a feasible option in various situations to achieve the goal of increasing the capacity of existing HRH [7]. In general, the exponential increase in TB and HIV/AIDS cases has caused vertical programs such as TB and HIV/AIDS to use laypersons in providing treatment and making follow-up care. In such cases, lay HWs assume supervisory roles on the treatment and follow-up of cases, a task that is supposed to be done by medical practitioners.

Despite the fact that the concept of task-shifting is not new as it has been practiced widely even outside HIV/AIDS service delivery [19], the experience in Tanzania is not well documented.

Evidence has shown that informal task-shifting exists in health service delivery points in Tanzania despite the government's efforts to reduce HRH shortages and mal-distribution. The efforts include expansion of health workforce training and inauguration of emergency hiring plans, just to mention a few. Unfortunately, these concerted efforts have been unable to keep pace with the ever-increasing demands for health service [1,26,27]. This reality suggests that a multitude of factors impinge on health service delivery at health facilities. The available literature shows that task-shifting has been taking place informally. However, there is no documented evidence on the effects of the practice on HIV/AIDS and reproductive health services.

In this paper, we report on the experiences and opinions of health workers in Tanzania on the effects of informal task-shifting practices in relation to HIV and AIDS as well as reproductive and child Health care delivery services at Health Facilities (HFs).

Methods

Study design and study area

This was a cross-sectional survey conducted from June to August 2012 in 9 regions of Tanzania covering one district from each region. The nine regions covered included Tanga, Manyara, Morogoro, Iringa, Singida, Mara, Kagera, Tabora and Mtwara which were randomly selected from seven zones demarcated by the Ministry of Health and Social Welfare (MoHSW).

Selection of study sites

Tanzania Mainland was stratified into seven administrative zones according to the Ministry of Health and Social Welfare (MoHSW). In each zone, one region was randomly selected, except for the Northern and Lake Zones where two regions were randomly selected as they had more regions than other areas.

Selection of districts and health facilities

A total of nine (9) districts were randomly selected; one district from each of the selected regions. The selection was based on the list of all district hospitals in the regions grouped by ownership to ensure equal representation of Faith-Based Organization (FBO) owned hospitals, which operate as Designated District Hospitals (DDH) and Government-owned (public) hospitals. In total, there were 40 hospitals-14 FBO-owned which operated as DDH and 26 were public (government). Out of the list, three DDHs (35%) and six (65%) government hospitals were selected for the study.

Mtwara and Singida regions did not have a DDH, hence they were considered first in the selection process whereby in each region, one district and, hence, one government-owned district hospital was selected randomly. Random selection of the remaining four districts with government district hospitals was made from a list of regions with both government and FBO-owned hospitals to complete a list of six districts with government-owned district hospitals. Using the same method as above, the selection of districts with DDHs was done from the three remaining regions with both FBO-owned and government-owned district hospitals.

From each of the selected districts, two Health Centers (HCs) were selected randomly, one from a list of government HCs and the second from a list of HCs owned by FBOs. If a district had no FBO health centre, a government HC was selected instead. Since government owns the majority of dispensaries in most of the districts, then three government dispensaries were randomly selected from each of the districts selected.

Study Population

HWs who were engaged in provision of HIV, AIDS and RCH services at government and FBO owned HFs were involved in the study. HWs traced at HF levels were drawn from all sections of the respective/individual HF visited. However, the main focus was the Out Patients Department (OPD), Care and Treatment Centre (CTC) and RCH clinics/departments. Those who were selected for interviews included clinicians, nurses, health technicians (laboratory and radiology staff), pharmaceutical staff, medical attendants and other supporting staff (such as recorders or registry clerks).

On arrival at the hospitals and health centers the heads of OPD, CTC, RCH, IPD, TB and labour room provided the list of all the staff within their departments/units. Emphasis was put on those who were present during the interview day. From these lists, HWs were randomly selected for interviews from each department/unit and considering all work shifts. At the dispensary level, the in-charges were purposively selected. Random selection was then applied to select others from the list of all the remaining staff and cadres present on the interview days.

Data collection methods

Data from the HWs were obtained through interviews using a standardized structured questionnaire administered by trained researchers. The questionnaire comprised of a mixture of closed and open ended questions carefully designed for the purpose of complementing each other and thus allowing comprehensive understanding of various aspects related to task shifting practices. The structured questionnaire for HWs was used to collect information on their perceptions on effects of task-shifting practices in health service delivery at HFs. All questionnaires were administered in Kiswahili, the national language universally spoken in Tanzania. The questionnaire was administered to respondents after obtaining their informed consent.

Data processing and analysis

Responses from open-ended questions were coded to generate quantifiable responses before being entered into the computer. All the data were double entered into computer using EpiData (3.1) software. Accuracy was maintained and errors fixed by matching the correct data as written in the questionnaire. Thereafter, a clean dataset was exported to STATA (11) software for analysis.

Univariate analysis was done to generate descriptive summary (statistics) for variables of interest. In addition, bivariate analysis was done to relate types of tasks and cadres of HWs who actually perform those tasks at different points of service delivery. Moreover, analysis of task shifting practice by location, ownership and level of health facilities was done. The findings were presented in tables and figures.

Ethical Considerations

The study received ethical clearance from the National Health Research Ethics Committee of Medical Research Coordinating Committee (MRCC) Tanzania (NIMR/HQ/R.8c/Vol II/53) and Associate Director for Science of Centre for Disease Control and

Table 1: General and demographic characteristics of the health workers interviewed (N=566).

Description	Number of respondents (%)
Cadre category	
Clinicians	52 (9.2)
Nurses	244 (43.1)
Pharmaceutical staff	11 (1.9)
Laboratory staff	36 (6.4)
Medical Attendants	176 (31.1)
Others	47 (8.3)
Total	**566**
Sex	
Male	154 (27.2)
Female	412 (72.8)
Total	**566**
Professional Qualification	
Certificate	347(61.3)
Diploma	127(22.4)
Advanced diploma	19(3.4)
First degree	7(1.2)
Second degree	1(0.2)
Others	65(11.5)
Total	**566**
Ownership of health facilities	
Public	407 (72.0)
FBO	159 (28.0)
Total	**566**
Location of health facilities	
Rural	213 (37.6)
Urban	353 (62.4)
Total	**566**

Prevention (CDC) in Atlanta, United States of America. Before initiation of the study administrative and health authorities at different levels were informed about the study. HWs were given information on the study activities and what they should expect during the study. The language used in the data collection was Kiswahili. The consent form was signed by the HWs upon expression of willingness to participate in the study and all of them did so. Research ethical principles of voluntary participation, the right of withdrawal, anonymity and confidentiality were adhered.

Results

Social demographic information

A total of 57 health facilities: 9 district hospitals, 19 health centers and 29 dispensaries were visited, of which 44 Health Facilities (HFs) were from the rural and 10 from the urban settings. In terms of ownership, 50 facilities were owned by the government and seven by FBOs. These facilities accounted for a total of 566 HWs, the majority of whom, 412 (72.8%), were females. The mean age of the HWs involved in the study was 40.1(±10.3) years. Among the workers interviewed, 213 (37.6%) were from the HFs located in rural settings. Other demographic characteristics of participants are presented in Table 1.

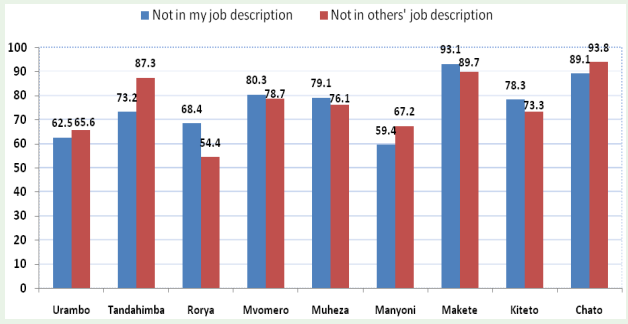

Figure 1: Proportion of health workers' personal experience and awareness of other staff performing duties beyond their job descriptions.

Awareness on existence of Task-Shifting practices in health services delivery at health facilities

Overall, 433/566 (76.5%) of the health workers interviewed acknowledged that they knew of others who were involved or had personal experiences in practicing duties beyond their specified job descriptions (Figure 1).

Perceptions on positive effects of Task-Shifting practices in health services delivery

Task-shifting practices were reported by the majority of HWs interviewed ((439/566 (77.6%)) as having brought about positive effects in health services delivery. Furthermore, 162/213 (76.1%) and 271/353 (76.8%) of HWs from rural and urban HFs, respectively, had positive perceptions of the effects of task-shifting in health service delivery (Figure 2).

Moreover, the majority of HWs found in both government and FBO-owned facilities acknowledged task-shifting practices as having had brought about positive effects in health service delivery. The proportions of the HWs reporting to have benefited from such

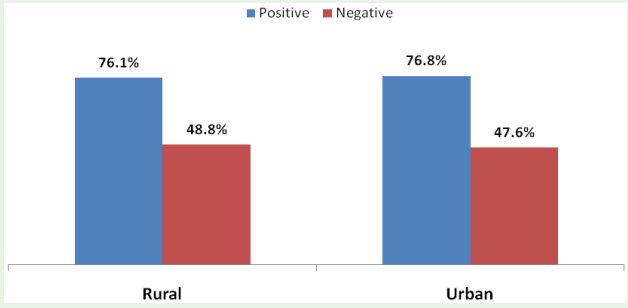

Figure 2: Proportions (%) of health workers who had either positive or negative perceptions on the effects of Task-shifting in service delivery by location.

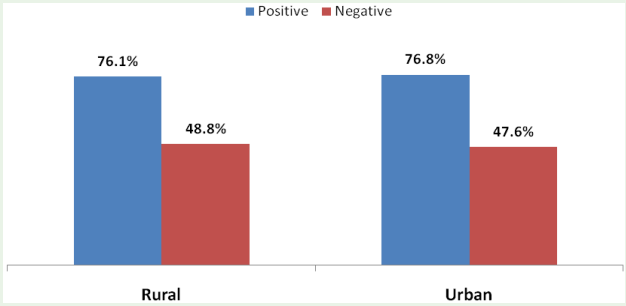

Figure 3: Proportion (%) of Health workers who had either positive or negative perceptions on the effects of task-shifting by ownership and level of health facilities (N=566).

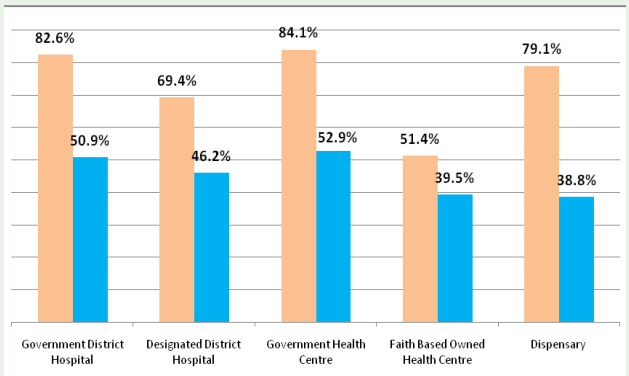

Figure 4: Number of Health workers who had either positive or negative perception on the effects of task-shifting by cadre.

practices within each category of individual HFs visited ranged between 51.4% in FBO-owned HCs and 84.1% in Government owned ones (Figure 3).

As illustrated in Figure 4, a similar trend was observed within all cadres categories whereby the majority of HWs acknowledged positive effects of task-shifting practices in the delivery of health services.

The top five perceived positive effects reported are presented in Table 2. Benefits of task shifting mentioned include: ensuring continuity in health service provision (as reported by 292/439 (66.5%) health workers), HWs being given an opportunity to learn more (89/439 (20.8%)), increase work experiences among the workers (88/439 (20.1%)), reduce patients' waiting time (59/439 (13.4%)) and avoidance of unnecessary deaths among patients (47/439 (10.7%)).

Perceptions on negative effects of task shifting practices in health delivery

Overall, 49.6% (281/566) of HWs interviewed reported that task shifting practices had negative consequences. In addition, 104/213 (48.8%) and 168/353 (47.6%) of the health workers from rural HFs and urban based HFs, respectively expressed a negative perception of the effects of task shifting in the health service delivery processes

Table 2: Perceived positive effects among Health Workers on task-shifting practices in health service delivery (N=439).

Effect	*Number of Health workers	Percent (%)
Ensuring continuity in health service provision	292	66.5
Opportunity to learn more	89	20.8
Increase work experience	88	20.1
Reduce patients' waiting time	59	13.4
Avoid unnecessary deaths among patients	47	10.7
Reduce overcrowding of patients	34	7.7
Enhance efficiency among HWs who co-operate	33	7.5
Improving the working relationship among cadres	33	7.5
Reduce unavailability of health workers at HF	22	5.0

*The responses were multiple.

Table 3: Perceived negative effects among Health Workers on task-shifting practices in health service delivery (N=260).

Effect	*Number of Health workers	Percent (%)
Poor quality of health services provided to patients	166	63.8
Increased complaints from patients	26	10.0
Negative health outcomes for patients	23	8.8
Lost trust among patients towards health workers	17	6.5
Lack of confidence among health workers in health service delivery	12	4.6
Incompetence leading to the risk of contracting infections among health workers	10	3.9
Misunderstanding between cadres of health workers	6	2.3

*The responses were multiple.

(Figure 2). When analyzed within cadres' categories some of the workers in each did acknowledge that task-shifting practices had negative consequences in the delivery of health services (Figure 4).

The frequently reported negative effects included: poor quality of health services provided to patients (166/260 (63.8%)), increased complaints from patients (26/260 (10.0%)), negative health outcomes for patients (23/260 (8.8%)), lost trust among patients towards health workers (17/260 (6.5%)) and lack of confidence among HWs in health service delivery (12/260 (4.6%)), Table 3.

Discussion

Results from this study have demonstrated that shortage of Health Workers (HWs) at the Health Facilities (HFs) has necessitated existence of task shifting practices in Tanzania. There is substantial evidence that task shifting in conjunction with other measures could contribute to improved access to health care services including those related to HIV, AIDS and RCH by increasing availability of HWs and can rapidly expand the Human Resource for Health (HRH) capacity in service delivery at the HF levels [6,11-13].

Findings from this study exhibited that perceived benefits outweighed the negative effects of task-shifting practices among all cadres of HWs in government and FBO-owned facilities based in both rural and urban areas. Our findings were in congruent with

results from other studies which generated evidence on how task shifting influences the quality, safety, acceptability, cost, management and impact of interventions in sub-Saharan Africa from different dimensions [9,17,18].

As noted in the results section, the HWs in this study specifically mentioned such benefits of task shifting as ensuring continuity of health service provision, creation of opportunities for learning, increasing opportunities for gaining work experiences, and improving working relationship among cadres. It is well informing to establish that the latter results/reports are consistent with those reported from Uganda, Benin and Rwanda where nurses positively linked task-shifting practices with non-financial incentives, including an opportunity to be more involved in patient care, and getting satisfaction from an expansion of professional competencies through capacity-building [5,14,20].

Waiting time is one of the major complaints being registered by patients/clients mainly attending government health facilities [25]. In this study HWs have reported task shifting practices had reduced overcrowding and waiting time. This could positively influence patients' satisfaction on health services received at the HFs and improve attendance. These findings were in line with other studies related to task shifting and patient waiting time [15,16].

The results underscore the reported reality from various studies that despite limited training opportunities for available nurses and medical attendants, these workers had helped to sustain provision of RCH and HIV/AIDS services, namely PMTCT, VCT HBC, ARV and PITC, especially in rural HFs where their presence is more vivid [24].

From another perspective, HWs also expressed negative effects of task shifting in health service delivery and which may have impact on both the workers delivering services and patients. Poor quality of service, lost trust towards HWs, complaints from patients and negative health outcomes for patients may impede accessibility and utilization of health services; and thus may undermine efficiency in the use of the available human resources [7,21,22]. In addition, the reported lack of confidence and incompetence among HWs, and misunderstanding between cadres of HWs are likely to compromise quality of health services. In case task shifting would have had been legalized in Tanzania, this could be easily addressed through in-service training, mentorship and supportive supervision.

Conclusion

Findings from this study show that the shortage of human resources for health has necessitated the existence of task-shifting practices in health service provision at HF levels in Tanzania. The practice is valued among the HWs as through such initiative continuation of health service delivery at HFs is ensured. To allow realization of SDGs, the situation is calling for the government of Tanzania to legalize task-shifting in order to monitor its implementation with the view of maintain the quality of rendered health care services.

Authors' contributions

(a) JMM, SEM, VAN, AES, JM, SPK, JJM and MAM, conceived the idea, participated in designing of study and development of data collection tools. JMM, SEM, VAN, AMK, MAM, AKM, AES, JM, SPK, GMM and TAM implemented the study on field data collection and data analysis. JMM, SM, VAN, AMK, MAM, JSK, AKM, AES, JM, TYM, SPK, TM, JJM, GMM and MNM were involved in drafting all sections of the manuscript. All authors read and approved the final manuscript.

(b) JMM, SEM, VAN, AES, SPK, TAM, JJM, GMM and MAM, have carried out research and other activities in the HRH field for the past 10 years as well as in the health systems and policy fields. JSK, AKM, JM, TYM,AMK, GMM and MNM, have vast experience in carrying out health research and programs evaluations in TB, HIV/AIDS, Lymphatic Filariasis, Malaria, zoonotic diseases and health systems and policy in Tanzania and East Africa region.

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