

WORKLOAD INDICATORS OF STAFFING NEED (WISN): SELECTED COUNTRY IMPLEMENTATION EXPERIENCES

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Foreword

The Global Strategy on Human Resources for Health: Workforce 2030, being submitted to the World Health Assembly in May 2016, projects the vision to accelerate progress towards universal health coverage and the Sustainable Development Goals by ensuring universal access to health workers. The need for an evidence-based planning method that could estimate actual health worker staffing needs in health facilities that could in turn contribute to producing and managing staff in the required numbers at the required places, is principal.

The Road map for scaling up human resources for health for improved health service delivery in the African Region 2012–2025 lays emphasis on the availability of sufficient numbers of qualified health workers in the right place as essential for the delivery of quality health services to the population.

The significance of health workers to meet the health-related Millennium Development Goals was also underlined in the World Health Report 2006: working together for health, that drew global attention to the critical shortages of skilled health professionals (physicians, nurses and midwives) in 57 countries the majority of which are in the AFRO region.

Beside the shortage of health workers, the lack of credible data hinders management to make evidence based policy decisions to manage their existing health workers with regards to understanding their workload and efficient deployment.

Since the launch of the computerised version of the Workload Indicators of Staffing Need (WISN) tool in 2010, many countries have implemented WISN studies in varying settings to assess actual workload of their existing health workers at the health facilities, in an attempt to understand issues of real gaps in required staff, maldistribution and low performance and productivity of existing staff.

This publication touches on the very element of health workforce planning and the importance of access to scientific evidence as the basis for health worker deployment plans, be it to reduce inequities in health worker distribution, to apply principles of task sharing or to ensure proper skill mix in a health care team.

The intention of this publication is to share the experiences of few selected countries from the African Region in implementing WISN tool. It is recommended to all those interested in understanding the implications of HRH planning at national level. The potential user could gauge the strength of the tool and its contribution to deploy the workforce at various levels of the health system to achieve a more responsive and balanced distribution of staff.



Mr James Campbell
Director
Health Workforce Department
WHO Headquarters



Dr Delanyo Dovlo
Director
Health Systems and Services Cluster
WHO Regional Office for Africa

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Executive summary

The Workload Indicators of Staffing Need (WISN) tool has been around since the 1990s and has been implemented in many countries since. The original Excel-based version was revised and computerized in 2010, making it more user friendly. Since the release of the computerized version, several countries have conducted WISN studies in varying scopes. To date, however, there has been no consolidated effort to document the various processes undertaken, challenges faced and lessons learned. This publication attempts to document the experience of the World Health Organization (WHO) in building capacity and offering technical guidance to Member States. Though this document focuses mainly on four countries in the WHO African Region, there are many other countries not alluded to herein where WISN studies have been conducted.

The WISN tool has a methodology that can, if followed accurately, produce 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 institution. Implementation of the WISN tool is more likely to succeed when institutional leaders are involved in the steering process from the start. Thus, the briefing session that is conducted to enable policy-makers to make a final decision whether to proceed with WISN or not is important, as experience has shown that when this step is not properly carried out, the technical process that follows does not yield much fruit.

Capacity-building is an integral and crucial part of the WISN implementation strategy. An inclusive approach gives room to partners and other relevant stakeholders who have direct interest and involvement in the health workforce agenda, including trade unions, funding agencies and partners. Capacity-building should adopt a bottom-up, partnership-based approach. In most if not all cases, national capacity-building demands external support in the form of both financial and human resources.

It is advisable that a country conducts a broad scoping exercise to develop a roadmap or operational plan indicating the main milestones of WISN, including allocation of responsibilities and a timeline for action. This roadmap is normally a shared responsibility between the ministry of health, WHO and funders.

Partner involvement is thus central to the development of the WISN implementation strategy and plan, including the training of trainers and actual roll-out of the tool in the field. The participation of WHO country offices has been key in this process, and their consistent involvement

has contributed to the success of WISN through continuous provision of technical support. Above all, wherever the WISN application has been completed, commitment by the ministry of health of financial resources and staff time at all levels, and involvement of stakeholders such as academic, research and related institutions, have been evident.

The use made of WISN depends on the needs of the country. By reviewing the staffing norms and standards for different health facilities, WISN can help ensure that the right people, with the right skills, are in the right place. WISN gives an accurate indication of staffing requirements based on actual workloads and expert professional opinion, and its results can be used in the determination of staffing norms and standards. Other aspects, such as the skills mix of the workforce and the capacity of health workers to fill skills gaps, will be reflected in the final staffing norms, within the overall national vision and policy framework for the health system. WISN results can also assist in improving many other types of decisions regarding health workforce planning and management, such as rationalizing the distribution of current staff, aligning task allocation among cadres, reducing workload pressure and increasing the quality of current health services.

WISN results can be used to evaluate staffing capacity and capability over the previous year, and to forecast the likely staffing requirements of facilities, departments and wards in the short term, based on future workloads. They can also help to assess distribution of staffing between similar types of health facilities in order to identify which health facilities face a shortage or surplus of staff in relation to the workload, and estimate the size of the staffing deficit or surplus. Such an analysis can also help to estimate how many additional or in some cases fewer staff would be required to increase the total staffing of all facilities to the level that corresponds to existing staffing and standards. Analysis of workload pressure can help to determine which health facilities should receive the highest priority on staffing issues.

In regard to task shifting, WISN results can help assess the policy and financial implications of staff shortages for the current allocation of tasks between similar cadres and task sharing or task shifting among different cadres, and to see if the tasks shared are appropriately addressed through adequate training. In addition, WISN can indicate the staffing consequences arising from creating a new staff category to undertake specific functions addressed by existing staff categories.

The process is most successful where there is local mastering of the WISN tool concurrent with ministry of health commitment with regard to staff time and financial resources. Also, where there is a good mix of knowledge and skills in the technical team, the success rate of implementation is generally higher. Another critical factor is the availability of data and information from facilities, supported by functional health information systems to help with the calculations of workload pressure.

The WISN tool is not intended for one-off use. By design, it is hoped that countries or facilities will mainstream the tool into the management processes for health workforce planning and implementation. Maximum use of the tool can be ensured by building capacity at national and health facility levels in the competent administration of the tool and its methodology.

The lessons learned so far show that continued use of the WISN tool is more likely where there is sufficient competence in the use of the tool by a critical core group of policy-makers and managers, along with knowledge of what the WISN tool can achieve once appropriately applied. In the meantime, there is need at international level to enlarge the pool of WISN experts available to offer systematic support to countries during their first experiences in the application of the tool. Use of the WISN tool thus far has provided an opportunity to take advantage of the experience of users to improve software programming and clarify methodology.

Financial resources urgently need to be mobilized to build a pool of WISN experts to support the increasing demand from countries and ensure adequate investment in the tool. Sustainable financial input can offer a means of guaranteeing continued support to countries and enabling them to maintain quality in the use of the tool.

1

The Workload Indicators of Staffing Need (WISN) tool has been around since the 1990s and has been implemented in many countries since. The original Excel-based version was revised and computerized in 2010, making it more user friendly. Since the release of the computerized version, several countries have conducted WISN studies in varying scopes. Following demand from Member States, the retool, which was originally developed in English, is now being translated into other languages. The French and Spanish versions are now complete. Based on the experiences using the computerized version since 2010, the tool has been upgraded with new features, making it easier to use. A revised software manual has been developed to accompany the multilingual WISN version.

2

Countries have been planning for human resources for health for a long time. In parallel, demand has grown for tools to facilitate that planning, including tools that can assist with applying objective and scientific methodologies to estimate health workforce requirements. Initially, it was thought that estimating accurately the required numbers for a service industry such as health could present insurmountable difficulties. But as progress has been made in quantifying the services required, so it has become more possible to quantify objectively the quantity and quality of health workers needed. The challenge of making the tools more user friendly is increasingly being met.

3

The WISN methodology helps to determine how many health workers of a particular type are required to cope with the workload of a given health facility and assesses the workload pressure of health workers in that facility. The methodology uses the data available in health information systems and provides options for closing gaps in workforce availability. It considers the different health service packages provided and the complexity of care in different health facility settings.

4

WHO approach to the implementation of WISN

The WISN tool has a methodology that can, if followed accurately, produce 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 institution.

4.1 Political leadership

When applied correctly, the WISN tool is able to estimate required numbers of health workers by skill category based on the actual workload. Prior understanding, ownership and appreciation of the tool are essential prerequisites for the results to be accepted by policy-makers following application of the tool. The results invariably have policy implications, and can confirm or guide revision of current policy and practice. For example, they may show that a particular category of health workers is in short supply, with the related tasks being performed by other workers, who may be overworked and may be underqualified or overqualified for the tasks. The results may also reflect absence of certain activities due to a variety of reasons, including absence of a particular expertise or diagnostic equipment. Implementation of the WISN tool is more likely to succeed when institutional leaders are involved in the steering process from the start.

4.2 Stakeholder agreement

The policy-makers who play a cardinal role in deciding to use WISN in health workforce planning and management are encouraged to involve other partners and stakeholders in the WISN process. Such an approach has been found useful because the tool is applicable at all levels, from a facility-level study to a nationwide exercise, depending on the main reason for applying the tool. Partners and stakeholders should be included not just to aid their understanding of the process, but also to encourage their involvement (as applicable) so that the WISN implementation has the full cooperation of all involved.

The approach taken by the WHO Regional Office for Africa is to provide an overview of WISN to senior management of the ministry of health, who are encouraged to include relevant ministries, partners and other stakeholders at the country level. This briefing normally takes two hours to a half a day to allow for interaction. The briefing session is conducted to enable policy-makers to make a final decision as to whether they proceed with WISN or not. Depending on this, the remainder of the process of application of WISN is undertaken. Experience has shown that when this step is not properly carried out, the technical process that follows does not yield much fruit.

4.3 Financial resources and human resources

In most countries, the ministry of health mobilizes resources for WISN application, supported by partners within the country. The partners often demonstrate a keen interest in knowing how the tool works. It is useful for them to be part of the technical process, thereby assuring continued support at country level. Partner involvement is thus central to the development of the WISN implementation strategy and plan, including the training of trainers and actual roll-out of the tool in the field.

The participation of WHO country offices has been key in this process, and their consistent involvement has contributed to the success of WISN through continuous provision of technical support. Above all, wherever the WISN application has been completed, commitment by the ministry of health of financial resources and staff time at all levels, and involvement of stakeholders such as academic, research and related institutions, have been evident.

There is a need for a process workplan with a feasible and agreed time frame, taking into account political factors and the nature of the governance system (for example, centralized or decentralized) in the planning and implementation at each stage.

Experience so far has shown that countries initially attempt to apply ambitious deadlines, as they want the WISN results to inform decision-making. This is reflected in the first roadmap that is developed at the initial briefing session. However, at the stage of actual orientation and the training of trainers, there is often a realization that the time frame has been overambitious and some readjustment of the timing of the different stages of the WISN application process is required. Normally, it is advisable that a country conducts a broad scoping exercise to develop a roadmap or operational plan indicating the main milestones of WISN, including allocation of responsibilities and a timeline for action. This roadmap is usually a shared responsibility between the ministry of health, WHO and funders (Table 1).

Table 1. Typical WISN roadmap indicating key steps

TASK	RESPONSIBLE	TECHNICAL AND FINANCIAL SUPPORT
Country request for WISN support	Ministry of health	Generally, the ministry of health requests WHO to assist understanding of the tool, including resource implications of the process
Preparation for briefing with senior management, selected partners and relevant stakeholders	Ministry of health	WHO facilitates the briefing as requested
Briefing with technical team (ministry of health only or ministry of health with core partners)	Ministry of health	Led by ministry of health in collaboration with WHO country office
Development of draft concept note	Ministry of health	Based on the orientations from senior management briefing indicating the objectives and targets of the process
Preparation of training of trainers, including resource mobilization	Ministry of health	Ministry of health in collaboration with partners and WHO
WISN training of trainers, including development of a draft implementation strategy	Ministry of health	Training of trainers facilitated by WHO
Implementation of the roadmap or strategy	Technical task force	Financial support from ministry of health and partners Technical guidance from WHO or experts during the various phases of the roadmap, such as development of activity standards, piloting, data collection, and entering data in the WISN tool
Monitoring and evaluation	Technical task force	With other partnerships available in the country

5

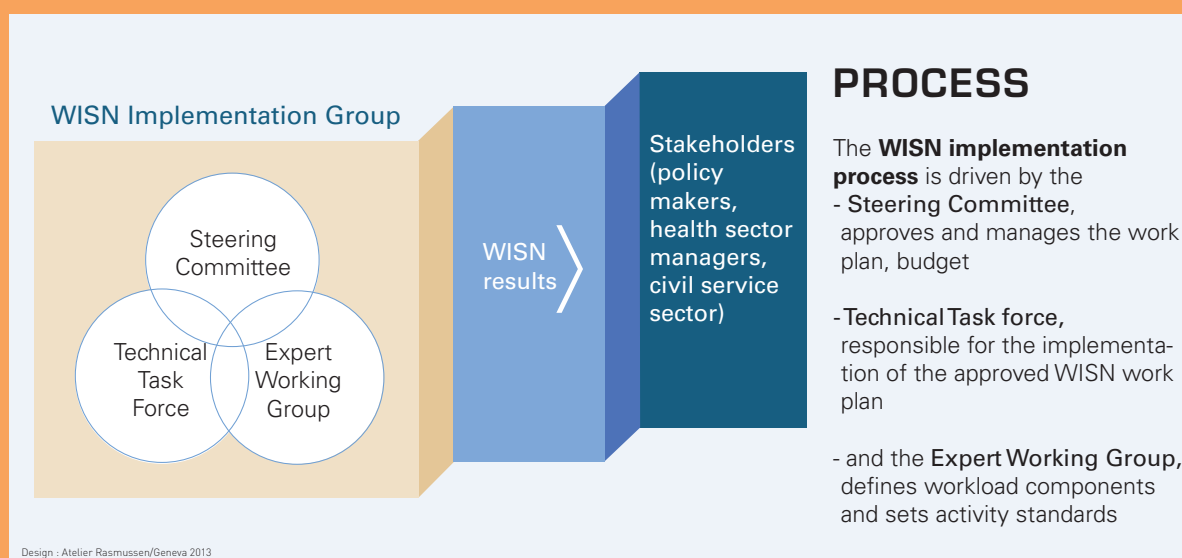
Establishment of committees

The WISN tool proposes a number of committees or working groups to manage and implement the methodology (Figure 1).

5.1 Steering committee: composition and role

Consistent with the WISN manual, WHO always recommends putting in place a steering committee based on the context of the country. The chair of this committee should be the highest-level policy-maker that can decide on behalf of the ministry of health on the whole process. Other members are expected to be heads of the different units or departments of the ministry of health, and representatives of other relevant sectors, such as public service. Due to the complexity of creating a committee at this level, in most cases, existing management committees could be allocated the additional function of overseeing the implementation of the WISN strategy and plan. Experience in countries with regard to the steering committee has varied, but in every case the proper functioning of this committee determines the success of implementation.

Figure 1. WISN process



5.2 Technical task force: composition and role

The members of the technical task force should include all those who will be actively engaged in managing the application or implementation of WISN. They will characteristically be technical heads with responsibilities in various areas, including human resources for health, planning, health information systems related to human resources and health management, and other health care categories depending on the breadth of WISN implementation required. For example, if the WISN tool involves nurses, doctors, pharmacists and other categories, or if the process is countrywide, then the composition of the task force can be expanded accordingly. The technical task force members are drawn from the initial larger group (usually varying between 40 and 60 participants) that will participate in the training of trainers workshop. Experience indicates that the initial group should not exceed 60, as it could compromise the ability of the group to become sufficiently competent in WISN to in turn train others who will actually undertake the fieldwork.

The chair of the technical task force should be the head of human resources for health at national level, and will therefore be senior enough to be part of the steering committee or at least have direct access to the chair of the steering committee to facilitate quick decision-making during the implementation process. The chair of the technical task force reports to the steering committee as necessary. Unless the process is at subnational level in a decentralized system, the regional, district or facility head of human resources for health could chair. Membership of the technical task force is best limited to a smaller group; in most cases, it has been below 20.

The success of WISN implementation on the ground depends on the technical task force having competence with WISN. Experience has shown that not all those receiving training of trainers end up spearheading the process; it is only natural to have varied levels of perception within a given group resulting in a select few being champions within the technical task force. A pragmatic approach to steer the process effectively would be to identify those champions and assign them to lead the internal training sessions for those who did not attend the training of trainers. WHO encourages this type of process so that the country produces a core group of WISN experts that the technical task force can use to reinforce the knowledge and skills received in the training of trainers as they apply the tool in the field. This is especially important as the WISN tool is intended for use as a management tool rather than being a one-off exercise.

Those identified as champions can be used by the technical task force to troubleshoot issues on the ground as they arise at the various sites during implementation.

5.3 Expert working group: composition and role

The WISN manual is also clear on its guidance as to how the members of the expert working group are selected and oriented to play their critical role in the application of WISN in countries. The expert working group should be chosen based on the particular WISN focus that the country wants to implement. The profile of the expert working group should be mixed, including senior and experienced members, those still active in the field, academics, and others respected by their peers.

The main role of the expert working group is to set activity standards for each of the health service workload components being studied, relevant to the national context.

6

Capacity-building: training of trainers

Capacity-building is an integral and crucial part of the WISN implementation strategy. It involves an inclusive approach, giving room to partners and other relevant stakeholders who have direct interest and involvement in the health workforce agenda, such as trade unions and funding partners. Capacity-building should adopt a bottom-up, partnership-based approach. In most if not all cases, national capacity-building demands external support in the form of both financial and human resources. However, care must be taken to ensure that the external support does not involve itself in management or control of the process, but rather plays the role of catalyst, steering the process towards the ultimate aim of increasing the self-sustainability of national organizations.

A crucial part of the capacity-building and WISN implementation process is the training of trainers workshop. The first, fundamental step is the design of the workshop, which will aim to ensure that the workshop aligns itself with the scope of the project by addressing issues such as health cadres and types of health facilities included in the WISN study. The design will also include such issues as the profile of the participants, the availability of facilitators and participants, venue, dates and budget. At this stage, it is important to have the complete support of the steering committee. Covering the above issues will facilitate planning and participation, providing a strong foundation for WISN roll-out and implementation.

The profile of the participants is important, and depends on the scope of the WISN study. Representatives should include ministry of health officials, experts, facility managers, civil service officers, planning officers, information system experts, and members of the targeted health cadres. It is strongly recommended that experienced professionals of the targeted health cadres be involved. An effective capacity-building approach requires involvement of all domains and stakeholders in the training of trainers for WISN.

A strategic step at this stage is to identify “champions” among the participants – those who could effectively engage with the technical task force. Those champions could bolster capacity-building by driving the process of knowledge dissemination and study implementation, based on the roadmap discussed above. It is important to devote sufficient time to the training of trainers, using flexible, adult learning approaches until all participants are familiar with the topic and with their roles.

Setting activity standards in a national context

Health workers in health facilities provide various services (workload components), which may involve outpatient care, inpatient care, deliveries, surgical operations, mother and child health, health promotion, supervision, in-service education, administration and other components. Each activity (workload component) requires allocation of time from one or several different staff categories based on existing standard medical practices and procedures in the country. For example, treating an outpatient may require not only the time of a nurse for preparation and recording, but also the time of a doctor for examination, a laboratory technician or radiographer for performing tests, a dispenser for filling a prescription, and so on. So, for the same workload component, different cadres can allocate different times to provide health services. WISN assesses these workload components, for which service activity standards should be set.

Service standards are set based on the work being performed to professional standards in local circumstances (for example, taking into account availability of equipment, electricity, water, technology and other provisions). In addition, a service activity standard assumes that the health worker is well trained, skilled and motivated. This step in the WISN methodology is critical, because service standards have a direct effect on the estimate of the staff required to cope with the actual workload of a facility.

There are two ways to express a service activity standard: the unit time, which is the average time taken by a health worker to carry out an entire service activity, for example 30 minutes of postnatal clinic per client; or the rate of working, which is the average number of activities completed within a defined time period, for example eight clients in a four-hour postnatal clinic.

The time estimate must include the time needed to complete all the work, which is related to the service activity as it is being delivered by the health worker. The period of time between the start of an activity and its conclusion, extending to the start of the next similar activity, is calculated according to the procedures and practices in the country, and is intended to ensure there are no delays between successive similar or identical activities (for example, attending to one patient and collecting a specimen for laboratory tests, completing the task, and going straight to the next patient to undertake the same activity).

Any activity done for each patient (for example visits) or item (for example X-ray, laboratory test) should be included in the unit time for each patient or item. Anything done regularly (for example, in terms of minutes per day, hours per day, days per week, or days per month), irrespective of service workload, should be covered by an allowance standard, for example for weekly reporting or staff meetings.

7.1 Activity standards and type of facility

Activity standards should be set within their context, even if they involve the same type of work in different facilities. For example, the treatment of an inpatient in a national hospital takes longer than in a district hospital or a clinic. Generally, a ward nurse spends longer per patient per day in a hospital for dependent inpatients than a nurse performing the same work in a clinic. Based on this, a national hospital requires more ward nurses for the same number of inpatients than a district hospital. This is also valid for other cadres or categories, such as doctors.

Setting activity standards for nurses and doctors in hospitals without considering the varying working situations can underestimate or overestimate the staff requirement. One solution is to consider separately each ward or unit and set activity standards accordingly.

However, there are some activities that are performed in the same conditions at all levels of care, in which case the same activity standard can be used for all facilities levels, for example in the case of vaccination.

7.2 Responsibility for setting activity standards

Activity standards are set by the expert working group or groups, which comprises senior and knowledgeable staff with substantial experience working in the health service activities under analysis. The mix of skills in the group or groups should be carefully considered: some bring many years of experience in undertaking the activities in each workload component, while others will be very familiar with the training and professional standards of the health worker category for which they are developing activity standards. By working together, the group members should be able to estimate with reasonable accuracy how long, on average, each workload component takes when it is performed to prescribed and expected professional standards in accordance with local conditions and practices. The aim, then, is to bring together representative experts, both category based and facility based:

- The cadre- or category-based expert group members comprise senior and knowledgeable staff with the ability to set activity standards for all members of the staff categories in their own cadre working in all different types of health facilities.
- The facility-based expert group members comprise senior and experienced staff in a given health facility type who are generally recognized to having good performance standards in a particular category.

The two groups should work together after receiving an orientation of half to one day on how to set activity standards. The orientation should provide an overview of the WISN methodology, including what constitutes a workload component or an activity standard, and how to define the workload components for each staff category in each type of facility based on actual services. This activity will take into account existing practices and procedures in the country as a basis for setting activity standards for each defined workload component in each type of facility.

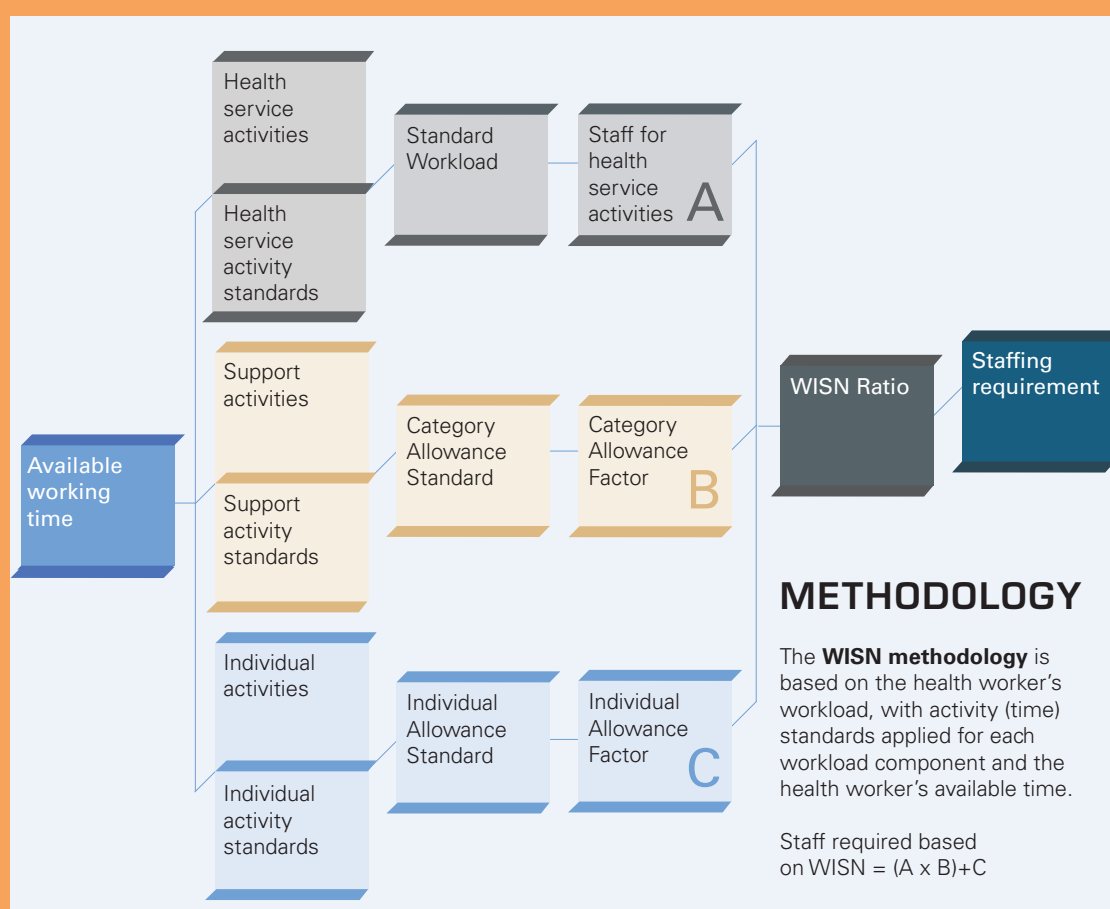
Experience has shown that it is advisable to conduct a workshop for orientation of the experts to develop activity standards when the time comes to develop those standards, and not directly after the training of trainers. This ensures that the orientation is still fresh in their minds, facilitating development of good-quality standards.

8 WISN's data needs

Like any health workforce planning tool, the WISN tool has its own data requirements. The amount of data required depends on the scope of the WISN application. The required data are most often obtained from the health information system and the human resources for health information system. Depending on the structure of national information systems, the data may be in a single system or in several individual systems. The data format is equally variable, ranging from computerized up-to-date standardized electronic databases to facility-based journals and papers maintained by health professionals.

In cases where data are not available from existing systems, a time and motion study can be conducted to address this gap. This is discussed in detail in section 9, "Availability and quality of data".

Figure 2. Data elements of WISN



8.1 Data components and their units

The main data elements required for the WISN study are (a) number of available staff to do a given activity; (b) the time needed for a given activity; (c) total time available to staff; and (d) the number of times the activity needs to be carried out (Figure 2).

8.2 Number of available staff to do a given activity

The data on number of staff in a facility or hospital ward are readily obtained and well documented in most cases. This information can be entered as a head count or as a full-time equivalent calculation in the WISN tool. These data are used to estimate the workload and related salaries.

8.3 Time needed for a given activity

The time needed for a given activity is what is called as the “activity standard”, which is basically the optimal time required to conduct an activity. “Activities” in WISN are categorized as “health service activities” and “support activities”.

Health service activities are those activities that require direct interaction with a patient or are directly related to a health activity. Examples include postnatal consultation by a midwife, X ray services by a radiographer, conducting tests to assess oral health by a dental hygienist, or scrubbing before a scheduled operation by a surgeon. Invariably the time taken to perform any given task differs from staff member to staff member, so setting activity standards is a crucial exercise. It is the responsibility of the expert working group to determine the standard time for each health service activity, expressed in minutes in the WISN tool.

Support activities are those that do not require direct interaction with a patient or involve direct relation to a health service; nor are data on these activities collected annually in the information system. They are activities performed to support the health service activities, and they are classified into two categories: (a) time spent on support activities that involve all members of a cadre; and (b) time spent on activities that are performed by particular individuals, for example team meetings on supervisory activities. Time taken for some of the activities listed as support activities may be fixed and predetermined, such as length and periodicity of team meetings; others, such as report writing, may depend on the individual health worker, and will involve computation of an arbitrated value. The WISN tool is flexible about the activity standard for units of support activity; it may, for example, be one hour each month for a meeting, or 20 minutes for report writing by a nurse in charge.

8.4 Total time “available” to staff

The WISN methodology uses the concept of “available working time”. This is the health worker’s time available in one year to do his or her work, taking into account absences, and involves a simple calculation of expected number of working hours, number of working days and number of absences. The available working time is denoted in hours or minutes for the purpose of WISN calculations.

8.5 Number of times the health service activity is carried out

The facility’s annual health service statistics from the previous year are used to assess the standard workload. The results obtained are only as reliable as the quality and completeness of the statistics. Poor quality of health service statistics due to incomplete documentation can lead to incorrect assessment of the workload, which can in turn lead to an underestimation of health personnel staffing needs. In such a situation a study could be conducted to record health service statistics during a fixed period and then project for the whole year to obtain a provisional figure, under the assumption that health demands throughout the year remain the same as for the study period.

9

Availability and quality of data

It is necessary to assess the possible sources of data and how they were obtained. This could require visiting a number of district or regional health offices to investigate the following:

- Service statistics are those that are received from health facilities and stored in the health information system. It is important to assess the accuracy and completeness of the data: do all facilities targeted by the WISN study make regular statistical returns? How accurately is this done (for example, are missing months ignored)? Do the district or regional health offices actually aggregate the annual statistics for each facility from the monthly figures? Is there adequate administrative and clerical capacity in the district health offices to undertake various activities, for example to assemble the statistics for each facility from the files, and to transcribe these statistics from the records to computer input sheets?
- Are the data on the actual staffing in targeted health facilities complete? Are the staffing records regularly updated?

When the answers to all these questions have been compiled, it will be possible to make an informed judgment on the best methods and ways (consulting file records or direct observation) of collecting the data for the WISN calculations, and also to set out the reasons for justifying this judgement to the steering committee.

If all the data (service statistics and staffing for each facility) are already available and accurate at central level, this part of the investigation will be easier and less time consuming.

In the absence of good quality service statistics, a time and motion study is conducted to fill the gap.

10

Health information systems and WISN

WISN is not intended as a one-off exercise. It is recommended that the situation and the workload at facilities be reviewed periodically, as these tend to depend on changing service demands. For reasons of sustainability and consistency, the health information system and human resources for health information system must be reviewed, adapted, adjusted and improved to produce the required statistics for management using the WISN tool. An approach that synchronizes the WISN analysis with the periodic health plans and human resources for health plans is highly recommended. The WISN results will empower decision-makers and planners with much-needed evidence to inform the development of health plans and human resources for health plans.

11

Using WISN results

There is an increasing and genuine need in African countries for an appropriate tool for determining staffing norms in their health facilities. Unfortunately, for many years, countries have been improvising human resources for health indicators, such as staffing ratios (for example numbers of doctors, nurses or other medical staff per 1000 population), in order to estimate their staffing requirements. These indicators have serious disadvantages. Staffing ratios do not distinguish between the utilization of health workers at the different levels of care, namely tertiary, secondary and primary health facilities. In addition, these indicators do not take into account wide local variations, for example in levels and patterns of morbidity, the demand for services and local economic circumstances.

These and other factors considerably affect the demand for services in health facilities and lead to overstaffing in some health facilities and understaffing in others. As the WISN methodology is based on staffing and workloads at the health facility, it is able to provide credible and evidence-based estimations of the staffing levels required to meet the actual demand for services in health facilities. This is supported by WISN studies demonstrating variations in WISN staffing requirements between health facilities of the same type in the same country, region or district.

By reviewing the staffing norms and standards for different health facilities, WISN can help ensure that the right people, with the right skills, are in the right place. WISN gives an accurate indication of staffing requirements based on actual workloads and expert professional opinion, and its results can be used in the determination of staffing norms and standards. Other aspects relevant to health service staffing and performance, such as the skills mix of the workforce and the capacity of health workers to fill skills gaps, will be reflected in the final staffing norms, within the overall national vision and policy framework for the health system.

WISN results can also assist in improving many other types of decisions regarding health workforce planning and management, such as rationalizing the distribution of current staff, aligning task allocation among cadres, reducing workload pressure and increasing the quality of current health services.

WISN results can be used to evaluate staffing capacity and capability over the previous year, and to forecast the likely staffing requirements of facilities, departments and wards in the short term, based on future workloads. They can also help to assess distribution of staffing between similar types of health facilities in order to identify which health facilities face a shortage or surplus of staff in relation to the workload, and estimate the size of the staffing deficit or surplus. Such an analysis can also help to estimate how many extra staff would be required to increase the total staffing of all facilities to the level that corresponds to staffing standards. Analysis of workload pressure can help to determine which health facilities should receive the highest priority on staffing issues.

In regard to task shifting, WISN results can help assess the policy and financial implications of staff shortages for the current allocation of tasks between similar cadres and task sharing or task shifting amongst different cadres, and to see if the tasks shared are appropriately addressed through adequate training. In addition, WISN can indicate the staffing consequences arising from creating a new staff category to undertake specific functions addressed by existing staff categories. WISN results can also be used to explore the reasons for poor performance of health facilities in cases where there is no workload pressure on the staff. WISN results are based on current professional standards, and enable an accurate comparison of current professional performance across health facilities.

WISN can also be used to examine the impact of changes in any existing condition of employment on staff requirements, such as the stipulated length of working time, the number of days vacation entitlement, the length of other absences, dual practices, and changes in certain medical practices arising from the use of new medical equipment or technology.

12

12.1 Namibia experience

Namibia used WISN to revise staffing norms to meet actual workload requirements. WISN was first applied in Kavango, one of the 13 regions of the country, with the support of IntraHealth. Technical support was provided to help set activity standards for doctors, pharmacists and pharmacy assistants in different types of facilities and to determine the staffing needs for these cadres.

12.1.1 Setting activity standards

Different expert teams were put in place to set service activity and allowance standards for the targeted cadres. The expert team members were selected by the steering committee of WISN and comprised senior and experienced doctors, nurses, pharmacists and pharmacy assistants, and representatives of 12 of the 13 regions, key departments, and divisions of the Ministry of Health, as well as other relevant partners.

Participants attended a two-day orientation and consultative meeting, during which the expert teams were first introduced to the WISN methodology and later guided on how to set service and allowance standards for their respective cadres at each of the health facility levels. The first step in setting the activity standards was to identify the key workload components of each cadre at health facility or unit level.

After agreeing on the workload components, the expert group was divided into two subgroups by cadre. Each subgroup worked separately with the support of the technical team to brainstorm on all major tasks under each workload component. For each identified task, the subgroups discussed what it entailed to carry out the activity to acceptable professional standards, taking into account local conditions. It is important to note that service standards were set for activities that are reported in annual service statistics, for example outpatient visits, admissions and major operations; while allowance standards were set for activities that are not reported in annual service statistics, for example attending meetings, washing instruments and making duty rosters.



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Following the subgroup meetings, one team from each staff category presented their activity standards to plenary. The standards were discussed until a consensus was reached.

12.1.2 Data collection

Workload components were validated for each cadre, including key activities related to health services that are performed by all members of the staff category, grouped into those activities for which regular statistics are collected, such as number of admissions per year; those support activities to health services that

are performed by all members of a staff category but for which regular statistics are not collected, such as staff meetings and reporting; and additional activities performed only by certain members of the staff category but for which regular statistics are not collected, such as making duty rosters. Namibia has detailed data collection forms and the reporting systems are numerous, including the health management information system (using district health information software/DHIS and FileMaker). Some of these data are reported through the region while other data are reported directly to the Ministry of Health.

To overcome the difficulties faced in obtaining all the data from one source, the technical team collected data mainly from the health management information system in the region and from other sources, validated against patient records in the targeted health facilities or units. The data collected covered a period of one year, from 1 April 2011 to 31 March 2012.

The technical team also collected data on absences among the targeted cadres, including annual, compassionate, maternity and sick leaves and days spent on both long trainings and short trainings or workshops. Data on the absences were obtained from health facility records and focus group discussions with the targeted cadres.

12.1.3 Results

The WISN results showed that the majority of the health cadres in the region were working under pressure due the shortage of health workers. At least 77 doctors were needed but there were only 24 available. For the nurses, a total of 602 were required but only 427 were available, leaving a deficit of 175 nurses; and there were only 2 pharmacists based at regional level, whereas 13 were required. None of the districts had a pharmacist, yet they needed 2 to 3 pharmacists each.

12.2 Botswana experience

The Ministry of Health decided to improve the planning and distribution of its health workforce by undertaking a workload assessment to develop staffing norms for health facilities using the WISN tool. The study covers all staff categories working in all types of health care facilities in Botswana. The study started with a pilot phase through the *Kweneng East District Health Management Team*.

All the facilities at all levels with all staff categories were involved in the study in Kweneng district. The categories targeted in the pilot phase were doctors (medical officers and specialists), dentists, nurses and midwives (registered nurses, specialized and nursing administrators), dental therapists, dental laboratory technologists, occupational therapists, physiotherapists, clinical psychologists, pharmacy technicians, laboratory technicians, optometrists, radiographers, biomedical engineers, dieticians and nutritionists. The pilot also provided an excellent opportunity to examine the total workload of the facilities using the WISN results for several health worker categories before national roll-out.

12.2.1 Establishment of committees

After receiving the initial training of trainers on WISN by WHO, the WISN technical task force, comprising 12 members and a chair, was appointed. The technical task force finalized the WISN strategy plan and developed the WISN implementation plan. An important activity of the technical task force was organizing regular briefing sessions throughout the WISN process to keep senior managers and stakeholders informed. These sessions included the steering committee, other senior



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managers, heads of programmes and stakeholders, who were briefed on the WISN tool methodology, the implementation strategy, the financial implications of the plan and the progress made. A core group of five members was drawn from the technical task force and acted as a link between the full technical task force, the expert working group and the steering committee. They managed and supervised the day-to-day activities during the **WISN process**.

Botswana utilized both the cadre and the health facility working groups because of the ambitious strategy that they had adopted. The cadre and facility-based experts provided the workload components and set activity standards for the staff categories that existed within the pilot district.

12.2.2 Setting activity standards

The technical task force, in collaboration with the steering committee, identified the experts who were trained to define the service standards and allowance standards for the targeted cadres. About 400 experts were mobilized to attend five successive consultative workshops for setting activity standards. The orientation consisted of a three-day workshop bringing together about 75 experts divided into five to seven category-based working groups. Each working group defined the workload components and set activity standards for all facility levels except for the nursing and doctor categories, which were split into two groups: a group for hospitals, and another group for primary hospitals, clinics and health posts.

The first day of each workshop was devoted to orientation of experts on the WISN method, including guidance from WHO to the technical task force on how to define workload components, service standards and allowance standards. On the second day, experts were divided into groups per cadre. Each group of experts was asked to discuss and adopt the terms of reference and the methodology.

Their tasks followed five main steps: (a) definition and validation of the main workload components for each cadre, taking into account the actual services offered by the health facility; (b) specification of the main activities for each workload component of the cadre, based on standard operating procedures; (c) definition of the activity standard for each of the activities of the workload component; (d) obtaining consensus within the group; and (e) submission of validated activity standards.

The discussions were moderated by a chair elected by peers, with a rapporteur for each group. In addition, each working group was assigned one facilitator from the WISN task force to offer guidance. The groups presented their work using a template, including the main components of the workloads. Feedback was given by the groups and the technical task force. The group discussions continued until the third day, when the workload components and activity standards were defined.

Some of the challenges experienced included:

- The list of the medical doctors working in a referral and national hospital were exceedingly long and needed to be subdivided to make the work practicable for the groups.
- Nurses and doctors working in hospitals required more time to brainstorm and agree on the cadres. More guidance was provided by facilitators with regard to the content of their tasks and the correct procedure to be used. Subsequently, the two groups of hospital nurses and doctors listed, respectively, all the different categories of nurses and doctors working in different settings in the hospital (wards, clinics, theatres, etc.). Members of each working group were then divided into a number of subgroups, and each produced activity standards for one of the subcategories of staff employed in those settings. The activity standards produced by each subgroup were reported back to the working group and then to a plenary meeting of the workshop for consideration and approval. Each group therefore presented an operational plan for completion of the draft activity standards, and how the activity standards would be shared and validated, along with a timeline, budget and deadline for submission of the validated activity standards.
- A number of challenges were faced on the matter of workload information. In some cases, health workers reported the ideal standards of the professional procedures as their actual practice, whereas the actual situation on the ground during performance was different.

Another challenge concerned disaggregation of the workload shared among different cadres and recorded as a combined entity. For example, time spent by a nurse with a patient in theatre is different from that spent by the surgeon on the same patient, yet the workload was defined by the numbers attending the theatre. Looking at the shared workloads, it was evident that the activity standards of cadres sharing the workloads were varied. Furthermore, data in some facilities were not consistently captured in the integrated patient management system, hence the sources were scattered in various registers and books.

12.2.3 Data collection

Data were obtained from the health workers in the facilities within Kweneng East district by the team of data collectors, who were members of the technical task force, supported by data capture. The data collection team physically went to the facilities and collected data for almost two weeks. The methodology used provided the team with the opportunity to visit the workplaces and observe some ongoing activities while engaging in face-to-face discussions with health workers. The tool (form 1B) covered the three workload components that had been set and validated by the expert working group. The visits also provided an opportunity for the data team to verify the information from the documentation within the facilities.

The quality of data was acceptable to all stakeholders, aided by the fact that the Ministry of Health had previously developed tools for collecting and reporting information from health facilities. In addition, the integrated patient management system in place in Botswana was able to provide annual workload statistics for the year 2014. The whole team was competent in data entry into the software for all health posts, and each entered the data with guidance from a consultant and an IT expert.

12.2.4 Lessons learned

Training in the WISN method was an exciting experience for the country's health sector. A number of important lessons were learned in the process:

- It is important to develop activity standards through a range of methods, including use of questionnaires, direct observation and estimations of times by experts. This produces results that are more valid and reliable than those depending on one methodology, such as expert reports.
- Record keeping of all the activities undertaken in facilities is critical in providing the annual workload statistics that are used in the tool.
- Involvement of all the relevant stakeholders in the process yields better and more reliable results.
- WISN should not be a stand-alone, one-off activity; rather, it should be integrated into the existing health system.
- It was noted that some cadres devote more of their available working time to support activities rather than their defined health service activities. For example, nurses in the outpatient department were observed interpreting for doctors; that activity could be performed by the health care auxiliaries, who are already in the system.
- It is imperative that roles and responsibilities be clearly defined for each staff category based on competencies and skills.

12.3 Kenya experience

The initiative for the WISN study came from the human resource and technical planning departments of the Ministry of Health after a team was trained by WHO in the use of the tool. The trained team drafted a concept paper that summarized the positive experiences and benefits of the tool. These results were shared with the senior management of the Ministry of Health, who requested financial and technical support from the WHO country office.

The policy-makers were in agreement that the tool would help provide guidance to define staffing needs in a stepwise coherent process by determining workloads. It was envisaged that the tool would help address the challenges that had been experienced in the previous Norms and Standards for Health Service Delivery (2006–2012), which were coming to an end. To aid consensus building, knowledge of WISN was then cascaded to stakeholders in the health sector, including provincial health teams, district health teams and health workers.

The overall purpose of the WISN study in Kenya was to inform development of Human Resources for Health Norms and Standards, to be packaged in the Kenya Health Sector Strategic Plan III, and to aid redistribution of health workers as the country decentralized and restructured to comply with the 2010 constitutional requirements. One of the main objectives of the study was to design the norms and standards for service delivery in a pilot project at Coast Provincial General Hospital, with the aim of replication across the whole country by March 2013.

Due to the cost implications and the urgency of testing WISN as a new tool in Kenya, Coast Provincial General Hospital was selected as a good sample based on its record of performance in health information management and its history of quality patient care. Implementation of the tool was supported by the presence of the team on the ground to help define workloads of health workers, with the possibility of observation where necessary. The study involved all the medical health care workers in Coast Provincial General Hospital in their various work units and within their staff categories.

The work was organized under four committees, which were responsible for supporting the norms and standards team – a steering committee, a service delivery committee, the WISN core team, and an expert technical working group. Selection of the various members was based on several factors, depending on the terms of reference of each committee:

The **steering committee** comprised health policy-makers at the national level. It also included stakeholders in the health sector from professional bodies, regulatory authorities, trade unions and donor partners. Their role was to approve the WISN activities, provide financial and management support, and utilize the results for decision-making and policy direction. The committee was oriented on the WISN method in a two-hour session to develop its understanding of the basis for calculating the required number of staff, and why WISN was an improvement on previous methods.

The **service delivery committee** comprised heads of the various national-level cadres, whose role was to review the services and interventions offered at the various levels of health care. The results were presented to the WISN core team to be used in tandem with the data from the expert technical working group.

The **WISN core team** comprised members who received in-depth WISN training conducted by WHO. They had varied professional backgrounds in the health sector. Their mandate was to implement the WISN study, train the various committees, and collect, collate and analyse data for interpretation.

The **expert technical working group** comprised experienced, respected health workers in the various cadres from Coast Provincial General Hospital. The cadre-based experts provided the workload components and set activity standards for the staff categories. The expert technical working group was oriented in a 10-day workshop that involved all the cadres. The first two days involved training of the entire group on the WISN steps. Thereafter, the members of the group were divided into their various cadres to estimate available working time and to define workload components.

The team defined the workload components that take up most of the health workers' daily working time. In setting activity standards, the team defined the main activities in each of the cadres' daily schedules, along with the time taken to undertake the tasks, including support activities and additional activities, performed by the members of the cadre.

Standard workloads were defined for each cadre with the guidance of the WISN core team. During this workshop, use was made of annual statistics for 2011 from various departments. The data were validated against those provided to the WISN core team on the Coast General Hospital by the Ministry of Health.

12.4 Ghana experience

In 2011, the Ministry of Health and its service delivery agencies decided to develop an evidenced-based staffing norm using the WISN tool. WHO supported the training of a core team drawn from various institutions in 2011 to lead the implementation in Ghana.

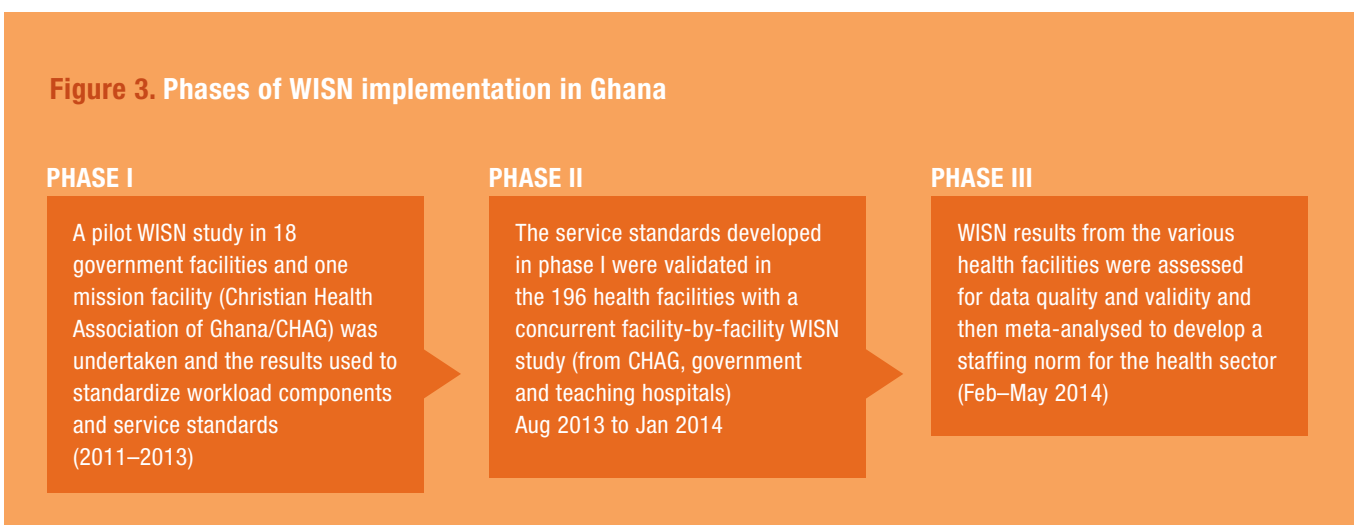
The main objective of the process was to review the 1992 staffing norms to develop a new version reflecting current needs. The specific objectives were:

- to determine staffing norms that will address emerging and re-emerging diseases, new service areas and technological changes;
- to have equitable distribution of health staff at all levels;
- to guide training and serve as justification for additional resources.

12.4.1 Implementation strategy

The WISN tool was piloted in 18 selected facilities at the various health delivery levels in five regions. The breakdown of facilities selected was as follows: five health centres, three polyclinics, seven district hospitals, one regional hospital, one specialized (psychiatric) hospital and one teaching hospital.

The study covered only clinical staff (those directly involved in patient care) in all the selected facilities. This was due to the easy access to workload statistics for clinical staff, and the limited funding available. There were three main phases to the entire implementation process (Figure 3).



12.4.2 WISN training

The Ministry of Health in collaboration with WHO organized a three-day training workshop for selected human resource managers, health planning and information officers and other health managers in Accra, 22–25 August 2011, on the application of WISN. There were participants from three other African countries. The training aimed to equip them with the skills necessary to effectively plan and allocate staff using the WISN tool. There were theoretical and practical sessions and opportunities for country participants to plan how they were going to implement the tool after the training. At the study sites, additional professionals were identified and trained to assist with data collection on workload components and activity standards.

12.4.3 Mobilizing support for the WISN study

At the national level the WISN team, comprising those trained in the WISN tool, presented a report on the workshop with action plans to the Minister of Health and other heads of relevant departments and agencies. In addition, the WISN team made presentations on the essence and benefits of WISN to political heads, senior managers at health interagency-level meetings, and wider stakeholders within the health sector at health summits in order to solicit commitment.

At the institutional level, letters were sent to selected facilities on the importance of the tool, the benefits they would derive from having the study undertaken and the need for their support. During implementation of WISN the support from the selected facilities was very encouraging.

12.4.4 Organization of work

The task teams were structured as follows:

- The **steering committee** provided policy direction on the implementation of WISN, advised the Minister of Health on the need for the WISN tool, worked on the plan and budget for the study and oversaw the implementation process while giving guidance to the technical task team. The members were made up of the Chief Director, Human Resources for Health (Ministry of Health); Director, Human Resources Directorate (Ghana Health Service); Deputy Director, Human Resources for Health (Ministry of Health); Deputy Director, Human Resources Development (Ghana Health Service); and Deputy Director, Human Resources Planning (Ghana Health Service).
- The **technical task team** actually implemented the WISN plan. The team was made up of human resource managers, health planning and information officers, and health managers (some of whom were health professionals), and a member of staff from the WHO Ghana office. Six teams were constituted and their work was to collect data on workload components, determine available working time for each staff category, analyse data and generate reports.
- The **expert groups** comprised managers, supervisors and key health professionals at facility, regional and district health directorates who were brought together at the various facilities to validate the workload components, activity standards and available working time data collected from the staff categories. They helped to correct areas where there were exaggerations, omissions and tasks that were not part of the actual duties being performed.

12.4.5 Defining workload components and setting activity standards

The WISN team (steering committee and technical task team) developed and adopted a data collection template based on the various workload components to help in the collection of data on the health service support and additional activities and the time spent in performing the activities.

The technical task teams, with the assistance of management at each facility, identified staff to be interviewed or to take part in discussions. The teams used the following methods to solicit information on the activities they performed and the time allocated to those activities:

- One-on-one interviews were used in facilities where it was difficult to group staff by category or where there was only one officer at a post, especially in the case of doctors.
- Focus group discussions were used where there were two or three similar professionals in a facility. In the Northern, Greater Accra and Western regions staff from the same facility levels were brought together for the focus group discussions.
- Direct observations were made of some of the procedures and tasks outlined to confirm the data provided by professionals.

- Expert opinion was elicited from key health personnel, managers and supervisors who had supervisory responsibilities over the various facility levels to confirm data from staff. Some experts joined in the focus group discussions; others also reviewed the data obtained from the various professionals covered in the exercise.

The work of the teams was explained to the staff and they were taken through the data collection template. For each specific activity performed under the various work components the staff also indicated the activity standards, that is, the time they spend in performing those activities to professional standards:

12.4.6 Data collection and analysis

The workload data collected for the study was for 2010 and included:

Most of the data were obtained from the biostatistics departments of the facilities. Other data were collected from service areas (especially pharmacies), annual reports and district health directorates. In some cases the data had to be adjusted for use.

Generalization of some of the inpatient data (especially at the Teaching Hospital) made it difficult to ascertain the exact workload of certain medical specialists. This was the case for inpatient wards that were shared among various specialties, but the data had not been captured and separated to reflect those specialties. In such cases estimations were made after discussions with the staff categories who worked in the areas.

At the Komfo Anokye Teaching Hospital, requirements for clinical pharmacists and specialist pharmacist (drug information), registered nurses and public health nurses were not calculated. There were no workload data on the clinical pharmacists and specialist pharmacist (drug information). The registered nurses were widely spread in many departments in the hospital. The public health nurses worked in other departments apart from their public health unit. It was therefore difficult to obtain workload statistics on them from the various places they worked.

The use of the same workload statistics for some cadres who performed the same health activities due to the difficulty in separating the statistics to reflect what each cadre did also had an impact on the results. The was the case for radiologist and radiographer, doctor anaesthetist and anaesthetist assistant, medical officer and medical assistant, public health nurse and community health nurse.

These challenges were experienced during the pilot phase which were addressed during the scale up.

12.4.7 Using WISN results for staffing norms

The results were presented to the steering committee and the Health Workforce Observatory quarterly meeting. The results were also disseminated during the monthly Health Sector Working Group meeting and at the 2012 Health Summit, where there were recommendations that the study be scaled up.

The staffing norms developed using WISN cover about 50% of health sector staff categories (or 74% of staff categories in health centres, district hospitals, regional hospitals and teaching hospitals). Staff categories in community-based health planning and services, health training institutions, district and regional health directorates and headquarters were not covered due to resource constraints. The draft norm has been widely accepted by stakeholders and a trial implementation is being carried out by the Ghana Health Service and the Christian Health Association of Ghana.

The Christian Health Association of Ghana also developed and used activity standards that were validated in developing human resource plans for its 173 facilities. The WISN results from these facilities contributed to the development of staffing norms covering about 50% of staff, mainly from hospitals, polyclinics and health centres.

The workload levels were used to categorize the health facilities using total annual outpatient visits and total annual admissions as proxies. An example for categorization of primary hospitals by workload level is shown in Table 2. Lower and upper thresholds in terms of staff requirement for each cadre type in each facility type were also developed as a guide. Such categorization has been developed for health centres.

The Ghana Health Service has used WISN-based staffing norms to undertake a gap analysis for the cadres covered in some of the health facilities, especially at the district hospital level (Table 3). The results are being used to revise the Ghana Health Service's staff distribution strategy, with the aim of filling staffing gaps. The Public Services Commission and the Ministry of Finance are also applying the staffing norms as employment ceilings for the health sector. It is therefore crucial to complete the rest of the staffing norms to enable full implementation.

12.4.8 Policy implications

At the regional hospital studied, the results showed that there were adequate numbers of staff and even overstaffing in the general surgeon, obstetrician and gynaecologist categories. It was, however, noted at the validation meeting that theatre space was a challenge, and there were queues to perform surgeries. Many elective cases had to wait for a long time to receive attention. The implication is that in considering staffing requirements, there is a need to also consider infrastructural expansion and provision of equipment to ensure efficiency.

The Human Resources for Health Directorate shared the results of the study with other directorates of the Ministry of Health. Already the Policy, Planning, Monitoring and Evaluation Directorate is considering expansion of the facilities at the Ridge Hospital.

The study coincided with the development of the 2012–2016 Human Resources for Health Policies and Strategies for the Health Sector. The findings have been considered in the Policies and Strategies on Production and Distribution of Health Professionals.

Workload data on pharmacy departments are not collected as part of the normal hospital statistics. Facilities have to collect statistics on their work, especially prescriptions served and patients counselled.

Understaffing was also noted for most specialized nurses. On the ground they are assisted by registered general nurses. This calls for training of general nurses in specialized areas.

12.4.9 Lessons learned and challenges

A number of lessons have been learned and challenges faced in the process of implementing WISN:

- The involvement of policy-makers at the national level and managers at the regional and district health offices and facilities helped them to understand and appreciate the WISN tool and offer the needed support. This encouraged the health workers at the facilities studied to view the task seriously.
- There is a need to distinguish between “training” used in calculating the available working time and “continuing professional development or continuing medical education” under the allowance standard.
- The activities and standards defined by staff at the various facilities were found to vary greatly across the same level of facility in other regions.
- Staff at some health facilities and institutions were not able to fully cooperate with the members of the technical working group due to their tight schedules, causing unnecessary delay in the data collection exercise. They were, however, able to contribute during the little time they had with the team.
- Some health staff were apprehensive about divulging information because the exercise was misconstrued to be linked to the International Monetary Fund conditionality for staff retrenchment. These fears were, however, allayed when members of the technical working group took time to explain and aid understanding of the objectives of the exercise.
- Some health facilities and institutions had outsourced certain services, such as security, cleaning and laundry, while others had not. This poses a challenge of deciding whether cadres in these jobs still needed to be employed by the government in large numbers.
- Multitasking and task shifting were common in some health facilities, especially due to nonavailability of some categories of staff. This matter needs careful attention to minimize overemployment while upholding the quality of health service delivery.

Table 2. Categorization of primary hospitals (labelled A, B, C, D) by workload level

TOTAL ANNUAL OUTPATIENT DEPT.	TOTAL ANNUAL ADMISSIONS			
	≤ 4157	4685–6563	6834–9000	≥ 9450
≤ 46 574	A			
48 903–76 308		B		
80 123–100 000			C	
≥ 105 000				D

Table 3. Staffing norms for district hospitals

CATEGORY	WORKLOAD CATEGORY A		WORKLOAD CATEGORY B		WORKLOAD CATEGORY C		WORKLOAD CATEGORY D	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Accountant	1	2	2	3	3	4	4	6
Accounts Officer	6	9	11	15	18	22	23	28
Internal Auditor	1	1	1	1	1	2	2	3
Biomedical Scientist	3	4	4	6	6	7	8	12
Technical Officer (Laboratory)	10	14	15	20	21	25	26	31
Biostatistics Assistant	8	11	11	15	16	19	20	25
Biostatistics Officer	1	2	1	2	1	2	1	3
Technical Officer (HI)	4	5	6	8	8	10	10	15
Clinical Engineering Technologist	1	2	2	3	2	3	2	3
Dental Surgeon	1	2	1	2	1	2	2	3
Dental Surgery Assistant	1	2	1	2	1	2	1	2
Dental Technician	1	2	1	2	1	2	1	2
Medical Officers	3	7	7	10	13	17	23	31
Obstetrician & Gynaecologist	1	2	2	3	3	5	5	8
Ophthalmologist	0	1	0	1	1	2	1	2
Paediatrician	1	2	2	3	3	4	4	6
General Surgeon	1	1	1	2	1	2	2	3
Family Medicine Physician	1	1	1	2	1	2	1	3
Midwives	10	29	30	41	43	52	55	84
Community Health Nurse	3	7	7	10	10	13	13	20
Enrolled Nurses	19	42	44	60	63	76	80	123
Registered Nurses	35	64	67	91	95	115	121	186
Ophthalmic Nurse	1	2	2	3	2	3	3	5
Public Health Nurses	2	4	4	6	6	7	8	12
Pharmacist	2	3	3	5	5	7	6	12
Pharmacy Technician	6	9	9	13	13	16	17	26
Physician Assistant (Anaesthesia)	2	3	3	5	5	8	8	13
Physician Assistant (COHO)	1	2	2	3	3	4	3	4
Physician Assistant (Medical)	2	3	3	4	4	5	6	9
Mental Health Nurses	2	3	3	4	4	5	4	6
Radiographers /X-ray Technician	2	3	3	4	4	5	6	9
Technical Assistant (X-Ray)	1	1	1	2	2	3	3	4
Artisans (Mechanic, Electricals, Plumbing)	6	10	11	14	15	18	19	29
Health Service Administrator	1	1	1	1	1	2	1	2
HR Manager/Executive Officer <i>[HRM must be in category D]</i>	1	1	1	2	1	2	1	2
IT Manager and Officer/Technician	2	2	2	3	3	4	4	6
Procurement Officers	1	1	1	2	2	3	2	3
Procurement Manager	1	1	1	1	1	2	2	2
Supply Manager	1	1	1	1	1	2	1	2
Supply Officer	1	2	1	2	2	3	2	4

NOTE: Where there is a Health Service Administrator, either Administrative Manager or HR Manager is required in addition (NOT BOTH cadres).

Source: staffing norms for the health sector (volume i: clinical and support staff), 2015

13

Partnerships with WISN implementation

The WISN tool is available on a WHO facilitated platform for countries and partners to use. This open availability has enabled countries and partners at country level to take the initiative in applying the tool, with WHO coming in at a later stage, resulting in some useful partnerships and experiences. There is also a community of practice for WISN users.¹ Anyone is free to join by sending an email request. Examples follow of countries that have taken the initiative in applying the tool along with national and international partners.

13.1 Rwanda

The Ministry of Health of Rwanda decided to apply the WISN tool with the financial and technical support of Management Sciences for Health (MSH), which has country presence in Rwanda. Later WHO partnered with MSH through the Ministry of Health, and a training of trainers was conducted for the Ministry, with the MSH team present during the whole training of trainers. Thereafter the Ministry of Health took over technical leadership of the process with the continued support of the MSH team to apply the tool. Rwanda is in the process of completing its WISN application.

13.2 Namibia

Namibia applied the tool with the support of IntraHealth. WHO contribution at this phase consisted of technical collaboration through training and identifying issues. An opportunity for collaboration presented itself at the roll-out phase. To increase the national capacity for WISN implementation, the Ministry of Health and Social Services requested joint support from WHO and IntraHealth. WHO conducted a training of trainers for a high-level national team comprising representatives of the Ministry of Health from all the regions and from headquarters, other relevant ministries, and stakeholders and other partners involved in national application of the WISN tool. IntraHealth funded the national participants. The opportunity was taken during the training of trainers to reinforce the capacity of those familiar with the tool and to clarify the data issues experienced during the pilot phase. Immediately following the training of trainers, IntraHealth continued the process with the cadre-specific expert teams in establishing activity standards. The WISN results have since been used in Namibia to revise the staffing norms and to update policy and planning for human resources for health in the country.

13.3 Democratic Republic of the Congo

The Democratic Republic of the Congo decided to implement the WISN tool with the joint support of IntraHealth and WHO for the training of trainers that was conducted for the Ministry of Health. The implementation stage is awaiting agreement on the implementation strategy. The WISN process in the Democratic Republic of the Congo will be carried out with the two partners and the Ministry of Health. The aim is to implement the tool while building national capacity.

¹ <https://mednet-communities.net/wisn>.

13.4 Egypt

The application of WISN in Egypt was the result of a partnership between the Egyptian Ministry of Health and Population and the Health Systems 20/20 project with support from the United States Agency for International Development. Application of the WISN model in Egypt was executed with the support and active participation of the Ministry of Health and Population Task Force for Workforce Planning and teams in the Ministry of Health and Population directorates of the piloting governorates.

The study included medical specialties and five staff types, including physicians, nurses, technicians, pharmacists and dentists, and covered both general and district hospitals.

13.5 Fiji

WHO together with the Ministry of Health and the Fiji Health Sector Support Programme carried out an assessment of workforce needs and projected future requirements to address the issue of workforce shortages, which result in patient overcrowding in hospitals, long waiting queues for services in emergency and outpatient departments, and challenges in accessing basic health services.

Partners utilized the WISN tool and methodology to estimate the number of health workers required to cope with the actual workload at each facility. The activity was undertaken across all divisions and involved 236 Ministry of Health staff across all clinical cadres (doctors, nurses, dentists and allied health workers) as well as administration and management cadres.

13.6 Dominican Republic

In the Dominican Republic, national stakeholders with support from IntraHealth aim to improve the distribution of health workers to ensure that they are strategically deployed to provide HIV services where they are most needed. The WISN approach has been adopted to build the evidence base that will inform decision-making on that matter.

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Lessons learned

Since the release of the computerized application-based WISN tool in 2010, several countries, partners and institutions have implemented WISN studies. In the WHO African Region, WISN sensitization was carried out at subregional levels during the human resources for health technical planning workshops conducted for both ministry of health and WHO country human resources for health focal points in 2010 and 2011. WHO conducted the first regional orientation workshop for WISN in 2010 in Ghana, where four countries (Ghana, Kenya, Liberia and Sierra Leone) participated. The second regional orientation workshop was in 2014 in Rwanda for 18 francophone countries of the African Region.

The tool and the manuals continue to be made available through the WISN community of practice forum. Some forum member countries were the first to conduct WISN studies using the tool, such as Ghana and Kenya. The approach adopted by these two countries has involved successful coordination by WHO at country level combined with the commitment of the ministry of health to apply the WISN tool. Particularly in the experience of Ghana, technical support was obtained through the WISN community of practice, especially with regard to data cleaning and analysis. The processes in both Ghana and Kenya took time due to the need to build consensus among key stakeholders during implementation of WISN.

Subsequent to these pioneering efforts, appreciation of and demand for the WISN tool increased and spread to other countries, and growing numbers of countries and partners are engaging in WISN studies for human resources for health planning purposes.

In 2012, WHO conducted its first nationwide training of trainers in South Africa through a combined team at the three levels of the organization, supported by colleagues from Ghana and Kenya who had themselves spearheaded WISN at national level. Their country experiences and expertise proved useful during the training of trainers as they were able to share concrete examples of actual practice, including challenges and solutions. The approach, whereby one country assisted another in capacity-building, was found to be extremely useful.

The approach to supporting countries has always been to build local capacity in applying the tool for both ownership of the use of the results and maintaining its use as a sustainable management tool. It is important for technicians to master the tool so they are able to explain the results and their implications. For example, the results normally imply some policy change and the policy-makers need to be convinced of how the tool produced the results.

For the WHO African Region, from the Ghana training of trainers in 2010 until now, much has been learned on how best to conduct the training of trainers with regard to both the approach adopted and the profiles of those who need to attend. The experience has also shown that it is not useful to conduct the training of trainers without evidence of commitment by national-level policy-makers and the consequent commitment of human resources for health leadership in the ministry of health.

The process is most successful where there is local mastering of the WISN tool concurrent with ministry of health commitment of both staff time and financial resources. Also, where there is a good mix of knowledge and skills in the technical team, the success rate of implementation is generally higher.

The WISN training of trainers is a technical and very involved process, designed to ensure that by its conclusion the country has the competence to apply the tool and the draft plan to implement it. The hands-on practice adopted in the training of trainers has proved very popular with the trainees, and it has been shown to reinforce the learning-by-application concepts of the methodology. Devoting more time to this session in the training of trainers programme has proved useful.

Another lesson learned from the experience of applying the tool has been the value of devoting more time to properly orient the WISN task force or task team in the development of the activity standards, as detailed earlier in this document. This empowers the technical task force to take the lead and reinforces ownership both by orienting the experts and by giving them the capacity to engage in the actual development of the activity standards for each staff category selected for the WISN study. Further, it ensures better acceptance of results and increases enthusiasm for the application of the tool.

As the tool recommends, careful preparation is crucial, including sensitization of senior policy-makers and senior management of the ministry of health, and building partnerships with key stakeholders, including funders, prior to the training of trainers. This step provides a firm foundation for the briefing that follows the training of trainers with the newly constituted steering committee, which includes some of the senior managers who were briefed before the training of trainers – this time, with the agenda of approving the draft WISN strategy.

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Resource pool for WISN

Similar training of trainers workshops were conducted by the WHO team in other countries. In anticipation of the WISN multilingual version, it was foreseen that demand would increase even more. For example, in May 2014, the Who Regional Office for Africa conducted a sensitization session for French-speaking countries, wherein 18 countries participated alongside WHO country office health systems strengthening focal points. This orientation was conducted in anticipation of the WISN tool being translated into French; the draft French version available at the time has now been finalized.

A more pragmatic approach had to be sought to address the surge in demand for WISN technical assistance, as it was not possible to have a handful of technical staff facilitating WISN training of trainers workshops. From this arose the idea of having a resource pool for WISN, which would address the human and financial resource needs and facilitate the training of trainers workshops and any needed follow-up with the countries during the WISN study implementation phase.

The resource pool would address country demands to have continuous access to support and assistance. WHO aims to establish a pool of consultants who would be able to offer training in countries following the WHO approach of national capacity-building. Required training materials and support would be provided by WHO in a ready-to-use format. WHO is currently working to prepare such training materials and other necessary arrangements to operationalize the resource pool for WISN. It is expected that the resource pool will be able to offer some financial resources in addition to human resources.

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Conclusion

The WISN tool is not intended for one-off use. By design, it is hoped that countries or facilities will mainstream the tool into the management processes for health workforce planning and implementation. The approach of building national or health facility capacity to be competent in the use of the WISN tool and methodology is one way of ensuring maximum use of the tool.

The lessons learned so far show that continued use of the WISN tool is more likely where there is sufficient competence in the use of the tool by a critical core group of policy-makers and managers, along with knowledge of what the WISN tool can achieve once appropriately applied. In the meantime, there is need at international level to enlarge the pool of WISN experts available to offer systematic support to countries during their first experiences in the application of the tool. Use of the WISN tool thus far has provided an opportunity to take advantage of the experience of users to improve software programming and clarify methodology.

Health Workforce Department
World Health Organization
20 Avenue Appia
CH 1211 Geneva 27 Switzerland
www.who.int/hrh

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