



POLICY RESPONSES TO THE INEQUITABLE DISTRIBUTION OF CLINICAL HEALTH WORKERS IN TANZANIA

Brief

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Introduction

In order to evaluate the distribution of health workers across Tanzania, relative to health needs, the USAID-funded Health Policy Project (HPP) examined existing data sources and conducted new analyses of human resources for health (HRH). Drawing on the results of these analyses, HPP proposes within this brief specific policy actions to improve 1) supply and retention of skilled health workers; 2) distribution of health workers; and 3) processes for hiring skilled health workers.

Background

Tanzania’s health system faces a staffing crisis of skilled clinical health workers, specifically, doctors, dentists, clinical officers, nurses, nursing officers, laboratory workers, dental technicians, and midwives. In fact, the Government of Tanzania (GOT) estimates the overall health worker shortage at just 56 percent of the country’s requirements (MOHSW 2014). As an illustration of the current availability of skilled health workers, there are only 7.44 skilled workers (excluding dental

and laboratory staff) available per 10,000 persons to support labor and delivery across both the public and private sectors. This is less than a third of the WHO-recommended level of 22.8 skilled attendants per 10,000 persons (URT, 2014a; WHO, 2015).

To bring Tanzania’s staffing levels up to meet the requirements of new facility staffing norms—and keep pace with population growth— Tanzania will need a total of 63,750 additional health workers by 2024 (URT, 2014b). This increase may be difficult to achieve, given that the country’s 2014 cohort of health-related trainees was just 6,050 (URT, 2014b). Moreover, in fiscal year 2013/14, only 70 percent of new recruitment requests (permits) for health workers were approved in the public sector (BMAF, 2015), making it difficult to induct trainees into the workforce.

Despite the current staffing gap—a gap that is estimated to grow given future healthcare needs—steps can be taken today to ensure a more equitable distribution of health staff in the years to come. A principle of equitable distribution of health workers is that areas

with greatest health need should see disproportionate health workforce density. In other words, a greater proportion of HRH should be allocated to those areas with the greatest need. These areas would benefit from additional allocation of new recruitment permits or other interventions to increase HRH density.

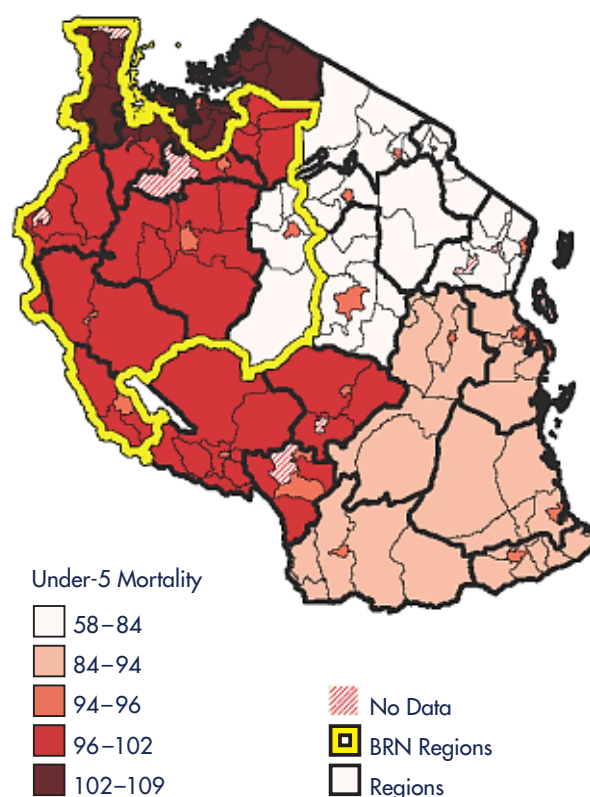
Redistribution of HRH has received significant attention in Tanzania since 2013. As of 2014, 74 percent of doctors worked in urban areas with a doctor to population ratio 17 times more favorable than in rural areas (URT, 2014a). Similarly, the three urbanized regions of Kilimanjaro, Dar es Salaam, and Mwanza commanded 25 percent of all skilled HRH. Redistributing health workforce density across geographic areas will help Tanzanians have more equitable access to care.

Health Need

A common measure of the effectiveness of a primary healthcare system is the under-five child mortality rate (U5MR), measured as the number of deaths per 1,000 live births. While U5MR is the total impact of many factors contributing to service delivery effectiveness, health-seeking behavior, and availability of preventive interventions, higher mortality suggests geographies where HRH needs for service delivery may be higher. HPP used commercially available GIS-mapping software to plot the data on a map of Tanzania, delineating local government authorities (LGAs) and regions. Figure 1 shows an U5MR color-coded on a map with LGA boundaries (N: 167). The map applies data from the Ministry of Health and Social Welfare (MOHSW), where such values are used with other indicators for allocating pooled health resources (MOHSW, 2015). The U5MR levels are higher (shown as dark brown and red) in the Western (left part of map) and Lake (top left) zones of the country. The Western and Lake zones represent groupings of regions, which in turn contain many LGAs. U5MR is only a single indicator of the potential need for HRH distribution and there have been other proposals to define underserved LGAs using geographical aspects, social services, and broad cultural context (Nkya, 2012).

Many of the regions with higher estimated U5MR are also the focus of the Big Results Now (BRN), Health Key Result Area, an initiative launched by the GOT along

Figure 1. Under-five Mortality Rate per 1,000 Live Births by LGA



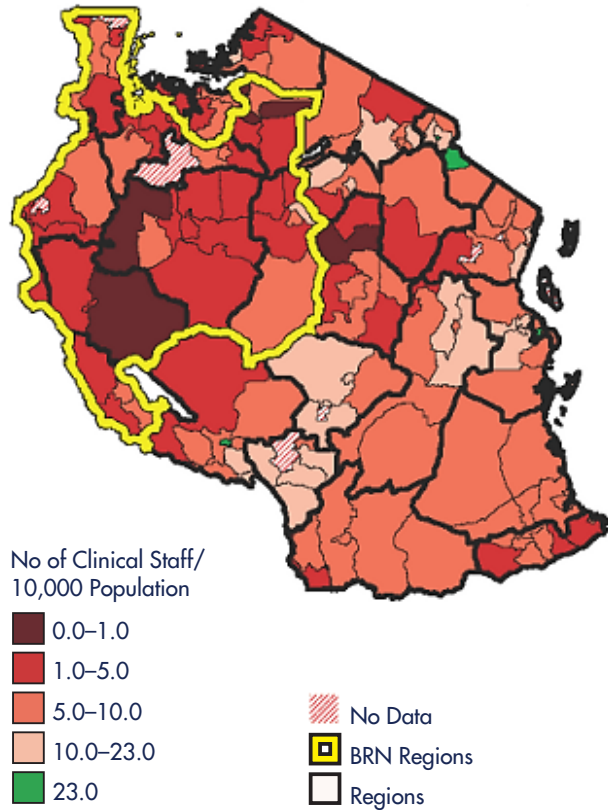
with its development partners in late 2014. The BRN initiative focuses on four issues: reproductive, maternal, neonatal, and child health scale-up; HRH; health facility performance management; and commodity management (URT, 2014a). The BRN regions are important to highlight given the initiative's focus on HRH and redistribution.¹

Distribution of Clinical Health Workers

Across both public and private sectors, Tanzania has a lower population ratio of clinical health workers compared to its peer countries (URT, 2014a). Within the country, the HPP and BMAF analysis confirmed the disparity in availability of HRH across all 30 regions. Thirteen regions had below the national average of doctors, assistant medical officers, nurses, and midwives (as a ratio of total population). The range in disparities can be extreme:

¹ It is important to note that some LGAs in the North West and Lake zones with high U5MR are outside the current BRN focal area.

Figure 2. Clinical Health Workers per 10,000 Persons by LGA



Katavi region in the West, a BRN focal region, has 1.6 nurses per 10,000 persons, compared to Kilimanjaro, in the Northern Zone, which has 10.6 nurses per 10,000 persons (URT, 2014a). Similarly, Tabora in the Western Zone has 1.1 clinicians per 1,000 persons, compared to 5.2 clinicians per 10,000 persons in the Pwani region in the Coast/Eastern Zone. Nine regions, mostly from the Western and Lake zones, were designated by the BRN study as “critically underserved” for these two cadres (URT, 2014a). These regions, which include Katavi and Tabora, were prioritized for action on HRH redistribution and new recruitment permits, as discussed later.

In order to understand the distribution of clinical health workers in greater detail, and to formalize the findings, HPP used the MOHSW’s Human Resources for Health Information System (HRHIS) data to map clinical health worker density at the LGA level, going beyond the BRN analysis. The HRHIS data includes staffing across public and private health workforces by LGA and personnel type (Box 1).

Box 1. Definition of Clinical Health Workers

For the purposes of this analysis, clinical health workers are defined as the following ten cadres:²

- Assistant dental officers
- Assistant medical officers
- Assistant nursing officers
- Clinical officers
- Dental surgeons
- Dental therapists
- Medical officers (doctors)
- Medical specialists
- Medical consultants
- Nurses
- Nursing officers

The study team chose not to include laboratory workers in this group, as they are primarily located in hospital laboratory settings, rather than at the primary healthcare level. Laboratory health workers were considered as clinical staff for all other reasons.

Almost two-thirds of the LGAs, 103 out of 161 mapped, are under the Tanzania national level of 7.17 clinical health workers per 10,000 population for the personnel types included in the analysis (Figure 2). Most of these LGAs are predominantly rural districts and councils, highlighting a pronounced disparity in the distribution of clinicians between urban and rural areas. In fact, 15 percent of clinical HRH (as defined by the personnel categories shown in Box 1) serve in just three LGAs that collectively contain only 7 percent of the country’s population, according to the HRHIS and census data.

Against the WHO’s recommendation of 22.8 personnel for skilled delivery per 10,000 population, Figure 2 suggests a shortage in all but two LGAs. The greatest need is concentrated in the LGAs within the Western and Southwestern zones. The entire Western Zone and part of the Southwestern Zone (Sumbawanga LGA) are included in the BRN area. In the areas highlighted in dark brown, many LGAs have very few clinical workers.

While there are some similarities between these findings and the BRN analysis of health workforce density at the region level, there are two additional insights the HPP and BMAF analysis revealed. One, HRH density for LGAs in a region (e.g., Tabora in the Western Zone) can vary widely. Therefore, policies that distinguish need at the LGA level are critical. Second, there are areas with low HRH density outside the BRN focal area which will require future attention (e.g., in the Central Zone, Dodoma and Manyara regions, and in the Southeast corner (Mtwara region) of the country).

Comparing Figures 1 and 2, we see that some correlation exists between low HRH density and high U5MR, especially in the Western Zone, which suggests areas of specific focus for equitable redistribution of health workers, or other policy measures. The higher health need in these LGAs coupled with significantly lower clinical HRH ratios per 10,000 population suggests a very high level of inequity within and stress on the health system. Especially considering the lower than average complement of skilled health workers, improving primary health outcomes in these LGAs may be especially challenging.

Current Policy Responses and Recommendations

Improve supply and retention for the skilled health workforce

Before considering distribution of new staff and redeployment of existing workers to areas with higher need, the overall volume of new health workers per year should be addressed. Increased supply of HRH allows options for health policymakers and planners, especially considering that there is a generalized HRH gap in Tanzania, with some areas facing an acute gap.

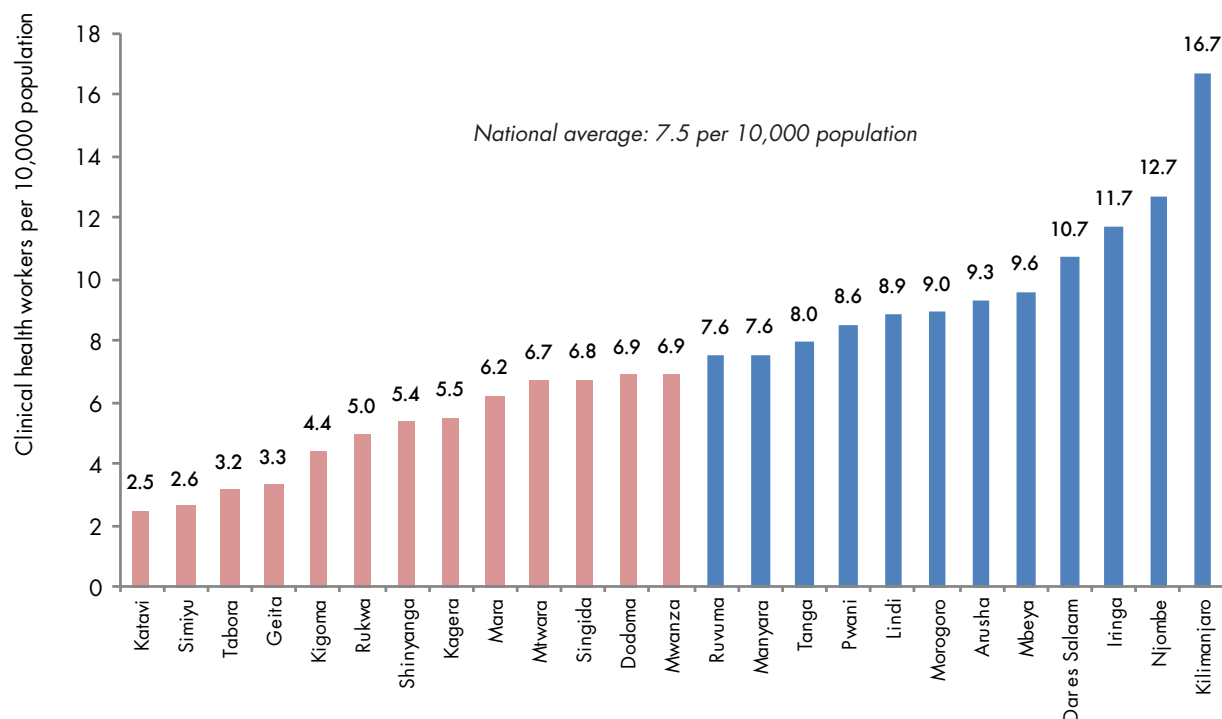
There is a limited supply of new health professionals entering the workforce every year. Under its *HRH Strategic Plan 2014-2017*, the GOT aims to build interest in health professions and to increase enrollment at universities from the estimated 6,059 in 2014 to 17,778 by 2019—a near threefold increase over the current number of students (MOHSW, 2014). There is also a deficit of trainers and academic staff at health training institutions, with the *HRH Strategic Plan 2014-2017* estimating the shortage at nearly 35 percent of need (MOHSW, 2014). Long-term

trends since the 2008/09 academic year suggest that growth in enrolment and in graduate volumes have slowed and, in the case of certificate and bachelor-level courses, dropped since peaking in 2010/11 (MOHSW, 2014).

The supply side of the health workforce suggests significant challenges to the GOT's ability to meet its goal of increasing the proportion of highly-skilled health workers from 12 to 13 percent of all health workers, and mid-level skilled workers from 54 to 59 percent by 2024 (MOHSW, 2014; URT, 2014b). This policy effort is aimed at raising the quality of service delivery for primary and secondary healthcare, where there is currently significant dependence on unskilled medical attendants, and to reduce the relative proportion of support staff.

The GOT estimates that the health sector will require about 68,200 new health workers from 2014 to 2024 to meet its needs, requiring health training institutions to enroll 35,550 new students over the same period. These figures reflect additional workers to meet new standards, plus the need to make up losses from personnel leaving the public or private health workforce altogether (URT, 2014b). At least 6.5 percent of the need for new workers is for gap-filling around workers exiting the health sector. There is no evidence that attrition in HRH is higher in the public sector, in fact trends may go in the other direction (Songstad et al., 2012; Tabatabai et al., 2013). Therefore retention policies are needed in both sectors.

The GOT is improving its support to the supply side, with additional funding for grants and student loans to undergraduates who study medicine and nursing at universities. Over the past three years, the GOT spent TZS 13 billion on funding students for medical and nursing courses (URT, 2014a). Students who receive these government grants or loans are required to sign agreements (bonding) to serve for five years in the health sector. However, this policy is poorly enforced and monitored. An appropriate bonding mechanism for skilled graduates, distinguishing those who received loans or grants, can link individual incentives with social need. The BRN for health has rated this as a high impact, implementable option and the GOT is committing to enhanced implementation from late 2015 (URT, 2014a). Improving conditions of service, workplace amenities, orientation and deployment incentives may also help to attract new graduates to rural areas. A report by BMAF showed that where LGAs tried to organize additional funds for incentive purposes, localizing incentive



Source: MOHSW, 2015; Authors

*Clinical health workers are types selected for this brief

packages contributed to the increase in retention of health workers from 76 percent in 2009 to 91 percent in 2012 (URT, 2014a). Additionally, compulsory service processes, as proposed under BRN, requiring service at primary healthcare prior to full-service registration can help to fill gaps in workforce.

Improve distribution of new and existing health workers

The BRN workplan aims to prioritize the nine most critically underserved regions to receive at least 40 percent of new HRH recruitment permits from FYs 2015/16 to 2017/18 (baseline: 32%) (URT, 2014a). However, due to the complicated nature of public sector hiring, this will require the coordination of LGAs and several ministries, and the execution of a recruitment permit analysis and remediation plan by the President's Office of Public Service Management which approves these permits. In the BRN phase two, another four regions will receive such attention. A task force on the reallocation of these permits was formed in 2014 to analyze, execute, and monitor this process.

Additionally, the BRN suggests that existing staff may be redeployed within a region when significant disparities

are found across facilities or LGAs, uncorrelated with the density of population in the catchment or geographical areas. In support of this inner-LGA redeployment, an analysis conducted for the BRN in three case study regions (Tabora, Kigoma, and Kagera) found that there were number of dispensaries within the same LGAs that did not have a clinician or a nurse, while others had at least one of the two types (URT, 2014a). Similarly, the HPP and BMAF analysis found that there were significant disparities within regions across LGAs.

The average cost of relocating a health worker is about TZS 3 million (US\$1,715 at 2014 rates). One LGA in the Kagera region which relocated nine workers in 2014 faced a total cost of TZS 26 million (US\$14,800) (URT, 2014a). The redistribution suggested by BRN would not move staff long distances, as the analysis of distribution will be limited within a region. The BRN implementation prioritizes eight regions for this process, with redistribution implemented by FY 2016/17. Overall, an effort to relocate 600 health workers in the priority regions could cost about TZS 1.7 billion (US\$971,400 at 2014 rates), to be funded by GOT from domestic resources. In time, the process of redistribution will follow an evidence-based approach that considers facility-level service delivery needs (i.e., the workload

indicators of staffing need or WISN approach). With this approach, redistribution can be expanded to more regions (an additional eight in FY 2016/17) and their LGAs.

Improve processes for hiring public sector health workers

Many problems have been identified in the process of recruitment of health workers into public service: long gaps between graduation and when new recruitment permits are decided, long and complex process of requesting and getting administrative and fiscal approval for new hiring, and a poor overall record in filling the approved permits with qualified staff, especially clinicians. This has exacerbated the ongoing HRH gap in Tanzania. These issues have been recognized in the BRN, especially the HRH recruitment process, including

1. LGAs with low capacity to understand their HRH staffing needs preparing their staffing request inclusive of new permits
2. Assessment of the request by the President's Office of Public Service Management without direct consultations with LGAs, with low inputs from the MOHSW
3. Approval on the fiscal front by the Ministry of Finance based on budget considerations (often reducing the approved level)
4. Issuance of the permits at a delayed stage misaligned with graduation dates, leading to low uptake and filling of posts

In the short-term, Tanzania is considering strengthening LGA capacity to utilize existing HRH better, including using the WISN methodology, and thereafter making better-informed requests. At the central level, process improvements may also reduce delays that exacerbate Tanzania's HRH shortage, in particular synchronizing the issuance of approved permits with graduation.

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