

# Using WISN to Address Nurse-Midwife Shortages in Baringo County, Kenya



Photo Credit: Mark Tuschman

## Introduction

Achieving the best health outcomes possible requires a well-trained, adequately staffed, equitably distributed, and highly motivated workforce to provide services, especially in challenging circumstances. A 2004 multi-country study found that the density of human resources for health (HRH) in a given population is inversely correlated with maternal, infant, and under-five mortality rates ( $p < 0.0036$ ); that is, an increase in HRH is linked to a decrease in these mortality rates.<sup>1</sup> A successful health system that reaches every woman, child, and adolescent within its territory must have enough staff to provide equitable, evidence-based, high-quality care to meet the population's health care needs and proactively respond to challenges, even before they arise. People are at the center of any health system. Therefore, strengthening several components of a country's HRH strategy—including density, attraction, and retention—is crucial for improving the quality of care, as well as the population's health outcomes.

## Background

### Baringo County, Kenya

As of 2017, Baringo County had 1,189 health workers staffed across 208 facilities mostly in urban areas. However, health facilities in rural and hard-to-reach areas lack enough staff to meet the surrounding population's health care needs. For example, on average, an urban resident has access to almost three times the number of doctors and twice the number of nurse-midwives,<sup>2</sup> compared to a rural resident.<sup>3</sup> This inequity in distribution of health workers, particularly nurse-midwives, has resulted in understaffed hospitals that compromise the availability and quality of FP/RMNCAH services and hinder the uptake of four antenatal care (ANC) visits<sup>4</sup> and delivery by skilled birth attendants.<sup>5</sup> For instance, national coverage for four ANC visits is 17% of pregnant women (October-December 2017), compared to only 11% in Baringo County.

### HRH Staffing

Traditionally, health workforce staffing has been determined according to population ratios and facility-based staffing standards that consider "ideal" staffing needs. Yet, this method has failed to account for the dynamic demand for services and shifting disease burden,<sup>6</sup> necessary considerations for determining the "actual" staffing needs of the population.

Recognizing the need to establish staffing requirements that meet real-world workload demands, the Baringo County Health

## About Afya Uzazi

Afya Uzazi is a five-year (2016–2021) project funded by the US Agency for International Development (USAID) and implemented by a consortium of partners led by FHI 360 that includes Management Sciences for Health, Kisumu Medical and Education Trust, and Living Goods, in collaboration with the Government of Kenya, the Ministry of Health (MOH), and the county governments. The project works to improve access to quality, client-centered, and linked health care services that include family planning and reproductive, maternal, newborn, child, and adolescent health (FP/RMNCAH) services in Baringo and Nakuru counties in Kenya.

Department worked with the Afya Uzazi Project in 2018 to apply the World Health Organization’s (WHO) workload indicators of staffing need (WISN)<sup>7</sup> method for informing nurse-midwife staffing decisions in five sub-counties. This brief reviews WISN results, which revealed shortages of nurse-midwives, a critical cadre for delivering FP/RMNCAH services, such as ANC, management of labor and delivery, newborn and postnatal care (PNC), and postpartum FP counselling and psychological support.

## Methodology

Afya Uzazi formed a WISN team of county and sub-county health managers, union leaders, human resources managers, county health assembly members, representatives from the county public service board, and professional cadres from rural health facilities. The WISN team defined a set of key workload components—the main activities that occupy most of a health worker’s daily working time (e.g., ANC visits)—on the basis of the Kenya Essential Package for Health (KEPH) (box 1). The team then captured support activities that all nurse-midwives perform (e.g., meetings and home visits) and activities specific to certain nurse-midwives (e.g., supervision and training) and referred to the most recent annual workload report<sup>8</sup> for every facility as recorded in the county District Health Information System (DHIS 2).

### Box 1. Steps for calculating needs for each cadre

1. Determine priorities for WISN application
2. Estimate available working time (in hours)
3. Define workload components
4. Set activity standards
5. Establish standard workloads
6. Calculate allowance factors
7. Determine WISN-based staff requirements; analyze and interpret results

Participants estimated available work time in a year for a typical nurse-midwife, taking into account authorized (holidays, sick time, leave, etc.) and unauthorized absences. The WISN team then set activity standards, which are the times necessary for a skilled and motivated worker to perform each workload component according to professional standards in the local circumstances. These activity standards are added together to estimate standard workload per

cadre. Standard workloads for each cadre divided by available work time for each nurse-midwife equals the number of staff required to perform the activities.

## Results

The WISN team conducted the exercise for each cadre<sup>9</sup> in 184 health facilities<sup>10</sup> in 5 sub-counties in Baringo County. Table 1 summarizes an example of the WISN analysis for nurse-midwives.

**Table 1. Number of required versus actual nurse-midwives based on WISN analysis, 2018**

Sub-county	Required	Actual	Gap	% Shortage
Mogotio	125	57	68	54.4
Eldama Ravine	100	60	40	40.0
Marigat	137	44	93	67.9
Baringo Central	120	55	65	54.2
Baringo North	135	60	75	55.6

With the exception of Eldama Ravine (40%), each sub-county has a nurse-midwife shortage of over 50%. The staffing gap is largest in Marigat, where the required number of nurse-midwives is 137, but only 44 are employed throughout the sub-county, indicating a shortage of 93 nurse-midwives, or 67.9%. (A sample calculation can be found on page 4.)

## Way Forward

Analysis and discussion of the WISN results revealed a two-tiered problem relating to nurse-midwife staffing shortages:

1. Baringo County did not have enough budgeted positions to address the RMNCAH needs of the population.
2. For the positions that were budgeted, high turnover and attrition, due to low motivation, contributed to these shortages.

Following the WISN exercise, Afya Uzazi continues to support Baringo County health officials in addressing these two challenges. First, health stakeholders are using WISN results as evidence in advocating for the creation of new positions within the county’s strategic plans and budgets. Already, Baringo County has budgeted for and begun recruiting 80 nurses. The county plans on posting them at previously closed, understaffed facilities to provide 24-hour FP/RMNCAH services where possible.

However, until those positions are filled, Baringo County has introduced volunteer nurses (mostly newly qualified nurses who are not currently employed) as a temporary measure to fill the nursing gaps and provide critical FP/RMNCAH services, particularly skilled childbirth services, ANC, PNC, postpartum FP, and immunization services. For each day worked, each nurse receives KES 1,500 for food and transportation. So far, 15 nurses have been dispatched to 15 health facilities in Baringo North (4), Baringo Central (3), Marigat (4), and Mogotio (4). Some nurses are stationed in the facilities at night to help ensure that the facilities are open around the clock. Afya Uzazi developed a monitoring tool to assess the effectiveness of the volunteer nursing program by measuring coverage of ANC, skilled childbirth services, PNC (within two to three days after delivery), immunization, and postpartum FP.

Second, Baringo County is developing attraction and retention strategies to reduce nurse-midwife attrition rates. For example, the county is updating job descriptions so that their specific roles and responsibilities are clear. In addition, financial and nonfinancial benefits and improved working conditions incentivize them to accept postings at hard-to-reach facilities. Some priority incentives include orientation programs, contributory pension schemes, comprehensive health care for staff members and their immediate families, opportunities for professional development, stronger supportive supervision, renovated and upgraded facilities, and team-building activities.

After completing the WISN application, Baringo County recognized its obligation to continuously maintain accurate workload and staffing data to ensure health facilities are well staffed going forward. Select staff in Baringo County are participating in trainings on the integrated human resources information system so they can track health workforce data and explore the technical exchange of data between systems with DHIS 2, the main platform for collecting routine health data.

## Conclusion

Applying the WISN tool to FP/RMNCAH units helped Baringo County project health staffing needs for the first Baringo County HRH Strategic Plan (2018-2022). The results also helped the MOH develop a comprehensive

attraction and retention strategy for highly sought-after health professionals to improve continuity and quality of services in rural health facilities. Furthermore, WISN results helped county and sub-county health management teams refine job descriptions and clarify roles and responsibilities for each cadre.

Overall, WISN is an HRH management tool that can be scaled up to other counties in Kenya and applied to different cadres and workload components. WISN results can inform redistribution of current staff, advocacy for the creation of additional positions, and future recruitment strategies that contribute to an equitable distribution of health workers so that every woman, child, and adolescent can access high-quality care, no matter where they live.

## Endnotes

- 1 Anand S, Bärnighausen T. Human resources and health outcomes: cross-country econometric study. *Lancet* 2004;364(9445):1603-9; <https://www.sciencedirect.com/science/article/pii/S0140673604173133>
- 2 There are different levels of nurses in Kenya, including registered community health nurses, enrolled community health nurses, and those with a BS in nursing. For purposes of this brief, they are referred to as “nurse-midwives.”
- 3 Baringo County Government Department of Health and Afya Uzazi Program. Rapid Human Resources for Health Assessment Report, Baringo County, Kenya. 2018.
- 4 Since 2016, WHO now recommends at least eight antenatal contacts. The feasibility of eight group ANC sessions is being tested at the request of the MOH.
- 5 Baringo County Government and Afya Uzazi Program. Concept note: Engaging volunteer nurses to support service delivery in supported health facilities in Baringo County. May 2018.
- 6 Masnick K, McDonnell G. A model linking clinical workforce skill mix planning to health and health care dynamics. *Hum Resour Health* 2010;8:11; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873342/>
- 7 World Health Organization. Workload Indicators of Staffing Need (WISN) User’s Manual. 2010. [http://www.who.int/hrh/resources/wisn\\_user\\_manual/en/](http://www.who.int/hrh/resources/wisn_user_manual/en/)
- 8 Workload per facility in a year, e.g., clients seen at ANC for one year in a certain facility
- 9 Analyzed cadres included nurses, nutritionists, pharmacists, laboratory technicians, records officers, photo technicians, medical doctors, dentists, drivers, and others.
- 10 The tool was used to analyze only health facilities with full-time staff.