The Joint Learning Initiative
on Human Resources for Health and Development

Health Human Resources Demand and Management: Strategies to Confront Crisis

October 31, 2004

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Report of the Working Group on Demand

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Preface

The Joint Learning Initiative (JLI) on Human Resources for Health is a project supported by the Rockefeller Foundation, WHO, and other international organizations and donors. The primary aim of the JLI is "to better understand the role of workers in health systems and to identify new strategies to strengthen their performance." This workforce, and the volunteers who aid it, are commonly referred to as *human resources for health (HRH)*.

The Joint Learning Initiative (JLI) was launched in November 2002 in recognition of the centrality of the HRH. At that time, HRH was comparatively neglected as a critical resource for the performance of health systems. To the founders of the JLI, it became progressively clear that the workforce, the human backbone of all health action, was comparatively overlooked. Human resources presented as both a huge opportunity as well as a major bottleneck to overcoming global health challenges.

The JLI was crafted as a multi-stakeholder participatory learning process with the dual aims of landscaping human resources and recommending strategies for strengthening the workforce for health systems. It was designed as an open, collaborative, and consultative process involving a diverse membership from around the world. More than 100 members joined seven working groups to pursue - in a decentralized manner - a learning agenda crafted by the working groups themselves. Each of the seven working groups was assigned a theme - history, supply, demand, Africa, priority problems, innovation, and coordination - and encouraged to pursue that theme.

The Working Group on Demand has undertaken an inquiry into the demand for HRH and the ways in which HRH can be organized and managed in order to meet that demand. In this report, we present the results of the inquiry and a series of recommendations aimed at helping countries, especially low-income countries, find ways to better meet the demand for HRH with limited resources.

The *Objectives* of the Working Group on Demand are:

- To analyze information that will allow us to understand demand for HRH, including the origins of demand and implications for health policy.
- To formulate policy options and practical suggestions for HR management. These options should support the goals of more equitable, efficient, and better quality health systems.
- Policy options should be developed within the context of public/private mix labor markets, and a broader framework of social reform, public sector reform, health systems reform and macro-economic policies.
- Policy options should be based on evidence and experiences from countries as well as institutions, both public and private. They may also include capacity building and priority research questions.

Organization of the Report

Chapter one is an introduction that includes the conceptual framework adopted by the Working Group. The chapter includes a model of HRH demand, supply and management issues as well as an illustration of the scope of HRH involvement in prevention and health care. Target audiences and key messages are also defined.

Chapters two and three address issues that have been identified as priorities by the Working Group. The objectives of each chapter are (1) to understand the characteristics, effects, significance and trends of forces that bear on success or failure of HRH policies and (2) to identify what we would like to achieve on each topic to improve the situations for HRH demand and management.

Chapter 2 deals with forces that are usually external to health system control, such as economic and public sector reform policies. Chapter 3 deals with forces that are primarily or potentially under the control of health sector management, such as the use of incentives and coordination between the demand and supply sides of HRH management.

Chapter 4 discusses strategies to implement recommendations in the short or medium term subject to financial conditions, institutional and managerial capacity in each country. Each topic area is accompanied by a discussion of specific measures that would serve to implement the policy objective, constraints to implementation and options for assistance.

An appendix provides a table listing policies and those with primary responsibility for implementing them. The table identifies international organizations (e.g. WHO, World Bank) and provides a more generic classification of responsible agencies within a country (e.g. Departments of Health, Finance or Labor, civil society).

This report summarizes knowledge gained or reviewed during activities of the working group. These activities included workshops in Annecy, France, May 2003, and Pattaya, Thailand, February 2004. Formal presentations at the Annecy workshop are referenced in footnotes; a conference report has been prepared and is available on the JLI website[1]. The working group commissioned a number of special studies, which are referenced throughout this report

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Executive Summary

The Working Group on Demand for human resources for health (HRH) has chosen a broad perspective that considers health needs and current initiatives to improve health. The major initiatives at present consist of the UN Millennium Development Goals and the WHO program to provide antiretroviral therapy to three million people by 2005. Effective demand, in this context, extends beyond current practices to include the full range of what is possible with current and expected resources. This approach leads us to recognize inefficiencies and challenges that impair the effectiveness of HRH and to consider how improvements can be made. In many countries, especially the developing countries, resources must be augmented and strengthened in order to provide the levels of prevention and health care required to meet present health goals.

Human resources for health include all persons engaged in promoting and maintaining health, from persons who support those with disease to professions that provide care. While all these persons help to meet the demand for HRH, we recognize that high level leadership is necessary in order for HRH workers to be effective. Accordingly, much of our report focuses on what can be done by policy makers and administrators to improve the efficiency and effectiveness of HRH.

Labor markets for human resources have not produced the effective and motivated workforce that is necessary for the task. Health workforces have been reduced in many developing countries. Existing levels of cohesion in some countries have been fractured by well-intentioned experiments to change administrative arrangements, such as decentralization or new vertical programs that recruit workers away from their existing responsibilities in primary care systems. The efficiency of HRH is often impeded by low pay, low motivation, and conditions of work that are inadequate and dangerous

In the global policy arena, financial crises have had a destabilizing effect during the last two decades, leading to a deterioration of the ability of public sector workforces to carry out their missions. A number of broad policy measures have been tried, including public sector reform (which seeks to change the ways in which governments carry out their mandates); decentralization of administrative authority to regional and community levels; and health sector financing reform (which seeks to identify new ways to fund health care). Often these policies have been implemented in response to financial crises and without adequate preparation of persons who must assume new responsibilities or oversee a smooth transfer of responsibility. As a result, HRH have had to cope with uncertainty and change at the same time as they have had to cope with greater workloads and higher demands resulting from new health threats.

Attempts to reform country administrations, whether initiated from within or recommended by international players, are inevitable so long as countries operate under financial pressures and their populations have unmet needs. Yet the lessons of recent history demonstrate that governments should be explicit about the role they wish to play in ensuring health services to their populations and identifying the implications of their decisions for equity and public health. Where reforms are implemented, measures to preserve the effectiveness of HRH should be identified and implemented in conjunction with policy change.

Global trade and international recruitment of health professionals have impacted health workforces in developing countries. Global trade has brought new investment, but it has also interrupted patterns of care, often attracting health workers from rural to urban locations and from the public service to private provision of health care. Negative results have included increasing inequity of HRH distribution, tension between ethics and profit, increased litigation and the necessity of new regulatory regimes that challenge the institutional capacity of country administrations.

International migration can lead to a mutually beneficial exchange of information and skills between different cultures. But too often it has meant a severe drain of scarce human resources from developing countries to developed countries. Unattractive working conditions in many developing countries understandably provide an incentive for emigration. But it is less easy to accept the situation in which some developed countries resort to international recruitment to help resolve demand for health workers that results from failures of their own policies. These failures include the failure to plan effectively, to implement efficient models of primary care, and poor working conditions that have adverse effects on retention of domestically trained professions such as nursing.

Challenges to management of HRH include technical issues, such as the right mix of skills to meet responsibilities, and leadership to motivate health workers and the communities where they work. Sound planning is required. Forecasting future demand for health workers is a key feature of planning. Basic forecasting and planning skills can be acquired with appropriate assistance from international organizations. Due to the complexity of all the factors involved, plans should be formulated in a flexible and participatory manner with continuous updates.

Scarce resources can be wasted if they are deployed without consistent planning and coordination. Wastage can mean that HRH are not working to potential, either because the skills mix of the workforce is inappropriate or because of deficiencies in the availability of supplies and logistics necessary to support their work. Human potential is also wasted due to deaths and attrition caused by unsafe working conditions. For countries, potential to improve health may be lost or mitigated due to migration and inappropriate geographical deployment of health workers.

Access to health care frequently shows great variation within a country, with residents of rural areas and inner-cities at a disadvantage relative to urban residents. Access problems are especially difficult where lack of transportation and poverty limit mobility. The most promising approach to these problems will be to strengthen local resources to provide primary care and prevention. Other measures include outreach services and assistance with patient transportation.

There has been a large migration of health workers from public to private sector employment, and many professionals maintain their public sector responsibilities while devoting much of their time to private practices. This trend requires innovative management with a view to coordinating the activities of both sectors in order to achieve health goals. Challenges also exist for quality control and effective regulation.

Motivation of health workers and incentives to increase productivity and job satisfaction are important considerations in management of health workforces. Both financial and non financial incentives are required, with the importance of each varying according to circumstances.

Two themes recur throughout this report. One is that countries need to find solutions to HRH challenges that are appropriate to their own circumstances. These circumstances include economic ability and, no less important, their political will and culture. International intervention will be most effective if it is done in a way that supports and enables countries to move forward but is not prescriptive of what specific measures and strategies are necessary.

The second major theme is that the most effective approach to present challenges will be to improve community level care. Primary care, training new cadres of para-professionals and coordinating all existing HRH resources are strategies that have shown great promise. It is also necessary to enlist communities themselves, by encouraging contributions of time and energy.

The report has 8 recommendations grouped within 3 theme areas. Strategies to implement the recommendations include **knowledge management, enlisting support from social movements and creating political and bureaucratic commitment**.

Recommendations:

Health Policy

1. National governments should commit to strengthening health human resource management as a primary objective for improving health systems performance.
2. National governments and international donors should protect funding of HRH workforces in public sector and health reform policies.
3. Decentralization should focus on building capacity from the bottom up instead of delegating down. Strategies include:
   - Adopt models of prevention and primary care that have been shown to be effective, including new models of skills mix.
   - Link new community models with the existing system. Expand these programs quickly when they are successful and readjust to eliminate problems.
   - Complete decentralization of administration or finance should only be implemented when sufficient managerial capacity exists to create a reasonable expectation of success.
4. Health system planners should collaborate with trade specialists to craft negotiating positions that will serve the best interests of the health care sector in international trade and service agreements.

International Migration

5. The international community should strongly encourage developed countries to resolve perceived HRH shortages in ways that do not weaken developing countries by recruiting their scarce health professionals.
6. A global emergency response mechanism should be established to support countries in dealing with severe HRH shortages. Responsibilities of the emergency response mechanism would include situation analysis, formulation of solutions, and, when necessary, help to mobilize excess HRH from other countries to temporarily alleviate the situation.

HRH Management

7. A national multi-sectoral mechanism should be set up within countries to strengthen their capacity in health systems and HRH management. This mechanism should be part of or closely related to the national health systems development mechanism. Situation analysis, demand projections and evaluation should be used to support the decisions of the national mechanism.
8. Establish an international **Global Knowledge Management Initiative** on human resources for health. This initiative will support countries to analyze their own situations and identify solutions that fit their own requirements

Chapter 1
Introduction

Between 1986 and 1995, 61% of doctors who graduated from the University of Ghana medical school left the country - 88% of them emigrated to the UK or the USA.[2] 70% of doctors trained in Zimbabwe during the 1990s immigrated to another country.[3]

In 2001/02 over 2,000 nurses trained in South Africa and over 450 trained in Zimbabwe registered in the UK. Rates of increase over 1998/99 levels of registration were 250% and 800% respectively.[4]

A 1999 report on the risks from HIV/Aids found that 51% of nurses leaving the health service in Malawi had died[5]. Another study covering the 10 years ending in 2001 found that "death was the largest cause of attrition in the Malawi Ministry of Health and Population."[6]

During the economic boom period in Thailand, 1990-1997, mushrooming growth of urban private hospitals resulted in massive internal migration of doctors from rural public hospitals. In April 1997, at the peak of the economic boom, 21 rural district hospitals went on without a single full time doctor.[7]

In Mexico, 37.7% of registered physicians in 2000 (excluding those still studying) were either unemployed or underemployed in activities other than medical practice. The rate of attrition of medical students who entered training in 1997 had reached 33.4% by the end of 2001.[8]

The paragraphs quoted above illustrate two of the major problems facing health systems in developing countries: (1) a severe brain drain of qualified HRH personnel in response to demand in developed countries and in the urban areas, and (2) wasted skills when scarce professionals die from high-risk diseases, leave training or choose to work outside their professions. These problems are caused in part by economic factors, which usually dominate discussions of demand, but they also include other considerations such as working conditions and motivation.

The Working Group on Demand has adopted a broad perspective for its inquiry. This perspective includes the determinants of demand, projections of future requirements and management of resources. Factors that influence demand for health workers include the obvious considerations, such as the need for a competent and mobile workforce to provide services necessary to achieve the UN Millennium Development Goals, and more complex issues such as the influence of macroeconomic trends and health systems reform on the demand for HRH. This chapter presents the conceptual framework, definitions and scope of HRH issues considered by the Working Group.

Conceptual Framework

Definitions

Demand for HRH

The Working Group has taken a broad perspective on demand for health care and *human resources for health (HRH)*. This perspective includes public goals for population health and

the resources required to implement important new initiatives to meet the challenge of infectious and chronic diseases.

In conventional economic theory, demand for HRH is derived from the demand for health services (or, more abstractly, the demand for health). An individual's demand for health care is determined by three influences: (1) health needs, (2) predetermining factors such as education levels and (3) enabling factors such as sufficient income to purchase health services. *Effective demand* means that persons are willing to purchase health care and able to pay its market price. The amount of care persons are willing to purchase decreases as prices rise, while the amount suppliers are willing to provide increases as prices rise. There is assumed to be an equilibrium price at which amounts demanded and amounts supplied are the same.

At present, health needs are seen as a high priority. Challenges include a worldwide epidemic of AIDS, re-emergence of TB, a continuing loss of life from malaria, as well as the increasing burden from chronic non-communicable diseases. The growing commitment to tackle these major public health problems can be understood most appropriately as *social or political demand*. In this perspective, global communities (donors and coalitions of countries operating through agencies such as WHO) have established goals for health improvements, and provided new funding to make them possible. These goals include the United Nations *Millennium Development Goals (MDGs)* and the WHO initiative to bring anti-retroviral therapy to three million people by 2005.

In many countries - perhaps most of the world - present resources must be augmented and improved if these goals are to be achieved. In the face of these challenges there is often a tendency to focus on methods of treatment (science) and financial resources. In the language of economics, these are the health care products and the ability to pay the cost of production. *The methods of delivering effective treatment and prevention are often taken for granted.* Yet, as more resources and effective treatments have become available to meet high priority needs, there has not been a concomitant increase in the capacity to deliver care. This lack of capacity is due to deficiencies in the *size, skills and infrastructure of*

HRH. Efforts to correct these problems can lead directly to efficiency gains and the prospect of more health achievements for each health dollar spent.

Labor markets, demand and workforce capacity

Labor markets in health care consist of employers and employees, with employers expressing demand to hire or contract with employees in order to respond to mandates or opportunities (in the case of the private sector) that arise from demand for health care. Health care employers may be public sector (ministries of health, regional authorities or publicly owned institutions) or private sector (privately owned institutions, provider organizations or self-employed professionals, and non-government organizations).

Effective demand for HRH occurs when employers are willing to employ or contract with HRH providers and are able to pay the going price for their services. In developing countries today, ability to pay should be interpreted to mean that public and private sector employers can provide competitive remuneration (by country standards) and incentives to attract, motivate and retain an effective health labor force. In many developing countries today health workforces are underpaid and have conditions of work that discourage continued employment. As a result, there are problems with motivation and performance. Labor markets have not produced either the quantity or the quality of health skills required to meet health goals.

Labor markets in health have received insufficient policy attention. One reason has been the economic climate of the last two decades, which has been characterized by low or negative economic growth in many developing countries. In this climate, much of the policy attention has focused on decreasing the size of health workforces in order to cope with declining budgets. Attempts to reorganize the ways in which care is delivered have also been made, with the expressed intention (or hope) that a more efficient public sector will result. Private sector health care has grown rapidly, but often the direction of growth has been to provide diagnostic services and treatment demanded by affluent classes, with little attention to primary care or

public health. Other reasons that have resulted in low priority for strengthening labor markets include a widely held perception among donors that public bureaucracies are inefficient and ineffective and that new management models must be implemented. In these circumstances there is both a reduced financial ability within countries to revitalize HRH and skepticism in the international community about the wisdom of doing so within present health delivery systems.

Field training of HRH has often consisted of short-term training to meet the needs of specific programs. The result has been a proliferation of vertical programs, separated from, rather than integrated with, existing delivery models. Vertical programs often compete with each other, and with ministries of health, for the services of the most proficient health workers.

While it is not always wise to make sweeping conclusions, there is a strong case to be made that insofar as external funding sources have intervened in the labor markets of developing countries, the interventions have tended to fracture existing workforces, either by promoting new organizational forms (such as decentralized administration) or by establishing new programs that bypass existing employer-employee relationships. The result of these interventions, combined with low institutional capacity in many countries, usually has been a workforce that lacks the solidarity, resilience and resources necessary to take on new challenges.

Public health

Public health demand for HRH must also be recognized as vitally important to preserve health and prevent the spread of diseases such as AIDS, SARS and avian flu. The financial payoff to effective investments in public health can be measured in terms of the costs avoided. These costs, which can be extraordinary, are usually difficult to predict in advance and often ignored when preparing budgets. As a result, public health workforces may become even more neglected than direct health care personnel since there is little public demand or political demand. Public health workers often require highly specialized skills, such as planning and disease surveillance. In other cases the same workers can provide public health services (e.g. immunizations, advice on hygiene) and direct patient care. Effective responses to demand for public health workers requires the right match of unique skills and persistent follow-through to minimize dangers from infectious diseases and the conditions in which they can develop.

Demand challenges

There is now a well-recognized requirement for more, better-motivated health workers with new skills and efficient working conditions in order to deal with present health challenges. But there is also a limit to the funds available to pay, train and provide support services for health workers, and those who provide funding naturally seek assurances that the money will be used as effectively and efficiently as possible. The core challenge for health delivery is to accomplish as much as possible within existing or increased levels of effective demand.

Management of HRH

There are often many options to meet the demand for health services: there is considerable latitude to modify the mix of providers, the numbers of providers and the use of technology to make providers more efficient. Resources can be substituted where scarcities exist or where there are large differences in the cost of different types of provider (e.g. the choice of auxiliaries or doctors). Effective management of resources involves some or all of the following challenges:

- finding optimal solutions for the mix of providers and technology;
- managing HRH personnel, infrastructure and support services;
- providing appropriate services to meet popu lation needs,

The Working Group on Demand recognizes the importance of managing both human and material resources in pursuit of effective and efficient health systems. Many of the topics reviewed in this report have been selected because they are essential to efficiency in deploying available resources. Other topics deal with the human concerns that often make a critical difference in the effectiveness of health workforces - skills, experience, motivation, cooperation and a sense of shared purpose. There is a science in managing scarce resources, especially the people who work in the health sector, so as to meet the demand for health and health care within the evolving paradigms in which demand is defined.

Box 1.1: Definitions

Human resources for health: All individuals engaged in the promotion, protection or improvement of population health.[9]

Health workforce: Persons formally employed in providing health care.

Effective demand for health care: The desire and the financial capacity to purchase health care at prices that reflect cost of production and a normal return on investment.

Effective demand for health workers: Employers are willing to employ or contract with HRH providers and are able to provide pay and working conditions that will attract and retain persons with the desired mix of skills.

Political and social demand: A commitment by governments, or by agencies that represent coalitions of citizens, to purchase health care or preventive services necessary to achieve specific goals.

Labor markets: A concept that includes diverse employers or purchasers of labor services on the one hand and employees or self-employed providers of service on the other hand.

Efficiency: Producing the maximum amount of health care with a fixed amount of resources; or producing a fixed amount of health care with the fewest possible resources.

Effectiveness: Producing health care that is effective in preventing or treating disease.

Cost effectiveness: Producing health care in ways that are both effective and efficient.

Equity: Although there is some debate about the full implications of this concept, equity in health care normally means that all members of a population have equal access to services that will benefit their health states.

Productivity: The amount of health care that can be produced by a given number of health workers. Increases in efficiency (e.g. improved skills or technology) lead to increases in productivity.

Population health: The state of health of identifiable populations, and the investigation of factors that affect states of health.

Public health: Activities that protect the health of whole populations, such as the prevention of infectious disease, the reduction of contamination caused by private or commercial activities and regulation of workplace safety.

Public and private sectors: In health care delivery, public sector normally refers to government or agencies of the state. Private sector refers to non-government ownership or control and includes for-profit and non-profit agencies.

Influences and Interactions

Demand and supply are the two key elements of economic markets. In the JLI framework, there are separate working groups for demand and supply with an agreed division of issues between the two groups. This report deals with demand and management issues, recognizing that there will inevitably be some overlap with supply issues. Figure 1 was developed to help clarify the relationships between demand, supply and management issues in HRH. Major influences on demand in the HRH labor market include;

- Macroeconomic policies and their effects on resources available for health;
- Globalization & international trade, which affect investment and mobility of providers;
- Demographic and epidemiological transitions, which affect the need for health services;

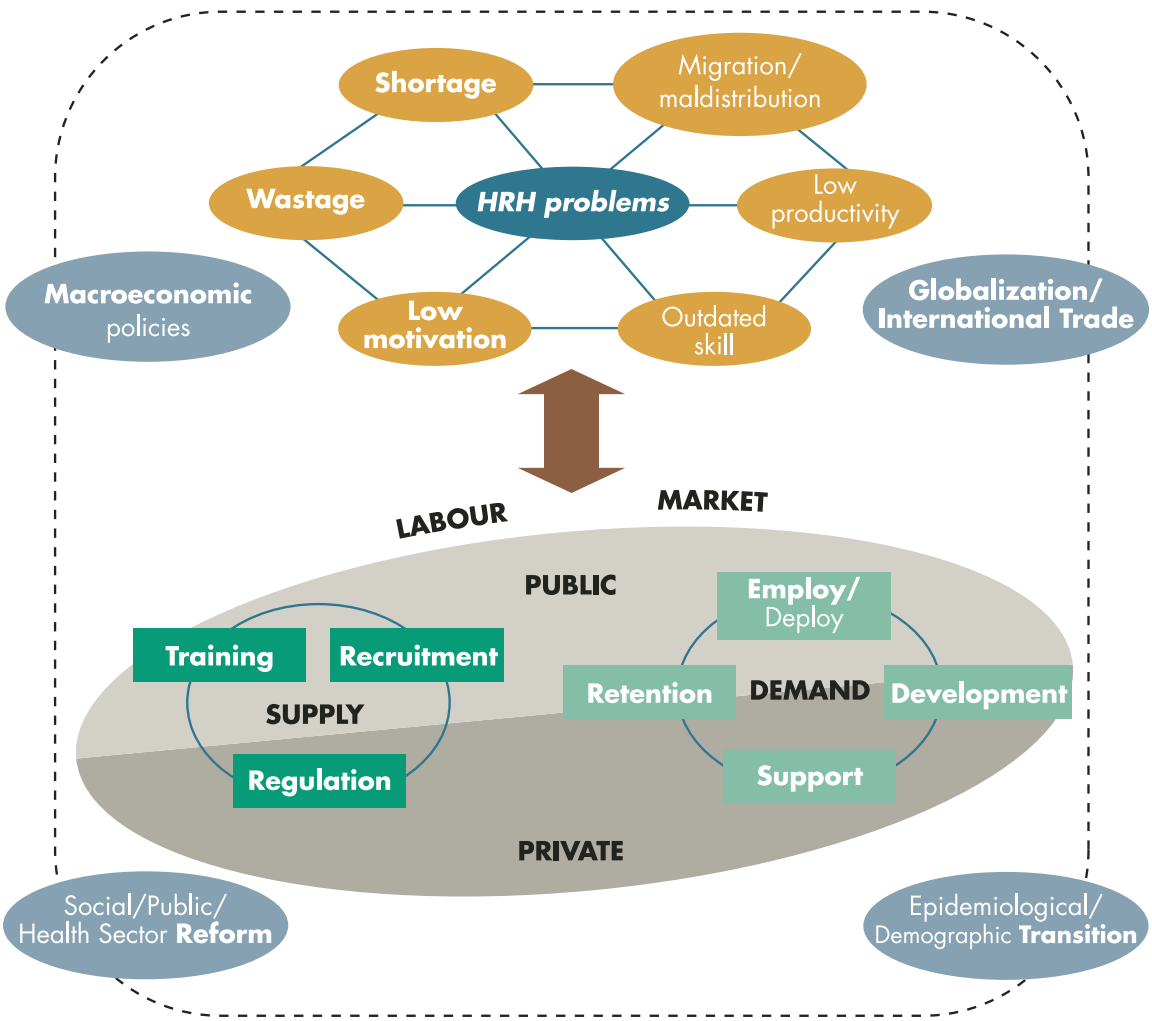
- Reform policies in social, public and health sectors, which affect the structure and flexibility of health systems.

These influences also affect the supply side of HRH management, in particular issues of recruitment, training and regulation. Issues of deployment, retention, development of capacity and support all affect the efficiency and effectiveness of HRH. The decision to group these issues within the demand side of the labor market in the JLI framework is somewhat arbitrary, but it provides a clear demarcation between HRH demand and supply.

In the conceptual framework, HRH demand and supply issues exist in both public and private markets for health care. In addition, there is a challenge to coordinate public and private providers in order to achieve the full potential of both groups (recognizing, too, that the same providers often participate in both public and private provision).

The problems in the upper half of Figure 1 are often inter-connected. They affect the efficiency of the health workforce and they also tend to destabilize the extent to which demand and supply are near to being balanced. Motivation, productivity and skills affect the ability of individuals in the workforce to work efficiently. The other three problems are system effects. HRH shortages often coexist with wastage caused by attrition or failure to reach full potential. Migration may lead to mal-distribution in which HRH are inappropriately distributed to meet demand. Wastage and mal-distribution also occur when HRH are underemployed or inappropriately employed in view of professional qualifications, or are providing services that are ineffective to meet population health needs.

Figure 1
Conceptual Framework of HRH Demand and Supply and Management Issues



Defining the scope of human resources for health

In the WHO definition HRH includes all persons who provide health care and prevention services or who assist persons using health care to do so in appropriate ways. Demand for HRH, in the Working Group perspective, includes all these persons and the services they perform. Most research studies have concentrated on those formally employed in health systems, especially professional groups such as doctors and nurses. Current challenges require more widespread recognition of the roles of less visible health workers, communities, families and individuals threatened by ill health. In the example below we illustrate the range of persons encompassed by the HRH definition with an example based on existing and planned models to provide antiretroviral therapy (ART) to persons with AIDS. The examples are taken from a WHO report prepared as part of the effort to implement the goal of three million persons receiving ART by 2005.

ART is best conceived, and in many environments best provided, as part of a continuum of prevention and care for sero-positive patients which embraces testing, behavioral counseling, psycho-social support, prevention of vertical transmission, treatment of opportunistic infections, home based care, nutrition support, and ART. A purely clinical approach is not only wasteful of human resources, but inadequate as a response to the many needs of the sero-positive patient. WHO (2003)[10]

Health Human Resources Required for Antiretroviral Therapy WHO 3 x 5 Initiative

HRH Providers	Services	Settings
Persons with AIDS, Lay counselors, Social workers, Psychologists	Counseling, education, monitoring compliance, psychological support	Home, community, health centres (including primary care & ART centres)
Traditional practitioners	Patient recruitment, reinforce treatment decision, potential ART providers in future.	Community
Midwives	Prevention, referral for treatment	Community, primary care and MCH health centres.
Nurses, Nurse assistants	Prevention, medical exams, dispense ART, monitor patients' conditions	Community, health centres, hospitals
Pharmacists, Pharmacy assistants	Dispense ART, maintain supplies, monitor dosage	Community, health centres, hospitals.
Lab technicians	Diagnostic tests	Hospital, diagnostic labs, health centres
Physicians, clinical officers, medical assistants	Prescribe ART, treat TB and opportunistic infections, monitor patients' conditions	Community health centres, hospitals

Source: adapted from WHO 2003.

Who should respond to present challenges?

Demand for HRH has a global dimension and a country dimension. Within each sphere there are many organizations and individuals that share responsibility for maintaining demand or for responding to it.

Globally, demand is financed by national governments, donor countries & agencies, as well as by international financial corporations. Influences are usually positive, as in the case of funding through direct grants, targeted initiatives or contributions to sector-wide approaches to planning (SWAPs). But international agencies can also have a negative effect on demand, for example structural adjustment programs that require countries to limit expenditures on social services and health. Non government organizations (NGOs) have traditionally played an active role in developing countries, encouraging demand through education and responding to demand through direct provision of services. International agencies such as WHO, UNDP and UNICEF play a large role in stimulating and shaping demand for HRH through health awareness initiatives and through the dissemination of standards for care.

At country levels, demand for HRH usually originates predominantly from ministries of health, which employ public sector health workforces and/or approve budgets and number of posts in health agencies or decentralized administrations. Privately owned organizations such as hospitals or large medical practices also exert demand for HRH. Large industrial firms often employ or contract with health workers to provide health services to their workforces.

Community organizations and individuals are an important source of demand for HRH through their choices among available practitioners. These choices are constrained by ability to pay, which is typically very limited. Choices are also constrained by the availability of different provider types. Allopathic medicine is available in all countries, but often in very limited supply. Traditional practitioners or healers are also used extensively in most countries, and are often the primary source of care (e.g. in Indonesia, where 54% of the population uses traditional practitioners and some hospitals have opened wards for traditional practice).[11] In other instances traditional practitioners complement the allopathic system and populations use one or the other depending on the nature of their ailments.[12,13]

The question of who should respond to present challenges could be answered by saying 'everyone', but such a response can be disingenuous when we consider the nature of health challenges and the state of health workforces in developing countries. The health systems of most of these countries are under great stress as the result of a host of factors:

- Health-related conditions such as epidemics (i.e. AIDS, TB, Malaria) and new treatment requirements caused by the epidemiological transition (aging populations that have become exposed to health threats from chronic conditions).
- Health workforces that are often understaffed, poorly paid, ill-equipped, stifled by bureaucracy, threatened by infection, torn by loyalty to public and private sectors and undervalued by their employers.
- Financial support that is insufficient to maintain effective demand at levels that are required in order to combat health threats and meet universal goals such as the Millenium Development Goals (and formerly, Health for All).

These factors suggest that responses to present challenges should be led by **policy makers at both the global and national levels**. Informed leadership is essential if we seek to transform health systems so that they can reach their potentials for equity and efficiency. Leadership is also necessary to tap into the pools of insight and innovation at community levels and to learn from these assets. Accordingly, this report is addressed primarily to policy makers. Nonetheless, the Working Group also wishes to reach a broader audience, with a view to encouraging opinion leaders and interested citizens to participate in the process of developing solutions to present challenges.

Key messages

Certain messages have emerged from the discussions of the Working Group and the analysis contained in background papers and literature reviews. These messages can help to condition our approach to specific problems. Essentially, we think a pragmatic approach is called for, yet we should not be boxed in by conditions that have limited progress in the past.

We know a lot about how human resources for health should be organized and directed. We also know how to motivate the workforce - in theory. We have a lot of insight into problems that have occurred with policies implemented in the past.

The main constraints in getting from where we are at present to where we would like to be involve ways to overcome impediments at country levels. The first set of constraints consists of (I) severe and changing health needs and (2) limited economic and institutional capacity. These conditions affect the ability to improve health systems and HRH. The second set of constraints consists of political and professional rigidities, which affect the willingness of governments, bureaucracies and professional groups to adopt new models for the provision of health services.

This report seeks to develop sound and realistic recommendations that can avoid past mistakes; build a knowledge base to assist countries and global stakeholders; and provide a roadmap for policy makers and managers to implement solutions that are appropriate to their own circumstances.

Box 1.2: Demand and Challenges for HRH

Challenge: Create and maintain an effective, efficient and motivated HRH workforce to provide preventive and curative health services within the limits allowed by a country's scarce resources. This challenge involves a qualitative dimension (e.g. quality equity and accountability) as well as a quantitative dimension.

Meeting the demand for health workers means finding the right mix of skills with available resources. Successful responses to HRH demand involve management skills, careful planning, incentives to motivate and retain health workers, appropriate technologies and transportation.

In economic theory, equilibrium occurs when demand and supply are equal. Equilibrium is not an appropriate concept to describe the health systems of developing countries, which have many unmet needs. The degree of balance between needs, demand and supply that does exist is often destabilized for a number of reasons.

- Demand for health care tends to increase as populations and economies grow.
- Macroeconomic reform, realignment of the roles of public sectors and health systems financing reforms have decreased resources available for the health workforce, impairing their ability to function efficiently. Yet demand has increased as economies modernize and populations gain more choice in their consumption of goods and services.
- Unexpected shocks, such as the emergence of SARS and avian flu, have caused large and urgent increases in demand for effective interventions.
- Demand for health workers increases as the result of global investment in health facilities and new technologies.
- Increasing demand in developed countries often leads to recruitment of professionals from developing countries, with severe consequences for fragile health systems.
- Demands for more workers and different skills occur as levels of urbanization and population mobility increase, providing larger proportions of the population with the potential to access modern health care.
- Growth of private sector health care, which is usually an urban phenomenon, attracts professionals from rural areas and from public health care systems. This presents a challenge for countries to find the right alignment of public and private providers to meet public health goals.
- Rural areas throughout the world report excess demand for health workers, often due to unattractive professional working environments. HRH migration from rural to urban areas also creates imbalances between demand and supply, usually leading to shortages in rural areas and surpluses in urban areas.

Chapter 2
Influences External
to Health Sector Control

The Working Group has identified a number of topics that have had an important role in shaping the evolution and the future prospects of health workforces in developing countries. This chapter reviews topics that are usually outside the control of health administrations. The topics include macro economic conditions and policies; restructuring and reform of public sector administration and finance; international trade and international migration. These issues have diverse dimensions but they are linked by an imperative for countries to adjust to global economic trends.

The first four topics are presented in what is arguably a natural order: macroeconomic conditions have beena major cause of public sector reform, including decentralization of administration and finance. Health sector reform has usually been implemented as part of larger public sector reform. The last two issues (international trade and migration) are imbedded in recent trends to globalization of markets, including markets for health care and health human resources.

Macro Economic Effects and Policies[i]

A background presentation prepared for WG3 made the point that 'Money is the currency for demand.' (Preker, 2003).[14] In a macro economic perspective demand for health care refers to global or country finance of health services. Global health spending is estimated by the World Bank to be approximately $2.6 trillion. Developing countries, with 90% of the world's population, account for only 11% of global health spending. Inadequate financial capacity often limits the ability of developing countries to employ the required number and mix of health workers to meet health goals. In these circumstances health care labor markets are underfinanced. Predictable consequences include difficulty recruitingand retaining workers with marketable skills, poor morale and insufficient infrastructure.

Macro economic problems in developing countries were exacerbated by global recession combined with inflation during the 1980s, another recession in the early 1990s followed by adverse investment trends in Asia and steep declines in stock market values during the early 2000s. Government deficits increased rapidly during the 1980s. Real incomes of country populations decreased as inflation eroded purchasing power. These conditionsled to a crisis in government finance in many countries.

Policies adopted to cope with financial crisis included fiscal stabilization and structural adjustment (Table 2.1). These policies were promoted by international financial corporations and were often required as conditions of financial aid. Stabilization policies reduced public sector spending while structural adjustment policies

[i] *This section is based largaly on a presentation by Alex Preker at a 2003 conference in Annecy and a subsequent paper cited as Preker et al, 2004.A number of other sources have been used as well, and they are cited.*

Table 2.1
Macro Economic Adjustment Policies

Policy and definition	Economic strategies
Fiscal Stabilization Reduction of national expenditure in order to balance government budgets.	Modification of tax policies. Public sector expenditure reduction and reallocation.
Structural adjustment Attempts to increase GDP by shifting resources to economic sectors that can compete in international markets.	Trade liberalization. Changes in public and private ownership of the means of production.

Source: Adapted from Preker et al. (2004).

encouraged a greater reliance on economic markets to encourage economic growth. These policies anticipate a reduction of inflation, a reduction of wage levels and/or a reduction of employment in the public sector. Labor mobility is required so that jobs can move to more productive sectors, especially the production of commodities that are exportable on world markets or commodities that compete with imports (Preker et al, 2004).[15]

In developing countries, reductions in wage rates were difficult to implement because salaries were already low. Workers often resist attempts to reduce wage rates, raising the prospect of conflict within the public service. In some countries the response was to delay wage payments or default on them. Two other conditions made fiscal stabilization and structural adjustment problematic in the economic environment of the 1980s. The first was high inflation, which reduced the purchasing power of wages. The second was high unemployment, which meant that there were few prospects for re-employment of persons laid off. The 1990s recession was not accompanied by high inflation, but by then a number of countries, particularly in Africa, were in a state referred to by the World Bank as long-term economic stagnation.

Many governments were able to transfer inefficient public enterprises to the private sector, or to implement strategies such as corporatization to make them more efficient. Health services have several characteristics that distinguish them from most other economic commodities, however, and almost all countries recognize a role for government in financing or providing health services. Public health and primary care are examples of basic health services that governments are expected to ensure for their citizens.

Economic trends did not reduce needs for health care and health workers. Poverty often increased for large proportions of the population in many countries, causing health indicators to decline. At the same time, many economies were modernizing and the growth of private markets provided enhanced incomes for subsets of the population who were able to adapt to entrepreneurial pursuits. Demand for technologically advanced services increased at the same time as the ability of governments to sustain an effective health workforce decreased. The rise of private providers was a response to new demand and decreased public capacity, but it often occurred without the standards and accountability normally associated with professionalism and regulation.

Most low-income counties have great need for effective health systems but do not have effective demand due to severe financial constraints and low income per capita. Solutions to this dilemma are illusive. In the long term, economic growth, adequate revenues for public health systems and appropriate HRH management skills will all be necessary. For now it is necessary to learn how to get the best from available resources, which will place most of the emphasis on management. Careful analysis and synthesis of lessons from experience will be essential to realize the potential of these approaches.

Box 2.1: Macro economic Shocks and Challenges

GDP declined at an average annual rate of 0.7% in the least developed countries during the 1980s. Real income per capita decreased by 12.5% in Africa and 9.1% in Latin America during this period.[16]

In 1999, 23% of the populations of developing countries were living on less than $1 US per day, a decrease of 6 percentage points from 1990. The percentage increased, however, in the regions of Europe and Central Asia, Latin American and Caribbean, and Sub-Saharan Africa. In Sub-Saharan Africa, 49% of the population lived on less than $1 per day in 1999.[17]

Africa accounts for only 0.4% of global health spending and Asia accounts for only 3.5%. Developed countries account for 88.9% (Preker, 2003).

Macro economic problems that limit health spending in developing countries include :

- Government revenues are low as percentages of GDP.
- Tax systems are often regressive, placing a larger relative burden on low-income taxpayers.
- Low-income countries have below-average levels of revenue pooling (i.e. cross subsidies from rich to poor, healthy to unhealthy and productive to unproductive segments of the population).
- The benefits [in a financial sense] of public sector health care in low-income countries tend to accrue mainly to higher income groups.

Consequences of economic shocks - examples from case studies:
In Mongolia, the real purchasing power of government budgetary expenditure dropped by over 50% from 1990 to 1993. Health status, unemployment, poverty and nutrition were adversely affected by economic conditions. Health staff declined during this period, with the largest decreases among nurses and mid-level workers.[18]

In Nepal, economic restructuring resulted in the retirement of many professionals at the peak of their ability at a time when the health system was under stress to adapt to new health needs.[19]

Public Sector Reform and HRH Demand[ii]

If efficiency, equity and effectiveness were the goals for health sector reform, then it has often led to greater inequity. Jane Lethbridge, 2003.[20]

'After some years of experience, there are indications that these reforms have not kept all their promises. In many cases privatization has led to lower salaries and job losses in the public sector and to a deterioration of working conditions for health workers in the private sector…a demoralized, insecure, stressed and overworked workforce.Standards of care have declined at a time when patient expectations have risen.' WHO' discussion paper, 2002.[21]

Public sector reform is a term used to describe a number of initiatives that seek to change the way in which the public sector of a country is organized, financed and/or delivers services. Initial models for public sector reform originated in developed countries as they sought to adapt to lower financial capacity caused by macro economic trends during the 1980s and 1990s. These economic trends, combined with a more conservative philosophy about the role of governments, tended to encourage market-based strategies in preference to a direct role for governments in economic affairs. Donor agencies played an extensive role in promoting and funding public sector reform in developing countries.

Health sector reform is usually one dimension of public sector reform. The broad policy framework adopted as part of health sector reform is usually determined by government departments of finance or civil service rather than health system administrators, however. Reform measures usually incorporate some or all of the policy options defined in text box 2.1. The package of reforms and specific measures within each type of policy vary widely and even the definitions overlap to some extent. Analysts have noted that these reforms tended to emphasize efficiency rather than equity.[22]

Reform measures that affect the HRH workforce often include decentralization of authority and privatization (which are discussed in other sections of this report); staff reductions; loss of security in new financing arrangements and uncertain lines of accountability.

Effective demand for health care and for health providers is almost certain to be affected by public sector reform measures. Often the effects were unintended or arose due to conflicts between financial and social priorities. User fees and privatization have direct effects on the demand for health services, with negative impacts that are greater for the poor whose resources are severely stressed trying to maintain other necessities of life. Privatization sometimes resulted in a reorientation of services to provide more technologically advanced services to urban populations with a preference for modern care. Labor markets change as a result, with effective demand increasing for the highly-skilled profes-

[ii] *This section is based on a report for the working group authored by Jane Lethbridge. Additional sources have also been used and cited.*

Box 2.2: Definitions

New Public Management (NPM). Usually involves [23]
- The separation of policy and financing from delivery of services, with the latter role contracted to public agencies or private firms.
- Incentives to improve employee performance.

Characteristics of NPM reforms that impact HRH have included conversion of government departments to independent agencies, privatization, contracting and internal markets.

Fiscal Reform. Key features involve:
New budget management systems that include financial planning, mechanisms for monitoring output and controlling performance.
Improved use of resources, which often involves downsizing of the workforce.
Improved revenue generation, which often involves user fees for public services.

Market Mechanisms. Forms of implementation include:
Privatization of provision and/or finance.
Corporatization, which introduces business principles to public sector agencies (e.g. hospitals).
Internal markets, which create a purchaser - provider split in the finance and provision of services.

Civil Service Reforms
Often includes reducing the number of public employees and changes to compensation packages.
May involve transforming government departments into semi-autonomous agencies (e.g. health service agencies).

sions or newly trained graduates and decreasing for older workers and health professions that provide primary care.

Negative impacts of public sector reform on HRH demand and the quality of management frequently resulted from a failure to properly implement reforms. This can happen where lines of accountability are blurred by change or where reforms are announced and then only partially implemented. In other cases there may bea conflict between stated intentions and methods of implementation (e.g. policies implemented in the name of efficiency that simply reduce to cutting-costs). Specific problems in HRH management that seem to be widespread include:

- The growth of an unregulated, and sometimes ignored, private sector competing with public sector providers.
- Defection of underpaid staff to the private sector and dual public-private practice by physicians.
- The legal status and accountability of public employees has changed with contracting and internal markets, often leading to confusion and insecurity.
- Loss of institutional memory, organizational culture, leadership and morale, which have often contributed to stability and prestige within the public service.

Box 2.3: Impacts of Public Sector Reforms on HRH

Remuneration policies implemented in Eastern and Southern Africa as part of public sector reform involved cutting salaries, restricting increases, consolidation of non-wage benefits into salaries, salary increases for specific groups, re-grading of jobs, performance assessments.[24]

In Tanzania and Botswana, health staff were transferred to local government agencies while senior staff remained at the MOH. This led to breakdowns in loyalties and management responsibilities.[25]

In Burkina Faso, there was resistance to reforms and a decline in standards of service between 1986 and 1997.[26]

In Eastern and Central Europe, women employees were the most affected by reductions in jobs in the health sector (ILO, 1998)[27]

In Bangladesh, employees responsible for implementing technical aspects of reform were uncertain as to the need for and the benefits of reform.[28]

In Mexico, financial reforms led to reductions in maintenance of health facilities and reductions in the wages of employees, leading in turn to reductions in the quality of health care.[29]

Source: Examples discussed in Lethbridge (2003).

Diagnosing problems and finding solutions

Understanding the limitations and processes of public sector reforms are important first steps in implementing or modifying reforms to ameliorate negative effects on the HRH workforce. Saltman points out the need for governments to identify methods of health reform that are appropriate to their own circumstances. He concludes that market-based mechanisms were relatively successful in publicly regulated and accountable health systems. These characteristics often are not present in developing countries.[30]

In a series of studies of NPM reforms in Africa, Asia and South America, Batley and colleagues concluded:[31]

- Economic crises have driven change while creating conditions that increase resistance to change.
- Externally driven reforms seldom succeed; local ownership and support from the public are necessary.
- Support for human resource development and improved public information is essential to the success of reforms.

- Reforms that avoid creating complex new organizational arrangements stand the best chance of success.

- Governments have weak capacity 'to perform market-sensitive regulatory and enabling roles; these roles need either to be strengthened or to be avoided...'

The examples discussed in the two text boxes above illustrate the importance of adapting reforms to circumstances that exist in developing countries. As shown in the Chile example, corrective measures can be taken where past attempts at reform have not been successful. Capacity to implement reforms and acceptance by affected populations are important conditions for success.

The challenges for HRH management in public sector reform consist of (1) adapting to change by identifying and building on existing strengths (2) advocating for a strong health system so that equity and health are not casualties of reform. In view of the very limited financial capacity in most developing countries, the most promising approach will be to identify primary care models that are working effectively at present and build on them. Social movements can also help to build support for community action in the areas of health education, nutrition, disease prevention and compliance with treatment, which is especially important in the case of TB and ART forAIDS.

Decentralization[iii]

Evidence on decentralization compiled for the Working Group on Demand demonstrates that: *'long-standing disregard of the human resource arena has resulted in the emergence of important and problematic challenges that impede the creation of an appropriately deployed, well-trained, and motivated workforce'*.

Key challenges:

1. *To define the essential human resource policy, planning and management skills that national human resource managers working in decentralized countries must possess.*
2. *To define and implement evidence-based strategies to address equity concerns in staffing.*
3. *Urgent action to improve health worker motivation and performance.*
   R-L Kolehmainen-Aitken (2003).[32]

Decentralization has been a key feature of many public sector reform initiatives. Proponents argue that decentralization allows more local input and produces results that are sensitive to local values and acceptable to local populations. In terms of resource management, decentralization can eliminate rigidities caused by excessive bureaucracy and encourage local managers to use initiative in solving problems. Critics argue that decentralization is often code for reducing financial support and downloading problems to local levels of government. Whatever the motivation for decentralization at national levels, its affects on health systems have often been profound.

A background paper prepared for the Working Group analyzed the impacts of decentralization on three key HRH groups in country health systems and identified key issues from the

[iii] *This section is based on a report for the working group authored by Jane Lethbridge. Additional sources have also been used and cited.*

Box 2.4: Reform in Chile - Reversing course to correct mistakes

In Chile, health care reforms prior to 1990 resulted in underfunding of the public health care sector, transfer of resources from public to private sectors and private insurance that was effectively limited to young adults. Health budgets declined. Labor relations in the health workforce worsened. There was widespread dissatisfaction among the population with health services.

A new government elected in 1990 has instituted a number of changes to reverse the negative effects of previous policies. These changes include modern management techniques and decentralized personnel management in HRH. Career paths have been established in the public service. Additional measures include dialogue with the civil service about further reforms and policies to link pay to performance.

Source: Case study in Lethbridge (2003)

perspectives of each group. These groups are local health managers, who typically face new responsibilities; health workers, who are required to deal with new tasks and lines of authority; and national health leaders, who must adapt administrative processes to new national policies. The concerns are listed in Table 1. The priority and urgency of the concerns listed will need to be considered in a context that recognizes the institutional and managerial capacity of each country seeking to implement policies of decentralization.

An important caveat when identifying policy options to deal with decentralization is that the extent to which responsibility is devolved and the form of decentralized administrations are always important considerations.

- Options for decentralization follow a gradient of responsibility transfer, from deconcentration within a national ministry to privatization or contracting with NGOs and non-profit organizations.
- Workers might remain in a national civil service but be accountable to local administrations. Alternatively, they might be transferred to local levels of government or to autonomous health service agencies.
- Local managers and employees may find it difficult to understand how much authority has really been transferred. They may find it difficult to navigate the bureaucratic complexities that often accompany transfers of power, especially in the initial stages of implementation.

Table 2.2
Concerns of Key Actors in Decentralization

Groups affected	Concerns
Local health managers	• Improved staffing arrangements • Improved performance and productivity • Improved personnel management
Health workers	• Stability of employment • Salaries, benefits, working conditions • Equitable treatment • Professional development • Career development & mobility
National leaders	• Strategic planning for HRH • Regulation of training & practice • Oversight to ensure equity • Legal protection of staff

Source: Adapted from R-L Kolehmainen-Aitken (2003).

Impacts of Decentralization in Low and middle income countries

A literature review in the background paper found the following results:

- Little evidence of new job posts, job re-profiling or improved staff mix.
- Local managers' ability to create new jobs may be constrained by a centrally controlled civil service or limited budgets.
- Planning and human resource management skills are generally weak at local levels.
- Political interference and nepotism often hamper personnel management.
- Human resources databases often deteriorate as aresult of decentralization.
- Effective performance management is rare in developing countries (even before decentralization) due to the lack of key prerequisites such as a living wage, supplies and transport.
- In some countries the complexity of procurement systems and reduced budgets after decentralization have compromised the levels of access to supplies and transport that existed before decentralization.
- Equity suffers when workers are paid unequally for the same work in different localities or administrative units. Inequalities arise through salary levels, pension arrangements, the existence (or non-existence) of bonuses and benefits, working conditions and access to a share of user fees or informal payments.
- Delayed payment or non-payment of wages may occur more frequently for decentralized workers than for centralized workforces in poor countries.
- Opportunities for professional development and career mobility have suffered as the result of decentralization in some poor countries. Causes include reduced training budgets, isolation from national training programs and reluctance to release staff for training programs due to shortages of personnel.

A recent ILO report on decentralization noted that traditional bargaining systems have changed, with more negotiation at the decentralized unit level, and more individualized patterns of remuneration (ILO, 1998). The report noted negative effects on the workforce, for example increases in overtime and unsociable working conditions as a result of reform processes and cost-containment measures in countries such as France, Germany, Sweden and the United Kingdom. In addition, the intensity of work has increased greatly, even if the actual hours of work have not changed much.

Box 2.5: Problems in health sector decentralization

In Nicaragua, decentralization was characterized by budget cuts, reduction in resources for primary care, user fees and privatization.[33]

In Indonesia, power to hire, train, transfer and fire personnel was transferred to regions. Alleged results include favoritism and an unequal distribution of staff. Plans for and funding of training programs are uncertain. Health staff are concerned about removal from career paths.[34]

Mexico decentralized health sector authority from federal to state governments. State governments have concentrated available personnel in state capitals. Municipalities claim the result has been to create new centralized authorities at state levels.[35]

State governments in Mexico have been unsuccessful in having local universities and health institutes provide post-graduate training and continuing education for public health managers.

In Uganda, resources at the local level were diverted away from primary health care following decentralization and cancellation of a central government block grant. Other negative impacts included problems of financial management, corruption and concerns over quality of services.[36]

Health sector financing reform

Health sector financing reform is closely linked to public sector reform and decentralization. Health sector financing reform usually results from national policies, yet there is often scope to adopt or modify specific initiatives inthe health sector in order to conform to public policy imperatives.

One of the most studied initiatives in health sector financing reform has been the imposition of user fees in publicly owned health centers and hospitals. Evidence indicates that user fees paid through fee-for-service charges are damaging to objectives of equity and access by the poor,[37,38] and have not served to increase efficiency.[39] Other measures in health financing reform have included the introduction of insurance, community financing schemes, contracting-out and privatization of some services.

New initiatives in service delivery include packages of essential services, introduced by the World Bank in 1993.[40] Concerns in implementing essential packages include targeting services to key populations such as the poor and rural underserviced areas. Cost estimates used in planning need to take into account local patterns of delivery and cost structures. There is also a concern that the definition of essential services may become unwieldy as numerous groups advocate for inclusion of the programs they support in the package.[iv] One potential approach to deal with the latter circumstance is to allocate most government funding to a service milieu structured so as to include essential services (e.g. primary care programs and rural health facilities that incorporate health education, immunization and preventive services).

The working environments and responsibilities of HRH can be affected in many ways by health sector financing reform.

- Contracting or privatization may shift employment from public agencies to autonomous agencies or private businesses, resulting in less security.
- Providers may voluntarily move from public employment to private practice or engage in dual public and private practice.
- Public sector managers often face new responsibilities in planning and coordinating services where new actors either compete or (should) cooperate. Managers of hospitals and other institutions, many of whom were trained as medical professionals, are often required to adopt business principles without adequate training in management skills.

[iv] *Both of these situations were experienced in Bangladesh during preparation for the Fifth Health and Pupulation Plan in 1996 & 1997.*

- Employees and their unions are key players in determining whether reform initiatives will succeed or fail, yet they frequently are left out of planning processes.

Health care financial reforms lead to changes in market characteristics that impact the demand for health services and the skills required to provide them. Developing countries usually differ from developed countries in health care market characteristics.[41] Key differences include limited risk-sharing and fragmented systems of finance. Provider behavior is less predictable due to weak regulation, absence of a tradition of professionalism, blurred boundaries for scope of practice and poorly organized systems for referral of patients. As a result, markets lack the stability associated with countervailing power in market theory or regulation in controlled markets. Results include opportunistic behavior, informal payments to obtain access and diversion of patients from public to private practice by physicians who practice in both venues.

Within public sector health centers and hospitals, competition for reduced resources may have undesired results for patterns of care. Where public facilities depend on private finance, as in China, preference may be given to services that have low price elasticity of demand (e.g. inpatient diagnostic tests). Preferred access may also be given to higher income persons with influence[42] or to persons who make unofficial payments to physicians and other staff. Preferred access or discounts for privileged classes have also been reported in private facilities.[43]

Health workers are important stakeholders in the success of reform. Rigoli and Dussault (2003)[44] point out that changes in working conditions that reduce security (such as flexible work arrangements, layoffs and performance measurement) also change the dynamics of employer and employee relationships, with self-interest replacing a shared work ethos and permanence of employment. Health sector financial reform measures should be sensitive to impacts on HRH and to the reactions of the health labor force. Important issues when managing change include security, retraining, understanding the need for reforms and, as far as possible, a sense that workers can influence the nature of reforms (see text box).

A key issue in health sector financing reform is the importance of preserving primary care. Primary care systems that use local workers to provide prevention and basic care are vital to health systems in poor countries and seem to be resilient in the face of change. Yet they are unlikely to have strong voices to compete for support during financial restructuring and reduced funding.

Box 2.6: Health Workers and the Reform Process

'The importance given to the human resources factor cannot be disregarded in the strategic planning and implementation of the reform process … In one way or another, the reactions of workers will influence the process and affect the plans.'

'A high degree of coherence between the institutional culture and values, the objectives of the reform instruments, and the tools and timetable of the implementation process facilitates the commitment of workers to the reform process…people who work in health services easily perceive the non-alignment between these components of the reforms.'

'Many well-planned transformations failed because the managerial or financial tools were not adapted to the proposed changes, creating labor turmoil and opposition from workers.'

Source: Quotes from Rigoli and Dussault (2003).

Box 2.7: Primary Care Systems and Health Sector Reform

In rural areas of Iran, village facilities known as Health Houses are staffed by a trained resident of the village who is normally able to provide preventive health leadership, health education, simple curative care and referral to higher levels. This health care model has existed since the 1970s and has retained its ability to function in a changing social and economic environment.

In Mongolia the rural health delivery system consists of Soum health centers that serve a population base of approximately 2,500; and mid-level health professionals, known as Feldshers, who serve an average population of 50 to 100 families. Despite the success of this model in areas of low population density, health reforms proposed in 1997 envisioned converting the Soum health centers to private ownership.

Sources: Abolhassan Nadim (Iran) and T. Sodnompil (Mongolia). Authors of country case studies in Hicks and Adams (1998).

In China, 'barefoot doctors' (rural village residents with training in basic primary health care) became a model for rural health care in the 1970s. During the past two decades most barefoot doctors have upgraded their skills or have been replaced by persons with civil or military health care training. They are now referred to as village doctors. After major changes in health finance introduced as part of the socialist market economy, the medical incomes of village doctors in poor rural areas consist mainly of revenue from drug sales. Many also receive financial subsidies and in-kind income (e.g. housing) from villages in which they practice. They continue to be the main source of care for significant proportions of the rural population who cannot afford treatment in public health centers and hospitals that operate on a fee-for-service basis.[45]

International Trade and Service Agreements[v]

'International service trade can have significant negative implications on health care systems, particularly HRH. The main implications include internal and external migration of HRH, inequitable tiered health care systems, and running down of professional ethics.'

'Positive implications include influx of foreign currencies and capital, better opportunity for professional training, improving quality of care and access to high technology equipment. The benefits are mainly restricted to a small fraction of the society, however.'
S. Wibulpolprasert et al (2003)[46]

The above quotes from a background paper prepared for the Working Group on Demand illustrate that international trade can have both negative and positive effects on HRH supply and management.

Direct effects occur through international migration of health workers and capital investments in the health sector. (The issue of international migration is discussed in more detail in a subsequent section of this report.) Indirect effects include incentives to internal migration of professionals, competition for scarce national resources from new facilities, such as private hospitals, and foreign patients who travel to seek treatment.

[v] *This section is based on a report for the working group authored Suwit Wibulpolprasert and colleagues, Additional sources have also been used and cited.*

Table 2.3
Advantages and Disadvantages of Foreign Investment in Hospitals and Influx of Foreign Patients

Advantages	Disadvantages
• Increased access to modern technology. • Increased opportunities for training. • Influx of foreign patient equivalent to increased employment and earnings from services exports.	• Diversion of human resources from rural public to urban private health services. • More Thai patients could be served with the resources required for one foreigner. • Tends to increase inequities resulting from tiered health care system. • Profits earned by foreign owned hospitals are remitted back to investors' countries.

Source: adapted from Wibulpolprasert et al (2003).

International trade agreements seek to create standard rules for trade. The General Agreement on Trade in Services (GATS) of the World Trade Organization covers 12 service sectors, at least 5 of which are related to health care systems (Business, Distribution, Education, Finance, as well as Health & Social Services). It also covers 4 modes of service trade, i.e., cross-border trade, consumption abroad, commercial presence, and temporary movement of natural persons. WTO members have the option of committing to GATS rules in specific sectors and the health and education sectors have attracted the fewest commitments. Nonetheless, the direct effects or the fallout from international trade that occur outside international trade agreements have been significant in many countries.

Experience in Thailand found that investments in tele-surgery and telemedicine using satellite technology were not cost-effective. In addition there are unresolved issues of medical ethics and gatekeeper responsibility where physicians in different venues share responsibility for treatment. Commitments to trade in the financial sector led to an influx of low interest foreign loans. Increased investment in urban private hospitals resulted in internal migration of health personnel. The migration was cyclical, with greater concentration in urban areas while investments were increasing (1992-1997) followed by decreasing concentration after an economic collapse in 1997 in which some hospitals went bankrupt.

Foreign investment also brought an influx of foreign patients. While this is a positive factor for a country's balance of trade, it usually benefits a small fraction of the society and can also constitute a severe drain on scarce professionals. Estimates in Thailand suggest foreign patients could account for 12% of total health systems workload in 2006, and that the demand for physicians could increase by 4,000 full-time equivalents as a result. This increased demand could mean another period of severe brain drain from rural areas. A local expert has termed this effect, "virtual external brain drain", as human resources stay in the country, but mainly serve foreigners. Effects of this magnitude create difficulties in managing resources and in planning to meet future demand throughout the country. Additional concerns include loss of domestic control as foreign investors gain control of major health systems infrastructure. In the Thai case study, investors used local nomineesto circumvent limitations on the degree of foreign ownership.

The spread of multinational insurance firms, and their ability to institute new value systems based on profit-oriented principles, has led to concerns in Latin America, where multinational firms are replacing locally operated social insurance funds. Concerns for HRH include the introduction of managed care principles that require physicians to assume financial risk and/or limit patient access to care.[47,48] Critics argue that these changes to insurance systems have been introduced without adequate public consultation or debate.[49]

The mutual recognition of health professionals' degrees and licenses among the EU members since 1998, as well as the right to receive services in other EU members paid by national

health insurance systems, may increase inter-country flows of patients and personnel and affect national health care systems. Extensive studies are needed. The lessons learned can be beneficial to other trade blocks that are moving in the same direction.

Policy Issues

A balanced approach to international trade in health services should allow a country to benefit from new investment but not suffer the loss of HRH in key sectors such as rural public health services. Countries with a surplus of HRH may be in the best position to benefit from inflows of foreign patients, and outflows of health personnel. These countries, like Cuba, India and Philippines, are promoting them seriously.

Foreign investment should not compromise the ability of a country to set objectives for health care and provider modes of practice that are consistent with its social goals and culture. There is a danger that market based objectives of foreign controlled for-profit enterprises may lead to negative effects in some countries. Potential negative effects include conflict between ethics and profit motives, an increase in litigation and a need for complex regulatory regimes that tax the institutional capacity of governments.

International Migration[vi]

'Data…suggest that the 1999 guidelines [for ethical recruitment of nurses] may have had some effect in reducing [UK] recruitment from South Africa and the West Indies, but that this recruitment activity may then have been displaced to other developing countries.' B. Stillwell et al. 2003.[50]

[migration statistics] 'hide serious qualitative consequences…lost tutors and specialists, even in small numbers, may have a much wider effect on supply and quality of health workers. In some key specialties loss of 2 or 3 practitioners from a country may mean a complete closure of services.'
'Critically, most health worker education in sub-Saharan Africa is entirely at public expense and much of this investment is wasted [when health workers immigrate].' D. Dovlo, 2003

"Targeted recruiting of this nature by regional health authorities in some Canadian provinces in the recent past has already affected South Africa's ability to reform the poor health infrastructure inherited from our apartheid past, and this leaves us even less able to grapple with the serious HIV AIDS pandemic…Could I appeal to you and to your health administrators to take these concerns into account as you prepare your plans for the coming years." André Jaquet, South Africa's High Commissioner to Canada, in a letter to all federal and provincial ministers of health, 2001.

"I don't care where we're stealing doctors from - we need a doctor to keep this town vibrant." Pharmacist in rural Saskatchewan, Canada.
Both quotes from CMAJ (2001).[51]

[vi] *This section draws on a presentation at Annecy by B Stilwell, A Eltom & C Wiscow. Other sources include a recent study of migration by WHO AFRO region: other work by WHO, both published and in press: papers prepared for the Working Group by D Dovlo (HRH Wastage), S Wibulpolprasert et al (International Trade): and other sources.*

International migration of health workers is, arguably, one of the most pressing policy issues in HRH management. The issue is being studied extensively and there seems to be a consensus among both developing and developed countries that 'rules of the game' need to be implemented to protect poor countries that have acute shortages of skilled professionals. A resolution passed at the WHO Fifty-Fifth World Health Assembly requested WHO : 'to accelerate development of an action plan to address the ethical recruitment and distribution of skilled health care personnel...' [52]

While information about health worker migration is increasing, there are still serious gaps and deficiencies in databases presently available (Stillwell, 2003). Consequently the extent and complexity of health worker flows are not fully appreciated. As an example, it is difficult to interpret statistics on in- and out-migration in developed countries without knowing how much of the latter results from workers following a 'migration path' from one country to another. But there is no doubt that poor countries are net losers in the process. African countries have been affected in particular, with annual immigration to the UK equivalent to 2.6% of nurses in Zimbabwe and 2.0% of doctors in South Africa (WHO, Annecy, 2003). The majority of physicians trained in Guinea Bissau, Sao Tom' and Cape Verde, and 46% of those trained in Angola now practice in Portugal.[53]

International migration is subject to both 'push' and 'pull' factors (see text box). A recent analysis (Buchan et al, 2003)[54] concluded that the pull factors were the most decisive factor in migration of nurses. Considerable attention has been given to the push factors, but there seems to be less information about the origins of demand for foreign-trained professionals in developed countries. Analysts tend to assume that shortages drive foreign recruitment, which may be true in many cases. But often the shortages result from conditions that could be resolved in the recruiting country - such as working conditions that make it difficult to retain domestically trained nurses. The American Nursing Association (2003) maintains that foreign trained nurses tend to be recruited for jobs that have unsatisfactory working conditions.[55]

Primary care reform has been slow to develop in some countries, potentially creating imbalances in skills that affect the demand for foreign professionals. In many developed countries, for example, physicians are the first line of contact

Table 2.4
Supply of Physicians and Nurses in African Countries and In Importing Countries Discussed in This Section

Countries	Number per 10,000 population	
	Physicians	Nurses
WHO Afro Region (46 countries)	1.7	7.6
United Kingdom	16.4	49.7
Portugal	31.8	36.7
United States	27.9	93.9
Canada	18.7	74.8

Source: WHO HRH database.

in patient care, with the roles of nurse practitioners limited to practicing as assistants in physician-managed, fee-for-service practices. Nurses complain that their duties in health care institutions do not recognize their levels of training and that they are unable to assume the levels of responsibility for patient care that they are capable of assuming.

There is a lack of research about the factors at work in developed countries that lead them to recruit foreign professionals. A notable exception is the Thailand experience, in which emigration of doctors increased rapidly during a three year period in the 1960s, from 24% of medical school graduates in 1963 to 52% in 1965. Much of the outflow resulted from increased demand for doctors in the USA, due in part to the Vietnam War and in part to the introduction of the Medicare and Medicaid plans, which increased effective demand for physicians' services (Wibulpolprasert, 2003). This case study illustrates that temporary shortages in HRH can arise as countries adjust to sudden shocks that increase needs or an infusion of financial resources for health care. It also illustrates that developed countries prefer not to commit to the international service trade agreement on the flows of personnel, but rather to open or close their labor markets according to their internal demand. Another example is the UK, where international recruitment has been an explicit policy solution by government to rapidly expand the numbers of physicians and nurses. The need to expand the workforce was a legacy of poor workforce planning and low levels of training in the 1990's, and is being enabled by significant increase in National Health Service funding (Buchan and Dovlo, 2004) [56]

There is also a potential that developed countries will recruit professionals as a strategy to keep wage rates as low as possible. This proposition is intuitively reasonable and consistent with labor market theory. But the strategy would be resisted by unions and unionization is widespread among

public sector agencies. In the case of fee-for-service professionals such as doctors, professional associations behave similar to unions when it comes to fee-bargaining with governments and insurers. These facts suggest that wage rate strategies might not play a large role in foreign recruitment. There could be notable exceptions among private sector employers that are not unionized, however, and the question deserves empirical exploration.

At present 'shortages' of physicians are perceived to exist in developed countries even though ratios of physicians to population in these countries are many times the global average. Physicians are the highest income profession in many of these countries and there are surpluses of persons attempting to enter the profession (as measured by the number of applicants to medical school positions relative to the number of places available). Clearly, higher incomes (or fees for service) will not clear the domestic labor markets in these circumstances (see economics text box). A phenomenon that may be closely related to the perceptions of shortage is the widespread use of threats to leave as a strategy for physician groups negotiating fees or lobbying for legislative changes (e.g. relief from excessive malpractice litigation or interference with practice autonomy under managed care). Threats to leave are only effective if people believe there is a general shortage that makes replacement difficult.

A thorough understanding of both the push and pull factors is necessary to develop feasible policies to deal with the migration of health professionals. Approaches to solving the problem of international migration will need to address the causes in both contributing and receiving countries. Nations, just as individuals, tend to act in their own perceived interests. It is not clear if international agreements or codes of ethics will be able to restrain countries or employing institutions from seeking to obtain skilled health workers at the lowest possible cost.

The international immigration picture is not all negative for developing countries. A recent survey by WHO AFRO found that total health professionals had increased in the six countries surveyed, although the results were not consistent across professions-notably there were decreases in nursing. The number of physicians increased in Cameroon, Senegal and Uganda although public sector doctors decreased in Ghana, South Africa and Zim-babwe.[57]

International migration can benefit the economies of both contributing and receiving countries. India and the Philippines produce surplus physicians and encourage migration to foreign countries. Remittances to families who stay behind are an important component of foreign income in these countries. Adverse effects on health care systems are becoming evident, however. In the Philippines, health system administrators are concerned that the most experienced nurses are emigrating, often leaving hospitals to rely on novice nurses, who must be trained on the job in specialty areas such as surgery. [58]

Contacts between people trained in different systems and cultures can be mutually beneficial. International organizations should explore ways to encourage a two-way temporary exchange of professionals between developed and developing countries. Countries that benefit from immigration of professionals from developing countries should be asked to finance exchange programs. The challenge will be to gain from the beneficial side ofmigration and to minimize actions and effects that damage vulnerable health systems.

Box 2.8: Determinants of Migration

Push Factors
- Insecurity, including risks from combat and infectious disease.
- Insufficient income.
- High unemployment rates
- Unsatisfactory working conditions.
- Lack of leadership and vision in health system bureaucracies.
- Lack of professional freedom.

Pull Factors
- Higher incomes in recipient countries
- Improved working conditions
- Increased intellectual and cultural opportunities

Enabling Factors
- International standards for education
- International agreements (e.g. GATS Mode 4 agreements to allow for the temporary presence of persons from other countries.)
- International recruitment agencies

Sources: Stilwell et al (2003). WHO AFRO (2003). Dovlo (2003).

Discussion

The issues discussed in this chapter are predominantly economic. There is a cause and effect relationship between macro economic conditions and public sector responses. During the last two decades macro economic trends have created great problems for developing countries, leading to fiscal destabilization and attempts to restructure government finances. 'Reform' usually refers to attempts to streamline public sector institutions so that they are more efficient and responsive to populations. Yet most reform initiatives in developing countries have been driven by economic imperatives and sometimes imposed as conditions of aid by international financial organizations. Contradictions between stated policy and actual effects have resulted, such as increasing disparities in income and reduction in access by the poor to health care and education.

New methods of administration, such as decentralization, have been advocated or enacted without adequate preparation of either central bureaucracies or local administrators, and often in countries where institutional and managerial capacity are weak. Health budgets have not kept pace with inflation and increasing needs caused by epidemics and epidemiological trends. Workforces have been reduced. Salary payments have been delayed or defaulted. User fees, or informal payments sought by health workers, have had a negative impact on population access to health care.

What we can do - macro economics and reform policies

Reforms or attempts to implement reforms are inevitable so long as countries are under financial pressure. This reality is especially pressing when there is a perception of inefficiency in the public service. While experience to date with public sector reforms in developing countries has revealed mostly negative impacts on the HRH workforce (and those providing other government services), it is important to note that most of these experiences were driven by financial crises.

Governments have a universally recognized role in ensuring health care for their populations. One of the most problematic questions for governments is how to fulfill that role in the face of severe economic constraints. One approach is to define basic values and understand their implications for health systems. For examples, equity in the use of health services is usually an important societal value. Preservation of equity

means that reform measures should not impede the goal of allocating care according to the potential for cure, or prevention of deterioration of health states. The relative importance of public health, acute care and activities to combat threats such as AIDS are other questions that should be dealt with explicitly in public policy.

There are strategies that can be used to develop more promising reform policies. A key requirement for these strategies is that they must be sensitive to country financial, institutional and managerial capacity. They must respect local culture. They will require skilled leadership and effective communications.

The challenge for health care labor markets is centered in the question of how to attract and retain health workers with appropriate skills in economies that have severely constrained resources. There is no single answer to this dilemma. Countries, assisted by international donors, need to develop a series of solutions to address demand at several levels, including village health workers and staff in regional and tertiary facilities. Innovative thinking is required in order to use available funds to maximum advantage. The following recommendations will support these objectives:

Health Policy Recommendations

1. National governments should commit to strengthening health human resource management as a primary objective for improving health systems performance.
2. National governments and international donors should protect funding of HRH workforces in public sector and health reform policies.
3. Decentralization should focus on building capacity from the bottom up instead of delegating down. Strategies include:
   - Adopt models of prevention and primary care that have been shown to be effective, including new models of skills mix.
   - Link new community models with the existing system. Expand these programs quickly when they are successful and readjust to eliminate problems.
   - Complete decentralization of administration or finance should only be imple

Box 2.9: Economic theory and physician incomes

Economists point out that significant barriers to entry in the profession are an important reason why physician incomes are high in developed economies. These barriers include limited enrollment in medical schools, lengthy training periods and licensing bodies that are largely controlled by the medical profession. In the absence of barriers to entry there are examples of countries with a relatively large supply of physicians earning relatively low incomes (e.g. Eastern European countries of the former USSR).

Within a country health system, shortages of physicians may lead to higher offers of remuneration as communities compete for a share of the existing physician supply. This process bids up physician incomes but may not increase the total supply of physicians available to the country health system so long as barriers to entry exist. In effect, it is a zero sum game with winners, losers and higher costs of care overall.

Economic theories of physician response to increasing incomes cover a range of possibilities:

- The prospect of higher incomes may lead to greater supply as physicians choose work over leisure.
- Some studies of physician responses to higher incomes have found evidence of a backward bending supply curve - a term used to explain the tendency of some physicians to work fewer hours once income passes certain thresholds.
- Theories of demand and supply for physicians' services also include the 'target income hypothesis' and 'supplier induced demand.' These theories hold that fee-for-service physicians aspire to certain levels of income and will modify their advice to patients in order to achieve service levels sufficient to maintain target incomes. Refinements of this theory refer to 'physician enhanced demand,' recognizing that demand inducing behavior is constrained by professional ethics and concern for patients' well being.

mented when sufficient managerial capacity exists to create a reasonable expectation of success.

4. Health system planners should collaborate with trade specialists to craft negotiating positions that will serve the best interests of the health care sector in international trade and service agreements.

What we can do - Globalization and international migration

Global trade and international recruitment of professionals have had mixed effects on country health systems. In some cases globalization has hastened the introduction of new skills and new technologies. In most cases there have been negative effects, such as loss of skilled workers or mentors from developing to developed countries, and repatriation of profits to foreign owners. A balanced approach to international trade in health services should allow a country to benefit from new investment but not suffer the loss of HRH in key sectors.

Many countries have legitimate concerns about their right to choose models of health care that are appropriate to their own social and political systems. Foreign investment should not interfere with these choices. There is a danger that market based objectives of foreign controlled for-profit enterprises may lead to negative effects in some countries. Potential negative effects include conflict between ethics and profit motives, an increase in litigation and a need for complex regulatory regimes that tax the institutional capacity of governments.

International migration needs to be considered in an international context. Countries that involuntarily contribute health professionals to international migration flows will continue to do so unless there are fundamental changes in working conditions and remuneration for their

health workers. Yet the scale of the changes that may be necessary is such that strong support from developed countries and international agencies will be essential. In the end, willingness to stay at home might depend on safe working conditions and modernization of health systems in developing countries.

Countries that benefit from international migration should confront the weaknesses in their own health systems that lead to insufficient numbers of professionals to meet present and future levels of demand. This may mean changes to their policies for servicing rural areas, and working conditions that will encourage professions such as nurses to pursue long term careers in the health sector.

Countries around the world can benefit from contact with persons from other cultures and from sharing experiences. Realistic measures should be taken to ensure two-way flows. Options include (1) more training spots in developed countries conditional on trainees returning to their home countries for designated periods after graduation; (2) financial support for organizations that facilitate short term experiences for professionals from developed countries in developing countries (e.g. medicines sans frontiers).

The following recommendations will support these objectives:

International Migration Recommendations

5. The international community should strongly encourage developed countries to resolve perceived HRH shortages in ways that do not weaken developing countries by recruiting their scarce health professionals.
6. A global emergency response mechanism should be established to support countries in dealing with severe HRH shortages. Responsibilities of the emergency response mechanism would include situation analysis, formulation of solutions, and, when necessary, help to mobilize excess HRH from other countries to temporarily alleviate the situation.