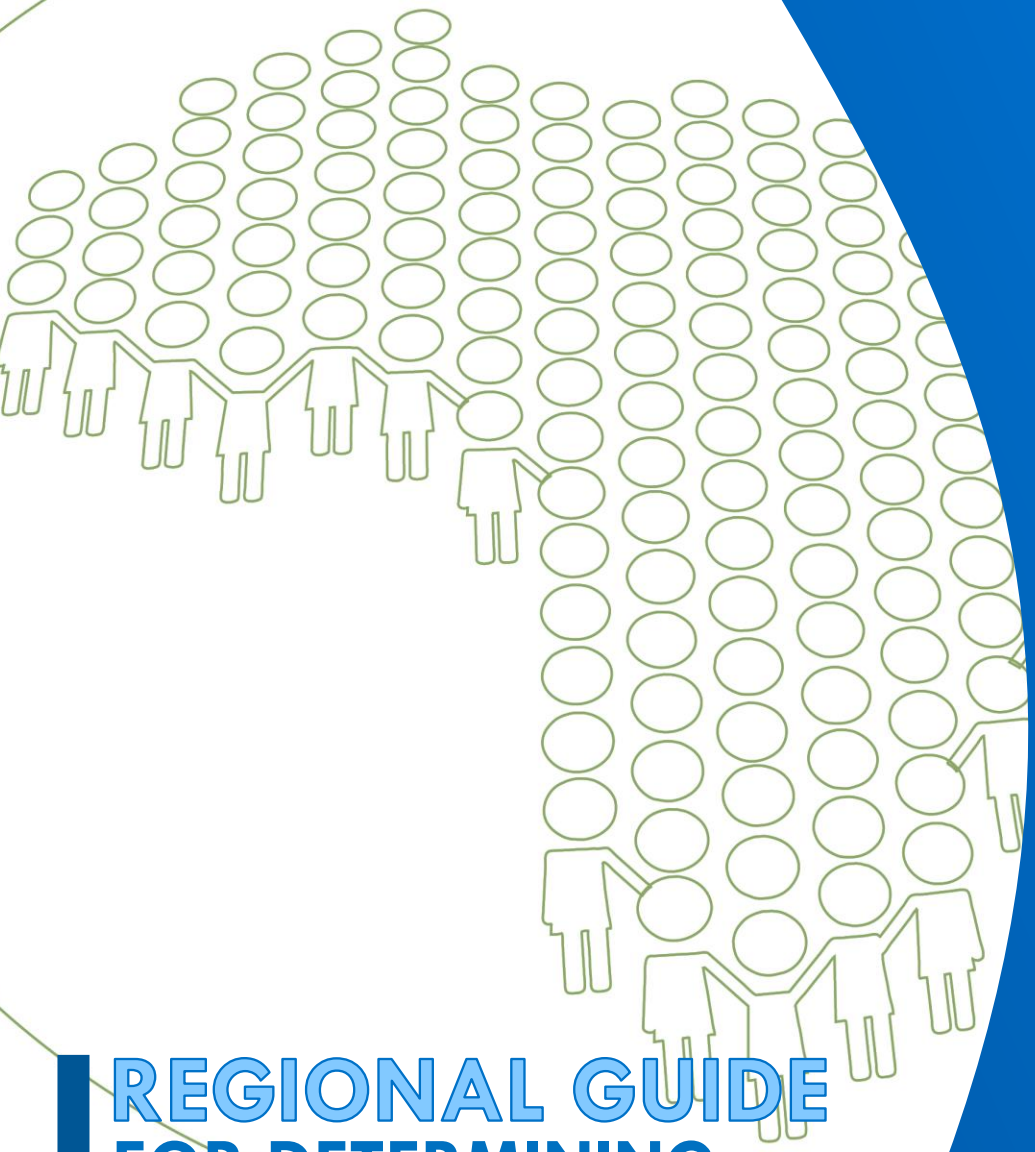

REGIONAL GUIDE
FOR DETERMINING HEALTH WORKFORCE STAFFING NORMS AND STANDARDS FOR HEALTH FACILITIES

World Health Organization
REGIONAL OFFICE FOR Africa

REGIONAL GUIDE

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World Health Organization
Regional Office for Africa
UHC Life Course Cluster
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Regional guide for determining health workforce staffing norms and standards for health facilities

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FOREWORD

There is no health without health workers; this necessitates improvements in health workforce investment and distribution to ensure that national goals, universal health coverage (UHC) and the Sustainable Development Goals are achieved.

While every country's journey towards achieving health sector goals is unique, we all acknowledge the importance of having an equitably distributed, qualified, competent and motivated health workforce with the right skill mix at service delivery points to deliver people-centred health services.

The African Region is facing several health workforce challenges, which have contributed to the disease burden and weakened health systems. There are shortages of health workers of all cadres, and inequitable distribution of the existing ones geographically and by the level of care.

This guide provides the Member States and partners with flexible, adaptable, and user-friendly frameworks to guide the determination of health workforce staffing norms for health facilities. It was informed by the need to have the right skill mix of health workers in health facilities in countries in the African Region. It was developed based on experiences and lessons learnt in the course of developing staffing norms in the African Region.

I urge all policy-makers, managers and partners to consider these frameworks in determining the appropriate numbers and skill mix of health workers needed for health service delivery at health facilities.

The World Health Organization Regional Office for Africa remains committed to providing the evidence needed by our Member States to improve the health workforce, as we make progress towards achieving universal health coverage and the Sustainable Development Goals.

Dr Kasonde Mwinga
Director, Universal Health Coverage - Life Course Cluster
World Health Organization Regional Office for Africa

ABBREVIATIONS AND ACRONYMS

σ	Standard deviation
AW	Annual Workload Statistics
AWT	Available Working Time
CAF	Category Allowance Factor
HRIS	Human Resources for Health Information Systems
IAF	Individual Allowance Factor
Max	Maximum
Min	Minimum
SW	Standard workload
TTF	Technical Task Force
UHC	Universal Health Coverage
WHO	World Health Organization
WISN	Workload Indicators of Staffing Need

ACKNOWLEDGEMENTS

This guide presents flexible, adaptable, and user-friendly methodologies and frameworks to inform the determination of health workforce staffing norms for health facilities. Its use will facilitate the implementation and achievement of the goals of the Global strategy on human resources for health: Workforce 2030, the African regional framework for the implementation of the global strategy on human resources for health: Workforce 2030, the Road map for scaling up the human resources for health for improved health service delivery in the African Region 2012–2025, WHO's Thirteenth General Programme of Work, 2019−2023 and national health workforce goals.

The UHC Life Course Cluster of WHO AFRO is grateful to the Health Workforce team that provided guidance and technical inputs to the regional guide: Dr Adam Ahmat, Ms Jennifer Nyoni, Dr Jean Jacques Millogo, Mr James Avoka Asamani, Mr Abdou Ilou Mourtala, and Dr Sunny Okoroafor.

Special thanks to Dr Adam Ahmat, the principal contributor to the development of the concept and elaboration of the guide.

SUMMARY

Many African countries have been developing health staffing norms and standards, based on simple expert opinion or the use of traditional methods such as population-to-staff ratio approaches. These approaches have shown significant limitations, thereby necessitating a change. The World Health Organization (WHO) workload indicators of staffing need (WISN) tool is being widely applied in the African Region, and its results are used to determine staffing norms. However, the approaches to using the WISN results are varied and sometimes inadequate. They lack consistency, while the rules for implementing the established norms and standards are difficult for managers to understand and apply.

Informed by the experiences and lessons learnt while developing staffing norms and standards in African countries, this guide aims to provide Member States and partners with flexible, adaptable and user-friendly frameworks to guide the determination of health workforce staffing norms for health facilities.

The guide presents three phases with processes for determining staffing norms and standards. Phase 1 consists of the application of the WHO WISN tool to assess the workloads of health facilities to determine their staff needs. This follows from an understanding of the demand for health services, how that translates into the workload components, and ultimately staff requirements. Those elements are also affected by service standards and informed by local circumstances. This study needs to be conducted on a representative sample of targeted health facilities. The results of the WISN study are staffing requirements for selected levels of care and cadres of focus.

In phase 2, the staffing norms are determined following an eight-step process. The validated WISN results are summarized by district or urban/rural area, using measures of central tendency and dispersion. The minimum and maximum staffing norms for each cadre for a given type of health facility are then determined, and the mean/median and standard deviation of required staffing levels by occupational category, and level of care for each district are calculated and compiled at the regional level. Subsequently, the staffing norms are adjusted based on anticipated changes in workloads, health policy orientations and service packages.

In phase 3, the staffing norms are applied based on calculated staffing norms, actual workloads in the health facilities and financial implications. In the application of this guide, it is important to adapt the frameworks and methodology to the context and ensure that policy-makers and human resources for health (HRH) managers are involved in the process. This will ensure ownership and institutionalization of the principles.

1. INTRODUCTION

The health sector uses a large number of skilled and unskilled workers. Determining the number of staff required for each category is a challenge, given the many underlying factors such as the workload that each category of staff would have to cope within a health care facility.

To guide the recruitment of staff with the right skills and at the right place, many African countries have developed health staffing norms and standards, either based on simple expert opinion or on the use of traditional methods to determine staffing requirements that include population-to-staff ratio approaches for certain cadres (for example, X number of nurses per 10 000 population or X number of nurses per doctor for a given health facility).

Over time, however, these approaches have shown significant limitations. Frequent questioning of these staffing norms, particularly by health facility managers, has been observed, highlighting the mismatch between the actual needs for health personnel and the model of care in force. The application of these staffing norms has generally put significant workload pressure on health care workers in health care facilities. Indeed, these methods have serious disadvantages, as they basically tend to ignore the contributions of other cadres, the work that health workers do, the wide local variations in the demand for health services, including the impact of the health system and services reforms on health policy at the national level, the poor working conditions, and the socioeconomic and demographic characteristics of the populations covered. These inadequacies have often led to overstaffing in some health facilities and understaffing in others, resulting in overall poor health performance and quality of health services and productivity.

The situation has compelled many countries to revise their health staffing norms or devise new evidence-based ones to better rationalize the recruitment and deployment of their health workers and improve their cost-effectiveness and performance. To achieve this, countries first conducted health workforce workload assessments to determine health care worker needs. In most cases, the WISN tool was applied, and the results were used to determine staffing norms. However, approaches to using the WISN results are varied and sometimes inadequate. They lack consistency and the rules for implementing the established norms and standards are difficult for managers to understand and apply.

Informed by the experiences and lessons learnt while developing staffing norms and standards in African countries, the aim of this guide is to provide Member States and partners with flexible, adaptable and user-friendly frameworks to guide the determination of health staffing norms for health facilities.

1.1 Definition of staffing norms and standards

According to Donabedian (1981), a “norm” is a criterion to which a normative statement, based on average experience, has been added.1 Slee (1974)[2] suggests that a norm is “a statistical description of the central tendency of the observed values of a selected parameter, along with a measure of the variability of the values, taken from an adequate sample of corresponding studies....”

Staffing: According to Caruth et.al (2009, P.1), staffing is defined as “the process of determining human resource needs in an organization and securing sufficient quantities of qualified people

[1] Donabedian A., 1981, Criteria, Norms and Standards of Quality: What Do They Mean? , AJPH April 1981, 71- 4

[2] Slee V., 1974, PSRO and the hospital's quality control. Annals of Internal Medicine, 1974; 81: 97-106.4.

to fill those needs."[3] In this guide, staffing is depicted as the process of determining and providing an acceptable number and skill mix of health workers to produce a desirable level of care to meet patient demand.

Based on the definitions above, staffing norm in this guide is considered as a criterion to which a normative statement has been added as an indication of the required number and skill mix for a given health facility type to produce a desirable level of care to meet patient demand.

The standard is the level of quality or achievement considered acceptable or desirable, and established by authority as a rule for the measurement of quantity, weight, extent, value or quality; for example, the legal working hours per week.

1.2 Purpose of the regional guide

This document serves as a guide to Member States and partners in the development of staffing norms and standards for health facilities, and provides useful, flexible and user-friendly frameworks that can be adapted to the country context, towards assessing staffing needs and developing staffing norms for all levels of care.

The guide is not intended to provide instructions or prescriptions to countries on what their staffing norms and standards ought to be, and does NOT contain regional staffing norms and standards. Rather, it offers guidance on HOW countries may reach realistic and progressive staffing norms and standards, taking into consideration the actual needs-based staffing workload and the country's specific situation, including its financial capacity to implement the defined staffing norms in the context of universal health coverage (UHC).

The guide explains "what" should be considered in the setting of the staffing norms by the level of care and "how" to determine, implement and review them, using step-by-step processes for formulating, developing and implementing the staffing norms and standards for health facilities.

1.3 Overall structure of the guide

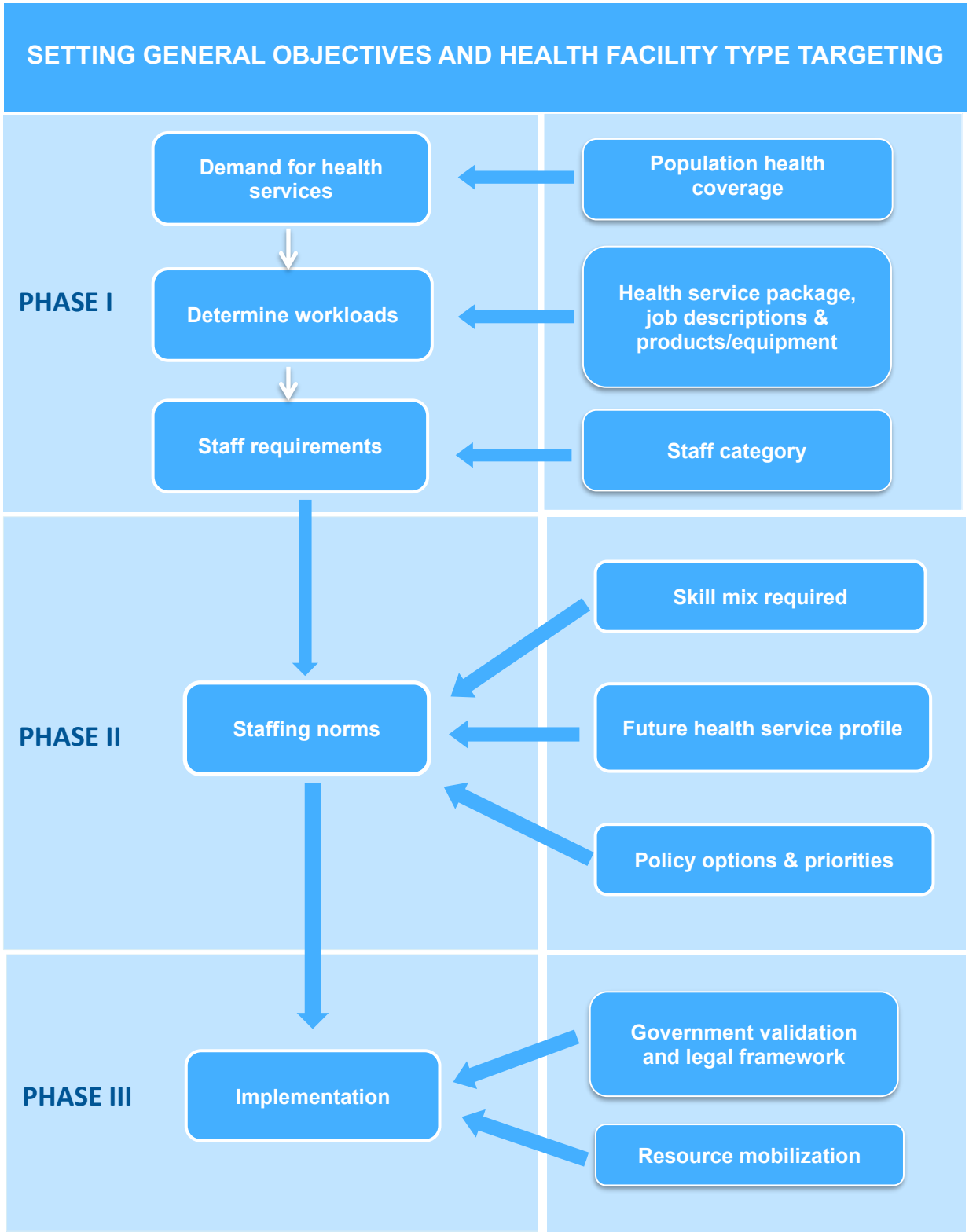
This guide has primarily been structured as a resource to assist countries in preparing, drafting, and developing their staffing norms for health facilities. As such, the content is organized to follow the process and order of its development:

- Phase I: workload assessment
- Phase II: determination of staffing norms
- Phase III: implementation of the adopted staffing norms and standards.

The framework of the guide presented in Figure 1 summarizes the essential phases and processes to be considered in determining flexible and accurate staffing norms and standards for health facility types. Understanding and applying the interlinked elements of this framework can be a driving force for setting fit-for-purpose staffing norms.

[3] Caruth, D. L., Caruth G. D., & S. S. Pane. (2009). Staffing the Contemporary Organization: A Guide to Planning, Recruiting, and Selecting for Human Resource Professionals. (3rd Ed.). Westport, CT.: Praeger Publishers.

Figure 1: Framework of the regional guide for determining staffing norms and standards



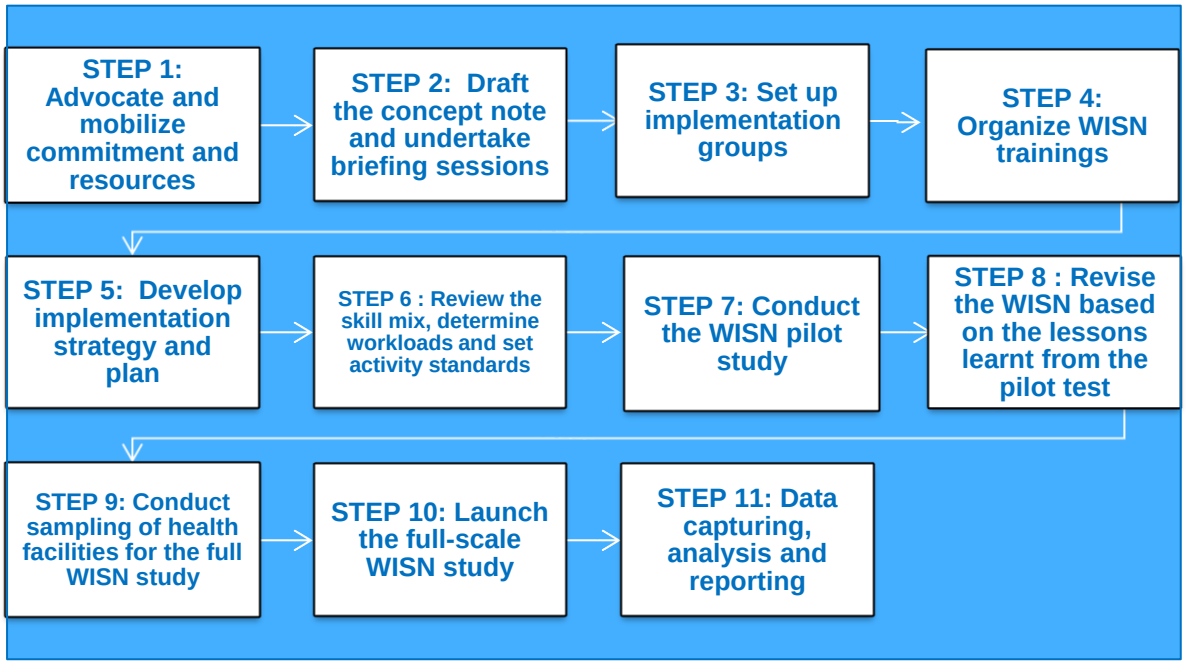
2. PHASE I: WORKLOAD ASSESSMENT AND STAFFING REQUIREMENTS

2.1 Process overview and WISN tool application strategy

Phase 1 consists of the application of the WHO WISN tool to assess the workloads of health facilities to determine their staffing needs.4 This is based on an understanding of the demand for health services, how that translates into workload components, and ultimately staff requirements. Those elements are also affected by workload components and service standards, which are informed by local circumstances. The study should be conducted on a representative sample of targeted health facilities.

The methodology of the WISN tool, if followed accurately, produces results that are evidence-based and understood by all relevant stakeholders and partners in the country, with the ministry of health as the preferred lead. After setting the objectives of the study and defining the scope of work, the 11 key steps for conducting a WISN study can then be undertaken to determine staffing needs as a basis for staffing norms, as follows:

2.2 Key steps for determining staffing needs toward staffing norms



4 World Health Organization. Workload indicators of staffing need. User's manual. Geneva: World Health Organization; 2010.

2.3 How do you go about each key step?

KEY STEP	HOW TO GO ABOUT IT	BY WHOM?
1. Advocate and mobilize commitment and resources	1.1. Define the objectives and scope of the study. For example, the objective could be to determine staffing norms for primary health care facilities in the country using the WISN tool 1.2. Organize a briefing session for senior managers to ensure that they understand what the WISN method is, what results it will produce, and how the results can help staffing norms development. Implementation of the WISN tool is more likely to succeed when institutional leaders are involved in the steering process from the start. An advocacy brief may be developed for this step. 1.3. Following approval by management, a concept note/proposal should be developed and submitted to the government and/or partners to implement the project.	1.1 Head HRH /MoH 1.2 Head HRH /MoH 1.3 Head HRH /MoH
2. Draft the concept note and undertake briefing sessions	2.1. Develop a concept note for WISN training of trainers, including technical support. This may require facilitating the training of trainers. The concept note should include the planned briefing sessions for key stakeholders and the groups to be established. 2.2. Briefing sessions of stakeholders should continue, to further garner support for the study and gain perspectives to shape the planned study.	2.1. Head HRH /MoH 2.2. Head HRH /MoH
3. Set up the implementation groups	3.1. MoH to establish a steering committee (SC), the technical task force (TTF) of the WISN study and expert working groups with clear terms of reference. Please, refer to the WISN Manual for guidance.[4] 3.2. The role of the steering committee is to approve the strategy for WISN implementation and validate the workplan and budget. The committee monitors the WISN implementation and provides the overall supervision. Rather than create a new committee, an existing one already handling health or HRH issues can play this role. 3.3. The technical task force is the WISN core team responsible for implementing the WISN study. It comprises technical resource persons who have received in-depth training on the WISN tool. It also includes various experts, such as a statistician/health information officer, an IT officer, working full or part-time. The task force might involve liaison persons, who arrange local-level activities, collect data and information and ensure observation and follow up. The TTF should be organized by area of work or topic (e.g., coordination and facilitation, activity standards, data collection, data capturing and analysis and documentation of the WISN process). Each area of work should be assigned at least two technical resource persons. A chairperson will coordinate and facilitate the work of the team. In addition, the TTF will conduct the briefing sessions, orientations and facilitation of the expert working groups, and the briefing of the data collectors on the questionnaires and validation workshops. The chairperson is responsible for reporting to the steering committee. 3.4 The expert working group defines the main workload components and sets activity standards for a target staff category. The expert working group must consist of selected senior representatives of the relevant staff category to ensure the confidence of the health workers and accuracy of the output. These individuals must have a track record and be respected by their colleagues. The selection of the experts will be done in	3.1 MoH 3.2 SC 3.3 TTF 3.4 EWG

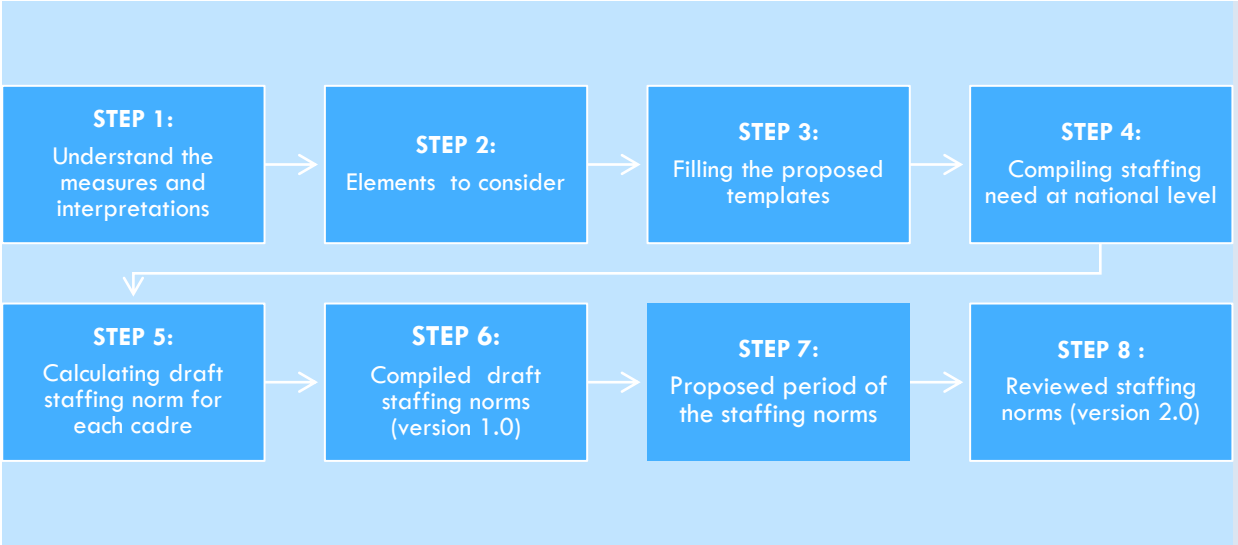
KEY STEP	HOW TO GO ABOUT IT	BY WHOM?
	collaboration with the steering committee. Due to the number of staff categories to be covered, you may need to hold two three-day workshops to define the workload components and set the activity standards. A clear methodology for setting activity standards should be developed by the TTF in collaboration with WHO. More time may be required for certain categories of staff, such as nurses.	
4. Organize WISN trainings	4.1. Organize a four- to five-day training of trainers workshop for a wide range of participants including TTF members 4.2. Organize briefing sessions for the key stakeholders to increase their commitment to, and involvement in the processes. This should target the steering committee and expert working group members to guide them in their roles and the WISN process.	4.1 TA may require 4.2 TTF
5 Develop implementation strategy and plan	5.1 Countries should conduct a broad scoping exercise to develop and cost a road map or operational plan, indicating the main milestones of the WISN study, including responsibilities and timelines. The TTF will be responsible for finalizing the road map or operational plan. This is to be submitted to the steering committee for approval 5.2 A briefing should be organized for the steering committee to present the implementation strategy, operational plans and budget for their approval. Technical support may be required.	5.1 TTF 5.2 TTF(chair)
6 Review the skill mix, determine workloads, and set activity standards	6.1 If staffing norms exist, it is strongly recommended that they should be reviewed thoroughly to draw lessons from their design and application. This review would help to address inadequacies in the existing staffing norms in terms of skill mix. This can help in determining the new staffing needs and eventually, the staffing norms. The term 'skill mix' refers to the mix of cadres in the existing establishment or staffing norms for a given level of services. It may refer to the skills required to provide the defined health services at acceptable professional standards. The review should focus on whether the existing skill-mix by the level of care is still valid or there is a need for additional competencies to fill the gap and/or inequities. 6.2 Organize a three- to five-day workshop of the expert working group to determine the workload components and set the activity standards of the staff categories targeted in the revised skill mix. The participants should be carefully chosen to ensure that they provide the needed information. To validate the workload components and activity standards, a different group of members of the cadre may be convened to validate the draft versions.	6.1 TTF 6.2 TTF
7 Conduct the WISN pilot study	7.1 Set criteria for selecting the sites for the pilot study[5], with urban-rural mix. 7.2 Develop instruments for data collection (training manual and questionnaire). WISN requires minimal secondary data on (1) activity standards, (2) absences, (3) annual workload data on health services, and (4) existing staffing. The main data sources are HIS, HRIS, and health facility registries. Each health facility reports data regularly into subnational databases that are fed into the central database (HRIS and HIS/HMIS). Some data	7.1 TTF 7.2 TTF

[5] The pilot study is a small-scale study to pre-test the feasibility of the study methods, logistic arrangements, training of data collectors and instruments that include questionnaires, interview, data capturing, data quality check, analysis and reporting.

KEY STEP	HOW TO GO ABOUT IT	BY WHOM?
	should be collected from registries if they are not accurate or up to date. 7.3 Train data collectors on the manuals and questionnaires. 7.4 Ensure administrative arrangements are made for the data collectors and provide adequate logistics for the deployment of the data collectors, including supervisors 7.5 Deploy data collectors and ensure data quality check and supervision reports. Two weeks for data collection and supervision reporting may be enough to cover the selected facilities 7.6 Review and analyse the pilot study (data and process) to find out where it worked well, where the arrangements have failed or not been followed; what were the practical issues and challenges, where the instruments were inappropriate or too complicated, and the main areas of improvement in terms of data collection and analysis.	7.3 TTF 7.4 Head HRH/MoH 7.5 TTF 7.6 TTF
8 Revise the WISN based on the lessons learnt from the pilot test	8.1 Organize a workshop to review the WISN implementation strategy and plan based on the lessons learnt from the pilot test findings and make needed revisions.	8.1 TTF
9 Sampling health facilities for the full WISN study	9.1 Determine a representative sample of targeted health facilities and reach a consensus with relevant stakeholders.	9.1 TTF
10 Launch the full-scale WISN study	10.1 Recruit data collectors. It is advisable to involve some members of the EWG to supervise the work of the data collectors at their facilities 10.2 Train data collectors on the manual and questionnaires. 10.3 Ensure that administrative arrangements are made at the sites and logistics are in place for the deployment of the data collectors, including supervision. 10.4 Deploy data collectors and supervisors allowing about two weeks for data collection.	10.1 TTF 10.2 TTF 10.3 Head HRH/MoH 10.4 TTF
11. Data capturing, analysis and reporting	11.1 Assign a small group from TTF to be in charge of data capturing and analysis. 11.2 Develop the draft WISN report with results on the staffing requirements for selected levels of care and cadres of focus. 11.3 Organize a validation workshop on the draft WISN report.	11.1 TTF 11.2 TTF 11.3 TTF

3. PHASE II: DETERMINATION OF STAFFING NORMS

The steps are proposed to guide the staffing norm-setting processes. It is recommended that a participatory approach should be taken until the final stage of validation. The same WISN groups can be used, with the flexibility to expand to additional stakeholders, if necessary.



Step 1: Understand the measures and interpretations

Using the validated WISN results, you need to summarize the results by district or urban/rural areas (if it was not done in phase I). It is recommended to use measures of central tendency and dispersion (cf. Box 1 for details). Two of them can be used:

- **The mean** is the average of all the values. To calculate it, add all the values and divide by the number of values you added.
- **The median** is the middle of all values, arranged in ascending order. To get the median, you need to organize the values from the least to greatest, and then find the middle value.

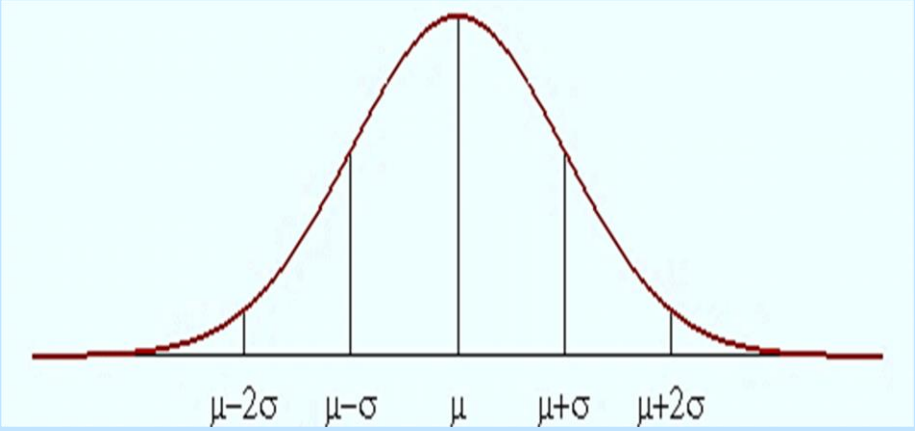
Which one do you choose? The choice should consider the tendency of the data set. For example, if the data have a wide range, the median rather than the mean is a better measure to describe the central tendency of the values. For example, if there are very low and very high required staffing of health facilities in one given district/region, the median rather than the mean can be used.

In addition, you need to measure the dispersion of the data set. The **standard deviation** can be used.

The standard deviation measures how closely the data clusters around the mean or the median (box 1). The combination of the mean with the standard deviation can help to decide the minimum and the maximum of the staffing norms. You can use the following table indicating how to interpret the value of a standard deviation with the mean.

BOX 1

The standard deviation measures how closely the data clusters around the mean or the median. Its symbol is σ. For example, it indicates the way in which the required number of staff in health facilities is distributed around the average number of staff. It makes it possible to assess whether all the required staff numbers are identical, concentrated around the mean or, on the contrary, dispersed between very low and very high numbers. Standard deviation has the advantage of having a probabilistic meaning. When a distribution is Gaussian (also called "normal") the probabilities of finding values at a given distance from the mean are as follows:



For example, a group of 50 health facilities has an average of seven required nurses with a standard deviation of one. Following the table below, this means that in 68% of health facilities, the required number of nurses varies between six and eight, which corresponds to one standard deviation from the mean, assuming a normal distribution.

INTERVAL	% OF THE VALUES OF A GAUSSIAN DISTRIBUTION
Mean ± 1 x σ	68.3% of the staffing needs are within the interval
Mean ± 2 x σ	95.5% of the staffing needs are within the interval
Mean ± 3 x σ	99.7% of the staffing needs are within the interval

NOTE: The wider the interval, the greater the financial implications of implementing the staffing norms. It is advisable to choose the first interval and put in place a mechanism to manage the need of the facilities outside the range (cf. phase III for more guidance).

Step 2: Points for consideration

You may want to decide which interval is suitable for determining a minimum and maximum staffing norm for each cadre for a given type of health facility by considering the following points:

- ✓ If the standard deviation is low, it means that the required number of staff in the health facilities is almost similar, and concentrated around the mean. A lower standard deviation is therefore needed to determine staffing norms because the required staff are not very scattered around the mean.

- ✓ If the standard deviation is close to zero, it may be better to choose the interval covering at least 95% of the cases. In this case, the mean can be considered a value close to a staffing norm with an adjustment factor of $\pm$ 2 X σ.
- ✓ If there is a high dispersion or outliers, an in-depth analysis should be made to understand why some health facilities have exceptionally high staffing needs. One of the explanations can be the low coverage of health services or the high demand for health services due to the high density of the population covered (such as large population in slums, displaced populations, internal migration for mining reasons). This situation can be observed where the health coverage rates are slow.
- ✓ The standard deviation cannot be negative.

Step 3: Fill templates 1, 2 and 3

After considering steps 1 and 2, you need now to proceed by calculating the mean/median and the standard deviation of required staffing levels by occupational category and level of care for each district. You need to factor in health facilities covering the urban and rural setting and specific settings like the capital, underserved areas, or those serving large populations.

There are three templates to be used in Excel to automate the calculation of mean/median and standard deviations by district, region, and country.

Template 1: WISN staffing requirements by cadre in the district (urban area)

Name of the district	Region/Department	Level of care

Health facilities (HF)	Doctors	Professional nurses	Associate nurses	Professional midwives	Associate midwives		
HF1							
HF2							
HF3							
HF4							
HF5							
Mean							
Std deviation							

Note: You can add more categories regarding the skill mix of a given type of health facility approved and used to conduct the WISN study

Template 2: WISN staffing requirements by cadre (rural area) in the district

Name of the district	Region/Department	Level of care

Health facilities (HF)	Doctors	Professional nurses	Associate nurses	Professional midwives	Associate midwives	…..	
HF1							
HF2							
HF3							
HF4							
HF5							
Mean							
Std deviation							

Note: You may add more categories regarding the skill mix of a given type of health facility approved and used to conduct the WISN study

Template 3: WISN staffing requirements by cadre in the district (specific settings)

Name of the district	Region/Department	Level of care

Health facilities (HF)	Doctors	Professional nurses	Associate nurses	Professional midwives	Associate midwives	…..	
HF1							
HF2							
HF3							
HF4							
HF5							
Mean							
Std deviation							

Note: You may add more categories regarding the skill mix of a given type of health facility approved and used to conduct the WISN study

Step 4: Compilation of means and standard deviations at the regional level

Once you complete step 3, proceed with the following actions:

(i) Compile all means and standard deviations at the regional level using the figures from templates 1, 2 and 3.

(ii) Use template 5 to calculate a draft staffing norm for each category of staff based on the decision made in step 2. This is to propose minimum/maximum staffing norms including the mean. You need to do it for urban, rural, and specific settings (template 3) if there is significant dispersion between these areas.

(iii) Repeat the same action in (ii) for each category of staff, separately.

Template 4: Compilation from templates 1, 2 and 3

Region/Department	Level of care	Category of staff

District	Urban		Rural		Specific settings	
	Mean	Std dev	Mean	Std dev	Mean	Std dev
District A						
District B						
District C						
District D						
District E						
…						
…						
REGIONAL						

Step 5: Computation of the draft staffing norm for one cadre by district at the regional level

This step is to fill templates 5, 6, and 7 in each region. To do so:

(i) You should refer to the following table to decide on which range to adopt for the minimum and maximum of the draft staffing norm of the cadre.

Interval	% of the values of a Gaussian distribution
Mean ± 1 x σ	68.3% of the staffing needs are within the interval
Mean ± 2 x σ	95.5% of the staffing needs are within the interval
Mean ± 3 x σ	99.7% of the staffing needs are within the interval

(ii) You repeat action (i) for each region of the country.

Template 5: Draft staffing norm for a category of……..by district in the urban area of the region……..

Region/Department	Level of care	Category of staff

Draft staffing norm of a cadre	Mean/median	Minimum staffing norm	Maximum staffing norm	Comment
District A				
District B				
District C				
District D				
District E				
REGIONAL				

Template 6: Draft staffing norm for a category of……..by district in the rural area of the region……..

Region/Department	Level of care	Category of staff

Draft staffing norm of a cadre	Mean//median	Minimum staffing norm	Maximum staffing norm	Comment
District A				
District B				
District C				
District D				
District E				
REGION				

Template 7 Draft staffing norm for a category of……..by district in specific settings (…..) of the region ……..

Region/Department	Level of care	Category of staff

Draft staffing norm of a cadre	Mean/median	Minimum staffing norm	Maximum staffing norm	Comment
District A				
District B				
District C				
District D				
District E				
REGION				

Step 6: Compile the draft staffing norms 1.0 (national level by level of health care)

Template 8: Draft staffing norms 1.0 by cadre and level of care (national level)

Staff	Urban		Rural		Specific areas (if any)		Comment including the coverage (%) considered
	Min	Max	Min	Max	Min	Max	
Category 1							
Category 2							
Category 3							
Category 4							
Category 5							

Step 7: Adjust the draft staffing norms 1.0

For staffing norms to be valid for a given period, it will be necessary to consider possible changes that may affect the workload of health workers. For example, a shift from a minimum package of services to an essential package of services during that period may change the level of workload for health service providers. If such changes occur, the application of these staffing norms may be inadequate, hence the relevance of taking them into account.

In determining staffing norms for a given period, it is necessary to take into account factors of change that may affect the new staffing norms in the future, assuming that the situation will not change significantly over that period:

(a) anticipated health policy orientations and shifts;

(b) anticipated evolution of health services and epidemiological profile.

This guide highlights some key potential factors that may affect staffing norms. Depending on the context, you may want to go further in your analysis to identify additional factors.

Anticipated health policy orientations

The impact of health development policy, including important strategic shifts, should be considered; for example:

- The government's vision of health developments, such as UHC strategies, health reforms (hospitals, referrals, scope of health centres).
- Strategies for preparedness to address health emergencies.
- Human resources for health development policy; for example, changes in working conditions (legal working time, new status of some health professionals, new career plan).

If the WISN study was carried out before these major reforms, an impact on staffing norms could be expected, as these reforms may increase or decrease the supply of health services and therefore the workload of the service providers.

Box 2

It is important also to consider for each type of health facility, the size of the population covered, does it vary according to rural or urban settings? The size of the population that is assumed to be covered by a health facility type has an impact on the demand for services and workload. For example, if a facility covers a relatively larger population than others of the same type, it is expected to have a higher need for staff. The staffing requirements may be low if the health facility covers only a small population compared to norms of the same type. In these cases, an adjustment is required to address these variations. The implementation guide of the staffing norms gives more detail on how to consider these issues (cf. implementation guide in phase 3).

Anticipated evolution of health services

The decision to set staffing norms for an extended period assumes that health service packages will not change significantly over that period. This is because some changes in health services may increase or decrease the demand for health services. These effects may come from:

- A change in service delivery models (such as primary health care reforms, new service packages, tasks shifting and sharing)
- Technological innovation (such as introduction of digital health, eHealth)
- Introduction of health insurance
- Introduction of free care or the opposite, targeting certain services such as maternal health care
- Introduction of mobile clinics for non-sedentary populations
- A significant improvement of access/coverage of health services in underserved areas
- More emphasis on health promotion and/or rehabilitation
- Rapid growth of the private or faith-based sector in health care provision
- Major investments in health infrastructure and equipment (high growth rate of new health facilities).
- Population health coverage by a health centre (cf. Box 2).

Step 8: Period of validity of staffing norms

The staffing norms should have a period of validity. It is important to set a long-term staffing norm for the next five to 10 years. The definition of the period should consider the outcomes of step 6, for example:

A. If you decide to set long-term staffing norms for the next 10 to 15 years, you need to make some assumptions to anticipate the changes. This would entail making adjustments in the draft staffing norms 1.0:
    1. If the changes of the drivers are considered significant and can affect the relevancy of the staffing norms over the proposed period, an adjustment of the draft staffing norms 1.0 is required to anticipate those changes.
    2. If the effects of the changes of the main drivers have been considered and the impact on the staffing norms is limited, then it would not be necessary to adjust them. However, you need to establish a monitoring and evaluation mechanism to follow and adapt the staffing norms application.

B. If the period of the staffing norms is short (between five and less than 10 years), you may decide to:
    1. keep the staffing norms without any adjustment, on the assumption that the actual workload of health services will remain unchanged over the period, or
    2. make minor adjustments, where only a few categories of staff may require having their staffing norms reviewed or new categories of staff are covered by the new staffing norms.

Based on these elements, the TTF can propose a period of validity of the staffing norms for discussion during the validation workshop (version 2.0).

Step 9: Adjusted staffing norms (version 2.0)

Based on the foregoing, the technical group should propose the adjusted staffing norms, version 2.0 using template 7. Adjustment means deciding whether or not to increase or decrease the range (Min/Max) of the draft staffing norms 1.0. In addition, the group should do a rounding of the draft staffing norms 1.0 for more clarity in its future application. You can use the WISN method of rounding the numbers (cf. WISN manual).

Template 7: Adjusted staffing norms (version 1.2)

Occupational category	Urban		Rural		Specific areas (if any)		Comment on the coverage (%) considered
	Min	Max	Min	Max	Min	Max	
Category 1							
Category 2							
Category 3							
Category 4							
Category 5							

4. PHASE III: IMPLEMENTATION GUIDE OF STAFFING NORMS

4.1 Applying staffing norms

Due to the low coverage of health services in some countries in Africa, some facilities cannot be equally staffed using the defined staffing norms because their actual workloads could be very high or very low, resulting in staffing needs outside the range of the staffing norms.

If you have chosen interval 2 (Mean $\pm$ 2 x σ) to set your staffing norms, it means that 95.5% of the facilities of similar type are within the interval of the staffing norms and only 4.5% of them are out of the range. However, if you have chosen in phase II, interval 1 (Mean $\pm$ 1 x σ) to set your staffing norms, this means that 68.3% of the facilities of similar type are within that interval of the staffing norms and 31.7% of them are out of the range.

To implement the staffing norms for the facilities within the range, the HRH manager may decide to allocate the:

(a) minimum value of the staffing norm by category if the need is close to the minimum value;
(b) average value of the staffing norm by category if the staffing requirement is close to the average value;
(c) maximum value of the staffing norm by category if the need is close to the maximum value.

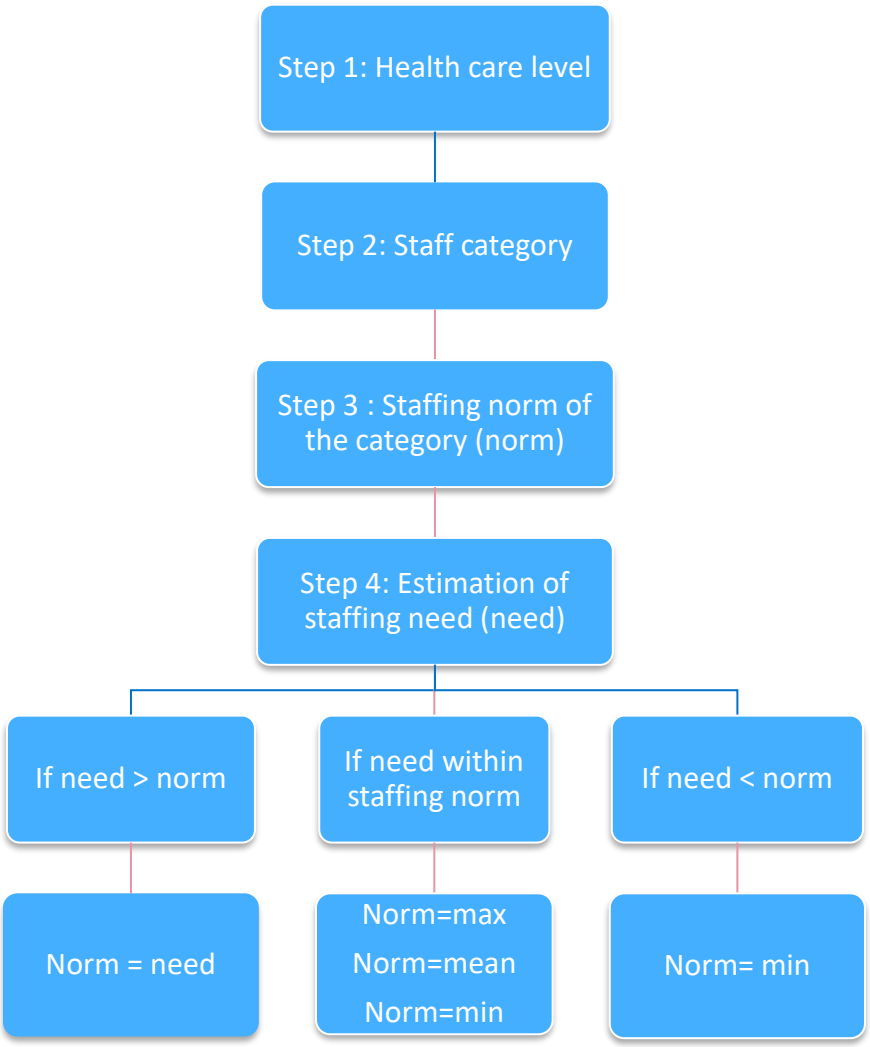
If the staffing need of the facility is outside the range of the staffing norms, then you need to decide as follows:

If the actual staffing need by category of the facility is higher than the maximum value of the staffing norm, you may allocate the calculated staffing need, and

(a) If the actual staffing need by category of the facility is lower than the minimum value of the staffing norm by category, you may allocate just the minimum value of the staffing norm by category.

The overall process follows the steps in Figure 2.

Figure 2: Overall process to implement staffing norms



4.2 Determining an estimated staffing need by category

Each facility manager, together with the district manager, supported by the HRH directorate of the MoH, should carry out this process. A model is developed to estimate the staffing need and adjust the staffing norms for facilities with very low or very high workloads.

Using the WISN method and the WISN results, you can estimate the need for health personnel in the health care facility, based on the actual workloads, using the following model:

Estimation of facility staffing need for a staff category

$$S_{need} = a\sum xi + b$$

Xi= Three to four main health services of the staff category
a= Allocation factor to account for support activities of the staff category
b= Allocation factor to consider individual activities of the staff category

The model can be made accessible online or shared in Excel format to run the model.

4.3 Application of the model using Microsoft Excel

The model requires WISN results, such as:

1. Annual workload statistics of selected key health services performed by all members of the staff category.
2. Available working time (in minutes) of the staff category (use the standard available working time which is an average).
3. Service standards of each selected main health service (in minutes).
4. Average of the WISN category allowance factors (CAF) in the region/country for that category (use the standard CAF which is an average).
5. Average of the WISN individual allowance factors (IAF) in the region/country of the staff category (use the standard IAF which is an average).

The model can be run in Excel software or on a website. Five parameters of the model can be fixed by default for each staff category, from the WISN results, you need to set:

1. Three to four main workload components of the health services of the staff category.
2. Average standard available working time, in minutes (AWT) of the staff category.
3. Service standards in minutes (Std) regarding each selected workload component of the health services.
4. Average of category allowance factors, **a = (∑CAF)/n.**
5. Average of individual allowance factors, **b = (∑IAF)/n.**

After setting these default values, the model-based Excel needs as an input, only the annual workload statistics related to the selected workload components of the health services of the staff category. Once this is done, the model should be able to calculate the:

1. Standard workload: **SW= AWT/Std.**
2. Staff requirement for each workload component of the health services of the staff category: **Xi = AWi / SWi .**
3. Estimated staffing need-based workloads: $S_{need} = a\sum xi + b$

Example of application

For example, the minimum and maximum values of the staffing norms for midwives in a primary health care centre are [2–4]. The estimated staffing need of this category of midwives is higher (5.02 midwives) than the maximum value of the staffing norm (4 midwives) as shown in the table below. Thus, the adequate staffing should be 5.

Using the model to estimate the required number of midwives for the health centre

Parameters	Antenatal care (X_1)	Postnatal care (X_2)	Deliveries (X_3)	Family planning (X_4)
AWT_i= Available working time (in min)	100 800	100 800	100 800	100 800
Std_i = Service standard (in min)	18	15	200	15
SW_i = Standard workload	5 600	6 720	504	6 720
AW_i = Annual workload statistics	4 360	3 460	600	4 532
Xi = Staffing need of service	0.78	0.51	1.19	0.67
a = Average of CAF	1.35	1.35	1.35	1.35
b = Average of IAF	0.37	0.13	0.13	0.13
$aX_i + b$	**1.42**	**0.83**	**1.74**	**1.04**
$S_{need} = a\sum xi + b$	**5.02**			
Staffing norms	**4**			

4.4 Validation of the staffing norms 2.0

It is strongly recommended that a stakeholder consultation should be held to discuss and validate the draft staffing norms 2.0 including its period of validity, the implementation guide and the financial implications to fill the gaps.

Staff	Urban		Rural		Specific areas (if any)		Comment on the coverage (%) considered
	Min	Max	Min	Max	Min	Max	
Category 1							
Category 2							
Category 3							
Category 4							
Category 5							
……							
…….							

Financial implications of the new staffing norms by level of care

Occupational category	Total existing health workers (EW)	Total health workers-based staffing norms (SN)	Gap (EW) –(SN)	Estimated gap costs (in local currency)
Category 1				
Category 2				
Category 3				
Category 4				
Category 5				
……				
…….				

CONCLUSION

This guide was developed based on experiences and lessons learnt while developing staffing norms and standards in African countries. It provides the Member States and partners with a flexible, adaptable and user-friendly framework to guide the determination of health workforce staffing norms for health facilities.

In its application, however, it is important to adapt the frameworks and methodology to the context. It is also important for policy-makers and HRH managers to be involved in the process to facilitate its adaptation and ensure ownership and institutionalization of the principles. This will ultimately improve health workforce planning and lead to the achievement of health sector goals, UHC, and the Sustainable Development Goals.

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