The Health Workforce in Africa

Challenges and Prospects

A report of the Africa Working Group of the Joint Learning Initiative on Human Resources for Health and Development

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Preface

In January 2002, representatives of over 16 African countries as well as international organizations, held a consultative meeting in Addis Ababa, Ethiopia, to examine the state of the health workforce in sub-Saharan Africa (SSA). Participants came from ministries of health, education and finance, from health training institutions, WHO, World Bank, Rockefeller Foundation and other organizations. This was the first meeting ever held in which the various stakeholders met face to face to discuss the crisis facing the health workforce. In November 2002, the Rockefeller Foundation convened a large group of stakeholders to conduct a joint exploration on human resources for health and engaged the expertise of over one hundred global health leaders. This exploration, aptly named the Joint Learning Initiative on Human Resources for Health and Development, had eight working groups operating synergistically to conduct analytical work and strategy development over a period of 24 months. One of these, the Africa Working Group (AWG), was set up *"to map the current landscape of human resources for health in Africa, identify key issues and define a broad strategy to address the prevailing crisis in the health workforce".* Members came from academia, regional and international organizations, non-governmental organizations, and the donor community but took part in this exploration in their personal capacity.

To perform its task, the AWG adopted the following learning strategies: i) commissioned papers on key issues related to human resources for health to individuals who have had demonstrated expertise in the subject, ii) held three meetings (each for 3–4 days) in different sub-regions of Africa (March 27–29, 2003 in Cape Town, September 28–October 2, 2003 in Accra and May 29–June 2, 2004 in Mombassa) during which members held structured and intensive exchanges of views and forged consensus on the main recommendations for action, iii) actively sought the views of important stakeholders (e.g. heads of departments of human resource development in ministries of health and of medical and nursing health training institutions) in the sub-regions where meetings took place, and iv) maintained dialogue through email correspondence.

This report is based on the collective wisdom of its members as articulated during the meetings, the commissioned papers, and the views of the many stakeholders that it interacted with. The Working Group is deeply indebted to all those that contributed to this learning. National participants during our meetings in Cape Town, Accra and Mombassa enriched our discourses by sharing their local experiences. We are grateful to Dr. D. Ndushabandi from Rwanda, Dr. Ken Sagoe from Ghana, Dr. Gilbert Mliga and Dr. Sidney Ndeki from Tanzania, Prof. Miriam

Were and Dr. Tom Mboya from Kenya, Drs. H. Homberg, I. Imhoff and I. Mathauer from GTZ, P. Naidoo from Rockefeller Foundation (Nairobi office), Magda Awases from WHO/AFRO, and G. Dussault and O. Picazo from the World Bank. The Group also benefited from feedback received from the Coordination Working Group of the JLI, and in particular that of the Chair, Prof. Lincoln Chen.

The report was compiled by Dr. Delanyo Dovlo, member of the AWG, and finalized after successive iterations to accommodate suggestions of its members. However, we bear joint responsibility for any misrepresentation of the views of the members in the Working Group. The editorial assistance of Mr. Peter Thorpe is also acknowledged with gratitude.

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Abbreviations

AMO	Assistant medical officer
AMREF	African Medical and Research Foundation
ART	Anti-retroviral therapy/treatment
AWG	Africa Working Group (of JLI)
CBO	Community-based organization
CHW	Community health worker
CO	Clinical officer
CRHCS	Commonwealth Regional Health Community Secretariat
DFID	Department for International Development (UK)
DHMT	District Health Management Team
ECOWAS	Economic Community of West African States
ECSA	East, Central and Southern Africa
FDI	Foreign direct investment
GATS	General Agreement on Trade in Services
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross domestic product
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HIPC	Heavily-indebted poor countries
HIV/AIDS	Human immunodeficiency virus /Acquired immunodeficiency syndrome
HRD	Human resources development
HRH	Human resources for health
HSRC	Human Sciences Research Council of South Africa
ICN	International Council of Nurses
IDRC	International Development Research Centre (Canada)
ILO	International Labour Organization
IMF	International Monetary Fund
JLI	Joint Learning Initiative
LDC	Least developed country
LIC	Low income countries
MDGs	Millennium Development Goals
MIDA	Migration for Development in Africa
MTEF	Medium-term expenditure framework
NEPAD	New Partnership for Africa's Development
NGO	Non-governmental organization
OAU/AU	Organization of African Unity/African Union
ODA	Official development assistance

OECD	Organisation for Economic Co-operation and Development
PHC	Primary health care
PNFP	Private-not-for-profit
PRSC	Poverty reduction support credit
PRSP	Poverty reduction strategy paper
RQAN	Return of Qualified African Nationals
SADC	Southern African Development Community
SARA	Support for Analysis and Research in Africa
SSA	Sub-Saharan Africa
SWAp	Sector-wide approach
TB	Tuberculosis
THP	Traditional health practitioner
UNAIDS	Joint United Nations Programme on HIV/AIDs
UNECA	United Nations Economic Commission for Africa
UNISA	University of South Africa
USAID	United States Agency for International Development
USD	US dollars
WHO	World Health Organization
WHOSIS	WHO Statistical Information Service
WONCA	World Organization of Family Doctors
WTO	World Trade Organization

Executive Summary

The health of Africans is probably one of the greatest challenges to the economic development of the continent and its peoples. However the past two decades have led to signs of a decline in health status in the sub-Saharan region. Indeed life expectancy is estimated to have declined in 17 of the 48 countries in the region between 1970 and 1999 (Sanders D *et al*. 2003). Significant increases in population have not been matched by increases in health resources and in a number of countries the ratio of health professionals to population has remained stagnant or has even declined. Health services have also been challenged by the resurgence of some of the older communicable diseases such as tuberculosis (TB) and malaria and now by the recent onslaught of HIV/AIDS. To this we can add the paradox that earlier improvements in health and life expectancy are now challenging health systems with increases in non-communicable diseases.

Bond and Dor in a recent paper (2003) argue that the era of structural adjustment and free market approaches to health care has resulted in reduced public sector involvement in health including the loss of health workers through retrenchment and recruitment embargoes that may have deprived poorer and rural communities of access to health services.

More recently, the advent of health sector reforms especially those using Sector Wide Approaches, the new global funding arrangements, such as the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI), and the Heavily Indebted Poor Countries (HIPC) Initiative with its Poverty Reduction Strategy Papers (PRSPs) and Credits (PRSCs) may have created possible opportunities for an expansion of the pool of resources for health. The effectiveness of these interventions are not yet clear but how countries seize and utilize these opportunities will be important to how human resources for health (HRH) issues are resolved.Tackling Africa's health crisis requires appreciating and tackling the underlying paradoxes that subvert health systems in Africa (see Box). Some of these factors reduce the effectiveness with which the continent can respond to its health crisis.

Tackling Africa's health crisis requires appreciating and tackling the underlying paradoxes that subvert health systems in Africa (see box). Some of these factors reduce the effectiveness with which the continent can respond to its health crisis.

Box: Key paradoxes of health in Africa

- Africa has the highest burden of disease of any continent (per population) but has the lowest number and ratio of health workers per population.
- Despite higher maternal and child mortality than found any where else, Africa produces the lowest number of basic health workers.
- The core of Africa's health problems reflects primary health problems—infectious diseases, nutritional diseases and diseases arising from environmental problems—but uses the same profile of health workers and health services as the developed industrialized countries that have to deal mainly with problems of degenerative diseases.
- The spectrum of skill mixes in African health systems has been limited or reduced by banning the production of some mid-level auxiliaries at the same time as some developed countries, such as the USA, have expanded utilization of physician assistants, nurse anaesthetists and medical assistants.
- The majority of Africa's health workers serve a minority of the population found in urban areas where most of the health facilities are also established. The majority living in rural areas are often neglected.
- International lending organizations' policies have at times severely restricted access for the poor whilst at the same time the volume of international investment required to make a difference seems well below the levels needed to transform Africa's economies.
- Some 70% of Africa's population see traditional health practitioners but these indigenous health service providers are often not well organized and integrated into a country's health system and have not been studied and analyzed in much detail.
- In many African countries the curriculum of health training schools tends to focus on and reflect the health problems and needs of industrialized countries.
- Despite Africa's paucity of health professionals, large numbers of its trained health workers are routinely poached by the industrialized countries of Europe, North America and Australasia.

The report of the Africa Working Group (Joint Learning Initiative) is in 4 main parts covering a situation analysis, opportunities that arise and the preconditions for effective strategies. Part I discusses the health crisis in Africa and the human resources in health challenges as it tries to meet health objectives. It discusses the causes and underlying factors behind the shortage of health workers in Africa, and compares the situation with other parts of the world. The effect of other issues, including HIV/AIDS, on the workforce is also analysed in Part I. Part II examines the opportunities that currently exist and how the international community and countries can respond in making human resources in health systems capable of delivering the development goals. This section examines the role of various stakeholders at global, regional and national levels and discusses positive examples of action taken by some countries to counter the crisis. In Part III, the report looks at how Africa could respond to the human resources crisis and examines the policy environment for strategy development and implementation. Future challenges are also discussed including the macroeconomic and social environments that influence the organization of health services. This includes discussions of the World Trade Organization (WTO) and the General Agreement on Trade in Services (GATS) and its effect on the mobility of the health workforce.

In Part IV the report ends with recommendations that evolved during the working group's deliberations and are aimed at helping countries, regional organizations and international partners and agencies to construct a framework for tackling the challenges instead of simply offering standardised prescriptions.

Health Personnel Shortages in Africa

A recent article by Bloom *et al*., (2004) suggests that the economic changes that have happened in East Asia are a result of the growth of labour, physical capital and human capital, because of

Box: Structural adjustment and health systems: Cameroon

"In Cameroon, government reform was initiated in the early 1980s as part of their Structural Adjustment Program (SAP) administered by the World Bank and International Monetary Fund (IMF). Measures affecting the health sector resulted in suspending recruitment, strict implementation of retirement at 50 or 55, limiting employment to 30 years, suspension of any financial promotion, reduction of additional benefits (housing, travel expenses, etc.), and two salary reductions totalling 50% and a currency devaluation resulting in an effective income loss of 70% over 15 years. In addition, paramedical training for nurses and laboratory technicians was suspended for several years and schools closed.

The overall effect was dramatic. In 1999, the health sector budget had shrunk to 2.4% of the national budget from 4.8% in 1993. These adjustments occurred while in the private sector (40% of service provision—mostly denominational) income substantially increased adjusting again for the effects of the devaluation. Thus, the spread between public and private health worker income is large. Not surprisingly, in 1999, jobs in the public sector were about 80% unfilled, and Cameroon had a truly de-motivated health workforce".

Source: Liese *et al*., 2003.

significant improvements in health with average life expectancy increasing from 30 years in 1960 to 67 years in 1990, and declining mortality resulting in increased economic production. Africa needs similar achievements in health to drive its development

However, Kurowski (2003) in an analysis of information from WHO's Statistical Information Service on health worker employment in 183 countries, showed that the lowest quintile for doctors is made up of 37 countries of which 28 are low-income countries of sub-Saharan Africa. For nurses and midwives, the situation is slightly better with 22 sub-Saharan African countries among the lowest 37 in the world.

Macroeconomic and fiscal constraints. Despite the poor pay conditions of health workers, in most African countries remuneration still constitutes 55–75% of the recurrent budgets of public sector health services. The poor budgetary investment in health limits room for expansion of remuneration costs and then structural adjustment programmes with across-the-board freezes in public sector recruitment coupled with staff retrenchments have exacerbated the health worker shortages in the poorest countries (Corkery, 2000; Kanyesigye and Ssendyona, 2003).

International health worker migration – an ongoing challenge. The brain drain of health professionals has reached serious proportions and is currently likely to be the single most important source of attrition of the health workforce in many countries in the region. Whilst the numbers of African health professionals who register to practice in industrialized countries may be relatively low compared with India and the Philippines, a low supply base in many African countries means that even losses of a few people can have a very significant impact on access to services, especially for the poor.

The Africa Working Group does not doubt that the international exchange of professionals can also be beneficial. The exchange of ideas and acquisition of new skills and technology can enhance progress in developing countries and help to build local institutions when some professionals return. However whether the 'advantages' of migration can positively influence the health status of the population (especially the poorer marginalized groups) is not clear and no direct evidence has been elicited to show that remittances truly offset the loss of public sector investment in training. Quantitative data alone do not tell the complete story of Africa's migration crisis as the qualitative effects are even more severe. For example, the loss of trained nurse and medical educators, specialist doctors and other technical supervisors and researchers, creates serious constraints in sustaining the future training and supply of quality health workers and also has an impact on the quality of care provided.

The African Union (2003) estimated that given the cost of training a general practice doctor as

US$60,000, low-income developing countries 'subsidize' developed countries by US$500 million annually. UNECA (2000) also estimates that Africa must have lost US$1.2 billion from the 60,000 professionals lost between 1985 and 1990 alone.

Vujicic *et al*. (2004), in a study on wages and migration, illustrate the dilemma many African countries face. They show that purchase parity physician wages in the USA are 22 times those in Ghana and about 4 times those of South Africa. Wages of nurses in Australia and Canada were 14 times those in Ghana and 25 times those of Zambia, but just about twice those of South Africa. It is very unlikely that African countries will be able to bridge these gaps soon.

Information for planning. The paucity of information and data on human resources for health is serious and in itself is a constraint to understanding and resolving the crisis. The supply, deployment and effectiveness of human resources in health cannot be readily determined in many countries. Data on some less popular professions such as physiotherapists, optometrists and radiographers are not well reported. Available data are often outdated and thus not useful for meaningful planning.

Quality: The Value from Trained Health Workers

Whilst acknowledging that the supply of a trained workforce is limited, concerns exist about the ability of the workforce stock to deliver quality health services. The surge in emigration to developed countries supports the fact that African health professionals are trained to the same standards found anywhere in the world. However, various factors continue to constrain their performance and limit their output.

Low performance - skills mix and skills levels. One area of the mix of health workers where Africa appears to have an advantage is the general emphasis on its nursing cadres and mid-level providers, producing a ratio of nurses to doctors that probably reflects its primary care needs. However in utilizing other mid-level, auxiliaries and primary care workers the skill mix patterns have tended to follow models similar to those found in industrialized countries. The decision in several African countries (strongly supported by nursing associations), to abolish the training of enrolled (or auxiliary) nurses over extended the scope of practice of registered nurses at the lower end (by withdrawing staff who could do some of the less technical and manual tasks).

Several countries though have utilized mid-level 'substitutes' for some functions of physicians and other professionals. Studies in Mozambique show minimal differences in outcomes between operations performed by physicians and those by their substitutes.

Motivation and inadequate incentive schemes It is well recognized that Africa's economic difficulties lead to health worker remuneration that is de-motivating, however, a variety of factors related to job satisfaction, excessive administrative bureaucracy, uneven and unfair implementation of incentives and inappropriate application of health resources, create a work environment that is not stimulating. Health workers, especially those in rural areas, feel their services are not valued and cumbersome bureaucracy frustrates staff trying to obtain even the minimal incentives and benefits due to them.

Another constraint on health worker performance comes from the inability of the health system to function in a cohesive and efficient way. Drugs and other supplies often run out and equipment and other tools are not maintained and are often faulty, frustrating quality services even when health workers are skilled and motivated.

HIV/AIDS: The Straw that Broke the Camel's Back

The HIV/AIDS epidemic has swamped health services with patients and has began to push existing health conditions such as malaria (very severe in their own right), into a lower priority status. Despite Uganda providing at least one success story in dealing with HIV/AIDS and moderating its impact, this epidemic remains the

single most important disease challenge to health systems and to the workforce in Africa.

The epidemic has also had a direct effect on health workers themselves. In Malawi there was a six-fold increase in mortality of health workers between 1985 (0.5%) and 1997 (3.0%) and similar trends are found in other countries. A recent Human Sciences Research Council (HSRC) report from South Africa (Shisana *et al*., 2003) indicates that up to 13% of deaths among health workers between 1997 and 2001 were HIV/AIDS related. HIV prevalence among health workers was estimated at 15.7% in general, **but at 20% among younger health workers** (ages 18-35) and suggests that South Africa could expect to lose up to 16% of its health workers in future to AIDS related diseases if anti-retrovirals are not used. This flies in the face of one of the assumptions made in WHO's 3 by 5 strategy document (WHO, 2003, Annex 1, p. 41) that "*sufficient numbers of qualified staff are retained, recruited or return to the health sector...*" which is expected to result from "*National plans for human resource development and measurable progress in their implementation.*" Underlying this vague proposal is the fact that human resources are going to be critical to the success of the initiative and require specific solutions to be offered.

Enabling International and National Environments for HRH?

Over the past four years the health policy environment has taken cognizance of the value that a strong human resources stock has for the health sector and for the development of sub-Saharan Africa as a whole. A variety of meetings and consultations have led to policy declarations and proposals that create an environment for effectively tackling human resources issues. In 2002, the African Union at its meeting in Durban, South Africa, declared 2004 (the AU has apparently since moved this to 2005) a Year of Human Resources Development with special emphasis on health (African Union, 2002). Other examples of international action are:

- IOM's Return of Qualified Africans Nationals (RQAN) programme has evolved into a Migration for Development of Africa (MIDA) programme, concerned with temporary modes of utilization of diasporal resources.
- The WHO Regional Office for Africa initiated a regional strategy on HRH in 1998 and established a Multi-Disciplinary Advisory Group to advise the Regional Director.
- Agencies like the Global Fund to fight HIV/AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI) have improved the level of resources available for tackling priority diseases A critical issue will be how to avoid vulnerability of Africa's health systems to disease-specific programmes and the possibility that the morale of the health workforce will be compromised by programme specific incentives.

The Africa Working Group believes that the next steps involve translating the rich experience and recommendations arising from these international events into feasible national strategies and practical actions. National consultations on human resources are important first steps towards generating solutions and serve to set out clear strategies aimed at the priority challenges and must involve a coalition of policy-makers from all sectors that influence health—education, public service, economic planning, local government, the professions and their regulators, including paramedical and middle level providers, community representatives, civil organizations and NGOs in health.

New Roles of the State and Complementary Actors in HRH

A variety of other actors and stakeholders need to be incorporated into tackling the crisis facing Africa. The process must involve a re-think of how health systems are organized, and whether existing paradigms for organizing and delivering health services still stand.

Reforming and reorganizing health systems. One aspect of health sector reform is the increased roles expected for private sector participation. In Africa, state health services have had alliances with faith-based 'private-not-for-profit' (PNFP)

service providers and NGOs. Governments have subsidized the remuneration of PNFP providers in some countries and this relationship has now evolved in some places into agreements that will allow for complementary coverage of services. Some African countries have recently changed laws and allowed private practice to nurses and other non-physicians more likely to set up practices in deprived areas.

Using the community and its resources for health. The primary health care concept adopted in 1978 envisaged health systems that empowered communities to participate effectively in making decisions about health. The implementation of primary health care (PHC) created a wide variety of experiences about communities engaging in their own care. Dare's review of a number of case studies reveals some lessons for Africa in utilizing community resources as an integral part of the workforce (Dare *et al*., 2003). For example, a community TB care project implemented in some African countries shows consistently that treatment success rates were higher with decentralized/community approaches, ranging from 3% higher (Kenya, South Africa) to 18% higher success rates (Uganda). Lehmann *et al*. (2004) also suggest that large centrally managed CHW programmes have failed whilst schemes that were truly community-based worked well. Secondly, the use of community health workers (CHWs) in specialized situations was also explored where CHWs were used for specific technical tasks and this was also considered a more successful experience.

Alternative practitioners: the healing traditions of Africa. Africa has had long standing traditions of healing that are integral to the culture of its people. The evidence is that traditional health practitioners (THPs) remain a major source of care in both urban and rural areas. Expanding their role in the health system may increase access and relieve conventional western practitioners to concentrate on other areas of care. Some countries have started training programmes for traditional practitioners and others have established courses for pharmacists, nurses and doctors in traditional practices. Kenya has a School of Traditional and Complementary Medicine at Kirathi and the University of Zimbabwe includes traditional medicine and medicinal plants in its pharmacy courses.

It was shown in Uganda that THP collaboration led to significant increases in HIV information and testing in communities where traditional practitioners have been trained to integrate these activities into their practice. For example THP clients who agreed to be tested for HIV rose from 46% to 64% over a 6-month period.

Gender and health workers – what needs to change? The gender of the health workforce in sub-Saharan Africa is largely female especially at operational levels but top management and policy levels have been mainly male. In one country, 59% of all public sector health staff is female, but this declines to 33.5% at the MOH headquarters. Only 17% of doctors were female compared to 87.4% of registered nurses and 90.2% of enrolled nurses (Dovlo, 1998). Ngufor (1999) also points out that despite the female preponderance in the workforce in Cameroon, family and marriage culture tend to limit their distribution around the country.

The gender composition of the workforce has implications for the impact of HIV/AIDS on health workers. Female health workers are caregivers at home, as members of their community and as professionals. UNAIDS (Armstrong *et al*., 2004) has suggested that even under ordinary circumstances women are at an increased risk of HIV infection compared to men, which has implications for a largely female workforce.

Positive Lessons from Within

The story of the health and human resources crisis in sub-Saharan Africa is interspersed with actions by countries, sub-regional groupings, non-governmental organizations, donors and other partners that have tried in various ways to address various aspects of the problem. The Africa Working Group felt that the lack of adequate forums and resources for research and exchange of innovations and poor advocacy hides many positive experiences that could be scaled up into successful interventions. The report is illustrated with examples in supply of health workers, HR management and retention,

Box: De-linking health services from the civil service

"... Two of the countries examined, Ghana and Zambia*, are pursuing strategies of delegation to semi-autonomous public institutions. In each case, the Ministry of Health has sought to redefine its role from the traditional all-inclusive health sector manager to one of policy formulation, regulation, and monitoring. Responsibility for health service delivery is to be delegated to an autonomous public institution, the Ghana Health Service in the case of Ghana, and the Central Board of Health in the case of Zambia. These new service delivery institutions will ostensibly have greater flexibility in human resource management, administration, and relations with private and non-governmental providers. The models for each of these institutions vary in important ways. While the Ghana Health Service will function essentially as a unified independent bureaucratic hierarchy, the Zambian Central Board of Health will oversee and coordinate a host of semiautonomous district and hospital management boards. The latter system was originally intended to confer a greater degree of decision space to the boards, but the MOH has retained responsibility for board appointment, thus significantly limiting their decision-space."

Source: Bossert *et al*., 2000.
*See Ch.2. Zambia's de-linkage is delayed due to the risk of workers losing Civil Service benefits in a transfer to health boards. This is yet to be resolved.

and performance management, as well as morale and motivation.

- Recruitment of students from rural and deprived areas will recognize and account for the factors that restrict equitable opportunities and ensure that candidates from deprived communities enter the health professions. A finding from South Africa is that graduates who came from rural areas were more likely to remain in rural care settings after school (de Vries and Reid, 2003).

  In Mozambique, the 'surgical technicians' programme gave mid-level service providers training in emergency surgery among other disciplines. These medical assistants (or 'técnicos de cirurgía') are now a significant component of the workforce.

- *Continuing education*. Distance education is one way of overcoming the lack of access to information and training. The University of South Africa (UNISA) and AMREF in East Africa offer distance education programmes designed for health workers. The advantages of distance learning are that health workers are not taken away for long periods from their workplaces and learning can involve the actual work that a student undertakes routinely. Satellife/HealthNet (a Boston based charitable organization) uses low cost email links among health workers in Africa to provide advice and information. This is an example of how new electronic techniques can be used for distance and continuing education in Africa (Fraser and McGrath, 2000).

- *Retention and incentives*. Successful retention of health workers has been difficult. However, the Community Service Scheme for new health graduates in South Africa which requires them to serve in the public sector (a requirement for full professional registration) is an example of retention management to address access.

  Other countries have implemented various allowances aimed at improving the income of health professionals. Uganda for example, has a Lunch Allowance scheme for health workers and Ghana has an Additional Duty Hours Allowance scheme that has substantially increased incomes for its health professionals and may have slowed the migration of doctors (Buchan and Dovlo, 2004). South Africa has introduced new allowances for staff with priority skills and those working in rural areas. These are designed to meet both retention and distribution objectives.

- *Governance of health systems.* A critical aspect of strengthening human resources for health lies with the governance of health systems. Developing new organizational structures and processes can create efficiencies in how services are managed and increase responsibility and accountability. The box describes how Bossert *et al*. (2000) reviewed civil service de-linkage in Zambia and Ghana.

Development assistance and global cooperation. Africa and its development partners have realized that enhancing the performance of its health systems is a key facilitator to development. A key challenge will be how to translate

donor policy influences into strategies to establish good, technically effective and cost-efficient health services.

Donor investment into human resources also faces what UNECA terms the 'development paradox' whereby investment results in trained persons who end up working in developed countries. The OECD has not significantly expanded local training of health professionals, and appears to rely on international recruitment to meet its needs. For example, OECD's target to maintain physician levels through a 26% increase in national medical schools output was not met in major recipient countries. The UK, USA and Canada, only achieved 14%, 10% and 18% of this target, respectively (Bundred and Levitt, 2000). The debt burden also frustrates the retention of health professionals. A World Bank and IMF study of 24 HIPC countries (who reached decision points by November 2001) suggests that average debt service for 2001-03 will reduce by 30% from the level prior to HIPC relief (1998/99) (IMF/IDA, 2001). Whilst these figures are positive events it is acknowledged that the current median per capita health budget in Africa of US$6 per annum will not increase much and remains very inadequate compared to the WHO estimate of US$60 per capita requirement for good basic health care (Brundtland, 2000).

'Trade' in natural persons (the WTO GATS agreement). The movement of health professionals between countries has been greatly facilitated in recent years by the trade liberalization in health services. Some observers suggest that GATS Mode 4 may create huge imbalances in health's human resources and have cautioned against the inclusion of health services in the GATS agreement, suggesting that retention of health workers should not come under binding trade liberalization when vulnerable groups in poor countries are at risk (Equinet *et al*., 2003).

HRH Development in Africa: Multi-sectoral and Multilevel Approaches

Resolving the HRH and health crisis facing Africa will require major multi-sectoral, multi-level and multi-dimensional approaches, which though originating from national strategies and policies will also requiring major international involvement and support.

Ideally, public service/health sector reforms should be designed with the core aim of promoting the efficiency and responsiveness of health systems. However, the danger exists that reforms may be externally driven and thus are not sustainable but are enforced by donor conditionalities such as social spending constraints and unrealistic funding time-frames. Lessons learnt (Corkery, 2000; Ngufor, 1999; Bossert *et al*., 2000) from reforming human resources management include:

- Reform is inherently political, and without strong political will not survive.
- A sustained reform process is a resource intensive activity as managerial systems and capacity needs are developed.
- Good data and information are a required basis for actions.
- Reform processes must be paced to match each country's absorptive capacity.
- Plans must be made to manage the inevitable inter-stakeholder tensions that arise.

Stewardship and governance. Health worker confidence in the stewardship of health resources and governance of services is a major influence in the morale of health professionals. Many interests and traditions are challenged by reforms and national planning commissions, civil service commissions, professional associations and regulatory bodies, legislators, the education sector, finance, local government, the pharmaceutical industry and the public/private interface, all have influences and interests that must be coordinated for the public good. The capacity of communities in Africa to analyze issues and engage policy makers needs to be enhanced through the deliberate capacity building of civil society groups to make them effective partners in health reform dialogue.

Information for change: roles for research, data and information systems. A major issue faced in developing this report is the countries' inability

to quantify and analyze the crisis situation using credible data. Information on stocks and flows of human resources is absent or out-dated and few research institutions monitor the status of human resources in Africa. This undermines credible decision-making and good research, data and information are needed to facilitate change. There is a critical need to develop local technical expertise in HRH that could be shared between countries.

SUMMARY OF CONCLUSIONS

The Africa Working Group was challenged by the broad range of issues and challenges affecting the workforce but finds that the experience gained from around the continent can constitute the basis for a comprehensive and systematic approach to resolving the health crisis with a competent performing workforce operating functional health systems. In conclusion:

- The availability of health workers is severely limited in terms of numbers, skills and distribution- a consequence of the constraints of the economic environment.
- Poor HR planning and information systems contribute significantly to the health crisis.
- The performance of health workers is hampered by curricula that produces well-qualified cadres but creates skills and competencies that may not always reflect Africa's priority health problems.
- Leadership and stewardship of health systems in Africa are a recurring factor in health workers' frustration. Management of health services must reflect fairness, efficiency and good administrative practices and organization.
- The Working Group recognizes that the epidemiological and demographic transition in Africa causes a mix of both developed and developing country diseases. However, clear priority skills needs are those that address the problems faced by the bulk of the population. The mix of cadres used must emphasize a primary health care and community health focus.
- The coyness of donors to invest in retention and motivation of workers has almost conditioned governments' proposals for funding to routinely avoid human resources issues except those for programme specific in-service training. Sustained development of the health sector in Africa requires coordinated government and donor action to improve the supply and retention of human resources through investments into incentives and welfare.
- Health workers in Africa feel neglected and not valued and this is further exacerbated by increased workloads and stress from the HIV/AIDS epidemic. The core foundation for all HRH strategies must address the morale and commitment of health workers.
- The report has depicted HIV/AIDS as the 'straw (or rather the log) that broke the camel's back'. Health workers who could previously cope with staff shortages have now been over-stretched by the epidemic, which is also depleting the very workforce needed to control it. To meet the challenge, Africa's health services need to rescue the health workforce from the disease through availability of counselling and treatment programmes.
- The experience of actions in African countries (some small scale but others larger) illustrate the type of efforts that can improve the situation. These efforts may have been piecemeal and the lessons learned are hampered by the lack of operations research, monitoring and evaluation.
- Though conclusions mainly concentrate on the internal factors that militate against good health workforce utilization, it is recognized that these challenges and constraints are strongly influenced by the global, regional and national policy environments. Policies generated by African countries on human resources can only work if international policy environments are favourable and without compelling negative externalities.

SUMMARY OF MAIN RECOMMENDATIONS

A variety of views and perspectives have come together to inform the Africa Working Group and to support its joint learning experience. While some opinions may still be divergent in some areas, there is not doubt as to the severity of the crisis facing the continent's health services and the role that the paucity of human resources plays in it. A number of steps are recommended that form a framework for developing strategies and actions.

ADVOCACY

There is need to create momentum for HRH policy and planning through advocacy targeted at different audiences and stakeholders. A key objective should be to change the mindset of key stakeholders to see allocation of resources to HRH not just as an expenditure item but as a critical investment with high yields for improving the quality of life.

Who should be the targets of advocacy and consultation?

- Policy makers at all levels: global/international, regional and at country level
- Civil society groups – NGOs, CBOs, as well as influential international groups
- Development partners – bilateral agencies, lending institutions and grant agencies
- Associations representing health professionals, as well as the wide spectrum of people with various managerial and technical expertise that work in health
- Regulatory bodies and agencies responsible for regulating health service delivery
- Private sector service provider and support groups, both profit and non-profit

And most importantly:

- The general populace of Africa, in their communities and workplaces and through their various representatives and organizations.

THE PROCESS FOR ACTION IN COUNTRIES

The Africa Working Group acknowledges that HRH issues have a multi-factorial genesis that involves several sectors (health, education, finance, etc.) and stakeholders (government, professional associations, private sector, etc.). Country solutions have to be tailored to specific needs and must recognize that HRH actions require a longer time frame to demonstrate the effect of implementation.

COUNTRY LEVEL ACTIONS

Initiating the process of change will require a number of steps summarized as follows:

- Stakeholder forums: Stakeholders get together and analyze the current situation of the health workforce and its effect on the sector preceded by a commissioned review of the state of HRH submitted to the stakeholders to examine.
- Development of solutions and innovations: The stakeholders explore possible solutions, identify feasible actions and together develop an implementation plan.
- Implement action plan: The stakeholders' forum gives a mandate to implement actions determined to be feasible with monitoring and evaluating processes.

- **Monitor effect of actions on the state of HRH**: Institutions and structures must be put in place to monitor and feedback to the forum on progress including international and regional macroeconomic changes that may impact on the plans.
- **Review, refocus and learn lessons**: It is critical that HRH development strategies are not mired in dogma but that opportunities are created to critically review actions and amend strategies keeping in mind that HRH actions require long term implementation.

POLICY OPTIONS TO RESPOND TO THE HRH CRISIS

A range of policy options is available to respond to the challenges facing the continent. These policy options should be taken up and supported by the main regional and international partners as well as by stakeholders within countries. Capacity limitations in Africa will mean a lot of support will be required from regional organizations and inter-country resources and expertise.

- **Reviving the Alma Ata approach**: A renewed focus should be on the production and support of appropriately trained primary health care workers that can respond to the health needs of the poor and other vulnerable groups by enhancing access. 'Hidden community resources' (traditional healers, teachers, agricultural extension workers, community-based organizations) should be exploited to assist by mobilizing communities and delivering specific services. The attainment of health related MDGs may depend on these types of cadres.
- **Retention of critical professionals** (doctors, nurses, midwives, pharmacists, laboratory technologists, optometrists, physiotherapists etc.): Interventions to stem the migration of health professionals are probably the single most important measure that needs to be undertaken. A key action is a significant upward revision of the total compensation package.
- **Managing HR shortages and financial constraints** affecting health services requires that each country should seriously consider expansion of the roles of 'mid-level' health workers who perform clinical (medical assistants, clinical officers, health officers, etc.) and nursing (enrolled nurses/midwives, practical nurses, nurse assistants) tasks at primary care levels.
- **HRH planning and management roles within countries**: HRH sections in ministries of health must also be co-leaders in health policy analysis and development to ensure that the HR basis for health policy decisions is carefully considered.
- **Improving health care provider skills and performance**: As a first action, a critical evaluation of education and training programmes is important to ascertain their relevance to the health needs of the population. There is urgent need to increase the number of all cadres of health workers produced to reach acceptable population coverage.
- **Continuing professional development** should be strengthened to help health workers respond to new and rapidly changing healthcare, demographic and epidemiological challenges such as skills needed for the HIV/AIDS epidemic.

REGIONAL AND INTERNATIONAL ORGANIZATIONS

- **Support strengthening of capacity for human resource planning and management** in ministries of health: Human resources departments must be staffed with well-trained staff and operate at policy decision levels. Regional organizations, such as WHO-AFRO, ECSA/CRHCS, WAHC and SADC, must support capacity building to develop tools and staff for ministries of health.
- **Building HRH needs into the macroeconomic and country fiscal agendas**: Human resources strategies must reflect the macroeconomic influence of international financial institutions and other key partners in the donor community. Countries must continue to demonstrate with evidence the necessity for the investment in human resources for health.

GLOBAL/INTERNATIONAL LEVELS

- **Reaching international consensus on managing the labour market**: The Working Group acknowledges the various interests of developing countries in either retaining or managing migration of health professionals in a way that brings benefits to all concerned. International dialogue is necessary to develop a consensus framework that clarifies and moderates the international recruitment of health workers from low-income countries by rich powerful countries. The rights of health workers to mobility is welcome and recognized, but this mobility must occur after some agreed service is provided for the investment made and that its occurrence does not undermine efforts to improve the well being of vulnerable populations in Africa. The recent WHO resolution addressing the brain drain is an important step in the right direction WHO, 2004b).
- **Re-engineering donor instruments to serve as vehicles for resolving the HR crisis**: The emerging aid instruments such as HIPC, PRSP/PRSCs, SWAps, etc., as well as the new global funding arrangements aimed at priority diseases, must be designed to provide long-term support for sustainable human resources retention. Such investments in health systems should be assessed for the level of health systems strengthening support included.

URGENCY AND THE NEED FOR AN IMMEDIATE RESPONSE

The recommendations developed reflect the overall sense of direction envisaged by the Africa Working Group membership. Given the urgency that the group feels is needed to resolve the crisis it sees in human resources for health in Africa, it is recommended that certain actions must take place within the next 2-3 years to lay the foundation for future actions and strategies but also to address immediate emergencies.

1. The most immediate action required in our opinion is to establish the framework for action through facilitated country consultations and stakeholder forums to address the problem. Examples of this process already exist in many countries and can be rapidly rolled out in all countries. This should be followed by the selection and tasking of a national task force to review the human resources for health situation, develop necessary actions and monitor how best HRH is utilized in countries.
2. Governments and development partners should negotiate to raise health sector budgetary allocations and earmark some significant proportion of this increment for strengthening human resources for health systems, especially in retention and motivation, leadership development and functional human resources management.
3. Building the capacity of countries in human resources for health is crucial; this involves the development of ministries of health HR management staff capacity, the capacity of training systems and analytical institutions as well as information and HR data capacities. Countries and sub-regional organizations should assist in setting up adequate capacity development programmes including formal training, experiential learning through attachments, study tours and country-based projects.
4. Regional and sub-regional development of a network of human resources for health experts, researchers and practitioners that can support countries' efforts at evolving and implementing strategies.
5. Development of criteria and systems to evaluate the relevance and responsiveness of training institutions to health needs and production of priority cadres.

In the intermediate, medium- to long-term period, further action will also be needed to sustain the efforts for maintaining change and action that are being developed and implemented. Such action may include:

6. Evolution of intervention studies/monitored implementation and reviews that develop lessons learned and reinvested into future human resources for health development.
7. Continued HR and health leadership capacity development is essential to sustained health systems and the efficient use of human resources to resolve health problems and also to react to changing environments.

8. Health governance systems (including criteria and monitoring) and peer reviews (outcome of HR plans outcomes and performance reviews) that are a corollary to leadership development.

9. The Africa region or sub-regions will be well served by setting up a regional/sub-regional observatory/monitoring institution and systems that can independently monitor and evaluate countries' experiences and serve as a knowledge sharing facility for experts and countries in the region.

Other longer-term actions will be needed but a quick evolution of the strategies enumerated above will assist the region stabilize and begin to sustain health.

CONCLUDING STATEMENT

It is the opinion of the Africa Working Group from the work done so far that health systems in Africa are facing a major crisis faces and investment in human resources for health can play a central role in attaining the millennium development objectives. Human resources for health have been inadequately studied in the decade of attempts to reform health systems in Africa following the 1993 World Development Report. Debt and poverty in sub-Saharan Africa has had a major impact on the continent's human resources and rebuilding this critical resource requires unparalleled leadership and commitment. Happily, events in recent years have shown a growing international willingness to discuss the essential role of human resources in health development and all stakeholders must seize the opportunities presented to assure measured but sustained development of health systems in Africa.

Africa's political leaders, regional development agencies and technical organizations as well as ordinary individuals and civil organizations have a role to play in investing in

the people who work for the continent's health.

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Introduction

The health of Africans is probably one of the greatest challenges to the economic development of the continent and its peoples. In the period following the colonial period, the countries of sub-Saharan Africa initially rapidly expanded health services and their access to their populations leading to rapid improvements in health indicators. The period following the Alma Ata declaration in 1978 particularly raised hopes of a health driven empowerment and development of poor populations (WHO, 1978).

However the past two decades have led to signs of a decline in the health status in the sub-Saharan region. Indeed life expectancy is estimated to have declined in 17 of the 48 countries in the region between 1970 and 1999 (Sanders *et al*., 2003). Significant increases in population have not been matched by increases in health resources and in a number of countries the ratio of health professionals to population has remained stagnant or has even declined. Health services have also been challenged by the resurgence of some of the older communicable diseases such as tuberculosis (TB) and malaria and now by the recent onslaught of HIV/AIDS. To this we can add the paradox that earlier improvements in health and life expectancy are now challenging health systems with increases in non-communicable diseases, some of which are a result of lifestyle changes.

However, these challenges hide some positive events. For example soon after independence, Africa expanded its network of health centres and the primary care services infrastructure needed for access improvements for basic services. Africa as a continent

Table 1: Comparison of doctor:nurse ratios – Sample OECD and SSA countries

Country	Doctor/Nurse ratio	Country	Doctor/Nurse ratio
Burkina Faso	1;5.8	Belgium	1:2.7
Cameroon	1:5	Canada	1:4
CAR	1:2.5	Czech Republic	1:3
Ghana	1:11.6	France	1:1.6
Kenya	1:6.8	Germany	1:2.7
Madagascar	1:2	Netherlands	1:3.6
Tanzania	1:20	Poland	1:2.3
Zambia	1:16	Switzerland	1:2.4
		USA	1:3.5

Source: Liese *et al.*,2003 and WHOSIS.

showed a bias towards utilizing primary care and mid-level personnel and had a relatively good ratio of nurses to doctors as compared to other continents and developing countries (see Chapter 1). These early positive steps have been challenged by a period of economic decline due to reduced prices of the primary products that Africa relies on for international trade and the high debt burden that subsequently arose.

Bond and Dor in a recent paper (2003) argue that the era of structural adjustment and free market approaches to health care has resulted in reduced public sector involvement in health including the loss of health workers through retrenchment and recruitment embargoes that may have deprived poorer and rural communities of access to health services.

The challenges facing the health sector in Africa are enormous but not insurmountable. Key challenges include the emergence of the HIV/AIDS pandemic and its impact on all aspects of society and health services, the economic and debt crises including the macroeconomic challenges facing almost all sub-Saharan African countries, the low supply of trained health workers worsened by a serious rise in migration of its trained professionals and the need to develop strong and determined leadership in health and society at large.

However, several initiatives over the past few years have raised the possibility of tackling priority health problems, if countries and development partners understand and manage these well. Health sector reforms especially those using Sector Wide Approaches, the new global funding arrangements such as the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI) and the Heavily Indebted Poor Countries Initiative (HIPC) with its Poverty Reduction Strategy Papers (PRSPs) and Credits (PRSCs) may have created possible opportunities for an expansion of the pool of resources for health. The effectiveness of these interventions are not yet clear but how countries seize and utilize these opportunities will be important to how human resources for health (HRH) issues are resolved. The macroeconomic framework within which these initiatives operate would also affect whether they really expand services to the poor and marginalized populations of Africa. The African Union's New Partnership for Africa's Development (NEPAD) also aims to pro-

Box 1: Key paradoxes of health in Africa

- Africa has the highest burden of disease of any continent (per population) but has the lowest number and ratio of health workers per population.
- Despite higher maternal and child mortality than found any where else, Africa produces the lowest number of basic health workers.
- The core of Africa's health problems reflects primary health problems—infectious diseases, nutritional diseases and diseases arising from environmental problems—but uses the same profile of health workers and health services as the developed industrialized countries that have to deal mainly with problems of degenerative diseases.
- The spectrum of skill mixes in African health systems has been limited or reduced by banning the production of some mid-level auxiliaries at the same time as some developed countries, such as the USA, have expanded utilization of physician assistants, nurse anaesthetists and medical assistants.
- The majority of Africa's health workers serve a minority of the population found in urban areas where most of the health facilities are also established. The majority living in rural areas are often neglected.
- International lending organizations' policies have at times severely restricted access for the poor whilst at the same time the volume of international investment required to make a difference seems well below the levels needed to transform Africa's economies.
- Some 70% of Africa's population see traditional health practitioners but these indigenous health service providers are often not well organized and integrated into a country's health system and have not been studied and analyzed in much detail.
- In many African countries the curriculum of health training schools tends to focus on and reflect the health problems and needs of industrialized countries.
- Despite Africa's paucity of health professionals, large numbers of its trained health workers are routinely poached by the industrialized countries of Europe, North America and Australasia.

vide a development framework that can enhance the well being of African peoples and has included initiatives on health and human resources needs.

The 2003 World Health Report (WHO, 2004a) identified the performance of health systems organization and management as a major influence on the achievement of better health objectives. Perhaps the most important factor in designing, planning, organizing, managing and delivering health services is the number, skill levels and motivation of human resources at all levels, and yet Africa has the poorest supply of human resources for health of any continent and the resultant health crisis is evident

The importance of human resources in health systems has always been recognized but generally for most of the 1990s, this issue has tended to slip off the development agenda so that governments and donors have not made much effort at realizing the fullest potential of this important factor in the production of health. Adoption of the Millennium Development Goals has led to a realization by a variety of influential stakeholders that health and development can only be attained from the investments being made into the sector by paying attention to resolving human resources constraints, especially in Africa. A number of conferences and forums on the subject of human resources for health has resulted in an initiative to understand the human resources for health crisis. To tackle Africa's health crises requires appreciating and tackling the underlying paradoxes that subvert health systems in Africa.

Resolving these contradictions informed some of the deliberations leading to this report from the Africa Working Group on Human Resources for Health.

The Africa Working Group (AWG) on Human Resources for Health was constituted in March 2003 as part of the Joint Learning Initiative (JLI) to study the HRH crisis on the continent. (its terms of reference are provided in appendix 2). It is one of 7 working groups of the Joint Learning Initiative on Human Resources for Health (JLI) but the only one with a geographical, rather than a technical, focus because of the unique nature and seriousness of the health crisis in Africa. The working group had its first meeting in Cape Town, South Africa, followed by further meetings in Accra, Ghana and Mombassa, Kenya. The group consists of experts from Africa and other parts of the world and working through preparation of a number of commissioned reviews and original papers, has tried to compose a picture of the plight of human resources for health in Africa. It also tried to capture the experiences and efforts that have taken place (albeit at moderate levels) on the continent, and reflected on the strategies and actions that are envisaged in fostering change. The work of the AWG was continually informed by the efforts of other JLI working groups, its interactions with various stakeholders and through advocacy and exchange of ideas at a number of international and national forums. Significant effort went into compiling the evidence and stories on the outlook for effective utilization of HRH in Africa but the working group also recognizes the experiences gained by other developing regions of the world.

This report cannot pretend to encompass all the information, data and wisdom collated on HRH in Africa. It focuses on constructing key fundamental and cross-cutting messages that arose from the deliberations of the Africa Working Group and seeks to present attainable sets of strategies and actions that are backed by an understanding of what works best in creating and sustaining the skills, motivation and performance of the people who work in health. These strategies and actions can help to create a stable and sustainable foundation for the attainment of the Millennium Development Goals (MDGs).

This report is divided into four main parts. Part I discusses the health crisis in Africa and the human resources in health challenges facing the region as it tries to meet its health objectives. It discusses the shortages of health workers in Africa, their causes and underlying factors, and compares the situation in Africa with other parts of the world. The effect of other issues affecting the size and effectiveness of the health workforce, including HIV/AIDS are also analysed in Part I.

Part II examines the openings and opportunities that currently exist and how the international community and countries can respond in making human resources in health systems capable of delivering the development goals. This section examines the role of various stakeholders at global, regional and national levels and discusses positive examples of action taken by some countries to counter the crisis.

In Part III, the report begins to look at how Africa could respond to the human resources crisis and examines the environment in which such strategies will be developed and implemented. The challenges for the future are discussed including the macroeconomic and social environments that influence the organization of health services. This includes discussions of the World Trade Organization (WTO) and the General Agreement on Trade in Services (GATS) and its effect on the mobility of the health workforce.

In Part IV the report ends with a set of recommendations that evolved during the working group's deliberations and are aimed at helping individual countries, regional organizations and international partners and agencies to construct a framework for tackling the issues and challenges described instead of simply offering standardised prescriptions.

Part I

A Crisis in Human Resources for Health

In this section, we discuss the health crisis in Africa and how it is linked to the human resources challenges the region faces in meeting its health objectives. The first chapter analyses the severe shortage of health workers in Africa compared with the situation in other parts of the world. Whilst these shortages are well known, the effectiveness of the workforce is also undermined by a number of factors related to performance and how efficiently the available workforce is used. Chapter 2 deals with the constraints on performance of the workforce whilst Chapter 3 reflects on the fact that HIV/AIDS also poses a complex variety of challenges to the workforce in Africa, further undermining a country's ability to withstand the stresses the health crisis poses.

Chapter 1

Health Personnel Shortages in Africa

A recent article by Bloom, Canning and Jamison (2004) suggests that the economic changes that have happened in East Asia are a result of the growth of labour, physical capital and human capital, because of significant improvements in health with average life expectancy increasing from 30 years in 1960 to 67 years in 1990, and declining mortality resulting in increased economic production. Africa needs similar achievements in health to drive its development. Health workers and managers are critical to the realization of health and development but the supply of health workers in Africa has been very low and unable to match the rapidly growing population and needs. Sub-Saharan Africa has the lowest ratios of health workers to population anywhere in the world and though there has been growth in the supply of health workers the rates have not kept pace with the demand.

Tables 2 and 3 illustrate physician and nurse availability trends using data from some sub-Saharan African (SAA) countries. The decreases in availability seen in some of the countries in the tables reflect not only a supply problem but also the effects of higher than normal losses from the workforce. Table 4 illustrates the disparity compared with some developed countries with figures that show the wide gap in availability of the core health professions. Yet many of these richer countries still source health professionals from some of the seriously under-endowed SSA countries.

Box 2: Effects of staff shortages in South Africa

"State dumps the mentally ill"

"...Only 38,000 of 120,000 severely mentally ill people in Gauteng—the province with the best community health resources—receive any formal community care. Sister Salome Mashile, a psychiatric nurse at one of the government's flagship community healthcare clinics—Mofolo Clinic in Soweto—does the jobs of three nurses, a pharmacist and a clerk. She said this week that none of the 500 patients who defaulted on medication had ever been followed up due to chronic staff and transport shortage."

Source: Rowan Philp. *Sunday Times* (South Africa), 14 March 2004. News page 5.

Table 2: Trends in the availability of physicians 1960–1998 in 8 low-income countries of sub-Saharan Africa (Staff per 100,000 popn)				
Country	**1960**	**1975-1977**	**1988-1992**	**1992-1998**
Burkina Faso	1.7	1.8	3.0	3.4
Cameroon	2.5	6.1	8.0	7.4
CAR	2.8	5.7	4.0	3.5
Ghana	8.2	10.0	4.0	6.2
Kenya	9.5	8.4	14.0	13.2
Madagascar	10.4	9.8	12.0	10.7
Tanzania	4.8	6.5	3.0	4.1
Zambia	8.3	9.8	9.0	6.9

Source: Liese *et al*., 2003.

Table 3: Trends in the availability of nurses 1960–1998 in 8 low-income countries of sub-Saharan Africa (Staff per 100,000 popn)				
Country	**1960**	**1975-1977**	**1988-1992**	**1992-1998**
Burkina Faso	22.9	22.1	24.6	19.6
Cameroon	16.3	44.8	51.2	36.7
CAR	36.2	64.1	18.0	8.8
Ghana	18.4	119	36.4	72
Kenya	44.8	89.3	44.8	90.1
Madagascar	32.2	28.2	42	21.6
Tanzania	9.6	36.2	21.9	85.2
Zambia	10.1	51.8	54	113.1

Source: Liese *et al*., 2003

Kurowski (2003) in an analysis of other information from WHO's Statistical Information Service (WHOSIS) on health worker employment in 183 countries, showed widely varying ranges of health worker to population patterns around the world, ranging from 5 to 2162 nurses per 100,000 population, and from 2.3 to 664 physicians per 100,000. The lowest quintile for doctors is made up of 37 countries of which 28 are low-income countries of sub-Saharan Africa. For nurses and midwives, the situation is slightly better with 22 sub-Saharan African countries among the lowest 37 in the world.

The figures illustrate sharp global contrasts in the availability of skills with the worst access to health workers being found where the disease burden is also the highest—in sub-Saharan Africa. Kurowski further uses Latin America's health achievements and human resources supply status to estimate that whilst sub-Saharan Africa currently has a total stock of 82,000 physicians the requirement to meet the existing shortage (basically to meet the same health improvements as Latin America) was a staggering 720,000 (physicians) and 670,000 nurses!

Table 4: WHO estimates of health personnel in selected developed countries (1998)			
Country	**No. per 100,000 population**		
	Physicians	**Nurses**	**Midwives**
Belgium	395	1075	65
Canada	229	897	—
Czech Republic	303	886	45
France	303	497	22
Germany	350	957	11
The Netherlands	251	902	9
Poland	236	527	64
Switzerland	323	779	26
USA	279	972	—

Source: WHOSIS.

The supply of health workers is influenced by the capacity of training schools to absorb qualified applicants, the ability of basic schooling to produce candidates qualified to become health professionals and the economic wherewithal to employ and retain them once trained and graduated. In addition to the limits on numbers joining the workforce, population growth

Box 3: Supply shortfall estimates in Tanzania and Chad

"...Recent reports provide information on the human resource implications of scaling up priority interventions in Tanzania and Chad by 2015 (Kurowski *et al*., 2003). The studies are different from thus far provided survey information, as HRH requirement estimates reflect country specific health sector priorities in line with international development goals. Moreover, future human resource availability was estimated as the change in active supply resulting from increments and losses over time and thus served as an approximation of total supply. In 2015, the expanded provision of priority interventions would require approximately 99,000 FTEs (Full-Time Equivalents) at the district level in Tanzania and 19,000 FTEs in Chad while only 36,000 FTEs would be available in Tanzania and 3,500 in Chad. The resulting supply shortage would be 63,000 FTEs and 15,500 respectively. The study predicts a substantial variation of imbalances between job categories. In absolute terms, shortages of nurses and midwives would be greatest with 28,500 FTEs in Tanzania and almost 6,000 FTEs in Chad."

Source: Kurowski, 2003.

in sub-Saharan Africa has outstripped the supply of health professionals. The type of training given also affects the output of training schools and hence the supply of human resources for health. Despite positive moves made to initiate schools devoted to primary health care and community practice, production of health workers has focused on secondary and tertiary care levels whilst relegating community and public health practice into the background. The production of elitist internationally recognized health cadres creates certain skills and attitudes which make it difficult for such health professionals to relate to the real health needs of African communities and families.

Although countries like Nigeria (Osegie, 2003), South Africa and Kenya have significant private sector health services, the public sector dominates health care in Africa, especially in terms of public health and preventive services and the entire range of services provided in rural areas, along with allied non-governmental and faith-based agencies. Human resource supplies are further strained by a burgeoning urban-based private sector that absorbs and redistributes available staff away from rural areas, and combines with the upsurge in migration of health professionals to 'greener pastures' to deprive rural health services of professional care.

Box 4: Structural adjustment and health systems: Cameroon

"In Cameroon, government reform was initiated in the early 1980s as part of their Structural Adjustment Program (SAP) administered by the World Bank and International Monetary Fund (IMF). Measures affecting the health sector resulted in suspending recruitment, strict implementation of retirement at 50 or 55, limiting employment to 30 years, suspension of any financial promotion, reduction of additional benefits (housing, travel expenses, etc.), and two salary reductions-totaling 50% and a currency devaluation resulting in an effective income loss of 70% over 15 years. In addition, paramedical training for nurses and laboratory technicians was suspended for several years and schools closed.

The overall effect was dramatic. In 1999, the health sector budget had shrunk to 2.4% of the national budget from 4.8% in 1993. These adjustments occurred while in the private sector (40% of service provision-mostly denominational) income substantially increased adjusting again for the effects of the devaluation. Thus, the spread between public and private health worker income is large. Not surprisingly, in 1999, jobs in the public sector were about 80% unfilled, and Cameroon had a truly de-motivated health workforce."

Source: Liese *et al*., 2003.

Box 5: The Boxburg Centre story

...the Centre for Spinal Injuries in Boxburg, near Johannesburg, South Africa was the referral centre for the whole region. On the same day in 2000 the two anaesthetists were recruited by a Canadian institution opening a new Spinal Injuries Unit. The Boxburg Centre has been closed ever since.

Source: Martineau *et al*., 2002.

Demand for health and macroeconomic and fiscal constraints

Despite the poor pay conditions of health workers, in most African countries remuneration still constitutes 55–75% of the recurrent budgets of public sector health services. The poor budgetary investment in health limits room for expansion of remuneration costs and then structural adjustment programmes with across-the-board freezes in public sector recruitment coupled with staff retrenchments have exacerbated the health worker shortages in the poorest

Table 5: Main source countries to the UK Register of Nurses 1998–2002				
Country	1998/99	1999/00	2000/01	2001/02
Philippines	52	1052	3396	7235
South Africa	**599**	**1460**	**1086**	**2114**
Australia	1335	1209	1046	1342
India	30	96	289	994
Zimbabwe	**52**	**221**	**382**	**473**
New Zealand	527	461	393	21.6
Nigeria	**179**	**208**	**347**	**432**
West Indies	221	425	261	248
Pakistan	3	13	44	207
Ghana	**40**	**74**	**140**	**195**
Zambia	**15**	**40**	**88**	**183**
Kenya	**19**	**29**	**50**	**155**
USA	139	168	147	122
Botswana	**4**	**—**	**87**	**100**
Canada	196	130	89	79
Malawi	**1**	**15**	**45**	**75**
Mauritius	**6**	**15**	**41**	**62**
Jordan	3	3	33	49
Singapore	13	47	48	43
Malaysia	6	52	34	33
Other	181	227	357	480
Non-EU total	**3621**	**5945**	**8403**	**15064**
Eu total	**1413**	**1416**	**1295**	**1091**

Source: UK Nursing and Midwifery Council (quoted in Buchan and Dovlo, 2004).

countries (Corkery, 2000; Kanyesigye and Ssendyona, 2003). Until investments, budgetary allocations and donor funding to the health sector can grow, the remuneration dilemma continues to frustrate expansion of health services for the poor.

The Abuja Declaration by African Union Heads of State commits African nations to reaching a target of devoting 15% of Government expenditure to health. This provides a start but must be supplemented by other actions such as a more comprehensive debt reduction effort and improved donor support to achieve the level of resources that will make a difference in real terms and subsequently influence human resources investments positively. The work of the Commission on Macroeconomics and Health suggests that unless certain minimums of per-capita investments are made, the health sector struggles to deliver results and major donor commitment and sustainability is paramount.

International health worker migration — an ongoing challenge

The migration and brain drain of health professionals has reached serious proportions and is currently likely to be the single most important source of attrition of the health workforce in many countries in the region. Whilst the numbers of African health professionals who register to practise in industrialized countries may be relatively low compared with those from Asian countries such as India and the Philippines, a low supply base in many African countries means that even losses of a few people can have a very significant impact on access to services, especially for the poor. Some countries have only one or two specialized professionals in certain disciplines and losing even a single one can close down the service.

The number of health workers leaving has been rising in recent years and whilst a very few countries, such

Table 6: Strategies used for managing migration of health workers in Africa	
Increasing current supply of staff	• Increase training intake and retention· • Recruitment from abroad· • Increase training of non-tradable staff • Upgrade other cadre types to do some duties of nurses or doctors
Improve retention of current staff	• Bonding, incentives, career systems, compulsory services, community service requirements, Post-graduate training etc.
Improve utilization of skills/mixed with other staff	• Cadre substitution, skill enrichment and expanding scopes of practice; auxiliaries, part-time and "bank nursing schemes
Encourage return of (from) migrant professionals	• Remittances· • Partial returns to provide service; etc.
Inter-country agreements/ negotiations	• Registration of recruitment agents· • Approved/Agreed recruitment numbers and process

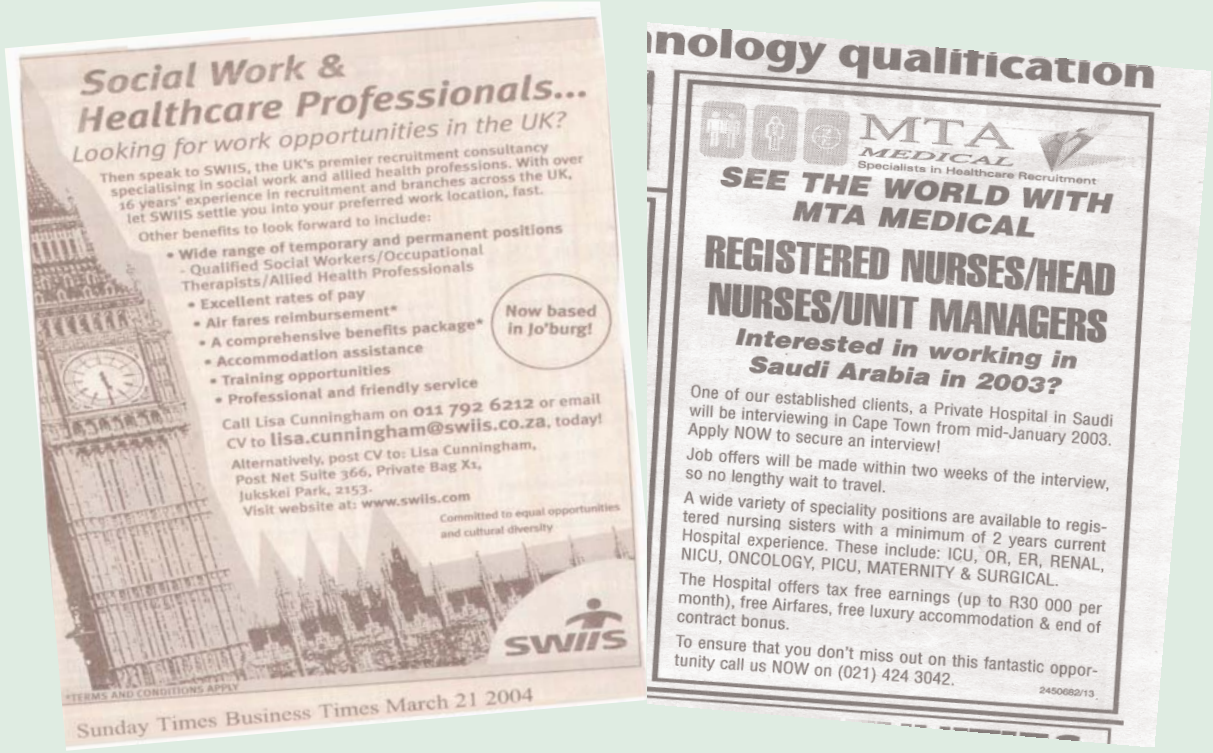
Source: Dovlo and Martineau, 2004.

as Nigeria appear satisfied to 'export' doctors and other health professionals (Osegie *et al*., 2003), supply levels are simply not enough in most other countries to absorb high rates of loss without disrupting health services. The Africa Working Group does not doubt that the international movement and exchange of professionals can also be beneficial. The exchange of ideas and the acquisition of new skills and technology can enhance progress in developing countries and may help to build local institutions when some of these professionals return. Remittances from citizens in the diaspora now contribute significantly to the foreign exchange inflows of many countries, sometimes exceeding foreign direct investment (FDI) or overseas development aid levels . However whether the 'advantages' of migration can positively influence the health status of the population (especially the poorer marginalized groups) is not clear and no direct evidence has been elicited to show that remittances truly offset the loss of public sector investment in training and development and the socioeconomic costs of collapsed health services and its negative impact on health and economic development. Whilst policy conditions may well vary between countries, for less well-endowed countries in sub-Saharan Africa unchecked migration from the health sector can be a disaster.

However the recent surge in the numbers leaving sub-Saharan Africa will clearly undermine health systems unless more decisive actions are taken, not only by poor source countries but also by the influential industrialized recipients who actively recruit Africa's health professionals. Table 5 illustrates the recent trends in overseas nurses seeking work in the UK. It shows that new African registrations onto the UK Register of Nurses saw rapid annual increases between 1998 and 2002.

Quantitative data alone do not tell the complete story of Africa's migration crisis as the qualitative effects are even more severe. For example, the loss of trained nurse and medical educators, specialist doctors and other technical supervisors and researchers, creates serious constraints in sustaining the future training and supply of quality health workers and also has an impact on the quality of care provided. The large bulk of Africa's health professionals leave to work in just a few industrialized countries and so this raises the possibility that in addition to voluntary 'codes of ethics' in recruitment (even these are often not endorsed by the recipient countries), inter-country negotiations could help to manage the exchange and flow of workers in such a way as to be beneficial to both systems. Available data show that the greatest increases have been in losses of nurses with most going to the United Kingdom, United States, Canada and Australia (Awases *et al*., 2003). International codes and policy statements on international recruitment have been adopted by a number of organizations including the Commonwealth, the World Federation of Family Practice (WONCA), the

Box 6: Recruitment advertisements (South Africa)



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International Council of Nurses (ICN), etc., though it has been felt that these codes have not achieved much change in the situation (Stilwell *et al*., 2003). Thus migration is one of the major contributors to the continuing shortage of health workers and all the countries in the region seem to suffer from this phenomenon albeit at varying levels. The cost of the brain drain to sub-Saharan Africa is huge especially when related to the fact that some of these countries are amongst the poorest in the world. The African Union estimated that given the cost of training a general practice doctor as US$60,000 and other paramedicals at $12,000, low-income developing countries 'subsidize' developed countries by US$500 million annually (Organization of African Unity and African Union, 2003). UNECA (2000) for example, also estimates that Africa must have lost US$1.2 billion from the 60,000 professionals lost between 1985 and 1990 alone and this is quite aside from the indirect but potentially higher losses from the impact on economic development.

The remuneration gap between sub-Saharan countries and industrialized countries that are recipients of their health workers is vast even after accounting for lower living costs in Africa. Vujicic *et al*. (2004), in a study on wage influence on migration showed that even with purchase parity pay estimates, physician wages in the USA are 22 times that in Ghana and about 4 times that of South Africa. Wages of nurses in Australia and Canada were 14 times that in Ghana and 25 times that of Zambia, but just about twice that of South Africa. That African countries will be able to bridge these differentials any time soon is very unlikely. Furthermore, South African health workers, though having lower wage differentials, show very significant migration rates whilst Ugandan workers with very high pay differentials show less inclination to leave (Awases *et al*., 2003). This shows that factors and influences on migration are much more complex than those posed by remuneration alone.

Whilst demographic changes in the industrialized countries have contributed to the increased demand for health professionals, a myriad of interacting factors work against retention of health workers in sub-Saharan Africa. Studies on health worker migration show that economic difficulties, poor working conditions and low remuneration, slow career prospects and more recently the perception of risk from HIV spur health workers to leave their countries. The factors influencing the decision by health workers to leave, termed 'push and pull' factors, also include societal issues in the countries, the way health services are governed, job satisfaction, social and welfare benefits, occupational protection, and career development prospects which are all limited at home (Dovlo and Martineau, 2004). It is important to note that factors other than remuneration are also very important and health workers have expressed sentiments about the poor leadership in health services and poor motivation that results from a lack of good

Table 7: Estimates of annual production: physicians and 'substitutes' in selected countries

	Estimated Average Annual Output		
Country	Clinical Officer/Medical Assistants	Assistant Medical Officer (Post-Basic)	Physicians
Ghana	30	0	200
Tanzania	300	40	50
Kenya	300	30	200
Malawi	100	N/A	20
Mozambique	300	N/A	20-25
Zambia	—	20 (co-anaesthetists)	—

Source: Dovlo, 2004.

Table 8: Estimates of comparisons of physician and 'substitutes' stocks in selected countries

	Available Estimates of Current Practising Cadres		
Country	Clinical Officer/Medical Assistants	Assistant Medical Officer (Post-Basic)	Physicians
Ghana	442[@]	0	1600
Tanzania	Not available	750	870
Kenya	4300[#] (2300 in Public Sector)	N/A	4900 (1200 in Public Sector)
Malawi	442[#]	—	315
Mozambique	627[@] (Basic cadre)	301[@] (Post-Basic)	278[@]
CAR	182	—	121
Uganda (1991)	750	0	671
Zambia	1458	40 (co-anaesthetists)	900 (approx)

Source: Dovlo, 2004.

[#]Includes both "Basic" and "Post-Basic" cadre types; [@]Public Sector figures only

management. On the other hand, active recruitment and lack of recipient country efforts to mitigate their own health worker needs create strong pulls.

African countries have responded to the migration crisis with a variety of coping strategies, including increases in financial incentives, doubling the output from health training institutions, recruiting from other countries and establishing some form of bonding or compulsory public service work. In Table 6, some of the coping strategies used by sub-Saharan African countries to mitigate their losses are summarized. The current personnel shortages have entailed increased workloads and poor workforce management, which in turn increases the frustration of health workers and serves as a further push to migration.

'Pull' factors generated by rich recipient countries are also very important. Recipient countries in Europe, America and Australasia, have made it easier for nurses and doctors from Africa to gain visas for work in their countries and this has created the conditions for recruitment agents to become very active in African countries. International action has so far been on adopting voluntary codes on ethical recruitment as mentioned earlier which have not had any impact. Huge needs are arising in the industrialized countries from aging populations that require more care and a reduction in births and the number of young people available to enter the health workforce. However, it appears the rich recipient countries have avoided investments into expansion of training capacity to meet their needs and to create incentives for indigenous workforce entrants.

Mid-level workers in Africa – substitutes?

A number of countries have produced locally specific cadres of mid-level workers some of whom take on tasks usually carried out by the main health professionals. However, the supply levels of these cadres are often even less than those of nurses and doctors and so do not provide much advantage in terms of numbers. Dovlo (2004) provides examples of the supply and stocks of the so-called substitutes in selected African countries and the following tables from his paper illustrate the situation. Such cadres may become very important for African countries, enabling them to secure health service delivery to their population especially those in rural and deprived areas.

Data availability and information for planning

Africa and its partners need to understand the issues surrounding the shortages of health professionals and the impact this will have on its ability to reach the Millennium Development Goals. The paucity of information and data on human resources for health is serious and in itself is a constraint to understanding and resolving the crisis. The supply, deployment

Box 7: Substitution in Burkina Faso and Zambia

...Burkina Faso has experience of the use of assistants for health for tasks normally reserved for the medical personnel. They are usually male nurses and midwives with at least five years of experience and receive three years of further training in medical specialities (surgery, anaesthesia, ORL, ophthalmology, etc.). Their role is to assist the doctors/specialists or to provide services where none exists. There is no formal evaluation of the experiences with the use of these staff categories in the country. Task descriptions and curriculums are available for the various categories.

Source: Dr. M. M. Hacen WHO Rep/Burkina Faso and Dr. D. Kielem, MPN (kielemd@wr.oms.bf). Personal communication/email, June 2003.

Zambia's Medical Licentiates...Qualified Clinical Officers who have a number of years of experience. Their original training is for three years and trained to become 'Medical Licentiates' for an additional two years. Zambia originally trained AMOs at the Kilimanjaro Christian Medical Centre in Tanzania, but recently (2002), started within Zambia at the Chainama Hills Hospital. The ML is being utilized from the 2nd level of patient care. Some medical Licentiates also head District Hospitals and are responsible for running out-patient departments, diagnosis, admission and management of all emergencies including those in gynaecology and obstetrics, (including caesarian sections). They also manage medical and paediatric conditions. A few have trained in specialized areas such as ear, nose and throat (ENT), anaesthesia and ophthalmology.

Source: Professor Jimmy James and Mrs Olive Munjanja, East Central and Southern Africa Health Community Secretariat, Arusha, Tanzania. Personal Communication, June 2004.

(urban, rural, private, public, service types) and effectiveness of various configurations of human resources in health cannot be readily determined in many countries. Data on some less popular professions, such as physiotherapists, optometrists and radiographers, are not well reported. Available data are often outdated and thus not useful for meaningful planning. A major problem to be overcome is in establishing the information base and a properly studied database of evidence on the interrelationship between service delivery and human resources that have been deemed positive and from which lessons could be gained. In compiling this report, extensive records of experiences of African countries were not readily available and many of our referenced examples are from a few countries such as South Africa that have readily accessible published data.

Chapter 2

Quality Concerns: The Value from Trained Health Workers

In the previous chapter we dealt with the numerical staff shortages facing African countries and the constraints and problems allied with that situation. Whilst acknowledging that the supply of a trained workforce is limited, concerns exist about the ability of the stock of diverse workforce members to deliver quality health services. The surge in migration to the developed countries supports the fact that African health professionals are trained to standards found anywhere in the world and their knowledge and skills are not in question. However, the performance of health workers in producing health outcomes is influenced by a number of other factors that affect the output of health workers and further worsens the difficulties created by shortages.

Box 8: Performance management blues

"You are left to carry out what you are supposed to do. The supervisor only comes when things have gone wrong." (Kenya, nurse, 31 years)

Source: Mathauer and Imhoff, 2004.

"...We will just work...and no one will see that these people are meeting their objectives because we are not being evaluated. Since I came here, no one came to me and ask me how good are these objectives, which one did you meet?..." (South African nurse)

Source: Ijumba P. 'Voice's of primary healthcare workers. *In*: South African Health Review: 2002. Durban: Health Systems Trust. p.190.

It has been suggested that the reliance on curricula more suited for industrialized health systems and training programmes that ignore the reality of African communities may be one such factor affecting the performance of health workers (Ndumbe, 2004). A second and linked factor is the weakening of support and supervisory systems coupled with significant numbers of uncoordinated in-service training programmes that only few staff have access to, or are delivered in ways unlikely to achieve an impact. Skills in planning health services have not been complemented with competence in implementation and monitoring and this has created a 'planning/implementation gap'. The Strengthening District Health Systems Initiative in Ghana and other countries executed in the early 1990s was one attempt to fill this gap that has significantly strengthened the effectiveness of district health management teams (DHMT) (Sanders *et al*., 2003).

Lehmann *et al*. (2000) and Ndumbe (2004) have described recent 'problem solving, community based' style medical schools. These along with other schools in Jimma (Ethiopia), Ife (Nigeria), Yaoundé (Cameroon), Calabar (Nigeria), Gezira (Sudan) and Ilorin (Nigeria), etc, (as members of the Towards Unity for Health (TUFH) Network, http://www.network.unimaas.nl /position/index.htm) have survived the initial design stages and continue to produce doctors seen as better attuned to community-based services. These schools use methods that encourage the use of teaching resources from within the community and offer practical experience at the operational level, such as at health centres and district hospitals, and are thus geared towards producing professionals that fit into the kind of health system Africa needs. Further and more detailed evaluations are needed to expand this approach and to assess the medium- to long-term retention of their graduates, especially in primary care situations.

Low performance: skills mix and skills levels

One area of the mix of health workers where Africa appears to have an advantage is the general emphasis on its nursing cadres and mid-level providers, producing a ratio of nurses to doctors that probably reflects its primary care needs. Secondary analysis of health worker population ratios from Liese *et al*. and WHOSIS data show average African doctor to nurse ratios of above 1:6 compared with developed country ones of around 1:3 (see Table 1 in Introduction).

However in utilizing other mid-level, auxiliaries and primary care workers the skill mix patterns have tended to follow models similar to those found in industrialized countries. A lot of the training of health professionals has focused on clinical care rather than preventive systems and occurs in tertiary care facilities with only a minimum of community-based components. Auxiliaries trained at more peripheral facilities experience a disjoint between themselves and their supervisors' approach to services delivery.

The decision in several African countries, strongly supported by nursing associations and councils, to abolish the training of enrolled (or auxiliary) nurses served to over extend the scope of practice of registered nurses at the lower end (by withdrawing staff who could do some of the less technical and manual tasks) and removes from the workforce a significant group of trained workers that would have helped Africa face the health crisis.

Do the mix of cadres and skills in African countries provide the best and most cost-effective means of meeting service needs? Several countries have utilized mid-level 'substitutes' for some functions of physicians and other professionals, perhaps the best examples of this are in Mozambique and Tanzania where Surgical and Obstetric Technicians and Assistant Medical Officers (AMO) respectively, provide emergency surgical interventions in rural health services and have become significant in their health workforce equations. Some studies in Mozambique have shown minimal differences in outcomes between the physicians and their substitutes for delegated tasks (Vaz *et al*., 1999). But a review of 'substitute' health workers in Africa found that the numbers of such cadres produced are low in many other countries with Ghana for example, producing up to 6 times more doctors per annum than medical assistants (Dovlo, 2004) even while losing about 60% of trained physicians to migration (Dovlo and Nyonator, 1999).

Box 9: Tanzania's Assistant Medical Officers

In Tanzania, about 750 Assistant Medical Officers contribute 1.4% of the overall workforce as compared to 870 physicians (MDs) or 1.6%. Whilst the MDs are responsible for specialist medical care and referral cases which need more special attention, most of the routine cases at district level (including surgery-caesarian section/herniae etc) are taken care of by the AMO. Without these cadres, decent health services in remote districts would have collapsed.

Source: Dr. G. Mliga, Director of Human Resources Development, Ministry of Health, Tanzania. Personal Communication, May 2004.

It has been mentioned previously that medical schools with community-based curricula now exist in sub-Saharan Africa, but most medical schools have retained curricula and training methodologies that make their products more attuned to health services in industrialized countries (Sanders *et al*., 2003). Investment in training research and curriculum transformation in Africa has been weak. Recent efforts by some medical schools with WHO assistance to start a peer evaluation process is a positive step but Ndumbe (2004) has noted that some of the educators asked to fulfil new community-focused curricula are unconvinced of their validity and in Cameroon for example, the formats of courses have changed with each change in leadership of the medical school.

Box 10: Is there a role for non-financial incentives?

The experience from GTZ-supported health projects in 29 countries suggest that a mix of financial and non-financial incentives is most effective, aiming at both individual aspirations and organizational change:

- Group based and effort related awards (and pay)
- Sanctions
- Exposure (conferences)
- Team building
- Token benefits (Free time, tea during night duty)
- Career development, transparent promotion schemes
- Continuing education, training
- Supportive supervision and feedback
- Performance assessments
- Staff satisfaction surveys
- Increased staff participation in decision-making processes within the health structure
- Horizontal and vertical communication among staff
- Quality circles and building a quality culture
- Benchmarking and competition between facilities

Source: Mathauer and Imhoff, 2004.

Box 11: When health systems don't work...

Niger – Dysfunctional referrals

"...much of the nurse's reluctance to refer seems due to the lack of marginal benefit to be derived from referral to a hospital that, apart from surgery, cannot do much more for the patient than what health centres can do...They are not completely in the wrong. To date only 3 out of the 33 district hospitals in Niger provide surgical care. Most cannot transfuse blood or give oxygen. District hospitals only did 79 major obstetric interventions in the whole year of 1998. In the best of cases there are 2 doctors in the district; they are regularly both absent for other duties. Laboratory and X-ray facilities are rudimentary. The majority of deliveries in hospital maternities are attended by TBAs, not by professional midwives. Obviously, hospitals under such conditions often do not make the difference with what health centres can offer closer to home, and without the costs and other risks."

Source: Bossyns and Van Lerberghe, 2004.

Ghana – Bureaucracy frustrates motivation

"I had to wait 14 months for my 1st salary...You have to fight to get anything due to you."

Source: Quote from a young doctor. Personal communication to D. Dovlo,"Brain Drain Voices," 2003.

Low performance: motivation and inadequate incentive schemes

Voices of health workers quoted in this report often reflect the frustrations and lack of motivation found within large segments of the workforce. It is well recognized that Africa's economic difficulties lead to health worker remuneration that is de-motivating, however, a variety of factors related to job satisfaction, excessive administrative bureaucracy, uneven and unfair implementation of incentives and inappropriate application of health resources, create a work environment that is not stimulating.

It also appears that leadership within the health sector in Africa has not inspired health workers and a true culture of responsibility for supporting health workers and achieving agreed targets is lacking in many management situations. Health workers, especially those in rural areas, feel their services are not valued by the system and inappropriately cumbersome bureaucracy frustrates staff trying to obtain even the minimal incentives and benefits due to them.

There is widespread absence of proper supervision and of good performance management, which undermines building and sustaining competence at operational levels. Health sector investments in in-service training do not result in improvements if they are not reinforced with strong supportive supervision. Knowledge and skills of health workers must be built into competence by regularly supporting their tasks through feedback and mentoring from supervisors. A major ingredient found in the success of parastatal, faith-based and private health institutions in Africa has been the value placed on supervision (Dovlo *et al*., 1998).

A further frustration for many non-physician health workers is that career pathways are blocked by educational systems that are not flexible. Thus it appears that senior management positions are denied certain cadres and in some sub-Saharan African countries, senior management levels are

Box 12: Non-financial motivators – Benin and Kenya

A study in Benin and Kenya on motivation and non-financial incentives revealed that the core aspects that make health workers undertake efforts comprise vocation and professional conscience, i.e. values, as well as the wish to help patients, recognition and professional satisfaction, namely professional goals. These aspects determine the strength of the 'will-do' component. Salary and other financial incentives are only mentioned by 15% of respondents of Benin, and less than 10% of Kenyan respondents. When asking health workers how their spirit and work morale could be further boosted up, they emphasise improved working conditions and available means and materials, but also HRM/QM tools, such as supervision, training, feedback and awards. At this point, motivators relating to salary and living standard also feature, but not as prominently as the HRM aspects.

In sum, the findings indicate that health workers are strongly guided by their professional conscience and professional ethos. In fact, health workers may be de-motivated and frustrated precisely because they are unable to satisfy their professional conscience and impeded in pursuing their vocation due to lack of means and supplies and due to poor support and supervision systems.

Source: Mathauer and Imhoff, 2004.

dominated by physicians who are neither trained for nor inclined to management but are required to do this as an added burden to their practice as doctors.

Low performance: dysfunctional health systems

A significant part of the constraints on health worker performance arises from the inability of the health system to function in a cohesive and efficient way. Drugs and other supplies often run out and equipment and other tools are not maintained and are often faulty, frustrating quality services even when health workers are skilled and motivated. The organization of the referral chain and support for primary care providers can be absent leaving health workers without the means of communication or the transport to transfer complicated and emergency cases. The malfunction of technical support systems exacerbates the health crisis facing Africa.

Other 'Job Satisfaction' problems are caused by the rising workload and the lack of basic inputs, including protective gear to prevent occupational hazards. Referral systems are weak and district hospitals expected to receive referrals may themselves be poorly resourced and not functional. Perceptions of a high occupational risk from HIV/AIDS, is said anecdotally, to have contributed to the rise in nurse migration from even the relatively well-off countries of South Africa and Botswana (Dovlo and Martineau, 2004). Some of the difficulties with workplace logistics are due to constraints arising from the imbalance in resource allocation between tertiary and basic care facilities leaving peripheral primary care services quite deprived. For example, the district level in Ghana received 42% of the budget allocated to it while tertiary care levels receive 43% (Addai and Gaere, 2001) though the core of services serving some 70% of the population is based there.

It has been acknowledged earlier in this report that the remuneration gap between Africa and the countries that recruit its health workers is wide and cannot be readily met by government pay increases. However, some evidence exists that the motivation of health workers relies on more than pay (Mathauer and Imhoff, 2004). The absence of non-financial incentives is linked to a fundamental problem of dysfunctional management systems and processes. For example, a recent study by WHO (Awases *et al*., 2003) shows that Ugandan health workers showed low levels of intention to migrate despite relatively low pay and incentives, which though recently improved, are quite close to those of other countries in the region. In fact, Vujicic *et al*. (2004) in comparative pay tables show Uganda as having one of the lowest pay levels despite better retention attitudes . This implies that factors other than remuneration may play a major role and these need to be thoroughly investigated and lessons learned.

Low performance: HR management structures

HR policies and plans, where available, are not implemented and monitored and appear to have done little to change the situation of health workers. The lack of decentralized personnel management structures is felt to be detrimental to performance management and indeed, human resources management in health has been embedded into centralized civil service systems that are slow and bureaucratic. Basic HR decisions involve not only the Ministry of Health but up to 4 other government departments (Corkery, 2000; Ngufor GF, 1999). In many countries the health sector lacks skilled HR managers and their department's status tends not to be part of the policy levels of Ministries of Health. However, there have been experiences from Zambia, Uganda and

Ghana of attempts to de-link health service delivery from civil service structures but these have not been adequately evaluated in terms of impact on staff and on performance of services. Zambia's de-linkage exercise has been partly stalled by strong opposition from unions, difficulties in transferring existing civil service benefits to the new decentralized boards, and the possibility of inequity in distribution of health workers when local hiring is in force (Seshamani *et al*., 2002).

Health sector reforms in Africa have avoided tackling human resources supply and retention issues, and even newer international funding activities have concentrated their human resource inputs on providing in-service training programmes for an ever-dwindling workforce. Funding of HRH supply and retention schemes has usually been left exclusively to governments even as service delivery is being expanded.

Health professions councils play a role in regulating health worker training and practice. However, even in countries undergoing health reforms, they sometimes appear to serve to protect the profession's parochial interests rather than the population's needs by blocking changes in roles and scope of practice of the mid-level cadres that are required to cope with health needs in a more cost effective way.

Chapter 3

HIV/AIDS: The Straw that Broke the Camel's Back

The HIV/AIDS epidemic has swamped health services with patients and has began to push existing health conditions such as malaria (very severe in their own right), into a lower priority status. There is evidence beginning to show that this epidemic has started crowding out patients with the usual endemic health conditions whilst at the same time, increasing demand for a wider range of services and skills than the health sectors had previously offered. Kinoti (2003) reviewed UNAIDS and World Bank data indicating that mortality in HIV-negative patients in Kenya rose from 14 to 23% at the same time as admissions of people not infected with HIV in a Nairobi hospital decreased by 18%. The possible explanation is that such non-HIV patients were being admitted at late stages of the disease due to pressure on the facilities and thus may not benefit fully from health facilities.

HIV/AIDS represents a huge expansion in the need for dedicated case management requiring for poor countries what constitutes relatively sophisticated laboratory support (WHO, 2003a). Significantly, a wide range of new skills, including those for testing and counselling, as well as for the care of the terminally ill, both inside institutions and in homes, are now required of the general workforce. A large segment of health care has now been shifted from curative/preventive care to a more palliative regimen. Thus in addition to a need to increase the stock of health workers available, they also need to acquire new skills to deal with the rising and altered workload.

Despite Uganda providing at least one success story in dealing with HIV/AIDS and moderating its impact, this epidemic remains the single most important disease challenge to health systems and to the workforce in Africa.

The challenge of HIV/AIDS to the workforce goes beyond the rising workload and new skill needs. The evidence from some of the worst affected countries shows increased attrition of the health workforce. Consten *at al*. (1995) for example suggested that sero-conversion rates may be 16 times higher in surgeons in Africa than in developed countries. Kinoti (2003) also quotes projections that suggest that health systems in Africa are likely to lose a fifth of their employees to HIV/AIDS over the next few years and calculates that given a 15% adult sero-prevalence rate in a country, the health services could lose between 1.6 and 3.3% of its workers annually. In Malawi there was a six-fold increase in mortality of health workers between 1985 (0.5%) and 1997 (3.0%) (Kinoti, 2003) and similar trends appear in other countries in the region. A recent Human Sciences Research Council (HSRC) report from South Africa indicates that up to 13% of deaths among health workers between 1997 and 2001 were HIV/AIDS related. HIV prevalence among health workers was estimated at 15.7% in general, *but at 20% among younger health workers* (ages 18–35) and suggests that South Africa could

expect to lose up to 16% of its health workers in future to AIDS related diseases if anti-retrovirals are not used (Shisana *et al*., 2003).

Stress and burnout with associated absenteeism as well as the rising social responsibility of health workers caring for sick relatives and attending funerals have affected performance and the quality of services (Kinoti, 2003; Shisana *et al*., 2003). The lack of appropriate new skills frustrates both patients and staff and reduces the quality of care delivered. The pressure on health resources compounds the stress and job satisfaction problems and enhances a perception of increased workplace HIV risk that in turn affects the morale of health workers and accelerates attrition. Again the South African HSRC study reports that 16.2% of staff interviewed had sought treatment for stress related illness with 63.9% of these having to take sick leave (Shisana *et al*., 2003). A paradox reported by Sagoe-Moses *et al*. (2001) is that, whilst 70% of HIV/AIDS cases occur in sub-Saharan Africa, only 4% of the world's occupational exposure is reported here, whilst 4% of HIV cases are found in industrialized countries that report 90% of the world's occupational HIV infection. Given the data difficulties faced in Africa it is likely that a sizeable chunk of the effect on health workers is not being reported.

Perhaps more dangerous in the long term is HIV's effect on the economies of sub-Saharan African countries that are losing their most active age groups to AIDS. The recent treatment initiatives are going to be a major strategy to check this effect on countries, and health workers will be an indispensable part of reaching objectives such as treating 3 million infected persons by 2005 recently launched by WHO (2003b). One of the assumptions made in the WHO's 3 by 5 strategy document is that '*sufficient numbers of qualified staff are retained, recruited or return to the health sector…*', which is expected to result from '*National plans for human resource development and measurable progress in their implementation*'. Underlying these vague proposals is the fact that such an assumption is critical to the success of the initiative and actually requires more specific solutions to be offered. Massive investments are needed into human resources to be able to achieve and sustain these objectives. The initiative emphasized that ART treatment is a life long process, and thus implementation will require long-term sustained availability of trained health workers.

HIV/AIDS behoves health services to fundamentally restructure their systems including HR to meet the challenges faced. Kinoti (2003) suggests for example, that the common strategy of using home-based care for AIDS patients may not necessarily be cheaper than institutional care and it also requires significant work force resources to support and supervise care and thus the conventional wisdom on how to deploy staff may have to be reassessed. Whilst the new global funding arrangements (GFATM, etc) have

Box 13: Press release – AIDS treatment programme for health care workers in Zambia (excerpts)

Nurses and other health care workers in Zambia will now be the focus of a special programme for access to Viramune® (nevirapine), Boehringer Ingelheim's antiretroviral treatment effective in preventing Mother To Child Transmission (PMTCT) of the HIV virus. The Zambian Nurses Association will partner with the Zambian Ministry of Health in the administration of the programme to provide free testing and treatment for pregnant nurses and other health workers. Viramune®, the antiretroviral drug which can prevent mothers from infecting their babies during birth, was discovered and developed by Boehringer Ingelheim and will be provided free of charge through the PMTCT Viramune Donation Programme.

"…Focusing on health workers for access to HIV treatment treats the health system itself", commented Thom Yungana, President of the Zambian Nurses Association (ZNA). "Nurses are shouldering the main burden of AIDS care but if they or their children are sick, their capacity to deliver care can be restricted. We are very grateful for this unique partnership in support of the Viramune® Donation Programme"…"A nurse receiving treatment can remain in the health system and care for others in society", stated Judith Oulton Chief Executive Officer of the International Council of Nurses (ICN). "Access to treatment will also be a powerful incentive for nurses to stay in the profession and in their country. ICN is working with its member associations and Boehringer Ingelheim to increase access to AIDS treatment for nurses…"

"The alliance with the Zambian Nurses Association not only strengthens the local health care system, but is an example of how stakeholders can work together, leveraging each others talent and resources to help make a real difference fighting this disease." The programme is scheduled to begin later this year.

Source: Press release (13 November 2003). Lusaka, Zambia; Geneva, Switzerland; Ingelheim, Germany. The International Council of Nurses; the Zambian Nurses Association; and Boehringer Ingelheim. http://www.icn.ch/PR26_03.htm

increased resources available for tackling the epidemic, its mechanisms have not dealt adequately with how to expand and strengthen the workforce to match the resources. GFATM proposals have many intentions for training and capacity building but lack options on retention incentives and supervisory support systems for health workers.

Aitkin and Kemp (2003) are clear that treatment schemes aimed at health workers themselves have proven beneficial in Botswana and for private sector industries in southern Africa. The health industry will also require a comprehensive but cost effective basket of interventions for health workers consisting of counselling, care and support as well as treatment regimes which are crucial in sustaining the resources most likely to impact on the outcome of current schemes.

To conclude, effective health systems leadership is required to meet the challenge HIV/AIDS poses and a major capacity building exercise is required in particular to produce the new skills needed for treatment roll-out. The major workforce shortages identified by Kurowski (2003) means that tens of thousands more trained health workers will be needed to meet these objectives. Moreover, the supply and skill mix of health workers needs to be increased radically through reviews of the entry requirements into the key service provider professions, the use of mid-level providers (given wider scopes of practice) and the creation of incentives for retention that includes availability of counselling and support for health workers and for good medical care when ill.

Part II

The Opportunities

The situation of health services and the role of human resources in their outputs are grim as was discussed in previous chapters of this report. In this section, the Africa Working Group notes that despite the severe crisis, a number of events are creating windows of opportunity to tackle and address some of the issues raised. Chapter 4 discusses the current international atmosphere that has encouraged high-level discussion of human resources for health issues and the opportunities these forums raise. Chapter 5 then looks at the role governments, communities and other stakeholders (including the private sector) could play and the possible advantages that health sector reforms could offer if the chances are grasped. The Working Group recognizes that a number of experiences (positive and negative) have enriched the practical knowledge on human resources for health in Africa and Chapter 6 highlights a number of activities that countries have initiated. Whilst not claiming that these are unqualified success stories, the Working Group sees these as illustrations of the types of efforts that need to be initiated, nurtured and evaluated as Africa tackles its health crisis.

Chapter 4

Enabling International and National Environments for HRH?

Over the past four years the health policy environment has taken cognizance of the value that a strong human resources stock has for the health sector as well as for the development of sub-Saharan Africa as a whole. A variety of meetings and consultations have led to policy declarations and proposals for action that create an environment for effectively tackling human resources issues backed by political will. In 2002, the African Union at its meeting in Durban, South Africa, declared 2004 a Year of Human Resources Development (this was later changed to 2005) with special emphasis on health (African Union, 2002). The establishment of the New Partnership for Africa's Development (NEPAD) has also created avenues for multi-country efforts at tackling the health crisis in Africa. Several NEPAD deliberations have concerned strengthening human resources with emphasis on health and several initiatives have been started in conjunction with various international partners including the development of a NEPAD Health Strategy (Buch, 2003a) and an Initial Programme of Action (Buch 2003b) which includes a proposal to '*Reach an international agreement on migration especially with regard to ethical recruitment of health personnel from Africa, whilst putting in place mechanisms to address the adverse conditions of service for health professionals*' (p. 6, sect. 1.4). UN agencies including the United Nations Economic Commission for Africa (UNECA), the World Bank and the International Organization for Migration (IOM) have held various meetings to deliberate on the human resources and capacity needs of African countries (African Union/United Nations, 2004). Aside from investments into building economies there is the need to engage the dire effects of HIV/AIDS and other health challenges that mitigate the health efforts of countries. The human resources cluster in NEPAD has agreed to establish Social/Health desks at sub-regional level. NEPAD, IOM and WHO have also collaborated in developing plans to harness Africa's human resources in the diaspora towards providing service for their countries. IOM and WHO are working towards creating a database of experts in the diaspora and to connecting this database to information on areas of need within countries (African Union/United Nations, 2004; African Union, 2002). Whilst experts from the diaspora can be a tremendous resource for developing countries, expertise gained in highly developed countries must be modified with local experience to be appropriate and relevant in low income countries.

The OAU/AU had continually exhorted member governments to plan for human resources for health and was to set up monitoring mechanisms to follow up on progress with HRD in health. In parallel to the regional and international efforts mentioned other consultations have been held such as the Consultative Meeting on Improving Collaboration between Health Professionals, Governments and other Stakeholders in Human Resources for Health held in Addis Ababa, 29 January – 1 February 2002. Earlier, in

Box 14: The African Union on human resources

"...RECOGNIZES the vital role played by human resources, in the promotion of health and general well-being of all communities worldwide and that inadequate human resources has been one of the major challenges to health systems development in Africa;

ACKNOWLEGES that brain drain has compounded the shortage of human resources on the Continent;

CALLS UPON each Member State to develop a realistic plan for development of human resources for health, motivate existing personnel through problem-oriented training and improvement of conditions of service, as well as upgrade skills of personnel working in the health sector in order to adequately respond to existing and emerging health issues especially preventive care;

DECLARES year 2004 as the Year for Development of Human Resources in Africa;

REQUESTS WHO, OAU/AU, World Bank and other relevant partners to establish an International Partnership for Human Resources Development (HRD) for Health for the purpose of conducting Health Sector Reforms on a sustainable basis at country level, and promote a code of ethics in international recruitment of health staff especially from Africa with the view to establishing a mechanism on how African countries can be compensated for such brain drain;

ALSO REQUESTS WHO, World Bank and other relevant partners and Institutions to regularly provide financial support to Member States in their efforts to promote and develop Human Resources in the Health Sector;

FINALLY REQUESTS the Secretary General, in collaboration with WHO and other interested partners, to call for a special Summit in 2003/2004 to consider the issue of Human Resources Development and its impact on Health Sector Reforms with special focus on HIV/AIDS, Tuberculosis and Malaria."

Source: African Union, 2002.

February 2000, a Regional Conference on Brain Drain and Capacity Building in Africa was organized by IOM, ECA and IDRC and was attended by 29 African countries as well as universities and other higher institutions. IOM has supplemented their Return of Qualified Africans Nationals (RQAN) programme with the Migration for Development of Africa (MIDA) programme, the second concerned not only with return but mainly with other more temporary modes of utilization of diasporal resources. It also recognizes the significant remittances from citizen working abroad that come into developing countries and which are now beginning to outstrip FDI in some countries.

The WHO Regional Office for Africa initiated a 6 component regional strategy on human resources for health in 1998 and established a Multi-Disciplinary Advisory Group to advise the Regional Director in 2000 (WHO/AFRO, 2000). Components of the strategy include encouraging developments within countries in the following areas:

- policies on the development of human resources for health;
- preparing human resources development plans;
- building health personnel competencies and skills;
- institutional capacity building;
- improving employment and working conditions in the health sector; and
- research into HRH.

The implementation of this regional strategy has led to the initiation of training courses for HRH officials from member countries, an attempt to establish a network of African HRH experts, support for a peer evaluation system for medical and other health professional training institutions in the region and the implementation of a number of advocacy actions. However, these actions need to be scaled up with much more significant investment into initiating country-level actions.

Table 9: International resource flow: remittances and Official Development Aid				
Country	Remittances (USD million)	% of national GDP	ODA (USD million)	Remittances as % of ODA
Nigeria	1301	3.71	152	855.0
Eritrea	127	19.68	148	85.81
Senegal	93	1.95	534	17.41
Mali	84	3.26	354	23.72
Benin	73	3.08	211	34.59
Cape Verde	69	11.87	136	50.73
Burkina Faso	67	2.59	398	16.83
Comoros	12	6.21	21	57.14

Source: African Union, 2003.

A second opportunity is that of the recent efforts to enable more resources towards reaching the Millennium Development Goals, which is represented by the Gates Foundation among others, and the creation of global funding mechanisms such as the Global Fund to fight HIV/AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI). These agencies may have improved the level of resources available for tackling priority health problems but human resources constraints continue to limit their use. A critical issue for African countries will be how to avoid the vulnerability of overall health systems strengthening to disease-specific programmes and the possibility that the utility of the health workforce will be compromised by an imbalance between training and disease (or programme) specific incentives. It is hoped that the new global funding organizations have realized the major obstacle that the human resources crisis poses to the successful implementation of their programmes. GAVI, for example, has instituted a consultation on resolving what it has called 'Health Systems Barriers to Immunization', in an attempt to understand and tackle systems problems including HRH constraints.

Health sector reforms and sector wide funding approaches (SWAps) may also offer opportunities for more flexible but concerted investments into the sector. One of the key constraints to increased investment remains a country's capacity to implement plans and to absorb and manage the new funds proficiently (Sanders *et al*., 2003). Highly indebted poor country (HIPC) debt relief and the development of poverty reduction policies and strategies by countries have offered a framework for enhancing the targeting of resources towards social and health services for the poor. Whilst these opportunities may have increased the resource base available to the health sector, many of the policy papers and strategies developed have failed to address human resources challenges adequately. A review of HRH content of HIPC and PRSP documentation revealed that while HRH is mentioned as a constraint to meeting the targets set, none of the documents sets out strategies and resources to provide relief from this constraint (Johnson, 2003). It may also be argued that other constraints to the effective use of public sector reforms, PRSPs and HIPC initiatives remain through the limits imposed on social sector spending and other hidden conditionalities that may reduce their effectiveness. There is debate on the appropriate structure and mechanisms for external aid and the effectiveness of the current examples mentioned.

Within individual countries, the realization of human resources difficulties has resulted in increased development of strategies to cope with the crisis. In Ghana, a broad-based multi-sector forum was held on human resources development in health, aimed at agreeing on innovative strategies to address the severe impact that emigration of health professionals is having on that country. Several sub-regional conferences and meetings have taken place on human resources for health. The Commonwealth Secretariat

in 2003 organized a workshop for East, Central and Southern African member states that looked at international recruitment and the 'coping strategies' that countries had adopted. The East, Central and Southern Africa (ECSA) Regional Health Community Health Ministers' meeting in November 2003 was also devoted to human resources for health. Key concerns arising from these meetings reiterate the inability of countries to respond to the crisis effectively without corresponding action from the recruiters of Africa's health workers.

A key challenge for sub-Saharan Africa remains how best to invest the momentum generated by interest in HRH with actions and strategies linked to the partnership and funding arrangements such as HIPC and PRSPs. Development partners and donors need to be encouraged away from their previous coyness of supporting human resources production and retention to having good HRH solutions integrated into the PRSPs. This will require much longer-term horizons of support.

Several countries have started reversing some of the crippling policy decisions of the past, such as the abolition of enrolled nurses and other auxiliary health worker programmes and interest is being raised in expanding the use of innovative substitute health cadres such as 'medical assistants' and 'clinical officers'. Countries are also experimenting with new ways of utilizing human resources, with some trying performance agreements/contracts with district and faith-based service providers and organizing private/public arrangements that allow specialist physicians other ways of gaining additional remuneration. Uganda, having identified health workers as a priority in its public services, arranged special pay levels as well as innovative 'lunch allowances' as incentives for retention (Kanyesigye and Ssendyona, 2003) and Ghana has increased the income of health workers through an 'additional duty hours allowance'.

The sum effect of these global, international, regional and national actions is the creation of the foundation for stopping the slide in the life-expectancy of Africa's poor through elucidating effective strategies for the use of human resources for health. Clearly the 'political will' has been stimulated and now requires the tools to put into effect the required response.

The Africa Working Group believes that the next steps involve translating the rich experience and recommendations arising from these international meetings and consultations into feasible national strategies and practical actions, which are implemented and monitored over time. For change to occur most of these actions must take place within the countries themselves. National consultations on human resources, as held in Ghana in 2003 (Ghana Health Service, 2003), are important first steps towards generating solutions (another is planned for South Africa in September 2004). These consultations serve to set out clear strategies aimed at the priority challenges and involve establishing a coalition of policy-makers from all sectors that influence health-education, public service, economic planning, local government, the professions and their regulators, including paramedical and middle level provider representatives, community representatives, civil organizations and NGOs in health and district and hospital services managers. These consultations are a difficult negotiation process but are nevertheless an essential first step for comprehensive HRH planning and implementation. The various sub-regional groupings in Africa (ECOWAS, SADC, etc.) will also need to explore possibilities for collaboration in resolving health human resource issues.

Chapter 5

New Roles of the State and Complementary Actors in HRH

In chapter 4, we discussed the inter-relationship of international, regional and national actions that have created opportunities for tackling HRH and creating a more effective health impact. However, a variety of other actors and stakeholders need to be incorporated into how we tackle the crisis facing Africa. This process must involve a fundamental re-think of how health systems are organized, and an understanding of whether existing paradigms for organizing and delivering health services still stand and if they do, what particular aspects of health systems do they best serve. The end of the cold war has seen a global trend towards the wide application of market principles to the health sector which has had an effect on the way services are organized and delivered and has also globalized the health labour market. Discussions on new directions must clarify the roles of the public and private sectors devoid of doctrinal dogma but emphasizing where each has a practical advantage and draw out ways in which they can complement each other.

Reforming and reorganizing health systems: private and public sector changes

One aspect of health sector reform is the increased roles expected for private sector participation in health. In Africa, state health services have generally had good alliances with faith-based 'private-not-for-profit' (PNFP) service providers and NGOs. Governments have subsidized the remuneration of PNFP providers in some countries and this relationship has now evolved in some areas, into contract-based agreements that will allow for other operational resources to be made available for such providers. There is a perception that the private sector has been more successful in retaining its professionals, though the evidence is not very clear on this. Efforts must also be made at providing incentives for private sector providers to target rural and deprived communities and to provide more than just clinical services. In Ghana, rural midwives have successfully provided private-for-profit (PFP) services, especially after job enhancement and training that enabled them to practise 'life-saving skills' usually reserved for physicians (Ghana Registered Midwives Association, 1992). Some African countries have recently changed laws and allowed private practice to nurses and other non-physicians more likely to set up practices in deprived areas. For example, Kenya now allows clinical officers private practise privileges that may have improved access in peri-urban slum areas (Dovlo, 2004).

However experience with increasing private sector roles has reinforced a need for well thought-out government roles in contracting, monitoring and regulating private-for-profit ventures in health. Preventive and primary care services that seem to have suffered from structural adjustment are clearly areas where good public sector health investment can have strengths and afford better equity of access to the poor.

Health sector reforms in Zambia and Ghana involved a complete restructuring of how the public sector is organized. Both countries have de-linked health service delivery from the civil service which now remains encumbered mainly with policy development and monitoring. In Zambia, de-linkage is coupled with decentralization of management to separate district and hospital boards while in Ghana the MOH delegated services to an autonomous agency, the Ghana Health Service, which in turn has devolved authority (within the overall organization) to regional and district health administration offices linked to health service committees involving community members at each level (Bossert *et al*., 2000). The possible advantage to the sector of such arrangements is that of improved and efficient HR management which is more responsive, both to client and health worker needs. Decentralized systems permit health worker performance to be supported and monitored more easily when relieved of the bureaucracy of multiple public service agency involvement in managing HR (Dovlo *et al*., 1998). De-linked health services also anticipate opportunities to develop new incentive systems outside the strictures of a civil service-wide pay systems. However, the experience with de-linkage needs to be evaluated and reviewed for lessons learned, to help inform a new group of African countries wanting to take that step. Decentralization, if not properly managed, could lead to greater inequity among districts and further mal-distribution of human resources. Poor local management capacity may often mean that the first cost to be cut by cash-strapped districts becomes its human resources. In countries with pre-existing staff shortages, local 'hire and fire' may well mean that the urban areas still get more and better qualified staff.

Making the case for human resources for health in Africa may have failed because civil society and communities probably do not link their needs for service with investment in human resources for health. Civil groups protesting for services such as ART rarely advocate for human resources needs as part of their demands. In order for countries to accept the required investment in retaining health workers and receiving quality care, there is need for the involvement and advocacy of community and civil society groups. Uganda was able (without de-linkage) to create special allowances for its health workers when it was generally agreed that this was important (however, this has been eroded by new civil service pay restructuring). This further emphasizes the need for consistent partnerships with society and policy makers to ensure the sustained motivation of health workers.

NGOs and 'not for profit' service providers have achieved good performance from health services by the more concrete integration and involvement of the community. Community participation must include roles on management boards and in monitoring the performance of health workers, as well as involvement in determining rewards (Lehmann *et al*., 2004). To reach core objectives, health workers and managers need to be made more directly responsible to the community they serve rather than to central bureaucrats. These suggestions may be regarded as controversial as the main health professionals have preferred peer regulation and avoided external control. However such steps are important if health workers are to receive the support and advocacy of the community and community groups.

It is also important to create mechanisms for effective health worker involvement in health policy decisions that affect them and the work they do. The concept of social dialogue can be a good mechanism for enabling health worker participation in policy. A case study of social dialogue among health sector stakeholders suggests that true consultation and agreement resulted in producing policy that is accepted by all major stakeholders and is implemented without much resistance (Dovlo, 2005). Social dialogue brings together all stakeholders including employers, employees, regulators of health workers and client representatives and involves more than just wage negotiation, focusing on general policy development, through analyzing and agreeing strategies as equal partners. The transparent and consistent use of such mechanisms can improve the communication between health workers and employers and create an environment of mutual respect in which other incentives become more effective.

How can governments facilitate new roles? What roles should they play themselves?

The changing policy environment requires serious re-examination of government roles in order to redefine how state sectors can facilitate the health of citizens. For example, in order to enhance private sector activ-

Box 15: Senegal: Village-based Health Committees

The entry point to reach this people effectively was agreed upon to be through the Village-based Health Committee. This committee whose membership could be changed every two years was organized to manage the enterprise; arrange for the procurement of, and the expenditure on essential drugs at moderate prices. Within the capacity of this management body also, is the recruitment of additional nurses to strengthen services.

The dispensary, which is the closest official public health facility to the community serves several villages. The government appoints a community health nurse to manage this dispensary and maintain links between the villages and the public health system.

...closer to the people in each village is a health facility known as the 'Health House'. The 'Health House' is the place where simple cases of malaria are treated, while severe malaria or other illnesses are referred to the dispensary. A Community Health Worker and Traditional Birth Attendant (TBA) work in this house...

Source: Dare et al., 2003.

ity, government health policy makers need to have the capacity to manage private sector initiatives in terms of assessing and monitoring contract implementation, setting up quality assurance systems and setting out systems to link health sector investment to health outcomes in the population. This should also include planning and managing the distribution of human resources between the public and private sectors in order to avoid disparities in care.

Are there possible private sector roles in the supply of health workers? While medical schools require heavy investment often beyond the means of private capital in poorer countries, significant roles can be played in training mid-level and substitute cadres. The Kilimanjaro Christian Medical Centre (Tanzania) is such an institution that has excelled in training assistant medical officers. Generally, the faith-based private sector in Africa has been involved for many years in producing nurses.

Intra- or extra-mural private practice in public sector institutions has been used in some countries to create incentives for retaining specialist doctors. Private wings have been created which in addition to providing extra income for service providers, are also intended to help fund other hospital needs. However a danger remains of possible neglect of public non-paying clients in favour of the rich and it may also demotivate those health workers who are not part of such schemes.

Using the community and its resources for health

The primary health care concept adopted in 1978 envisaged health systems that empowered communities to participate effectively in making decisions about health. The implementation of primary health care (PHC) created a wide variety of experiences about communities engaging in their own care. The experiences gained were generally positive (negative experiences possibly reflecting poor approaches to community engagement and involvement). However, the use of community resources in health appears to have remained underutilized in Africa. The emphasis of the primary health care concept on utilizing community health workers (CHWs)/village health workers (VHWs) and community participation appears to have waned with time. Dare *et al*.'s (2003) paper reviewed experience in the African context of community involvement in health. The paper enumerated various levels of engagement ranging from traditional 'top-down' programmes through a range of community arrangements (involvement, participation, self reliance, empowerment) with various levels of responsibility and partnership between officials and community members. Dare's review of a number of case studies reveals some lessons for Africa in utilizing community resources as an integral part of the workforce. A community TB care project implemented in some African countries showed consistently that treatment success rates were higher with decentralized/community approaches, ranging from 3% higher (Kenya, South Africa) to 18% higher success rates (Uganda).

The changing dynamics of health service provision and the need to strengthen access reinforces the need for community health workers in Africa. These were initially volunteers chosen from within their own community and trained to go back and tackle basic ailments and assist health worker activities in their communities. Many NGOs and faith-based private services have used, and continue to use, these cadres. Lehmann *et al*. (2004) reviewed the use of community health workers in Africa for the Africa Working Group and suggest that large centrally managed CHW programmes have failed while schemes that were truly community-based worked well. Secondly, the use of CHWs in specialized situations was also explored where CHWs were used for specific technical tasks and this was also considered a more successful experience.

Box 16: Utilization and effectiveness of community-based health workers

Defining community health workers

Community health workers should be members of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers.

CHWs include the most generic type of community-based workers including cadres such as village health workers (VHWs), community resource persons (CORPs) or workers known by local names such as Onompilo. In addition to generalist CHWs there is also a range of more specialised cadres such as community rehabilitation facilitators (CRFs), community-based directly observed therapy short-course (DOTS) supporters, HIV/AIDS communicators (HACS), home-based care (HBC) workers, first aid workers, lay health workers, etc. All these types of CHWs carry out one or more functions related to health care delivery, are trained in some way in the context of the intervention, but usually have no formal professional or paraprofessional certificate or degree tertiary education.

Using community health workers for malaria control: experience in Zaire

The potential for using CHWs for administering timely and effective treatment of presumptive malaria attacks was evaluated in the Katana health zone in Zaire (Delacollette *et al*., 1996). In each of the twelve villages of the intervention area, a CHW selected by the village was trained for two weeks in the use of a simple fever management algorithm. After training, the CHWs started their activities.

The CHWs performed their services under the supervision of the nurse in charge of the area's health centre and attended monthly meetings. They received only a symbolic monetary award, as well as the standing in the community. Nevertheless, no CHW dropped out of the programme. Malaria morbidity and mortality trends were monitored over two years in Area A (the project area) and in an ecologically comparable control area (Area B), where malaria treatment continued to be available at the health centre only. Health care behaviours changed dramatically in the intervention area, and by the end of the observation period 65% of malaria episodes were treated at the community level. Malaria morbidity declined 50% in Area A but remained stable in the control area. Malaria-specific mortality rates remained, however, at essentially the same levels in both areas.

Source: Lehmann *et al*., 2004.

Kidane and Morrow (2000) for example have looked at resources within the family and tested examples of mothers in parts of Ethiopia being enabled to treat malaria with chloroquine successfully .

The paucity of health workers in sub-Saharan Africa requires that the need for CHWs must be reviewed and revisited. However, they must be well integrated into the chain of care and not simply seen as a source of low quality care for poor rural communities. Utilization of community resources will not be entirely without constraints and factors for success have included issues of local community leadership and governance, the methods and involvement of the community in needs assessments and community diagnosis, and the commitment of health and local officials to sustaining the process (Dare *et a*l., 2003). Often the process of generating true community participation is lengthy and needs more than the usual life cycle of donor support. Successful use of these important resources will require sustained and consistent efforts with major social mobilization efforts backed by effective political will that could empower communities to support the health workforce effectively.

Alternative practitioners: the healing traditions of Africa

Africa has had long standing traditions of healing that are integral to the culture of its people. These have been largely ignored by the modern health systems that evolved from the colonial era. However, the evidence is that traditional health practitioners (THPs) remain a major source of care for the population in both urban and rural populations. Expanding

Table 10: Sample ratios of traditional practitioners compared with ratios of medical doctors to the population

Country	Ratio of THPs to the population	Ratio of medical doctors to the population
Kenya:		
urban (Mathare)	1:833	1:987
rural (Kilungu)	1:146–345	1:70,000
Zimbabwe	1:600	1:6,250
Swaziland	1:100	1:10,000
Nigeria:		
Benin City	1:110	1:16,400
national average	no data	1:15,740
South Africa:		
Venda area	1:700–1,200	1:17,400
Ghana	1:200	1:20,000
Uganda	1:700	1:25,000
Tanzania	1:400	1:33,000
Mozambique	1:200	1:50,000

Source: Chatora, 2003.

their role within the health system may increase access and relieve conventional practitioners to concentrate on the areas of care. This would improve and regulate traditional practices for the benefit of the client, and when used in well-defined service areas, THPs could help avoid duplication of effort and work as community motivators and mobilizers for health programmes. As Chatora (2003) showed (Table 10) the availability of traditional practitioners outstripped that of doctors in most parts of Africa.

The Africa Regional Office of WHO has collaborated in studies on THP activities in member countries with results that could be scaled up to benefit other countries. Herbal and traditional medicine research institutions in Madagascar and other countries are scheduled to become WHO collaborating centres. Some countries have started training programmes for traditional practitioners and others have established courses for pharmacists, nurses and doctors in traditional practices. Kenya has a School of Traditional and Complementary Medicine at Kirathi and the University of Zimbabwe includes traditional medicine and medicinal plants in its courses for pharmacists and pharmacy technicians (Rufaro Chatora and Ossy Kasilo – WHO/AFRO: Personal communication, July 2004). Training and capacity building is required for both traditional practitioners and the conventional professions in order to facilitate collaboration and scale up. Kasilo (2003) raises the question of how

Box 17: Traditional health practitioners: benefits from a Uganda study

A conservative estimate shows that THPs receive about 15 clients/month and therefore about 72,000 community members are reached a year with improved services provided by THPs

- 60% trained THPs compared to 9% untrained THPs report distributing condoms
- 80% trained THPs compared to 40% untrained THPs report counselling patients
- 82% trained THPs compared to 42% untrained THPs report giving AIDS community education
- 97% trained THPs report referring patients to CHPs, clinics or hospitals

Results of the interviews showed that:

- 55% before vs. 95% after training talk to their patients about AIDS (condom use, prevention & referral)
- 63% before vs. 92% after training advise their patients to go for an HIV test
- 49% before vs. 95% after training discuss condom use with their patients
- 34% before vs. 69% discuss sex-related issues.
- Other benefits of training included: better management of patients through referral, better hygiene, record keeping, decrease in consultation fees, initiation of eight patient support groups, eight THP associations, and improved collaboration with conventional medicine.

Source: Kyeyune *et al*., 2003.

respect for THPs can be built among researchers, universities and conventional health practitioners. She also raises the important challenge of establishing registration and accreditation systems that are important to reduce fake practitioners. WHO notes that only 11 of 46 African countries have national policies in place on traditional medical practice, while 12 have some laws or regulations related to their practice (Sambo, 2003). At present, most countries tolerate but do not formally recognize traditional practitioners. This needs to shift into more inclusive and integrative inter-play with conventional health practitioners and countries need to explore ways of achieving effective collaboration and integration of traditional and modern practices to be truly complementary. Kyeyune *et al.* (2003) have shown in Uganda that THP collaboration led to significant increases in HIV information and testing in communities where traditional practitioners have been trained

Box 18: HIV/AIDS – the gender factor

"Women are more physically susceptible to HIV infection than men. Data from a number of studies suggest that male-to-female transmission during sex is about twice as likely to occur as female-to-male transmission, if no other sexually transmitted infections are present. Moreover, young women are biologically more susceptible to infection than older women before the menopause.

Women's increased risk is also a reflection of gender inequalities. Gender refers to the societal beliefs, customs and practices that define 'masculine' and 'feminine' attributes and behaviour. In most societies, the rules governing sexual relationships differ for women and men, with men holding most of the power. This means that for many women, including married women, their male partners' sexual behaviour is the most important HIV-risk factor.

The epidemic also has a disproportionate impact on women. Their socially defined roles as carers, wives, mothers and grandmothers means they bear the greatest part of the AIDS-care burden. When death and illness lead to household or community impoverishment, women and girls are even more affected due to their low social status and lack of equal economic opportunities."

Source: Armstrong *et al*., 2004

to integrate these activities into their practice. For example THP clients who agreed to be tested for HIV rose from 46% to 64% after 6-months follow up.

Mali has set up systems for advancing collaboration between traditional and conventional practitioners starting with an evaluation using a set of criteria and leading to official recognition. Engagement with this widespread human resource and further enhancing its utility to the populace through training, wider involvement in health services, regulation and enhanced practice are the essential next steps and the evidence exists that this can be done.

Gender and health workers – what needs to change?

The gender of the health workforce in sub-Saharan Africa is largely female especially at operational levels but top management and policy levels have been mainly male. It is estimated that only about 10% of nurses in most countries are male. In one country studied, 59% of all public sector health staff was female, but this declines to 33.5% at the MOH headquarters. Only 17% of doctors were female compared to 87.4% of registered nurses and 90.2% of enrolled nurses (Dovlo, 1998). Gender reflects on staff distribution and on access to care, in that the lowest female staff ratios were found in the deprived northern regions (49.3%, 44.5% and 53%). These figures, probably true for other parts of Africa, indicate underlying issues of gender insensitive workforce organization which may hinder the participation of women health workers in health services management and policy development. Ngufor (1999) also points out that despite the female preponderance in the workforce in Cameroon, family and marriage culture tend to limit their distribution around the country. However, Cameroon unlike some other countries in Africa permits training of male midwives which partially alleviates the problem. He also notes that female representation at the higher levels of the health sector had started increasing.

Box 19: Gender and health sector reforms in Uganda

"The Uganda government's current HR strategy proposals do not address gender issues directly but their emphasis on creating more open career structures is likely to benefit women. Enrolled nurses are to be upgraded to registered nurses/midwives to enable them to continue providing primary level nursing care. They will be able to develop careers in public health nursing. They can now be upgraded medical assistants (who currently are mainly men). Similarly nursing aides found to be effective may enter enrolled nurse training even though they lack formal educational qualifications."

Source: Standing *et al*.,1998.

The gender composition of the workforce also raises implications for the HIV/AIDS impact on health workers. Female health workers are care-givers at home, as part of their community and as professionals. UNAIDS (Armstrong *et al*., 2004) has suggested that even under ordinary circumstances, women are at an increased risk of HIV infection compared to men. Thus this may have effects on a largely female workforce facing these higher risk factors. It again emphasizes the need for HIV/AIDS programmes designed specifically for the health workforce including aspects aimed specifically at its large female component.

Health sector reforms should provide another opportunity to redress some of the gender challenges to effective utilization of the workforce. Standing (1998) gives examples of how the reforms in Uganda may assist the female workforce that dominate peripheral and lower cadre groups (See Box 19). Reorganizing

the way careers are developed may allow greater access to self-development for female health workers, recognizing the peculiar constraints they face, and improve the ways by which the health sector demonstrates the value it places on its workers.

Clearly Africa needs to organize its workforce in a way that recognizes the development and work environment needs of the predominant gender and be able to respond to gender issues in the community as well as in the workforce.

To conclude, this chapter has raised some issues on the new dimensions of managing the shifting paradigms in evolving health systems and service delivery and discusses the implications these have for workforce organization and utilization. Achieving these broad and strategic visions of the health workforce requires leadership and a reorientation of policy making and management to thoroughly understand the issues. It also requires skills of advocacy, interdisciplinary communication, policy analysis and, even more crucially, implementation capability.

Chapter 6

Experiences from Countries: Positive Lessons from Within

The story of the health and human resources crisis in sub-Saharan Africa is interspersed with actions by countries, smaller jurisdictions, sub-regional groupings, non-governmental organizations, donors and other partners that have tried in various ways to address various aspects of the problem. The Africa Working Group strongly feels that the lack of adequate forums and resources for research and exchange of innovations coupled with a lack of avenues for publishing and advocacy hides many positive experiences and restricts how far lessons could be learnt from African examples and scaled up into successful interventions. The aim of this section is to give examples of some approaches and strategies that have been tried and to encourage countries and HR professionals to invest in ways of establishing facts and learning from the compendium of available interventions. It is recognized that innovations happen in specific locations and there are factors that influence their success which may not be immediately transferable into other settings. However it is important that African countries move away from piecemeal strategies (though important as crucibles for testing future development) into comprehensive national actions.

The actions and strategies discussed here are not given as examples of unqualified successes but are examples of initiatives and decisions implemented in key areas of health sector human resources responses and may provide templates for designing interventions. The examples illustrated cover areas of human resources development such as:

- The supply of health workers – training, education, recruitment, cadres profiling.
- HR management – retention and incentives, performance management, welfare and benefits for health workers as well as morale and motivation.
- The governance of health systems and services and the organization and management of resources and of service delivery.

These examples, of course, need to be further analyzed in terms of conceptual and contextual variation before implementation. They can form the basis of discussion and of countries learning from other experiences.

Supply, training and education

Ndumbe (2004) and Lehmann (2000) have described some of the innovative medical school curricula being used in Africa. These show how the skills of the medical workforce can become more in tune with community needs and showcase innovative systems. For example, the University of Transkei's (UNITRA) innovative approach to selecting and training medical students in South Africa was well illustrated by Lehmann (2000). (Box 20).

Box 20: An innovative medical school curriculum

The main types of assessment methods at UNITRA are:

- assessment of the tutorial progress by tutors, peers and students themselves;
- the Discipline Knowledge Status Examination, which are written exams consisting of case scenarios that test for content mastery across traditional disciplines;
- the Individual Process Assessment which tests an individual student's ability to function completely on their own and mirrors the work on cases done in tutorial groups;
- Objective Structured Clinical Examinations (OSCEs), which test clinical skills in a controlled environment.

Community members play an important role in the planning, implementation, and assessment of community-based activities at UNITRA. Student learning objectives are discussed and negotiated with community members, who ensure that these activities will be of some benefit to the community. They contribute to the continuous assessment of students by giving feedback on the impact of student activities in the community. They also comment on the interpersonal skills of students, and the level of sensitivity, respect and caring which they display.

During the last three years of their medical training students spend approximately eighteen weeks in community clinical clerkship. During their fourth year they are assigned to selected rural hospitals for ten weeks. Students are supervised by general practitioners who have been trained as preceptors, and are visited once or twice a week by circuit riders from UNITRA.

...Students also rotate through the peripheral clinics attached to these hospitals, where they are involved in activities such as immunisation and growth monitoring of children. In the fifth and sixth years students are placed in the UCHPP clinics, which are run by the Department of Family Medicine, for block periods of approximately five and six weeks respectively. The emphasis is on learning the principles of family medicine and community health care, and the assessment and management of common health problems in the Primary Health Care Settings.

Source: Lehmann *et al.*, 2000.

Box 21: Training mid-level 'substitutes' for doctors

Mozambique's 'Técnicos de Cirurgía'

"A successful programme is reported from Mozambique for training middle-level health workers to perform fairly advanced surgical procedures in remote areas where the services of consultants are virtually unobtainable. Manpower and financial constraints obliged Mozambique to train medical assistants to perform surgical work in rural areas, where three broad priorities were identified: pregnancy-related complications, trauma-related complications, and emergency inflammatory conditions. Since 1984, 20 health workers have emerged from three-year courses to become 'técnicos de cirurgía' (assistant medical officers), and it is expected that there will be 46 by 1999. The training comprises two years of lectures and practical sessions in the Maputo Central Hospital, and a practical internship lasting a year at a provincial hospital.

...Throughout 1995 a follow-up was conducted on 14 assistant medical officers. They performed 10,258 surgical operations, some 70% of which were emergency interventions. Low rates of complication occurred and postoperative mortality amounted to 0.4% and 0.1% in emergency and elective interventions respectively..."
Source: Vaz *et al.*, 1999.

Orthopaedic Clinical Officers in Malawi

...There are about 200 MDs in the country and the Blantyre Medical School plans to graduate 25 new physicians annually. Thus, the very small physician to population ratio will persist for many years. Paramedical Medical Assistants, numbering some 700, provide the major part of primary medical care. Such Medical Assistants receive three years training in Lilongwe. Additional training in specialties like Anaesthesia or Orthopaedic Surgery leads to qualification in the grade of Clinical Officer.

...The Orthopaedic Clinical Officers will look after all of the common fractures coming to District Hospitals. They are competent in closed reductions, castings, application of lower limb traction and prescription of orthotics such as simple caliper braces for children who have had polio. They are capable of carrying out tendon releases for post-polio contractures, incision and drainage of abscesses such as pyomyositis and the debridement of open wounds. All of these surgical procedures are extremely cost-effective in the setting of a developing country with little financial resources.
Source: Lyttle, 1998.

Health professionals have at times been seen as elitist and students' and practitioners' attitudes seen as removed from the conditions of their communities. Candidates from rural and deprived communities face the challenge of rigorous academic requirements for admission. Recruitment of students from rural and deprived areas who would otherwise not have met competitive entrance requirements will recognize and account for the factors that restrict equitable opportunity and could be a way of ensuring that candidates from poor communities enter the health professions. A corollary to this is the finding from South Africa that graduates who came from rural areas were more likely to remain in rural care settings after school (de Vries and Reid, 2003).

In Mozambique, a 'surgical technicians' programme was started that gave mid-level service providers training in emergency surgery among other disciplines. These medical assistants (or 'técnicos de cirurgía') are now a significant component of the workforce, providing services in rural hospitals where doctors are reluctant to work. Vaz's evaluation of Mozambique's 'técnicos' which indicated good service outputs illustrates the usefulness of such cadres (Vaz *et al*., 1999). In Malawi, 'Orthopaedic Clinical Officers' have been trained to provide similar services. (Box 21). Scaling up service delivery may require increased production of such cadres who are much better retained that the internationally mobile professions.

Continuing education

Africa needs good supervisory support and continuing education for its health workforce. The skills and competencies of health workers must be continually reinforced with opportunities to update and understand new technologies and processes. Distance education is suggested as one way of overcoming the lack of access to information and training. The University of South Africa (UNISA) and AMREF in East Africa are examples of institutions offering distance education programmes designed for health workers (See Box 22). The advantages of distance learning techniques are that health workers are not taken away for long periods of time from their workplaces, learning can involve the actual work that a student undertakes routinely and the costs of residential training may be reduced.

Telemedicine and Internet-based learning is currently less popular, possibly because of the limited technology found in rural settings. However, there are indications that email access is expanding in Africa and at relatively inexpensive costs. Organizations like Satellife/HealthNet (a Boston-based charitable organization) uses email links among health workers in Africa at relatively low cost to provide valuable advice and information to practitioners using low level satellite technologies (Fraser and McGrath, 2000). These techniques could be adapted for open learning training strategies for staff in deprived areas.

Box 22: Distance education in Kenya

"...The AMREF Distance Education Project runs two programmes. The first one is a distance education course offered through printed materials. The second one consists of two radio series: one directed at the general public and the second one for health workers. When the DE programme began in 1980, the Distance Teaching Unit offered six courses that were developed at writers' workshops. Currently, AMREF runs nine correspondence courses and a weekly radio programme.

...in the first intake only 200 learners were enrolled. By the end of March 1999, AMREF had enrolled 7,991 learners; and by June 1999, the total enrolment had reached 8,047 of whom 6,004 (75 per cent) were men and 2,043 (25 per cent) women. The target population is approximately 40,000 health workers, working in different health facilities all over the country. Considering that these learners are not receiving any recognisable certificates, the number of learners enrolled for the courses is quite encouraging."

Source: Mwangi, 2000.

HR management, retention and incentives

Successful retention of health workers has been difficult to achieve in most countries. The civil service has been unable to cope with administering bonds and following up defaulters. Very often bonds were devalued by inflation and high exchange rates enabling private sector and internationally-employed workers to pay off the bonds with ease. A development in the area of compelling staff to give some service is the Community Service Scheme recently adopted for new graduates in the main health professions in South Africa. It requires professionals to serve in the public sector as a requirement for full registration by the professional councils. A recent review of community service by Reid (2003) illustrates some of the implementation issues faced. (Box 23). Though the South African government does get two years of work from new health graduates, many leave the country immediately after completing their

Box 23: Community service in South Africa

"The one-year period of community service (CS) for health professionals has been implemented since 1998, with doctors, dentists and pharmacists now being routinelyallocated to a 12-month period of service in public institutions, on completion of their-formal training. A further 7 professional groups will follow in 2003, including physiotherapists, occupational and speech therapists, clinical psychologists, dieticians, radiographers and environmental health officers. The aim of CS, according to the the Department of Health, is 'to ensure improved provision of health services to all citizens of the country'".

"...despite difficulties and frustrations, the majority felt that they had made a difference and had undergone some professional development. Overall, most described their experience of the year as positive in retrospect, but only a minority reported that their attitude had become more positive during the year. Supervision of CS doctors, dentists and pharmacists by more senior professionals was found to be significantly poorer in rural than in urban settings. The dentists showed the greatest gap between their skills and expectations as university graduates, and the needs and context of oral health in the public service."

"...CS pharmacists, who had completed their internships in the retail sector, were also initially disorientated in the public health sector, but their skills and knowledge were valued and appreciated particularly where there had been no pharmacist before. A feature of all these young professionals is the alarming proportion of between 20% and 45% that are planning to work overseas after their CS."

Source: Reid, 2003.

Box 24: Lunch allowance in Uganda...

"...It is difficult to attribute the reduction in the brain drain to the payment of lunch allowance alone. In fact during this period there was an embargo on recruitment imposed by Civil Service Reforms (at the same time as the introduction of Lunch Allowance). This freeze resulted in a lot of health professionals without public sector jobs and many went where their services were needed.

When lunch allowance is paid through the payroll, prompt and regular payments are guaranteed. On the other hand, the total emoluments on the payroll become subject to income tax deduction. This implies that the lunch allowance will be taxed in cases where the total emoluments are over the taxable threshold of Ushs. 130,000 per month. This has resulted in lower actual pay and to complaints by medical workers, that the allowance is no longer received in full due to taxation..."

Source: Kanyesigye and Ssendyona, 2003.

...and in Kenya

"January 2002 – Government of Kenya introduced payment of non-practice, risk and extraneous allowances to doctors in the civil service. Before the allowances were introduced, the civil service employed 700 out of the 5000 doctors in Kenya. Only three applications were received after an advertisement for doctors. After introduction of allowances, an additional 500 doctors have been employed. A total of 50 applicants are being considered. Similar allowances are being paid to teaching staff in medical schools of local universities.

Payments to nursing staff and other cadres have been restricted to 'risk allowances' without a similar effect as for doctors. In addition to allowances, the Ministry of Health & the Medical Practitioners and Dentists Board (MP&DB) have issued part-time private licenses to all specialists to enable them engage in private practice; earning additional income."

Source: Dr. Stephen Ochiel, National Chairman, Kenya Medical Association - Personal Communication, June 2004.

requirements. This means that other incentive elements must be employed before sustained retention can be achieved.

Incentive systems have been an area of difficulty in the public sector. As country budgets are cut and employment frozen the workload increases and the low pay and benefits make it even more difficult to motivate health workers. However, a number of countries have implemented various allowances and schemes aimed at improving the income of health professionals (especially doctors). Uganda has implemented a Lunch Allowance scheme for health workers and gives them pay scales higher than that of other civil servants. The health sector also ensures that the remuneration of key health workers in decentralized local government facilities are guaranteed. Ghana has implemented an Additional Duty Hours Allowance scheme for its health professionals that substantially increases income and may have slowed the migration of doctors. However differences

Box 25: New allowances for South Africa's health workers

...The allowances are unique: They combine, for the first time, to address the dual inequity in the distribution of health professionals – between the private and public sectors and between rural and urban areas. They also apply much more widely than previous allowances, covering more rural areas and for the first time acknowledging the critical role of professional nurses in such areas. The rural allowance applies to 33,000 full-time health professionals, including professional nurses, working in designated areas. These are areas previously covered by a more limited form of rural allowance; the nodes presently designated in terms of the Integrated Sustainable Rural Development Programme; and areas requested by provincial departments for inclusion. The allowances range from 8% to 22% of annual salary, depending on area and occupational category. The scarce skills allowance applies to 62,000 full-time health professionals in specified categories regardless of the geographic area in which they work. The categories include medical officers, dentists, medical and dental specialists, pharmacists, radiographers, various types of therapist and nurses specialising in the areas of operating theatre technique, critical or intensive care and oncology. The allowances range from 10% to 15% of annual salary, depending on occupational category. Certain health professionals will, therefore, qualify for both allowances. For example, a doctor, dentist or pharmacist working in the deepest rural area would be eligible for both allowances and would get 37% of annual salary in allowances.

Source: Media Release, 28 January 2004. *Substantial allowances ready to roll for health professionals*. Dr Manto Tshabalala-Msimang, Minister of Health, Department of Health, Civitas Building, Struben Street, Pretoria.

in the level of these allowances paid to nurses are thought to have spurred recent spikes in migration (Buchan and Dovlo, 2004).

Studies in Uganda (Lindelöw *et al*., 2003) have shown that public sector pay rises resulted in better staffing levels when compared to private-for-profit and non-profit institutions. Work output in terms of patients per staff was also higher in public sector health facilities, though this varied across the country. As access is one of the key reasons why clients chose public facilities, it appears that the improved pay was worth the investment.

Another example from outside the health sector illustrates how Ethiopian Airlines, a government-owned concern, has been able to provide market-linked pay

Box 26: Mechanisms to enhance performance

"...The supervisors' role was the linchpin of performance enhancement in the quasi-government hospitals. It was clear from the focus group discussions that the keener pressure from supervisors and their perceived knowledgeability of technical processes served to keep service providers on their toes. In a sense the supervisor felt a more direct pressure to ensure good performance/outputs (which were likely to be directly related to retaining the position, incentives and other benefits). The above observations were not so with public hospitals studied. Their supervisors seemed to have less authority and performance emphasis seemed to be placed on behaviours such as 'obedience', 'punctuality', 'respectfulness', than on performance of technical tasks. A system for reorientation of supervisors and an emphasis of formal performance appraisal systems on productivity of supervisors rather than directly on service providers may be a useful option to test..."

Source: Dovlo *et al*. 1998.

to its most critical staff, the senior pilots. The pilots were better paid than the Managing Director, and were provided with regular external training opportunities (Habte, 2003). Pilots are loaned to international airlines, giving them another opportunity for additional income. However, though Ethiopian Airways has retained its pilots, it has experienced a higher than usual turnover among other staff, such as accountants and administrators, who did not receive similar benefits.

South Africa has introduced new allowances for staff with priority skills and those working in rural areas. These incentives were designed to achieve both retention and distribution objectives. Staff with priority skills serving in rural areas receive both allowances. (Box 25)

The incentive examples given do not represent perfect solutions but are aimed at demonstrating specific actions that could be taken to motivate health workers. Initiating such actions will not be without problems but will require political will to initiate the policy steps, implement them and then review and fine-tune the interventions. Factors to be noted in setting out incentive schemes include the perceived fairness with which they are provided between various professions and how well they are linked to performance or output. Similarly, countries must consider whether to tax such allowances and how enhanced allowances can contribute to pensions and welfare after retirement.

Box 27: De-linking health services from the civil service

"...Two of the countries examined, Ghana and Zambia, are pursuing strategies of delegation to semi-autonomous public institutions. In each case, the Ministry of Health has sought to redefine its role from the traditional all-inclusive health sector manager to one of policy formulation, regulation, and monitoring. Responsibility for health service delivery is to be delegated to an autonomous public institution, the Ghana Health Service in the case of Ghana, and the Central Board of Health in the case of Zambia. These new service delivery institutions will ostensibly have greater flexibility in human resource management, administration, and relations with private and non-governmental providers. The models for each of these institutions vary in important ways. While the Ghana Health Service will function essentially as a unified independent bureaucratic hierarchy, the Zambian Central Board of Health will oversee and coordinate a host of semiautonomous district and hospital management boards. The latter system was originally intended to confer a greater degree of decision space to the boards, but the MOH has retained responsibility for board appointment, thus significantly limiting their decision-space."

Source: Bossert *et al*., 2000.

Performance management

Public sector performance management systems have relied almost exclusively on 'performance appraisals' that use assessment forms and interviews (and in some countries confidential reports on staff). Often appraisals are tedious and centralized exercises that are not clearly linked to the incentives and reward system and thus reduce the value of the process. Not much experience has been elicited on Continuous Quality Improvement processes in Africa and performance management that is developed around quality systems may be a better way of tackling the productivity of health workers. An example of comparisons in performance management processes between government and non-government providers is illustrated in Box 26.

A recent factor influencing morale and performance is the perception of many staff (especially those working in peripheral and rural areas) of not being valued and respected by the health service and senior managers. The need for welfare schemes and health care for health workers was also a recurring theme in enhancing performance. The HIV/AIDS prevention schemes for health workers being implemented in Botswana and Zambia are examples of actions that show that healthy workers are valued.

Innovations in governance of health systems

A critical aspect of strengthening human resources for health lies with the governance of health systems. This not only requires capacity building for the 'governors' but also for the client organizations that must insist on certain results from managers. However, the way health systems and services are structured and linked can result in excess bureaucracy and inappropriate interference from government. Developing new organizational structures and processes can create efficiencies in how services are managed through approaches that insist on responsibility backed by accountability. Decentralization of health systems may be an important way of enhancing governance and accountability of public health facilities. Bossert *et al*. (2000) reviewed decentralization processes in Zambia and Ghana and their description illustrates some of the issues. (Box 27)

De-linkage from the civil service is often touted by health professionals as a way of resolving health worker pay constraints, as de-linked organizations could develop new schemes of service that can give higher remuneration than the civil service. However, a critical objective of de-linkage that is lost in the discussion is that of being able to achieve better performance in service delivery by creating new institutional and management systems that are different from routine civil service systems.

Conferences, workshops, reports and anecdotes from around Africa teem with examples of various efforts aimed at resolving some of the operational constraints of developing and utilizing human resources for health. However, data collection and information systems are poor and research institutions on the continent will need to refocus some of their activities on assessing the effects that these examples have had and lessons that can be shared.

Part III

Evolving a Framework for Strategy Development: Establishing the Appropriate Pre-Conditions

In previous sections the report sought to establish the situation of human resources for health in sub-Saharan Africa in terms of the supply, retention and utilization, and the challenges faced. The second section in particular shared some experiences of actions and innovations that have taken place aimed at moderating human resources problems. The report will now discuss a framework for distilling strategies and what influence the policy environment can have on the context, assumptions and risks inherent in options for action. These issues concern macro-policy and the economic environment and the range of interests and stakeholders. Chapter 9 summarizes conclusions that the report has drawn upon to reach its recommendations.

Chapter 7

The Macro Environment

Development assistance and global cooperation

Africa and its development partners have realized that enhancing the performance of its health systems is a key facilitator to development. Human resources are essential for the health sector's contribution to the advancement of the continent. This new political will against the health crisis has to negotiate a variety of global influences and factors that have significant impact on the economies of low-income countries in sub-Saharan Africa. A key challenge will be how to translate these policy influences into strategies that will enhance health for the majority of Africa's peoples, while establishing good, technically effective and cost-efficient health services. It is acknowledged that funding for the health services in the poorest countries must increase significantly for human resources development investments to yield concrete results.

Meeus (2003) and Kinuthia (2002) suggested that actions by developed countries to generate the 'pull' of health workers, coupled with international trade arrangements such as GATS Mode 4 (General Agreement on Trade in Services. Mode 4: Movements of natural persons), militate against efforts by African countries to retain health professionals. Loss of health workers from Africa occurs without any real recompense. Donor investment into human resources development in Africa faces what UNECA terms the 'development paradox' whereby this investment results in trained persons who end up rather working in developed countries (UNECA, 2002). The OECD, while acknowledging rising demand for health professionals in their own countries, has not significantly expanded local training of health professionals, and appears to rely on international recruitment for its needs. For example, Africa (and other source countries) are losers in the international labour market when an OECD target to maintain physician to population ratios through a 26% increase in national medical school outputs, was not achieved by the major recipient countries—the UK, USA and Canada, who only achieved 14%, 10% and 18% of this target, respectively (Bundred and Levitt, 2000). The ILO's Commission on Social Dimensions of Globalization concludes that lack of a multi-lateral framework on migration has made developing countries lose one the most needed resources for development without compensation (ILO, 2004). However, even as Africa loses its trained professionals, Pang *et al*. (2002) estimate that some 35% of annual official development assistance (ODA) goes into salaries of up to 100,000 foreign experts (for all sectors) to provide services that could have been provided less expensively by indigenous capacity. Perhaps more disturbing is that even with these losses of both human and financial resources from Africa, development assistance had been decreasing with most national (industrialized country) ODA levels well below the suggested standard of 0.7% of GDP (ILO, 2004). The situation where countries offer health sector development aid, while on the other hand encourage the pull of skilled human resources into their countries, must be resolved through greater moral commitment to resolve global HRH supply problems. Some OECD countries appear to have been able to maintain health

Table 11: Foreign-trained physicians as a % of practising physicians, 1980–2001						
Country	1980	1985	1990	1995	2000	2001
Australia	35.7	35.5	37.2	19.6	—	—
Japan	1.0	—	1.0	—	1.0	—
Austria	—	—	—	—	1.5	1.6
France	—	9.0	4.0	4.0	3.0	—
Norway	—	—	—	—	12.7	12.4
Switzerland	—	—	—	—	17.8	—
Canada	28.0	26.7	24.3	22.6	21.1	21.0
United States	20.9	21.5	21.4	23.0	24.2	—
England	—	—	—	28.0	30.0	30.0
New Zealand	—	—	—	33.3	34.5	—

Source: OECD, 2003.

services with moderate proportions of foreign staff. Year 2000 data show that France , Japan and Austria, for example, have proportions of foreign trained practising physicians between 1% and 4% of their total physician stock, while others, such as New Zealand (34.5%), England (30%), USA (24%) and Canada (21%) maintain quite high levels (OECD, 2003).

The debt burden remains a major issue frustrating the economic environment for retaining health professionals. The Commission on Social Dimensions of Globalization estimates that between 1990 and 2001, external debt (as % of income) rose to 100.3% from 88.1% in the poorest countries! And most least developed countries (LDCs) used an average of 3% of GDP to service debts. It recommended that the HIPC initiative should be deepened and accelerated in order to achieve meaningful change in poor countries (ILO, 2004). A World Bank and IMF study of 24 HIPC countries (who reached decision points by November 2001) suggests that average debt service for 2001-03 will reduce by 30% from the level prior to HIPC relief (1998/99). Both institutions also propose to reduce debt service payments by 65% and 55%, respectively, and expect average social spending to rise by 45% above 1999 levels (IMF/IDA, 2001). Whilst these figures are positive events it is acknowledged that the current median per capita health budget in Africa of US$6 per annum will not increase much and remains very inadequate compared to the WHO estimate of US$60 per capita requirement for good basic health care (Brundtland, 2000). Thus, even with debt reprieve, significant resource gaps continue to exist. Only five countries in sub-Saharan Africa spend US$60 or more per capita on health (South Africa, Botswana, Namibia, Seychelles, Mauritius) (Sanders and Meeus, 2002). It is not clear how debt relief will affect human resources for health. A review of HIPC and PRSP documentation by Johnson (2003) indicates that poverty reduction policy papers have dealt minimally with human resources for health and on those occasions where it was identified as a major problem, few specific strategies were aimed at systematically addressing HR development and retention.

Sanders and Meeus (2002) also show that while public expenditure on health has increased in high- and middle-income countries, it has actually decreased in low-income countries, possibly due to pressure from international lending institutions . Twenty-seven of 46 African countries with data available had an average per-capita expenditure on health of less than US$12 per annum.

The 'trade' in natural persons and the WTO-GATS agreement

The movement of health professionals between countries appears to have been greatly facilitated in recent years by increased demand in developed countries and the environment created by trade liberalization in health services. It is suggested by some observers that GATS Mode 4 (which deals with the movement of natural persons) may serve to create huge imbalances in human resources for health. Kinuthia (2002) suggests that GATS assumes that governments can disengage themselves from providing basic services, such as health, and leave these to free market forces without repercussions. Some organizations have cautioned against the inclusion of health services in the GATS agreement, suggesting that retention of health workers should not come under binding trade liberalization when vulnerable

Table 12: Public expenditure on health

	Public expenditure on health as a % of GDP 1990	Public expenditure on health as a % of GDP 1996-98
48 High Income Countries – GDP US$ 22,273 billion (no African countries included)	5.3	6.4
93 Middle Income Countries – GDP US$ 4,319 billion (22 African countries included)	2.6	3.2
34 Low Income Countries – GDP US$ 1,830 billion (includes 29 African countries, excludes Somalia and Liberia)	0.9	0.8
World	4.7	5.6

Source: UNDP, 2000.

Per capita expenditure on health (US $)	No. of African countries	African countries
>60	6	Seychelles, South Africa, Mauritius, Botswana, Tunisia, Namibia
>34–60	3	Algeria, Swaziland, Cape Verde
12–34	10	Gabon, Morocco, Egypt, Zimbabwe, Lesotho, São Tome & Principe, Republic of the Congo, Côte d'Ivoire, Comoros
<12	27	Guinea, Ghana, Mauritania, Cameroon, Gambia, Togo, Central African Republic, Uganda, Kenya, Burkina Faso, Benin, Chad, Eritrea, DRC, Nigeria, Mozambique, Madagascar, Niger, Zambia, Mali, Rwanda, Guinea Bissau, Ethiopia, Burundi, Malawi, Tanzania, Sierra Leone
No data available	7	Libya, Angola, Equatorial Guinea, Sudan, Djibouti, Somalia, Liberia

Calculations based on 1998 GDP per capita (1995 US$) and 1998 public expenditure as % of GDP.
Source: *Human Development Report 2000*, UNDP.

groups within poor countries are at risk (Equinet *et al*., 2003).

WHO, in a recent international consultation, agreed that the impact that the liberalization of movement of skills has on health services has not been fully studied and there is an urgency to avoid major deleterious effects in poor countries (WHO, 2001). Though GATS Mode 4 may represent an opportunity for some developing countries to export surplus skills, Wickramasekara (2002) suggests that the arrangements inordinately favour multi-national companies and are limited by other migration barriers in industrialized countries. However, Wickramasekara proposes that a focus of GATS Mode 4 on temporary movements may permit arrangements that allow professionals to work temporarily abroad and return home suggesting special 'GATS visas' to facilitate such temporary movement of skills.

For human resources for health to play its role in human development in Africa, there is a need for a critical review of the macroeconomic environment and its effects on the health sector in poor countries. Economies burdened with debt and low health budgets cannot sustain motivated health workers. Despite the positive note of the Abuja declaration of African heads of state in 2001 (African Union, 2001), the low starting point of some countries means that even substantial increases in budgets allocated to health may not result in significant changes. Development assistance to low-income countries in Africa must reflect other international economic policies that negatively impact on the achievement of health objectives.

The health labour market and trade liberalization raises challenges to African governments on the economic feasibility of retention strategies, and the political realities and choices that they face. The coordi-

nation of infrastructure, human capacity and local and external partner resources are needed to arrive at workable strategies. Human resources for health also requires a change in the structure of economic aid and debt management and an increase in the absolute investment made into countries' health budgets. International labour markets must consider 'protection' of core assets of poor countries (such as HR) in order to sustain development in an unfairly globalized world.

Chapter 8

HRH Development in Africa: Multi-sectoral and Multilevel Approaches

Resolving the HRH and health crisis facing Africa will require major multi-sectoral, multi-level and multi-dimensional approaches. These approaches while originating from national strategies and policies will also require major international involvement and support, through policies that ameliorate the negative impact of globalization on health in the poorest countries. In this chapter, the process for devising strategies in countries and their coordination within the Africa region are examined.

Making structural changes to health systems and HRH: the stakeholders

Public service/health sector reforms in Africa have involved restructuring the sector to create new systems, procedures and functions. Ideally, these reforms should be designed with the core aim of promoting the efficiency and responsiveness of health systems. However, the danger exists that reforms may be externally driven and thus are not sustainable due to lack of implementation capacity and ownership but are enforced by donor conditionalities such as social spending constraints and unrealistic funding timeframes. The reforms may not reflect the opinions of key stakeholders and true national debate and consensus may not occur. For example, the report from a conference of representatives of policy makers, health professionals and educators in 2002, suggested that health professionals in Africa have often been ignored and uninformed about health sector reform processes (WHO AFRO/World Bank, 2002). The capacity of the stakeholder organizations to internally analyze and communicate reform issues adequately to their constituents may influence ownership and participation in reforms.

Corkery (2000), Ngufor (1999) and Bossert (2000) review civil service reform in Uganda, Cameroon, and Zambia and Ghana, and these studies reveal lessons that can be learned in reforming human resources management in Africa. Some of these are that:

- Reform is inherently political, and without strong political will and a framework, will not survive.
- A sustained reform process is a resource intensive activity as managerial systems and capacity needs are developed.
- Good data and information are a required basis for actions.
- Reform processes and progress must be paced to match each country's absorptive capacity.

Box 28: Participation of health workers in health sector reform

"...Both government representatives and speakers from professional associations underscored the importance of engaging professional associations in the substance and process of health sector reforms. This would increase the commitment to reform by health professionals and increase the probability that reforms could be successfully implemented. Capacity-building to strengthen professional associations should therefore be encouraged. The experience of a programme of leadership training for paramedical staff was mentioned as a way to increase confidence, awareness and engagement of these critical groups in the health reform process. It was also argued that there was a need to work out strategies for integrating traditional practitioners in the overall health-care system. Conscious communication strategies and professional communications assistance were evoked by a number of speakers which could be very helpful to the engagement of health workers in health sector reform."

Source: WHO/AFRO-World Bank, 2002.

- Plans must be made to manage and mitigate the inevitable inter-stakeholder tensions that arise.

Rigoli and Dussault (2003) analyzed the interface between HRH and health sector reform and proposed that in managing the reform process, setting out clear policy intentions and objectives are critical in order to avoid the process becoming a forum for negotiating the individual interests of health professionals and other stakeholders. Reforms if poorly conceptualized and managed could lead to negative results and constrain further change.

Stewardship and governance: governments and health systems

Health worker confidence in the stewardship of health resources and governance of services is a major influence in the morale of health professionals. Good health systems governance helps to resolve HRH issues through engaging a variety of political and technical stakeholders, including external development partners, in sharing information, building confidence and enhancing the credibility of the national policy decision making process.

Many interests and traditions are challenged by reforms, and national planning commissions, civil service commissions, professional associations and regulatory bodies, legislators, the education sector, finance, local government, the pharmaceutical industry and the public/private interface, all have influences and interests that must be coordinated for the public good.

Box 29: Lessons from Uganda's health sector reforms

"The following lessons are among the most important which can be drawn from the Ugandan experience with health service reforms:

- Reform of the health sector is political as well as technical.
- Health service provision is complex, so is its reform.
- Reform programmes must be given adequate financial and human resources.
- Management capacity is essential.
- The pace of reform must be adapted to the available capacity of the service being reformed.
- Reform proposals must have credibility.
- Communications are crucial and must be given continuing attention.
- Good decisions need good information.
- Reform has to manage tensions.

Building (or rebuilding) a nation is not only about economic policies or about infrastructure. These things are important but if they are not grounded in the soul and spirit of the people of the country, they will be unlikely to succeed. This is one of the clearest and most general lessons to come out of review of experience with reform programmes right across the economic and cultural spectrum.

Source: Corkery, 2000.

Health service clients are often forgotten in the policy development process, especially if they are poor and uneducated. This may partly be the reason why civil action has not been as strong an advocate for change in human resources motivation as for infrastructure and services. The capacity of communities in Africa to analyze issues and engage policy makers needs to be enhanced through deliberate capacity building of civil society groups to make them effective partners in health reform dialogue. Corkery's (2000) paper on public service reform in Uganda suggests that successful reforms are a result of commitment, confidence and changes in attitude towards realizing change!

Information for change: roles for research, data and information systems: A major issue faced in developing this report is the countries' inability to quantify and analyze the crisis situation using credible data. Information on stocks and flows of human resources is absent or out-dated and few research institutions monitor the status of human resources in Africa. This lack of information undermines credible decision-making and good research, data and information systems are needed to facilitate change. Information systems on HRH require a blend of manual peripheral systems and more sophisticated computerized systems linked to the entire health information system. Creating useful information systems will require cooperation in using inter-country technical capacity and experience.

Managing international cooperation and support to health and development: Though the issues raised in this report require national government action, significant support will be required from the international development community. This should be in the form of technical assistance and international advocacy to redress a world macroeconomic environment that may be inimical to Africa's health development. A critical need is to develop local experience with HRH and technical expertise that could be shared between countries. The WHO Africa Regional Office efforts at establishing a network of African HRH experts is noteworthy but will require sustained action and capacity development to be effective. The reluctance of international aid to support the recurrent resources for health staff needs to change if the investment in health is to be effective. Thus shift from programme support to direct budget support may be important in creating the right funding environment for sustaining human resources for health. New funding arrangements for priority diseases (e.g., the Global Funds) should invest in improving the supply and retention of health workers in order to create a momentum aimed at meeting the Millennium Development Goals.

Shifting the paradigms of health professional profiles and skills mixes

The report illustrates how some low-income countries in Africa have created staffing models different from that of the industrialized countries. Tanzania, Mozambique, Malawi and Zambia, among others, illustrate this through their use of clinical officers and assistant medical officers to 'substitute' internationally tradable professionals especially in rural areas. These cadres remain under-valued and expanding their role could be a factor in sustaining equitable health services. Investment in the training of such health professionals has been limited, possibly because of the discomfort the traditional professions have with such workers. African countries have abolished some mid-level health workers even as the need for cost effective human resources have increased *and at the same time as some* ***developed*** *countries have continued to develop and use 'auxiliaries' such as nurse practitioners, medical assistants and anaesthetic assistants*. Engaging health professionals in a dialogue and reaching consensus on how to protect the health of our population will help to clarify roles and agree skill mixes and scopes of various mid-level providers so that tradition, custom and turf protection do not to hold Africa's population to ransom. The HIV/AIDS pandemic and other challenges to service delivery means that not using all such resources efficiently may harm Africa's ability to respond to the health crisis. The use of community health workers and other community resources needs to be enhanced to augment healthy environments and behaviours. Integrating these non-conventional resources into our health systems paradigms to respond to specific African problems is important in achieving health targets and poverty reduction objectives.

Chapter 9

Summary of Conclusions

The Africa Working Group was challenged by the broad range of issues and challenges affecting the workforce but finds that the experience garnered from around the continent can constitute the basis for a comprehensive and systematic approach to resolving the health crisis with a strong, competent and performing workforce, operating within functional health systems. The conclusions reached reflect issues of HRH planning, management, retention and training and how these must be coordinated to achieve lasting impact. The current situation is such that the Millennium Development Goals and moderation of the HIV/AIDS pandemic will not be met by any country in the region unless the human resource crisis is resolved.

The availability of health workers is severely limited in terms of numbers, skills and distribution—a consequence of low health sector investment and the constraints of the world economic environment. These constraints are not only due not to low supply/production of health workers but also to widespread recruitment of Africa's health workers into developed countries without recompense. Poor HR planning and information systems in Africa contribute to the problem.

In view of the limited numbers and rising workload it is not surprising that the performance of the available health workforce is not optimal. This is a result of poorly functioning health systems and the lack of adequate support and supervision for health workers. Services also lack basic equipment and logistics to facilitate health worker tasks. The performance of health workers is further hampered by training and curricula that produces well-qualified cadres but creates skills and competencies that may not always reflect the needs of Africa's priority health problems. Africa must develop a new approach to preparing its health workers that must emphasize the right attitudes and focus, in addition to knowledge and core skills.

The leadership and stewardship of health systems in Africa are a recurring theme in the frustrations expressed by health workers. Management of health services has not reflected fairness, efficiency and good administrative practices and organization. Government health services are too bureaucratic and overly centralized and are seen as non-responsive to both client and health worker needs.

The Africa Working Group recognizes the effects of the epidemiological and demographic transitions in Africa and the resulting mix of morbidity and mortality that reflects both developed and developing country disease profiles. However, a clear priority for emphasis of health worker skills is to address the problems of the bulk of the population. The mix of cadres and training must continue to emphasize primary health care and community health issues. Thus the roles of auxiliary cadres, mid-level health workers, and 'substitute workers', is not to replace the traditional professionals but to complement them

in a mix that reflects cost-effectiveness as well as efficient utilization of human resources.

Donor partnerships in health have had a major impact on how human resources are retained and utilized. Over the years, coyness of donors to invest in retention and motivation of workers has conditioned governments' proposals to agencies such as the Global Fund to routinely avoid human resources issues except those involving programme specific in-service training. Sustained development of the health sector in Africa requires coordinated government and donor investment in improving the supply of human resources, and retaining these through investment in incentives and welfare.

The Africa Working Group found that health workers in Africa feel neglected and not valued and this is further exacerbated by increased workloads and stress from the HIV/AIDS epidemic. Incentives (where available) tended to be seen as favouring one profession over another which further frustrates health workers. A core foundation for all HRH strategies must be to address the morale and commitment of health workers.

The report has depicted HIV/AIDS as the 'straw (or rather the log) that broke the camel's back'. Health workers and services that could previously cope with staff shortages have now been severely overstretched by the epidemic, which is even depleting the very workforce needed to control it. To meet the challenge, Africa's health services must be saved through concerted efforts to rescue the health workforce from the disease. Availability of counselling and treatment for health workers not only saves their lives but enhances their morale.

The experience found of actions in African countries (some small scale but others larger) illustrate, in the opinion of the Working Group, the type of efforts that can lead to improvements in the situation. These efforts may have been piecemeal and not comprehensive enough to be scaled up. The lessons learned from some of these examples are further hampered by the lack of operations research, monitoring and evaluation aimed at understanding and appreciating their impact.

Our conclusions mainly concentrate on the internal factors that militate against good utilization of the health workforce. It is however recognized that these challenges and constraints have occurred under the strong influence of global, regional and national policy environments. Policies generated by African countries for human resources can work if the international economic and social policy environments are favourable and conditions are created for policies to be implemented without compelling negative externalities.

Evolving new strategies and actions aimed at resolving Africa's human resources for health crisis will thus require better data, better information channels, persistent advocacy, and thorough stakeholder involvement and participation at all levels. Implementation of policies and the necessary capacity to roll out interventions will be a critical area of need.

The foundations for reforming and strengthening health systems must be laid through strong leadership, engaging populations and communities to agree good polices, with the positive support of our leadership.

The effect of HIV/AIDS on the workforce and its rapid depletion through migration are urgent needs and must be tackled immediately. Longer-term strategic issues exist and these have to be planned for in the short term and executed over time.

The environment for action is enhanced by the attention that the African Union (AU), NEPAD and other international organizations have paid to the issue of human resources for the health sector (African Union, 2002, 2003; Organization of African Unity/African Union, 2003; African Union/United Nations, 2004). Seizing the initiative at this time is essential in order to harness the international and regional interest in HRH.

The Africa Working Group's discussions, commissioned papers and consultations with government officials and international organizations, have generated a framework for developing action towards responses. The recommendations of the Working Group are discussed in Chapter 10.

Part IV

Recommendations and Summary of Proposed Actions

Chapter 10

Main Recommendations of the Africa Working Group

A variety of views and perspectives have come together to inform the Africa Working Group and to support its joint learning experience. While some opinion may still be divergent in some areas, there is no doubt as to the severity of the crisis facing the continent's health services and the role that the paucity of human resources plays in it.

As Africa has a wide variety of countries and health systems, the crisis impacts in different ways in different countries, and it is clear that no specific prescription can suffice for all countries. However, there is great clarity as to the underlying process needed to create an environment that enhances good stewardship and enhances the development and utilization of strategies and the Working Group proposes many of these. There are also many examples, often poorly recorded or evaluated, of positive events and innovations around sub-Saharan Africa that together may lay the foundation for a comprehensive and consistent response to the workforce crisis.

As a prerequisite for any strategies to become productive, there is the need for more effective information and evidence, as well as well structured monitoring and evaluation of interventions. The paucity of data on human resources for health in Africa must also be resolved. Secondly, capacity and technical expertise in human resources for health remains insufficient both within countries, as well as in terms of finding appropriate technical assistance to support countries' needs. Capacity building and enhancing HRH expertise will be an essential need and especially within national health systems, HRH managers must become effectively involved in all policy dialogue and reforms.

The Joint Learning Initiative's Working Group on Africa recommends 3 broad areas of action:

1. Advocacy

There is need to create and sustain momentum for HRH policy and planning through advocacy targeted at different audiences and stakeholders. A key objective should be how to change the mindset of key stakeholders to see allocation of resources to HRH not just as an expenditure item but as a critical investment with high yields for improving the quality of life and economic development. Advocacy strategies must be geared towards:

- Expanding the consultative base for input of other stakeholders (especially the professions, civil society and community advocates, governmental oversight ministries, etc.) into HRH development and strategies.
- Collaborative identification of implementation constraints to emerging HRH strategies in terms of:

⇒ Economic feasibility

⇒ Political realities and challenges

⇒ Operational limitations

⇒ Infrastructure and capacity limitations

⇒ Donor partnerships and coordination

- Creating an enabling environment for consensus on HRH development strategies and actions by all partners and stakeholders through good communication and consultation and in so doing, facilitating uptake and ownership of and mobilizing commitment to action.

Who should be the targets of advocacy and consultation?

- Policy makers at all levels:

  ⇒ Global/International

  ⇒ Regional

  ⇒ Country level

- Civil society groups—NGOs, CBOs, both internal to countries as well as influential international groups
- Development Partners, such as the

  ⇒ Bilateral agencies

  ⇒ Lending institutions

  ⇒ Grant agencies

- Professional associations representing health professionals, as well as the wide spectrum of people with various managerial and technical expertise that work in health
- Regulatory bodies and agencies responsible for the quality control of health service delivery
- Private sector service providers and support groups, both for profit and non-profit

And most importantly

- The general populace of Africa, in their communities and workplaces, and through their various representatives and organizations.

Advocacy requires at each stage a professional approach and the leadership of key political and technical personages, that lead to the creation of awareness and the evolution of innovation and strategies. Advocacy requires that specific plans and actions be monitored and their impact evaluated. As indicated in the text of this report, significant political will has been created through interaction with the Africa Union and NEPAD, and the current supportive environment for addressing HRH issues must be seized. A variety of African and international policy forums have been identified and ought to be utilized to set the stage for increased HRH investment in Africa.

Advocacy requires actions at all levels:

Within countries by Ministries of Health and civil society who must lead in informing and coordinating the involvement of the various stakeholders. The crisis must be brought to the fore of cabinet discussions and into mainstream policy discussions.

In the continental sub-regions, organizations such as SADC, ECOWAS and ECSA have a role to play in defining common goals and systems for supporting HRH and in coordinating common advocacy actions directed at international and global audiences.

2. Initiating a process for action in countries

The Africa Working Group acknowledges that HRH issues have a multi-factorial genesis that involves several sectors (health, education, finance, public administration, etc.) and stakeholders (government, professional associations, private sector, health care providers, etc.). Country solutions have to be tailored to their specific needs and it must be recognized that HRH actions often require a longer time frame to demonstrate the effect of implementation.

Initiating actions to address HRH issues as indicated demands a participatory and consultative process in which key stakeholders in a country work together to find an acceptable solution. Development partners (WHO, World Bank, bilateral donors, foundations, etc.) have a responsibility to encourage and facilitate this process with technical and financial support, and by together leveraging relevant parts of government and other stakeholders that are reluctant to take part.

The Working Group recommends the following steps, which have been adapted from the experiences of Latin American countries, to help initiate the process of reform.

- Stakeholder forums: Stakeholders get together and analyze the current situation of the health workforce and its effect on the sector (Ministries of health, education and finance; civil service/public administration or relevant government branch responsible for employment; training institutions; professional associations and unions; non-governmental health care providers, e.g. faith-based organizations, the private sector, NGOs, political representatives, e.g. parliamentary committees). The stakeholder forum should be preceded by a commissioned review of the state of HRH conducted by a national institution or team of experts, a report of which is submitted to the stakeholders to examine.
- Development of solutions and innovations: This group will then explore possible solutions, identify feasible actions and together develop an implementation plan. The experience of other countries will be very helpful in selecting options and inter-country collaboration in gathering lessons from experience will be important during this step. (see under 3).
- Implement action plan: The stakeholders' forum gives the mandate to the health sector and other important players to implement the actions determined to be feasible, building a plan that includes opportunities for monitoring and evaluating the impact on health systems.
- Monitor effect of actions on the state of HRH: Institutions and structures must be agreed and put in place to monitor and feedback to the forum on the state of progress with the implementation of actions. This must include continued evaluation of international and regional macroeconomic and social changes that may impact on the plans.
- Review, refocus and learning lessons: It is critical that HRH development strategies are not mired in rigid dogma but that opportunities are created to critically review actions and amend strategies if necessary keeping in mind the fact that HRH actions require long-term implementation for full results to be evident.

The above process must be supported by technical, inter-institutional, and inter-sectoral expert committees that have access to data and an evidence base for recommending decision-making.

3. Developing policy options to respond to the HRH crisis

A range of policy options is available to respond to the challenges facing the continent. These policy options should be taken up and supported by the main regional and international partners as well as by stakeholders in the countries who must then adapt these to their own specific needs and resources. The capacity limitation in Africa will mean a lot of support will be required from regional organizations and inter-country resources and expertise in formulating and testing out these strategies.

- **Reviving the Alma Ata approach**: A renewed focus should be on the production and support of appropriately trained primary health care workers that can respond to the health needs of the poor and other vulnerable groups by enhancing access though community outreach and services that serve the needs of families and community members who are unable to utilize fixed health facilities. These resources include community-based health workers and mid-level/auxiliary health workers. In addition, 'hidden community resources' (traditional healers, teachers, agricultural extension workers, community-based organizations, such as youth and women clubs) should be exploited to assist the health sector by mobilizing communities and in some instances delivering specific services under the supervision of the district health system and the larger referral chain. It is clear to the Africa Working Group that the attainment of the health related MDGs may well depend on these types of cadres.
- **Retention of critical professionals (doctors, nurses, midwives, pharmacists, laboratory technologists, optometrists, physiotherapists, etc.)**: Interventions to stem the migration of health professionals are probably the single most important measure that needs to be undertaken. A key action is a significant upward revision of the total compensation package to a level that reflects the value placed on the work they do and is likely to discourage staff from wanting to leave public sector services. Initially, at least it may be important to place priority on lecturers and trainers of health workers, key specialists and specially trained staff that provide support and supervision to the whole system. Care has to be taken in establishing priorities that this does not result in marginalization and frustration of rural and mid-level workers carrying the brunt of efforts to the poor. An innovative mix of salary rises, coupled with other added benefits such as accommodation, loan facilities, a range of appropriate allowances and 'managed' private practice that is tailored to each country's circumstances will be needed. These together with other measures will address the many 'push' factors that result in migration. Some of these include protection from and treatment of HIV/AIDS, opportunities for continuous professional development, and ensuring the involvement of the range of health professions in national health policy formulation. These tangibles must go hand in hand with certain intangibles generally among the non-financial incentives described in the report. These include fair and well-managed systems for recognizing performance and enhancing the respect and status of health workers in the community and ministries of health developing leadership that raises morale.
- **Managing the shortages and financial constraints** affecting health services requires that each country should seriously consider expansion of the roles of mid-level health workers who perform clinical (medical assistants, clinical officers, health officers, etc.) and nursing (enrolled nurses/midwives, practical nurses, nurse assistants) tasks at primary care levels. These cadres probably serve a much larger percentage of the population, are affordable and are less likely to emmigrate out of their country. It will be important to gain the cooperation of professional bodies and to study and understand how these work in countries that have tried this out.
- **HRH planning and management roles within countries**: HRH sections in ministries of health must also be co-leaders in health policy analysis and development to ensure that the HR basis for health policy decisions is carefully considered. They must be part of integrated planning to ensure that the national human resource development policy

and plan is integral to national health policy. Effective information systems and human resource databases are needed to keep track of the health worker situation on a regular basis.

- **Improving health care provider skills and performance**: As a first action, a critical evaluation of education and training programmes is important to ascertain their relevance and responsiveness to the health needs of the population and steps taken to correct any disconnects. An overarching strategy should involve ensuring linkages between the education and health service sectors, both for curriculum development and training strategies, as well as for formulation of national health policies and planning on supply of health workers. This may imply involvement in joint planning of each other's programmes. Secondly interventions to improve the quality of the products of training schools are recommended by the working group for countries to adopt:

  i) Training institutions should have clear institutional objectives in accordance with the needs of the population.

  ii) Training programmes should have a strong community orientation with compulsory field attachment to rural and peri-urban areas; pedagogical methods should respond to the training objectives,

  iii) Recruitment of students into training institutions should be decentralized and students should be recruited to reflect the types of populations/communities to be served. It is believed this aids retention and distribution.

  iv) There is an urgent need to increase the number of all cadres of health workers produced to reach a minimum acceptable population coverage, and

  v) Continuing professional development should be built and/or strengthened to update knowledge and skills in order to help health workers respond to new and rapidly changing healthcare, demographic and epidemiological challenges, evolution of new health technologies and advances in biomedical sciences, such as those needed to treat and care of HIV/AIDS.

Action at a regional level

- **Support strengthening of capacity for human resource planning and management in ministries of health**: Human resource development departments must be placed at policy levels and staffed with well-trained staff. Regional organizations, such as WHO/AFRO, ECSA/CRHCS, WAHC and SADC must support capacity building to develop tools and staff for ministries of health. Regional capacity initiatives must also involve collation and analysis of HRH data and provide technical advice for planning. HRH directorates/departments would then be encouraged to take a lead part in health policy development and the elaboration and implementation of strategies to resolve the HRH crisis. There is a need for technical tools that will aid development of HR information systems and databases. Regional organizations can assist by developing these and other HR management tools that can be tested and share by countries using a common framework.

- **Building HRH needs into the macroeconomic and country fiscal agendas**: Human resources strategies must reflect the macroeconomic influence of international financial institutions and other key partners in the donor community. Countries must continue to demonstrate with evidence the necessity for the investment in human resources for health and the economic and social impact that this has for meeting development goals and economic growth. While this may be difficult for individual countries to do, regional research and scientific collaboration centres can be developed to generate the expertise in this area and to make these skills available to countries. These are roles that UNECA and WHO/AFRO can play to assist countries and sub-regional health organizations to develop individual and institutional expertise in HRH.

Action at an international level

- **Reaching international consensus on managing the labour market**: The Africa Working Group acknowledges the various interests of developing countries in either retaining or managing migration of health professionals in a way that brings benefits to all concerned. International dialogue is necessary with all global stakeholders to develop a consensus framework that clarifies and moderates the international recruitment of health workers from low-income countries by rich powerful countries. The rights of health workers to mobility is welcome and recognized, but this mobility must occur after some agreed quantum service is provided for the investment made and that its occurrence does not undermine efforts to improve the well being of vulnerable populations in Africa. Managing the international labour markets must involve re-negotiating international trade agreements on the movement of people by embedding the nuances needed to protect weak economies and vulnerable people from an unfairly competitive world trade regime. The recent WHO resolution addressing this issue is an important step in the right direction (WHO, 2004b).
- **Re-engineering donor instruments to serve as vehicles for resolving the HR crisis**: The emerging aid instruments and processes such as HIPC, PRSP/PRSCs, SWAps, etc., as well as the new global funding arrangements aimed at priority diseases must be designed to provide long-term support for sustainable human resources retention. Such investments in health systems should be assessed for the level of health systems strengthening support included. Country proposals for support must similarly be evaluated for the level of health systems strengthening included. As the Working Group found most PRSPs and HIPC documentation lacked specifics on human resources needs, it makes a strong recommendation for international lending and grant-giving organizations to make human resources support an element of their assessment of such documentation.

URGENCY AND THE NEED FOR AN IMMEDIATE RESPONSE

The recommendations developed reflect the overall sense of direction envisaged by the Africa Working Group membership. Given the urgency that the group feels is needed to resolve the crisis it sees in human resources for health in Africa, it is recommended that certain actions must take place within the next 2–3 years to lay the foundation for future actions and strategies but also to address immediate emergencies.

1. The most immediate action required in our opinion is to establish the framework for action through facilitated country consultations and stakeholder forums to address the problem. Examples of this process already exist in many countries and can be rapidly rolled out in all countries. This should be followed by the selection and tasking of a national task force to review the human resources for health situation, develop necessary actions and monitor how best HRH is utilized in countries.
2. Governments and development partners should negotiate to raise health sector budgetary allocations and earmark some significant proportion of this increment to be used for strengthening human resources for health systems especially in retention and motivation, leadership development and functional human resources management.
3. Building the capacity of countries in human resources for health is crucial; this involves the development of ministries of health HR management staff capacity, the capacity of training systems and analytical institutions as well as information and HR data capacities. Countries and sub-regional organizations should assist in setting up adequate capacity development programmes including formal training, experiential learning through attachments, study tours and country-based projects.

4. Regional and sub-regional development of a network of human resources for health experts, researchers and practitioners that can support countries' efforts at evolving and implementing strategies.
5. Development of criteria and systems to evaluate the relevance and responsiveness of training institutions to health needs and production of priority cadres.

In the intermediate, medium- to long-term period, further action will also be needed to sustain the efforts for maintaining change and action that are being developed and implemented. Such action may include:

1. Evolution of intervention studies/monitored implementation and reviews that develop lessons learned and reinvested into future human resources for health development.
2. Continued HR and health leadership capacity development is essential to sustained health systems and the efficient use of human resources to resolve health problems and also to react to changing environments.
3. Health governance systems (including criteria and monitoring) and peer reviews (outcome of HR plans and performance reviews) that are a corollary to leadership development.
4. The Africa region or sub-regions will be well served by setting up a regional/sub-regional observatory/monitoring institution and systems that can independently monitor and evaluate countries' experiences and serve as a knowledge sharing facility for experts and countries in the region.

Other longer-term actions will be needed but a quick evolution of the strategies enumerated above will assist the region stabilize and begin to sustain health.

It is the opinion of the Africa Working Group from the work done so far that health systems in Africa are facing a major crisis and that investment in human resources for health can play a central role in attaining the millennium development objectives.

Human resources for health have been inadequately investigated in the decade or more of attempts to reform health systems in Africa following the World Development Report of 1993. The effect of debt and poverty in sub-Saharan Africa has had a major impact on the continent's human resources and rebuilding this critical resource requires unparalleled leadership and commitment. Happily, events in recent years have shown a growing international willingness to discuss the essential role of human resources in health development and all stakeholders must seize the opportunities presented to assure measured but sustained development of health services in Africa.

Africa's political leaders, regional development agencies and technical organizations as well as ordinary individuals and civil organizations have a role to play in investing in

the people who work for the continent's health.

October 2004

Epilogue

Since this report of the Africa Working Group on Human Resources for Health (Joint Learning Initiative) was completed, the global policy environment has changed significantly and several complementary events have taken place in late 2004 and early 2005 in support of global action on resolving the world human resources for health crisis.

In November 2004, the Joint Learning Initiative (JLI) of which the Africa Working Group was a constituent part released its overall report 'Human Resources for Health – Overcoming the Crisis' which made a major contribution to initiating global advocacy, awareness and action on human resources for health. Other JLI Working Group reports and commissioned papers are also now available collating a broad spectrum of experiences, reviews and research findings and together provide strong evidence of the linkage between HRH availability and the attainment of the health-related Millennium Development Goals (MDGs).

The second High Level Forum (HLF) on MDGs met in Abuja, Nigeria, in December 2004 and the HRH crisis featured as a prominent part of the agenda with presentations on the Africa HRH situation and a proposal of actions by Joint Learning Initiative members, Dela Dovlo and Tim Evans.

The HLF Meeting was followed by an African HRH Dialogue held in January 2005 and by the Oslo Meeting of February 2005 ('Overcoming the Crisis – Taking the Abuja Action Agenda Forward'), which focused on specific platforms of actions to be taken by countries and the global community. In March 2005, the Economic and Social Council (ECOSOC) of the United Nations General Assembly requested and received a briefing on the findings of the JLI and the HRH crisis.

Other events included an African Union Heads of State summit in January 2005 that called for action on the HRH crisis in Africa. A variety of other groups and agencies, (the USAID-supported Capacity Project, the UNDP Southern Africa Capacity Initiative – SACI, the Commonwealth Secretariat, the African Council for Sustainable Health Development – ACOSHED, the International Council of Nurses, etc.) have all initiated consultations and prepared for collaborations with countries and other agencies to take forward the African HRH agenda. In both 2004 and 2005, the World Health Assembly discussed and produced resolutions on key human resources issues.

In July 2005, the World Health Organization's Africa Regional Office (WHO/AFRO), the African Union's New Partnership for Africa's Development (NEPAD), and ACOSHED held a joint consultation with various partners that resulted in key action steps being initiated for a coordinated approach to coordinating Africa's response through a common platform for actions, the establishment of an HRH observatory, and establishing support for sustaining HRH action through research and evidence gathering, strengthening HRH linkages with supporting priority health programmes and overall health systems development.

Perhaps most important is the recognition by all these forums, partnerships and collaborations that the key to success lay in support for actions that take place in countries – a key recommendation of the report of the Africa Working Group on Human Resources for Health.

Members of the Africa Working Group are acutely conscious that the African continent faces a near collapse of its health systems and that this is closely linked to the many years of neglect to address a critical and indeed essential component of the health system, the health workforce. However, we are convinced that it is possible to mount an extraordinary response to this extraordinary challenge.

The climate is right and more stakeholders are engaged in the search for solutions than at any time in the past. Partnerships are being forged and resources are being mobilized. We hope that the content of this report serves as a reference focus that transforms the lessons of the past into the actions of the future.

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Appendices

Appendix 1

Members of the African Working Group

Name		Affiliation
Habte, Demissie	Co-Chair	World Bank, Washington DC, USA
Dare, Lola	Co-Chair	African Council for Sustainable Development, Abuja, Nigeria
Dovlo, Delanyo	Member, Report Lead Author	Accra, Ghana
Buch, Eric	Member	University of Pretoria, South Africa
Chatora, Rafael	Member	World Health Organization, AFRO, Congo
Codjia, Laurence	Member	CESAG, Senegal
Daar, Abdallah	Member	University of Toronto, Canada
Fresta, Mario	Member	Agostinho Neto University, Angola
Gbary, Akpa R	Member	World Health Organization, AFRO, Congo
Ijsselmuiden, Carel	Member	University of Pretoria, South Africa
Johnson, David	Member	IHSD/DFID, London, UK
Kandimaa, Anna-Carin	Member	Swedish Embassy, Lusaka, Zambia
Kinoti, Stephen	Member	SARA/AED/USAID, Washington DC, USA
Korte, Rolf	Member	GTZ, Eschborn, Germany
Kurowski, Christoph	Member	World Bank, Washington DC, USA
Lehmann, Uta	Member	University of the Western Cape, Cape Town, South Africa
Martineau, Tim	Member	Liverpool School of Tropical Medicine, UK
Munjanja, Olive	Member	Commonwealth Regional Health Community Secretariat (ECSA), Arusha, Tanzania
Ndumbe, Peter	Member	University of Yaoundé, Cameroon
Sanders, David	Member	University of the Western Cape, Cape Town, South Africa

Appendix 2

List of Commissioned Papers

1. Utilization and effectiveness of community based health workers (*Sanders and Lehmann*)
2. The alternate workforce: involving communities to manage priority health problems (*Dare, Okelana, Obaseki and Osegie*)
3. A review of the human resource content of PRSP & HIPC documentation in six selected countries (*David Johnson/DFID Health Systems Resource Centre*)
4. Stocks and flows of health workers (*Gbary and Munjanja*)
5. Review of the migration of Africa's health professionals (*Dovlo and Martineau*)
6. Education and training of health workers (*Ndumbe and Ijsselmuiden*)
7. Shortages of health workers – concept and evidence (*Kurowski*)
8. Impact of HIV/AIDS on health systems and the health workforce (*Kinoti – USAID/SARA*)
9. Country case study on brain drain – Nigeria (*Osegie, Fasawa and Dare*)
10. Country case study on brain drain – Sudan (*Hassan, Osman and Fahal*)
11. Case studies of good practices in human resource management:
    i. The Uganda Lunch Allowance scheme (*Kansegye*)
    ii. Ethiopian Air Lines as an example of good practice outside of health sector (*Habte/EAL*)
12. Staff motivation: The impact of non-financial incentives and quality management tools (*Korte, Mathauer and Imhoff*)

Appendix 3

Stocks of Key Human Resources in the AFRO Region

Country	Year	Population	Physicians		Midwives		Nurses		Pharmacists		Dentists		Others health workers	
			Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Algeria	2002	32,030,008	13,639	4.258					104	0.032	4521	1.411		
Angola	1997	13,134,000	881	0.671	492	0.375	13,135	10.001	24	0.018	2	0.002		
Benin	2001	6,445,000	405	0.628	557	0.864	1,315	2.040					215	0.334
Botswana	1999	1,508,000	53	0.351			3,556	23.581	31	0.206	10	0.066	1125	7.460
Burkina Faso	2001	11,837,475	314	0.265	457	0.386	3,097	2.616	32	0.027	33	0.028	3286	2.776
Burundi	2003	6,687,826	230	0.344	229	0.342	38	0.057					5600	8.373
Cameroon	1996	14,876,000	1,007	0.677	69	0.046	4,998	3.360	59	0.040	59	0.040	6968	4.684
Cape-Verde	2003	463,988	202	4.354	84	1.810	355	7.651	15	0.323	15	0.323	126	2.716
CAR	1995	3,717,000	120	0.323	166	0.447	300	0.807	26	0.070	6	0.016		
Chad	2000	7,885,000	248	0.315			1,054	1.337						
Comoros	1997	706,000	50	0.708	95	1.346	231	3.272	2	0.028	95	1.346		
Congo	1995	3,018,000	670	2.220	663	2.197	4,933	16.345						
Congo (RD)	2003	52,429,824	5,647	1.077			16,969	3.237	863	0.165	107	0.020	1332	0.254
Côte d'Ivoire	2002	16,013,000	1,763	1.101	1,980	1.236	7,233	4.517					6220	3.884
Equatorial Guinea	2001	469,000	47	1.002			162	3.454	6	0.128	4	0.085	1389	29.616
Eritrea	2000	2,273,973	173	0.761			811	3.566	85	0.374			3837	16.874
Ethiopia	2000	62,908,000	1,310	0.208			5,342	0.849						
Gabon	1997	1,014,000	368	3.629	385	3.797	1,554	15.325	41	0.404	8	0.079	1070	10.552
Gambia	1997	1,303,000	40	0.307	95	0.729	144	1.105	6	0.046	6	0.046	517	3.968
Ghana	1999	17,933,723	1,294	0.722			14,972	8.349	207	0.115	29	0.016	326	0.182
Guinea	1995	8,154,000	898	1.101	359	0.440	3,847	4.718	224	0.275				
Guinea Bissau	2003	1,492,470	103	0.690	109	0.730	799							

Country	Year	Population	Physicians		Midwives		Nurses		Pharmacists		Dentists		Others health workers	
			Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Kenya	1995	30,669,000	3,855	1.257			26267	8.565	1357	0.442	655	0.214	8130	2.651
Lesotho	1995	2,035,000	114	0.560	990	4.865	1266	6.221	10	0.049	11	0.054	8600	42.260
Liberia	1997	2,913,000	73	0.251	135	0.463	185	0.635			2	0.007	737	2.530
Madagascar	2001	16,436,000	1,428	0.869	1472	0.896	3088	1.879	8	0.005	76	0.046	6,503	3.957
Malawi	1999	11,108,000	200	0.180			1871	1.684	8	0.007	3	0.003	5,056	4.552
Mali	2000	11,351,000	529	0.466	284	0.250	1501	1.322					2,859	2.519
Mauritania	2002	2,807,000	333	1.186	241	0.859	1580	5.629	50	0.178	52	0.185		
Mauritius	1995	1,161,000	960	8.269			2629	22.644	223	1.921	152	1.309		
Mozambique	2000	18,292,000	435	0.238	1414	0.773	3664	2.003	419	0.229	136	0.074	2304	1.260
Namibia	1997	1,757,000	466	2.652	1841	10.478	2654	15.105	149	0.848	63	0.359	1272	7.240
Niger	2002	11,544,000	386	0.334	461	0.399	2668	2.311	63	0.055	21	0.018	597	0.517
Nigeria	2000	115,000,000	30,885	2.686					8642	0.751	2221	0.193	860	0.075
Rwanda	2002	8,272,000	155	0.187	10	0.012	1805	2.182	11	0.013	4	0.005	616	0.745
São Tomé and Principe	1996	138,000	63	4.565	40	2.899	172	12.464	2	0.145	7	0.507	314	22.754
Senegal	1995	9,421,000	640	0.679	560	0.594	1887	2.003	220	0.234	101	0.107	1812	1.923
Seychelles	2003	80,000	120	15.000			422	52.750	8	1.000	16	2.000	1061	132.625
Sierra Leone	1996	4,405,000	338	0.767	215	0.488	1524	3.460			19	0.043		
South Africa	1999	41,660,406	27,551	6.613			90986	21.840	9715	2.332	4192	1.006		
Swaziland	1996	925,000	133	1.438										
Tanzania	1995	35,119,000	1,264	0.360	13689	3.898	26023	7.410	562	0.160	227	0.065	15482	4.408
Togo	2001	4,740,000	265	0.559	346	0.730	782	1.650	141	0.297	25	0.053	2,999	6.327
Uganda	2002	25,004,000	2,429	0.971	2929	1.171	9851	3.940	134	0.054	72	0.029	3978	1.591
Zambia	1995	10,421,000	670	0.643			10987	10.543	75	0.072			9660	9.270
Zimbabwe	2003	11,634,663	1,530	1.315			11640	10.005	132	0.113	59	0.051	1624	1.396

Source of Data and Notes

Algeria Statistiques sanitaire/Ministère de la santé, de la population et de la réforme hospitalière, Direction de la Planification et de la Normalisation Nov 2003

Angola Data extracted on Human Resources for Health (HFA 3rd EVALUATION)

Benin Population extracted on Core Health Indicators, Source of Data on HRH DRH/MSP in SADRH3/AUTRES/WGAlgeria - Statistiques sanitaire/Ministère de la santé, de la population et de la réforme hospitalière, Direction de la Planification

	et de la Normalisation Nov 2003
Botswana	Population estimated with annual growth rates of 2,2%, Data of HRH extrated on WHO Country Cooprperation Strategy
Burkina Faso	Ministère de la santé du Burkina Faso, Direction des ressources humaines, Recensement général du personnel de santé, 2001
Burundi	Population estimée taux acc. de 1,3%, Population en 2002 de 6 602 000 hbts, Source données sur les ressources humaines Ministère de la Santé Publique / EPISTAT
Cameroon	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Cape-Verde	Population estimée taux acc. de 2,2%, Population en 2002 de 454 000 hbts, Données sur les ressources humaines reçues WR Cap Vert/CAV/HRH/463/03 – Sage-femmes modernes et traditionnelles ensemble
CAR	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Chad	Population extracted from Core Health Indicators, Data on HRH extracted from WHO CCS
Comoros	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Congo	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Congo (RD)	Population estimée taux acc. de 2,4%, Population en 2002 de 51 201 000 hbts, Source données sur les ressources humaines Ministère de la Santé/Division des ressources humaines
Côte d'Ivoire	Données extraites des statistiques sanitaires du Ministère de la Santé – Médecins, pharmaciens, chirurgiens dentistes regroupés (1763)
Equ. Guinea	Population extraite du Core Health Indicators, Données sur les resources humaines extraites du MSBES Document de politique nationale de la santé de la Guinée Equatoriale, 2001
Eritrea	Annual Health Service Activity Report/Ministry of Health 2000
Ethiopia	Population extracted on Core Health Indicators, Data on HRH extracted on WHO CCS
Gabon *	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Gambia	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Ghana	Population estimated with annual growth rates of 2,6% (population in 2000 was 18,4 millions); data on HRH extracted from WHO Country Cooperation Strategy
Guinea	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Guinea Biss.	Population estimée taux acc. de 3,0%, Population en 2002 de 1 449 000 hbts, Source données sur les ressources humaines Direction des ressources humaines/MINSA-2003
Kenya	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Lesotho	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Liberia	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Madagascar	Population extraite du Core Health Indicators, Données sur les resources humaines extraites envoyé par sec4oms@iris.mg/10 juin 2003 – Données du secteur public seulement
Malawi	Population estimated with annual growth rates of 1,8% (Population on 2000 was 11,308,000), Data on HRH extracted from Malawi National Health Plan 1999-2004, Volume 3 - November 1999
Mali	Population extraite du Core Health Indicators, Données sur les resources humaines extraites des Résultats du recensement du personnel de la santé
Mauritania	Population extraite du Core Health Indicators, Données sur les resources humaines extraite du MSAS 2002 : Base de données du personnel
Mauritius	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Mozambique	Population extracted from Core Health Indicators, Data on human resources for health extracted from Ministry of Health, Human Resources Directorate, December 2000
Namibia	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Niger	Population extraite du Core Health Indicators, Données sur les resources humaines extraite Human Resources for Health (HFA 3rd EVALUATION)
Nigeria	Data obtained from Federal Ministry of Health, Department of Health Planning & Research
Rwanda	Population extraite de Core Health Indicators (2002), données sur les resources humaines extraites du Rapport Sommaire du Personnel par Qualification (Année 2002)
São Tomé P	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Senegal	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Seychelles	Population extracted from Core Health Indicators, Data on human resources for health extracted from Ministry of Health/Health Information Section – Division of Planning, Research and Information
Sierra Leone	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
South Africa	Data extracted from Health Summit 2001, Department of Health
Swaziland	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Tanzania	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Togo	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Uganda	Population extracted from Core Health Indicators, Data on human resources for health extracted from Statistical Abstract 2002 Ministry of Health (April 2003)
Zambia	Data extracted from Human Resources for Health (HFA 3rd EVALUATION)
Zimbabwe	MOHCW, 2003

N.B.: Ratio is calculated as number of specified type of health workers per 10,000 population
Highlighted rows: data from 1998 onwards

Appendix 4

WHO/AFRO Training Output & Supply Data, Africa Region: 1998–2002

Country	Year	Physicians	Nurses	Midwives	Pharmacists	Dentists
Burkina Faso	1998	40	204	53	9	
	1999	44	207	53	12	
	2000	16	189	38	9	
	2001	42	239	49	19	
	2002	51	237	49	13	
Burundi	1998	15	69		4	
	1999	18	55			
	2000	22	30		1	
	2001	16	56			
	2002	23	141			
Congo	1998	19	1			
	1999	23	2			
	2000					
	2001					
	2002					
Congo (RD)	1998	49	215			
	1999	68	460			
	2000	144	492			
	2001	82	462			
	2002	161	213			
Côte d'Ivoire	1998	191	323	133	68	22
	1999	268	343	129	71	22
	2000	290	126	93	77	19
	2001	390	102	78	88	18
	2002	375	247	104	118	23

Country	Year	Physicians	Nurses	Midwives	Pharmacists	Dentists
Ethiopia	1998	131	139	20	32	
	1999	43	211	18	32	
	2000	125	290	24	43	
	2001	127	114	17	55	22
	2002	149	115	16		
Gabon	1998	12	1	33		
	1999	30	251	33		1
	2000	20	300	48		
	2001	44	320	26		
	2002	26	1121		1	
Gambia	1998		74			
	1999	12	76			
	2000	16	59		2	
	2001		39		2	
	2002	4	46			
Ghana	1998	85	291	265	120	9
	1999	113	522	309	120	12
	2000	84	408	393	120	9
	2001	67	520	323	120	7
	2002	72	583	445	120	8
Guinea	1998	81	311		49	10
	1999	79	103		19	2
	2000	87	101		20	12
	2001	140	148		25	10
	2002	159	296	10	40	17
Guinea Bissau	1998					
	1999	20				
	2000	14	25		8	
	2001	8				
	2002		1			
Lesotho	1998		58			
	1999		66			
	2000		19			
	2001		74			
	2002		45			
Liberia	1998		36	30		
	1999		75	22		
	2000		54	55		
	2001	6	74			
	2002		175	53		

Country	Year	Physicians	Nurses	Midwives	Pharmacists	Dentists
Madagascar	1998	451			11	27
	1999	416			10	28
	2000	338	100	90	6	28
	2001	628	119	96	3	30
	2002	384	101	82	2	29
Malawi	1998	26	41	17	26	
	1999	85	69	4	7	
	2000	75	78		36	15
	2001	23	60	28	23	9
	2002	44	74	28	20	13
Mauritius	1998		415			
	1999		179			
	2000		75			
	2001		192			
	2002		90			
Mozambique	1998	29	20	197		
	1999	29	57	99	1	
	2000	49	145	243	1	
	2001	33	175	234	1	1
	2002	35	132	189		
Namibia	1998		101			
	1999		74			
	2000		97			
	2001		89			
	2002		59			
Niger	1998	73	306			
	1999	31	211	52		
	2000	31	236	63		
	2001	59	356	80		
	2002	56	334	76		
Rwanda	1998	27			2	
	1999					
	2000	91			12	
	2001	119			18	
	2002	11			17	
Senegal	1998	62	55	14	71	31
	1999	84	51	15	91	29
	2000	88	91	24	90	35
	2001	88	83	25	121	31
	2002	68	96	29	108	21

Country	Year	Physicians	Nurses	Midwives	Pharmacists	Dentists
Seych-elles	1998		20			
	1999		17			
	2000		39			
	2001		25			
	2002		30			
South Africa	1998	349	1850			48
	1999	390	1570		3	52
	2000	335	1484		3	41
	2001	356	1196		5	105
	2002	370	1538		4	49
Tanzania	1998	39	774		14	4
	1999	53	495	409	17	8
	2000	72	762	398	19	16
	2001	88	947	408	14	11
	2002	94	821	497	21	8
Zambia	1998	20	628	181	2	
	1999	83	585	283		
	2000	21	495	270	4	
	2001	45	477	160	2	
	2002	54	322	114	1	
Zimbabwe	1998		358			
	1999		250			
	2000	100	737	170		
	2001					
	2002					
Total	1998	1699	6290	943	408	151
	1999	1889	5929	1426	383	154
	2000	2018	6432	1909	451	175
	2001	2361	5867	1524	496	244
	2002	2136	6817	1692	465	168

Source: Survey on migration of skilled health workers in the WHO African Region, 2003.

Appendix 5

Nurses and Midwives: Sample Data on Verifications of Qualifications for Migration

Country	No. in Training	Numbers that Graduated				Numbers that sought verification in:				No. in Public Service	No. in Private Service	Foreign regis-tered
	2003	2000	2001	2002	2003	2000	2001	2002	2003			
Mauritius Pop 1,200,000	891	300	176	111	291				400 total	2,305	60	12
	101	35										
Seychelles Pop 80,000	99	20	26	31	25 (Dec)	19	36	13	18	230	15	4
		16		15								
Tanzania Pop 33,000,000	2,400	500	550	550	600	150	200	500	150	No data	No data	40
	5,200	1,200	1,200	1,250	1,300							
Malawi Pop 10,000,000	147	49	10	91	20	77	108	80	59	1,196	538	70
	612	164	169	169	389	13	20	24	15	2,603	598	12
Uganda Pop: 27,000,000		435	341	542	Data awaited	Data awaited	Data awaited	Data awaited	Data awaited	Data awaited	Data awaited	Data awaited
Zambia Pop 11,000,000	728	283	333	326	220	448	309	392	396	No data	No data	No data
	661	337	291	325	452	62	29	20	62			

Source: O. Munjanja, Commonwealth Regional Health Community Secretariat for East, Central and Southern Africa.

Appendix 6

Glossary of Human Resources for Health

Compiled by JLI, 3 February 2004

Accreditation – Approval of an educational programme or an institution by a governmental or voluntary body

Balance – Effective deployment and distribution of health personnel by geography, among levels of care, and among types of services for the equitable provision of quality health services to all (World Bank)

Barriers to entry – Factors that inhibit the movement of providers within the health sector or between health and other sectors of the economy

Benefits – Advantages that a worker is entitled to, such as maternity leave and health insurance (based on World Bank)

Brain drain – Outflow of health professionals to other countries (or from the public to the private sector within a country or out of the health sector) due to better working and living conditions and employment opportunities (World Bank)

Capacity building – Continuing process of strengthening individuals, groups, organizations, institutions and/or societies to enhance their ability to perform core functions, to solve problems, and to define and achieve objectives (World Bank)

Career – Movement of individuals from one job or position to another which has different (usually higher) levels of authority, income and or skills/requirements (World Bank)

Competences – Knowledge, skills and attitudes which an individual accumulates, develops, and acquires through education, training and work experiences (World Bank)

Continuing professional development – Process of systematic learning that allows health professionals to continue to meet the needs of the population being served by updating and enhancing their skills, while addressing health professionals' career and educational aspirations (World Bank)

Coping strategies – Approaches employed by health personnel to overcome unsatisfactory remuneration or working conditions in order to fulfil professional and material expectations, for example undertaking extra duties to supplement income, migrating to private practice or out of the health sector, and being in a payroll without providing services (World Bank)

Cultural factors – Customs, values and norms of societies which affect the health system dynamics, both at individual and collective level. Factors like gender, language, or residence may affect, in some cases, the participation in health labour market of certain social groups. (Adams *et al.*, WHO)

Deployment – The process of allocating personnel among types and levels of services and among regions and sub–regions of a country (World Bank)

Education – Preparing students for the practice of health by equipping them with necessary knowledge and skills, usually within established structures like medicine, nursing, and dentistry schools (based on World Bank and WHO).

Employment

Full-time – Employment for or working for the amount of time considered customary or standard. (World Bank)

Part-time – Employment for or working for less than the amount of time considered customary or standard. (World Bank)

Permanent – Employment contracted for an indeterminate period. (World Bank)

Fixed term – Employment contract for a fixed period of time (World Bank)

Temporary – Short-term contracts or 'casual' work, either for a definite period or for a specific activity. (World Bank)

Multiple – Process by which health personnel seek alternative ways to increase income by undertaking other forms of paid employment either after or during official working hours. (World Bank)

Financial and physical resources – Means available for the operation of health systems, including: buildings and engineering services, such as sanitation, water and heating systems, for the use of communities and medical care institutions; equipment and supplies; and monetary allocations (based on Adams *et al.*, WHO)

Gender – Socially defined aspects of being male or female. Gender roles refer to those activities considered by a given culture to be appropriate to a woman or a man. When applied to human resources for health, gender refers to an understanding of the significance of gender in (1) employing people in the health sector workforce, (2) recognizing how gender affects occupational choices, career patterns and working practices and (3) considering the non-institutional care of the sick, usually carried out by female family members. (World Bank)

Ghost worker – Personnel formally on payroll but providing no service (World Bank)

Globalization – Increasing interconnectedness of countries through cross-border flows of goods, services, money, people, information and ideas; the increasing openness of countries to such flows; and the development of international rules and institutions dealing with cross-border flows. (Adams *et al.*, WHO)

Health labour demand – The amount of services those individuals; organizations or governments would like to purchase from providers at current prices and wages. Health labour demand is conceptually different than the amount of provider services that are actually 'needed' to improve population health. (based on Adams *et al.*, WHO)

Health labour supply – The amount of services those health care professionals are willing to provide at current wages. Common measures of health labour supply include the number of providers per capita and total hours worked per provider. (Adams *et al.*, WHO)

Health planning – Planning for health and health services is planning for the optimal use of available resources for improvement of health (or health status) over a given period, whether those resources lie within the health sector or outside it. (Adams *et al.*, WHO)

Health policies – A formal statement or procedure within institutions (notably government) which defines priorities and the parameters for action in response to health needs, available resources and other political pressures. Health policy is often enacted through legislation or other forms of rule-making which define regulations and incentives which enable the provision of health services and programmes, and access to those services and programmes. (Adams *et al.*, WHO)

Health system – All the activities whose primary purpose is to promote, restore, or maintain health (WHR 2000)

Human capital – The stock of accumulated skills, experiences and personnel that make workers more productive. (World Bank)

Human resources – The different kinds of clinical and non-clinical staff who make each individual and public health intervention happen (WHR 2000)

Human resources management – Process of creating an adequate organizational environment and ensuring that the personnel perform adequately using strategies to identify and achieve the optimal number, mix and distribution of personnel in a cost-effective manner (World Bank)

Human resource policies – Guidelines and directions that regulate the utilization of workforce both

within the health sector and within the wider context (socio/political/economic) (World Bank)

Imbalances – An imbalance occurs when there is shortage or surplus of health personnel as a result of a disequilibria between demand and supply for labour.

Profession/specialty imbalances – A disparity in the number or type of various health professions

Geographic imbalances – Urban-rural and poor-rich regions disparities of health personnel

Institutional and services imbalances – Differences between health care facilities, as well as between services

Public/private imbalances – Differences in human resources allocation between the public and private health care system

Gender imbalances – Disparities in the female/male representation in the health workforce.

Incentives – Rewards and sanctions to improve staff performance and motivation by providing financial and non-financial benefits such as flexible working schedule and training, education and career development opportunities. (World Bank)

Industrial action – Collective activities of workers to pressure management into agreeing to some demands. It can include strikes, demonstrations and other forms of expression of discontent. (World Bank)

Labour markets – Institutions and processes through which employment and wages are determined, affecting the supply and demand for labour. Labour markets can be divided into regional, occupational or skills segments. Health labour market is the segment concerned with human resources in the health sector. Factors affecting health labour market are imbalances, mobility, and migration. (World Bank)

Licensing – (of health personnel): Governmental authorization of a person to engage in a health profession occupation.

Medium Term Expenditure Framework (MTEF) – A top-down estimate of aggregate resources available for public expenditure consistent with macroeconomic stability; bottom-up estimates of the cost of carrying out policies, both existing and new; and a framework that reconciles these costs with aggregate resources. (UN)

Mobility – The capacity or facility of movement of personnel between positions, organizations and regions. Mobility of health care personnel is an important issue in the allocation of personnel within a health care system. (World Bank)

Motivation – An individual's degree of willingness to sustain efforts towards achieving certain goals. (World Bank)

Non-Health Policies – State interventions in areas like employment, education and regional development contribute to shape the health workforce. Non-health means that their original purpose is not related to promoting or caring for the health of the population, but indirectly they can be closely linked to health outcomes. (Adams *et al.*, WHO)

Non-Governmental Organization (NGO) – Private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development. (World Bank).

Official Development Assistance – Grants or loans to developing countries which are undertaken by the official sector at concessional financial terms with promotion of economic development and welfare as the main objective. (OECD)

Performance Management – Process of optimizing productivity and quality of work of the workforce. This includes designing or adapting performance management and performance appraisal systems.

Poverty Reduction Strategy Paper (PRSP) – Provides the basis for assistance from the World Bank and the International Monetary Fund as well as debt relief under the HIPC initiative. PRSPs should be country-driven, comprehensive in scope, partnership-oriented, and participatory. (CMH)

Productivity – Refers to outputs extracted from given inputs, such as patients seen per doctor, number of procedures per provider, and so on. (World Bank)

Recruitment – Process of searching for personnel to enter a particular job or position.

Registration – Official recording of the names of persons who have certain qualifications to practice a profession or occupation

Remuneration – Payment of an equivalent to a person for a service or expense. (World Bank)

Retention – Maintenance of health personnel by offering adequate opportunities for re-training and career management assistance. (World Bank)

Sector-wide approach (SWAp) – A strategy for development assistance in which a collective group of donor countries and a recipient country jointly plan, and commit to, a package of investments for a given sector (such as the health sector). In some cases a basket fund (a fund to support the entire package) is established into which participating donors contribute, and from which recipient countries make expenditures. (CMH)

Skills mix – Refers to the mix of posts in the organization, the mix of employees in a post, the combination of skills available at a specific time, or it may also refer to the combinations of activities that comprise each role, rather than the combination of different job titles. Skill mix is a strategy used to ensure the most cost-effective combination of roles and staff.

Social capital –The social capital of a society includes the institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development. It includes the shared values and rules for social conduct expressed in personal relationships, trust and a common sense of 'civic' responsibility that makes a society more than a collection of individuals (World Bank).

Staffing – Process of recruiting, allocating and retaining staff or personnel, in terms of mix and number of personnel (the right combination of categories of personnel and adequate numbers per category), and its deployment, of its distribution by region (including internal migration pattern), by level of care, by type of establishments, by gender, in order to meet the service objectives.

Stakeholders – Those individuals or entities interested in, involved in or potentially affected by a planned intervention in a programme or project.

Stock – Quantity of accumulated productive assets. In workforce planning, 'stock' refers to the current composition of the workforce. In budgetary terms it can refer to mobile clinics as well as fixed assets are part of the capital stock of the health care system. (World Bank)

Substitution – Process of delegating tasks to less qualified personnel with the goal of improving cost-effectiveness. (World Bank)

Teamwork – Work done by a group formed by associates with different skills and backgrounds, with each doing a part but all subordinating personal prominence to the efficiency of the whole. (World Bank)

Training – maintenance and adaptation of the competencies of existing personnel within the context of their current position. (World Bank)

Unemployment – The condition in which personnel available for work in a labour market are not employed. (World Bank)

Underemployment – The condition in which personnel available for full-time work in a labour market are (1) employed at less than full-time or regular jobs or (2) in jobs where their full skills are not utilised, or are inadequate for economic needs. (World Bank)

Unions – Representative bodies of personnel that act to protect and defend the legal rights and interests of their members. Unions influence the contents and the pace of implementation of reforms agendas, especially in issues involving conditions of pay, terms of employment or job specifications. (World Bank)

Workforce planning – Comprehensive process to provide a framework for staffing decision-making based on an organization's mission, strategic plan, budgetary resources, and a set of desired workforce competencies. It incorporates an analysis of present workforce to identify competencies needed in the future and possible gaps and surpluses, preparation of plans for building workforce, and evaluation process to assure objectives are being met. (World Bank)

Working conditions – Characteristics of the environment in which a person is expected to work. Includes terms of employment, benefits, physical and social climate. (World Bank)

Workload – The amount of work expected or assigned to a specific position or to one person. (World Bank)

HEALTH WORKERS

Dental assistant – Dental assistants carry out advisory, diagnostic, preventive and curative dental tasks, more limited in scope and complexity than those carried out by dentists, and they assist dentists by preparing and taking care of instruments and other equipment, preparing materials and helping patients prepare for examination and treatment. Tasks include: advising communities and individuals on dental hygiene, diet and other preventive dental measures; conducting dental examinations to make diagnoses and refer more difficult cases to dentists when needed; cleaning teeth, preparing cavities and placing fillings; performing certain types of prosthetic work and some surgical procedures; preparing and taking care of dental instruments and equipment; preparing dental materials; helping patients prepare for examination or treatment. (ILO)

Dentist – Dentists conduct research, improve or develop concepts, theories and operational methods, and apply medical knowledge in the field of dentistry. Tasks include: conducting research into dental and related disorders and illnesses and preventive or curative methods; making diagnoses, advising on and giving necessary dental treatment; giving surgical, medical and other forms of treatment for particular types of dental and oral diseases and disorders; participating in public action to maintain or improve standards of oral health and dental care; preparing scientific papers and reports. (ILO)

Faith healer – Faith healers endeavour to cure human mental and physical illness by mental influence and suggestion, power of faith and spiritual advice. Tasks include: endeavouring to cure human mental and physical ailments by power of faith; advising community and individuals on proper behaviour and faith to preserve or improve health and well-being; performing related tasks; supervising other workers. (ILO)

Medical assistant – Medical assistants carry out advisory, diagnostic, preventive and curative medical tasks, more limited in scope and complexity than those carried out by medical doctors. They work independently or with the guidance and supervision of medical doctors in institutions or in the field as part of the public health service, and may work mainly with diseases and disorders common in their region, or mainly apply specific types of treatment. Tasks include: advising communities and individuals on birth control, hygiene, diet and other preventive medical measures; conducting medical examinations to make diagnoses, or refer more difficult cases to medical doctors if possible; prescribing medicine and giving treatment for diagnosed illnesses, disorders or injuries; performing simple surgical operations. (ILO)

Medical doctor (or Physician) – Medical doctors conduct research, improve or develop concepts, theories and operational methods, and apply preventive or curative measures. Tasks include: conducting research into human disorders and illnesses and preventive or curative methods; conducting medical examinations and making diagnoses; prescribing and giving treatment for diagnosed illnesses, disorders or injuries; giving specialised medical or surgical treatment for particular types of illnesses, disorders or injuries; giving advice on and applying preventive medicine methods and treatments; participating in the development and implementation of public health laws and regulations for safeguarding and promoting the health of a community; preparing scientific papers and reports. (ILO)

Midwife – A midwife is a person who, having been regularly admitted to a midwifery educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery. She must be able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant. This care includes preventative measures, the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education, not only for the women, but also within the family and the community. The work should involve antenatal education and preparation for parenthood and extends to certain areas of gynaecology, family planning and childcare. She may practise in hospitals, clinics, health units, domiciliary conditions or in any other service. (International Confederation of Midwives)

Midwife associate or auxiliary – Midwifery associate professionals deliver or assist doctors or mid-

wifery professionals in the delivery of babies, provide antenatal and post-natal care and instruct parents in baby care. Tasks include: advising expectant mothers on appropriate diet, exercises and behaviour to ease pregnancy and childbirth, and noting their general health and progress; delivering babies, or, more often, assisting doctors or midwifery professionals in deliveries; attending mothers in the post-natal period to supervise their recovery, to check on babies' progress, and to instruct parents in baby care; advising on and administering birth control methods. (ILO)

Nurse – The nurse is a person who has completed a programme of basic, generalised nursing education and is authorised by the appropriate regulatory authority to practice nursing in his/her country. Basic nursing education is a formally recognised programme of study providing a broad and sound foundation in the behavioural, life, and nursing sciences for the general practice of nursing, for a leadership role, and for post-basic education for speciality or advanced nursing practice. The nurse is prepared and authorised (1) to engage in the general scope of nursing practice, including the promotion of health, prevention of illness, and care of physically ill, mentally ill, and disabled people of all ages and in all health care and other community settings; (2) to carry out health care teaching; (3) to participate fully as a member of the health care team; (4) to supervise and train nursing and health care auxiliaries; and (5) to be involved in research. (ICN, 1987)

Nursing auxiliary – In countries with more than one level of nursing personnel, those who assist in the practice of nursing under the standards and the direct or indirect supervision of nurses are referred to in a general sense as auxiliaries or assistants. Specific titles, preparation, and authorization are in accordance with the scope and level of practice, with national custom, and with regulatory policies and practices for auxiliaries in other fields. (ICN, 1987)

Optometrist (or Optician) – Optometrists and opticians prescribe and fit glasses and contact lenses and advise on their use or the use of other visual aids, as well as on proper lighting for work and reading. Tasks include: examining eyes and prescribing glasses, contact lenses or other treatment to improve vision, referring cases which may require medical treatment to medical doctors; advising on the proper use of glasses and contact lenses, appropriate lighting for work or reading and other visual aids; fitting prescribed lenses into frames and fitting frames or contact lenses to customers. (ILO)

Pharmaceutical assistant – Pharmaceutical assistants dispense and prepare medicaments, lotions and mixtures under the guidance of pharmacists, in pharmacies, hospitals and dispensaries. Tasks include: preparing medicaments and other pharmaceutical compounds under the guidance of pharmacists; dispensing medicines and drugs and giving written and oral instructions on their use, as prescribed by medical doctors, veterinarians or other authorised workers; cleaning and preparing equipment and containers used to prepare and dispense medicine and pharmaceutical compounds. (ILO)

Pharmacist – Pharmacists apply pharmaceutical concepts and theories by preparing and dispensing or selling medicaments and drugs. Tasks include: preparing and directing the preparation of medicaments according to prescriptions of medical, dental and veterinary practitioners, or established formulae; checking prescriptions to ensure that recommended dosages are not exceeded, and that instructions are understood by patient – or person administering the medicament – and advising on possible drug incompatibility; dispensing medicaments and drugs in hospitals or selling them in pharmacies; maintaining records, especially of narcotics, poisons and habit-forming drugs issued; testing drugs to determine identity, purity and strength; participating in the development of controls and regulations; preparing scientific papers and reports. (ILO)

Physiotherapist – Physiotherapists and related associate professionals treat disorders of bones, muscles and parts of the circulatory or the nervous system by manipulative methods, and ultrasound, heating, laser or similar techniques, or apply physiotherapy and related therapies as part of the treatment for the physically disabled, mentally ill or unbalanced. Tasks include: advising communities and individuals on correct body postures, for work or otherwise, to avoid injuries and strain and to strengthen muscles; conducting examinations to make diagnoses of disorders of bones, muscles and parts of the circulatory or the nervous system to determine proper treatment or refer to medical doctors, if necessary; treating disorders of bones, muscles and parts of the circulatory or the nervous system by manipulative methods, and the use of ultrasound, heating, laser or similar techniques; massaging client or patient to improve circulation, soothe or stimulate nerves, facilitate elimination of waste matter, stretch contracted tendons and produce other therapeutic effects; examining body deformities and disorders to determine and write specifications for artificial limbs or other appliances, helping to fit them and explaining their use. (ILO)

Traditional medicine practitioner – Traditional medicine practitioners treat human mental and

physical sickness by herbs, medicinal plants and other techniques traditionally used in the community, and believed to cure and heal by assisting or stimulating nature, and advise on methods to preserve or improve health and well-being. Tasks include: treating sickness and injuries using herbs, medicinal plants, insects, and other traditional techniques used in the community believed to cure and heal by assisting or stimulating nature; advising community and individuals on proper diet and behaviour to preserve or improve health and well-being. (ILO)