

A Review of Health Infrastructure and Workforce Critical for Delivering Universal health Coverage in Uganda

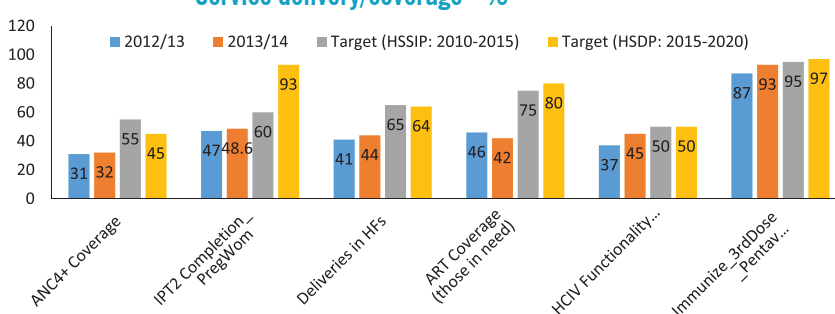
Executive Statement

Universal health coverage (UHC) - defined as the availability of quality and affordable health services for all when needed without financial hardships- can be a vehicle for improving equity in healthcare. However, access to basic healthcare is still limited, and the quality remains low in Uganda. This is mainly caused by poor health infrastructure, sub-optimal operation of health facilities, and staff absenteeism, among others. This brief summarizes the findings of a study on infrastructure and human resource gaps that impede Uganda from realizing UHC¹. The study results show fundamental challenges with the health infrastructure needed to deliver UHC. Spatial inequality exists in health facility population coverage and private sector health infrastructure investments. Low health workforce density is widespread; and even if the staffing level is raised to 100% as per the set staffing norms for critical cadres, the health workforce density will still fall short of the recommended standards. The low health workforce density implies that the existing health workforce is deficient and unable to expand population-based healthcare services. Accelerating progress towards UHC requires; increased investments in health infrastructure and strengthening Public Private Partnership arrangements to establish health infrastructure in disadvantaged regions; and improvement in health workforce density by reviewing current staffing norms for critical cadres as well as increased deliberate investments in human resources for health.

Introduction

Sustainable Development Goal (SDG) 3 stresses the need to ensure healthy lives and promote wellbeing for all at all ages (WHO, 2015). Under this goal, the world is committed to reducing maternal mortality, reducing child and neonatal mortality, ending epidemics such as HIV/AIDS, tuberculosis, and malaria, and ensuring universal health coverage (UHC), among others. Within this, Uganda is contending with the various components of achieving universal health coverage through enhancing access to health care. Access to health services comprises of availability, affordability, and acceptability of health facilities and their readiness to deliver health services (O'Neil et al; 2013)². In other words, access can be assessed in terms of availability of health facilities and distribution of healthcare infrastructure, Human Resources for Health (health workforce), and services. Indeed, Healthcare infrastructure and/or facilities is a central facet of the health system and is integral to service delivery and the ultimate drive towards universal access and coverage. Uganda faces the challenge of

Figure 1: Selected health services core indicators for Uganda
 Service delivery/coverage - %



Note: ANC4=At least 4 antenatal care, IPT2= Intermittent presumptive treatment for malaria (2 doses), HCIV= Health Centre IV, CEMOC C/S= Comprehensive emergency obstetric care. C/S is Cesarean Section, and IMMUNIZE= Immunization.

poor health infrastructure and staffing gaps resulting in the country falling short of attaining set health targets. There is a gap between the actual health indicators the country has achieved and the Health sector strategic and investment plan (HSSIP), and subsequently health sector development plan (HSDP) health performance targets. For instance, the percentage of women who had at least 4 antenatal visits was lower for 2012/13 and 2013/14 compared to the set

targets. The same low performance is observed across other health indicators (see Figure 1).

In this policy brief, we examine the status of healthcare infrastructure by analyzing the distribution of healthcare infrastructure (facilities) and health facility density, as well as Human Resources for Health (HRH) to delineate access to and coverage of the population by health facilities in Uganda.

Access to Healthcare

The fraction of individuals³ who access healthcare within a distance of 5kms of a health facility is generally low across all types of health facilities (Table 1), implying that distance to health facilities is an impediment to healthcare access.

Table 1: Access to healthcare by facility type

Category of Health Facility	% accessing healthcare within 5 km radius			
	2002/03	2005/06	2009/10	2012/13
Government hospital	10.7 ⁴	4.3	5.7	4.9
Government Health Centre	23.1 ⁵	21.4	23.8	34.9
Private hospital/Clinic	48.7	48.1	46.5	37.5
Pharmacy/Drug shop	17.5	14.8	16.8	7.8

Source: Compiled from UBOS – UNHS (2002/03, 2005/06, 2009/10, 2012/13)

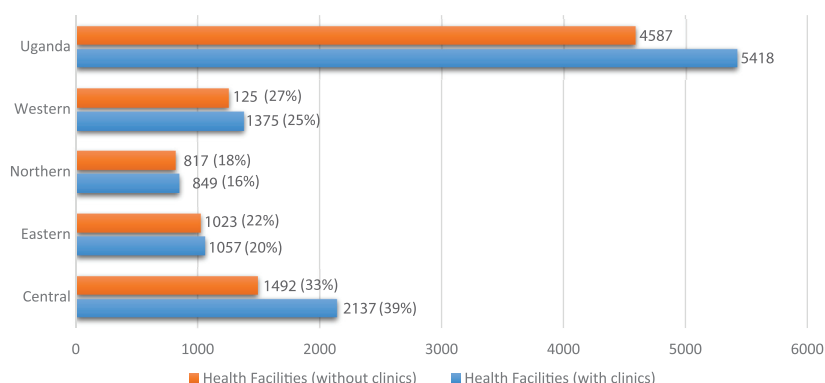
Accordingly, 41% of women in reproductive age (countrywide) reported that they have a serious problem in accessing healthcare for themselves when they are sick due to distance to health facilities. The problem is more striking in the South-Western and Northern regions as well as in rural areas (compared to urban) and amongst those in the lowest wealth quintile (poorest)

Health infrastructure and Health Facility Density

Nationally, the distribution of health facilities is skewed, in favour of the Central and Western regions (Figure 2). In line with the welfare distribution, majority of the facilities are established in the Central region (39% - including clinics and 33% - without clinics) followed by Western, Eastern, and lastly Northern regions. Private for Profit (PFP) health facilities (clinics) are more common in the central (30% of all facilities) followed by Western region (8.7% of all facilities).

There is marginal private sector investment in health facilities in the Northern and Eastern regions, given that PFPs (clinics) account for only 3.2% and 3.7% of all health facilities respectively. These findings suggest the need for more investments in healthcare

Figure 2 Distribution of health facilities⁶



Source: Author's computation based on HF inventory and HSDP (2015).

infrastructure (facilities) in the lagging regions by both government and the private sector. Investing in the lagging regions is important in creation of equity in access across regions, in order to drive progress towards UHC.

The analysis of health facility density, which is a measure of health facility – population coverage, reveals that the facility density is 15.15 and 12.83 per 100,000 population with and without clinics respectively (Table 2). Across regions, health facility density ranges between 11.32 per 100,000 population (in Eastern region) to 21.71 per 100,000 population (in central region). The health facility population coverage is lowest in Eastern and Northern Uganda when compared to the rest of the regions. This reaffirms the need for more investments in healthcare infrastructure (facilities) as revealed in the data on facility distribution. Fewer facilities are available for provision of services for a larger number of people in the two lagging regions and this potentially undermines both access and quality of healthcare services for the population, which is a threat to UHC progress.

Table 2: Health facility density

Region	Health Facility Density per 100,000 population	
	With clinic ⁷	Without clinic ⁸
Central	21.71	15.16
Eastern	11.32	10.96
Northern	11.44	11.01
Western	15.01	13.70
Uganda	15.15	12.83

Source: Author's computation based on HF inventory, HSDP (2015), and UBOS (2015)

Health workforce

Results show some improvement in public sector staffing reflected by reduction in staffing gaps at all health facility levels between 2008

and 2013. Statistics in Figures 4A & B capture district level – public health facility staffing, aggregated at regional and national levels. From the results, about 52% and 56% of the required HRH positions are filled for general staffing (including non-medical) and medical staffing, respectively. Wide staffing gaps therefore exist both at the national and regional levels, with marginal variations across regions.

Figure 4A: Staffing - General

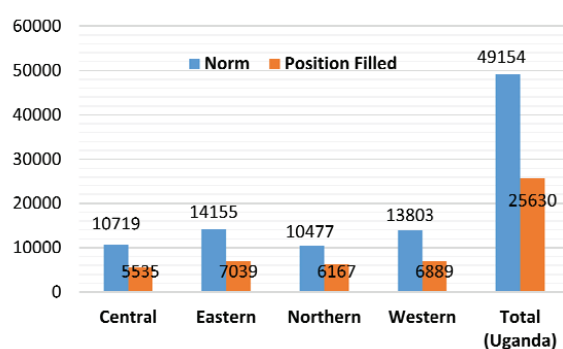
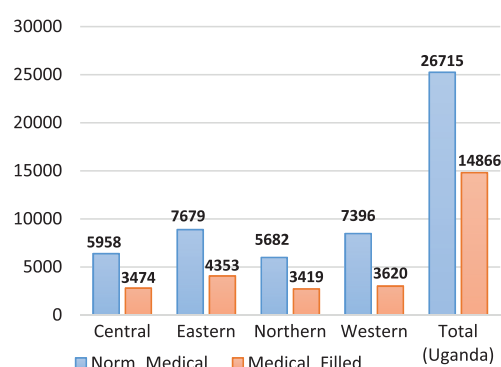


Figure 4B: Staffing - Medical



Source: Author's computation based on MoH data on district HRH recruitment plan 2011/12

The gaps in HRH are a serious threat to Uganda's progress towards UHC. The goal of universal coverage will remain unattainable for Uganda if health facilities are not equipped with the required or sufficient human resources necessary to deliver the healthcare services needed by the population. In addition to training an adequate number of health workers, this calls for government to devise strong mechanisms capable of attracting and retaining health workers in the health system, especially critical cadres.

In addition to the staffing gaps, the study examined the health workforce density (see Table 3 below). In relation to the World Health Organization's recommended density of 2.28 health workers per 1,000 people (Cotlear et al., 2015)⁹, the results show that the health workforce density for Uganda ranges between 0.46 and 0.54 and varies across regions. At the national level, the density increased slightly from 0.498 in 2011/12 to 0.710¹⁰ in 2014, although this is generally low. This means that the existing health workforce in Uganda's public health sector is deficient and unable to expand population-based healthcare services. This poses a serious threat towards UHC progress. Reviewing current staffing norm, recruiting health workers to satisfy the staffing norm, and staff retention initiatives are critical in achieving the WHO recommended standard.

Table 3: Public sector health workforce density

Region	Health Worker (HW) Density (HWs per 1,000 people) 2011/12	HW Density (HWs per 1,000 people) 2014
Central	0.52	-
Eastern	0.47	-
Northern	0.54	-
Western	0.46	-
Uganda	0.498	0.71

Source: Computed based on MoH data on district HRH recruitment plan 2011/12; IntraHealth HRH data (2014) and UBOS population data

Further analysis based on the staffing norms set by the Ministry of Health reveal that even when all the required health worker positions are filled to the level of the set norms (i.e., 100% staffing as per set norms), the resultant health workforce density of 0.86 (See Table 4) still falls short of the recommended WHO standard. Even when all the critical cadre¹¹ gaps are filled, the available health workforce would still not be in a position to provide full coverage to the population. This result suggests that the set norm is lower than what the required norm should be and might not have adequately accounted for health worker workload and the changes in healthcare services, demand or population. This presents the need to periodically review the set staffing norms by aligning them to the WHO standard, changes in populations and demand for healthcare services, and workload, among other factors.

Table 4: Staffing – critical health cadres at national level (public sector): December 2013

Health cadre	Norm	Filled position	Gap	Density based on Filled position ¹²	Estimated density based on set norms ¹³ (without-consultants)	Estimated density based on set norms (with consultants)
Doctors	1296	936	28	0.71	0.86	0.87
Consultants	305	107	65			
Nurses	19946	16,584	17			
Midwives	6,061	4,607	24			
Clinical Officers	2,758	2,780	-1			

Source: Computed based on IntraHealth HRH data (2014) and UBOS population data

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Conclusions and Policy Action Recommendation

This policy brief highlights the status of health infrastructure, and health workforce in Uganda. The findings show fundamental challenges with the critical health infrastructure needed to deliver UHC in Uganda. These challenges include spatial inequality in health facility population coverage, with the Eastern and Northern regions experiencing the least coverage. In addition to this, the long distances to health facilities are a barrier to healthcare access for some segments of the population (for instance, women of reproductive age). Regarding human resource for health, low health workforce density was widespread, indicating that the existing health workforce is deficient and unable to expand population-based healthcare services. It is worth noting that the specific critical cadre gaps (for doctors, nurses and midwives) are not substantial; however, the overall health workforce density remains very low compared to the WHO standard for expanding population-based healthcare. Additionally, even when the staffing level is raised to 100% as per the set national staffing norms for critical cadres, the health workforce density will still fall short of the recommended WHO standards. This situation necessitates the review of the current staffing norms - especially for critical cadres, the recruitment of more health workers to satisfy the revised staffing norms, and the implementation of staff retention initiatives. We recommend the

following policy actions for strengthening health infrastructure and HRH, as the country positions itself to drive the UHC agenda.

- Increased investments in health infrastructure (to provide facilities that have the necessary equipment) should be undertaken to a greater extent, especially in regions with low health facility population coverage (e.g., the East and North). Efforts should also be directed to ensure the functionality of the health facilities in these regions by stocking them with the necessary medical commodities and equipment. Public Private Partnership (PPP) arrangements should be strengthened in these regions to enhance the health infrastructure.
- Review the staffing norms especially for critical cadres, followed by recruitment of more critical health workers in order to satisfy revised critical cadre staffing norms, and putting in place effective staff retention initiatives. Review of the norms should take into account the recommended WHO standard, workload, and changing health services as well as health services demand and population. Government should thus increase efforts towards deliberate investments in HRH (including capacity building), and the Results-Based Financing model can be used to motivate health workers, improve their performance as well as healthcare coverage and outcomes.

Endnotes

- 1 Odokonyero, T., Mwesigye, F., Adong, A., & Mbowa, S. (2017). Universal Health Coverage in Uganda: The Critical Health Infrastructure, Healthcare Coverage and Equity. Economic Policy Research Centre (EPRC), RESEARCH SERIES No. 136.
- 2 O'Neil, K., Takane, M., Sheffel, A., Abou-Zahr, C., Boerma, T. (2013). Monitoring service delivery for universal health coverage: The service availability and readiness assessment. Bulletin of the World Health Organization 2013; 91:923-931
- 3 Individuals who fall sick and seek for medical care

- 4 Includes other hospitals apart from government hospitals
- 5 Includes other health centers apart from government health centers
- 6 Health facilities (without clinics) means government facilities only. Health facilities (with clinics) means government and private facilities combined.
- 7 With clinic means both public and private health facilities
- 8 Without clinic means only public health facilities
- 9 Cotlear, D.; Nagpal, S.; Smith, O.; Tandon, A.; Cortez, R. (2015). Going universal: How 24 developing countries

- are implementing Universal Health Coverage reforms from the bottom-up. Washington, DC: World Bank.
- 10 Estimated density for 2013 is reported in Appendix B. Note that density is computed only for public sector due to unavailability of data on private sector HRH. However, even if the number of public sector health workers (Doctors, Nurses, and Midwives) is doubled to account for private sector, the density still falls short of the WHO recommended standard.
- 12 Critical cadres comprise – doctors, nurses, and midwives.
- 13 Cadres considered are Doctors, Nurses, Midwives, and Clinical Officers. If consultants are considered, the density is about 0.72
- 14 Same cadres as above

This policy brief was produced as part of the SPEED Research Project.

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