making the most

of existing chapter four
health workers

A country's health workforce is made up of health workers who are at many different stages of their working lives; they work in many different organizations and under changing conditions and pressures. Whatever the circumstances, an effective workforce strategy has to focus on three core challenges: improving recruitment, helping the existing workforce to perform better, and slowing the rate at which workers leave the health workforce. This chapter explores the second of these challenges: optimizing the performance of current workers.

Strategies to boost worker performance are critical for four reasons:

- They will be likely to show results sooner than strategies to increase numbers.
- The possibilities of increasing the supply of health workers will always be limited.
- A motivated and productive workforce will encourage recruitment and retention.
- Governments have an obligation to society to ensure that limited human and financial resources are used as fairly and as efficiently as possible.

This chapter outlines four dimensions of workforce performance: availability, competence, responsiveness and productivity, and reviews the levers available to improve these different dimensions. Many ways of improving performance exist, some aimed at individual health workers and some directed at the organizations in which they work.

WHAT IS A WELL-PERFORMING HEALTH WORKFORCE?

Health workforce performance is critical because it has an immediate impact on health service delivery and ultimately on population health. A well-performing workforce is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances.

Table 4.1 Dimensions of health workforce performance

| Dimension	Description
Availability	Availability in terms of space and time: encompasses distribution and attendance of existing workers
Competence	Encompasses the combination of technical knowledge, skills and behaviours
Responsiveness	People are treated decently, regardless of whether or not their health improves or who they are
Productivity	Producing the maximum effective health services and health outcomes possible given the existing stock of health workers; reducing waste of staff time or skills

Evaluations of health workforce performance by the extent to which it contributes to the desired improvement in population health leave no doubt that performance can vary widely. Box 4.1 provides one illustration of how health workers use available financial resources to very different effect on infant mortality, even after controlling for education and poverty in the population. Examining performance this way reveals areas where a workforce is performing well and areas where improvements should be possible, but this method does not explain why performance varies or what can be done about it.

Box 4.1 Infant mortality and health worker density, Viet Nam

Infant mortality rates were examined in relation to the density of health service providers in 1999. Average results across the provinces are represented by the black points in the figure below. Many provinces, denoted by the red points, do better than expected for their health worker densities – they lie below the black line – while others do less well. More detailed analysis reveals that this is explained, in part, by differences in financial resource availability, measured in terms of health expenditure per capita. An indicator was derived of the efficiency with which health workers in each province use the available financial resources to reduce mortality, controlling for education and poverty. Efficiency ranges from 40% to 99%, raising the question of why health workers in some provinces seem to perform better than in others (1, 2).

Infant mortality rate and per capita density
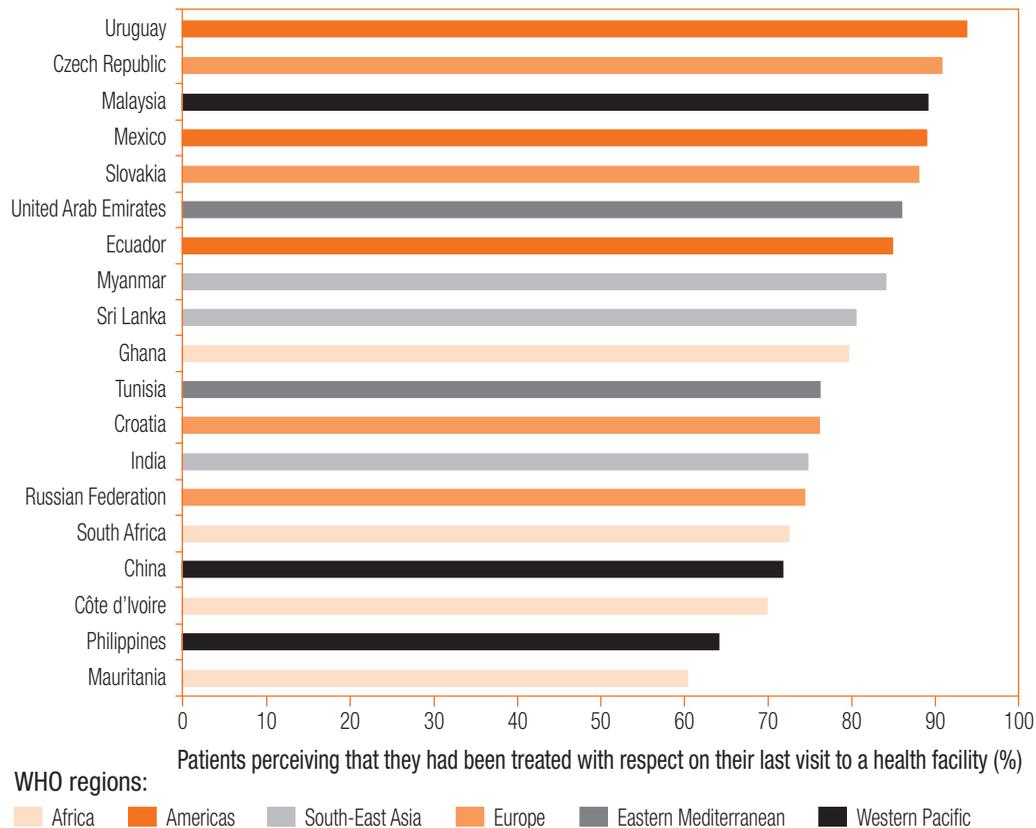of health professionals, by province, Viet Nam
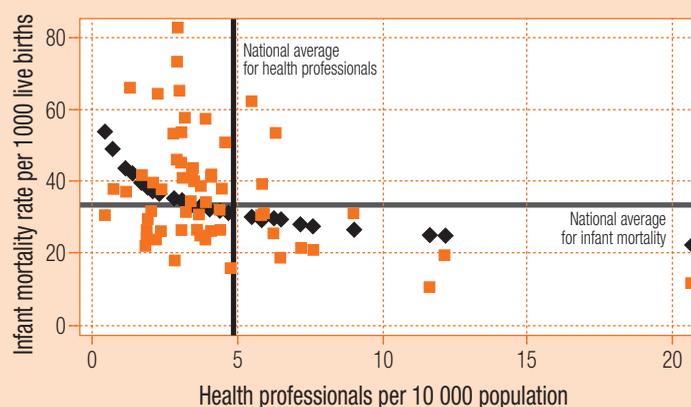
◆ Expected provincial infant mortality rate given available resources (from model).

■ Observed provincial infant mortality rate.

Another approach is to look at four dimensions of workforce performance that are believed to contribute to the achievement of better service delivery and health (see Table 4.1). Looking at the problem this way can help in selecting areas for action.

This simple outline sets the scope for any health workforce strategy and provides a framework for assessing whether or not it is having its desired effects. This framework moves beyond the traditional focus on inputs (having the right number of staff, in the right place, at the right time, with the right skills, and the right support to work *(3))* to consider workforce outputs and outcomes.

What is known about the various dimensions of health workforce performance shown in Table 4.1? Chapter 1 has already outlined what is known about workforce ***availability***, across and within countries. This chapter describes efforts to capture some of the other dimensions more systematically. For all of them data are scarce, especially in lower income countries. However, if countries are to track whether workforce policies are having their desired effects, some metrics of performance are needed. Studies of ***productivity*** in the health sector have been conducted in both rich and poor countries *(4)*. A recent study estimated the potential gains in productivity of existing staff in two African countries could be as much as 35% and 26%, respectively *(5)*. Efforts, ranging from the simple to the sophisticated, are under way to assess the extent to which health workers are ***competent*** *(6–9)*, and

Figure 4.1 Patients' perception of respectful treatment at health facilities in 19 countries

Patients perceiving that they had been treated with respect on their last visit to a health facility (%)

WHO regions:
Africa | Americas | South-East Asia | Europe | Eastern Mediterranean | Western Pacific

Source: *(10)*.

exhibit aspects of ***responsiveness*** such as respect towards the people they see. Figure 4.1 illustrates results from a survey in 19 countries, which found that the proportion of patients who thought they were treated with respect when they visited health facilities varied from 60% to 90%.

For each dimension of health workforce performance, important differences between health workers may be seen, and policy responses should bear these in mind. Box 4.2 provides one example.

It is difficult to measure and monitor performance and all too easy to manipulate data *(15)*. Many human resource and staffing indicators are routinely collected only in systems with relatively sophisticated information infrastructure. More work is needed to establish which existing indicators could best capture the four dimensions of workforce performance, but Table 4.2 illustrates some possibilities. These four dimensions are a consequence of factors such as staff turnover and motivation. Indicators of the determinants of performance, such as supervision visits and workplace safety, may also be worth measuring.

Many people view feedback on performance not just as a necessity for policy, but also as a powerful tool to influence the behaviour of health workers and organizations if linked to rewards and sanctions. The uses of performance monitoring are discussed later in this chapter.

WHAT DETERMINES HOW HEALTH WORKERS PERFORM?

To understand why health workers perform differently, it is useful to consider the factors known to influence their work. For many years it was assumed that poor health worker performance was primarily caused by a lack of knowledge and skills. In recent years this perception has changed, and three broad groups of factors are now recognized.

■ *Characteristics of the population being served:* it is simpler to increase immunization coverage or adherence to treatment for tuberculosis or HIV infection where the population understands the benefits and has the motivation and resources to seek services.

■ *Characteristics of health workers themselves,* including their own sociocultural background, knowledge, experience and motivation.

Box 4.2 Differences in performance of male and female health service providers

Male and female health workers sometimes approach their work and interact with patients in different ways. A recent study in Brazil found that women spent longer in consultation with each child under five years of age (an additional minute, on average) than their male counterparts, even adjusting for other determinants of time inputs such as patient loads. The difference was more pronounced for providers trained in the Integrated Management of Childhood Illness protocols, suggesting that the influence of training might also differ according to the sex of the practitioner *(11)*.

In the United States, women were more likely to undergo screening with Pap smears and mammograms if they were seen by female physicians, and this was more evident with internists and family doctors than with specialist obstetricians and gynaecologists *(12)*. Female patients, especially those seeking gynaecological and obstetric advice, reported greater satisfaction with female than male physicians *(13, 14)*.

Taken together, these findings suggest that certain aspects of the care rendered by women health workers can, in specific circumstances, be more responsive to the needs of patients than the care provided by male physicians. These differences could be important for the development of the health workforce, but need to be better understood.

■ *Characteristics of the health system,* and the wider environment, that determine the conditions under which health workers work. These include the inputs available to them to do their jobs, how the health system is organized, how the workers are paid, supervised and managed, and factors such as their personal safety.

These elements are interconnected. For example, motivation (the level of effort and desire to perform well) is considered by many to be crucial to performance. Motivation is determined both by factors internal to health workers and by factors in their work and social environment *(17)*.

WHAT INFLUENCES HEALTH WORKERS' PERFORMANCE?

Leverage can be applied to stimulate better performance from both individuals and the health workforce as a whole. The main levers available to support performance include a group that are *job related*; those related to the *support systems* that all workers need to do their jobs; and levers that shape and create an *enabling work environment*. It is rare to find a direct relationship between one specific lever and a desired change. Collectively, they make up a checklist of options for policy-makers to consider, from which various instruments have to be selected and combined to meet specific health workforce challenges.

Figure 4.2 summarizes some of the key levers that exist and the characteristics of the workforce that they can collectively influence. Some of these instruments have been found to be relatively easy to implement, others are more complex. Some offer the prospect of relatively early results, others are much longer term. Some are low cost, others are expensive. Some are not exactly policy levers but affect productivity – paying a heating bill, for example, so that a facility is warm enough for staff and patients to use. All of these levers need to be set within a vision for the workforce over the medium to long term. Improvements in workforce performance and productivity usually result from a bundle of linked interventions, rather than uncoordinated or single ones *(18)*.
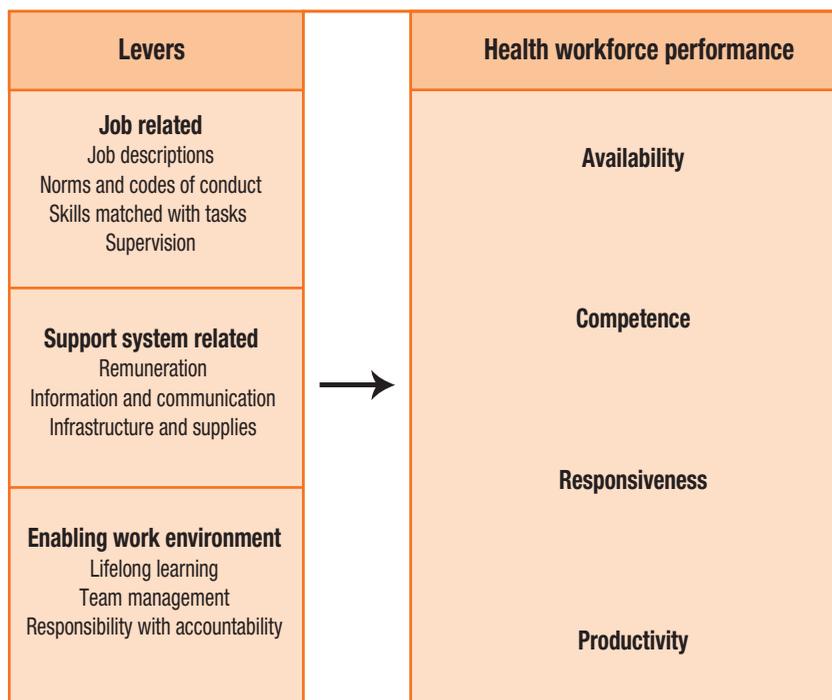
Selecting the right instruments to use and judging when and where to use them, require not just knowledge

Table 4.2 Human resource indicators to assess health workforce performance

Dimension	Possible indicators
Availability	Staff ratios
	Absence rates
	Waiting time
Competence	Individual: prescribing practices
	Institutional: readmission rates; live births; cross-infections
Responsiveness	Patient satisfaction; assessment of responsiveness
Productivity	Occupied beds; outpatient visits; interventions delivered per worker or facility

Source: *(16)*.

Figure 4.2 Levers to influence the four dimensions of health workforce performance

Levers	Health workforce performance
Job related Job descriptions Norms and codes of conduct Skills matched with tasks Supervision	**Availability**
Support system related Remuneration Information and communication Infrastructure and supplies	**Competence**
Enabling work environment Lifelong learning Team management Responsibility with accountability	**Responsiveness** **Productivity**

of the instruments themselves, but also an understanding of other important issues that can influence how well the levers work, such as the structure, culture and institutional capacity of the organization concerned, and wider social values and expectations. Action to encourage better performance and productivity can be directed at the individual, team, organization or overall system level *(19)*. Some of these instruments can be introduced within an existing health system by managers of local facilities or services. Others require decisions by higher level authorities or by other sectors – especially if they involve structural change. While it is pragmatic for managers to focus first on one or two things that they can directly influence and that can be changed more easily, there are times when this is inadequate for any substantial improvement in workforce performance and a more comprehensive set of managerial and organizational changes may need to be considered.

The next three sections of the chapter summarize current knowledge about the effectiveness of different levers. For each, four issues of concern to decision-makers are considered: the robustness of the knowledge base, what is known about ease of implementation, the cost, and the time frame for effects to take place. Hard evidence of what works is still limited, but this is no excuse for inaction, given the workforce crisis that is facing many countries. At the same time, this lack of evidence makes two things essential: careful monitoring of trends and effects to allow course corrections as needed, and a much greater effort to evaluate and share findings within and across countries.

Job-specific levers

One set of instruments that influences personnel performance is specific to individual jobs or occupations. These levers include clear job descriptions, professional norms and codes of conduct, the proper matching of skills to the tasks in hand, and supervision *(20–22)*.

Strategy 4.1 Develop clear job descriptions

Job descriptions that clearly set out objectives, responsibilities, authority and lines of accountability are consistently associated with improved achievement of work goals, for all sorts of worker *(23)*. Moreover, moves to develop clear job descriptions can produce quite rapid effects. A programme jointly undertaken by WHO and the Ministry of Health in Indonesia has demonstrated that establishment of clear job descriptions, along with better in-service training and clearer standards, can enhance job satisfaction and compliance with standards among nurses and midwives (see Box 4.3). Health workers in many countries still lack proper job descriptions, so this strategy has widespread potential.

Strategy 4.2 Support norms and codes of conduct

The performance of health workers, in terms of both competence and responsiveness, is also influenced by their sense of professional identity, vocation and work ethic. There are many instances of health workers continuing to provide care despite difficult and sometimes dangerous working conditions. Some ways of sustaining or, where necessary, creating values, standards and aspirations are outlined below.

The notion of "professionalism" and vocation in health has a long history. Almost every doctor and patient has heard of the Hippocratic Oath, which is the longest surviving ethical code of conduct. It is still sworn by many medical graduates. Health workers are expected to conduct themselves with integrity, selflessly to apply techni-

cal know-how and to put the interests of the patient above their own *(30, 31)*. Professional codes of conduct are often instilled through unwritten channels and take time to develop, but can become a significant source of internal motivation.

One of the functions of professional associations is to foster this sense of valued professional identity and hence responsibility and higher morale *(32)*. For more "modern" professions, such as management, professional associations are relatively new (for example, the European Health Management Association has existed for only 25 years) and still do not exist in many countries. Creating professional associations may be a desirable long-term strategy, but they take time to establish. The creation of associations for more informal providers such as drug-sellers has also been tried as a means of bringing their activities more into line with accepted good practice.

In very poor countries, coping strategies by health workers to deal with difficult living conditions may become so prevalent that maintenance of professional ethos is threatened. Box 4.3 explains how health workers in two countries perceive the problem.

Many employers are now introducing explicit written codes of conduct for all their employees, stating, for example, that they should arrive at work on time, treat patients with dignity and respect, and provide them with full information. The effectiveness of such codes has not been documented (and is usually only one aspect of a larger package of managerial interventions) but logic suggests that their effectiveness will depend on the extent to which they are communicated and enforced.

More formal instruments are also used to steer the behaviour of health workers in a desired direction. For example, a government might introduce a regulation that no private practice by public sector health workers is allowed during working hours in public facilities. To have the desired effect, such rules and regulations need to be well publicized, and action taken when they are broken. Licensing and accreditation are other tools to promote standards of care of existing workers and the institutions to which they belong. The effectiveness of formal regulations is often limited because the institutional capacity to enforce them is just not there. This problem is discussed further in Chapter 6.

> *The performance of health workers is influenced by their sense of professional identity, vocation and work ethic*

Strategy 4.3 Match skills to tasks

In rich and poor countries alike and in all types of facilities, numerous examples exist of ways in which the skills of individual health workers or the skill mix within the workforce as a whole are being inefficiently used. Common reasons for this include the following:

- Tasks do not match an individual worker's skills – for example, skilled nurses doing clerical tasks because there are no ward clerks. The opposite also occurs: for example, due to skill shortages, management tasks being carried out by scarce medical personnel, who have no specific expertise in these areas; or untrained personnel carrying out skilled tasks such as birth delivery and other interventions *(33, 34)*.
- Certain tasks consume an excessive amount of time, such as hosting missions and reporting.
- Workers are not always at work at the times when the workload is highest, i.e. when their skills would be most productive.

Some examples of skill mismatches are given in Box 4.3.

Often countries with the scarcest human resources have the greatest demands made on their health workers' time by external agencies. This problem concerns senior policy-makers, managers and clinical staff. The Paris Declaration on aid effectiveness has a set of principles for harmonization and alignment with partner countries' systems and procedures that has been endorsed by ministers and development institutions *(35)*. Many health agencies and partnerships are now examining how to put these principles into practice *(36)*. External agencies have a golden opportunity to free up some time for health workers, for example by harmonizing review missions and training courses or by aligning overlapping reporting demands.

Shift patterns and time flexibility could provide another way to increase worker productivity. This strategy could potentially achieve a better match between staffing levels and workload at limited cost, but there are virtually no evaluations from developing countries *(18)*.

Finally, skill delegation or task shifting is another way to increase overall workforce productivity that has received much attention. Most actual experience comes from substitution of physicians by nurses, and from English-speaking countries *(37)*. Chapter 2 provides examples of instances where skill delegation is being adopted.

Box 4.3 Job-related challenges to improving health worker performance

Develop clear job descriptions: Indonesia
In 2000, a survey of 856 nurses and midwives in five provinces found that 47.4% nurses and midwives did not have written job descriptions, 39.8% were engaged in work other than nursing care or midwifery and 70.9% had not received in-service training for the past three years. A Clinical Performance Development Management System was developed: it created clear job descriptions that outlined responsibilities and accountability, provided in-service training consisting primarily of reflective case discussions, and put in place a performance monitoring system. Staff benefiting from the programme reported that the job descriptions, together with standards of operations and procedures, had given them greater confidence about their roles and responsibilities. The participating hospitals also reported that the programme helped to ensure quality and facilitate hospital accreditation *(24)*.

Maintaining professional values: tensions and suggested solutions from Cape Verde and Mozambique
A study of how health workers perceive the difficulty of maintaining professional values found that they experience a conflict between their self-image of what it means to be an honest civil servant who wants to do a decent job, and the realities of life that make them betray that image. For example, misuse of access to pharmaceuticals has become a key element in the coping strategies that some health personnel employ to boost their income. The authors conclude that this ambiguity indicates that the opportunity to intervene still exists, and that this should be sooner rather than later before practices become too entrenched. Respondents' suggestions to change the situation included:

improved and tighter management of stock, improved working conditions, informing the population about such practices, and appeals to people's personal and professional values *(25)*.

Match skills to tasks: examples of mismatches
A study in the United Republic of Tanzania estimated that 40–50% of a district medical officer's time was being spent on report writing and 20% on hosting missions *(26)*. In Uganda, district managers estimated that they spend 70–80% of their time on planning, reporting and training workshops. This left little time for implementation of activities *(27)*. A survey of hospitals in Washington, DC, United States, showed that for every hour of patient care in an emergency care department there was one hour of paperwork *(28)*.

Exercise supportive supervision: Ghana
In quasi-government hospitals, the supervisors' role was the linchpin of performance enhancement: keener pressure and their perceived knowledge of technical processes kept service providers on their toes, with the supervisor themselves feeling more direct pressure to ensure good performance/outputs (for example, to retain their position, financial incentives and other benefits). In the public hospitals studied, supervisors seemed to have less authority and performance emphasis seemed to be placed on behaviours such as obedience, punctuality and respectfulness rather than on performance of technical tasks. Systems for reorientation of supervisors and for formal performance appraisal of productivity of supervisors rather than directly on service providers may be useful *(29)*.

In some cases, professional resistance and the need for changes in legislation can delay implementation.

Strategy 4.4 Exercise supportive supervision

Supervision, especially coupled with audit and feedback to staff, has been consistently found to improve the performance of many types of health workers, from providers to managers *(21, 38)*. While the intent to supervise is almost universal, it often proves difficult to put into practice and becomes the first casualty in the list of priorities for busy and resource-constrained managers. Supervision often becomes more difficult but even more important in health systems that are decentralizing. Ministry central managers, for example, may be perceived as no longer having the authority to supervise districts, or their posts may have been transferred.

> *Supervision that is supportive and helps to solve specific problems can improve performance, job satisfaction and motivation*

When it does take place, the *nature* of the supervision is important. If supervisory visits become sterile administrative events, or are seen as fault-finding and punitive, they have little positive effect and may have negative effects. In contrast, supervision that is supportive, educational and consistent and helps to solve specific problems, can improve performance, job satisfaction and motivation. Good supervision made a difference in staff motivation and performance between public hospitals and autonomous quasi-government hospitals in Ghana (see Box 4.3).

Strategies to improve supervision tend to neglect three groups, all of whom perform better with supervision. The first of these groups consists of supervisors themselves; the second consists of lay health care providers, be they families or community health workers with more formal roles, who often work alone; and last but not least are private providers, who in many low income countries receive virtually no supervision at all. The challenge is to find ways to oversee performance that will be accepted by independent, self-employed practitioners. Supervision is one element in various strategies being explored to engage private and informal providers in the delivery of commodities and services. In the example of social franchising projects, franchisees such as drug sellers obtain certain benefits, for example subsidized supplies, and in return accept – among other things – to be supervised by the franchiser *(39)*.

Basic support systems

Every health worker needs some key supports to perform his or her job: remuneration, information, and infrastructure, including equipment and supplies. This section does not provide a comprehensive review of the systems that deliver these supports, but focuses on features that have particular relevance to enhancing health workforce performance.

Strategy 4.5 Ensure appropriate remuneration

Three aspects of remuneration influence the behaviour of health workers: the level and regularity of pay, the way people are paid, and other incentives.

Health workers must be paid reasonably for the work they do. They need to receive a living wage; they also need to believe that the wage is commensurate with their responsibilities and that it is fair when compared with others in the same or equivalent jobs.

# Box 4.4 Differences in salaries between countries, professions, sectors and sexes

(a) Cross-country comparisons of annual salaries of physicians and nurses

Doctors and nurses in poor countries earn less than their counterparts in most high income countries, even after accounting for differences in the purchasing power of earnings, so substantial financial incentives exist for them to emigrate. In figure (a), annual salaries are plotted against GDP per capita in international dollars. Available data usually concern doctors and nurses only.

figure (a)
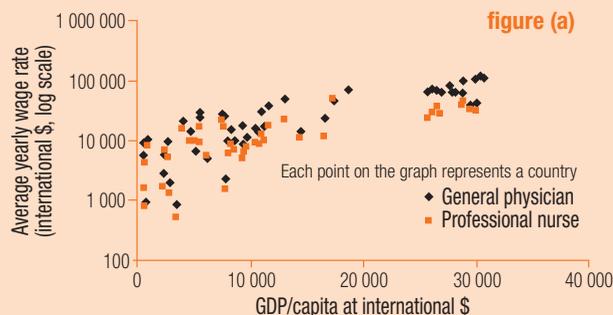
(b) Salary differentials between comparable professions

Differentials in the salaries of health professionals also vary within countries. Salaries can be compared between equivalent professions, public and private sectors, and men and women doing the same job. For countries with available data, the monthly salary of a teacher is typically 1–1.5 times the salary of a nurse (see figure (b)) though in Costa Rica, Estonia and the United States nurses reportedly earn more than teachers. Engineers are paid more than doctors, sometimes substantially more, in most low income countries, for example Bolivia, Côte d'Ivoire and Honduras. In general, this balance is different in countries with incomes per capita above US$ 10 000 (as in Australia, Slovakia and the United States), so that here doctors are paid more on average.
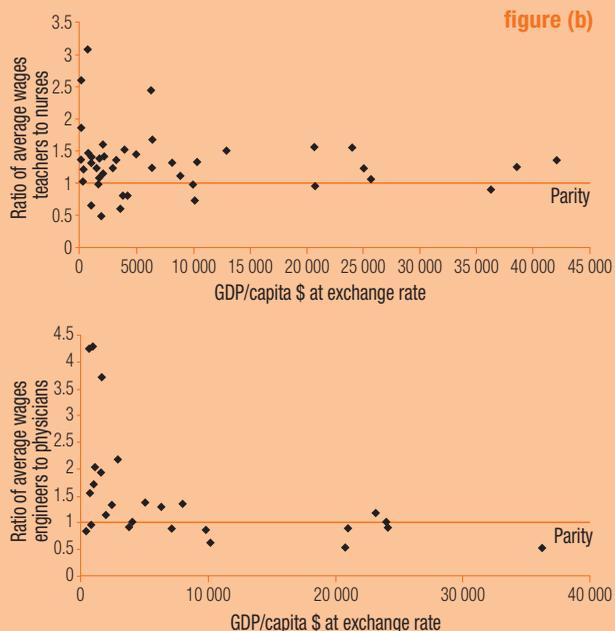
(c) Comparisons of salaries between the public and private sectors

Such comparisons are sparse. Certainly not all private sector workers are necessarily highly paid: for example, one study found that around 14% (Latvia) and 50% (Georgia) of private sector health workers were paid at or below the minimum wage.

(d) Ratio of wages (PPP US$), men to women

Likewise, few data are available on differences in earnings between men and women. Figure (c) illustrates salary differentials by sex in four OECD countries: in three of them there seems to be parity across the five occupations studied. The most rigorous cross-country study available suggests that the small differences that exist can be explained by differences in the number of hours worked, type of speciality and seniority. This general finding could well hide considerable variation across countries.

figure (b)

figure (c)
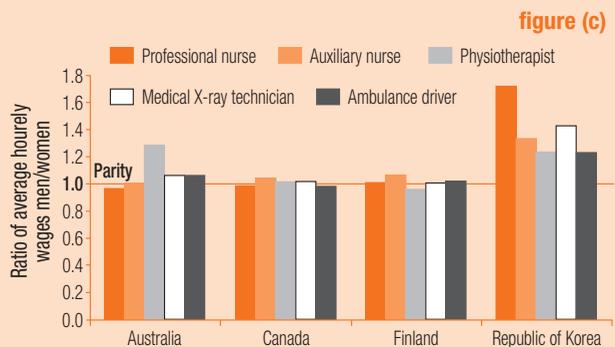
Sources: *(44–49)*. Data from most recent year available.

Underpayment and a sense of unfair differences stunt productivity and performance *(40)*. Public sector health workers have developed many coping strategies to deal with salaries that are unrealistically low, or intermittent: dual or multiemployment, absences and ghost workers; informal payments; referring patients to the private sector; and migration to better labour markets *(25, 41–43)*.

Raising salaries in the public sector can be difficult and costly. In some cases ministries of finance set public expenditure ceilings; salary levels may be set for all civil servants by public service commissions, who consider it unfair or unwise to raise salaries in one sector alone, or simply lack the ability to do so. Furthermore, for some particularly skilled and scarce health workers, the public sector may simply be unable to match salaries offered by the private sector or that are found overseas. Not all private sector workers are highly paid, however; in some countries, a significant proportion of workers in the private sector are paid at or below the minimum wage *(44)*. Various comparisons of salaries are described in Box 4.4.

So what can be done? Despite the difficulties, a number of low income countries have dramatically increased the pay of public health workers in recent years. In the United Republic of Tanzania, for example, the Selective Accelerated Salary Enhancement scheme provided an opportunity for ministries to raise levels of remuneration for high priority groups *(15)*. In Uganda, salaries were increased in 2004 for all health workers following a job evaluation exercise across the whole public service, which used a standard set of criteria (such as length of training, cost of errors, and working hours) to rank jobs and set their associated salary scales. As a consequence, the salaries of the lowest level nurse almost doubled and became equivalent to that of a new university graduate *(42)*. Given the cost of salaries, there has recently been increasing acceptance by external agencies that salary support will be needed in very low income countries for the medium term (see Box 2.2).

Some countries have made efforts to remove health workers from the civil service pay structure, to allow for more freedom in the setting of pay and conditions of service. Zambia tried this approach but it was resisted by professional groups and eventually lost momentum. In Ghana, tax-collectors and bank employees have been successfully de-linked from the civil service, but health workers have not *(15)*.

Unpaid salaries present a problem in many countries, from eastern Africa *(50)*, and may provoke absenteeism. Salaries sometimes remain unpaid because human resources management and payroll systems are not working properly. There is no hard evidence on the effects of investing in functioning administrative systems. However, bolstering this essential ingredient for workforce management may be easier to act on than other more politically charged workforce reforms, need not be costly, and could provide relatively quick and significant results. A second cause of unpaid salaries is lack of funds. In Chad, donor funds have been successfully used to guarantee timely payment for health workers who were previously experiencing delays of 4–7 months *(50)*.

The way people are paid makes a major difference to what they deliver. Individual health workers, and the facilities in which they work, can be paid in many different ways. For each, pay may be time-based (salaries or fixed budgets), service-based (fee for service) or population-based (per capita payments or block contracts) *(51)*. Both facility-based and individual payment mechanisms can

> *" Unpaid salaries present a problem in many countries, from eastern Europe to Africa "*

influence how individuals perform. Experience shows that salaries and fixed budgets lead to providers reducing the number of patients seen and services provided, whereas fee-for-service payments encourage incentives for providers to see more cases; offer more services, and deliver more expensive services. Each payment mechanism also has different administrative implications, from simple to more complex *(52)*. Optimal payment systems induce providers to give high-quality, effective treatment while promoting a rational allocation of resources *(40)*.

Middle and upper income countries, including Australia, Hungary, the United Kingdom, and the United States, have been moving away from input-based budgets and salaries towards performance-related pay based on outputs and outcomes *(53–55)*. Mixed provider payment systems have become more common to balance the different incentives each mechanism creates. Robinson's study of physician organizations in the United States found that approximately a quarter of physicians were paid on a purely retrospective basis (fee-for-service), another quarter on a purely prospective basis (capitation, non-productivity-based salary) and about half on a mix of the two *(48)*. Some evidence suggests that performance-related pay can lead to improvements in the quality of care provided *(56, 57)*.

The idea of introducing performance-related pay in lower income countries has gained popularity recently, for the same reasons that this approach is used in richer countries. However, experience remains very limited. In most lower income countries the majority of public health workers still receive salaries together with allowances unrelated to performance, whereas in the private sector the fee-for-service system is more prevalent. The limited introduction of this mechanism may stem in part from the fact that payment methods with stronger incentives for quality, consumer satisfaction, equity or efficiency tend to have higher administrative costs and require greater administrative capacity *(52)*.

The use of **other sources of income**, such as allowances, to increase job attractiveness – whether in general or only in underserved areas – exists in virtually all countries. Types of supplementary pay and allowances valued by health workers include: contract-signing bonuses; reimbursement of job-related expenses such as uniforms and petrol; education, accommodation, transport or child care subsidies;

Box 4.5 Incentives to enhance health workers' performance

Thailand. In the 1990s, payment reforms to improve the availability of health workers in rural areas included: supplements to doctors in eight priority specialties and services who worked in rural areas; non-private practice compensation for doctors, dentists and pharmacists; monthly salary supplements to doctors, pharmacists, dentists and nurses in district hospitals and health centres; and overtime and night shift payments. These supplements were combined with other non-financial incentives. Over time, the availability of health workers in rural areas has improved *(64)*.

Mali. In 1986, the Ministry of Health introduced a strategy, which continues today, to encourage newly graduated doctors to serve in rural areas. Doctors are contracted to work in underserved areas to deliver the minimum health package stipulated in the National Health Policy, either as part of a public health centre which has no doctor, or as a private practitioner. The two sectors have different payment mechanisms but similar non-financial benefits: public sector doctors receive a salary plus a share of facility revenue; private doctors are paid on a fee-for-service basis but the fee level is based on local ability to pay. All participants receive some initial training, plus accommodation, equipment and transport if needed. In addition, all are expected to join the Medical Association and be part of a peer learning network. By 2004, 80 doctors (from Mali's estimated total medical stock of 529) had joined this scheme and were working in rural areas, where some had been for over five years. An assessment in 2001 found that service coverage in rural facilities with a doctor was higher than in those without *(65)*.

health insurance; access to loans (e.g. subsidized mortgages); per diem payments while on training courses; allowances for working in remote areas or out of hours (overtime and night shifts); and specific service output incentives (e.g. for immunization) *(58)*.

Doctors and nurses are often the main beneficiaries of income supplements. In the United States, tuition reimbursement or contract-signing bonuses are commonly used to attract nurses. In Jamaica, health insurance, paid vacation and transport are often offered to nurses *(59)*; while benefits in Botswana include housing, car loans and medical aid *(60)*.

> *"Doctors and nurses are often the main beneficiaries of income supplements"*

How well these measures work depends on how they are designed and implemented and what other incentives are in place. Objectives and target groups need to be defined, and in some cases incentives must be negotiated with unions; they must also be viewed as fair. Over time they may come to be seen as entitlements rather than incentives, and their effects may change *(61)*. Well-intentioned incentives can have unintended, perverse effects *(58, 62)*. In Ghana, for example, the additional duty hour allowance introduced for doctors and nurses was resented by nurses, because of the perceived or real disparities in the gains, and is thought to have contributed to the increased migration of nurses *(63)*.

Packages of incentives are often required to balance the different effects of individual financial (and non-financial) incentives. In Thailand, for example, efforts to improve the availability of doctors in rural areas have involved several types of additional payment, as well as educational, infrastructure and social strategies *(32)* (see Box 4.5 for two examples). Studies of "magnet institutions" – those which are successful in recruiting, retaining and motivating nursing staff – in the United Kingdom and the United States, found that critical factors include good human resources management and quality of care *(66)*. These are discussed further later in the chapter. All incentives require regular monitoring and adjustment to changing "push and pull" factors: Thailand has employed different tools at different times to improve and maintain the availability of health workers in rural areas.

No discussion of remuneration would be complete without acknowledging that in many countries, in all continents, informal payments provide a major source of income for health workers and thus exert major influences on behaviour towards their clients *(42, 67)*. There is no easy way to address the problem of informal payments but there are encouraging examples. In Cameroon, the government introduced a scheme that is now in place in all larger health facilities. It included: having a single point of payment for patients at the facility; clearly displaying the fees and the rules about payment to patients, and telling them where to report any transgressions; using the fees to give bonuses to health workers, but excluding them from the bonus scheme if they break the rules, and publishing names of those receiving bonuses and those removed from the scheme. A key factor in the success of this scheme has been a strong facility manager who enforces the rules fairly *(43)*.

The above points concerning remuneration of health workers can be summed up as follows:
- Secure the minimum: a living wage that arrives on time!
- When it comes to worker performance, pay matters. External agencies could help to improve worker performance in low income countries by providing salary support for the medium term.

■ A mix of payment systems and incentives should be used where possible. If institutional capacity is limited, caution should be exercised in adopting approaches with complex administrative requirements.

■ Salary increases alone are not enough to change performance. These must be combined with other strategies to create significant change.

■ Any incentives or remuneration policies must always be monitored and adapted over time to ensure that they produce the desired outcomes.

Strategy 4.6 Ensure adequate information and communication

A well-known adage states that you manage what you measure. Evidence shows that having information does help health workers to do their jobs better, as long as certain provisos are met: the information must be relevant to the job and available when needed, and workers must have a degree of confidence in the information's quality and understand what it is "saying" *(21, 68)*. Health workers at different levels need different sorts of information from many sources: medical records, facility activity reports, financial accounts, health workforce inventories and payrolls, population-based survey data and scientific literature, to name just a few. A well-functioning national information system is a key ingredient to improving workforce performance.

Any specific efforts to improve ***overall workforce*** productivity need to be based on reliable data about workforce level, distribution and skill mix, coupled with information on the factors thought to be constraining better health worker performance and intelligence on potential policy options.

In some instances, ***individual provider*** productivity has been improved with communication technologies that help health workers to deliver services. There is a growing amount of evidence to suggest that these technologies can lead to productivity gains in the health workforce by improving the way workers provide clinical and public health services. Examples are given in Box 4.6.

Many organizational, legal, infrastructural, social and financial barriers to the widespread use of modern information and communication technology remain, especially

Box 4.6 Using modern communication technology to improve data, services and productivity

In well-off countries, health workers increasingly use modern communication technology to provide care, and studies have demonstrated increases in their productivity as a result. The use of telephones to remind high-risk individuals about influenza immunization *(69)* and mammography among managed health care plan members resulted in a significant increase in uptake of these preventive interventions, without any other apparent changes in the workforce *(70)*. Computer-generated telephone reminders have also been effective in improving medication adherence and blood pressure control in hypertension patients *(71)*.

There is evidence that computer-based patient records can improve patient care, outcomes and costs. Computerized reminder systems to alert health care staff to repeat tests have reduced the number of patients subjected to unnecessary repeat testing, while automatic systems communicating critical laboratory results reduced the time for

getting appropriate treatment when compared with the existing paging systems *(72–74)*. The need for chronic care of HIV/AIDS patients has triggered an exploration of models for resource-poor settings, which are being piloted in a number of low income countries.

Handheld computers are powerful data collection tools, providing rapid access to information needed to prevent or respond to disease outbreaks. They can furnish data at the point of need, even in the absence of Internet or telephone connectivity. For example, a Red Cross survey team gathering data for measles immunization in Ghana using such devices processed 10 times more questionnaires than usual, and returned results to the Ministry of Health with unprecedented ease and speed. For more information, see http://www.satellife.org/ictinhealth.php.

in low income settings *(75)*. In some cases, these technologies may be viewed as magic bullets to solve problems that need quite different solutions. Nevertheless, it will be important to keep a critical but open mind to their potential: the explosion in the use of mobile telephones in low income countries shows how quickly a new technology can be adopted in countries where traditional communication infrastructure is weak or unaffordable. Simple communication methods such as newsletters and helplines also have a role to play in improving access to information.

Strategy 4.7 Improve infrastructure and supplies

No matter how motivated and skilled health workers are, they cannot do their jobs properly in facilities that lack clean water, adequate lighting, heating, vehicles, drugs, working equipment and other supplies *(76–78)*. Two examples illustrate the consequences. In Niger, nurses at health centres were reported to be reluctant to refer patients to district hospitals because only three of the 33 hospitals provided surgical care, most of them could not give blood transfusions or oxygen, and laboratory and X-ray facilities were rudimentary *(79)*. In Kyrgyzstan, health professionals in primary care providing diabetes care said that their job was hampered by a lack of testing strips, machines to measure blood sugar, weak laboratories and irregular supplies of insulin *(77)*. Drugs being out of stock is a familiar problem to many health workers (see Table 4.3).

Hard evidence for the performance benefits of improving basic infrastructure and supplies is very thin *(81)* but it seems highly likely that such improvements – once in place – could create significant, almost immediate gains. For example, paying a utility bill so that the electricity or heating is turned on again may make a quicker difference to productivity than any more specific performance management tool. Costs are likely to be variable: some would be unique outlays and some recurring. A simple and obvious, but sometimes overlooked, way to determine the actions that will create the largest and most immediate improvements is to ask the health workers themselves.

The physical work environment also needs to be safe, and health workers themselves need to be provided with health care when sick. Aspects of safety are discussed in Chapter 5.

Functioning support systems require consideration of the management and support workers discussed in Chapter 1, such as store managers, accounts clerks, information officers, equipment technicians, hospital administrators and personnel and

> *"When looking for ways to improve performance,* we have found nothing works so well as talking to health workers themselves. *Their ideas are just amazing. They will tell you what to do"*
>
> **Director of human resources in Africa**

Table 4.3 Pharmaceutical situations in public health facilities in Africa and South-East Asia

Indicator	Africa[a]	South-East Asia[a]
Average number of days during which key medicines were out of stock in the preceding year	25	19
Percentage of facilities meeting basic conservation conditions required to maintain medicine quality	75%	75%
Percentage of dispensed medicines adequately labelled	71%	87%

[a]Median, seven countries in each region.

Source: *(80)*.

procurement managers. These workers are often neglected in workforce discussions, but are critical to scaling up service delivery.

An enabling work environment

Three general types of levers can be used to promote an enabling work environment. Most involve the managerial culture and organizational arrangements within which health care providers work. They are grouped as follows: lifelong learning, team management and team working, and responsibility with accountability

Strategy 4.8 Promote lifelong learning

Health workers require up-to-date knowledge to perform well, as has been mentioned in Chapter 3. Rapid increases in knowledge and changing health systems make this need even more essential today. This is a field full of experimentation, but some clear and straightforward messages have emerged.

Individual needs vary widely. Basic workers with only weeks of pre-service training have different learning needs from doctors or nurses with a decade or more of education and experience. Nurses in rural Switzerland clearly deal with very different everyday challenges than those in rural Malawi. Nevertheless, some common principles underlie any strong approach to professional development. Table 4.4 summarizes some individual and workplace-wide approaches.

Formal one-off, off-site training courses have a poor track record for changing the actual practice of health workers. In-service training is most likely to change worker behaviour when it is interactive, based on real-life problems and coupled with continuing, intermittent support.

To illustrate this fact, although the use of oral rehydration salts for childhood diarrhoea greatly increased in the 1980s and 1990s, after more than 2000 training courses on case management and supervision from 1988 to 1993 in over 120 countries, the median percentage of children correctly rehydrated by health workers (from 22 surveys) was only 20% *(21)*. Simple, low-cost approaches that follow the principles of interactive, realistic training with adequate continuing support can be very effective *(38)*. These lessons have been translated into the more encompassing, long-term concept of continuous professional development or lifelong learning. Con-

Box 4.7 What sort of training works best?

If performance change is the goal, exclusively didactic approaches, conferences and activities without any practice have little or no role to play *(83, 84)*. Evidence suggests that there is more probability of knowledge and skills transfer into practice when the training course is interactive with as much hands-on real-life experience as possible. Interactive courses improve prescribing or dispensing behaviour *(85–88)*, improve specific clinical skills *(89–90)* and positively effect health care utilization while promoting favourable patient responses *(91)*. Active learning opportunities, sequenced learning, after-training support, reminders and multifaceted activities are effective *(92, 93)*. Distance edu-cation is shown to increase knowledge *(94)*, knowledge-seeking behaviour *(95)*, self-confidence *(96)* and positive attitudes in three studies, though no effect on behaviour change was observed. When a videoconference-type training session was compared with in-class face-to-face training, there was no difference in knowledge accumulation *(97)*. The most convincing evidence for distance education is a study which shows that a 10-month distance education course, supported with 1–2 contacts by tutors, caused a significant increase in correct assessment of diarrhoea cases *(98)*.

Table 4.4 Approaches to professional development and performance

Training	Individual	Team or organization-based
Intermittent	Training courses	Retreats
Continuous	Continuous professional development	Wide array of approaches with similar principles but many different labels, e.g. total quality management, tools and techniques
Distance learning	Web-based training and access to literature	Teleconferencing, collaborating workspaces, other web-based groupware

tinuous professional development can be simply defined as a "systematic, ongoing, cyclical process of self-directed learning" for individuals. Such an approach goes beyond training to include, for example, career paths, feedback from others, mentoring and secondment *(82)*. Distance education in its various forms also deserves further exploration, given the geographical distribution of the many health professionals in need of continuous professional development. Box 4.7 presents some of the options for educational opportunities.

Experience clearly shows that simply disseminating guidelines is ineffective. If guidelines are passively distributed, few people read them, even if they are followed by reminder visits *(99–104)*. When guidelines are distributed during a training course, however, and supported by peer groups to discuss the content and to provide audit and feedback to participants or associated with subsequent supervisory visits, they are significantly more likely to be implemented *(105–107)*.

In recent years, attention has shifted to multifaceted packages of iterative, on-the-job support, with an emphasis on ways to encourage translation of new knowledge

Box 4.8 Quality assurance, supervision and monitoring in Uganda

Since 1994 Uganda's Ministry of Health has engaged in vigorous quality assurance, supervision and monitoring of districts and sub-districts through the following approaches:
- creation of a Quality Assurance Department;
- development and dissemination of standards and guidelines;
- initial workshops to assist administrators, political leaders and clinical staff with identifying and solving common service-related problems;
- support visits by multidisciplinary teams;
- quarterly supervisory visits with routine monitoring (of finance and planning, for example) and one special focus area such as malaria or child health;
- supervision that is supportive, non-punitive, and exercised in an atmosphere of trust;
- verbal feedback and summary reports with key issues highlighted and action plans agreed on.

The programme includes routine monitoring of indicators at national and district levels, and benchmarking of progress towards the achievement of the national strategic plan. Public service providers and nongovernmental organizations are monitored, but not the private sector.

To provide incentives for improvement, Uganda's Ministry of Health has put in place an award system called the Yellow Star Programme. District health facilities complying fully with the 35 standards considered the best indicators for overall management now receive a plaque in the form of a five-pointed yellow star, along with official recognition and publicity. Forty-seven districts now participate.

Uganda's efforts have resulted in better coordination between health services and local administrators and political leaders. The 2003/4 health sector review found that some districts are performing much better than others, and that unexpectedly, poor and rural districts are not necessarily poor performers. In interviews conducted across Uganda, the view was widely expressed that good performance stems at least in part from good management, especially in a supportive political environment *(112)*.

into changed practices. Such approaches can be judged in many ways, including the quality of services and productivity. Recently, a wide array of programmes has emerged with different labels, degrees of complexity, tools and techniques, but mostly following a similar set of principles. Some focus on individuals and others on organization-wide or team-based approaches – where the team may be a work unit of mixed staff or a group of professionals, such as managers, who share the same responsibilities in different places.

Teamwork and processes such as joint development of guidelines and peer review can be moderately successful in improving health worker performance. The observed benefits of teamwork include improved staff well-being (*108, 109*) and better quality of care (*110*). Evidence of the effectiveness of organization-wide approaches to achieve sustained improvements in services is limited. For example, in the United Kingdom and the United States, total quality management approaches have shown mixed results (*111*). Many forms of quality improvement projects have taken place in low income countries with successes reported (see Box 4.8) – but rigorous evaluations are few *(21)*. Ultimately, of course, the most suitable approach depends on the specific needs and objectives of the workforce.

Strategy 4.9 Establish effective team management

Along with the shift in approaches to professional development has come a rising recognition that important gaps exist in the scope of the current response. Over the years most attention has focused on knowledge and skills for clinical services, rather than on more generic skills needed to make health systems work, such as management, accounting, procurement and logistics. Some "softer" managerial skills such as team building and negotiation have also received little attention. As a result, many low income countries receiving large amounts of additional funds to scale up services rapidly are facing some basic skill deficits in such areas as simple accounting, drug stock and store management, and basic personnel management. Health system reorganizations may also create a need for new skills. This has been the case in Kyrgyzstan (see Box 4.9), while health reforms in Chile and the United Kingdom increased the need for skilled managers (*113, 114*).

People respond positively to a host of non-financial incentives that can be collectively captured under the rubric of good management or leadership, terms which are often used interchangeably (*116*). Whether called management or leadership, these skills benefit health workers at every level of a health system. Limited but positive evidence suggests that the factors listed below may improve individual or organizational

Box 4.9 Changing tasks and therefore skill needs

In Kyrgyzstan, funds used to be allocated to facilities based on bed and staff numbers. Reforms introduced in 1997 have changed the system from this passive budgeting approach to one relying on active or strategic purchasing of personal health care services. A new agency, the Mandatory Health Insurance Fund (MHIF), pays inpatient facilities on a per case basis and primary care practices by capitation. The hospital payment reforms have involved completely new processes of information management, financial management, and quality control to ensure that contracted providers are paid and that the services provided are appropriate and of good quality. A critical new function performed by the MHIF is utilization review which involves checking claims to protect against fraud while contributing to quality improvement. This has led to the need for a new set of skills: in computer programming, data processing, analysis of clinical data, and the ability to discuss and negotiate with providers on the basis of those analyses *(113)*.

performance (*56, 117–123*). Health workers are more motivated to perform well when their organization and managers:

- provide a clear sense of vision and mission;
- make people feel recognized and valued whatever their job;
- listen to staff and increase their participation in decisions – they often have solutions;
- encourage teamwork, mentoring and coaching;
- encourage innovation and appropriate independence;
- create a culture of benchmarking and comparison;
- provide career structures and opportunities for promotion that are transparent and fair;
- give feedback on, and reward, good performance – even with token benefits;
- use available sanctions for poor performance in ways that are fair and consistent.

> " *These evaluations are a source of motivation for us; if we get a good grade we make even greater efforts to keep our rank or to go even further* "
>
> **Public sector manager, Benin**

Good managers reward their staff. Some examples of non-financial rewards that may be used are: tea during night duty, holidays and days off, flexible working hours, access to and support for training and education, sabbaticals, study leave, and planned career breaks. Some examples of management and leadership are mentioned in Box 4.10.

The introduction of performance appraisal systems, such as Zambia's Performance Improvement Review system and Malawi's Performance Contract scheme, are becoming more common. How effective is performance audit and feedback (*126*)? There are many examples of successful projects, but large-scale evidence that such schemes improve service quality, productivity or health outcomes is still scarce *(15)*. A major review of experience with audit and feedback in high income countries concluded that these tools can be effective in improving professional practice but their effect is small to moderate (*127*). Assessment of facility performance is also becoming more common, but experience is still scarce in low income settings.

Box 4.10 The importance of management and leadership

South Africa. Nurses working in maternal health services were asked about the most important characteristics of the workplace and presented with 16 theoretical workplace profiles. The most significant finding was that good management (e.g. clearly defined responsibilities, supportive attitude when mistakes are made, rewarding ability and not length of service) outranked salary as a preference, unless the remuneration was dramatically higher. These results reinforce other research demonstrating the effect of good management on employment choices and job satisfaction among health workers *(124)*.

Leadership for Change programme. The International Council of Nurses (ICN) has set up a programme to develop nurses as effective leaders and managers in a constantly changing health environment. The Leadership for Change methodology and key strategic goals are designed to assist them at a country or organizational level to participate effectively in health policy development and decision-making, become effective leaders and managers in nursing and health services, prepare future nurse managers and leaders for key positions, and influence changes in nursing curricula so that future nurses are prepared appropriately.

Nurses in more than 50 low and middle income countries have gained the knowledge, skills and strategies they need to take leadership roles in nursing and health systems, build partnerships, and improve health care through participation in this programme. Evaluations indicate that graduates are involved in a range of nursing leadership roles, with an increase in nurse leaders' influence, ability to build sustainable partnerships, and ability to develop new models of nursing to improve quality of patient care *(125)*.

As for implementation, introduction of the changes mentioned here is not necessarily costly, but neither is it necessarily straightforward. For example, a study on performance management of district health managers in nine Latin American countries found that teamwork was difficult to introduce into a health system that promotes hierarchical structure and favours an authoritative management style (*128*).

Strategy 4.10 Combine responsibility with accountability

Giving local managers at least some freedom in the allocation of funds can make a big difference to staff and facility performance, as these managers can then quickly deal with local problems unknown to higher level managers *(129).* Mechanisms to hold health workers accountable for their actions are another way to improve productivity and performance *(130).*

Services can be organized in many different ways, but managers cannot manage them properly if they are not given at least some control over money and staff.

Three consistent findings have been identified across different health systems.

- Decentralization is under way in many countries. However, though local managers are often being given more responsibility for service delivery, they are not always being given the greater authority over money and staff required to enable them to fulfil these new responsibilities.
- There are often few functioning mechanisms to assure accountability in the use of money, recruitment of staff or quality of services provided.
- Confused lines of reporting are common, especially during periods of reorganization. This not only reduces accountability and thereby blunts its use as a lever for improving staff performance, but can reduce staff motivation.

The general public also has a role to play in holding health workers accountable for their actions (*130*). Publicizing what patients should expect from their providers is cheap and easy to do and has been done with good results regarding patients' rights and user fee schedules in both low and high income countries (*131*). In Uganda, for example, health district performance is ranked and the results are published in the press. Formal mechanisms for handling allegations of provider misconduct can also be effective but have proved difficult to use successfully in practice in low income settings (*132*).

HOW ARE LEVERS LINKED TO THE FOUR DIMENSIONS OF HEALTH WORKFORCE PERFORMANCE?

The framework at the start of this chapter listed four desired dimensions of health workforce performance: availability, competence, responsiveness and productivity. Rigorous evidence is limited, but Table 4.5 provides an overview of which levers appear to have the greatest effect on each of these dimensions. The results will naturally be influenced by local context.

Availability

The levers thought to be most effective at increasing the availability of existing staff are those related to salaries and payment mechanisms, together with the materials to "do the job" and a degree of independence allowed to individual health workers to manage their work – whether in the management and deployment of staff for managers, or in clinical decisions for health care providers. Job descriptions and codes of conduct may also help, by providing clarity and the sense of professionalism which often appears to sustain health workers in difficult conditions.

Table 4.5 An aid to thinking through potential effects of levers on health workforce performance

	Levers	Dimensions of health workforce performance			
		Availability	Competence	Responsiveness	Productivity
1	Job descriptions	+	+	+	+
2	Norms and codes of conduct	++	+	++	+ / ++
3	Match skills to tasks	+	+	+	+++
4	Supportive supervision	+	+++	++	++
5(a)	Salary levels	+++	+	+	++
5(b)	Payment mechanisms	++ / −−	+ / −	+ / −	+++ / −−−
6	Information and communication	0	++	+	++
7	Infrastructure and supplies	++	0	+	++
8	Lifelong learning	+	+++	+	+
9	Teamwork and management	+	+	++	+++
10	Responsibility with accountability	++	+	++	+++

Key:
+ = positive effect; **−** = negative effect.
+ = some effect; **++** = significant effect; **+++** = substantial effect.
Payment mechanisms: the effects will depend on the mechanism used.

Competence

The levers that seem to have the greatest influence on health workforce competence (here encompassing technical knowledge, skills and behaviours) are supervision coupled with audit and feedback and lifelong learning. It is important to note, however, that it is the *way* in which these levers are applied that is crucial: sterile, fault-finding visits have no effect, whereas supportive supervision (together with audit and feedback) consistently has moderate to large benefits. An institutional approach that fosters the culture and practice of lifelong learning is more effective in changing practice than stand-alone, off-site training courses.

Responsiveness

Responsiveness refers to the goal that people should be treated decently regardless of whether or not their health improves, and irrespective of who they are. As with the other dimensions of performance, no single lever alone is sufficient but the following appear to have the most significant effect: norms and codes of conduct; supervision; and basic amenities, such as privacy during consultations. Team-based interventions that make health workers feel valued and permitted to innovate can also boost responsiveness.

Productivity

Many levers have the potential to improve productivity but three stand out. Strategies to redress skill mismatches could reap huge productivity gains. Adjusting the way that health workers are paid, improved teamwork, and responsibility with account-ability also offer potentially large benefits.

Table 4.6 Health workforce performance: provisional assessment of implementation and effects of levers

Levers	**Implementation and effects**				
	Evidence base 1 = theory 2 = anecdote, example 3 = some formal studies 4 = strong evidence	**Ease of implementation** 1 = easy 2 = moderate 3 = difficult	**Relative cost** 1 = low 2 = medium 3 = high	**Potential effect** 1 = small 2 = moderate 3 = large	**Timing of impact**[1] 1 = near term 2 = medium term 3 = long term
Job-specific levers					
Job descriptions	2	1	1	2	1
Norms and codes of conduct	2	2	1	2	2,3
Matching skills to tasks	1	1,2,3*	1,2	3	1
Supportive supervision	3	2	1,2	2,3	1
Basic support systems					
Remuneration (salary levels)	2	2,3	3	2	1
Remuneration (payment mechanisms)	3	2,3*	2	3	2
Information and communication	2	2	2	2	1,2,3*
Infrastructure and supplies	2	2	2,3*	3	1
Enabling work environment					
Lifelong learning	3	1	1	2	1
Team management	3	1,2,3*	1	2	1
Responsibility with accountability	3	1,2,3*	2	3	1

[1]Once implemented.
*Depends on cause of problem, specific interventions introduced.

CONCLUSION

This chapter has described the levers that can influence workforce performance. Table 4.6 summarizes what is known about implementation of the measures proposed here. An inevitable tension exists between the perspectives and goals of individuals and the organizations to which they belong. Organizations have to perform well and deploy their staff to the greatest advantage, while also providing places for individuals to thrive. This tension must be continually monitored and managed. Moreover, managing any change is a subtle and often difficult process, for several reasons. Changes may be needed at several levels. Legal and regulatory frameworks may need to be changed, which can be complex and slow. Resources are often needed to support change. Probably most importantly, local stakeholders must be brought "on board" as they can facilitate or equally effectively block a reform that has been carefully negotiated at central level *(78)*. However difficult, without changes to support improved performance of existing health workers, any recruitment and retention strategies will have limited effect. Retention is discussed in the next chapter.

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