

On comparison of average staff from WISN calculated requirement and current staffing provided in the hospitals structure, 3 key staff cadres seem to be have a major shortage i.e. GP doctors, midwives and laboratory staff with 70%, 84.6% and 114% respectively. The hospitals have improvised from their own resources to reduce this shortage but still there are visible gaps as shown in table that require more interventions. Currently, the doctors, midwives and laboratory staff shortages have reduced by 40%, 54.6% and 64% respectively. It is only the nurses where the structure seemingly provides more numbers compared to WISN calculations on the workload. However, we need to know that data used in WISN was obtaining from nurses roles and yet the nurses cross cut in many tasks including dispensing at pharmacy, which did not have data to enable us calculate the required staff in dispensing.



Given the workload variations, if the ministry wants to recruit and deploy staff to health facilities based on this scientific approach; the study has now recommended categorization of hospitals such that hospitals with similar workload can benefit equally as opposed to the previous recommendation of deploying uniformly same numbers of staff. There are three categories; category I with a minimum of 30 GP doctors, 100 nurses including pharmacy nurses, 40 midwives, 25 laboratory technicians, and 10 anesthetists. Category II with a minimum of 20 GPs, 80 nurses including pharmacy nurses, 30 midwives, 22 laboratory technicians and 8 anesthetists; whereas category III has been recommended 12 GPs; 42 nurses including pharmacy nurses; 15 midwives; 12 laboratory technicians and 5 anesthetists.

WISN application therefore is a very special and important contributing tool in HRH planning and management; and it has been recommended that with support from the ministry of health and the development partner, WISN application should be institutionalized in health facilities as an HRH management tool. The WISN reports generated from the hospitals' workload always guide the Ministry of health on the evidence-based decisions on deployment of health workers and consequently review of the health sector staffing structures.

## Conclusions or policy recommendations

The WISN results have revealed a number of staffing challenges both at hospital and health center levels. It is therefore important to undertake this study as a very helpful information source for health workforce planning and management. The ministry of health and the other decentralized level entities together with hospitals should work together using this information provided by the study to improve health workforce and in turn, improve health services delivery to the population. The significant shortages identified especially in laboratory staff, midwives, doctors (GPs) are key and may require immediate and short-term actions. Therefore, workload is a good indicator for estimation of staffing requirements in each health facility and distributing health workers by using equity or staff population ratio may not be a better approach.

## Key Recommendations

- Obtaining accurate and detailed data for each cadre working in hospitals is important and a vital action for evidence-based health workforce needs assessment and planning. It is important to prepare reporting tools that collect all required data in relation to the broader scope of practice of these cadres.
- To boost health workers motivation and vitality to offer quality services in public health facilities, there is a need to consider policy changes that allow more flexible working hours and job-sharing arrangements to encourage those health workers wishing to reduce their working hours to remain in the workforce.
- Suitable succession planning needs to be established and/or boosted to ensure continued service levels especially the specialized services, particularly offered by the specialized doctors who are retiring and yet there is still a significant gap to be filled in most hospitals.

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REPUBLIC OF RWANDA



MINISTRY OF HEALTH



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## WORKLOAD INDICATORS OF STAFFING NEEDS (WISN) APPLICATION IN RWANDA

The Rwanda Health Systems Strengthening (RHSS) Project (2014–2019) represents the US Agency for International Development's (USAID) continued commitment to supporting Rwanda on its journey to sustainable improvements in the health of its 12 million people. The overall goal of RHSS is to improve population health outcomes by strengthening the performance of the health system at the national and decentralized levels and by increasing the resilience of the health sector to respond to new health challenges. Implemented by Management Sciences for Health (MSH) and its partners, the project supports implementation of Rwanda's Fourth Health Sector Strategic Plan (2018–2024) and contributes to Rwanda's Vision 2020 for a health system that guarantees universal and equitable access to quality health care for all people in Rwanda.

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Rwanda like many countries in the sub region is struggling with an inadequate health work force in terms of quantity and quality. The inadequate skills mix and unclear definition of roles / delineation of services per cadre further compound the shortage of health workers. Human resource situation analyses carried out in 2010 and 2011 by the MOH and development partners revealed a significant variation in staffing between districts and cadres. This variation is a result of the fact that deployment of staff is not needs based, service based or data driven hence the need for a rationale way of deploying staff.

In collaboration with development partners, MOH identified the Workload Indicator of Staffing Needs (WISN) methodology as a scientific tool that would be used to objectively determine the actual staffing needs for the health facilities.



The Workload Indicator of Staffing Needs methodology (WISN) uses workload to determine staffing needs, provides a rationale method for determining actual staff required per health facility. WISN also provides a rationale use of available skills for the right tasks depending on training and experienced based competences to deliver services of acceptable quality. The results of WISN assessment are intended to inform the review and development of staffing strategies and plans.

The WISN implementation starts with (i) Setting activity standards, (ii) Training the WISN technical teams, (iii) customizing the WISN software to the country context, and (iv) putting into the software the activity standards set per each cadre. After data from health activities was extracted from hreports, the workload of each facility is analyzed against set standards and WISN software generates a report showing the minimum staff required to accomplish the tasks.

The required staff generated from the workload analysis by WISN is then compared with the existing staff to determine if the health facilities have staff shortages or excess.

In 2014, the first national WISN study was done on three main cadres, doctors, nurses and midwives. The multi-disciplinary WISN technical team composed of 18 members from MOH, (USAID-funded) Integrated health system strengthening project and some health facilities was trained in the use of the WISN methodology and spearheaded the national WISN implementation activity. The team collected data for 42 district hospitals and 460 health centers. Results were compared across regions, districts and health facilities. The results of this analysis are presented in table below:

Cadre	Current staff	WISN require-ment	Staffing shortage	work pressure
Nurses	7,509	4,686	2,823	-60%
Doctors	431	417	14	-3%
Mid -wives	457	3,360	(2,903)	86%

As noted in this table above, the health facilities assessed had an overall shortage of midwives. Midwives were working under a work pressure of 86%. Literally, this meant that at a national level, there was on 14% of the required midwives.

The nurses on the other hand were more than required according to the WISN calculations. In real meaning, one could say that the required nurses were in excess by 60%. However, in reality the nurses were not only doing the nursing tasks but were even covering up the midwives tasks hence working under pressure that could not be easily identified. In other words, if nurses were taken to replace the midwives (this will be allowed in WISN only if there is task shifting policy), we would state that out of 86% gap of midwives, 60% was covered up by the so called extra nurses, leaving a work pressure of 26% to all the categories.

Based on the findings, minimum staff allocation was proposed and recommended as follows:

1. Doctors up to **a minimum of 10 doctors** per hospital was recommended to enhance full functionality of the hospitals.
2. Regarding the critically low number of Midwives, it was recommended to give the nurses adequate training for midwifery tasks and to put in place a task shifting policy. The study recommended **a minimum of 28 midwives** per hospital and **5 midwives per health center**.
3. For nurses WISN results, recommended **a minimum of 46 nurses** for the district hospital and 6 nurses for the health center.

Towards the end of 2016, significant improvement had been made in improving health facilities staffing through improved production, quality training and equitable distribution of the available health workers. In that month of Nov 2016, the Ministry of health released a newly proposed health facilities staff structure to respond to the staffing needs taking into consideration some of the recommendation from WISN application in 2014 .The hospital staff was to recruit and MOH deploy staff following the new staffing structure. However, repetitive complaints within health facilities continued to arise about significant staff shortages, compromising quality of health care. In view of this, the Ministry of Health proposed to carry out another quick WISN exercise to determine the current staffing situation based on the workload.

In collaboration with Management Science for Health (MSH) implementing Rwanda Health System Strengthening (RHSS) project, a USAID funded project, another WISN study for all the hospitals in the country was implemented starting October 2018 to Feb 2019. This time the health professional cadres of interest included medical doctors, nurses, midwives, laboratory staff, Pharmacy staff, dentists and anesthetists.

The second round of WISN application started with review and updates of previous standards of doctors, nurses and midwives; and setting new standards for the additional cadres mentioned above; validation of standards and customization of those standards into software; orientation of HRs, data managers from hospitals on WISN methodology and data entry and then WISN application and analysis of reports. The table below summarizes the key findings from WISN application in 43 district hospitals.

Staff category	Existing Staff (A)	Calculated Require-ment (B)	Staffing gap (B-A)	WISN Ratio (A/B)	Work Pressure
Anesthetists	175	305	130	0.6	40
Dentists	98	134	36	0.7	30
GPs	490	689	199	0.7	30
Lab techs	351	643	292	0.5	50
Midwives	684	987	303	0.7	30
Nurses	2,497	2,139	-358	1.2	-20
Pediatricians	26	47	21	0.5	50
Physicians	41	82	41	0.5	50
Surgeons	12	26	14	0.5	50
Gynecologists	32	96	64	0.3	70

As seen from this table, the second round WISN study findings indicates tremendous staffing improvements especially in Midwives. Even though, there are visible improvements within Midwifery cadre, there is still an important shortage of 30% but off course, this time the work pressure is significantly reduced compared to that of 2014, which was 86%. The WISN results for doctors this time indicated that GP doctors are now working under a pressure of 30% while in 2014, they had no work pressure at all. The study also indicated that nurses are only 20% excess in number compared to 60% excess as seen in 2014 study. In fact, this confirms that as hospitals get more midwives recruited, there are likely less numbers of nurses in proportion.

Important to note is that the workload of professional cadres analyzed this time including laboratory technicians, dentists and anesthetists revealed significant shortages of 50%, 30% and 40% respectively. Actually, laboratory technicians available are half the real number of staff requires according to the WISN calculations using the hospitals' laboratory workload. It is another urgently call for the MOH to find immediate, short and long-term solutions for this cadre as it was done for the midwives. The study also looked into the workload of specialist doctors and the findings indicated that there is significant shortage in all the cadres.

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To know the magnitude of the gap between the current district hospital staffing structure and the WISN calculated staff requirement staff figures per cadre provided by the structure and the WISN calculations based on the workload were compared as shown in the figure below.

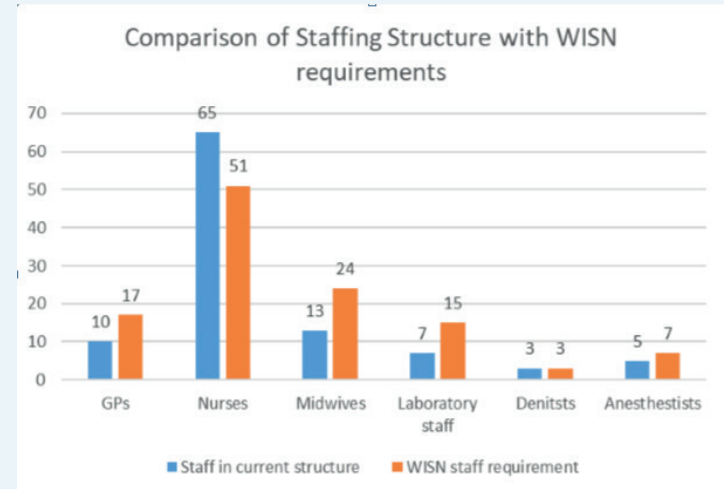


Figure 1: Comparison of Staffing Structure with WISN requirements