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Planning, Developing & Supporting the Health Workforce

Workforce Planning for the Health Sector

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One of the current recommendations for tackling the health sector staffing crisis faced by many countries is that they should have comprehensive and coherent human resources for health (HRH) strategic plans. Such plans normally include strategies for strengthening performance of staff, improving staff retention and adapting to any major structural changes that may be occurring (for example, decentralization).

A key component of the wider HRH strategic plan is a workforce plan. This plan enables senior managers to scan and analyze human resources (HR) data routinely, determine relevant policy questions and institute policies to ensure that adequate numbers of staff with appropriate skills are available where and when they are needed. Plans for an entire health sector may cover tens or even hundreds of thousands of staff and can be very complex. It is therefore important to have an organized way of estimating how many of what type of additional staff will be needed in work-places over time, both to fill current vacancies and address future losses. The next step is to decide how those jobs will be filled. This usually has significant implications for training and the planning for training institutions or recruitment campaigns if suitable prospective staff exists in the labor market. Most workforce planning is concerned with trying to increase the number of workers—especially in those countries where there is a staffing crisis. Sometimes, however, the aim of the plan may be to reduce certain groups of staff, perhaps for financial savings. What is important is that workforce planning supports the overall HRH strategic plan within the constraints of available resources.

Is Workforce Planning Necessary?

Workforce planning dates back to the forecasting of military training requirements during World War II using mathematical modeling techniques derived from the discipline of operations research. Over time, however, "manpower planners" earned a reputation for developing plans that turned out to be unrealistic. Some of their assumptions about the future turned out to be grossly incorrect—for example, the impact of computerization on the need for administrative staff. Further, the accuracy of the assumptions was often not

monitored and forecasts were not revised accordingly. Planning tools, run on large mainframe computers, were expensive and unresponsive and had to be operated by specialists in computing rather than HR management. Even as workforce planning has evolved, its questionable reputation has persisted and it is often dismissed as an unnecessary activity.
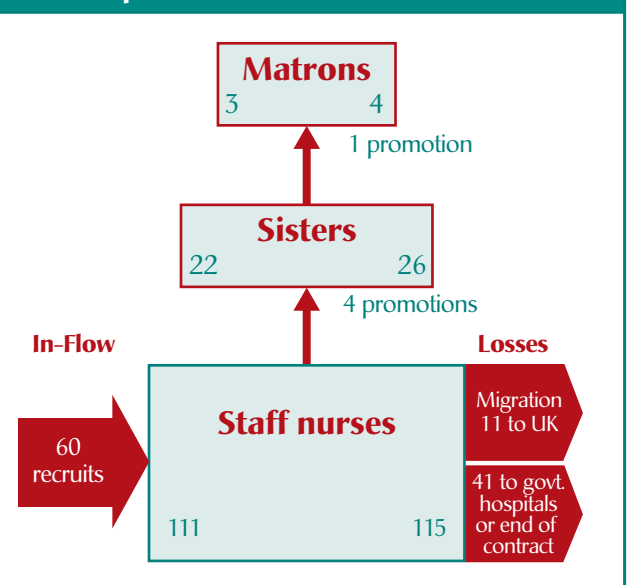
Despite this perception, some form of workforce planning is necessary in most organizations. Large organizations in the business sector use workforce planning techniques effectively. These techniques are also frequently employed in the public sector where the number of staff is large and there is essentially an internal labor market within the sector. In many middle- and low-income countries, training is largely controlled by the government, and so training plans can be coordinated with workforce plans. In countries that have a policy to coordinate the efforts of health care providers to meet health goals, workforce plans may be developed to cover all major employers in the health sector.

Basic Concepts

The essential steps in workforce planning are to:

■ **Determine Requirements:** Identify the numbers and types of staff that will be needed—and where—at the end of the period covered by the plan.

■ **Analyze Supply:** Conduct a stock audit of the existing staff and anticipate flows in and out of the organization during the plan period (see Figure 1).

An example of stock and flows

Matrons 3 | 4

1 promotion

Sisters 22 | 26

4 promotions

In-Flow | **Losses**

60 recruits → **Staff nurses** 111 | 115 → Migration 11 to UK | 41 to govt. hospitals or end of contract

This diagram represents the stock and flows of nurses during a one-year period in one African hospital. It illustrates the data needed to track staff movements. In this example there is an in-flow of 60 recruits into the stock of staff nurses, but a total of 52 leave during the year and four are promoted, resulting in an increase of only four nurses by the end of the year.

Figure 1

Figure 2

■ **Develop Policies and Strategies** to match the supply to the demand. These can broadly be divided into reducing (or increasing) losses, changing future recruitment levels, adjusting the staffing mix and increasing productivity.

Determine Requirements: There are differing views about how to determine these figures (see Figure 2). Requirements for services run by a ministry of health may be controlled through the use of establishment figures (number of posts) authorized by the ministry of finance. Directors of autonomous and non-governmental organizations (NGOs) may have more freedom to determine the numbers and types of staff they employ.

Analyze Supply: An audit, or headcount, is needed to identify the current supply of staff and take into account estimated losses. A simplified categorization of losses includes:

■ Staff that retires or otherwise ceases work at the employer's instigation

■ Staff that chooses to resign

■ Staff attrition due to illness or death.

Retirement can be predicted by analyzing the age profiles of the workforce. The other two forms of losses are not controlled by the employer but assumptions need to be made to estimate them. The only way to do this is to examine data on recent losses and identify trends. To analyze resignations it is necessary to know which jobs people are leaving, how old the people are, whether they are male or female and what kinds of positions and locations they are going to. If they are resigning to take NGO or private-sector positions, this would not be a negative factor for the national supply, but if they are leaving the country to work abroad it would. Particularly in countries with high prevalence of HIV/AIDS, there is a need to understand more about the rate at which people are becoming too sick to work or are dying. Without this kind of information on losses, any attempts to increase retention are untargeted and therefore likely to be ineffective.

Develop Policies and Strategies: Combining the future requirements, current staff in post and anticipated losses provides a view–or forecast–of the likely number of vacancies that will arise in the sector or organization year-by-year into the future. Once future vacancies have been estimated, replacement policies can be planned. There are two main ways of planning for replacement:

■ **Direct recruitment:** In the health sector this typically would occur at the completion of a pre-service education (PSE) program and therefore is not something that can be achieved without long-term planning. The exception would be hiring expatriates or inactive people in the labor market with the necessary skills. Both approaches have been actively pursued by the National Health Service in the UK. A number of African countries hire expatriates; for example, Cuban doctors have worked in Zambia for decades and 40 percent of the nurses at one hospital in Swaziland are nationals of other African countries.

■ **Internal development:** Vacancies at more senior levels can be filled by advancing junior staff in the organization using professional development programs (e.g., doctors upgraded to specialists) or promoting staff who have gained experience. However, such actions create vacancies in the more junior posts.

Alternatively, one can review the requirements in light of the people available to recruit or develop. Other ways of organizing work can be considered. The productivity of existing staff can be improved, in effect reducing the demand for supply of workers. "Task shifting" parts of the work to unskilled or lay workers is another option (e.g., using volunteer HIV counselors as has been done in Namibia).

Practical Issues

As workforce planning takes place under a variety of circumstances, it is not helpful to be too prescriptive about the process. However, we can offer some practical tips from our experience.

1. **Plan the planning:** The more data you have the more confidence you can have in the workforce plan. In 1998 the Ministry of Health in Malawi carried out a detailed staffing survey in preparation for developing a workforce plan. After an intensive period of data analysis, the findings were presented to groups of stakeholders for review and the exploration of staffing projections. A draft plan, including the staffing projections, incorporated stakeholders' comments. The process occurred over more

than a year and resources were available for the staffing survey, data analysis, consultation workshops and technical assistance. In contrast, in Zambia a presidential order called for production of a plan within 60 days. Because of the short time span, workforce planners had to rely on limited data and consultation. Neither process is necessarily right or wrong, but these examples illustrate the need to plan in terms of time and resources available for the type of plan that is envisioned.

2. **Agree on how the future requirements will be determined:** In Malawi in 1999, there were so many vacant posts that the planning was based on the greatest increases in training output that could be achieved. Recently in Kenya, the requirements have been based on staffing needs of the Essential Package for Health. In Rwanda, where nurses make up over 75% of the professional health workforce, requirements could not be determined until balance between the higher-qualified A1 nurses and the lower-qualified A2 nurses had been resolved. In addition to trying to agree on the determinants of future requirements, it may be necessary to satisfy stakeholders with diverse interests by producing several scenarios based on different assumptions regarding the requirements.

3. **Understand the current staffing characteristics and trends:** For example, vacancies may currently be low for a particular cadre, but this could change during the plan period. An age analysis might show that the majority of the cadre will be retiring within ten years and that very few younger staff members are likely to be available. In Malawi, detailed analysis of the data in 1999 showed that registered nurses between ages 25 and 30 were seven times more likely to leave than nurses between ages 35 and 40—so the focus of retention strategies should be on the younger group. Officials in the Russian republic of Karelia thought that staff retention in rural areas was not a problem, but when data from five successive annual reports were collated it became clear that the staffing situation was deteriorating. Examination of data may reveal anomalies that can be rectified by policy changes. For example, recruitment trends may drop sharply for a number of years not because of shortage of supply but because of a freeze on recruitment as part of a wider fiscal policy. Gender analysis by cadre may provide very useful insights, as it may show imbalances within certain cadres, or high attrition by females in certain cadres in particular parts of the country.

4. **Involve key stakeholders in developing the staffing projections and targets.** This process is essential as stakeholders provide important input to the assumptions and targets. It also gives stakeholders an appreciation of how the figures were derived and increases their ownership of the resulting workforce plan. Unlike the early days of workforce planning there are now user-friendly tools that can be operated directly by the workforce planner on a laptop computer so that stakeholders can immediately see the results of their inputs to assumptions and strategies. Workforce planning software being developed by the Capacity Project is designed to assist with an interactive approach to workforce planning.

5. **Develop appropriate strategies to achieve staffing targets.** At this point the wider HRH strategic planning process is used to decide how the targets will be achieved. Malawi included an emergency training plan in its current HRH strategic plan in order to deal with chronic staff shortages. In Eritrea, the HR plan of 2002 was not fully adopted by the Ministry of Health but the planning process did lead to the establishment of three training centers in rural areas in order to improve staff retention through the use of local recruitment.

6. **Ensure the workforce plan will be updated.** The plan is based on assumptions about the future. These assumptions—about the number of workers who will be required, the number who will join and the number who will leave or who will die—need to be reviewed regularly, preferably annually. Revising the calculations using more accurate data for the assumptions need not be a very difficult task if appropriate computer software has been set up during the planning process. It is therefore vital to establish a regular reporting system so that senior managers can monitor progress with implementing the plan. If assumptions change radically or progress toward meeting targets is clearly not being achieved, then strategies may need to be modified.

Conclusion

The workforce plan is an important component of the wider HRH strategic plan that countries need to strengthen the workforce in the health sector. Staffing projections may at first be inaccurate but as the quality of data and

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assumptions improves, managers will have greater confidence in the impact of their HR policies and strategies. To help get the process started, Figure 3 suggests the key steps for developing a workforce plan.

Key steps for developing a workforce plan

1. Clarify the purpose of the workforce planning and how it contributes to the wider HR strategy

2. Plan the planning – how long? What resources are required to conduct the plan? What external expertise is needed? How will stakeholders be involved? Agree on the methods for determining requirements.

3. Identify data required and collect from existing databases, a survey or other means

4. Identify tools for analysis

5. Analyze the data and develop projections

6. Present findings to key stakeholders; agree on targets and explore strategies for achieving targets

7. Establish indicators for monitoring and evaluation and reporting mechanisms

8. Incorporate into the wider HR strategy

9. Set up procedures to monitor assumptions and regularly revise strategies as necessary throughout the implementation period.

Figure 3

References

Dewdney J. The WPRO/RTC health workforce planning work-book. Sydney, Australia: Centre for Public Health, University of New South Wales, 2001.

Dewdney J, Kerse L. Health workforce planning: developing expertise in Eastern Asia and the Pacific Islands. *Human Resource Development Journal.* 2000;4(3):146–157. Available: http://www.who.int/hrh/en/HRDJ_4_3_03.pdf

Green A. Planning human resources. In: Green A. *An introduction to health planning in developing countries*. Oxford, England: Oxford University Press, 1999; pp. 260–279.

Hall T. Why plan human resources for health? *Human Resource Development Journal* 1998;2(2):77–97. Available: http://www.who.int/hrh/en/HRDJ_2_2_01.pdf

Shipp P. Workload indicators of staffing need (WISN): a manual for implementation. Geneva, Switzerland: World Health Organization, 1998.

More information about planning tools and relevant literature is available from the Capacity Project's HRH Global Resource Center (www.hrhresourcecenter.org) and the HRH Tool Compendium (www.hrhcompendium.com).

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