Issues
in health services
delivery

Human resources for health

2

Achieving the right balance:
The role of policy-making processes
in managing human resources
for health problems

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Discussion paper No. 2

Human resources for health

*Achieving the right balance:
The role of policy-making processes
in managing human resources for health problems*

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Abbreviations and acronyms

AFRO	WHO Regional Office for Africa
CE	Continuing Education
DRG	Diagnostic-Related Group
EMRO	WHO Regional Office for the Eastern Mediterranean
EURO	WHO Regional Office for Europe
HRH	Human Resources for Health
HRD	Human Resources Development
MOH	Ministry of Health
MCH	Maternal and Child Health
MD	Medical Doctor
NGO	Non-Governmental Organization
PAHO	WHO Regional Office of the Americas (aka Pan American Health Organization)
SEARO	WHO Regional Office for South-East Asia
SWAp	Sector-Wide Approach (to development assistance)
WPRO	WHO Regional Office for the Western Pacific
TBA	Traditional Birth Attendant
TQM	Total Quality Management

Acknowledgements

Executive summary

To address problems in the health workforce, many developing countries have devised human resources for health (HRH) policies and plans. Yet, substantial gaps exist between the policies and their implementation. As a result, many countries still face significant HRH imbalances, and a range of HRH problems make it difficult to achieve other reforms in the health sector. What can policy makers do to become more effective in solving HRH problems?

Both the causes and the solutions to human resource problems in the health sector are complex. The problems are rooted in political, economic, cultural, and health systems. The solutions depend on numerous inputs – funds, education and training Programmemes, data and working conditions – over which HRH policy makers often lack direct control. In an attempt to simplify this complex set of factors and dynamics, WHO devised a framework for analysing the factors affecting the development and implementation of HRH policies and strategies. It groups them into three categories:

Context, including the political and socioeconomic environment, disease patterns, and the involvement and degree of influence of various stakeholders;

Policies, including macroeconomic policies and government organizational reforms, health sector policies and reforms, and HRH policies themselves;

Support systems, including information, human resources, and financial resources that go into HRH planning and implementation

The relationships between and among the factors are multiple and interconnected. Some may have direct effects on HRH policy development and implementation, while others may operate indirectly through other factors. The hypothesis of this study is that countries that successfully implement HRH policies and, as a result, ameliorate HRH problems are those that: 1) adjust the specific HRH strategies to meet the demands of their country's health sector reforms, the political/macroeconomic context, and government administrative policies; and 2) use policy-making processes that are consultative, "owned by the country", based on sound data, and supported by adequate human and financial resources. In other words, to achieve the right balance (number, type, distribution) in a country's health workforce may also require striking the right balance between context-appropriate strategies (content) and organizational change mechanisms (process). The study's major findings are as follows.

Country HRH problems and policies

Generally, in response to similar HRH problems, similar strategies are being pursued. Strategies to redress distribution and management problems often reflect ideas that were popular at the time they were adopted, while education and training strategies are more consistent across time. Yet, there are variations in solutions chosen by particular groups of countries that relate to different causes of the problems as well as to different economic and political environments. In most countries, the solutions are targeted to the most severe problems and correspond to the priorities of the political or economic situation. In the few countries where HRH policies are not focused on the most pressing HRH problems, there is often divergence between those responsible for HRH planning and policy, and those responsible for HRH management or education.

Context for HRH policy development

Country case studies show that the contents of nearly all the HRH strategies of the 18 countries studied have been adapted to reflect the unique political and economic context, government administrative policies, and national health policies or health reform strategies of each country. There are noticeable patterns in proposed HRH strategies that correspond to the dictates of the political and economic situation. Countries emerging from, or prone to, frequent crises tend to take a short- or medium-term planning perspective. Those with greater stability take on long-term HRH strategies, which also require more resources. Some least developed countries are in the latter group, though the financial feasibility or sustainability of their strategies depend more on donor support.

HRH Policy-making processes

The HRH policy formulation analytic framework suggests that, in addition to the content, aspects of the *process* are critical to adoption and implementation of HRH policies. Four components of the process have been identified as influential: 1) consultation with key stakeholders, 2) ownership by the country, rather than being donor-driven, 3) based on sound data, and 4) supported by adequate human and financial resources. Most of the study countries recognized the importance of these four key process components, but some appeared to be more effective than others in using them, or in applying particular ones. Despite developing specific plans to implement HRH policies, few countries have regular systems in place to monitor progress and problems to ensure policies are *appropriately* implemented and regularly reviewed.

Assessment of HRH policy implementation and impacts

Indicators of progress vary widely across countries, making it difficult to accurately compare relative progress. Thus, only a rough measurement tool could be devised to assess each country's progress in ameliorating the key HRH problems identified by each country. The major factors contributing to the success so far of some countries in solving HRH problems appear to be:

- Securing sufficient financial resources

- Obtaining high-level political endorsement of HRH policy and strategies, and

- Effective use of the four HRH policy development processes (listed above).

Implications and lessons for developing countries

Country experiences in trying to apply the WHO framework, though it is somewhat complex, demonstrate that it can be a useful tool for improving HRH policy formulation (Egger and Adams, 1999). To be more effective in solving human resource problems, some specific lessons can be drawn from country experiences and from the study analysis on the keys to effective HRH policy development and implementation:

Political/economic context. The political and economic context determines the feasibility of various HRH strategies and the potential to implement them. Two countries showed that despite adapting their HRH strategies to the overall country context and following a sound HRH policy development process, the outbreak of civil

war wcan be a major setback to the best-conceived plans. As such catastrophes are not always predictable, their experience shows that it is advisable to develop a set of short-, medium-and long-term plans that can be quickly adjusted to changing political and economic circumstances, as well as to public health or health system needs. In such situations, health service or human resource management training, often a feature of current health sector reforms, must teach skills in managing the process of change itself.

Government policies and health sector reforms. There has been very little information on how HRH policies and strategies relate to types of government and health sector reforms. *HRH policies and strategies must be adapted to the specific design of government and health sector reforms.* And the converse is equally true. *To be effective, government administrative and health sector reforms must genuinely fulfill the legitimate needs of health workers.*

Data, monitoring, and evaluation. Continuous data collection is important for several purposes – understanding the changing political and economic environment, assessing emerging health needs and health system issues, and monitoring changes in health personnel supply and distribution. Sudden changes in any of them may indicate a need to modify HRH strategies. This is important due to the long time lapse before HRH policies, especially those involving education and training, take effect. It is also important given the high cost of health professions' education and training programmes, and the economic opportunity costs to those who enter the health professions. These factors underscore the need for *a regular HRH policy implementation monitoring and evaluation system.* Such a system needs to: i) keep the 'big picture' in mind while looking closely at specific issues, ii) translate policies into measurable objectives, detailed plans, and intermediate outputs and indicators, iii) share its results with relevant actors to solicit views on needed changes in policy, and iv) be designed prior to policy implementation so that data collection and review mechanisms can be put in place at the start.

Ownership. In countries that depend heavily on external aid, HRH policies may be driven by donor agencies and consultants. But if HRH policy directions and strategies do not reflect the views of those in the country, it will be very difficult to stick to priorities and fulfill objectives. "Owning" a policy often requires building national capacity to assess needs and agree on solutions. This can take longer, but experience suggests it will result in more sustainable change. It also requires that external donors' inputs are consistent with national policies. This may not be easy, particularly if the policies focus on items involving recurrent spending such as staff pay or benefits. Donor coordination efforts (roundtables, SWAps) may not be able to solve this problem entirely, but they can help find solutions that meet everyone's needs.

Consultation with stakeholders. Ownership, in turn, appears to require a critical mass of supporters for HRH policies and strategies within and throughout each country. To secure this support key actors must be involved in the HRH policy formulation process and consensus among them forged on the chosen strategies. Which groups of stakeholders should be involved? That depends on the types of HRH policies under consideration. There may be important sub-groupings, e.g. publicly versus privately employed health professionals, various ethnic or religious groups, and different groups within civil society, whose views must be taken into account and fairly represented.

Actors may have different interests at different stages of the policy formulation process, so their input and reactions must be continuously sought. New actors should be included as additional policies are considered. And as HRH issues are intersectoral, other sectors must be consulted and negotiated with, especially ministries of finance and education, the civil service, and officials at regional and district levels.

Strong HRH leadership. The last key to effective HRH policy development and implementation is highly skilled, dynamic, and committed HRH leaders. It is not easy to separate this factor from the others, as strong HRH leaders put substantial effort into the factors critical to HRH policy development and implementation – generating and using sound data, consulting with, and achieving consensus among, a broad group of stakeholders, coordinating donor contributions and securing needed financial resources for policies actually to be implemented. Strong HRH leaders are also those who form close linkages with policy makers and planners at all levels, and can obtain high-level political endorsement and support for the HRH strategies chosen. In other words, an HRH department on its own cannot do much without strong teamwork with the central ministry of health and other key constituencies. And while external assistance can be very important in filling gaps in *technical* skills or knowledge, it cannot substitute for HRH leaders with skills in managing change.

1. Introduction

Numerous guidelines and methodological approaches have been developed for human resources for health (HRH) policy development and planning, including computerized personnel files and budgets and simulation and scenario construction models for decision-making. One such guide was completed nearly 20 years ago (Hornby, 1980) and several appeared during the 1990s (WHO, 1990; Rovere, 1993; WHO/SEARO, 1994; Chindawatana et al., 1995; Hall, 1995; Martineau and Martinez, 1997). Yet, while many countries have developed HRH policies and plans using these methods, substantial gaps exist between them and their implementation. Indeed, many countries still face significant HRH imbalances, and a range of HRH problems make it difficult to achieve other reforms in the health sector.

What explains the gap between HRH policy development and implementation? Frequently, the failure to address HRH problems is blamed on the lack of a favourable economic environment and real political commitment in countries. However, another explanation may lie with the HRH policy formulation and strategy development _process_ itself. In health care reform generally, the reform process and problems in implementing reforms have been neglected compared with discussion of its content (Cassels, 1995 and Walt and Gilson, 1994). Similarly with HRH reform, most of the attention has been given to the _content_ of HRH plans, with less concern for the _process_ of change. For example, the limited success of HRH planning in the past was attributed by one observer to "weak linkages with the many units and interest groups that need to be involved in the planning process, [and the failure to] take into account the many and often conflicting viewpoints of those affected by the plan." (Hall, 1998)

This study was undertaken to empirically test the hypothesis that countries would be more likely to succeed in implementing HRH policies if they: 1) adjusted HRH strategies to meet the demands of health sector reforms, the political/macroeconomic context, and government policies, and 2) used policy-making processes that were consultative ("owned by the country"), used data effectively, and provided the requisite financial and human resources,. In other words, achieving the right balance (number, type, distribution) in a country's health workforce may also require striking the right balance between context-appropriate strategies (content) and organizational change mechanisms (process). To use a health care analogy, policies that adjust the type and amount of a drug to the patient's unique physiology, and work in partnership with the patient, the family and the community to solve the underlying causes of the illness, should lead to a quicker and more complete recovery.

1.1 Analytic framework

To test this hypothesis, HRH policy development and implementation was systematically examined and analysed in 18 countries. _Annex A_ contains a description of the study methodology. A conceptual framework for analysing the determinants of HRH policy formulation and implementation was used, based on WHO's experience and involvement in HRH policy development in developing countries. This experience has shown that both the causes of health workforce problems and their solutions are multidimensional. Thus, the framework divides the domains of influence into three major sets, as shown in _Figure 1_:

Human resources development policy formulation:
A framework for analysis

| **Context** | → | **Policies** | ← | **Support systems** |

Overall environment
 • Political
 • Socioeconomic
 • Demographic
 • Epidemiologic
 • New Technology

MAJOR REFORMS
 • Civil service
 • Decentralization
 • Privatization
 • Institutional reorganization

MAJOR PLAYERS
 • Government
 • Civil society
 • Prof. assoc. & trade unions
 • Private sector
 • Donors

Government programme
 • Macroeconomic and financial policies
 • Changes in priorities: productive and social sectors

HEALTH POLICY
 • Health sector reforms
 • Changes in priorities and strategies

HRD POLICY & PLANNING
 • Content
 • Formulation process

Information
 • Assessment tools
 • Nat'l health mgt info system
 • HRH database & payroll
 • Performance monitoring

HUMAN RESOURCES
 • National capacities, including institutional strengthening
 • Technical assistance

FINANCIAL RESOURCES
 • Mechanisms for allocation
 • Mgt systems & payment
 • Incentives

WHO, Health Systems, 1998

Context, including the political and socioeconomic environment, disease patterns, and the involvement and degree of influence of various stakeholders;

Policies, including macroeconomic policies and government organizational reforms, health sector policies and reforms, and HRH policies themselves;

Support systems, including information, human resources and financial resources that go into HRH planning and implementation.

The relationships between each component within each factor and their individual or cumulative effects on HRH policy *implementation* are complex and highly interconnected. Many may have indirect effects, and their influence is mediated through other factors and dynamics. This makes it difficult to isolate the precise impact of any one of the factors on HRH policy implementation. Furthermore, quantitative data on each set of factors is not available in many cases. As a result, this study does not analyse the relative importance of each factor through quantitative methods. Instead, a qualitative research approach has been used to better understand *how* each set of factors influence HRH policy and its implementation. These are examined in the remainder of this report, divided according to the study's four major questions:

Part 2: What are each country's HRH problems and proposed solutions, and are they consistent?

Part 3: *What is the political, economic, government administrative policy, and health care reform context in each country and how, and to what extent, have HRH policies been adjusted to that context?*

Part 4: *What are the HRH policy-making processes used by each country? To what extent do they use or generate sound data, are consultative, owned by the country, and supported with adequate financial and human resources?*

Part 5: *How do the overall context, HRH policy content, and HRH policy-making processes affect progress in implementation of HRH strategies, or contribute to the resolution of HRH problems? What do country experiences in the use of the HRH policy making framework suggest that might help to achieve the right balance in the health care workforce?*

2.   Country HRH problems and policies

Overview*:   What are countries' HRH problems and proposed solutions and are they consistent?* Generally, in response to similar HRH problems, similar strategies are being pursued. Strategies to redress distribution and management problems often reflect ideas that were popular at the time they were adopted, while education and training strategies are more consistent across time. Yet, there are variations in solutions chosen by particular groups of countries that relate to different causes of the problems as well as different economic and political environments. In most countries, the solutions are targeted to the most severe problems and correspond to the priorities of the political or economic situation. In the few countries where HRH policies are not focused on the most pressing HRH problems, there is often divergence between those responsible for HRH planning and policy, and those responsible for HRH management or education.

2.1   HRH problems

Imbalances in human resources for health are commonly divided into three categories: a) *Imbalances in overall numbers*, meaning differences between the number of health care providers of various categories and the numbers a country or community needs (and can afford), b) *Imbalances in skills or skill-mix*, meaning a mismatch between the type or level of training and the skills required by the health system, and c) *Imbalances in distribution*, meaning a mismatch in the geographical, occupational, public/private, institutional, or specialty mix (Adams and Hirschfeld, 1998). Common underlying problems that contribute to these imbalances are inadequate pay, benefits, or other incentives, as well as poor management of health personnel employed in the public sector. Because the country case studies dwelt heavily on these problems, they are treated as a separate category (Public Sector Personnel Compensation and Management) in the following discussion of cross-country trends and themes.

Nearly all countries cited HRH problems in all four areas, as summarized in Table B-1 in Annex B. Only **Costa Rica** did not cite any major numeric imbalances, training-job skills mismatch or distributional problems perhaps because it has had over 20 years of uninterrupted investment in the health sector and HRH development. However, it is not exempt from a range of management problems in the public sector workforce and uncoordinated or inadequate continuing education programmes. Even **Chile**, the wealthiest country in the group, cited a backlog of problems when a democratic administration assumed control of the country in 1990 following more than a decade of underinvestment in health and social services.

Numerical imbalances. Most countries reported varying degrees of shortages of qualified health personnel, though it is difficult to categorize the severity of the problem (Box 1 explains why). Country ratios of doctors and nurses to population (Box 2) show that some countries, particularly in the African and Asian regions, appear to have more severe personnel shortages. But the cause of these shortages is different among the two subsets of countries. The African countries have both limited training capacity and very low pay for health workers, causing both production and retention problems. In Asia, the problem is often a distributional imbalance, as some of the countries have much higher ratios of health professionals to population in urban areas and very low or none in many rural areas. For example, **Philippines** officials claim that they have an oversupply of nurses and doctors, which their ratios do not indicate.

Instead, the problem appears to be an oversupply of *graduates* from nursing and medical schools, many of whom are unwilling to work in rural areas and, as a result, emigrate to countries where the pay and work conditions are more attractive. Varying causes require different solutions: in Africa, there is often more emphasis on training and education, and in the Philippines, it is on redistribution strategies.

Box 1. *Is there a "right" number?*

> There is no absolute norm regarding the "right" ratio of physicians or nurses to population. This depends on 1) demand factors, e.g. demographic and epidemiological trends, service use patterns, and macroeconomic conditions; 2) supply factors, such as labour market trends, funds to pay salaries, health professions education capacity, licensing and other entry barriers; 3) factors affecting productivity, e.g. technology, financial incentives, staff mix, and management flexibility in resource deployment, and 4) priority allocated to prevention, treatment, and rehabilitation in national health policies. Generally, shortages or oversupply are assessed based on comparisons with countries in the same region or at the same level of development.

Oversupply is a problem elsewhere, though the basis for this judgment varies. In some countries, oversupply is based on an objective assessment of population or health system needs (e.g. **Chile**, **Jamaica**). **Lithuania**, **Kazakhstan** and **Kyrgyzstan** are also oversupplied with specialist physicians due to the legacy of the Russian health care model which was "overmedicalized, hospital-based, physician-centred, and specialist-oriented". (*Lithuania case study*) But sometimes, oversupply is defined in relation to available government posts, e.g. nurses in **Myanmar** and the **Philippines,** and paramedical staff in **Fiji.**

Box 2. *Physicians and nurses per 100,000 population in study countries*

	MDs/10,000	Nurses/10,000
Angola	NA	NA
Botswana	2.7 (1997, EIU)	26.4 (1997, EIU)
Guinea	1.5 (1993)	0.3 (1993)
Guinea-Bissau	1.8 (1994)	4.5 (1994)
Chile	11.0 (1997, PAHO)	4.7 (1997, PAHO)
Costa Rica	14.0 (1997, PAHO)	10.9 (1997, PAHO)
Jamaica	14.0 (1997, PAHO)	6.5 (1997, PAHO)
Jordan	16.6 (1997, EMRO)	29.6 (1997, EMRO)
Oman	13.3 (1998, EMRO)	32.5 (1998, EMRO)
Kazakhstan	33.0 (1997, EURO)	89.0 (1997, EURO)
Kyrgyzstan	30.0 (1997, EURO)	78.0 (1997, EURO)
Lithuania	39.0 (1997, EURO)	109.0 (1997, EURO)
Indonesia	1.6 (1994, SEARO)	5.0 (1994, SEARO)
Myanmar	2.9 (1995, SEARO)	4.3 (1995, SEARO)
Sri Lanka	3.8 (1997, SEARO)	7.5 (1997, SEARO)
Cambodia	1.2 (1995, WPRO)	4.2 (1995, WPRO)
Fiji	3.8 (1994, WPRO)	21.5 (1994, WPRO)
Philippines	11.8 (1992, WPRO)	43.7 (1992, WPRO)

Sources: World Health Organization, WHOSIS, and WHO regional offices - NA=not available
[Ratios are not directly comparable due to inclusion of various personnel in above categories]

Skill/skill-mix imbalances. Regarding the composition or skills of the workforce, the case studies indicate that several countries have an underqualified health workforce – that is, those whose jobs require a certain level of skill(s) for which they do not have adequate training. In some cases, that is due to a shortage or low educational standards

of training facilities and educators themselves, as in some of the African countries and in **Cambodia**. In **Guinea**, it appeared to be due to a lack of specialists who could provide anything other than basic treatment. In **Oman**, in-country nurse education rogrammes cannot provide training in post-basic skills, and in **Indonesia**, doctors and midwives contracted to work in remote areas need "on-the-job training" to deliver appropriate services.

Several countries noted a mismatch between the skills of health workers and the needs of the health care system, as in the case of too many narrowly specialized doctors and a shortage of general practitioners in **Kazakhstan, Kyrgyzstan,** and **Lithuania**. **Chile, Jamaica** and **Philippines** have found that their workforces do not have sufficient public health or community-based health skills to fulfill the goals of a more preventive-oriented health system. **Indonesia** and **Sri Lanka** reported a lack of enough health professionals who can treat the diseases of the epidemiological transition – chronic diseases, disabilities, and emerging diseases. A low nurse/doctor ratio was cited as a problem in **Jordan**, contributing to inefficient use of resources in the system.

Distributional imbalances. Almost all the countries examined have shortages in rural areas, except those countries that are relatively small geographically (e.g. Fiji, Jamaica, Lithuania). Providers tend to concentrate in urban areas. Many of **Indonesia**'s most remote islands lack any trained health personnel despite decades of a policy that required public service assignments of one to five years after post-graduation (the policy was modified in 1992). In **Cambodia,** only 13% of the government health workers are based in rural areas, even though that is where 85% of the population resides. In **Angola,** 85% of all health professionals work in urban areas, though just 35% of the population lives there. But, this ratio may have changed as renewed fighting has resulted in urban centres being flooded with displaced persons. **Jordan** has a 3:1 difference in doctor:population ratios between the capital, Amman, and many rural governorates. **Chile** noted that most specialists are located in the capital, Santiago, and are concentrated in the private sector.

Public Sector Personnel Compensation and Management. With just one exception, all of the case studies discussed problems confronting the public sector health workforce, which contribute to many of the problems already discussed. Topping the list is inadequate pay and benefits, followed closely by poor working conditions that range from work in conflict zones, to inadequate facilities, equipment and essential drugs, and lack of basic amenities (electricity, clean water, schools). As a result, recruitment and retention of health personnel in public sector facilities remains difficult in most countries, which contributes to both numerical and distributional imbalances.

Personnel management problems rank next on the list of concerns in this area. From the perspective of workers, the lack of job descriptions, poor supervision, and lack of involvement in decision-making are sources of morale problems and grievances. In addition, the lack of continuing education opportunities or incentives to acquire new skills contribute to imbalances in skill-mix, especially in countries undergoing epidemiological transitions or major health system reform. In the **Philippines** and **Costa Rica**, staff grievances are the direct result of health reforms that transferred staff from central to local governments, or from the ministry of health to the social security system, respectively. Differences in pay and benefits, management capabilities or styles, and status have all contributed to dissatisfaction on the part of public sector health workers.

Another perspective is that of policy makers, payers, and top-level managers, who express problems with public sector personnel compensation and management somewhat differently. They believe that their Ministries of Health lack people, especially at the provincial and district level, with basic financial and human resource management skills (**Angola, Guinea-Bissau, Jordan)**, or the capacity to improve quality and efficiency (**Jamaica)**. Some also complain of the lack of provider incentives to assure or raise quality (**Jordan, Kyrgyzstan**), or believe that health workers are resistant to change (**Lithuania)**, or demand that improvements in performance be linked to higher pay and benefits (**Chile)**. These differences in how the problem is defined can lead to different solutions, as discussed later.

Very closely related to the problems of low compensation and inadequate personnel management in the public sector is the growing incidence of both formal and informal (not officially sanctioned) private sector practice to supplement income. This is an issue for nearly every country. In some countries, nearly all publicly-employed doctors see private paying patients in addition to their regular jobs. Some health workers, and many MOH officials, might see this as a solution to problems of low pay and poor working conditions. But experiences in many countries shows this can lead to diverting scarce resources from the public sector and can cause some health professionals to leave public service to work full-time in private practice. It may also add considerably to the cost of health care. In **Kazakhstan**, informal payments to providers of medicines are estimated to add 30% to total national health-care spending (Ensor and Savelyeva, 1998). Problems also arise from recruitment of expatriates, which is a strategy employed by many countries to fill available posts. In **Fiji** and **Oman** there is some competition and resentment between expatriates and national staff.

2.2   HRH policies and strategies

The policy directions pursued by the 18 countries may be divided into three major categories: 1) *Rational utilization*, 2) *Rational production*; and 3) *Public Sector Personnel Compensation and Management Strategies*. A complete summary of the strategies is found in Table B-2 in Annex B. Sound HRH policy development and strategic planning are also critical to the resolution of HRH problems; but as such strategies are regarded as part of the HRH policy-making *process*, they are discussed in Part 4.

Rational Utilization. Policies in this category seek to make more efficient use of available personnel, through geographic redistribution, the use of multiskilled personnel, and closer matching of skills to functions.

To address the severe shortage of health professionals in rural, isolated or peripheral areas, four types of strategies have been pursued: 1) An older strategy, reflecting human resources development (HRD) trends in the 1970s, involved training low-level health workers *en masse* to provide basic preventive and curative services in rural areas. This strategy is still in use. For example, health "promoters" in **Angola**, and voluntary health assistants and traditional birth attendants (TBAs) in **Myanmar** often serve as the only care providers in some areas. Similarly, during the 1970s, **Jamaica** introduced community health aides, while the **Philippines** made a concerted effort to train 200 000 *barangay* health workers for underserved areas. 2) More recently, several countries decided to set up or expand training of certain health professionals to substitute for doctors in underserved areas. For instance, **Botswana** is training more nurse-

practitioners and pharmacists to offset the lack of doctors. 3) Foreign health workers continue to be recruited in some countries, such as **Fiji** and **Oman,** to fill critical gaps and as an interim strategy until these countries can produce sufficient numbers of national professionals over the long term. **Botswana** also regarded recruitment of foreign health workers as an interim strategy until it could establish its own medical school, although it has since put aside the latter goal for the time being. 4) Finally, a fourth strategy provides monetary and other incentives to health professionals located in rural areas, or requires a period of mandatory service in underserved areas by new graduates. **Oman** is trying to make it more attractive for health professionals to serve outside the capital by improving rural health service infrastructure and devising more rational staffing norms for upgraded facilities. **Chile** improved incentives for doctors to locate in rural areas and started a similar rogramme for nurses in 1997. The **Philippines** has several nationally-coordinated deployment programmes, the newest one being a "doctors for the *barrios*" (neighbourhood) programme, which offers higher salaries as a central feature.

Mandatory service is still widely used but it is undergoing some changes. **Kyrgyzstan** dropped a policy that required practice in rural areas for three years after medical school graduation, but this is being reconsidered. **Indonesia** modified its mandatory service requirement to a programme that establishes contracts with doctors and nurse-midwives serving in rural areas for a period of three years. Contracted professionals receive higher pay than they would working in urban areas or as civil servants, although public service remains a prerequisite for obtaining a licence to practice. The change came after the government imposed a freeze on new civil service hiring, so that it could no longer promise health professionals who completed their service obligation further training or a promotion, much less a permanent position.[1] **Oman** still has mandatory service for new medical graduates and **Myanmar** requires all doctors entering private practice to spend three years in public service, part of that time in rural areas.

Rational Production. Policies in this category seek to ensure that the number and types of health personnel produced are consistent with the needs of the country. Most of the strategies involve education and training. In many countries, the focus is on medical schools. Only two countries limited the number of new entrants to medical schools, but for different reasons. **Guinea-Bissau** did so to redirect resources to more critically-needed health professionals (see Box 3), while **Lithuania** did so to redress the oversupply of specialist-physicians. Other countries focused on changing admissions policy, curricula, or post-graduate residency requirements, often to respond to the need for general/family practitioners. **Oman, Kazakhstan**, **Kyrgyzstan**, and **Sri Lanka** have, or are, starting to set up post-graduate family practice internship and residency programmes.[2] **Cambodia**, **Indonesia**, and **Kyrgyzstan** are upgrading basic and continuing education standards while **Kazakhstan** and **Lithuania** are also trying to bring medical education standards up to par with those of European countries, which is important to the former's attempt to become an EU member. They are also adding

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[1] **Costa Rica** has also introduced private contracts with physicians, though it is pointed out that this gives managers flexibility rather having to refrain from increasing the public workforce.

[2] In addition to family-oriented obstetrics and pediatrics, **Fiji** Medical School added anesthesiology and surgical post-graduate programmes and also intends to add community health shortly. These specialties may be necessary as Fiji supplies doctors to many other Pacific Island countries.

courses to the basic medical curriculum or providing continuing education in economics, public health/epidemiology, computer technology, and financial management to equip doctors for new roles in prevention, managing capitation payments, or converting to group or private practice.

The emphasis or scope of education and training for nurses and other health professionals varies widely across the 18 countries, depending on previous skill levels, education institutional deficiencies, or specific health system needs of each country. **Oman** has established health professional training institutes for nurses, laboratory technicians, assistant pharmacists, and health educators, placed them around the country rather than just the capital, and gradually increased enrolments. **Jamaica** and **Kazakhstan** have created new Schools of Public Health to meet the demand for professionals with epidemiology, statistics, management, and health education skills. **Chile** has provided in-service training to a sizeable share of public sector workers in numerous clinical areas, while **Costa Rica** has emphasized management training. **Fiji, Indonesia**, and **Philippines** have strengthened or expanded nurse-practitioner, nurse-midwife, or other mid-level practitioner training.

Box 3. Changes to medical school admissions and education standards are very controversial

Guinea-Bissau decided to suspend new enrollments to its medical school in order to redirect resources to a new National School of Health, which integrates training for doctors with that for paramedical staff, especially midwives. Only a united effort by donors, who made this a condition for loans or grants, was able to overcome opposition by some medical professionals. In **Guinea**, students at Conakry University staged a protest following "a controversial decision by the dean of the faculty of medicine to allow certain students who had failed to achieve the required grades to progress to higher courses while others were forced to resit their examinations. " (EIU) Protests also followed a decision by the **Cambodian** government to switch to competency-based grading and graduation.

Public Sector Personnel Compensation and Management Strategies. Policies and strategies in this third category are designed to improve the productivity and motivation of public sector health care personnel. About a third of the study countries are investing in management training locally or abroad. To address the most serious problem among public sector workers – that of inadequate pay and benefits – the majority of countries in this study have sought to improve compensation packages and working conditions. In addition (or instead), many countries are instituting other types of incentives to recruit and retain personnel, such as providing staff accommodation or establishing career/promotion structures to improve staff motivation. However, these changes are costly and are difficult for many countries to afford in light of constrained government budgets and growing costs of other critical health system inputs, such as drugs, equipment and facility improvements. Donors, while they recognize the importance of health worker pay raises, are less keen to support such recurrent costs though there are some exceptions (e.g. donors pay the salaries of reform implementation staff and staff of new health professions' associations in **Kyrgyzstan**).

But, the public demand for more or higher quality care, which requires qualified personnel, and pressure from public sector unions, are usually strong motivating forces to raise health worker compensation. Indeed, over two-thirds of the 18 countries studied increased pay or benefits as a key strategy for resolving personnel shortages or improving the quality of care provided in the public sector. Many of these countries, particularly those whose policy makers are inclined towards the "managers'"

perspective, discussed earlier (e.g. **Chile** and **Kyrgyzstan**), reflect management trends in the 1990s, by insisting that such raises be linked to performance improvements,. Among the countries that did not mention plans to increase health worker pay or benefits across the board, several (**Botswana, Indonesia,** and **Sri Lanka**) intend to implement incentive systems that base individuals' pay increases or bonuses on performance indicators.

Two different approaches to performance-based compensation benefits are reflected in the countries examined. One involves publicly-employed health workers whose salaries are determined by civil service law and labour negotiations. Within this context, MOH performance-linked bonuses are established. In **Chile**, the government annually negotiates with unions over salary increases for all civil servants; raises are based on forecast price inflation and the country's productivity. In addition, a law has been passed permitting MOH to pay a bonus to 30% of central-level officials who obtain the "best grading" during the past year, based on efficiency and quality targets for services provided to users. For regional and municipal-level workers, the MOH human resources division is developing tools to allow local health service authorities to assess staff performance. But, implementation is uncertain as the proposal has been the basis of worker strikes, and a similar bonus proposed for doctors, dentists and pharmacists faces opposition in Parliament.

A second model of performance-based incentives involves requirements set by a public or private purchaser. **Costa Rica**'s system of management commitments between the social security system and MOH provider units defines the criteria by which incentives are awarded, which include some health outcome indicators and patient satisfaction measures. Providers who use less than their allocated budget or exceed a pre-defined "production unit" target can access an incentive fund. **Jordan**'s health reform plan envisions a split between purchasers (MOH for primary care, and a new "national curative organization" for all others) and both public and private providers. Provider payment incentives would link budgetary allocations to performance criteria, comparable across providers.

Only a few countries have developed explicit strategies to prevent a "brain drain" from the public to the private sector. **Myanmar** recently introduced medical education courses leading to a Doctorate in Medical Sciences; as an incentive to remain in public service only those with at least two years of government service can apply. **Sri Lanka** reported that it recently relaxed rules in order to allow publicly-employed doctors to engage in private practice on a limited basis.

2.3   Correlation between problems and priority strategies

Most of the 18 countries demonstrated substantial congruity between the major problems and the solutions devised. In many cases, the priority needs were strongly influenced by the overall economic and political context. While this is discussed in greater detail in Section 3, a few examples are instructive here. Countries in post-conflict situations, for example, whose health infrastructure was in disarray, focused on immediate needs of basic training, re-establishment of educational programmes, and systems for paying workers (see Box 4). Countries in the former Soviet Union, who inherited an excess of specialist physicians ill-suited to treating social causes of disease (e.g. tobacco and alcohol use), were more concerned with reorienting health

professionals to primary care. It is difficult to generalize about the four African and six Asian countries, which have the most severe shortages of trained health professionals, because the causes of their health workforce problems and their political and economic situations are so diverse. The next part of the paper identifies some patterns in the way each of them have adapted HRH solutions to their unique political and economic contexts.

There were some countries with an apparent inconsistency between the most critical HRH problems and the strategies chosen. For example, in **Guinea**, two most critical problems are poor, uneven distribution of health professionals across regions and facilities, and staff morale problems due to very low salaries relative to the cost of living. But the strategies receiving the most attention are those related to in-service training of staff, and efforts to coordinate MOH plans with those of other departments that conduct training and employ civil service staff. The latter ultimately might help resolve some problems, but not as rapidly as more focused strategies. **Costa Rica**'s health sector reform plan recognized the lack of clear policies, standards and procedures for the management of human resources but did not go on to develop them. Instead "management commitments" were designed to improve worker productivity and more short-term personnel contracts were offered rather than permanent employment, both of which contributed to even greater grievances on the part of public sector employees. **Sri Lanka**'s HRH strategies are heavily biased towards medical education and staff training while doing little to redress distributional imbalances. **Myanmar** cited shortages of trained health workers in rural areas and low salaries leading to doctors to move to the private sector. Yet no policies have been introduced related to pay, benefits, or other incentives that would encourage workers to remain in the public sector or in remote regions.

Box 4. Post-conflict HRH priorities

In **Angola** and **Cambodia** which experienced extended periods of war and internal political instability, the paramount problem in the post-conflict period was the tremendous loss or dislocation of trained medical personnel. In the aftermath of war, these countries' major priorities were to: 1) determine how many health professionals there were, of what type and training level, and their location; 2) provide emergency training to health professionals to compensate for years without practice, 3) reorganize basic medical and health professions education programmes and set educational standards, and 4) assure that health workers receive adequate pay and benefits. From 1980 to 1991 in Cambodia, strategies focused on training large numbers of workers in knowledge-based curative medicine to meet the needs of an undernourished, disease-prone population. From 1991, despite many urgent needs, it could begin to focus on longer-term human resource development.

One feature common to these four countries is that those responsible for HRH policy and planning are divided from those that have responsibility for HRH management, or from those with control over educational institutions. At the same time, there does not appear to be any organization or mechanism that has been able to resolve the differences in priorities between needs and solutions. Clearly, this makes coherent planning more difficult. Other countries also have separation in these functions (e.g. Chile, Indonesia); but as discussed in Part 4, they have bodies that can resolve the differences or other strengths that seem to compensate for these weaknesses.

3. Context for HRH policy development

Overview: *What is the political, economic, government administrative policy, and health care reform context in each country, and how do HRH policies reflect that context?* The country case studies show that nearly all of the 18 countries' HRH strategies have been adapted to reflect the unique political and economic context, government administrative policies, and national health policies or health reform strategies of each country. There are noticeable patterns in proposed HRH strategies that correspond to the dictates of the political and economic situation. Countries emerging from, or prone to, frequent crises tend to take a short- or medium-term planning perspective. Those with greater stability take on long-term HRH strategies, which require more resources. Some least developed countries are in the latter group, though the financial feasibility or sustainability of their strategies depends more on donor support.

3.1 Political and economic context

The political and economic environments in which HRH policies are developed vary considerably, as summarized in Table B-3 in Annex B. Political environments range from extremely unstable (e.g. frequent changes in government by military coup, or civil war) to generally stable, in which changes in government occur through mostly democratic processes. Most countries studied are operating under moderate or severe economic constraints, which place limits on public spending. The 1997 GNP per capita was less than US$500 in several countries, though in two it exceeded US$5 000. Economic changes range from total disruption or major shifts (e.g. a switch from a centrally-planned to a market economy, economic recession and large budget cuts) to moderate shifts (e.g. trade liberalization, privatization, budget restraint).

These different degrees of political and economic change appear to determine whether HRH planning and proposed strategies can realistically take a short-, medium- or long-term perspective and are financially feasible and sustainable. Figure 2 divides the 18 countries into categories, defined by average income, and three levels of political/economic change – extreme, major, and moderate/minor.

Figure 2. Political/Economic Groupings of Study Countries

	Poor/Least developed countries		Middle-income developing countries	
Extreme: Ongoing political instability/economic disruption	Angola Cambodia	(I)		
Major: significant political	Guinea Guinea-Bissau* Kyrgyzstan	(II)	Indonesia* Kazakhstan Lithuania	(III)
Moderate: political or economic *shifts*			Botswana Chile* Costa Rica Fiji* Jamaica	Jordan Oman Philippines Sri Lanka (IV)

* After their case study was submitted, Guinea-Bissau experienced a year-long civil war. During this case study, Indonesia experienced a serious economic and political crisis; Chile (1990) and Fiji (1987) both went through major political changes, but political stability was quickly restored and their current HRH plans and strategies were developed in that context.

Group I countries – **Angola** and **Cambodia** – have had continuing political and economic instability with very low economic development. They are highly dependent on external resources; the contribution of donor participation to the national health budget can exceed 80% for both investment and recurrent costs. In this context, short-term HRH strategies developed in conjunction with, and acceptable to, external donors would seem to be more realistic. In fact, both countries have involved donors through formal coordination mechanisms and individual negotiations. But political instability can disrupt the process again; as **Cambodia** showed, after a 1997 coup, when most foreign aid ceased, HRH policy implementation was interrupted. **Angola**'s HRH plan adopted the same time frames as the overall government development plan: emergency phase, transition period, and return to sustainable socioeconomic development. The strategies of the emergency and transition phases, which emphasize improvements in work conditions, pay and benefits, as well as management training, seek to create the minimum conditions to allow the MOH to more fully develop HRH when political stability returns.

Group II countries have had somewhat greater political stability but huge economic upheavals with very low economic development. Thus, they could move beyond short-term planning, while still being very dependent on external aid. In **Guinea-Bissau,** HRH policies combined: 1) short-term efforts to reform salary grades, increase pay and living conditions for health workers and halt new enrolments to the medical school to redirect resources to a new National School of Health and midwifery training, and 2) medium-term strategies to establish regional HRH plans and projections using a decentralized database coordinated with the central MOH. Donors were not critical of the decision to stop medical school enrollments, thereby enabling the Minister of Health to implement it, despite strong opposition from some in the medical profession. In **Kyrgyzstan**, the emphasis of HRH strategies on increasing pay, upgrading health personnel skills, and retraining specialist physicians towards family practice is consistent with recent Presidential statements highlighting the importance of high quality education and health services. Given the government's severe budget constraints, it might seem unrealistic for the MOH to be able to improve public sector health workers' salaries. However, with donor this might be possible. Pay increases are planned to be linked to improved provider performance and changes in provider reimbursement methods – both supported by external donors.

Group III countries have somewhat more resources to work with than those in the first two groups, but have suffered large economic shocks that continue to make the macroeconomic environment unstable. Such conditions favour flexible HRH plans in which strategies that require greater investment can be easily switched to those requiring less. **Indonesia**'s HRH strategies before the 1997 economic crisis focused on redistribution of health workers to remote areas and strengthening of health professional education programmes. These were consistent with the political concerns of the time, namely the start of decentralization to provinces and districts and greater equity across regions. But the 1997 economic crisis reduced operating budgets making such strategies more difficult to implement, while increasing the need to improve efficiency and staff productivity. Thus, other HRH strategies were emphasized, such as management training and greater "professionalism" in the delivery of high quality care. **Lithuania**'s economy of the early 1990s made it difficult to afford to retrain large numbers of specialists but recent economic improvements have provided additional resources to make this possible.

Box 5. Net exporters/importers of health workers:two sides of the coin

Two countries demonstrate the importance to the overall economy of being a net importer or a net exporter of health workers. **Oman** seeks to reduce its reliance on foreign nationals. The study author notes, "Omanization is not just a slogan. It is a political and economic necessity in view of (i) the burgeoning growth in the production of secondary and general university graduates consequent to the priority assigned to education, and (ii) the need to plough back domestic savings for domestic investment to yield macroeconomic growth in the non-oil sectors of the economy, as emphasized in state economic plans and budget proposals." Plus, the fewer non-nationals, the more personal income will be spent in Oman rather than sent outside the country. The **Philippines** represents the other side of the coin. It has had great success as a net exporter of well-trained health professionals. The government's commitment to the production of globally competitive Filipino human resources, and its emphasis on producing "marketable" health professionals benefits the country because Filipino workers send back their earnings to the country. The study author says this provides much needed dollars for their families and the economy. But, he notes, this policy of global competitiveness, compromises efforts to respond to the country's own health care needs. See Adams and Kinnon, 1998, for further discussion of this issue.

Group IV countries, which include half of the 18 study countries, have political and economic environments that are more conducive to long-term HRH planning, and strategies that are financially ambitious or can be sustained with national resources. There are significant national income differences in this group, with Botswana, Chile, Costa Rica, Fiji and Oman having a GNP per capita of over US$2 000 while it is below this level in the other four. Those in the upper income group, in general, have set their goals high. **Botswana** has tried to establish its own medical school, though it then shifted its attention to ensuring more funds for nationals sent abroad for training. **Oman**'s long-term goal is to nationalize its health workforce (along with the rest of its professionals), by gradually replacing foreign expatriate workers with Omani nationals (see Box 5). Both **Chile** and **Costa Rica** attach importance to focusing on greater efficiency and quality via management changes, given the growing demands of their more educated, higher-income, and aging populations. (See Table B-4 in Annex B for key human development indicators in all 18 study countries). **Fiji** is also very conscious of its role as a regional training centre and thus tends to focus its strategies on its medical school. The four countries with a GNP per capita below US$2 000 show higher proportions of external aid in their total GNP although their HRH policies are not substantially different in content or emphasis than those in the higher income levels (see Box 5 regarding the **Philippines**, for example).

3.2   National policies and government administrative reforms

While the political and economic context is important to HRH policy development and its implementation, there is often a more direct relationship between specific government policies (macroeconomic, budgetary, administrative, etc.) and HRH strategies. In **Botswana**, HRH strategies were considered so important that they were integrated into national economic and social development plans.

It is more common, however, for government policies to influence HRH strategies. For example, in **Costa Rica**, the economic structural adjustment programme undertaken in the mid-1990s emphasized greater government operating efficiency. Thus, government spending had to be restrained leading to budget cuts in 1998 and proposed health budget cuts for 1999. For public sector health workers, this translated into a freeze on vacant posts, downsizing of the workforce, less equipment and drugs, and

more patients per employee. It also led to two key HRH strategies: performance monitoring via management commitments between CCSS (the social security system) and health provider units, and short-term personnel contracts, rather permanent positions, for civil servants. While both these attempts have been opposed by labour unions, the latter is a growing trend throughout Latin America among professionals and technicians in many sectors (ECLAC, 1999). These HRH strategies also reflect a shift in Costa Rica's government policies, which show a preference for private sector management strategies to increase efficiency.

Civil service reforms of this type, common in many of the study countries, are pushing HRH policies to respond. For example, **Indonesia** adopted a "zero-growth" civil service policy in the early-1990s. This led to a change in policy from mandatory service for new health/medical school graduates to a contract system for doctors and nurses who work in remote areas for higher salaries. After the typical 3-year contract period, the government is not obligated to hire or promote these workers, which helps to achieve the "no-growth" policy.[3] Civil service reforms in 1996 required a reduction in the workforce in **Guinea-Bissau** and put a ceiling on total salary costs. Thus, health workers' salary scales could be modified in 1997, but only up to a limit. In other countries, government civil service reforms were introduced after HRH policies were developed, requiring retroactive adjustments. In **Fiji,** civil service reforms will give the MOH direct control over placement, hiring, firing of public sector health personnel from Public Service Commission, to be followed by a competency-based performance management programme. In 1998, the MOH in **Cambodia** was chosen to be a pilot for the National Administrative Reform Programme, and has required cuts in the public workforce among other changes. This may facilitate development of staff performance monitoring tied to incentives, which figured prominently in previous HRH plans.

Decentralization, which reallocates intergovernmental powers between central, regional and local governments also has enormous implications for HRH policy and strategies. While the **Philippines** tried to assure the same level of pay and benefits to health workers transferred from central to local government, it was not entirely successful, and led to major HRH problems (see Box 6). **Jamaica**'s HRH plan, which recommended increases in health personnel with management skills, explicitly noted the importance of recruiting staff who can manage in the now-decentralized health system.

3.3   National health policy and health sector reforms

Various changes in scale and direction are occurring in the health sector of every country. The extent and type of changes all have direct or indirect impacts on the need for health care workers and the capacity of the system to educate, train and effectively employ them. The 18 case studies show that most HRH policies and strategies have been adapted to fit in with the priorities of national health policies and the directions of health sector reforms. But in many countries, policies still fail to take adequate account of the implications of health sector reforms for the health workforce.

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[3] This system was modified in 1996. Doctors in very remote regions were given a 90% chance of obtaining a civil service appointment (and eligibility for subsidized specialist training), those in remote regions, a 50% chance, and those in 'ordinary' rural areas, a 10% chance.

Box 6. *Philippines: decentralization and health workers clash*

After Ferdinand Marcos was removed from office in 1986, civil liberties were restored, political prisoners were released, and a new constitution was drawn up by a convention appointed by Corazon Aquino, the new President. One of the most important political reforms that followed was the Local Government Code of 1991, which devolved responsibility and power to local government. Initial sectors for this transfer were agriculture, social welfare, environment and health.

In 1993, local government units (LGUs) rather than the central Department of Health became responsible for planning, budgeting and providing local health services. Related finances, personnel and assets were transferred to municipal (for primary care and preventive services) and provincial governments (most hospitals). Thus, 46,000 DOH staff out of 75,000 total were transferred to LGUs.

Among the most difficult issues in the changeover were personnel and salary problems. Some LGU officials resisted due to worry about the increased costs to their budgets implied by the salary and benefits due to workers under the 1992 "Magna Carta" law. In fact, many workers did not receive the pay they should have, despite the national government's allocation of more money to LGUs. Surveys on the effects of change during the first three years revealed high proportions of demoralized health workers. The Barangay Health Workers Benefits and Incentives Act of 1995 also provided a package of training, accreditation, benefits and pay incentives, but because underfinanced LGUs had to pay for most of these benefits, many workers have not received them.

Due to frustration with slow or non-implementation of salary supplements due to health workers transferred to LGUs, there are reports that some lab and radiology health workers have joined the ranks of doctors, most of whom also see private-paying patients to augment their income. Unions and local government executives campaigned to suspend or reverse DOH decentralization. These bills have been defeated in the national legislature due to strong political support for decentralization overall. But ongoing health worker issues remain a threat to full implementation.

National health policies, when they exist, nearly always mention the importance of producing sufficient numbers of appropriately trained personnel and assuring their productivity. But these are often general statements. In several countries – **Fiji, Guinea-Bissau, Jamaica, Kyrgyzstan, Lithuania, and Oman** – HRH strategies are regarded as so central to the achievement of health system objectives that they are built into annual or five-year national health plans, or health reform initiatives. In other countries, HRH policy and strategy development occurred prior to national health plans or key health sector reforms, as in **Angola** and the **Philippines**, which seems to make it more difficult to harmonize the two later on. A discussion of the relationship between key health reform themes and HRH strategies follows.

Management/organizational reforms*.* Reforms in this category include: 1) reorganizing national ministries of health to reduce their responsibility for direct service provision in order to strengthen their overall policy, regulatory, and oversight roles; 2) giving public hospitals more autonomy to manage their financial and human resources; and 3) efforts to reallocate public health budgets across regions to make spending more equitable, or to different types and levels of care to make it more efficient.[4]

Costa Rica's reforms have shifted responsibility for direct health services from the Ministry of Health to the social security system to allow the MOH to focus on policy and system oversight. HRH strategies emphasizing management training, performance monitoring, and short-term contracts, rather than permanent employment, are consistent with the for the health reforms to improve efficiency and quality. But many

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[4] Decentralization of responsibility to local governments for health services is also an important reform in this category. Because it is often part of government-wide reform, it is included in the last section.

former MOH workers feel they lost the status and respect they had in their communities after their transfer, and health workers in general fear that the focus on productivity compromises motivation and commitment to patients. In neglecting the "human side" of HRH policies, health reform objectives may be more difficult to achieve.

One of **Guinea-Bissau**'s health reform initiatives involves making hospitals more autonomous and allowing them to make contracts with the private sector for non-medical support services. While this has the potential to reduce the size of the public workforce, it was planned that savings from contracting out would be used to increase salaries of those that remained working in the public hospitals. Health reforms in **Jamaica** and **Lithuania** have increased resources for disease prevention and health promotion. Both countries have used this to justify a redirection of HRH training resources towards public health courses and principles. In some *oblasts* (districts) in **Kazakhstan**, the share of the government's health budget allocated to primary care nearly tripled in anticipation of new provider payment methods that would steer funds to groups of primary care physicians. **Cambodia** HRH strategies to train health centre-level workers to deliver a minimum package of services directly flow from a new MOH coverage plan, which funds local health centres to deliver services in a defined package. The new health coverage plan, along with defined staffing levels for each type of health facility, now permits more accurate health workforce planning. None the less, delays in starting the staff training have become the major bottleneck in health sector reform implementation. This underscores the importance of making HRH strategy *implementation* a higher priority.

Financing reforms. A second category of health sector reforms relates to health financing sources, such as user fees, special taxes earmarked for health, community-based pooling of funds, social health insurance schemes, or private health insurance. These are in addition to general revenues from taxes and external aid – often the primary sources of *public* financing in developing countries. In many developing countries, private household spending is a major share of total health spending (Berman, 1997).

Of the four countries where health reforms include the expansion of public health insurance coverage (**Kazakhstan** and **Philippines**) or propose to do so (**Jamaica** and **Kyrgyzstan**), there was no discussion about how an expected increase in demand for insurance coverage for health services might affect system human resource capacity. Since expanded coverage will be phased in slowly and benefits will be limited, this may not be a major concern. Private health insurance coverage (via private entities known as ISAPREs) has grown steadily in **Chile** over the last 10 to 15 years, due to tax incentives to enroll in them. As a result, demand for private services rose substantially exacerbating public sector staff retention problems.

More common are changes in user fee policy. If user fees can be retained by health facilities, and are applied towards health worker salary increases, services may improve. On the other hand, the system of user fees, "may be undermined by health workers and managers if it interferes with informal income generating activities such as unsanctioned charges and private practice, or demands increased accountability." (McPake, 1996). The case studies offer examples of fees being allocated for salary supplements (e.g. **Cambodia, Indonesia, Kyrgyzstan**). Cambodia planned to devote

most user fee revenue to pay higher salaries in return for curbs on private practice and on charging informal fees. While some studies show subsequent improvements in quality and patient satisfaction (Gani, 1996), it is not clear whether they resulted from staff incentives or simultaneous changes in hospital/facility management.

Provider payment, contracting, and regulatory reforms. A third major category of health reform strategies is that relating to changes in the way public or private providers are reimbursed, in contracts between public purchasers and private providers, and in regulations governing private practice. Several *oblasts* in **Kazakhstan** and **Kyrgyzstan** have begun to reimburse primary care physicians using capitation payment. **Kyrgyzstan** started in 1998 on a pilot basis; if the physician groups can provide required services for less than the capitation amount, they can keep the difference. About a third of the funds reimbursed by the health isurance fund can be used to supplement staff salaries and the rest must be spent to improve drug supplies and equipment. In **Kazakhstan**, family group practices (FGPs) under contract with a government health services purchasing entity can also retain the savings derived from efficiency gains and use them to reinvest in their practice or pay salary bonuses to staff.[5] As non-governmental organizations, FGPs also have more freedom to reorganize their staffing patterns. This contrasts with **Chile**, where public hospital managers have little authority to adjust staff salaries, despite pressure to cut costs imposed by case-based diagnostic related group (DRG) payments, which began in 1996.

Fiji's MOH recently began contracting with private physicians to deliver outpatient care, while allowing public doctors to practice in the private sector (while on leave from the government), both of which help to accommodate public demand for care in the hospital outpatient setting while satisfying public doctors' demands for higher earnings. A pilot project, tested in **Cambodia**'s health sector reform project, involved contracting for management services from NGOs and other private-sector groups for public health facilities or contracting out the operation of an entire district's health facilities to a private group.

Priority health problems/targets. The fourth category of health reform strategies includes those that seek to reduce the incidence of particular diseases, conditions or health problems. Key health status indicators are shown in Table B-5 in Annex B. **Indonesia**'s high maternal mortality rate (650 per 100 000 live births in 1990) was a key justification for a massive midwife training programme. **Botswana,** with 25% of its adult population living with AIDS/HIV (one of the highest rates in the world), and 60% of medical and paediatric wards filled with AIDS/HIV patients, did not mention the need to train more health educators or personal care attendants, or to train health professionals to provide the most appropriate and cost-effective care to such patients. However, in 1999 the Minister of Health announced increased funding for a home-based care programme, adding that "more health personnel, including retired health workers, would be mobilized this year to assist in the programme." (*Botswana Daily News*, Government of Botswana, 7 May 1999).

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[5] As noted earlier, if informal payments to providers are as high as estimates suggest, with some physicians obtaining 80% or more of their total income from such payments, then the new formal payment methods will have little effect on provider behaviour (Ensor and Savelyeva, 1998).

4.   HRH policy-making processes

Overview: *What are the HRH policy-making processes used by each country? To what extent are they based on sound data, consultative, owned by the country, and supported with adequate financial and human resources?* The HRH policy formulation analytic framework suggests that in addition to the content, various aspects of the process are critical to the adoption and implementation of HRH policies. Most of the study countries recognized the importance of the four key process components, but some appeared to be stronger than others in using them, or in applying particular ones. Despite developing specific plans to implement HRH policies, few countries have regular systems in place to monitor progress and problems to ensure policies are appropriately implemented.

To understand *how* HRH policies and strategies were developed, four key process elements are reviewed: 1) *Based on Sound Data* – using information about needs and feasible solutions; 2) *Ownership* – determined by national interests and reflecting national priorities; 3) *Consultative* – efforts to involve and accommodate the interests of all affected stakeholders; and 4) *Supported by needed human/financial resources* – backed by adequate funds and led by capable people. Examples for each country in these components are summarized in Table B-6 in Annex B. This section also discusses the extent to which HRH action plans and monitoring systems were developed to guide policy implementation.

4.1   Based on sound data

The data needed to develop sound HRH projections and policies can be extensive, ranging from demographic and epidemiologic trends, service utilization, and macroeconomic conditions that affect demand, to labour market trends, funds to pay staff salaries, licensing requirements, training capacity and other factors affecting supply, as well as factors affecting productivity, such as reimbursement incentives and use of technology. This implies that sources of data must be equally wide-ranging. Yet, HRH planners do not always have all the data they need to make accurate projections. Solutions include soliciting a wide range of subjective assessments on needs, compensating for the lack of hard data and major efforts to collect key information.

 In countries where, for different reasons, no reliable data was available on HRH, the first step was to undertake an inventory of the workforce The inventory of the Ministry of Health in **Guinea-Bissau**, for example, counted 2 310 health workers, compared to about 3 000 shown on the payroll of the Ministry of Finance; the 700 "ghost" workers were subsequently removed from the payroll. **Cambodia**'s 1993 survey of health workers, conducted with WHO assistance, provided data on the composition and size of the workforce, work locations, and perceived problems. The results revealed a workforce that was poorly distributed, had widely differing competencies, was largely unregistered, and had inadequate supplies and poor work environments. The results were used to develop responsive HRH policies in 1993 and were later incorporated into a MOH Health Policy and Strategy.

Botswana's HRH planning framework takes into account a very broad set of factors in its model for forecasting staffing needs. But the way the data is used is equally important (see Box 7). Its experience demonstrates the importance of sharing data with a broad range of stakeholders, and helping others within the MOH and other ministries

to use it as well. **Oman**'s experience suggests that having policy makers involved at the start helps to ensure use of data for policy development and implementation. There, the Minister of Health identifies the need for major studies on key aspects of HRH and health systems, reviews the findings, and provides feedback to HRH planners and key HRH/health service administrators. For example, a study on hospital-level HRH needs used workload indicators to develop a model for hospital manpower planning. This led to a MOH policy that manpower requirements be based on this approach instead of on the previous policy of sanctioning staff on an ad-hoc basis, or based on demands by regional hospital administrators. Another example of data-influencing policy comes from the **Philippines**, where the "doctors to the *barrios*" programme was a direct response to the data on the number of municipalities without doctors. Information gathered by the Task Force that examined the problem also led to several other policy recommendations in a proposed HRH Plan.

Box 7. Botswana links health workforce data to planning and budgeting

In 1994, the Botswana MOH began to develop a HRH database containing quantitative and qualitative data (e.g. demographics, education and training, and place and type of employment) on nurses and midwives. It also developed a model for calculating staffing norms for all health facilities in the country. MOH staff then made sure that they shared the data widely (e.g. with the Botswana Nursing Council) and trained others on how to make use of it for policy, planning, and management purposes. They trained regional managers to use the staff forecasting models and modify them to reflect regional HRH and population needs. MOH staff also used the data as a starting point for coordinated national workforce planning efforts with other agencies and ministries, such as the Department of Local Government which employs health workers in local regions. County officials admit there are still problems with poor quality data and that they spend a great deal of time getting the correct staffing information for each facility or district. But the process helps to gain acceptance of the resulting human resource projections. MOH is now using the HRH data for improved annual budget forecasts and for use in the five-year National Development Plans.

4.2   Ownership

Clearly, the economic situation and lack of resources in many poor countries requires that they rely on external donors to fund major investments in HRH development and policy. But, experience suggests that development policies will not be sustainable if the process is not initiated by the country. As two prominent development leaders noted, "Countries themselves, not donor agencies or foreign experts, must be in the driver's seat. Even when a general [development] framework is broadly accepted, particular strategies have to be discussed and developed at the national level. Only then will development be broadly based and broadly owned." (Amartya Sen & James D. Wolfensohn, *International Herald Tribune*, 5 May 1999).

But it is not always easy for donors to refrain from navigating or driving on different tracks. Cambodia's experience shows that too many donors continue to steer funds towards their own agendas and priorities. To address this problem, the MOH, with assistance from WHO, developed a donor coordinating committee (CoCom), which has helped to ensure that all donors are kept up to date on MOH policies and plans, and that most donors subscribe to them. Angola also instituted an Interministerial Aid Coordination Committee and set up public-private committees at both central and provincial levels to define priorities, select strategies, maintain dialogue with donors, and help match donors' interests with programme goals. But if donors are not willing

to fund country priorities, then donor coordination by itself does not necessarily solve the problem (see Box 8).

With sufficient technical assistance, staff development and support, the MOH and other country officials have become more adept at managing donor inputs into HRH policies. For example, in Guinea-Bissau in the early 1990s, donor support for HRH was limited to education and training, focused on narrow disease-oriented or other vertical programmes, and was generally uncoordinated. This called for concerted efforts to strategically manage donor support. With WHO assistance, MOH officials conducted an extensive donor consultation process involving: 1) two national seminars with over 60 participants to reach consensus on key HRH problems and priorities; 2) development of a short-term plan of action to resolve the most urgent salary and personnel management problems; and 3) incorporating the plan into the National Health Plan budget which was presented to donors. The process resulted in full donor support for the plan and agreements to fund specific components, even though some vested interests still opposed some key components.

Box 8. Cambodia struggles to hold donors in line

In Cambodia, "There has been and continues to be a very ad hoc/emergency approach to HRH. There has been a total underestimation [by donors] of the effect of genocide and isolation on the training of health workers and a consequent lack of understanding of the length of time required to train health workers. Very few donors are willing to support long-term basic training for health workers. For example, while there are major problems with midwifery training, in a country that has one of the highest maternal mortality rates in the world, donors continue ad hoc emergency training courses. [Donors] subscribe to a National Safe Motherhood Plan, but over the past 6 years have been unwilling to give realistic financial and technical support to restructuring midwifery training." [Cambodia case study report.]

4.3 Consultation with stakeholders

Ensuring that donors do not drive HRH policy content or process requires that a national consensus be formed among a broad range of groups, which actively participate in making decisions about priorities and strategies. Donors are only one group among many organizations, in and out of government, with a stake in HRH development. Many of these groups have tremendous political influence, or more impact on HRH policy implementation than donors.

Which of the various stakeholders to involve, and how, depends on the structure and composition of a country's health, financing, and political systems. In **Botswana**, for example, where the public sector provides at least 80% of all services and finances over 90% of all health care, it has been critical to involve the health care leadership of all major public institutions at the national and local levels. In developing its latest National HRH Plan, Botswana held numerous "bottom-up" workshops with more than 600 health facility managers, chief clinicians, allied health personnel, district health administrators, and malaria programme staff. This was followed by a workshop with all of the teaching institutions and the Ministry of Education to develop strategies to fill the gap between national HRH demand and supply. **Angola** also used an extensive consultative process to develop HRH policies, involving provincial workshops, a national consensus conference, as well as one-on-one and joint meetings with various interest groups to resolve differences among them. Because Angola had strong trade unions and a well-developed private sector (professional associations, NGOs,

community-based and religious organizations, and private practitioners), more meetings were held with private groups than in neighbouring Botswana.

The most important government agencies that HRH officials must work with are the ministry of finance, the ministry responsible for civil service personnel and the ministry responsible for higher education. In many cases, these ministries can "make" or "break" the potential to implement even the most carefully developed HRH plan. In several other countries, such as **Botswana, Fiji,** and **Indonesia**, MOH links were established very early in the process with the Ministries of Finance and Planning, Education, and Public Service. These linkages facilitated the development of HRH strategies within the countries' broader macroeconomic (e.g., civil service constraints, changing institutional responsibilities) frameworks. In **Guinea-Bissau**, donors' support for the HRH plan engendered wider political support such that the country's Finance Minister promised donors that health and social sector staff salaries would be protected. Consultation between the MOH and Finance Ministry in **Chile** also ensured that health budget cuts in 1998 did not affect salaries.

In **Guinea**, staffing norms developed for the HRH deployment plan have not yet been implemented due to lack of coordination between the Department of Health (DOH) and the Ministries of Finance and Planning, Labour and Civil Service, and Education. Staff was recently recruited to mediate among these agencies. But in the **Philippines**, when a new Commission on Higher Education (CHED) was created to be responsible for tertiary education, HRH officials actively sought participation from its health sciences education section in HRH planning. As a result, CHED was the first government agency to adopt the HRH policy recommendations and entered into an agreement with the DOH to implement some priority programmes. Similarly, a controversy over post-graduate medical residency programmes in **Oman** was resolved through negotiations at the highest level of MOH and Ministry of Higher Education officials.

Close working relationships among MOH officials responsible for HRH planning and those responsible for overall health sector planning are also key. This should go without saying, except that in many of the case studies, the development of closer links between the two was cited as a challenge that had not yet been overcome (e.g. **Indonesia**), or as a significant accomplishment, if achieved (e.g. **Cambodia**).

In some developing countries, the stakeholders that should be involved in policy discussions have no organized group (e.g. association) to represent their interests. Because of this, **Kazakhstan** and **Kyrgyzstan** (with World Bank funds) decided to support the creation of family physician organizations. Over time, both countries would like the professional groups to gradually assume a role in setting and enforcing professional standards, conducting continuing education, and ultimately, joining the policy development process.

Experience in several of the most developed countries, however, warns that it can be very difficult to manage input from professional associations, which often wield their influence in ways that contradict sound national HRH policy making. For instance, **Sri Lanka** has made tremendous investments in medical school training, in order to increase the supply of doctors over the past several decades. There are now 800 students admitted annually to the country's medical schools, with another 100 to 150

Sri Lankan doctors trained outside the country and returning annually. Due to limits on government resources, however, there is a high unemployment rate among doctors and dentists. Yet, due to political influence of professional associations and trade unions, "the Ministry of Higher Education wants to increase the intake of medical and dental students [and] the Government is contemplating opening two more universities which may have medical faculties." (Sri Lanka case study). In **Lithuania**, despite broad consensus and endorsement by Parliament for reorienting the health system towards primary care, societies of medical specialists continue to resist change, although post-graduate training schemes have helped to reduce some of the opposition.

Chile has also had to deal with powerful interest groups, but it has done so with relative success. For example, the government proposed to train and use more optometric technicians in order to meet a high demand for affordable eye care services. Medically-trained ophthalmologists opposed the proposal. But through discussions with all stakeholders – ophthalmologists, optometric technicians, insurance companies, universities, parliamentary representatives, and consumers – they were able to strike an agreement. It allows for a 4-year trial period for optometric technicians to expand their scope of practice while medical schools take in more ophthalmologist for training, and general practitioners are trained to improve diagnostic skills.

It should be obvious that health workers themselves are among the most important groups to involve in HRH policy development. The Philippines' experience with decentralization reinforces this lesson. The **Costa Rica** case study also shows insufficient health worker participation in development of health policies and reforms, and is cited as a major cause of public sector staff problems in adapting to the reforms. Involving them in discussions alone is clearly not enough; policy changes must use their input and reflect their legitimate concerns. **Chile** has begun to involve health workers in making decisions about projects that will improve their working environments.

While it is common to involve other government agencies and organized professional associations, and trade unions, it is less common for HRH policy planners to consult civil society representatives, who may be crucial to policy implementation. **Indonesia**'s case highlights this point. When the contractual midwife programme was developed, which offered more pay for work in remote or very remote areas, policy makers hoped to reduce the very high maternal mortality rate by placing at least one trained midwife in each of the 66 000 villages throughout the country. Following implementation of the policy, by 1997, about 95% of all villages had at least one midwife and each village had a maternal and child health (MCH) clinic. But the programme encountered substantial opposition. TBAs felt their livelihood and community status were threatened. Local doctors believed their income was threatened. And in some cases, pregnant women did not trust the mostly young nurses from outside their community. This suggests that the policy might have been better received had it taken into account the concerns and interests of TBAs, local doctors and rural women.

4.4   Financial/human resources support

Country ownership and broad participation cannot occur without leadership from within the country, and in many cases that requires two essential ingredients: 1) knowledgeable and skilled individuals having responsibility for HRH policy development, and 2) adequate financial resources to support policy development and implementation. A third important ingredient is when outside technical assistance is required, that assistance should be of high quality, have continuity in personnel, and be coordinated if coming from multiple sources.

Indeed, in most countries, the role of technical assistance in strengthening human resources has been very important. Kyrgyzstan's experiences demonstrate that frequent and ongoing interaction between external partners and country officials responsible for HRH policy, as well as a regular system for monitoring progress, can elevate the priority of HRH issues within the country's overall health reform plan (see Box 9). Central MOH officials in the Philippines have very good human and financial resources to develop HRH plans. But they have found that as decentralization hands over more control for human resources planning, and management to local government units (LGUs), these units have both less technical capacity to develop appropriate HRH management systems, and less financial capability to ensure that health workers receive the full pay and benefits to which they are legally entitled by federal law.

Box 9. HRH technical assistance in Kyrgyzstan: country-led, WHO-supported

In 1994, WHO/EURO was invited to become a partner in the development implementation of a national health care reform program (called MANAS) in Kyrgyzstan and as part of that, to contribute technical expertise in human resources development. While country policy makers recognized their need for strengthened management capacity, the country team itself identified the key areas for technical assistance, based on country priorities. WHO's technical advice and training in HRH planning/management tools has been provided to MANAS team members, to MOH staff, to regional health officials, and to NGOs. Regular visits were made by a WHO team, during which human resource issues were discussed with a broad spectrum of national stakeholders and international donors (World Bank, USAID, UNDP, UNICEF, and several bi-lateral donors). At each visit, workshops and seminars also were held to strengthen knowledge in HRH development and management. Follow-up visits are made by WHO every six months to help the country team review progress and identify strategies for improvement.

Where staff with the necessary skills exists, but in short supply, the process can take longer. Botswana's experience in developing the nurse/midwife management information system (MIS) and an accurate staffing projection model, which took several years to develop and implement nationally, shows that the time was well spent. HRH officials believe that the process ensured "the development of HRH planning skills at the local level (within all health facilities), and not only within the Health Manpower Planning Division at the Ministry."

The experiences of several countries also highlight the importance of regional networking and support. For example, Jamaica's focus on HRH issues gained strength after a special meeting among Ministers responsible for health in the Caribbean in 1997, which emphasized the importance of HRH development. Fiji's development of post-graduate training programmes for doctors in child health and obstetrics, of a nurse-practitioner training programme, and overall expansion of capacity were guided by

recommendations of the 1995 Yanuca Island Declaration by the Pacific Island Health Ministers. Both Kazakhstan and Kyrgyzstan have participated in the Central Asian Republics Network for Health Care Financing and Management (CARNET), under WHO/EURO auspices, which examined human resource issues as part of efforts to increase countries' capacity to manage health system change.

4.5   HRH policy implementation plans

As noted, most of the countries have HRH policies, often as part of an overall national health policy. But to be implemented, policies require concrete operational or action plans that specify how they are to be achieved, clearly defined objectives, targets and steps needed to achieve them, and a timetable for their completion. They also requires a regular system for monitoring implementation progress and problems and for evaluating advances towards the objectives.

In a number of other countries, the HRH policies have been translated into a work plan with clearly defined objectives, strategies and expected results, with a time-frame and resources attached to them (e.g. **Chile, Guinea-Bissau**). And many have established policy review mechanisms, such as annual or biannual reviews; public hearings/fora; and, round table discussions by key stakeholders. The structures for these review mechanisms include policy level task forces, internal coordination meetings and inter-ministerial (intersectoral) coordination meetings. However, despite the existence of these mechanisms, there is often no process devised for readjustment of the policy or the implementation plan. Only a few countries reported having a regular monitoring and evaluation system based on performance indicators. The lack of such systems often makes it hard to assess progress, as discussed in the next section.

5. Assessment of HRH policy implementation and impacts

Overview: *How do the overall context, HRH policy content, and HRH policy-making processes affect progress in implementation of HRH strategies, or contribute to the resolution of HRH problems? What do country experiences in using the HRH policy making framework suggest that might help to achieve the right balance in the health care workforce?* Indicators of progress vary widely across countries, making it difficult to accurately compare relative progress. Thus, only a rough measurement tool could be devised to assess each country's progress in ameliorating the key HRH problems identified by each country. Countries which have shown the greatest success so far in solving HRH were those that were able to: a) secure sufficient financial resources, b) obtain high-level political endorsement of HRH policies and strategies, and c) make effective use of HRH policy development processes.

Accurate assessment of the progress and impact of HRH policy implementation requires a sufficient time lapse after the adoption of a plan or the development of strategies, and their implemention. Thus, only those countries that began the HRH planning process during, or before, 1996 were chosen for this study. However, some strategies require greater time to put into effect or to yield results than others. For instance, education and training strategies take longer to produce significant changes in numerical or qualitative terms, than do financial incentives on distributional problems. Given the different emphases of country strategies, it is, therefore, difficult to directly compare progress in their implementation. Furthermore, indicators of progress and impact varied so much across the countries that a valid cross-country comparison could not be performed.

Thus, this section summarizes the types of indicators that study countries use to monitor and evaluate their HRH policy implementation efforts. Such examples may help to identify those aspects that could be measured in a more rigorous cross-country comparative study in the future. It then uses a rough measurement tool to assess the degree of progress *against each country's identified problems.* Based on these results, it discusses possible reasons for variations in implementation progress.

5.1 Indicators of progress in HRH policy implementation

Implementation milestones and indicators reported by countries, summarized in Table B-7 in Annex B, are for the most part process or input measures.[6] In the *rational production* category, countries cited measures, such as: a) the creation, expansion, or upgrading of health professions' educational institutes or programmes, b) changes in curricula or graduation requirements, c) the number of health workers who received formal staff training (clinical and management), d) the number of new graduates produced by new or modified educational programmes (or conversely, the reduction in number of new admissions if the objective was to downsize), and e) changes in governance of health professions' institutions. In the category of *management and worker wages/benefits*, countries cited progress indicators, such as: a) implementation and percentage increase in wages, b) changes in recruitment procedures to make them

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[6] Input measures include facilities, personnel, supplies and funding needed to produce goods or services. Process measures concern the activities carried out.

more objective or competency-based, c) development of staffing norms or workload indicators, d) implementation of performance-based appraisal, pay or bonuses, and, e) introduction of short-term or contract-based hiring practices, rather than permanent employment.

Though improvements in HRH policy development resources were regarded, for purposes of this report, as components of the policy development *process*, many case studies pointed to specific achievements in this area, such as: a) creation of HRH databases, b) use of staff norms in overall MOH planning and budgeting, c) increased HRH staff or financial resources, d) a new HRH department or unit established, and e) formal adoption of a HRH policy statement or plan.

A few countries cited indicators of progress that are output or outcome measures, which means that they reflect changes in access to, or quality of, the health services provided to the population. They include: a) increases in the number of posts filled due to salary increases, b) reduction in the number of people who receive treatment outside the country, c) expanded hours and physician availability, d) reduction in waiting lists for operations and complex interventions, e) reductions in the numbers of communities lacking trained health professionals, f) improved ratios in the distribution of health professionals in urban/rural areas, and g) changes in proportion of attended deliveries.

Only Lithuania cited a change in the physician to population ratio over a seven-year period as a result of reducing the number of admissions to one medical school, but this was probably also affected by physician pay, status, public sector layoffs, and labour market forces (Healy and McKee, 1997). Both Chile and Lithuania cited drops in infant mortality and increases in life expectancy in recent years, but such changes are certainly affected by factors other than health workforce changes. WHO's 1999 report on *Global TB Control* reports that Cambodia – with a high TB burden – had over 50% of its detected cases of TB under treatment and a success rate of over 70%. This suggests that health worker training, and drug supply efforts, are well-targeted. Myanmar also cited health status improvements due to health worker training, but they may be attributable more to concurrent public health strategies.[7]

5.2   Effects of HRH policy making process on progress and impacts

In order to roughly compare[8] the relative degree of progress and impact on the problems in each country, countries were categorized by, 1) those making *some* implementation progress, but having no impact on the problem identified; 2) those making *substantial* implementation progress but having little or no impact on the problem identified, and 3) those making *substantial* implementation progress and having *notable impact* on the problem identified. See Figure 3. (Impact is defined as any reduction in problems identified in the country case study.) Of the 18 countries, two

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[7] Myanmar cited a decline in the incidence of waterborne diseases and in the prevalence of leprosy over a five-year period as attributable to the training of basic health staff **and** "related disease-control efforts." The latter is not explained and it is difficult to know how much of the improvement is attributable to the former.

[8] The results are subject to three important caveats: 1) not all countries responded to a follow-up questionnaire asking for specific indicators of progress, 2) even among those that did respond, the open-ended nature of the question ("Specify key milestones reached or changes in outcomes"), means that some may not have reported progress for particular indicators because they were not specifically requested, and 3) the amount or degree of progress was assessed subjectively since comparable quantitative indicators were generally not provided.

(Angola and Jordan) were not ranked because they reported that their HRH plans were adopted too recently to enable progress assessment.

Figure 3. *Degree of Implementation Progress/Impacts in Study Countries*

1: Some implementation progress; no impact so far		*2: Substancial implementation progress but minor impact*	*3: Substantial implementation progress and notable impact*
Cambodia	Jamaica	Botswana	Chile
Costa Rica	Myanmar	Indonesia	Guinea-Bissau
Fiji		Kazakhstan	Lithuania
Guinea		Kyrgyzstan	Oman
		Philippines	

The ranking of **Chile** and **Oman** in group 3 may reflect their substantially higher GDP per capita relative to the other 14 countries. Clearly, having greater financial resources facilitates implementation of the activities planned without undue influence or interference from donors. The connection between financial resources and implementation progress is evident in the cases of **Cambodia** and **Jamaica**[9], which cited inadequate or shrinking resources in recent years as an impediment to faster or greater implementation progress.

The apparent relationship between financial resources and progress in implementation might be seen as reinforcing the argument that the lack of a favourable economic environment is responsible for the gap between HRH policy development and implementation. *But the effect of income or financial resources is not uniform.* **Guinea-Bissau** and **Kyrgyzstan**, for example, both with very low GDP per capita, were able to achieve substantial progress in implementation.[10] On the other hand, some middle-income countries (**Costa Rica** and **Fiji)** fall into the first group, with only modest progress in implementing their HRH strategies so far. What else could explain the gap between policy and implementation?

One of the hypotheses of this study is that countries that have implemented their HRH strategies are more likely to have adapted the content of those strategies to the political and economic context, government reform policies, as well as health sector reform strategies. Part 3 of this paper, which reviewed how HRH strategies sought to take into account these contextual factors, showed that, with just a few exceptions, country HRH strategies were quite consistent. The relationship can be drawn between each component of the broad context and HRD policy, though it is sometimes indirect. Even in the **Philippines**, where a national law standardized a higher level of pay for workers transferred from central to local governments, the intent of this policy was largely consistent with the national decentralization policy, even though policy makers did not allocate sufficient funds to ensure that the higher salaries were paid.

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[9] Jamaica's HRH policy development process is notable for its careful study of problems and needs, an inclusive strategy development process, consistency with health reform themes, and support from regional and international bodies. But as the case study author notes, "The macroeconomic conditions and severe financial constraints have resulted in unfortunate cuts in budgetary allocations to the MOH."

[10] In Kyrgyzstan, an economic crisis in late 1998 resulted in a 12% cut in the health budget. This may be expected to harm implementation prospects. But, rather than across-the-board program cuts, MOH proposed a plan of selective facility closures, mergers and service reorganization that was hoped to minimize cuts in availability or quality of care. It is not known whether this plan was accepted or what its effects might be (Joseph Kutzin, WHO, personal communication).

The relatively few cases in which the context conflicted with HRH strategies points to the influence of the HRH policy formulation process in determining which plans are more likely to succeed. The four countries that have made the most progress are notable in three ways. First, they have had a comprehensive review of HRH policy and official adoption by a high-level public body within the past few years. In all four cases, the HRH policies have been recently endorsed by their parliaments (**Chile** and **Lithuania**) or by their heads of government (**Guinea-Bissau** and **Oman**). This has lent *strong and visible political support for HRH policies.* Second, there is strong consistency between HRH and national policies. Third, they have made good use of data to guide priorities, conducted highly consultative processes to solicit input, and had strong HRH leadership. That is not to say that they do not encounter problems. In **Chile,** HRH policy makers have little ability to require rural service or determine the number or types of health personnel trained by autonomous educational institutions. But they have effectively used incentives to compensate for these limits. And, **Guinea-Bissau** demonstrates that major armed conflict can do serious damage to the gains made through successful implementation.

By contrast, except for Jamaica and Cambodia where economic constraints have become severe in recent years, those in group 1 – some implementation progress with no impact on problems – have faced three types of problems. One is a mismatch between the most critical HRH problems and the strategies being pursued most vigorously, as in the case of **Costa Rica,**[11] **Guinea, Myanmar,** and **Sri Lanka** discussed in Part 2. In such situations, it is not surprising to find little or no impact on the problems identified. Strong and high-level political support for HRH policies exists in **Sri Lanka**, but it cannot make up for this basic shortcoming. The other three countries have been unable to obtain high-level political approval of their HRH policies. In addition, there are deficiencies in several aspects of their HRH policy development process – weak HRH leadership (sometimes because of divided responsibility for HRH policy, management, and training), inadequate financial or human resources for HRH policy development, insufficient consultation with interest groups, poor use of data, or dominance of external interests.

For example, in **Costa Rica** the lack of a coherent HRH policy was attributed to conflicts between the two agencies responsible for public health workers, as well as inadequate participation of labour unions in drawing up the health sector reform plan. Apparently, the labour unions had been involved initially, but their influence was undermined by a World Bank and Inter-American Development Bank agreement which adopted a more closed, centralized decision-making process. Nor has **Guinea** adequately engaged all interested parties. **Fiji**'s policy development process was conducted with limited consultation with groups outside the MOH (other than the Fiji School of Medicine) while those in charge of HRH planning lack some key qualifications. And **Myanmar** tends to project HRH resource needs based on the budget, rather than on health system needs. This may be economically realistic in light of a relative scarcity of external funds, but it will not solve underlying HRH problems.

Finally, in group 2 countries – those that have made substantial progress but no or little impact on the HRH problems identified as yet – there tend to be more strengths and

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[11] However, as noted in Part 2, compared to most other countries, **Costa Rica's** HRH problems are less severe due to previous success in addressing them.

fewer weaknesses in the use of HRH policy development processes. Both **Botswana** and the **Philippines** have used data for policy analysis, consulted with stakeholders, and used technical assistance without letting donors dominate the agenda. But in addition to problems in paying transferred health workers in the **Philippines,** successive administrations have not accorded high priority to HRH issues.[12] **Kyrgyzstan**'s top health reform officials recognize the importance of HRH issues in implementing health reform, but several key departments have not had strong HRH leadership or capacity (Adams et al., 1999).[13] In **Indonesia** the Ministry of Health's links with other key ministries was a strength that allowed several major HRH policies to be successfully implemented. As a result, there was improved distribution of trained health personnel in remote rural areas and a substantial rise between 1988 and 1995 in the percentage of births attended by midwives. But the failure to coordinate with other parts of the health system has led to less improvement than expected in maternal mortality rates (see Box 10).[14] Moreover, because the policy was not planned with sufficient input from those outside the government, the placing of trained midwives has generated controversy. It suggests that ownership, in addition to being an issue with external donors, is also an internal issue – support for implementation must come from those whom the policy most directly affects.

Box 10. HRH Strategies: Necessary but not Sufficient

> Indonesia engaged in massive training and rural placement of midwives in response to a need to reduce maternal mortality. As most of these midwives were very young and inexperienced, they were often not well accepted in the rural areas by traditional birth attendants, who were supervising most deliveries. The referral systems have also not been well thought out, leaving the midwives without the necessary support system. This has therefore not resulted in the level of reduction of maternal mortality that was expected.

Another issue faced by some countries in the second group is their focus on education and training strategies, as in **Botswana** and **Kazakhstan**. These are appropriate strategies in view of the critical shortage of doctors in Botswana, and an excess of medical specialists in **Kazakhstan**. But by definition, changes in medical education and staff training take many years to yield impacts. A long-term evaluation may show a greater impact from these changes than appears in the short-run.[15]

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[12] This may change with the appointment as MOH Director of a former WHO regional adviser on HRH.

[13] A new chief of MOH's Dept. of Education, Sciences and Human Resources was appointed in April 1999.

[14] In 1988, 65% of all births were attended by traditional birth attendants (TBAs), 31% by midwives and 2.4% by medical doctors. By 1995, the number of births attended by midwives had risen to 55% with a corresponding decrease in those attended by TBAs. Between 1992 and 1995, maternal mortality dropped from 450 per 100 000 live births to 390 in 1995 (Indonesia MOH website). But at that rate of progress, the country will not meet its goal of 225 per 100 000 live births until the year 2010, rather than 2000 as expected.

[15] Lithuania, which also focused on education and training strategies, has had somewhat longer to implement its policies. But it has also been more aggressive than Kazakhstan in limiting medical school enrolments.

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Annex A
Study methodology

Country selection

The countries were selected based on their having recently engaged in some type of HRH planning activity or HRH reform efforts that resulted in a plan, or if not a formal plan, then a set of HRH policies and strategies. This meant that the planning period had to commence in the early or mid-1990s to provide sufficient time to elapse to determine implementation progress by 1997/98, when an assessment was conducted.

An attempt was made to ensure that at least three countries were represented from each WHO region.[16] Five of the countries are classified as least developed countries (LDCs), 10 as "developing countries" (DCs), and three as countries with "economies in transition" (EITs), according to the classification system used by the UN *World Economic and Social Survey 1998.*

Study Countries, by WHO Region and Country Classification

	AFR	AMR	EMR	EUR	SEAR	WPR
LDCs	Angola Guinea Guinea-Bissau				Myanmar	Cambodia
DCs	Botswana	Chile Costa Rica Jamaica	Jordan Oman		Indonesia Sri Lanka	Fiji Philippines
EITS				Kazakhstan Kyrgyzstan Lithuania		

Case studies

In each of the study countries, country investigators knowledgeable about HRH issues were identified to describe HRH plans and policies, and provide information on the political and economic context, and on recent health care reforms. Country investigators were asked to follow a protocol, described under the section on Scope of Work containing specific questions to address in compiling this information. Follow-up questions were sent to request clarification of the information and to seek opinions on the relative contribution of various factors to subsequent implementation success or failure. In addition, representatives from most of the participating countries met in October 1998 to discuss the results of the studies and draw some preliminary lessons from their efforts to use the analytic framework. These are summarized in a separate document (WHO, 1999).

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[16] Egypt was to have been the third country in the Eastern Mediterranean Region, but its case study report was not completed.

Caveats

Some caveats and limitations apply in a study methodology of this type. First, the study countries were not randomly selected, which means that the findings can be generalized for all developing countries. In particular, the selection criterion that of having been recently engaged in HRH planning or HRH reform efforts, means that the findings are based on countries that have already taken this first important step in the HRH policy process. Second, the case study investigators were selected by WHO regional and country offices for their knowledge and familiarity with HRH issues, rather than objectivity or commitment to strictly observe the study protocol. This resulted in level of detail variations of the case studies, the focus of their analysis, and perspective on the HRH policy process, which, to some degree, biases the information on which this report was based.

Scope of work

For the country assessments, a case study and questionnaire approach, building on the work of HQ and the regions, was used. The focus of the individual assessments varied according to the particular situation of each country. In addition to providing country-specific information on the overall context and the health sector, the assessments contributed to defining directions of change, identifying points along the way that constitute progress towards comprehensive approaches for human resource development, and highlighting issues arising in the course of moving towards this approach. In other words, these assessments focused more on process than on final products. The dimensions of human resource development policies are shown below together with a list of questions which will have to be adapted to the individual circumstances of each country. Emphasis was placed on elaboration, especially with regard to Section 2.

1.   Context, stakeholders, negotiation

In this section only information which clearly relates to health and human resource policy development was to be provided, both in a descriptive and analytical way. The links and interaction with health and human resource policy development had to be made explicit. It might, therefore, be useful to give some very concrete examples to better illustrate these different points.

- What key factors influence the direction of the health sector: changes in the political system (democratization, popular participation, elections), macro-economic trends (structural adjustment, growth patterns), political and administrative decentralization, public sector and civil reforms (downsizing the government workforce, restructuring, performance orientation)?

- What other factors (demographic trends and/or epidemiologic changes) influence the direction of the health sector in relation to service delivery?

- What has been the relationship between the ministry of health and relevant central agencies and financing institutions, in particular the ministries of finance, planning, education, public service, and local government?

- How do professional associations (medical/nursing associations, trade unions for health workers) influence policy directions?

- What has been the behaviour of different international and bilateral agencies in supporting the identification of overall national priorities for health development, including human resources, the design and implementation of reforms, and institutional capacity building?

- What are the key issues around which extensive bargaining has taken place?

2.   **Health and human resource policy development, planning and resource allocation**

- When was the last health policy and plan established?

- When was the last policy and strategy for human resource development established?

- If the current health and human resource policies are not the first ones:

  – Why was it necessary to review or formulate a new policy on human resource development?

  – Have there been recent significant changes in the approach to health and human resource policy development, planning and resource allocation, considering both processes?

- What has been the process for formulating the current human resource development policy plan?

- Are there any explicit or implicit links between the policy for human resource development and the overall national health policy, both in terms of contents and processes?

- What are the top priorities for human resource development and how have these been determined and negotiated?

- Do these priorities include a policy/strategy for education and training? If yes, could you specify its content?

- Have there been significant shifts in human resource priorities and are these shifts reflected in the policy documents, as well as in the budgetary/ expenditure programme (as submitted, approved and disbursed by the Treasury or donors)? What are the areas of recent or ongoing major changes of policy content?

- Who has been involved, and at what stages, in priority setting and strategic planning for HRH?

- What difficulties did you encounter in priority setting and strategic planning for HRH?

- What is the role of donors and technical assistance in priority setting and strategic planning for HRH? To what extent are recent developments donor-driven? To what extent are recent developments due to strengthening of your own institutional capacity?

- What have been the major supportive or impeding factors in priority setting and implementation of your HRH strategies?

- What approaches and/or tools have been used in support of policy development?

- Is there a plan to build human resources capacity to support the implementation of the policy?

3. Institutional reforms, organizational structures, regulation

In this section only information which clearly relates to human resource policy and strategy development was to be provided. The implications of institutional reforms for human resource development were to be clearly explained and analysed. It might therefore be useful to give some very concrete examples to illustrate these different points.

- Is there a good fit between existing organizational structures and agreed human resource development policies and strategies?

- Have there been any major institutional reforms in recent years in relation to human resources for health (review of central ministry role and structures, including the HRH Department)? What is the relationship of the central ministry with decentralized levels of institutions (e.g. district health boards, training/ education institutions for health)?

- How significant is the private sector in health, and have there been changes in the public policy toward private sector financing and provision? What is the share between public and private health expenditures? Please describe the relationships between the public and private sector. Are the relations formal or informal?

- What recent developments have taken place with regard to legislation, regulatory mechanisms and incentives to ensure implementation of policies and priorities in the public and private sector in relation to health personnel?

- How have recent institutional reforms affected the effectiveness of health service delivery at all levels of the health system? Please specify in which way effectiveness has been affected.

4. Financial flows

- To what extent does the actual flow of funds (from both domestic and international sources) support the implementation of priorities for human resource development, as set out in policies, plans and budgets?

- Have there been any recent reforms in the financial management system and payment procedures for health personnel?

- Do externally funded projects have separate banking and accounting systems and/or separate management structures?

- How have recent changes in financial flows affected the effectiveness of health service delivery?

- Are there conditional grants/earmarked funds (from donors, local governments) for human resource development activities, including education and training? How are decisions made regarding earmarking?

5. Performance monitoring

- How is progress in HRH policy development and implementation monitored in general (all priority areas mentioned in the policy and/or human resource development strategy)?

- What are the current approaches/recent developments regarding the definition and monitoring of health personnel performance?

- Are existing information systems capable of providing key performance indicators for health personnel at different levels of the system?   Are any changes envisaged in the information systems?

- What is the role of donors and technical assistance in monitoring and evaluating performance?   To what extent are recent developments donor-driven?

6.   Technical assistance and expertise

- What is the percentage of technical assistance in the total health budget (including external aid)?

- How does the health sector currently access expertise from other relevant countries and situations?   What support is provided for reviewing policy options?

- How, by whom and on what basis are needs for technical assistance defined, terms of reference agreed, and technical assistance chosen and assessed?

- Is there any coordination between the suppliers of technical assistance and expertise to avoid duplication and confusion?   Is it needed?

Annex B
Country Tables

Table B-1: Major HRH problems and issues in study countries

	Numerical imbalances	Qualitative imbalances	Distributional imbalances	Public employee pay, benefits, management and training
A F R				
Angola	60% of municipalities lack highly-qualified health professionals	Underqualified technicians at higher levels of care; training does not match needs or is obsolete	85% of all health profs. work in areas where 35% of population lives	Degeneration of work conditions, low pay, low productivity and morale; weak mgt. at provincial/district level
Botswana	Shortages of doctors, dentists and pharmacists, in part due to limited training capacity			Loss of public sector personnel to private sector due to very low salaries for some health workers
Guinea		Mismatch between skills and needs of health programmes; lack of qualified specialists	Poor, uneven distribution across regions and facilities	Lack of job descriptions, career plans and formal in-service training; staff morale, motivation problems, due to low salaries
Guinea-Bissau	Severe shortage of midwives, ratio of doctors to lower-level staff is high	Qualifications of doctors and nurses are low; no nurse training since 1989; CE programmes lack coordination; heavy reliance on expatriates	Difficult to retain health staff in periphery	Very low wages even for Africa, and poor working conditions; weak financial, mgt. skills, poor supervision and training of workers in health posts
A M R				
Chile	Health workforce fell in 1980s due to budget cuts and political dismissals; 1990s: nurse shortages	Insufficient generalists and family MDs (only 25% of all MDs), and imbalances in types of specialists. Health professionals not attentive to patient needs.	Shortages in rural areas, and in urban areas at the primary care level. Poor distribution of specialists between urban and rural areas.	Conflicts between workers' demands for better pay & managers' expectations for improved performance; retention problems in public sector workers, as many leave it for private practice.
Costa Rica				Staff motivation problems due to health care reforms; training programmes fragmented, not matched with staff needs; inadequate pay for some categories of CCSS staff
Jamaica	Shortages in most health professions, esp. nurses (but doctors adequate) due to emigration	Staffing patterns and training programmes not in line with needs of a reform(ing) health system		Managerial inadequacies became more acute in last 10 years; recruiting and retention problems in public sector health workforce; drain on public resources due to private practice by publicly-employed doctors

	Numerical imbalances	Qualitative imbalances	Distributional imbalances	Public employee pay, benefits, management and training
E M R				
Jordan		Nurse:doctor ratio is low, causing inefficiency; training not linked to MOH or system priorities; no coordinated plans for CE, basic training, or professional licensing	Geographic maldistribution of providers, with heaviest concentration in Amman	Low salaries for public sector health workers and lack of incentives to providers to assure or raise quality; MOH management skills inadequate
Oman	Shortages of national *(i.e.Omani)* health personnel due to lack of educational infrastructure	In-country nurse training programmes do not provide post-basic skills; deficiencies in CE and lack of educational facilities in certain fields	Shortages of highly skilled staff in rural areas	Salaries not raised in 10 years; poor staff motivation among Omani staff due to competition with expatriate staff and inadequate opportunity for promotion
E U R				
Kazakhstan	Too many physicians, relative to reduction in state public health budget	Too many specialist physicians		Low salaries and long delays in pay for health workers, poor working conditions and for nurses, low status; growing black market care provided and paid outside public sector
Kyrgyzstan	Oversupply of physicians; loss of other health workers, due to emigration or those who leave to work in other jobs	Too many specialist physicians; for some, low productivity due to low skill levels	Geographic maldistribution, fewer personnel in rural areas	Very low salaries for health workers, and long delays in payments, leading to low morale; lack of incentives to promote greater efficiency and higher quality of care by providers
Lithuania	Oversupply of specialist-physicians, with large proportion who continue to practice after retirement age	Overmedicalized, doctor-centred, specialist-oriented health model		Poor mgt. of health care, along with resistance to change; low pay for medical staff resulting in loss of some physicians from public sector
S E A R				
Indonesia	Inadequate number of doctors, especially specialists, and shortage of particular types of professionals such as nutritionists	Most doctors trained to treat mostly communicable diseases, leaving gaps in those equipped to treat noncommunicable disease, esp. in urban areas.	Health personnel concentrated on Java and other urban areas; many rural islands lack any trained health personnel	Staff salaries are rising as % of total govt health budget; public sector workers performing private practice to detriment of government health centres
Myanmar	Oversupply of nurses relative to available posts; undersupply of midwives	Gap between knowledge and practice due to poor work conditions	Shortage of doctors in rural areas, due to inadequate incentives; shortages of other workers in rural areas	Low salaries for doctors encourages leaving public sector for private practice
Sri Lanka	Oversupply of physicians relative to available posts in the public sector system; shortages of some types of specialized health professionals	Increased need for health staff qualified to treat "epidem. transition" health problems; inadequacies in medical/ health educational institutions	Disparities between urban and rural health worker:pop. ratios, with acute shortage of doctors in rural areas	

	Numerical imbalances	Qualitative imbalances	Distributional imbalances	Public employee pay, benefits, management and training
W P R				
Cambodia	Severe loss of health professionals of all types since 1970s	Lack of appropriate training means 'LTFQ' providers	Only 13% of MOH workforce based on rural areas (despite 85% of pop. residing there)	Very low pay fosters private provision; CE funds not used well; few staff have any mgt training or skills
Fiji	MD shortage due to emigration of trained doctors, and insufficient capacity at Fiji Medical School; unemployed paramedical graduates, due to fewer public sector posts			1994 civil service protest over wages and working conditions; tension over growing number of contracted expatriate doctors; public sector doctors leaving for private practice
Philippines	Oversupply of nurses, leading to unemployment & emigration	Inadequate training of health profs. to work in community settings	Shortages, especially of doctors, in rural areas	Low pay and benefits prior to 1990s, which have been only partially addressed since then; low morale problems & grievances due to decentralization and transfer of staff to local government units

Table B-2: HRH policies and strategies in study countries

	Rational Utilization, e.g. redistribution of health workers, or multipurpose health workers	Rational Production, e.g. medical/health educational development, reform, and initial or continuing education	Public Sector Personnel Compensation and Management Strategies, e.g. management training, rewards and incentives, performance monitoring, and public regulation or contracts with private sector
A F R			
Angola	Use Health "promoters" to serve as major (or only) care providers.		Develop plan for better pay, benefits, work conditions, & supervision. Establish work teams and develop management training.
Botswana	Recruit foreign-trained doctors with relatively higher pay. Train more nurses (e.g. family NPs) and pharmacists to offset lack of doctors.	After plan to establish medical school shelved, train more nationals outside the country. 1997: revise curricula to emphasize PHC skills. Priority to continuing education in NDP 7 (1993-97)	Develop performance mgt. system for all government agencies. Complement with TQM project in MOH facilities and those of local authorities.
Guinea	Personnel development via plans for employment & redeployment (1990).	Improve coordination between MOH & other departments responsible for training/ employment. Establish new MOH training division.	Set up staff incentive plans.
Guinea-Bissau	Develop regional plans and projections for 1998-2002.	Create medical and health technical school. 1997: stop new med. school enrolments to redirect resources to new National School of Health, to integrate basic, post-graduate and in-service training. 1997: develop plan to coordinate CE with supervision.	1997: Reform salary grades (and reduce numbers of health workers), in line with higher qualifications, pay and living conditions. Implement new salary payment system. Attempt to improve management capacity.
A M R			
Chile	1990s: Increase slots for MDs and dentists to serve in rural areas via enhanced incentives. 1997: Begin similar programme for nurses.	Provide extensive in-service training for public sector health workers.	1996: Introduce performance-based financial incentives. 1990s: Large salary increases 1995-96: Regulate working conditions of primary-level health workers in municipalities. Strengthen HR management in NHS.
Costa Rica	Create multifunctional human resource teams for EBAIS.	Shift emphasis of training to general MD practitioners rather than specialists. 1995: Focus on National Training and Education Fund on mgt. training and other selected issues, Coordinated training and education for HRH via CENDEISSS.	Use short-term contracts with personnel rather than permanent employment. Institute performance monitoring via management commitments between CCSS and provider units.
Jamaica	Train and introduce community health aides and NPs (during 1970s).	Create New School of Public Health. Increase training in management skills and in public health tools and approaches.	Raise pay for certain categories of public sector workers; reclassify some positions via job evaluation exercise to match skills required with productivity requirements.

	Rational Utilization, e.g. redistribution of health workers, or multipurpose health workers	Rational Production, e.g. medical/health educational development, reform, and initial or continuing education	Public Sector Personnel Compensation and Management Strategies, e.g. management training, rewards and incentives, performance monitoring, and public regulation or contracts with private sector
E M R			
Jordan			Improve management capacity, via training programme development by external-local collaboration. Develop mechanisms to monitor & compare provider performance. Create incentives to reward staff performance towards MOH goals.
Oman	Redistribute health personnel from Muscat to other regions, via improved infrastructure, rationalized staff norms for upgraded facilities. Mandatory service for new medical graduates. Continue to recruit non-Omani professionals.	Establish health professional educational institutes. Develop post-graduate family and other specialist residency programmes at medical school. Continue to allocate funds for overseas education of staff.	Place emphasis on overseas post-graduate training in health care/human resource management.
E U R			
Kazakhstan	Improve health care staff retention in rural areas and villages.	Introduce medical training in general practice, and establish a general practice internship programme. Reorganize nurse education system. Set standards for mid- and upper-level medical education programmes in line with international standards. Provide in-service education to MDs in economics, mgt., computers, etc.	Introduce incentive-based provider payment systems to improve efficiency and quality.
Kyrgyzstan	Redistribute health personnel, based on needs.	Reorganize training of health workers and develop model training centres with skilled educators to teach new treatment protocols. Change medical education from specialist to GP training, and train doctors to establish general family practices.	Institute new provider payment methods and performance-based pay and grant facilities authority to hire and fire staff. Improve training of health facilities managers. Improve working conditions and pay of personnel.
Lithuania	Develop policy and legislative basis for employment of new family specialists in medical profession.	Restructure medical education to bring it in line with European standards; integrate teaching, research and clinical practice; coordinate with requirements of restructured health system. Increase education and training in primary health care (and retraining for GP), public health, & health service management skills.	
S E A R			
Indonesia	1992: Change from mandated service to contracts for MDs, nurses in remote areas who get higher pay with new graduate placement by central MOH.	Give Center for National Education for HRH authority to accredit health prof. education programmes. Retrain some doctors in family medicine. Coordinate CE via Centre for Training & Education, with focus on management.	Test a "reward and incentive system" in some areas, to encourage greater "professionalism" as part of World Bank-funded project (HP-V).

	Rational Utilization, e.g. redistribution of health workers, or multipurpose health workers	Rational Production, e.g. medical/health educational development, reform, and initial or continuing education	Public Sector Personnel Compensation and Management Strategies, e.g. management training, rewards and incentives, performance monitoring, and public regulation or contracts with private sector
S E A R			
Myanmar	Mandatory 3-year public service for all general doctors before entering private practice. Train voluntary health assistants and TBAs (only pay is from patients).	Upgrade health prof. schools to institutes & develop post-grad courses. Offer training in disease management and in-service training for nurses.	
Sri Lanka	Relax rules in order to allow publicly employed doctors to engage in private practice.	Strengthen training facilities and create new ones, where required, along with internship programmes for medical graduates. Develop new in-service training programmes.	Develop recruitment scheme and promotional grades for all categories. Develop incentives linked to performance, in-service training, service in remote or conflict areas, and opportunities for professional advancement.
W P R			
Cambodia	Develop system of registration, equivalencies and certification. Develop incentive scheme for staff serving in isolated areas.	Upgrade/revise curricula, provide clinical practice training, and set competency-based standards for graduation for range of basic educational programmes. Retrain existing health profs. and develop national CE programme standards for health centre level workers to deliver min. package.	Develop performance monitoring system and propose performance-related pay.
Fiji	Continue recruiting foreign MDs to fill vacancies. Post NP graduates in rural areas.	Develop NP training program. 1998: Grant Fiji medical school autonomy, allow expanded capacity, acceptance of private pay students, and add post-graduate training in specialities.	Grant MOH control over placement, hiring, firing of public sector health personnel. Conduct competency-based performance management programme as part of civil service reform.
Philippines	Raise remote assignment pay for health workers (Magna Carta). Establish "Doctors to the Barrios" programme. Train 200000 *barangay* health workers for work in underserved areas.	Train and broadly place more midwives.	1992: Standardize health workers benefits, pay, etc. 1994: Grant pay increases to all public-sector health professionals. 1995: Increase pay, training, & benefits for *barangay* health workers.

Table B-3: Political and economic context in study countries

	Political Context	GNP/capita, in 1997 US$ (World Bank)	Ave GNP/capita Growth 1990-95 (World Bank)	Official dev. aid as % of GNP 1996 (World Bank)
A F R				
Angola	After 17 years of civil war, multi-party parliamentary democracy emerged and first elections held in 1992. Civil war soon after, resulted in mass displacement, economic devastation, and disintegration of health system. Nov 94 peace accord not fully implemented & fighting continued.	340.00	-6.6%	16% (over 80% of government health spending)
Botswana	Presidential democracy with political stability since independence in 1966; change of President in 1998, but of same political party.	3260.00	2.6%	2%
Guinea	Increasing democratic and representative government after 1984; first national elections in 1993. President Conte elected in 1993 and re-elected in 1998.	570.00	2.0%	8% (est. 70% of government health spending)
Guinea-Bissau	Multi-party elections first held in 1994; relatively stable political conditions followed (except for cabinet reshuffle in May 1997), until a July 1998 civil war, caused most government and commercial activities to cease. Military rebels ousted President Vieira and installed former head of parliament in May 1999; elections promised in November 1999.	240.00	0.4%	67% (over 80% of government health spending)
A M R				
Chile	Following 16 years of military rule, presidential democracy re-established in 1990; last national election in 1993 and next one scheduled for December 1999.	5020.00	6.3%	0.3%
Costa Rica	Longest period of unbroken civilian democracy in Central America, with orderly succession of democratically elected governments and developed welfare state. Rodriguez, who favors economic liberalism, elected President in 1998.	2640.00	3.0%	-0.1%
Jamaica	Parliamentary democracy since independence. Elections of December '97 resulted in third term of rule for People's National Party, which generally favors economic liberalization, and a second term as Prime Minister for PJ Patterson.	1560.00 (2400 acc. to case study)	3.4%	1.4%
E M R				
Jordan	Economic recession in early 1990s, with some recovery by mid-1990s, but government budget sapped by foreign debt. Death of long-time King Hussein in early 1999 with mostly smooth transfer of power to his son, King Abdullah.	1570.00	3.6%	7.2%
Oman	Government policy recently has focused on replacing expatriates with Omanis and economic diversification. Ruled by monarch but emerging political representation via Majlis al-Shura and State Council.	6876 per capita GDP in 1996- EIU	-0.8%	N.A.

	Political Context	GNP/capita, in 1997 US$ (World Bank)	Ave GNP/capita Growth 1990-95 (World Bank)	Official dev. aid as % of GNP 1996 (World Bank)
E U R				
Kazakhstan	Independence after break-up of USSR in 1991; economic hardship and mass emigration followed. President Nazarbayev has ruled since 1991 & re-elected in Jan 99. Some economic improvement in mid 1990s due to IMF-SAP, but low prices for oil and grain in 1998 again hurt economy.	1340.00	-11.8%	0.6%
Kyrgyzstan	Independence after break-up of USSR in 1991; President Akayev reelected in two subsequent elections. Economic reforms proceeded quickly but economy severely contracted. Economic recovery in 1996 (real GDP rose 6.2% in 1997) but nearly half of population live in poverty.	440.00	-15.1%	14%
Lithuania	Independence from USSR in 1990 with unicameral parliament. Severe economic and social shocks in early 1990s but some recovery in 1995 (1997 GDP up 5.7%). Present government is stable centre-right coalition with reformist agenda. Current president Adamkus, elected in January 1998, not affiliated to any political party.	2230.00	-9.7%	1.2%
S E A R				
Indonesia	Political stability under a constitutional democracy and relatively strong economic growth until 1997 Asian economic crisis. President Suharto resigned May 98. His successor Habibie took steps toward more democracy (first multi-party elections held in June 1999); social/political violence & economic hardship continue.	1110.00	6.0%	0.5%
Myanmar	Current military council seized power in 1988. Last election in 1990 was won by main opposition party, but the results were not recognized, and parliament not convened.	Est. to be < 785.00	N.A	2% (uncertain)
Sri Lanka	Ethnic conflicts have marred an otherwise strongly democratic state with free and mostly fair elections; some disenchantment with new presidential system adopted in 1987 due to authoritarian administration from 1987-93.	800.00	3.7%	3.6%
W P R				
Cambodia	1991 peace accord followed by 1993 national elections but political conflicts continued followed by a 1997 coup, causing much foreign aid to cease. New government formed in 1998 and reforms proposed to try to secure fresh aid commitments in 1999.	300.00	N.A	14.5% (68% of all health spending in 1994)
Fiji	Military coup in 1987 following ethnic tensions; new constitution adopted in 1997 and democratic elections held in May 1999, resulting in an Indian-Fijian prime minister, a former leader of the public service workers' trade union.	2470.00 (1996)	1.2%	N.A.
Philippines	Presidential democracy with bicameral Congress; new constitution in 1987 after 20 years of dictatorship. Under Ramos (1992-98), some economic growth. Estrada elected president in 1998.	1220.00	0.5%	1%

Table B-4: Human development indicators (HDI)

	HDI - 1995 (UNDP)	% earning <$1/day, survey year (World Bank)	Life exp. at birth, 1995 (UNPopDiv)	Annual pop. growth rate, 1978-98 (UN/WHO)	Adult literacy rate, 1995 (UNDP)
Angola	0.344	N.A.	47.4	3.0%	42%
Botswana	0.678	33% (1985-86)	51.7	3.2%	69.8%
Guinea	0.277	26% (1991)	45.5	2.7%	35.9%
Guinea-Bissau	0.295	88% (1991)	43.4	2.3%	54.9%
Chile	0.893	15% (1992)	75.1	1.6%	95.2%
Costa Rica	0.889	19% (1989)	76.6	2.9%	94.8%
Jamaica	0.735	4.3% (1993)	74.1	1.0%	85%
Jordan	0.729	2.5% (1992)	68.9	4.3%	86.6%
Oman	0.771	N.A.	70.3	4.3%	59%
Kazakhstan	0.695	<2% (1993)	67.5	0.6%	99%
Kyrgyzstan	0.633	19% (1993)	67.9	1.4%	97%
Lithuania	0.750	<2% (1993)	70.2	0.4%	99%
Indonesia	0.679	12% (1995)	64.0	1.8%	83.8%
Myanmar	0.409	N.A.	58.9	1.6%	83%
Sri Lanka	0.716	4% (1990)	72.5	1.3%	90.2%
Cambodia	0.422	N.A.	52.9	2.4%	65%
Fiji	0.869	N.A.	72.1	1.3%	91.6%
Philippines	0.677	29% (1993)	67.4	2.3%	94.6%

N.A. = not available

Table B-5: Health status/epidemiological indicators

	Infant deaths/1000 live births (1998)	<5 deaths/ 1000 live births (1996)	Maternal deaths per 100000 live births (1990)	1997 adult AIDS/HIV rate (%) (UNAIDS)	TB Incidence/ 100,000 (1997)
Angola	125	292	1500	2.12	123.7
Botswana	59	50	250	25.10	455.7
Guinea	124	210	1600	2.09	56.8
Guinea-Bissau	130	223	910	2.25	N.A.
Chile	13	13	65	0.20	26.5
Costa Rica	12	15	55	0.55	17.7
Jamaica	22	11	120	0.99	4.7
Jordan	26	25	150	0.02	6.9
Oman	25	18	190	0.11	9.8
Kazakhstan	35	45	80	0.03	101.4
Kyrgyzstan	40	50	110	<0.01	119.3
Lithuania	21	18	36	0.01	78.7
Indonesia	48	71	650	0.05	10.9
Myanmar	79	150	580	1.79	36.6
Sri Lanka	18	19	140	0.07	35.7
Cambodia	103	170	900	2.40	148.6
Fiji	20	24	90	0.06	21.1
Philippines	36	38	280	0.06	294.5

Note: All data from WHO unless otherwise noted

Table B-6: HRH policy making processes and inputs

	Evidence-based	Consultative (interest groups involved)	Country-led and owned	Support: adequate funds and able HRH leaders
A F R				
Angola	* (see note below)	Extensive (regional & national) and wide range of interest groups involved.	Donors financed, trained, organized and empowered.	Good funds and TA from donors; strong HRH leaders.
Botswana	Extensive use of data: workforce profile, service use, macroeconomic and epidemiolog. projections.	Over 600 representatives of health groups consulted.	Nationally-set priorities, but lots of donor support.	
Guinea	Inventory conducted with help of consultants and database constructed.			Improved funds and staff capacities over time.
Guinea-Bissau	Created new HR database - told exact No. of personnel, eliminated 700 "phantoms"; used to develop 5 year HRH projections.	Views on major HRH problems and priorities obtained from wide range of stakeholders.	Donor coordination steadily improved and many rallied behind HRH plan (with WHO help).	Strong HRH director, with good mgt. skills; WHO support in HRH plan preparation and donor negotiations.
A M R				
Chile	Advanced HRH policy analysis recently extended to private sector; special studies on gender, health labor market, and new methods to determine personnel needs.	Negotiations with various interest groups around new law on worker contracts and evaluation.	No donor involvement.	Separate MOH Human Resources Division created in 1997.
Costa Rica	**(see note below)	Interministerial planning, but insufficient health worker participation.	WB and consultants influenced agenda without adequate attention to "human" part of human resource development.	Inconsistent policies re: HRH mgt. due to different perspectives; adequate funds but overall HRH policy not a priority.
Jamaica	New HR MIS system being developed based on needs of new health system; analysis of workforce in relation to educational institutions.	MOH Task Force on HRH held a wide range of interviews.	Donors are supportive, with strong support from regional body (CARICOM).	HRH 10-year plan aims to strengthen HRH planning process; some "shortages of skills".
E M R				
Jordan	Studies on staff utilisation, workload-based staffing norms, but further developing HR information system.			
Oman	Numerous HRH studies by MOH & WHO. Developed workload staffing norms, HR database. Continuing improvements to HRH database.	Good consultation within MOH and with other ministries; private sector less involved.	Almost no donor support needed, except for funding of HRH health services management training.	1990 TA by WHO-EMRO gave impetus to first HRH plan and continued collaboration is good; strong HR planners.

	Evidence-based	Consultative (interest groups involved)	Country-led and owned	Support: adequate funds and able HRH leaders
E U R				
Kazakhstan	* (see note below)	Collaboration with newly formed family practice association; other ministries involved in HRH planning, but do not give it priority; CoH has little influence on oblast health personnel decisions.	Some donor support (WB, USAID, WHO) and regional coordination (CARNET), but country-determined priorities.	Central MOH understaffed, with few qualified to perform HRH strategic planning.
Kyrgyzstan	Data deficiencies noted but new information coming from family practice groups will strengthen HRH monitoring & forecasting.	High-level meetings with stakeholders and ongoing collaboration with newly formed professional associations; other ministries involved in HRH issues but not coordinated.	Good donor support (USAID, WB, WHO), donor coordination on HRH planning, and regional networking, but country steers.	Strong staff in health reform group that sees HRH issues as integral to health reform, but weak HRH skills.
Lithuania				
S E A R				
Indonesia	Developing HRH info system as part of broader health information system for planning, esp. at province & district level. "Indicator of staff needs" method used but not "appropriate".	11 MOH units involved in workforce planning; Bureau of Planning tries but cannot integrate; nongovernmental bodies not formally involved.	Some support from donors. World Bank assisting HRH in Health Project V.	HRH departmental reorganization chaired by experienced senior official.
Myanmar	Situational analysis and health system research determine needs, but inadequate data for HRH projections; developing information network.	Recommendations of "Medical Education Seminars" steer HRH policies; involve medical educators, policymakers, MOE, & student reps.		WHO TA on HRH strategic planning; support increased human resources and funds for the process.
Sri Lanka	Plan to develop HR needs assessment scheme, by category, and by District and Province.			
W P R O				
Cambodia	1993 health workforce survey used to develop first HRH policies; 1998 in-depth analyses of training needs. Developing regional links to HRD database with ADB loan.	Post peace accord/pre 1993 election period involved all 4 political parties in health reform planning, including NHP and HRH.	Donor coordination (COCOM) has health resources subcommittee.	Staff turnover in HRD Dept. and lack of strong HRD leader hampered planning process. In 1998 HRD reinstated as separate MOH dept.; still loses senior HRH staff to other departments.
Fiji	Good data available to prepare workforce plan; data used to justify increase in number of students at Fiji Medical School.	MOH conducts largely with medical school leaders.	Donors advise but do not drive HRH policy.	Weak HRH mgt and planning skills in MOH; external consultant used to develop workforce and training projections.
Philippines	Situational analysis conducted for HHRD planning 1993-1996; big data gaps regarding private-sector professionals and traditional healers.	National multisectoral consultation held on proposed HHRD policies but did not lead to commitment to implementation.	Initially supported from bilateral assistance funds.	1993: Special HHR Policy and Program Project set up closely linked to national health planning office, with TA from WHO; local govt units given some TA to deal with new health personnel management responsibilities.

*   denotes that country investigator or case study information indicated this factor facilitated HRH policy development process, but did not provide specific details on how or to what extent

**   denotes that country investigator or case study information indicated this factor hindered HRH policy development process, but did not provide specific details on how or to what extent

Table B-7: HRH policy implementation progress

	Implementation milestones and impacts (Output/outcome impacts noted in bold)
Angola	No progress due to economic political disruption (1998) Period since policy adoption too brief (plan adopted in 1997)
Botswana	HRH database/registry of all nursing health personnel – public *and* private Nursing staff methodology now used as a model for national workforce planning Workforce planning model is basis for annual health workforce budgeting process
Guinea	Recruitment in 1997 of nearly 800 public health workers on the basis of specific vacancies in rural, underserved areas, rather than general hiring after graduation Minimum package of activities specifies required HRH (i.e. staffing norms) at each level of care, e.g. primary health centres, hospitals, etc. HRH Strategic Training Centre established in MOH
Guinea-Bissau	New salary payment system put into effect. Public employee salaries increased by 50% at the end of 1997, though they remain extremely low and wages went unpaid after civil war broke out in July 1998 HRH database started in 1996 (*used to create regional plans and projections?*) Improved HRH technical and management capacity (*how measured?*) Number of posts filled rose from 37 to 58% from 1997 to 1998 **- which reflects more equal distribution?** Only 1 of 12 graduating MDs refused to serve in an underserved area Medical school admissions halted; resources redirected to new National School of Health
Jordan	Period since policy adoption too brief
Oman	Formal HRH Policy Statement 1999 adopted Manpower planning has become the basis of all staff sanctions to institutions MOH institute nurse enrollment rose from 220 in 1990 to 1,148 in 1997 First batch of medical graduates passed in 1993 Post-graduate specialty programs started in 1994 and residency programs initiated Nursing education now available in most regional capitals Oman educational programs established in most paramedic fields **No. of people treated abroad/100,000 fell from 56.7 in 1983 to 15.3 in 1997** **Proportion of Omani increased: MDs 8.7% in 1990 rose to 14% in 1997; Nurses 11.6% in 1990 rose to 23% in 1997** **Share of HRH (physicians, nurses, lab technicians and asst. pharmacists) tilted more in favor of regions outside the capital**
Chile	More specialists in internal medicine, surgery, pediatrics and obstetrics, and more doctors trained in family medicine; all medical schools now have a family medicine program. Training abroad in primary care for more than 120 people in 1998 (200 planned in 1999) Salaries rose 38% to 80% for various levels of health workers since 1991 Over 64,000 public health service officials received some training Over 1000 individual "work environment improvement" projects covering 65,000 health workers Performance-based pay system implemented in 1997 **Over 15,000 workers added to public sector workforce since 1991** **No. of doctors and dentists in rural areas rose, but still shortages** **Drop in infant mortality, and child deaths due to pneumonia, and increased life expectancy between 1990 and 1997** **Reduction in waiting lists for operations and complex interventions**
Costa Rica	Basic health care teams (EBAIS) created to combine preventive/curative care National Training and Education Fund conducted management training CENDEISS revived and reoriented to coordinate training and education Management commitments signed with 21 hospitals, 35 health areas and 4 cooperatives, though many workers feel they don't get enough pay, training or equipment to achieve expected outcomes Short-term personnel contracts rather than permanent contracts
Jamaica	1995/96: Raised pay for public sector nurses Control of West Indies School of Public Health and a nursing education program transferred to Education Ministry

	Implementation milestones and impacts (Output/outcome impacts noted in bold)
Kazakhstan	In 1998, first 140 general MDs graduated from educational institutions Re-trained 130 specialist physicians to practice general medicine First group of graduates from bachelor of nursing program Reduced enrollment in all medical education institutions and colleges **Capitated payment from national insurance fund led to better access (expanded hours, 24-hour MD coverage) & better outcomes in one oblast**
Kyrgyzstan	Retraining of general practitioners and nurses in primary care begun; nearly 2000 MDs retrained and 1000 nurses in process About 30 instructors and 100 health specialists trained by foreign specialists; nursing instructor training started, based on Family Medicine Centre Approximately 550 family doctor groups formed Center for Health Management at Intern'l University of Kyrgyzstan established in July 1997, offering curricula approved by the Kyrgyz State Medical Academy
Lithuania	60% reduction in admittance to Kaunas University of Medicine Introduction of new training programs in community nursing, home care, health management and administration, health education, oral health and social work Reoriented undergraduate and postgraduate medical educational programs towards general practice and family medicine, by intensive training of instructors, requirement of a one-year residency requirement, and additions to basic curriculum requirements **Drop in number of physicians from 43/10,000 in 1990 to 36/10,000 in 1997**
Indonesia	48,000 personnel provided with continuing education (out of 275,000 targeted) **Improved distribution of trained health personnel in remote rural areas: 95% of all villages now have a midwife**
Myanmar	Basic health personnel (PHS2, midwives, nurses) produced locally or regionally Training schools in nursing, basic health workers, paramedics/pharmacists upgraded and expanded Ph.D./specialist medical courses opened in June 1997 **Total personnel rose 5% (midwives) and 25% (doctors, dentists, and nurses) between 1986 and 1996** (*but no change per capita*) **Incidence of water-borne diseases declined (726/million to 467/million) and prevalence of leprosy reduced (6.1/10,000 to 2.5/10,000) over 5-year periods due to training of basic health staff and related disease-control efforts**
Sri Lanka	Added two teaching hospitals, one school of nursing, & expanded dental school Introduced new courses in medical administration and community medicine Established regional centres for training in PHC Increased recruitment for paramedical personnel Strengthened information system for HRH planning, norms and standards Staff performance appraisal system implemented
Cambodia	Trained instructors in how to train health workers to support the delivery of defined minimum package of services (with some delays) District managers received management training Implemented competency-based medical school exams and increased standards
Fiji	Nurse practitioner program started in 1998 Fiji School of Medicine gained autonomy in 1998 and accepts private-pay students
Philippines	Nationally coordinated deployment programs to address maldistribution of health personnel, e.g. Doctors for the Barrios, Rural Health Physicians, Partnership for Alternative Health Sciences Education Programs Increase (and attempt to standardize) pay and benefits of government health workers – highest paid government workers at the LGU level Strengthened BHWs capacities but support and incentives depends on LGUs Innovative programs in health sciences education initiated in five schools High-level HRH planning initiated as part of integrated services project and high-visibility vertical programs **Number of communities without doctors reduced to <100 from 272**