Systemic Management of Human Resources for Health
An Introduction for Health Managers

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Jhpiego is an international, non-profit health organization affiliated with The Johns Hopkins University. For 40 years, Jhpiego has empowered frontline health workers by designing and implementing effective, low-cost, hands-on solutions to strengthen the delivery of health care services for women and their families. By putting evidence-based health innovations into everyday practice, Jhpiego works to break down barriers to high-quality health care for the world’s most vulnerable populations.

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## ABBREVIATIONS AND ACRONYMS

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<tr>
<td>CHW</td>
<td>Community Health Worker</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>HRH</td>
<td>Human Resources for Health</td>
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<td>HRIS</td>
<td>Human Resources Information System</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<td>MOE</td>
<td>Ministry of Education</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>NGO</td>
<td>Nongovernmental Organization</td>
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<tr>
<td>POC</td>
<td>Point of Care</td>
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<td>RRT</td>
<td>Resource Requirement Tool</td>
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<td>WHO</td>
<td>World Health Organization</td>
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INTRODUCTION

Human resources for health (HRH) are a key component in any health care delivery system—the World Health Report 2000 states that human resources are “the most important of the health system’s inputs.”¹ Health workers constitute the backbone of health services: with dedication and commitment they provide the care needed by the people all over the world and around the clock. From the economic point of view, the relevance of human resources in a labor-intensive industry such as health is clear: wages and staffing costs usually represent the largest proportion of recurrent health budgets in most countries. In addition, in a world in which more and more activities are “knowledge-based,” human resources, particularly those most experienced and skilled, constitute valuable intellectual capital and are a key element in the success of health care systems.

In many countries, however, the health human resources are operating under serious policy, financial, organizational, and managerial constraints, with productivity, morale, and effectiveness suffering as a result. Some of these constraints are structural in nature and have existed for many years, others are provoked by the need to respond to new and urgent national and global health challenges, and, finally, some are caused by the effect of pandemics and epidemics that affect the general population including health workers.

The structural bottlenecks and imbalances in the health systems that affect the human resources are several. Financial constraints and/or inappropriate policies and decisions related to personnel lead to deficits or unbalanced distribution of key cadres of staff or to inadequate salaries and working conditions that produce dissatisfaction, turnover, and sometimes emigration of the most skilled providers. In other occasions, the insufficient or disproportionate allocation of budgetary resources results in providers lacking basic equipment and supplies, including the drugs needed for appropriate health care delivery. In many cases, the lack of good management practices and incentives that effectively support performance results in deficient work environments, low workforce motivation, and poor results.

Besides the structural issues, many countries are now facing new challenges that put an additional strain on their HRH. For instance, to meet the Millennium Development Goals to lower the social and health burden represented by HIV/AIDS, TB, malaria, maternal and infant mortality, and other conditions, countries have to drastically expand and support their health workforces, often under severe resource limitations. Other countries are undertaking a broad and substantial transformation of their health systems (health sector reform). They are expanding primary care and increasing decentralization and community involvement, or even embarking on the goal of achieving universal health coverage, which will require changes in the numbers and profile of the current health workforce to match the new health care model and demands.

In addition, the effect of the HIV/AIDS pandemic has exacerbated already stretched HRH systems and resources, particularly in sub-Saharan African countries. The health care workforce is as

vulnerable to the effects of the HIV/AIDS epidemic as the general population. Indirect costs—such as absenteeism from illness or caring for loved ones, reduced productivity, and a demoralized workforce—also increase the burden of this disease on HRH.\(^2\)

The effective functioning of national health systems in the future will largely depend on how appropriately countries and health leaders and managers address these structural and new constraints on their health care workforces. HRH can no longer be a “forgotten” element in the health sector agenda—it must be an essential and priority component in the process of the health system improvement and transformation.

**WHY WRITE THIS MANUAL AND WHO CAN BENEFIT FROM IT?**

Health leaders and managers need to have a thorough and clear understanding of what a HRH system is and what the key elements of its successful management are. The term “human resources” may be understood by many health managers in a very narrow sense: salaries, or the process of hiring, perhaps training, or even disciplinary actions. The purpose of this manual is to present, in a simple but comprehensive way, all the basic components of a HRH system, and explain why and how they have to work in synergy to contribute to the achievement of the health sector strategic goals. In other words, how the HRH system can be managed in a systemic and strategic way.

To effectively manage a HRH system, functions must be performed by managers at different levels in a coordinated and synergistic manner. The framework and elements provided by this manual can help central, regional, and/or district health and human resources managers to understand better how their actions can produce specific improvements at their levels and at the same time contribute to the strengthening of the HRH system as a whole.

**THE HRH SYSTEMIC MANAGEMENT FRAMEWORK**

**THE IMPORTANCE OF A HRH SYSTEMIC VIEW**

In an Asian country, which has one of the highest maternal mortality ratios in the world, the Ministry of Health (MOH) made enormous efforts to rebuild and strengthen the country’s midwifery capacity. With help from external organizations, several midwifery schools were created or improved throughout the country, and in a relatively short period of time, hundreds of new skilled female midwives were trained. Very soon, though, it was clear to the MOH officials that producing the midwives was only part of the solution. Recruitment and deployment of the new providers also had to be improved. Among several actions, the MOH issued policies that favored the local recruitment of students, who are more likely to remain in their localities. Furthermore, the MOH identified procedures to support the new midwives deployed, particularly in remote areas, and to ensure the quality of the services provided by them, the MOH designed supportive supervision and quality assurance mechanisms in collaboration with a network of local NGOs.

In one African country, several well thought out HRH planning exercises had been conducted, and dozens of excellent reports outlining in detail the human resources needs of the country by category of staff and geographical location were produced. Nevertheless, due to enormous financial and technical constraints, very little progress had been achieved in actually implementing the plans and producing the new additional resources urgently needed. Moreover, weak retention policies resulted in widespread emigration of well-qualified professional staff, which, in addition to the effects of the HIV/AIDS epidemic, further reduced the health workforce of the country.

A Latin American country had made a big effort to improve the salaries of medical professionals in the public sector. Medical wages in that country were increased to a level four to five times higher than those in neighboring countries. However, not enough attention was paid to defining and measuring the expected improved health activities and results related to the salary increases. As a result, the observed performance of the physicians in that country was not better than that in the neighboring countries.

In another African country, the MOH had made an important effort to increase the production of new technicians needed to expand the health coverage. An increase of 30 percent in the production of technicians was projected to occur in three years. However, the MOH noticed that when the new staff were actually deployed to health facilities, they were required to perform tasks that were different from the ones they had learned in school. This mismatch between the competencies the staff learned in pre-service institutions and the ones they were required to have at the facilities disoriented the new staff and affected their performance.

The examples above illustrate that to understand and successfully manage a HRH system, attention must be paid to its different elements and the way in which they interrelate. Focusing on just one element may lead to bottlenecks, wastage of resources, and ineffectiveness.

**THE COMPONENTS OF THE HRH SYSTEM**

The purpose of the HRH system is to produce, maintain, and develop a health care workforce that allows the health sector to achieve its specific and social impact goals. The HRH system accomplishes its purpose through the inter-connected operation of several “internal” elements or components. They fulfill different types of functions: strategic, operational, and support functions. The combined action of these elements produces some specific outputs and outcomes of the HRH system.

**Strategic components**

Are those that provide the general guidelines and framework for the functioning and interaction of the other components of the system:

- **Policies**: set the guiding principles for the functioning of all the other components of the human resources system and the system as a whole
- **Planning and strategic decision-making**: help to give dimension to and articulate the different elements of the system
Operational components

Are the ones that focus on the production and operation of the human resources. These components represent the supply and demand of HRH:

- **Production:** generates the human resources with the knowledge, skills, and attitudes to provide the required health care. The production component represents the supply side of the HRH system.

- **Deployment:** focuses on the appropriate distribution of these human resources where they are needed. This component reflects how supply and demand meet.

- **Management and support:** ensure that these human resources perform effectively, continuously, and with job satisfaction. This component represents the demand side of the HRH system.

Support components

Are those that provide the elements for the proper functioning of the operational components:

- **Human resources administration:** focuses on the several specific tasks of the administration of human resources as a specialized function.

- **Regulation and quality assurance:** verify that the HRH system components operate according to acceptable and pre-set criteria.

The inter-related functioning of the above components produces:

- **Outputs and outcomes:** for each component and for the system as a whole

THE EXTERNAL ENVIRONMENT

In addition, the HRH system does not operate in a vacuum. Important elements of larger systems of the external environment also influence and sometimes determine how the HRH system works and produces outputs. These “external” elements are:

- **Health sector goals, strategies, and leadership**

- **National macro-economic policies**, including the **labor market**

- **Political and administrative context** of the country, including decentralization schemes and other sectors of the government such as education, labor, or public administration

- **Social and cultural environment**

The articulation of these “internal” and “external” elements is presented in the HRH Systemic Management Framework shown in Figure 1. The framework shows in a simplified way the connections and inter-relations of all the components of the HRH system. For the systemic management of this system, it is essential to take into account all the elements of the framework.
THE ELEMENTS OF THE EXTERNAL ENVIRONMENT

The systemic and strategic management of HRH requires understanding the relationships and dynamic interactions between the HRH system and the health and national context. The HRH system should contribute to the achievement of the strategic goals of the national health system. To what extent and how this objective is achieved are determined not only by the functioning of the “internal” elements of the HRH systems but also by the influence of the “external” context represented by the broader health system and the national economic, political, and social environment.

The most important elements of the context that influence the HRH system are the following:

THE HEALTH SECTOR GOALS, STRATEGIES, AND LEADERSHIP

Health sector goals and strategies—such as the type of service delivery model adopted to respond to the health needs of the population—are extremely important in regard to the HRH system. For example, a health system based on the substantial expansion of integrated primary care will have different human resource needs than a system based on specialized secondary and tertiary hospital care. Similarly, a health system focused on improving coverage in rural areas or one designed to
control acute infectious diseases will have different human resources requirements than an urban-based system or one designed to treat chronic diseases.

During the past decades, service delivery models have been changing significantly. The hospital- and physician-based model, prevalent until the mid-1990s, evolved into a health system based on primary, secondary, and tertiary levels of care. The expansion of the primary care level brought new requirements for the health workforce: more focus was placed on developing professional cadres such as general practitioners, nurses, midwives, and technicians and auxiliary staff able to operate in health centers and posts. More recently, the service delivery model has expanded further to include diverse modalities of care provided beyond health facilities at the community and household levels. This expansion is requiring a new focus on developing the right type of workforce, including community-based and lay workers, for this care.

In the future, the health service delivery model may be more shaped not only on the basis of “need” but also on “demand.” This more client-focused approach would require some customization of the health workforce, particularly where private services are a relatively larger component of the health system.

The health sector leadership also influences the HRH system. For instance, a health sector leadership strongly committed to the timely achievement of the Millennium Development Goals or to a rapid increase in the effectiveness and efficiency of the health system will seek to quickly upgrade the HRH system to enable it to produce and support the workforce needed to achieve these goals.

Other aspects related to broader health systems strategies that impact the HRH systems are technological and managerial trends in health care. The type of new technologies adopted (e.g., information technology, biotechnology, imaging) and the pace of their adoption may bring new complexity to health care but also create opportunities for the development of new cadres of health workers or for empowerment of some of the less specialized cadres of providers. In addition, it may require re-training or, in some cases, even downsizing of the health workforce. To better face these changes, the health workforce would need to be more flexible and versatile.

THE NATIONAL MACRO-ECONOMIC POLICIES AND LABOR MARKET

The macro-economic policies of a country have a large impact on the HRH system. Decisions about resource allocation among different government sectors are made considering competing social and economic priorities, and they will determine how much budget and financial resources are available to the health sector (what is called the “fiscal space”). These resources will largely determine the capacity of the health sector to maintain or increase its workforce. In some cases, this has an impact not only on public sector services but also on a significant part of the private sector. This occurs in countries where governments support or sub-contract private sector services to provide care for some sectors of the population (e.g., government support for salaries of mission hospital staff in some African countries, or sub-contracts with NGOs in some Latin American countries).
In some cases, the hiring capacity of the government, including the health sector, is limited by macro-economic expenditure and growth targets. The total size of the government payroll may be linked to financial or debt agreements with international organizations and therefore extremely difficult to modify. Also, the salary scales of health workers may be part of a broader public sector wage structure, which will give health policymakers and managers little or no room for modifying them.

Another important macro-economic aspect that influences the HRH system is the level of development of the economy’s private sector. A stronger private health sector brings more diversification to the labor market, creating competition for the workforce with the public sector. A more developed private sector could also create more opportunities for market incentives (e.g., additional sources of income) for health workers and new situations such as dual employment.

The labor market has strong influence in the HRH system and it is often not properly taken into account by policymakers when they estimate workforce needs. Supply and demand are determined by complex political, social, and economic factors that are often beyond the control of health policymakers and managers. The demand for HRH is influenced by factors such as budget allocations and level of wages. In general, the higher the wages and the lower the budgetary resources available, the greater is the tendency for health employers to hire less staff or hire less expensive types of personnel. Political and social factors (e.g., strong public mobilization), the level of technology, and patterns of practice may also influence the demand for HRH. The supply depends on factors such as how many individuals are willing to pursue health careers. This in time is influenced by how attractive the salaries and working conditions in the health sector look. Supply is also affected by the country’s capacity for health education. Finally, supply is influenced by other factors related to the individual health worker such as age, family situation, or personal goals and values.

THE POLITICAL AND ADMINISTRATIVE CONTEXT OF THE COUNTRY

The configuration of the political and administrative structure of a country has important effects on the HRH system. Many countries are involved in active decentralization processes by which several political and administrative functions of the central government are being devolved or delegated to the regional, provincial, or even district levels. In some cases, HRH management functions, including hiring, deploying, firing, or training of new technical staff, are delegated to the provincial or district health sector levels. In other cases, decentralization processes are more comprehensive and involve devolution of political responsibilities such as allocation of budgetary resources to the local level. Under the latter model, local health authorities would have to advocate and negotiate for health resources with the local government decision-makers. Hiring of new health staff at the local level also may be conducted by decentralized multi-sectoral government bodies that are not under the authority of the health sector.

Another important aspect to consider is the relationship of the health sector with other sectors such as education, labor, or public administration. In several countries, the institutions in charge of educating the new health human resources fall under the administrative responsibility of the education sector. Therefore, the health sector has limited influence on this key aspect of the
production of the new workforce, making essential the existence of strong mechanisms of joint
policy-making and coordination. In some countries, the labor or public administration sectors may
have a strong role in setting the job classifications and the wage structures or working conditions of
the different institutions of a country. This could limit the flexibility needed by health managers to
better adjust the demand and supply of HRH. Again, strong joint policy-making and coordination
will be needed in these cases.

The strength of governance and accountability systems in a country also has an impact on how
transparency HRH are managed. In a few countries, the structure of the state and government has,
unfortunately, been severely damaged or fragmented by internal conflict or war. Reconstructing
HRH systems under these conditions may require special approaches and substantial initial external
support.

THE SOCIAL AND CULTURAL ENVIRONMENT

Every HRH system works under a specific social and cultural context. The failure to thoroughly
understand this fact may lead to serious errors and undesired results. In some countries there may be
some strong preferences (or even clear delimitations) regarding the gender or age of the provider for
the provision of certain services. For instance, in some regions, the population may have a strong
preference for male community health workers, believing that they are more skilled and available
than women. In other areas, only female providers can attend deliveries and other procedures for
women. In some places, people may not have as much trust in young providers as they have in older
ones because they believe that experience is very important when dealing with their health
conditions.

In some contexts, professional careers, including health professions, are valued differently by society.
Some professions may have high prestige and will be very attractive to many prospective students, as
is the case of medicine in many regions. Public and private schools will be created to respond to this
demand for medical education, resulting in many cases in a dramatic oversupply of physicians. Other
professions, some of them critical for the improvement of health care, may have less social prestige
and will attract fewer student candidates, which highlights the importance of efforts to raise the
social profile of these key careers.

In some countries, large segments of the population may believe in the benefits of traditional
medicine and have great confidence in traditional providers. In this situation, the appropriate
integration of these traditional practitioners into the HRH system could be a good strategy for the
successful implementation of health actions.

There may also be several points of view among people from different countries on how health care
providers should be rewarded. Some will agree that economic rewards are most important and in
these cases there will be social support for keeping a good salary level for health workers. Others may
think that the altruistic nature of the health professions should take priority and will be less willing
to support wage increases for health providers. These points of view are relevant because they may
have an impact when advocating for attraction/incentives policies.
THE COMPONENTS OF THE HRH SYSTEM

As previously said, the strategic, operational, and support components of the HRH system must work in a synergistic way to produce the best possible outputs and outcomes.

STRATEGIC COMPONENTS

POLICIES

HRH policies are the guiding principles under which the human resources system works. They establish the basic values and the guidelines for the functioning of the other components of the system and for the inter-relations among these components. Policies can be developed for the macro (HRH system) and micro (workplace) levels.

Macro-level policies

Macro-level policies establish the link between the HRH system and the larger organizational or national health goals. They are more relevant for large health institutions such as ministries of health and should include aspects such as:

- **Statement of the health goals of the institution**, including its main strategies and service delivery model. Policies should state the main health issues that have been identified and the desired results (e.g., control of acute or chronic diseases or reduction of burden of disease in underserved areas or regions), the ways in which these issues will be addressed (e.g., the relative importance attributed to promotion, prevention, and curative care), and the basic configuration of the health services (e.g., the balance between community, primary, and specialized care).

- **Definition of the health workforce profile** to meet the needs of the health care service delivery model. HRH policies have to define the main characteristics of the health workforce needed, answering the question: “What type of health workers do we need for the services we want to strengthen or expand?” For instance, policies will need to clearly state how much emphasis the HRH system should put on primary or specialized care providers. Policies should also outline the staff and skill mix of providers required at every level of the health delivery system (for instance, at what levels are medical doctors, nurses, technicians, or other types of staff needed and in what approximate proportions). In this regard, due to the rapidly changing technological and social health environments, HRH policies may consider some flexibility in the configuration of the workforce (e.g., promoting the development of a more versatile workforce as opposed to rigidly defined careers).

- **Desirable mechanisms and processes of production of new health workers**, including orientations on the types of institutions that are suitable for the education of the different categories of health workers. HRH policies should also provide general guidance on the desired level of decentralization of the production of health workers. This aspect may have to be coordinated with the education sector, including universities.
- **Appropriate distribution of the health workforce** in order to reduce geographical inequities. Recent information\(^3\) indicates that there is a positive correlation between the supply of health human resources and the population’s health status, particularly in regard to maternal and child mortality. HRH policies should promote the improvement of the supply of qualified health workers, particularly in underserved areas. This may include the setting of health human resources density goals per region or area of the country.

- **Identification of the basic mechanisms to enter, progress, and exit the health workforce**, including basic requirements and procedures for hiring, career paths, firing, and other personnel actions.

- **Identification and prioritization of HRH retention and development strategies.** Health workers, particularly those deployed in isolated or difficult areas, need appropriate support in order to continuously perform well and stay on the job. HRH policies should establish the basic elements of this support, including remunerations and incentives. Well-designed HRH policies can help to minimize losses due to out-migration of health workers where such a problem exists.

- **Identification of financial and other resources needed** to maintain and develop the health workforce. HRH policies should try to identify credible sources of the resources needed for this purpose. Whenever possible, a sector-wide approach should be used to allow the identification of private and community resources in addition to the contributions of the public sector.

- **Identification of the managerial requirements for the HRH system.** It will be important that the policies consider the need to develop a strong human resources managerial capacity at different levels of the health system, and identify the basic mechanisms for achieving it.

- **Definition of the labor relationships between workers and health organizations.** A positive and healthy relationship between health workers and organizations can promote healthy work environments and foster commitment to the achievement of the institutional mission and goals. This element should include the aspects of the relationship with workers’ unions, negotiation, and solution of conflicts. In many places it would be important to clearly address the issue of precarious and unprotected employment of health workers.

- **Definition of mechanisms of cooperation among the different institutions** that play a role in the HRH system. The close collaboration of institutions such as health services organizations, training institutions, professional associations, community organizations, etc., which may operate under different sectors, is essential to ensure that the HRH system moves toward the achievement of the health goals of the country. Therefore, HRH policies should state the main mechanisms for the coordination and collaboration among them, including the formation of HRH national task forces or the promotion of initiatives such as the multi-sectoral Observatories of Human Resources for Health promoted by the WHO.

- **Statement that the HRH system adheres to non-discrimination principles and practices,** including those based on race, religion, gender, age, etc. The HRH policies should clearly indicate how non-discriminatory practices would be enforced and guaranteed throughout the

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HRH system, including complaint and resolution mechanisms. The role of organisms of the civil society as advocates of the public should be included by the policies.

- **Identification of regulation and accountability mechanisms** to guarantee quality health services for the population. HRH policies should identify the main regulation and quality assurance mechanisms to ensure that providers and facilities comply with basic safety, competency, and quality requirements to protect the health of the population. Roles, responsibilities, and accountability mechanisms at every level of the health system should be clearly stated in the HRH policies.

These elements of macro-level HRH policies can be stated in one or more documents elaborated by an institution such as the MOH and should serve as a general guide for the whole HRH system. Some aspects of these policies can be further developed in more detailed documents or administrative directives tailored to specific contexts. Sometimes, macro-level HRH policies can also be the subject of agreements at the international level (e.g., The Pan American Health Organization Regional Plan of Action for Human Resources for Health 2007–2015).

It should be highlighted that the use of scientific evidence in the development of HRH policies can greatly facilitate consensus-building and achieve expected results. Even though research in the area of HRH is not abundant, in the last years, a valuable body of scientific evidence has been developed and should be used in policymaking. It will be important to identify mechanisms, such as the HRH Observatories mentioned above, to make this evidence available to policymakers, simply and clearly presented and accessible on an “ongoing” basis.

It is important to consider that macro-level HRH policies require multi-institutional coordination, work, and agreement. Therefore, consensus should be systematically sought among the involved institutions and feedback on the development and implementation of the policies should be constantly provided.

**Workplace-level policies**

Workplace-level policies establish the guidelines for HRH activities at the facility level. They also state the expected behaviors of health employees and employers in the workplace and how their relationship should be managed. They reflect organizational values and are typically based on the broader, macro-level HRH policies and on the country’s labor policies.

Workplace-level policies have traditionally addressed the following three issues:
The conditions under which the employee is hired – including working hours, benefits, and resources available for conducting the employee’s duties.

The behavior expected from the employee and employer – what is acceptable in the working environment and what is not, including norms for personal interaction with clients and colleagues, enforcement of non-discriminatory practices, dress code, and use of the organization’s resources.

The manner in which the relationship between the employee and the employer is to be managed – includes performance management, reward, and reprisal conditions.

Nowadays, several organizations have moved beyond this regulatory environment to recognize the importance of using HRH policies to create a growth-oriented work environment. Workplace HRH policies should be viewed as an evolving set of guidelines being reshaped to meet the challenges of a changing environment. They should:

- Be responsive to the needs of the population from which the organization hopes to recruit its workforce. For instance, the advent of child-friendly work policies came from the expanded incorporation of women into the workforce. Policies need to address the values, hopes, and aspirations of the workforce and take into consideration that today’s employees are much more in need of family friendliness in the workplace than ever before.

- Provide employees with the tools to keep pace with knowledge and to manage the information they receive. Knowledge in the health sector is growing and changing constantly. For a workforce to be successful in such an environment, it is imperative to articulate processes and systems for knowledge management and sharing.

- Foster a work environment where employees feel empowered and encouraged to learn and grow. Policies should promote employee development, reasonable discretion for decision-making, and team work.

- Promote the rewarding of good performance and employee contributions and accountability. Workplace policies should reinforce the concept of individual and team accountability without sacrificing an environment of openness and self-criticism and avoiding creating a punitive culture.

In the case of a MOH, workplace-level policies may also be developed at the regional/district or even at the national level for implementation at the facility level.

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Sample Outline of a HRH Workplace-Level Policy

**PRINCIPLES**
The organization will:
- Treat all staff in a professional, non-discriminatory manner
- Provide safe, effective working conditions and accommodations
- Provide reasonable salaries and benefits
- Employ individuals whose creativity and imagination will support and contribute to achieving the institution’s mission
- Support, promote, and recognize individual contribution at all levels and appreciate innovative effort and accomplishments
- Encourage open communication, team work, and shared responsibilities to accomplish the mission
- Communicate the institution’s standards and expectations
- Value diversity
- Assure equal employment opportunity and a workplace where relationships are based on mutual respect

**SPECIFIC POLICIES**

**Employment**
Employee classification, status, and position requirements
Hiring
New employee orientation
Pay system and payroll procedures
Vacation days
Absence and leaves for personal, medical, and parenting reasons
Holidays and other events
Overtime
Employee records
Termination of employment
Retirement

**Workplace behavior**
Equal employment opportunity
Interaction with colleagues and clients
Appearance of employee
Ethics and conflict of interest
Productivity and attendance
Positive corrective action
Drugs, narcotics, alcohol
Sexual harassment
Grievances
Deterrents to workplace violence

**Management practices**
Communications and expectations
Performance management
Compensation philosophy
Employee recognition and promotion
Work environment, safety, and security
Health and welfare coverage
Knowledge management
Employee assistance program
PLANNING AND STRATEGIC DECISION-MAKING

Planning in HRH, according to the World Health Organization (WHO), “…is the process of estimating the number of persons and the kinds of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives.” HRH planning and strategic decision-making provide a framework for staffing decisions, based on an organization’s mission, policies, strategic plan, budgetary resources, and a set of desired workforce competencies. According to Peter Hornby, it incorporates an analysis of the present workforce to identify future needs and possible gaps and surpluses, preparation of plans for building the workforce, and evaluation processes to assure the objectives are being met. Planning and strategic decision-making are a comprehensive and continuous process that helps articulate and balance the supply with the demand of human resources for health. It must be continuous and not just a one-time exercise because it has to be responsive to supply and demand changes and developments.

The demand for HRH depends on factors such as the size, age, and gender of the population; the prevalence of disease; and public expectations (in turn influenced by education level and socioeconomic status). Demand can also be influenced by the providers themselves, e.g., physicians can increase the demand for diagnostic services by ordering more tests. The supply of HRH is represented by how many providers are available, their workload, and their productivity, which is in turn influenced by other aspects such as technology.

The process of planning has to answer at least the following questions:

- How many of each type of human resources does the health system need?
- Where and when are these human resources needed to accomplish the goals of the health sector?
- What are the resources needed to make these human resources available? Are the HRH needs identified affordable?
- What are the systematic steps to be taken to cover any gaps?

In answering these questions, health managers should not just focus on the short term, but consider the mid and long terms (a horizon of five to 20 years). The development of human resources, and other aspects of the HRH dynamics, takes time, and short-sighted plans are often insufficient to solve HRH constraints.

To help health managers in this task, several models have been developed to project and estimate the future HRH resources and needs. These models use several variables, such as demographic and epidemiological data, health services networks, staffing patterns and needs, production of different types of health cadres, availability of financial resources, etc. The variables in the models can be altered, with a choice of the most likely options, to produce simulated scenarios that can be used for policy-level decisions. The proper utilization of these models usually requires specialized technical skills because the number of factors and variables that intervene in the determination of human resources needs in the health sector are multiple and complex.

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There are different methodologies, based on different underlying assumptions, for developing these projection models for the health care workforce. The most common are the following:

- **Population-based methodology**: It determines the health care personnel needed in ratio to the size of the population (for example: number of medical doctors or nurses per 10,000 inhabitants). This method is relatively simple but does not account for factors affecting supply or demand (including epidemiological factors or productivity of the workforce).

- **Needs-based methodology**: It estimates the requirements to meet all or part of the expected health care needs in response to the types of diseases of the populations. Because this method takes into account demographic data and the disease-based needs of the population, it requires the collection and analysis of epidemiological data.

- **Utilization-based methodology**: It assumes that the populations will be served in the future in the way they are currently served. This method uses observed health services utilization rates, applies them to the future population profile, and determines the required health personnel. However, utilization-based measures do not take account of demand that is unmet.

- **Effective demand-based methodology**: It establishes the requirements needed to satisfy the expected development of health care services, including changes in productivity, and the preferences of the population.

The planning methodology chosen for a particular country or setting should depend on the specific characteristics of the country’s health system. A single planning method may not fit the requirements of every case.

Among the tools developed for these projection models there is the WHO’s Workforce Supply and Requirements Projection Model. This is a software package (spreadsheet), which offers various options including the population-based and the needs-based approaches to projecting HRH requirements. When staffing patterns have to be taken into account in the projection models, it would be useful to consider the WHO Workload Indicators of Staffing Needs (WISN) tool. This tool allows the determination of staffing levels in health facilities by setting activity (time) standards for health personnel and translating these into workloads.

The methodologies for the projection models require reliable data, which may be difficult to obtain in developing countries. In general, the future requirements of human resources seem to depend on four elements: demography or the size and demographic mix of the population; epidemiology or the levels of risks to health and morbidity in the population; extension and configuration of health services/standards of care or the services deemed appropriate to address the levels of risks to health

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and morbidity; and productivity or the rate of service delivery by providers. According to WHO, among the information that health managers will typically need to have available are:

- Demographic information: including total population and urban/rural, age and sex distribution, as well as anticipated population growth rate over the plan/projection period.

- Epidemiological information: including the major causes of morbidity and mortality and the expected changes in patterns of sickness and disease over the plan period.

- Information on health workforce stock and flows: including total staff for each cadre by age and sex; expected annual attrition rate for each category; numbers of new graduates; and net flow of health workers into or out of the health services industry. Attrition caused by HIV/AIDS and emigration of qualified human resources is a serious problem in a number of countries and must be considered when estimating the losses of personnel.

- Information on remuneration and other recurrent costs: salary levels for each type of staff, including all pay and other benefits and projected changes in the annual real wage costs.

- Economic information: gross domestic product (GDP); predicted annual percentage change in GDP; recurrent expenditure (personnel, non-personnel, and total) for the public health sector by source; and projected changes in these expenditures over the plan period.

- Private health sector economic data: estimated personnel and non-personnel private sector expenditure in health care.

- Information on the capacity of training institutions, including current and expected student enrollment and graduation rates for each cadre of skilled health service provider.

- Information on health facilities: the current and projected number of health facilities of each type, both those with in-patient beds and those without, and across both the public and private health sectors; average capacity of each facility type (e.g., number of beds, bed occupancy rate, number of discharges per year); and activity rates (e.g., ambulatory visits, surgeries, etc.).

- Information on facility staffing: current number of staff by type and sector of facility, and by category of staff; current staffing ratios (i.e., staff to facilities, staff to beds, skills mix ratio); and projected changes in staffing norms, including potential task-shifting mechanisms.

In some contexts, other types of more specific information, such as those related to gender and minorities, also should be taken into account.

Other methods, such as stock and flow analysis, can be performed to identify in more detail key factors or variables influencing the supply of human resources and to facilitate design of proper interventions to correct the imbalances. (See Box and Figure 2.)

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The use of models or modeling can be very useful for projecting future supply and demand of specific HRH cadres. The Physician Supply Model developed at Health Canada uses the stock and flow model and shows how critical tendencies, crucial for making projections about the effective supply of physicians over the next two decades, are evolving over time. This model relies on the availability of data on some key variables over a period of time and provides information on which assumptions on these variables really matter for projections. The data sources are historically and demographically rich (they have data for a period of several years and include information on both sexes, all ages, and location of providers).

Stocks represent quantities at a point in time (e.g., the number of employed physicians at the end of a calendar year). Flows represent quantities that change over a period of time. The change in stock, or net flow, is usually a consequence of a series of contributing flows. For example, the stock of physicians at the end of a particular year is equal to the stock of physicians at the end of the previous year plus the net flow of physicians entering and exiting employment during the current year. Outflows break down into retirements, emigrations, and deaths, while inflows include immigrants and new entrants from medical schools. Flows can be broken down into more and more detail—data permitting—to examine in more detail the various factors that affect the flow of HRH. The model is also useful for capturing both lags (e.g., how long it takes a new medical school student to graduate and start to work) and leakages (e.g., the number of school entrants who do not complete their training or do not go into practice). Projections are based on the historical tendencies of all the variables that are components of the stock and flow model. The model makes it possible to test the sensitivity of projections to each of the variables. By performing such analysis, the model offered information useful for the identification of some effective policy measures in balancing supply and demand of medical doctors in Canada.


Figure 2. Mapping Outflows with a Labor Market Approach. An Example: Mozambican Doctors from the 1980–2007 Cohort


To estimate the financial resources necessary to produce and maintain the needed stock of health workers, it may be practical to use the Resource Requirements Tool (RRT). This is an Excel-based tool to: 1) estimate and project the resources required for meeting HRH plans; 2) analyze the plans’
affordability; 3) simulate “what if” scenarios; 4) facilitate the monitoring of scale-up plans; and 5) contribute to the development of the cost and financing component of the human resource management information systems. The RRT includes modules on comprehensive costs of employment in the public sector (salaries, benefits, in-service training, and others); costs of pre-service training to meet HRH plans; and affordability of HRH employment and pre-service training. Utilizing this tool or conducting similar costing exercises allows the determination of the financial feasibility of the desired scenarios and introduction of adjustments to the plans, and/or can serve as a guide for advocacy and resources mobilization activities.

When developing HRH plans, health and HRH managers must keep in mind that human resources are a critical component of health care services but that there are other components such as equipment, medical supplies, or drugs that are also essential for the provision of care and the productivity and motivation of health workers. Therefore, plans and budgets should be balanced. A balanced allocation of resources between personnel costs and the costs of other goods and services can lead to an optimal level of productivity.

Balancing the supply and demand of HRH cannot be a one-time activity. Having the projections and estimates of the health workforce and developing plans to correct the imbalances are not enough because there are several complex and unforeseen factors that may appear at any moment and that may affect the projections and plans. Therefore, it is essential to ensure that mechanisms are in place to constantly monitor our plans and immediately make the necessary decisions to adjust them according to the evolution of events. In general, it would be necessary to ensure the following elements:

- **Leadership:** It is essential to gain the commitment of the senior levels of the health sector. Obtaining an adequate health workforce is not a task of HRH managers only but a responsibility of all levels of the health leadership. To obtain this commitment it is essential to ensure that the HRH plans are closely aligned with the health sector’s global strategy. For instance, advocating for more specialists when a country is decidedly focusing on primary health care would probably not be quite successful. Also, appropriate advocacy activities have to be conducted to disseminate the HRH evidence and priorities and reach common understanding of the issues.

- **Stakeholder involvement:** The most critical HRH issues will require the participation and contribution of other actors such as other sectors (e.g., finance, education, or labor), development partners (e.g., donors, cooperating agencies, NGOs), and the private sector. In many countries, decentralization processes are also in place, and in these cases it would be key to involve regional, provincial, and/or district leaders and managers. These stakeholders have to be involved in the process of HRH planning since the beginning. Their opinions and inputs for the development and adjustment of the plans have to be taken into proper consideration and they

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have to be kept continually informed about the evolution of the process. The creation of national coordination mechanisms can be useful to favor interaction with and involvement of stakeholders.

- **Information**: The adequate monitoring of HRH plans should be based on accurate and reliable information. One important source of this information are the human resources information systems, developed by the ministries of health and other health organizations, which provide information on the number, characteristics, and location of their health workers. However, the information provided by these systems may be incomplete, outdated, or inaccurate. It would be, therefore, very important to complement it with information coming from other sources, such as surveys, censuses, and special studies. One important mechanism to consider for this purpose is the WHO-sponsored Observatories of Human Resources in Health. The purpose of these Observatories is to **produce, analyze, and share information and knowledge** necessary for integrating human resources in the health policy agenda and improving the development of policies on human resources.

- **Resources**: No plan can be implemented without the appropriate resources. Therefore, the availability of financial resources is one of the aspects that have to be closely monitored. Over the period of the plan, it would be necessary to ensure that there is enough “fiscal space” for funding the development and support of the workforce required and that the additional resources needed from development partners and/or the private sector are mobilized. This may require special advocacy efforts with concrete and clear objectives supported by solid information.

**OPERATIONAL COMPONENTS**

**PRODUCTION**

Production of HRH refers to “...all aspects related to the basic and post-basic education and training of the health labor force. However, although it is one of the central aspects of the health manpower (development) process, it is not under the health system’s sole control.” The production of HRH includes educational and training activities, which are usually the joint responsibility of health and educational governing bodies. This component determines, to a great extent, the health worker supply and must be in line with the health system’s needs and budgetary resources.

Basic or pre-service education is the main mechanism for producing new health care providers. Pre-service education is the formative process offered by medical, nursing, midwifery, and other professional and technical schools. It aims to ensure that future health care workers are produced in sufficient numbers and that they develop the basic knowledge, skills, attitudes, and learning capacity needed to provide high-quality services to clients.

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**What types of health workers should be produced?**

There is evidence of the positive effect that the numbers and quality of health workers such as medical doctors, nurses, and midwives, have on health outcomes. The cadres are part of a group of health workers called **health service providers**, who form the core of the health workforce. In addition to them, there is another group not engaged in the direct provision of services, the **health management and support workers**, who fulfill important functions that enable the service providers to work effectively. Finally, there is a third group, increasingly important, called **community health workers**, who deliver health services outside of health facilities, in the household and community settings. The types of health workers that the health system needs to produce are:

- **Health service providers**, who include professionals such as medical doctors, dentists, pharmacists, nurses, midwives, health technicians (laboratory, imaging, physiotherapy, etc.), and health and nursing associates/auxiliary personnel
- **Health management and support workers**, composed of managers, administrative personnel, and maintenance, clerical, and support staff
- **Community health workers**, including extension workers, health visitors, home-based caregivers, and health promoters

**Production of health service providers**

The educational models for health service providers have been evolving for over a century, influenced by a changing health environment (due to technological, epidemiological, demographic, and social changes). The main “generations” of educational models for careers such as medicine, dentistry, nursing, midwifery, and pharmacy are the following:

- **Science-based**, began at the beginning of the twentieth century. It had as an objective the advancement of scientifically based professionalism with high technical and ethical standards. It is characterized by its science-based curriculum and the sequencing of education in biomedical sciences and clinical practice in clinical settings (academic hospitals linked to universities).
- **Problem-based**, started around mid-1990s, and introduced problem-based learning, emphasized the notion of apprenticeship, promoted disciplinarily integrated curricula, and linked education, provision of care, and research. The medical residency programs were established as postgraduate training (a type of apprenticeship) in hospital-based academic centers.
- **Systems-based**, beginning in the 21st century, tries to establish links between the education of new professionals and the social needs and health system demands in a globalized world. It aims to develop a culture of critical inquiry and a sense of socially responsible professionalism. It focuses on patient- and population-centeredness, competency-based curriculum, inter-

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professional and team-based education, IT-empowered learning, and policy and management leadership skills. (See Figure 3.)

**Figure 3. Three Generations of Reform**

![Three Generations of Reform](source)


According to the Commission on Education of Health Professionals for the 21st Century, many countries are in the first generation of these models, “with traditional and stagnant curricula and teaching methods and with an inability, or even resistance, to change” and several countries are incorporating second-generation reforms but only a few are moving into the third generation. The educational system for health service providers should move toward the new, more integrated and holistic model, according to the possibilities of each reality.

**What to teach: identification of core competencies**

The education of health care providers must address the priority health needs and problems within a society and define the expected role of health care providers. This process involves the identification of core competencies.

> “Competency is the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served.”


Core or essential competencies are the aspects of a discipline that are essential to master in order to graduate from an academic program and enter into professional practice. For example, a core competency required of a physician or midwife for providing effective antenatal care services may be to “perform a pelvic examination.” When defining core or essential competencies, educators should remember that health care continually evolves with advances in knowledge and technology and
should be dynamic and responsive to societal needs, and that health care providers must fulfill multiple roles.

The core competencies of an overall academic program include cognitive (knowledge), psychomotor (skills), and affective (values and behaviors) domains that are observable and can be appraised. The competencies to be developed in the new professionals should enable them to provide patient-centered care, work in interdisciplinary teams, apply evidence-based practice, and use new informatics. They should also help new professionals to integrate a public health approach and develop research, management, and leadership skills. Undergraduate education should prepare graduates for lifelong learning.

When defining specific core competencies for an academic program, it is important to ask the following:

- What are the responsibilities, duties, or functions of the student after graduation (job description)?
- What knowledge, skills, and attitudes are experienced professionals in that cadre applying in the workplace? If job descriptions are out-of-date or not well-designed, there may be a difference between them and the actual knowledge, skills, and attitudes applied by health professionals.
- What does the student need to learn and be able to do to meet licensing requirements and demonstrate competency?

Core or essential competencies become the learning objectives of an educational program and determine the content, teaching methods, materials, and student assessment strategies needed for the courses. All these elements are organized in the curriculum.

**How to teach: curriculum development, competency-based education**

Curriculum can be defined as the totality of learning activities that are designed to achieve specific educational outcomes. Curriculum design is the organization and sequencing of course requirements and learning experiences that make up the total academic program. A good curriculum or course design has clear logical links among desired outcomes (e.g., core competencies), teaching and learning methods, and the assessment of students’ learning. A curriculum should be regularly revised to incorporate changing health care needs and an emerging evidence base.

In an effective pre-service education activity:

- There is a document (syllabus) that defines the learning objectives, summarizes learning activities and learning materials, informs the students of expectations for achievement, and describes the methods of assessment that will be used.
- Knowledge, skills, and attitudes are introduced using interactive teaching methods.

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Students practice integrating knowledge, skills, and attitudes during practice sessions in the classroom, simulated practice environment, or clinic (including group teaching methods such as case studies, role plays, clinical simulations, and supervised clinical practice).

Students are regularly assessed and given feedback to help them improve their performance.

Teachers monitor their courses and revise their teaching in order to improve learning.

During pre-service education it will be also necessary to apply a team-based learning approach, which teaches the students and enables them to work in a collaborative way in teams of different types of health care providers. In addition, the team-based approach promotes inter-professional work with professionals of other areas (environmentalists, engineers, police, urban planners, etc.).

Good professional education programs mobilize all learning channels to their full potential: small student learning groups, team-based education, early patient or population exposure, different worksite training bases, longitudinal relationship with patients and communities, didactic faculty lectures, and the use of IT.


Where to teach

The education of health care providers requires an adequate infrastructure. Often, limitations in this aspect are one of the barriers to expanding the production of new providers in developing countries. The infrastructure needed includes adequate facilities for classroom and laboratory teaching as well as clinical and community practice sites in order to provide competency-based education.

The teaching facilities should at least have:

- Classrooms for lectures and seminars
- Laboratories for such disciplines as anatomy, biochemistry, physiology, etc.
- Skills practice laboratories equipped with anatomic models
- Library
- Computer facilities and connectivity
- Administrative area
- Archives and teaching and student records
- Faculty affairs room
- Student affairs room

In many cases, the teaching facilities should also include dormitories for the students and kitchen and cafeteria services.
The practice sites should include the range of settings and facilities appropriate for the acquisition of the desired competencies. They should include community settings, primary care facilities and specialized centers as appropriate. Clinical practice sites, where students can try new skills and master core competencies, are as critical as (or even more critical than) classrooms to the success of preservice education. For maximum effectiveness, clinical practice sites should:

- Provide the same level of care as the facilities where students will work after graduation,
- Have a sufficient caseload and equipment for clinical practice,
- Deliver services according to guidelines and protocols, because incorrect practice may negatively influence the students,
- Employ staff who are willing and able to coach students and act as role models, and
- Permit students to practice full service provision, not just isolated skills.

All of the providers at clinical practice sites should be prepared to be receptive to students, to serve as role models, and to coach and mentor students. Staff who are serving as clinical preceptors and thus are directly involved in teaching students need additional training and materials.\(^{21}\)

The impressive developments in IT are also making possible what is known as e-learning. Through e-learning, students can have access to interactive, multimedia training materials that can effectively replace or decrease the need for traditional lectures. The power of e-learning has been expanded enormously by the Internet. Ready-to-use, high-quality training materials and courses are being shared for free via the Internet (e.g., OpenCourseWare) and used by a growing number of universities and schools. Additionally, increasingly powerful portable devices are making these materials more easily available. Distance education using IT-based e-learning is taking education outside of the limits of traditional schools and giving more control to students, who can pace their studies at their convenience. The broader use of e-learning would allow faculty and students anywhere to share best practices and evidence-based materials in real time and can also help to alleviate the constraint created by the deficit of qualified faculty in many countries. Nevertheless, an important limiting factor for the further expansion of e-learning in some low-resource settings is the access to Internet.

The educational system

In addition to the definition of what, how, and where to teach, there are other aspects of the production of health care providers related to the educational system that must be considered.

Recruitment, admissions, and support for retention. Recruiting efforts, entrance requirements, and admissions policies determine the composition and qualifications of the student body. This, in turn, influences graduation rates. Limited interest in the health professions and high school fees may discourage qualified candidates from even applying to health care training programs. Once accepted, many do not complete the course: poor preparation in secondary school and poor teaching at the

training institution itself may make it hard for them to succeed. Limited educational opportunities reduce the number of qualified candidates from poor, rural, and minority groups and as a result, students tend to come from urban areas, dominant ethnic groups, and higher social classes. They are less likely to want to work in rural and underserved areas after they graduate.

To diversify the student body, increase graduation rates, and help fill rural positions, educational institutions can:

- Actively recruit students from underserved areas,
- Broaden the criteria for admission, including considerations to gender balance,
- Subsidize student fees, and
- Improve the quality of teaching.

**Faculty development.** Faculty members not only teach knowledge and skills, they also act as professional role models for students at pre-service training institutions. To be effective, teachers at health care training institutions must be competent in two areas:22

- Technical knowledge and skills (e.g., curative, preventive), and
- Training skills (e.g., clinical training skills).

Instructional methods are as important as content in pre-service education but by dint of their professional training, clinicians are generally proficient in the latter but not the former. Hence, faculty members may need a general orientation to pedagogy as well as specific advice on how to conduct the learning activities prescribed by the curriculum. Also, some faculty may lose part of their clinical competency as they maintain their profession in teaching and do not continue to practice. Qualified teachers are in short supply and student-faculty ratios are high in many countries. Although increasing the size of the faculty is critical to expanding the production capacity of training institutions, teaching careers are often less financially and socially rewarding than clinical careers. Potential solutions include:

- Designing incentive packages to attract new faculty members, including non-monetary recognition,
- Establishing teacher exchanges between institutions,
- Creating part-time teaching positions that can be combined with clinical posts, and
- Using on-the-job-training and coaching to speed up the preparation of teachers.

**Accreditation.** Accreditation is an assessment of compliance with predetermined quality standards by the educational institutions. Establishing accreditation bodies and processes may often be difficult due to financial and organizational constraints. It is nevertheless a critical function that must be undertaken collaboratively by governments, professional councils and associations, and other organizations of the civil society. This type of regulation becomes more important with the

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proliferation of health education institutions in many countries. The expansion of the educational capacity of a country is very important and it should be guaranteed that all institutions, public or private, fulfill the quality requirements to satisfy the expectations of the students and the safety of the population.

Graduation and licensing. Upon successful completion of an academic program, graduates normally receive a degree, certificate, or other type of formal diploma. In several countries, graduates must also pass a national examination to receive a license or certificate that allows them to begin professional practice. A national licensing body outside of the teaching institution often administers this examination, although in some countries the teaching institutions may administer it.

Production of health management and support workers

Among the other types of workers that are needed for the appropriate functioning of the health system, there are:

- Managers and administrators, including personnel in charge of the general management of health facilities and institutions, policy analysts, planners, human resources managers, accountants, logistic specialists, and clerical and secretarial staff
- Social sciences professionals, including social workers, psychologists, statisticians, and demographers
- Engineers and technicians for the maintenance of the health infrastructure and equipment, including drivers and mechanics
- IT specialists and technicians

These personnel are normally produced in educational institutions that are not part of the health sector although many of the principles valid for the education of health service providers (e.g., competency-based education) also apply to them. It would nevertheless be important to establish coordination mechanisms with these other educational institutions to promote the development of health-related specialties in these careers to have more readily available personnel in the management and support areas.

Production of community health workers

Many health systems have turned to community health workers (CHWs) to expand access to primary health care. Their effectiveness depends on thorough and appropriate training, which should be based on the same principles that underlie effective pre-service education for health service providers. Training programs for CHWs should be specially developed to meet their unique needs. CHWs typically play a broad role in primary care, often have limited formal education, and must work within the constraints of the community. Therefore, training materials should use simple language, feature more illustrations, and relate medical and technical information to cultural traditions and other local factors that affect health.
Like other health care workers in training, CHWs need ample opportunity to practice core competencies. Interactive discussions and role plays in the classroom along with supervised clinical practice can help them master essential skills and knowledge. While training CHWs in the community offers the advantage of hands-on experience in the actual work environment, health facilities may offer larger caseloads and more opportunities for clinical skills practice.

CHWs can effectively work in some specific areas of prevention and care after a well-designed, competency-based, short-term training (e.g., lasting a few weeks). For more comprehensive or complex types of community work, the training period can be longer: a WHO review recommends that CHWs receive six months of pre-service education with an additional six months of clinical practice. This time allows for covering a broad range of core competencies related to maternal, newborn, and child health; diseases such as malaria, tuberculosis, and HIV/AIDS; and leadership, organizational, and interpersonal communication skills.

**Post-basic education**

The functioning of the health system also requires professionals with more specialized competencies. This is achieved through the production of specialists in areas such as public and preventive health and clinical specialties. Courses at the master’s and doctoral degree levels in different scientific and technical areas also contribute to produce this type of professional. In some countries, the educational infrastructure may not be developed enough to appropriately conduct post-basic education. Residency programs in preventive and clinical specialties and master’s and doctoral programs may be poorly structured and lack supporting research and teaching infrastructure. In these cases, the collaboration with well-established centers in other countries may help to strengthen local programs.

**DEPLOYMENT**

Deployment is the process of distributing the workforce so that sufficient staff with the required competencies are available to operate the health care facilities. Successful deployment programs include appropriate recruitment, placement, and orientation programs to attract and retain the most qualified staff as well as making sure that they are promptly ready to function effectively. Deployment should ensure that the workforce has been assigned to the worksite where their skills are most needed.

There are two ways of deploying or distributing health staff:

- Top-down deployment (push mechanism): which consists of sending workers to pre-determined locations identified in the planning process in a directive way.
The top-down mechanism is used in several countries. For instance, some ministries of health have regulations that specify that, at the end of their education, certain cadres, educated with government support, have to fulfill a limited period of service in locations determined by the government. This mechanism operates under different modalities (rural service, mandatory service, etc.). This method, if continuously and effectively implemented, can contribute to alleviate critical deployment gaps but may not offer by itself a more permanent solution for reducing long-term staffing inequities. Some of the shortcomings of this approach are its limited duration, usually two to three years, and that, for different reasons, it is often not adequately enforced. In spite of its limitations, the top-down mechanism can have one important, long-term effect: some research suggests that the initial placement has an important influence on physicians’ long-term decisions on where to work more permanently.23

Another way in which the top-down mechanism is implemented is the regulation of transfers. Some ministries of health or other health institutions may establish some requirements for leaving some posts considered high priority, or may simply delay decisions on transfer of staff in these positions. On the other hand, transfers to difficult or critical areas may be expedited or facilitated by the employers.

Some countries that have critical shortages of health personnel such as medical doctors have inter-governmental agreements with other countries to obtain these human resources. The international medical staff available through these agreements often serve for limited periods of time and are usually distributed through a top-down mechanism.

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The bottom-up mechanism plays an increasingly important role in the distribution of staff due to decentralization schemes implemented in many countries. In these cases, more resources and decision-making power lie at the local levels of government and even at individual health facilities. The bottom-up mechanism is also the main method of recruiting staff in the private sector. Under this modality, the institutions have to develop a staffing plan that includes attractive employment packages and the design of a systematic process for the successful recruitment of staff.

Creating a staffing plan

Staffing can be an organization’s most important function, and creating a staffing plan will enable administrators to hire more quickly and more efficiently. And while creating a plan may initially take more time, a well-designed and administered staffing plan will dramatically increase an organization’s chances of hiring the most appropriate candidates and make consistent, fair hiring decisions.

Creating a staffing plan includes:

1. Determining staffing requirements/assessing the need to hire
2. Conducting a job analysis and developing a job description
3. Developing competitive attraction packages
4. Developing a recruitment strategy

The Mandatory Rural Health Service in Thailand

Responding to an emerging shortage of physicians in rural areas, in 1968 the Thai government launched a program of mandatory rural service. This initiative established that all newly graduated physicians had to work for public medical facilities for three years in exchange for waiver of public universities’ medical education fees. At present, medical doctors and dentists have to perform a three-year service and nurses serve for a two-year period. The mandatory rural service does not apply to private medical and nursing schools.

More recently, an increasing number of health care workers were streamed from mandatory rural service to urban private hospitals, affecting the mandatory rural service system. A number of strategies were implemented in an attempt to solve this problem, including a one-year rural service prerequisite for specialist training for all new medical graduates (from public and private schools). A specific scholarship has also been provided by the Royal Thai Government for those public school graduates who complete their mandatory rural service. This new system has been implemented for approximately 10 years and it appears to be an effective tool to encourage newly graduated physicians to work in the rural hospitals for at least one year.

Although not all physicians are willing to serve in rural areas, the Thai mandatory rural health service system has largely solved the problem of an inadequate number of physicians and other health care workers in rural areas. The new policy that allocates all newly graduated physicians to rural areas for a year as a prerequisite to entry to specialist training appears equally successful. While rural work may be a difficult experience for some of the physicians, it is also seen as an opportunity to gain a broad range of medical experience.

The mandatory rural service also faces some issues. The workers obtained under this system are newly graduated and less experienced, and some of them may be cautious about rural work with no guidance from those senior. There is still controversy about whether mandatory service is ethically acceptable. Physicians who continue to work for more than five years in rural hospitals may take examinations for some board certifications (such as family and preventive medicine), which ensures an increase in baseline salary, but how to retain health workers after their mandatory rural service is still an unsolved issue.

1. **Determining Staffing Requirements/Assessing the Need to Hire**

Each year, HRH managers should make a projection of their anticipated staffing requirements. This staffing projection includes expected openings due to new needs, reassignments, and staff departures. Having a plan imposes structure and order on the process: managers with unfilled vacancies can feel pressured to hire quickly—even if the candidates lack the required knowledge or skills to perform the work. Unqualified or mismatched staff have a higher turnover rate, causing gaps in the delivery of services and leaving the organization in a continuous recruiting cycle. Turnover is also expensive; its costs include staff time spent recruiting, interviewing, and training.

Administrators should carefully assess several options before initiating recruitment for new or replacement positions. This assessment will help an administrator eliminate or minimize some of the errors that can make the hiring process inefficient and ineffective.

- Why does the facility need more staff? Are more services opening? Are the vacancies due to staff turnover? Is there an increased demand for services from the community?
- Can the work be restructured so that existing employees could complete it? Can some duties of an existing staff member be eliminated or reassigned to create time for this work?
- What is the duration of this assignment? Can someone be hired on a temporary basis?
- What is the level of effort for the job—is it a full-time or part-time position? Can two people share the position?
- What special skills are required to do the work? Are these skills available in the local labor pool? Is there anyone already on staff who has these skills or who could be trained for the position?

2. **Conducting a Job Analysis and Developing a Job Description**

The next step in the staffing plan process is to perform a job analysis of the vacant position. A job analysis is a systematic assessment of the knowledge, qualifications, skills, and abilities (otherwise known as “competencies”) needed to perform the job and to be successful in it. The outcome of the job analysis will be a job description. Job descriptions are important because they are at the heart of the staffing plan; they are like a road map that gives direction and instructions on how to reach the destination. Typically, the HRH manager and the supervisor of the position perform the job analysis. To fully understand the job functions and the skills and competencies needed for success, they should also seek input from other staff in similar jobs (and their supervisors) who are considered high-level performers.
3. Developing Competitive Attraction Packages

Once the type and characteristics of the staff needed are well-defined, it is necessary to develop a competitive package to attract the personnel required, particularly providers who are critical for the provision of services to the clients (medical doctors, nurses, technical staff). When developing such a package, it is important to keep in mind some key factors that motivate staff to accept a position.²⁴

- Financial incentives: represented by the salary and other monetary allowances for the position, including in-kind benefits such as housing;
- Career development opportunities: including opportunities for specialization and continuing education;
- Resources for the provision of good care to clients: such as adequate facility infrastructure and availability of equipment and medical and other supplies; and
- Adequate work environment: including good supervision and management support, team work, linkages with the community, and recognition for achievements.

Financial incentives are important but not enough to attract qualified staff. Other aspects related to professional development and an appropriate work environment must be taken into account.²⁵

When developing the compensation packages, managers can use as a reference compensation schemes offered to qualified personnel in the private or other sectors. HRH managers may try to match them or compensate for aspects that they cannot provide with other benefits (e.g., more opportunities for continuing education). Flexible work schemes or rotational posting should be considered particularly for difficult areas with a more challenging social environment (e.g., lack of schools for the children of the staff member). For instance, some mining companies attract qualified medical staff for very remote areas by offering flexible schedules (e.g., 15 continuous working days in

the work location and 15 days at home) plus transportation facilities. Finally, HRH managers should explore not only performance incentives (those offered by the employer) but also market incentives (those provided by the clients): qualified personnel may feel attracted to some localities due to the existence of a private health market and the possibility of conducting some private practice in addition to their work in a public health facility.

4. Developing a Recruitment Strategy

In the interest of a fair, competitive recruitment process, vacant positions should be posted and announced. While newspapers and Web sites are common places to post vacancies, the list should also be circulated to a wide range of other sources—universities, technical colleges, professional organizations, civic and community groups, secretarial schools, nursing schools, etc. Posting in many sources will develop a larger pool of qualified applicants and help promote the facility as a possible employer for new or recent graduates applying for future openings.

For positions where there is high turnover (depending on the facility it may be doctors, nurses, community health workers, or clinic aides), more proactive, sustained recruitment measures may be needed. Managers and hospital staff should establish ongoing relationships with local schools and colleges. This might include attending career days, making presentations to students and teachers about careers in the health field, inviting students and teachers to the facility, etc. The process of cultivating a pool of future employees may help alleviate staff shortages later, and it is a worthwhile investment of time and resources.

Proper placement of new staff: key for quality and effective services

Once the human resources have been recruited, either through a top-down or a bottom-up mechanism, it is important to ensure that they are placed in the correct positions, according to their competencies and job descriptions. This is an important responsibility of local health and HRH managers. A task analysis of the nursing careers conducted in Mozambique in 2008 found that, particularly in facilities of less complexity (rural health centers), nurses were often placed in positions that did not match their competencies.26 For instance, maternal and child nurses were acting as general nurses and vice versa. The result of this misallocation of resources led to reported lack of confidence of staff in the skills required to perform their assigned duties. Sometimes, this improper allocation of staff happens, as in the case mentioned, because of the scarcity of some types of human resources. But in other cases it is due to ill-informed or arbitrary managerial decisions that can and should be avoided because they can compromise the quality and effectiveness of the services provided.

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Orientation of the new workforce: speeding up the learning curve

Providing proper orientation for the new health workers to their positions is a critical step that will ensure that the new workforce is ready to be fully productive as soon as possible. Frequently, new human resources in health have to begin their assignments without knowing their specific tasks and responsibilities, which negatively affects the productivity of these resources for a period of time and may have undesirable effects on retention. During the orientation process, the new human resources get to know their tasks and responsibilities, their work environment, and the values, norms, and behaviors of the organization.

Formalized placement programs that begin at the start of employment are more effective than informal ones, and can be implemented through a variety of methodologies including provision of informational materials, informational meetings, and mentoring.

The HRH manager and the direct supervisors are jointly responsible for coordinating an effective orientation plan that will quickly give employees the tools they need to navigate their new workplace. In general, immediately after a candidate has accepted the job offer, the hiring manager and/or supervisor should contact her/him, welcome him or her to the organization, and answer any questions the new member has in advance of the agreed-upon start date. After this initial contact, the supervisor and/or HRH manager should set up a time to meet within the first days of the employee’s start date to review the job description and discuss performance expectations and set performance goals for the initial orientation period (usually 90 days). In this meeting, the employee should also receive information on communication channels with her/his supervisor, facility authorities, and co-workers.

Some organizations prepare short seminars (e.g., half- or one-day meetings) for new employees in which additional information on the organization is communicated. This mechanism may work well when there are several workers starting their employments at the same time. In other cases, written or multi-media materials and individual meetings with unit heads or representatives could work effectively. As an example of what can be done, the Peruvian MOH developed some years ago an orientation manual for new health providers in primary care clinics, which included detailed information and key specific tasks to be implemented each day of the first week of employment and every week afterwards until the end of the first month.

Suggested content of an orientation program:
- Specification of the technical functions and responsibilities of the job
- Performance expectations and organizational standards
- Description and tour of the facility, including employee’s workspace, restrooms, and supplies
- Introductions to key staff in and outside the employee’s department
- Organizational structure and functioning and main activities and programs
- Communications and relationship with supervisor and coworkers
- Review of occupational health, safety, and emergency procedures
- Organization’s internal policies, procedures, and norms, including desired “social” behaviors
- Administrative details such as key personnel policies, hours of work/breaks/lunch breaks, payroll, etc.
- Orientation on clients and community environment
HRH managers and senior management should determine the length of the initial new hire orientation period, taking into account that local law often governs the maximum period. Ninety days are commonly used, although some administrators prefer a six-month period.

Health and HRH managers are encouraged to promote this initial period of employment as a dynamic learning and development experience rather than the traditional “probationary” period, with its negative associations with failure. They should be ready to be supportive, provide mentoring, and keep in constant communication with the new employee. Supervisors should also encourage collaboration and mentoring from the coworkers of the new employee. Employees who have a positive experience during their initial period of employment may tend to stay with the institution significantly longer. An attentive and thoughtful new-hire orientation process demonstrates to the employee his or her value to the organization from the first day of employment.

**PERFORMANCE MANAGEMENT AND SUPPORT**

The purpose of the performance management and support component is to ensure that deployed staff continuously have all the elements to perform their duties at the workplace effectively, including the necessary competencies, resources and tools, and motivation. Through adequate performance management and support, the health organization ensures sustained health care provider performance, productivity, and delivery of high-quality services.27

**Ensuring a competent workforce (workers that know what and how to do)**

Competent health workers have the necessary information, knowledge, and skills to perform their duties.

**Performance plans**

The very first step for managers is to ensure that their workers know what their responsibilities are. The information on the workers’ duties is provided in what are called “performance plans.” They include the tasks, goals, and performance expectations for the worker. Developing performance plans is one of the most important functions of a manager, and yet it is not always given the attention it deserves. Setting performance expectations requires that managers are able to describe what should be done and accomplished and by when, what the procedures are, and what standards should be met.

The individual performance plan development process:

- Creates a link between the employee’s work and the priorities of the institution or facility,
- Clarifies what the employee is accountable for and to whom,
- Builds employee skills by establishing learning objectives, and

● Documents the employee’s contributions and accomplishments.

Managers should always meet with employees periodically so that both can monitor progress toward goals. During these meetings, managers should ask non-threatening questions that encourage the employees to reflect on their goals and to discuss any problems they are encountering.

**Continuing education**

When workers are hired, they normally have the competencies required to perform their tasks. However, over time, part of their knowledge may become outdated or they may lose skills not used frequently. In addition, new service provision modalities and technologies are constantly introduced in health care. Therefore, an essential task for managers is ensuring that their staff maintain and constantly develop their knowledge and skills. This may require significant amounts of additional training and retraining of the workforce in a process called continuing education.

Continuing education is an integrated process that is developed around the set of competencies required for an optimal job performance. Therefore, the focus should be on improving performance and not just on attending a number of courses or seminars. (See Figure 4.)

![Figure 4. Continuing Education for Competencies, Performance, and Results Framework](image)

**Source:** Ministry of Health of Mozambique. 2011. National Continuing Education Strategy.

A continuing education plan should include the identification and analysis of:

- Performance gaps and needs at the organizational and individual levels
- The knowledge, skills, and attitudes associated with optimal job performance
- A professional’s current knowledge, skills, and attitudes
- The environmental, professional, and personal context within which the professional practices

Steps in the performance plan development/goal-setting process:

- The employee writes a list of tasks and goals to be accomplished during the period (e.g., one year). The employee should use his or her job description as a reference for this list. Goals should be specific, measurable, attainable, results-oriented, and time-related (SMART).
- The employee and the manager discuss the tasks and goals and prioritize them.
- The goals are written using success criteria (with the result in mind), using action words to state the goal and stating success criteria to specify how the goal will be measured.
- The learning objectives are developed (e.g., attending a course or conference, a mentoring relationship with a fellow employee for career development): these objectives contribute to the employee’s career development, increased job satisfaction, and sometimes a promotion.
Different, specific tools exist to assess each one of the four points above, including performance assessment tools for organizations and individuals and training needs assessment tools.

Health care professionals must see themselves as responsible for their own professional development and the organization should ensure that they have the resources needed for this task. A continuing education program requires an adequate infrastructure, including a coordinating entity and procedures clearly defined for determination of content, methods, activities, selection of participants, identification of trainers, facilities, and resources, and evaluation. (See Figure 5.)

Figure 5. Continuing Education Elements


Clear standards for continuing education must exist. The oversight of adherence to these standards may be provided by ministries of health, which may take an active role in regulating the structure and process of continuing education programs, or it may be delegated to a nongovernmental accrediting body. The International Association for Continuing Education and Training (IACET) is a well-established accrediting body with standards and benchmarks for continuing education that are internationally respected.28

While courses, workshops, and seminars are a familiar means of learning for most health professionals, other teaching strategies, including those supported by information and communication technology (e.g., eLearning), may provide enhanced access to professionals on a

regular basis within the context of their daily work.\textsuperscript{29} This is one of the reasons why there is increasing attention to point of care (POC) learning methodologies. Training at the POC can have some important advantages:\textsuperscript{30}

- Occurs in real conditions and therefore helps to identify all the elements beyond training that affect performance
- The immediate linkage of training to the real practice enhances the learning experience and makes it more effective
- The skills learned are immediately put into use
- Workers spend less time away from work
- Creates more opportunity for training of teams and not just individual providers
- Favors the establishment of ongoing connections and networking

Effective continuing education goes beyond simple knowledge of job-related information. Activities that develop clinical skills and decision-making, realistic problem solving, and peer collaboration will lead to a higher and more sustainable level of job proficiency. Table 1 presents different training modalities that can be used according to the needs identified.

**Table 1. Options for Continuing Education**

<table>
<thead>
<tr>
<th>LEARNING METHODS</th>
<th>DESCRIPTION</th>
<th>EXAMPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural experience learning</td>
<td>The individual is placed in the natural environment and learns through real-life events.</td>
<td>Internship, assignment to a team, temporary job placement</td>
</tr>
<tr>
<td>Experiential learning</td>
<td>Similar to natural experience learning but the individual participates in structured debriefings to reflect on experiences/draw conclusions.</td>
<td>Structured internship, field placement with coaching, practicum</td>
</tr>
<tr>
<td>On-the-job training</td>
<td>The individual assumes an apprenticeship role while in a working setting. Guidance is provided by co-workers and supervisors as needed.</td>
<td>Apprenticeship program, job placement with orientation and/or coaching on request</td>
</tr>
<tr>
<td>Structured on-the-job training</td>
<td>As above, except that the work environment has been systematically organized for learning and the individual has a learning plan.</td>
<td>Structured on-the-job program</td>
</tr>
<tr>
<td>Role play</td>
<td>The individual assumes the role of another and acts out feelings, reactions, and responses to various scenarios.</td>
<td>Psycho- and socio-dramas, group role plays for counseling or management</td>
</tr>
</tbody>
</table>


### LEARNING METHODS

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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</tr>
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<tbody>
<tr>
<td>Simulation</td>
<td>The individual performs as s/he would in real life. The setting is a re-creation of the natural environment.</td>
<td>Wargames, simulator practice</td>
</tr>
<tr>
<td>Laboratory training</td>
<td>Similar to simulation but the laboratory does not necessarily recreate the work environment. The individual practices activities not necessarily in normal job sequence.</td>
<td>Practice with models in skills laboratories, hardware repair practice, science experimentation</td>
</tr>
<tr>
<td>Classroom training (live or virtual)</td>
<td>The individual acquires skills and knowledge guided by an instructor in a class setting removed from the workplace.</td>
<td>Seminars, courses, workshops, lectures, internet classes, video-conferencing</td>
</tr>
<tr>
<td>Self-study</td>
<td>The individual acquires skills and knowledge through self-learning, guided structured materials (from print to multimedia systems).</td>
<td>Programmed instruction, interactive multimedia learning systems (CD-ROM, DVD, Web-based, etc.)</td>
</tr>
<tr>
<td>Job aids</td>
<td>External memories. They contain information that the individual does not have to learn and remember.</td>
<td>Algorithms, decision grids, checklists, electronic systems</td>
</tr>
</tbody>
</table>


### Providing resources, tools, and managerial support (workers that are able to do)

The provision of resources needed for service provision (including equipment, drugs, medical supplies, infrastructure, etc.) is an important factor for health workers retention.³¹ Workers who do not have the necessary means to implement their duties may rapidly become demotivated and see desertion or emigration as an option. In addition, lacking resources to operate, the workforce may stay partially idle or be able to deliver only incomplete services (e.g., clinical exams but not laboratory tests to refine the diagnostic, or no treatment due to lack of drugs). Therefore, if managers want hard-won increases in the size and quality of the workforce to translate into expanded and more effective services, they have to ensure that the other resources needed for the provision of care are available.

Health managers have to pay particular attention to the following systems:³²

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Budgeting and finances
Managers should ensure:

- Sufficient allocation of funds: in many countries, an important limitation to having adequate health budgets is the scarcity of resources but, in some cases, the problem is not the lack of resources but of information. In decentralization processes being implemented in several countries, local governments may be unable to spend their resources (or may devote them to lower-priority areas) because they do not know the needs of the health sector. Advocacy to obtain financial resources can be strengthened if managers know in detail what resources are needed for effective service delivery. There are tools that assess facility readiness for service delivery and can be helpful in this regard (e.g., Jhpiego’s Standards-Based Management and Recognition–SBM-R®–assessment tools, MACRO’s Health Facility Assessment tools). These tools specify the different types of resources (infrastructure, human resources, equipment, drugs, medical supplies, etc.) needed for appropriate service provision.

- Good distribution of resources: as mentioned above, managers should ensure that budgets are balanced between categories of spending and also areas of care.

- Additional resource mobilization: raising additional funds may be necessary, particularly where health needs are high and revenues insufficient. Additional resources may range from small donations or in-kind contributions from the community and small businesses to larger items such as equipment and vehicles from larger companies.

- Improved efficiency and accountability: to ensure a transparent and more effective use of resources.

Supply chain and maintenance of durable goods
Aspects that are relevant to consider are:

- An efficient procurement, supply, storage, and distribution system for drugs and other supplies that minimize leakage and waste. It is not infrequent to find in some facilities considerable amounts of expired or deteriorated products because they were improperly stored or the users had no knowledge of their existence. It is important to involve providers in the supply chain system to ensure the right technical specifications of products and keep them informed about what is available.

- A working maintenance system for durable goods including vehicles: this is important to ensure that costly items acquired have a longer usable life.

Information systems
Functional information systems are important because they keep providers and managers aware of the evolution, quality, and volume of the services provided to their clients and the community as well as of their own performance. Organized patient records are essential for a systematic and accountable provision of care. Service statistics give an idea of the impact achieved through health actions.
Leadership and management

Supportive leadership and management mechanisms are essential to enable providers to perform well, including:

- Promotion of “distributed leadership”: it means recognizing that leaders are not only those in highly visible or formal leadership roles but that different types and levels of leadership are needed in an organization. A distributed leadership model, with institutional, service, and frontline-level leaders, enables people to make effective decisions more rapidly and locally.33

- Strengthening of managerial skills and creation of a productive workplace atmosphere where employees feel valued and respected: this can be accomplished through such measures as team-building, good communication, empowerment, and delegation. Poor communication, insufficient feedback, lack of trust, and a stressful work environment (particularly between the supervisor and supervisee) all contribute to turnover.

- Provision of supportive supervision: it involves a shift from a traditional, hierarchical performance management system to a structure that promotes shared responsibility for identifying and resolving problems, facilitates teamwork, improves two-way communication, and provides ongoing opportunities for thoughtful and supportive discussions on performance improvement. Decision-making becomes a participatory process, and employees are encouraged to monitor and improve their own performance.

Enhancing motivation (workers who want to do)

The significance of motivation is often overlooked in an examination of workers’ performance, and it is perhaps the most critical aspect to consider in this regard. It is important to establish a difference between motivation (intrinsic factor) and incentives (extrinsic factor).

Motivation

Motivation is the inner drive or morale to perform a task and reach a goal. Among the most important factors that motivate workers are:

- Sense of personal and professional growth and empowerment: workers would feel more inclined to undertake tasks that they believe will contribute to their personal and professional development;

- Having more control over their jobs: workers, particularly those with higher qualifications, want freedom to make decisions on how to carry out their tasks and not be micromanaged;

- Value attributed to their tasks: if a worker does not value her/his job, it is unlikely that s/he will make an extra effort to perform it well. It is important to take this factor into account for some critical tasks in a health facility that may not be appropriately valued, such as cleaning;

- Perception of the impact of their performance: workers will be more enthusiastic about their tasks if they can perceive the results of their work. It is important that workers participate in the evaluation and monitoring of facility activities, including client and community feedback;

- Rigorous but achievable challenges: setting goals that are meaningful but realistic contributes to generating enthusiasm for implementing a task;

- Healthy competition: comparing their own performance to that of workers in similar situations helps to identify benchmarks and creates a more positive atmosphere for improvement;

- Participation in the decisions and implementation of activities: feeling excluded from relevant decisions and/or activities can make workers feel isolated and less important; and

- Job security and confidence in the organization’s support systems.

Motivation is greatly influenced by how strongly a person feels or is confident he/she will be successful.

**Incentives**

Incentives are elements provided by the external environment to increase motivation. In general, there are three types of external elements that help to increase motivation:

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**The “Pygmalion” Effect**

The “Pygmalion” effect (named after George Bernard Shaw’s play “Pygmalion”) tells us that staff perform how their bosses expect them to perform—people behave the way they are treated. Exceptional managers create high performance expectations that their staff then meet. Weak managers are unable to create similar high expectations, and their staff’s productivity and quality of work declines. What is the secret to creating strong performers? The answer lies in the managers themselves. Successful managers have higher confidence in their own skills to develop the talents of their staff. A manager with a reputation for success will instill in her/his team feelings of self-worth and competence, generating high expectations for performance.

It is important that the team considers the challenges/goals to be realistic. If they are asked to accomplish goals beyond their capacity or if the goals are influenced by matters out of their control, the team will stop trying and accept results that are poorer than what they are capable of.

The “Pygmalion” effect is especially powerful when practiced on new professionals in their first job. These workers are not yet defined by the successes or failures of past performance and they can be strongly influenced by a confident manager to accept new challenges and reach their maximum potential. Health care facilities seeking to develop and retain sought-after cadres of junior-level workers should partner them with their most confident, most successful managers.

Feedback

It is the most direct and least costly way of acknowledging good performance (or point out its shortcomings) and also developing and maintaining competency. Feedback may look like a simple thing but it is extremely important; its impact on performance and employee morale is very significant. In the absence of explicit feedback, workers may feel that their supervisors are unhappy with their work and start feeling insecure, frustrated, tense, and even aggressive. A positive relationship between an employee and her/his supervisor may turn into a negative one just because of lack of feedback and communication. Feedback can be provided both orally and in writing, and to be effective, it must be timely, specific, continual, and interactive.

Social recognition

It consists of the provision of rewards of symbolic value such as public commendations, trophies, diplomas, celebrations, positive reports to the files, and others. Social recognition immediately helps with improving workers’ morale. Moreover, according to some authors, social recognition is important for workers because it is a good predictor of future material rewards. This type of incentive is not costly and it is extremely effective for improving individual and team morale. The improvement of the status of workers through increased levels of authority is another form of social recognition.

Providing Corrective Feedback

Giving corrective feedback is a skill that is often built over time and that improves with practice. Managers are often reluctant to provide negative feedback for fear of angering, alienating, or making their staff feel defensive. However, feedback is a powerful and simple learning tool that managers can use to develop their employees. New managers can build their feedback skills by providing positive feedback, even if it is on minor accomplishment. This helps the manager build a rapport with the employee.

Some questions that should be asked about feedback are:
1. Have you been explicit in stating your expectations?
2. Does the employee have the resources or skills necessary to perform the assignment?
3. Have you personally observed the situation and do you have all the facts?
4. Has feedback been immediate and specific?
5. Have you let one positive—or negative—trait influence the overall assessment of the employee’s performance? Avoid the “leniency” error—don’t give positive evaluations to well-liked but underperforming staff in an attempt to avoid conflict. The manager should also be consistent in applying the same rules of conduct to all staff.
6. Is the feedback focused on the task, performance issue, or observable behavioral issue? Feedback should not include comments on the employee’s ethnic background, education, physical appearance or other personal traits.
7. When providing feedback to the employee, do you allow the employee to share her/his view on the situation?
8. Is there agreement for following up and monitoring progress on performance issues? What is the manager responsible for, and what is the employee responsible for?


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Material recognition

It can be provided as monetary and in-kind rewards. It can be awarded to individual workers, teams, or whole facilities. Individual monetary rewards can adopt the form of systematic performance-based payments or one-time bonuses. For facilities, examples of monetary rewards are performance-based financing or the provision of additional resources for achieving pre-established targets or goals. In-kind rewards for individual providers can be given in the form of opportunities for professional development, and for facilities, they can consist of additional equipment or supplies.\(^{35}\)

Regarding motivation and incentives, it has been proposed that the intrinsic factors are the real motivators and that extrinsic factors, such as economic and social factors or the physical environment for work, act primarily as demotivators if they do not meet minimum levels.\(^{36}\) According to this idea, managers should try to provide at least a minimum of acceptable economic and social conditions (without which workers would not be willing to perform appropriately) and pay attention to the motivating factors to improve performance. Consistent with this principle, it is has also been stated that conventional “carrot and stick” rewarding systems work better for simpler, straightforward tasks but not for more sophisticated ones. For the latter, other rewards such as prestige, career development, or work autonomy seem to work better.

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SUPPORT COMPONENTS

HUMAN RESOURCES ADMINISTRATION

The appropriate management of the health care workforce requires specialized expertise in human resources administration. Procedures for hiring, salaries and benefits, health and safety issues, and employee record-keeping require specific knowledge and skills. Likewise, human resources actions, including disciplinary and termination procedures, need to be handled by trained staff who exercise tact, discretion, and the utmost confidentiality. The implementation of HRH administration functions normally requires the existence of a human resources administration unit and specialized or trained managers in this area.

Human resources administration functions and procedures can be organized around the employee “life-cycle,” which includes three basic moments:

- Entry to the workforce
- Permanence in the active workforce
- Exit from the workforce

Entering the workforce

Once the decision on recruitment of personnel has been made, the immediate next action is hiring the staff required. The process of hiring new staff has several steps:

Advertisement of the position:
Open positions should be as broadly advertised as possible in order to guarantee a sufficient pool of candidates. Moreover, equal opportunity employers would like to ensure that the information on the position reaches all potentially eligible/interested persons to avoid potential discrimination based on race, religion, gender, age, etc. The positions can be advertised in local or national media (e.g., newspapers) and through other mechanisms such as posting in schools, letters to colleagues and partner organizations, and Web-based announcements. The advertisement should include brief but sufficient information based on the job description and include: title of the position, main duties/tasks, type of competencies needed (e.g., clinical, administrative), education requirements (e.g., nurse, medical doctor, master’s in management), experience, and initial information on salary range/compensation package.

Nomination of the selection committee:
The designation of the selection committee is a critical step to ensure a successful selection of a suitable candidate. The committee should include at a minimum representatives from the organization’s management, the HRH department/unit, and the technical unit in which the new person will work. In some cases, representatives from the professional bodies or workers’ union of the facility or organization may participate as observers.
Application process/screening of applicant materials:
Applicants could be both external and internal (current employees in other positions). They will typically respond to the advertisement with an application including curriculum vitae. The screening of applicant materials must be based on the qualifications and competencies stated in the job description. Gender, ethnic background, religious affiliation, family status, and other personal information are not relevant to the qualifications of the applicant. The candidates who fulfill the requirements should be ranked according to their strength. Internal applicants should not automatically be considered the “preferred” candidates. Even though promoting from within the organization is good for staff morale, the needs of the organization should prevail.

Interview:
The top-ranked candidates should be interviewed. Candidates should provide the names and contact information of previous supervisors and should know that the organization can investigate their prior educational and work history. During the interview, the selection committee must try to get additional information on the qualifications and specific, relevant work experience of the candidate. The interviewers should realistically describe the position, review the performance expectations, and ask if the candidate has questions about the job. The selection committee should also ask about current and previous jobs and a potential date of availability for the new position, and should discuss the anticipated timeline for the selection. Finally, the committee may want to ask how the candidate knew about the position and whether any relatives working in the organization (some organizations do not hire any relatives of current employees; others restrict close relatives from employment, particularly for some sensitive positions).

Reference checking:
Reference checking is the final stage in the selection process. It should be conducted for the top-ranked candidate(s) after the interviews. In general, a minimum of three references should be checked. References checked by phone or in person increase the likelihood of obtaining in-depth information. The reference checker should briefly describe the position and ask if the candidate would be a good fit based on his/her work experience. Other questions can include personality traits,

Warning Signs to Look for When Screening and Reviewing Applications
- Gaps in employment (ask questions about any one month).
- Mismatched and overlapping dates of employment.
- Blank sections on the application (particularly about reasons for leaving a job).
- Periods of employment listed as a “consultant” (this can be a mask for unemployment).
- Frequent job changes. Although frequent changes are not necessarily warning signs, be sure to question the applicant for the reasons for early departures.
- Lack of details on the application about the duties and responsibilities for each job.
- Illegible writing (which may be an attempt by the applicant to hide unfavorable information).
- Failure to sign the application.

Surveys have shown that from 25 to 40 percent of applicants lie about, exaggerate, or omit information on CVs or applications.

work habits, overall performance, and primary accomplishments. The reference checker should always verify the candidate’s reason for leaving a previous position, whether the person is eligible to be rehired, and any misconduct or violent behavior. If a candidate asks that his or her current supervisor not be contacted, s/he can provide her/his most recent performance evaluation. All reference information should be kept confidential and not be shared with the candidates.37

**Extending a job offer:**
Once the candidate has been selected, s/he should be offered the position both orally and in writing. Typically, the HRH manager extends the job offer, which is based on the level of the position and the salary history of the candidate. When discussing the offer, the manager should encourage the candidate to consider the offer in terms of “total compensation”—that is, the overall salary and the benefits package.

**Closing the communication loop with the candidates:**
The hiring manager should keep in close contact with the candidates during the selection process and notify them of any delays. The hiring manager should also notify interviewed candidates not selected, briefly stating the reason why they were not selected. It is extremely important to treat all candidates with the utmost consideration: they will be forming an impression of the institution based on their experiences and are likely to tell others of their interactions—whether positive or negative. A non-selected candidate may be just the right person for a future opening.

**Permanence in the active workforce**
During their stay in the health workforce, employees usually do not remain in their original positions but make different movements that have to be properly managed and registered. There are three basic types of personnel movements: vertical (promotions or, rarely, demotions), lateral (transfers and reassignments), and temporary absences (leave, suspensions).

**Vertical movements:**
A **promotion** is the advancement of an employee to a higher position within the organizational hierarchy. A promotion typically involves advancement in terms of increased authority, level of responsibility, status, and salary. To be promoted, employees can apply to open, higher-level positions or they can receive the promotion as a reward for superior performance. In the first case, the process to be followed is similar to the one for hiring staff: advertisement of the position (usually internally), screening of the candidate’s qualifications, interview, and reference checking with the candidate’s supervisor. In the second case, the promotion is offered directly. In both cases, it is important that the organization ensures that the employee is able to handle the required added responsibilities and should be ready to provide additional training or on-the-job supervision as needed.

The opposite of a promotion is a **demotion**. A demotion occurs when an employee either voluntarily or involuntarily moves to a position that is lower than the one currently held. A demotion could be the result of unsatisfactory performance, a disciplinary action, or even a

Restructuring of the organization. A demotion typically involves a loss in terms of authority and status and may involve a loss of salary. A demoted employee may believe his/her career has been permanently damaged and may not perform well in the new position, seek to leave, or even consider legal action against the organization. For these reasons, a demotion should be properly and respectfully discussed with the employee, examining the reasons for the action and explaining the opportunities for continuing to advance his or her career in the organization.

**Lateral movements:**
Lateral movements occur when an employee moves from one position to another without a grade or salary modification. There are two basic types of lateral movements: transfers and reassignments. A transfer is a change in the job location, usually in another facility or unit in the same or different geographical area. Transfers can be implemented at the request of the employee (for personal/family or professional reasons) or management (e.g., when employees are allocated to positions for fixed periods of time). When a transfer occurs, it is important to ensure that the destination unit or facility has a position available and that the position of the facility or unit of origin does not move with the employee. A reassignment is a change to a different but equivalent position inside or outside the same facility or unit. Reassignments can permit the organization to use the skills of the staff in other positions. Even though they are not promotions, reassignments expose the workers to new duties and responsibilities and can be an opportunity for professional growth.

**Temporary absences:**
Official temporary absences of personnel can be due to leave or suspensions. Leave is an authorized absence from the position due to a variety of reasons such as health, maternity, vacations, or professional development (e.g., training outside of the unit or facility). Leave can also be taken for personal reasons. In all cases, the leave has to be previously authorized by the supervisor and/or the HRH manager (with the exception of emergencies) and its reason has to be properly documented. Leave is usually with pay although it may also be without pay (e.g., leave for personal reasons). Suspensions are mandatory, temporary separations from work for disciplinary reasons or investigation of potential misconduct. Suspensions can be with or without pay, depending on the cause.

Some key administrative processes need to be in place to effectively manage these personnel movements:

**Establishing career paths:**
A career path is the progression of jobs in an organization’s specific occupational field, ranked from lowest to highest in the hierarchical structure. Career paths also include lateral transfers. Organizations should develop clear career paths to facilitate employee career development and to serve as a retention tool. Newer professionals view promotions as markers—proof they are learning and growing in their careers. Younger workers in particular can feel frustrated at an organization without a clear career path and will be more inclined to seek employment elsewhere. Organizations that have structured career paths develop reputations within their communities as desirable places to work and have increased employee productivity and satisfaction and higher retention rates.38

Annual performance evaluations:
A performance evaluation is an organized method of reviewing an employee’s job performance. It includes a review of accomplishments and an evaluation to determine if the employee has achieved his or her goals. The performance evaluation process is also a time to determine training and development needs, to review and update the employee’s job description, and to assess whether the employee may be ready to assume additional tasks or is consistently performing at a higher level and should be promoted. Written annual performance evaluations often start with a self-assessment by the employee, which is then reviewed by the supervisor. Performance evaluations should not contain any negative information or feedback that has not already been discussed with the employee.

Salary and benefit administration:
Salary and benefits are collectively known as “total compensation.” Benefit packages can be the equivalent of as much as 25 percent of an employee’s salary, and sometimes more, if other incentives such as housing or use of a car are part of the package. Some terms used in payroll management are:

- Pay grades: are used to group jobs together that have approximately the same relative internal worth and are paid at the same rate.
- Pay ranges: are associated with pay grades. The range sets the upper and lower compensation boundaries for jobs within that pay grade.

Salaries should be reviewed periodically. Some organizations conduct annual salary reviews that coincide with the performance evaluations and determine, according to their financial possibilities, if the employee is eligible for a salary increase. In most public sector organizations, however, salaries are established by the national government and are revised periodically (not necessarily every year) due to changes in the cost of living or due to collective bargaining.

Occupational health and safety:
The health and safety of an organization’s workforce should be of vital concern to senior management and HRH managers. Effective plans have been demonstrated to reduce the number and severity of work-related injuries and illnesses; improve employee morale and productivity by reducing stress, job burnout, and absenteeism; lower the costs for compensating workers for injuries and accidents on the job; and improve health worker retention and strengthen recruitment initiatives. Every effective safety and health plan has four key elements:

Management commitment and employee involvement;

Worksite and job analysis: managers should identify health and safety risks and ensure that the health and safety plan is relevant to the needs of the facility;

Hazard prevention and control: managers should work with the staff to determine how to reduce the number of hazards in the facility. They should also determine how to reduce staff exposure to hazardous situations and ensure the supply and availability of appropriate personal protective equipment. Records of all staff work-related injuries must be kept;

Training and education (for new and current personnel) and designation of specific staff responsible for overseeing work safety and health policies and implementation.

**Employee relations:**
Employee relations refers to the general management of activities related to developing, maintaining, and improving employee relationships, including conflict and grievance solution.

Conflicts are a common occurrence in the workplace and can cause loss of productivity, lowered morale, absenteeism, etc. Conflicts may be resolved directly by the parties involved or may require mediation from supervisors or a HRH manager. In some cases, it may not be appropriate or it may be culturally difficult for one employee to directly approach another (e.g., when the other party is the employee’s supervisor, or in claims of harassment, discrimination, or other ethical abuses or perceived conflicts of interest). A grievance is a complaint regarding a policy, action, or specific working condition that is perceived by the employee to be unjust, discriminatory, or an obstacle to effective organizational operations. Grievances can be solved through a discussion with the immediate supervisor or may require the involvement of higher levels of management and/or the human resources unit.

**Progressive discipline:**
Progressive discipline is the process used to address employee performance gaps with the goal of achieving a positive change in performance and conduct. Its primary objective is to correct

Some behaviors and actions that pose risks to the organization:
- Giving undeserved positive performance evaluations.
- Failing to document, report, or correct performance or behavior problem.
- Failing to respond promptly to employee claims of harassment, discrimination, or other ethical abuses or perceived conflicts of interest.
- Berating or yelling at an employee.
- Not following the organization’s rules and policies.
- Sharing confidential information.
- Inappropriately using the organization’s property, including improper use of the computer and/or e-mail system.
- Making jokes or comments about an employee, including those that are sexual in nature or relate to the employee’s gender, religion, ethnic background, physical handicap, or other sensitive or hurtful topics. Leering at or touching anyone should also be avoided.
- Becoming romantically involved with employees, vendors, consultants, and others with whom the organization collaborates on a regular basis.

Such behaviors are disruptive and demoralizing and can be the source of employee resignations and even complaints to government oversight agencies. Supervisors, HRH managers, and senior management must act immediately if evidence of any such actions is brought to their attention.
problems—not to punish the staff member. Generally, progressive discipline uses the most moderate action first and then moves to more severe measures if the problem is not corrected. Progressive discipline is not appropriate for all situations; in cases such as theft, destruction and misuse of property, threats, violence, or unauthorized absence from work without notification, employees are usually terminated without use of these procedures. The progressive discipline process includes:

- **Oral counseling:** it should provide firm and supportive feedback as soon as the unacceptable performance or behavior is identified.
- **Written warning:** it should include the nature of the problem, specific examples, potential consequences, and a plan for improvement.
- **Final warning:** this memo restates the messages of the earlier warning and includes a plan for improvement with a specific time period (usually 30 to 60 days).
- **Suspension:** is the temporary removal of a staff member from the workplace for a specified period of time. A suspension warns a staff member that his/her continued employment with the organization is in jeopardy. Generally, it is one to three working days without pay.
- **Termination:** is the final step in the progressive discipline process. It is implemented when all of the above steps do not improve the performance problem. HRH managers should always consult local labor laws before terminating a staff member’s employment.

**Records management:**
HRH managers should maintain several different files on employees and should develop protocols on who can have access to them. Employees need to have confidence that their personal information will be treated with the utmost care and that their privacy will be protected and respected.

The employee personnel files should contain:

- Employee’s employment application, CV, and other documents submitted as part of the application process (copies of diplomas, certificates, etc.)
- Emergency contact information
- New hire form
- Job descriptions
- Annual performance evaluations
- Salary information
- Records of promotions or transfers
- Disciplinary memos (written warnings, removal from disciplinary status, etc.)
- Letters of appreciation or commendations
- Training records and copies of certificates

At employee termination, this file should also contain the employee’s letter of resignation (or dismissal documentation). Employment files of former staff should be kept indefinitely with other
confidential materials. The information may be needed to provide references and also if the employee is rehired. All employee health records and medical information should be kept in a controlled-access location, and only the HRH manager should have access to these records. Grievance files and exit interviews should be kept in separate, confidential files.

Exit from the workforce

Workers exit the health workforce because of several reasons: retirement, termination, migration, illness/disability, and death.

- Retirement is when the employee chooses to leave his or her employment permanently. In most places, it is necessary to reach a certain age or length of service in order to be able to retire with some benefits, such as a lifelong pension.

- Termination occurs when the employee leaves her/his position as a result of a decision by the employer. The reasons for termination could be disciplinary or the elimination of the position due to reorganization or downsizing. In the latter case, the employee may be eligible for some type of compensation, according to local laws.

- Migration happens when the employee voluntarily leaves her/his position for employment opportunities in other organizations or other countries.

- Illnesses/disabilities are health conditions that make the employee unable to carry out her or his duties. If the condition was caused by a demonstrated work-related incident or factor, the employee may be entitled to some type of compensation, depending on the local laws.

- Death is the final cause of exit from the workforce.

The exit of an employee represents an important loss for the organization because workers, particularly those more experienced, are its intellectual asset. When an employee migrates, the organization should conduct an exit interview to identify the causes of the departure. An exit interview is a confidential, structured interview with only the HRH manager and the employee present. Its purpose is to allow the employee to give confidential feedback on his/her experience with the organization. It is usually held on or close to the last day of employment. While most organizations conduct them only with employees who have resigned voluntarily, others include employees who are being terminated involuntarily (for poor performance, etc.)

Exits interviews should be held face-to-face whenever possible; this allows the HRH manager to probe the true reasons for the employee’s departure, which are sometimes masked by stated reasons. The HRH manager should inform senior management, investigate issues/charges of a serious nature, and take any other necessary actions to address the problem. Some reasons for employee departure are poor management, perceived unfair treatment, lack of career advancement, etc. The HRH managers can use exit data to strengthen retention initiatives and address organizational deficiencies in these areas.
REGULATION AND QUALITY ASSURANCE

The objectives of regulation are to guarantee quality, efficiency, and equity and to protect individuals and society from undesirable outcomes of the HRH system. Regulation establishes the technical, operational, and social requirements under which the components of the HRH system should operate.

In the context of the health reform and decentralization processes that are taking place in many countries, regulation is now receiving much more attention. Traditional functions of ministries of health such as direct service delivery and several planning and managerial tasks are being transferred to decentralized units or to nongovernmental providers. Under this new framework, regulation is seen as one of the critical functions that ministries of health must play in order to ensure effectiveness, efficiency, and equity of health care.

Regulation may be actively encouraged through incentives and/or enforced through legal and control means. Quality assurance mechanisms such as licensure/registration, certification, and accreditation are some of the most relevant instruments used to operationalize regulation and are typically carried out by the state or by nongovernmental organizations under delegated authority. Governments can also regulate through direct legislation and norms (e.g., stating ceilings for the number of admissions to health education institutions or establishing requirements for entering into government service). Providers and institutions can also practice self-regulation of their own activities (e.g., hospitals that have quality assurance committees, or professional associations that set technical and ethical parameters for the practice of their affiliates). These days, clients, communities, and the civil society are playing an increasingly important role in promoting and controlling quality, and are now seen as key sources of health care regulation (demand-side regulation).40

The aim of quality assurance is to guarantee that health organizations (health facilities and health education institutions) and/or individual providers are able to produce safe and quality services in a continuous and reliable way. The most common quality assurance mechanisms are licensure/registration, certification, and accreditation. They are typically implemented through assessments of individual competencies or organizational capabilities and systems. These assessments inform the public, clients, managers, and providers whether or not the performance of health organizations and workers is complying with pre-established quality standards. Because of this purpose, quality assurance assessments normally involve independent and external verification.

Licensure/registration, certification, and accreditation are increasingly used in many countries around the world. They are among the most frequently used quality assurance mechanisms in health care that are relevant for the HRH system.

**Licensure/registration**

Licensure/registration is a first step in the quality assurance process. Licensure and registration are terms most commonly interchanged because they usually refer to the same process. In some cases, however, licensure refers more to the assessment and verification of compliance with basic or minimum standards, and registration emphasizes the administrative procedures for incorporating providers and institutions within certain publicly recognized categories.

When applied to individuals, licensure or registration verifies that a health care or health education provider meets the basic minimum standards of competency to perform her/his work safely and effectively. Such a requirement is normally mandatory for institutional or independent practice. The licensure or registration process is conducted by government units or by professional associations or councils or associated independent bodies. In the case of individuals, the customary requirement for licensure/registration consists of: 1) completion of a training program, and, in several countries, 2) passing an examination. The duration of the license/registration could be for the duration of one’s career, and in this case, after the initial licensing/registration the provider may simply have to pay periodic fees to maintain its validity. Licensing/registration could also be valid for a given period of time after which re-licensing is necessary. Re-licensing can be obtained through different mechanisms that include continuing education, self-administered tests, examinations, or a combination of these. To guarantee the quality and safety of service provision and health education activities, it is very important to try to ensure that professional- and technical-level health workers entering the workforce, particularly service providers and health educators, are licensed by the corresponding recognized body.

Licensure/registration also applies to health care facilities and health educational institutions. In this case, again, it sets the basic minimum standards for the effective and safe operation of an institution, facility, or service, and is mandatory for their opening and operation. Licensure/registration of organizations is typically conducted by authorized government bodies (ministries of health or education, regulatory councils, etc.), which verify compliance with the required standards.

In some countries, there has been a proliferation of health education institutions that do not meet the basic standards of quality to produce competent health providers. Appropriate regulation through licensure should be implemented or enforced in these cases. Similarly, in several countries, the existence of informal health facilities where the safety and health of patients and providers are at risk is a significant problem that requires better regulation and licensure.

**Certification**

Certification is a next step in the quality assurance process. Certification demonstrates that a provider or a health educator has acquired specific additional competencies in a given area of specialty. Certification is commonly voluntary and self-driven, although there is an implicit perception that it is an important and beneficial component of career development. Certification is usually conducted by professional associations or associated independent bodies. Certification requirements typically consist of: 1) previous professional licensure/registration, 2) completion of a training program in a specialty, and 3) a written examination. The purpose of these requirements is
ideally to certify individual competence, which should result in effective services and a reduction of risk due to individual malpractice. Certification is typically conferred for a given period of time that can vary (e.g., in the U.S. five years for Certified Midwives and Certified Nurse-Midwives) and re-certification is necessary after this period. Re-certification can be obtained through continuing education, self-administered tests, examinations, or a combination of these.

Although certification is often more utilized for individuals, it can also be applied to health services or facilities and educational institutions. Certification in this case typically indicates that the organization has fulfilled specific standards and has achieved a level of competency in a specialized area of service. For example, a previously licensed/registered health clinic might obtain a certification to conduct some specialized ambulatory surgical or clinical procedures (e.g., surgical contraception, provision of antiretroviral therapy, or implementation of some specific laboratory tests). Likewise, a registered/licensed nursing health education institution may obtain a certification for training intensive care nurses or technicians in anesthesia.

Certification is not common in many developing countries although it should be encouraged and seen as a component of risk management in health care: the higher the risk of a health procedure, the greater the relevance of certification. Certification should be a mandatory requirement for providers or health educators who work in some specialty areas (e.g., teaching in or provision of surgical or obstetric procedures) and also for institutions providing specialized services or health education (e.g., provision of surgery/anesthesia, training of laboratory technicians).

**Accreditation**

Accreditation can be considered the next and more comprehensive step in the quality assurance process. Accreditation usually consists of a thorough review of the capabilities of an organization to consistently deliver reliable quality outputs or achieve desired results. It is typically applied to health institutions or organizations and not to individuals. Accreditation can be used for health facilities (hospitals, primary care services, etc.) and health education institutions and programs.

The accreditation process consists of organizational assessments based on pre-established performance or quality standards. In the past, the focus of accreditation was mainly the assessment of organizational inputs or processes but, nowadays, this is changing and there is increasing attention to organizational outputs and outcomes. Until recently, accreditation was essentially based on external assessments conducted by specialized quality assurance bodies. These days, there is recognition that in order to properly guarantee quality, it is necessary to go beyond the periodic external assessments toward a more continuous process with greater involvement of the organization’s members. Accreditation procedures now try to promote a combination of assessments: more continuous ones conducted by the organization’s staff (internal assessments) and periodic assessments conducted by the accrediting institution (external assessments). Accreditation is usually conferred for a given period of time (e.g., two or three years).

Accreditation is normally voluntary but is frequently required for the proper recognition of the outputs produced by an organization (e.g., health services provided, health providers graduated) by users or purchasers of these goods and services. In some cases, this recognition is a pre-requisite for
getting access to financial reimbursement or payment for the provision of goods or services. Therefore, it is desirable that, gradually, countries implement accreditation programs for health care facilities and health education institutions.

Table 2 below summarizes some key characteristics of the quality assurance methods described above.

Table 2. Summary of Quality Assurance Mechanisms

<table>
<thead>
<tr>
<th>Purpose</th>
<th>LICENSURE/REGISTRATION</th>
<th>CERTIFICATION</th>
<th>ACCREDITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Verify compliance with basic standards for safe individual performance or organization’s operation</td>
<td>Verify specific additional competencies in a given area of specialty health care</td>
<td>Thorough review of the capabilities of an organization to consistently deliver reliable quality outputs or achieve desired results</td>
</tr>
<tr>
<td>Applies to</td>
<td>Individuals and organizations</td>
<td>Primarily to individuals but also to organizations</td>
<td>Organizations</td>
</tr>
<tr>
<td>Requirements</td>
<td>Completion of a training program and, in several countries, passing an examination (for individuals) Compliance with required pre-set basic standards of operation (for organizations)</td>
<td>Previous professional licensure/registration, completion of a training program in a specialty, and written examination (for individuals) Fulfillment of specific standards showing achievement of competency in a specialized area of service (for organizations)</td>
<td>Compliance with pre-established organizational performance or quality standards</td>
</tr>
<tr>
<td>Validity</td>
<td>Duration of one’s career or limited time</td>
<td>Limited time</td>
<td>Limited time</td>
</tr>
</tbody>
</table>


The quality assurance mechanisms mentioned above have clear advantages but also some challenges for their proper implementation. Among the advantages are:

- **Quality assurance**: quality assurance mechanisms verify compliance with required and objective standards of quality and inform the public, managers, providers, consumers, and other constituencies of this compliance. When these mechanisms are systematically and continuously applied, they promote consistency and reliability in the provision of quality services and contribute to the control or limitation of risk in health care.

- **Service improvement**: the standards used for quality assurance can help to set clear and objective parameters and goals for quality improvement efforts. The utilization of clear standards in certification and accreditation helps to streamline management, reinforce transfer of learning, and make supervision more effective.
- Service expansion: in some contexts, mechanisms such as certification can help to upgrade the competencies of cadres of health providers, enabling them to perform critical tasks where human resources are scarce (e.g., counseling and care for HIV/AIDS), contributing in this way to a faster expansion of needed health services.

- Recognition: licensure/registration, certification, and accreditation can serve as mechanisms to recognize individual and organizational improvement and achievements. In this way, these mechanisms can function as incentives to promote improved performance and quality.

Among the challenges, which can be significant in some contexts, are:

- Incentives: the identification of meaningful, sustainable incentives and the establishment of consequences related to quality assurance are critical but many low-resource countries may not be able to afford them.

- Institutional capacity: the implementation of quality assurance requires appropriate bodies to elaborate relevant standards, keep databases of workers and institutions, implement assessments, verify compliance, resolve disputes, and enforce consequences. Usually, these tasks cannot simply be added to overstretched ministries of health or professional associations. In these cases, it might be appropriate to gradually build this institutional capacity, starting with the supervision system.

- Resources: establishing the infrastructure needed for quality assurance may require significant financial and other resources that are scarce. Governments should recognize, however, that this is a priority element for ensuring safe and appropriate care for the population.

- Resistance to change: in some settings, there may be significant resistance to required changes by the quality assurance process. In such cases, decision-makers may be pressured to tailor requirements and procedures to protect vested interests.

- Enforcement and credibility: in many low-resource settings, the institutional capacity of governments and professional organizations is weak and the consequences of non-compliance cannot be properly and transparently enforced, which can affect the credibility of the whole system.
HRH SYSTEM OUTPUTS AND OUTCOMES

The measurement of the outputs and outcomes of the HRH system reflects its effectiveness and shows to what extent it has achieved its goals. Outputs and outcomes can be determined for each of the components and also for the HRH system as a whole.

The assessment of outputs and outcomes is generally done using quantitative methods (those based on measurements and statistical analysis). A practical and action-oriented way of using quantitative methods to assess the effectiveness of the HRH system is the utilization of metrics. Metrics consist of developing and continuously monitoring (measuring) selected indicators and standards by which the performance of an organization or system can be assessed. To use metrics appropriately, meaningful indicators and standards of performance including quality, efficiency, and outputs/outcomes should be set. Also, the data sources and collection methods and the procedures for the analysis, dissemination, and use of the information for decision-making should be identified. Metrics can help HRH managers demonstrate that their initiatives add value and positively impact the health system’s performance and ability to provide quality services to patients and the community.
In some cases, quantitative methods could be complemented by qualitative methods that help to understand better the HRH system processes and the points of view of those involved. Qualitative methods are usually implemented through interviews of individuals or groups that are involved in some way in the operation of the HRH system. The interviews can help to shed light on the interconnection of factors, internal or external, their influence on the functioning of the HRH system, and on the perceptions of personnel and the reasons for their actions.

Using metrics and qualitative methods when appropriate can help us to better assess the HRH system. Below are some potential indicators that can be used to track the performance of the HRH system and its components. The list is not exhaustive but rather focused on some key and feasible aspects.

**Policies**

With regard to policies, at the institutional level it should be verified whether:

- There is an institutional (macro-level) HRH policy
- It contains the basic elements (outlined in the Policies section on pages 9–12) to guide the operation of the HRH system
- It is known by key health and HRH managers
- It has been updated within the last five years

It should also be checked in a sample of facilities whether:

- There are workplace-level policies
- They contain the basic elements (outlined in the Policies section on pages 9–12) to guide the expected behaviors of health employees and employers in the workplace and their relationship with each other
- They are known by managers and employees
- They have been updated within the last 10 years

This information can be obtained through qualitative methods such as interviews with national- and facility-level health and HRH managers and a sample of employees and verifying documentation.

**Planning and strategic decision-making**

Some relevant aspects to ascertain about the planning and strategic decision-making component include:

- The level of alignment of the HRH plans with the broader institutional (e.g., MOH) goals, strategy, and priorities
- The level of ongoing involvement of stakeholders, both internal (leadership, management, and employees) and from other relevant institutions and sectors (e.g., finance, planning, labor, education) in the planning process
- The existence of an operational Human Resources Information System (HRIS) with updated and complete information on the existing HRH
- The sources of information used for the planning process, which should include internal sources such as the HRIS but also information from other sectors such as education, finance, or labor, and census and relevant surveys available
- The identification of sources of financial resources (e.g., “fiscal space”) to fund the plans
- Defined planning methodologies
- The existence of annual HRH plans in implementation
- The existence of a mechanism to adjust the plans according to the evolution of the situation

This information can also be obtained through qualitative methods including interviews with the national health leadership (e.g., vice-minister, national director of planning, and national director for human resources), national HRH managers, and relevant managers from other sectors or institutions and through reviewing the plans produced.

**Production**

Table 3 presents a list of potential quantitative indicators and sources of information to track performance of the production component. The indicators are related to some critical inputs for the production of human resources as well as to the quality and the outputs of the component.

**Table 3. Production Indicators and Potential Sources of Information**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students graduating from secondary school</td>
<td>Ministry of Education (MOE) registries</td>
</tr>
<tr>
<td>Number of applicants to health education institutions, by institution</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Number of health education institutions by type, level, and localization</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Enrollment capacity of the health education institutions by type, level, and localization</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Number of students by gender, age, and origin accepted and enrolled in health education institutions by type, cadre, level, and localization</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Number of faculty by health institution, by specialty, gender, level of qualification, and dedication (full-time, part-time)</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Ratio of students to faculty by health education institution by type, cadre, level, and localization</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Proportion of health education institutions that use competency-based training</td>
<td>Special survey</td>
</tr>
<tr>
<td>Turnover rate of faculty by specialty</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Dropout rate per student cohort</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>INDICATOR</td>
<td>POTENTIAL SOURCES OF DATA</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Number of students graduating each year per cadre</td>
<td>MOE, MOH, private schools’ registries</td>
</tr>
<tr>
<td>Total cost per graduate, by cadre</td>
<td>MOE, MOH registries and budgeting/finances offices, private schools’ registries</td>
</tr>
</tbody>
</table>

**Deployment**

A potential list of indicators for deployment and sources of information is presented in Table 4. The indicators allow the determination of the size of the current labor force and its distribution as well as the level of unemployment.

**Table 4. Deployment Indicators and Potential Sources of Information**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of health workers by type/occupation (physicians, nurses, administrative staff, etc.), gender, age, and geographical area</td>
<td>Census, labor force surveys, civil service payroll registries, registries of professional associations/regulatory bodies, HRIS of ministries of health</td>
</tr>
<tr>
<td>Number of health workers by employer, type/occupation, gender, age, and, geographical area</td>
<td>Civil service payroll registries, HRIS of ministries of health, labor force surveys, health facility assessments</td>
</tr>
<tr>
<td>Density of health workers by type/occupation and employer per population</td>
<td>Census, labor force surveys, civil service payroll registries, registries of professional associations/regulatory bodies, HRIS of ministries of health</td>
</tr>
<tr>
<td>Proportion of employed/unemployed health workers by type/occupation, gender, age, and geographical area</td>
<td>Census, labor force surveys, civil service payroll registries, registries of professional associations/regulatory bodies, HRIS of ministries of health, special studies</td>
</tr>
<tr>
<td>Proportion of health workers currently employed at more than one location</td>
<td>Census, labor force surveys, special studies</td>
</tr>
</tbody>
</table>


**Performance management and support**

The suggested indicators for performance management and support are presented in Table 5. They include some key inputs for supporting performance and the outputs of the component focused on retention and productivity.
**Table 5. Performance Management and Support Indicators and Potential Sources of Information**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of health workers who have received at least one continuing</td>
<td>Labor force surveys, health facility assessments, HRIS</td>
</tr>
<tr>
<td>education activity in a year</td>
<td></td>
</tr>
<tr>
<td>Number of stock-outs of selected critical medical supplies and materials</td>
<td>Health facility assessments, institutional registries</td>
</tr>
<tr>
<td>during a year</td>
<td></td>
</tr>
<tr>
<td>Proportion of health workers by type/occupation who are performing tasks</td>
<td>Task analysis surveys</td>
</tr>
<tr>
<td>outside of their original job description and/or competencies</td>
<td></td>
</tr>
<tr>
<td>Salary levels of health workers by type/occupation, employer, geographical</td>
<td>Civil service payroll registries, registries of professional associations/regulatory</td>
</tr>
<tr>
<td>area, and gender</td>
<td>bodies, registries of the ministry of labor, labor force surveys</td>
</tr>
<tr>
<td>Number of workers who voluntarily left the institution in a year by type/</td>
<td>HRIS of ministries of health and private institutions, civil service payroll registries</td>
</tr>
<tr>
<td>occupation, employer, geographical area, gender</td>
<td></td>
</tr>
<tr>
<td>Number of health workers who migrated out of the country in a year by type/</td>
<td>Exit interviews of departing workers, International Labor Organization reports</td>
</tr>
<tr>
<td>occupation, employer, geographical area, gender</td>
<td></td>
</tr>
<tr>
<td>Stated reasons for leaving the institution by type/occupation, employer,</td>
<td>Exit interviews of departing workers, labor force surveys</td>
</tr>
<tr>
<td>geographical area, gender, and age</td>
<td></td>
</tr>
<tr>
<td>Number of days of health worker absences in a year by type/occupation,</td>
<td>Institutional registries, payroll registries</td>
</tr>
<tr>
<td>employer, geographical area, gender, and age</td>
<td></td>
</tr>
<tr>
<td>Volume of outputs for specific activities/health procedures in a year by</td>
<td>Institutional health information systems</td>
</tr>
<tr>
<td>institution and geographical area/facility</td>
<td></td>
</tr>
</tbody>
</table>

**Human resources administration**

Potential indicators for this component are in Table 6 below.

**Table 6. Human Resources Administration Indicators and Potential Sources of Information**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of trained HRH managers in the institution</td>
<td>Institutional registries, payroll, and/or HRIS</td>
</tr>
<tr>
<td>Average time to conduct a recruitment (when candidates are available)</td>
<td>Institutional registries, payroll registries, interviews with HRH managers</td>
</tr>
<tr>
<td>Number of promotions processed in a year</td>
<td>Institutional HRIS, payroll registries</td>
</tr>
<tr>
<td>Number of transfers/reassignments processed in a year</td>
<td>Institutional HRIS, payroll registries</td>
</tr>
<tr>
<td>Number of work-related injuries, illnesses, or accidents registered in a</td>
<td>Institutional registries and health information systems</td>
</tr>
<tr>
<td>year</td>
<td></td>
</tr>
<tr>
<td>Number of health workers’ complaints solved</td>
<td>Institutional human resources registries</td>
</tr>
<tr>
<td>Proportion of exit interviews conducted on workers leaving the institution</td>
<td>Institutional human resources registries</td>
</tr>
</tbody>
</table>
Regulation and quality assurance

Table 7 below lists suggested indicators for this component.

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of health graduates by cadre (technical and professional levels) who are registered/licensed</td>
<td>MOH registries, registries of professional associations</td>
</tr>
<tr>
<td>Proportion of health facilities and health education institutions that are registered/licensed</td>
<td>MOH registries, registries of regulatory bodies</td>
</tr>
<tr>
<td>Proportion of health workers by cadre who are certified in a given specialty</td>
<td>Registries of professional associations</td>
</tr>
<tr>
<td>Proportion of health education institutions that are accredited</td>
<td>Registries of regulatory bodies</td>
</tr>
<tr>
<td>Proportion of health facilities that are accredited</td>
<td>Registries of regulatory bodies</td>
</tr>
</tbody>
</table>

System outputs and outcomes

In Table 8 there is a list of indicators that can express how the whole HRH system is contributing to the larger health systems goals.

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>POTENTIAL SOURCES OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density of health workers (employed/active) by cadre</td>
<td>Health information systems, HRIS, institutional registries</td>
</tr>
<tr>
<td>Proportion of HRH currently active in the health workforce</td>
<td>Census, labor force surveys</td>
</tr>
<tr>
<td>Volume of health services produced total and by type</td>
<td>Health information systems</td>
</tr>
<tr>
<td>Correlation between density of health workers by cadre and production of health services by type</td>
<td>Health information systems, HRIS, institutional registries</td>
</tr>
<tr>
<td>Correlation between density of health workers by cadre and morbidity and mortality</td>
<td>Health information systems, HRIS, institutional registries</td>
</tr>
<tr>
<td>Correlation between density of health workers by cadre and social image of the health sector</td>
<td>Population surveys, HRIS, institutional registries</td>
</tr>
<tr>
<td>Correlation between volume of health services produced and proportion of total expenditures in HRH</td>
<td>MOH budgetary/financial information, health information systems</td>
</tr>
</tbody>
</table>

From the lists above, selected relevant indicators and acceptable standards to each context can be organized in a dashboard which should be periodically updated. Policymakers and managers should have access to these indicators so they can make better evidence-based HRH decisions.
CONCLUSION

As stated at the beginning of this manual, a HRH systemic management is essential for translating investments and efforts made in different HRH activities into more effective, comprehensive interventions. This systemic view can be achieved only if all the elements of the HRH system and the external health and national environment are taken into account and their interactions considered.

An effective HRH system managed with a comprehensive approach can deliver the results expected in benefit to the population, and can show leaders and policymakers the great value added by investments made in the health human capital.