

Health Systems Development Programme



Health Systems Development

Human Resource Studies in Health for Poor and Transitional Countries

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1. Introduction

The importance of human resources in health is overwhelmingly acknowledged in national and international policy and strategy documents but much of what has been done to date to solve human resource problems particularly in poor and transitional countries (PTC) has not achieved the desired results. Health worker (HW) salaries form a major share of health services recurrent costs (Bach, 2000, WHR 2000) further testifying to the importance of human resources as an input to the health system.

We now need to move from the rhetoric that people are an important resource to understanding reality that HWs are underpaid, poorly motivated, and increasingly dissatisfied in developing countries (Martinez and Martineau 1998, Bach 2000). We also need to understand health system factors impacting on the health workforce. These include macro-level factors within the health system (e.g. financing, regulation, organisation and management of the health system) and other socio-economic, cultural and political factors (e.g. economic performance and political will). Which of these factors is of greater importance depends on the specific context under review.

The last two decades have seen reforms in the health sectors of various forms in PTC, and more reforms are underway. The extent to which these reforms have impacted on human resource capacity is not known or at least documented. What is clear is that reforms continue to pose significant challenges to health systems. Achievement of reform goals depends on the distribution of staff, the development of improved or different skills, and changed working practices (Martinez and Martineau 1998). It is likely that some reforms have created appropriate incentives for improving HW performance whilst others have had unintended negative effects.

Human resource capacity in health remains a chronic problem even in developed economies such as the United Kingdom. It can be viewed from two perspectives: internal and external capacity. Internal capacity is related to the ability of individuals to perform which is linked to their knowledge, skills, and experience; whilst external capacity relates to the organisational, institutional and governance environment in which they are located (Mills et al., 2000). Thus external capacity encompasses macro-health system factors and

wider non-health system factors such as the socio-economic and political environment. Internal capacity is a function of external capacity. In other words, the way the health system is organised and the overall socio-economic and political landscape is important to the achievement of internal capacity.

It is therefore important to invest in developing appropriate macro-level structures and institutions that enhance external human resource capacity in health. This entails identifying the systemic constraints, designing and implementing appropriate interventions. The rationale for focusing on external capacity factors is that individual skills, training and experience is shaped by the financing, regulation, organisation and management of the health system. Health systems research provides an opportunity to understand why, after years of concerted effort in building human resource capacity in many countries, health workers remain demoralised and under-performing. Research that focuses on wider systemic and not just health service related factors might help us identify options for improving human resource capacity in health. The health system's ability to improve the quality of services, access to these services by the poor, choice and consumer responsiveness centres on human resource capacity.

Section 2 of the paper presents a summary of the main human resource issues raised by the four HSD partner countries at the Manchester workshop in October 2001. These concerns provide the foundation for the generic research questions presented in Section 3. Section 4 presents a generic conceptual framework for carrying out human resource studies, using a systems approach. The last section of the paper considers some of the key research questions and data requirements for studying human resources and possible ways of generating and analysing the requisite data.

2. Summary of country concerns on human resources in health

The following are summaries of the country concerns raised at the inaugural workshop of the Health Systems Development programme in Manchester in October 2001. The summaries could be viewed as priority areas for research in human resources in the member countries (Table 1).

Table 1 Issues raised by partner countries

Country	Human Resource Issues in health
Bangladesh	<ul style="list-style-type: none"> • Exploring the skills mix against health system needs • Incentive structures for HWs and their behaviour • Assessment of skills mix (availability) against defined service packages at various levels of the service. Identification of gaps. • What are the training costs?
Uganda	<ul style="list-style-type: none"> • Uneven distribution of staff between urban and rural areas, and deployment problems • Problems of staff retention • Disparities in staff skills between the public and private sectors. • Use of the public sector as a training ground for private providers. • Training institutions: training capacity, what values and technical competencies are obtained from these institutions, and funding of these institutions. • Staff needs (capacity) versus expansion in health care infrastructure • Informal payments and dual practice • Informal and formal incentives
South Africa	<ul style="list-style-type: none"> • What have been the successes and failures in human resource training, deployment and retention in South Africa? • Staff distribution patterns.
Russia	<ul style="list-style-type: none"> • Increasing problem of over-specialisation and over-supply of specialists: appears to be driven by informal payments. • Significant investments in attempts to establish a General Practitioner Model have allegedly failed. Why?

3. Key health systems research questions in human resource studies in Health

The following research questions attempt to capture all the cross-cutting themes reflected in the country concerns on human resources (see Table 1).

1. What are the systemic determinants of incentive structures that HWs are facing in the four countries?
2. How are these systemic factors influencing staff training, deployment, retention and performance?
3. Does current external human resource capacity meet the needs of the health system (including those generated by health sector reforms)?
4. How are health sector reforms changing incentive structures, and influencing staff retention and performance?
5. How can these constraints be addressed?

4. Conceptual Framework: descriptive and analytical linkages

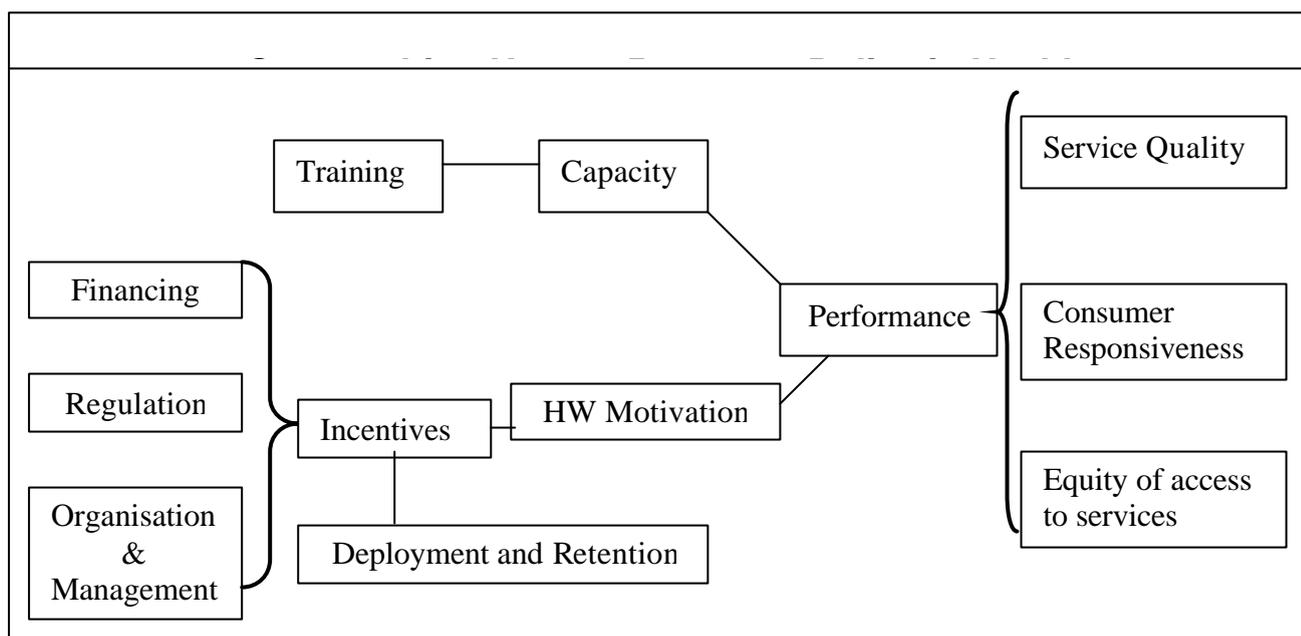
Health system performance is largely driven by human resources because health services are by nature labour-intensive. The key to understanding why health systems fail or succeed is arguably through understanding what motivates and drives HWs¹ at all levels of the health system. However, understanding the determinants of HW incentive² structures and their relationships is a complex process. Health worker behaviour is not only a function of the health system but also of the elements of external capacity such as socio-economic, cultural and political systems, as discussed in section 1. Thus attempts to explore and unravel the nature of HW incentive structures and their impact on system performance require the delineation of an analytical framework (Figure 1). What is important for policy are those systemic factors that are vulnerable to change. This framework attempts to highlight features of the health system that impact on human resources, particularly those that directly or indirectly influence HW behaviour.

We argue that the prevailing incentive structures faced by HWs and ultimately their performance are shaped by the effects of systemic factors such as financing, regulation, organisation and management of health systems. Incentives govern health worker performance in part and also training, deployment, and retention. Health worker performance encompasses various monetary and non-monetary elements. Overarching human resource policy frameworks (where they exist) are important in shaping the “terrain” within which these interactions occur. These issues are discussed in turn with a specific focus on how they relate to HW motivation and performance.

¹ The term “health worker” is generically used in this paper to mean all cadres from the primary health care to the policymaking level. It includes medical and non-medical personnel.

² Incentive is defined as “a thing that motivates or encourages someone to do something or a payment or concession to stimulate greater output or investment” (Concise Oxford Dictionary, 10th Edition, 1999). The WHR (2000) defines incentives as “all the rewards and punishments that providers face as a consequence of the organisations in which they work, the institutions under which they operate and the specific interventions that they provide”.

Figure 1: Analytical Framework for Human Resource Studies in Health



4.1 Human Resource Policy in Health

A human resource policy is vital in ensuring that a country's resources are co-ordinated and utilised to meet the primary objective of the health system, which is to improve health. Effective human resource development requires that there be clear guidelines on planning³, training and retraining of HWs, recruitment, remuneration and deployment procedures, and retention. Martinez and Martineau (1996) argue that " Human resource development (HRD) is concerned with the different functions involved in planning, managing and supporting the professional development of the health workforce within a health system, generally at strategic and policy levels. HRD aims at getting the right people with the right skills and motivation in the right place at the right time". The functions described in these terms would require clarity in health system goals and the human resource needs in meeting those goals. The majority of health systems in PTC are undergoing reforms and creating new human resource demands in terms of types of HWs, numbers, distribution and skills mix. However, it is not uncommon for such countries to have incoherent human resource policies in health that do not ensure that the health system's needs are met in a

³ Human resource planning refers to the process of estimating the number of persons and the kinds of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives (WHO, 1990).

sustainable way. Labour markets are not well developed such that co-ordination between public and private sector institutions in health worker training and deployment for example is important. Haphazard policies lead to either excess supply or shortages of some professionals in some areas and not in others (e.g., uneven HW distribution patterns between urban and rural areas).

A coherent human resource policy in health must provide broad guidelines on how the activities of different types of private and public actors are financed and regulated. Bach (2000) argues that human resource policies can only be effective if there is agreement and co-ordination of all stakeholders at central level. We argue that agreement and co-ordination must be at all levels of the health system for the policy to work effectively. Investments in human resource development must be driven by health system capacity requirements (need and absorptive capacity). The policy challenge is in ensuring that the activities of private and public institutions complement each other or at least engage in “positive” competition (e.g. based on quality). This is particularly important where labour markets are undeveloped. Problems of over-specialisation (and over-supply) in Russia seem, a priori, to be a result of lack of such a policy. The design and content of a human resource policy must reflect the organisation and management structure of the health system such that the general human resource needs for the system to function effectively are known. That is, what competencies, and systems of authority, accountability and career development are required for the system to function effectively?

Issues of human resources need to be considered within the context of broad based developments and reforms such as demographic change, decentralisation, new partnership with the private sector and changes in financing of health services (Martinez and Martineau, 1996). In other words, we need to look beyond health service related factors in our efforts to understand human resource dynamics in health.

4.2 Financing

The level of health system financing has implications for HW training, deployment and retention. There are several dimensions to this. Firstly, the level of funding of public training institutions impacts on the scope and scale of their activities (capacity). Poorly

funded training institutions are more likely to produce low quality products for obvious reasons: for instance, lack of quality teachers, facilities and other relevant training materials. Secondly, the way enrolees in training institutions are funded may affect the way they are employed, deployed and retained. Privately funded students tend to have no restrictions on where they practice after training. Governments tend to fund health students through grants, loans or a mix of both and sometimes linked to these funding arrangements are provisions for public employment and deployment after completion of training. In some instances, HWs are bonded for a given number of years in the public system. The success of such policies in terms of staff performance is variable. It is unclear whether bonding *per se* is sufficient to retain staff. Thirdly, it seems the greatest source of frustration for health workers is lack of the wherewithal to deliver quality health services. This is a common phenomenon in both developed and developing countries, although the problem is more severe in the latter. It is thus not unusual to witness highly endowed health systems in terms of human resources, performing poorly.

Fourthly, funding levels and provider payment mechanisms have immense impact on HW behaviour, distribution and retention in the health system. Differences in HW emoluments between the public and the private sector vary across levels and countries. The sector that offers better salaries is more attractive to health workers. Methods of payments may also differ by sectors (informal, private for-profit, private not-for-profit and public) or across levels in the health care system. The above differences in payment methods may result in different configurations in incentives and HW distribution (which may vary by HW category). This means that the incentives that public HWs face may differ from those of private HWs (Xingzhu, 1999, Hongoro, 2000). Apart from HW remuneration, differences are also observed in working conditions and perks across these sectors. The key point here is that the level and method of funding the health system impacts on human resource training, deployment, retention, the incentive environment and ultimately performance.

4.3 Organisation and management

The way the health system is organised and managed impinges on HW training, deployment and retention. Public health systems in most developing countries often have a

typical pyramidal health system structure with the Ministry of Health headquarters or Social Security organisation at the apex and primary health care facilities at the base. In-between are various organisational levels depending on the structure and degree of decentralisation of the system. The management structure of the health system tends to follow the organisation structure. Human resource management systems (that is, training, supervision, concrete incentives such as remuneration (living wage, reward systems), promotion and performance review processes, career structures, organisational work culture) are linked to the organisation and management structure. The roles and responsibilities of the different tiers of the system must be clear. In bureaucratic systems health workers operate within rigid guidelines covering these processes tending to stifle innovation and engender laxity. The centre makes all major decisions affecting human resource management such as recruitment or discharge, remuneration and perks, promotion or demotion, training, and HW discipline. Local management is thus severely handicapped in that it cannot swiftly respond to local human resource needs. In decentralised health systems, the opposite might be true. However, in practice decentralisation is rarely complete as different components of human resource management are subjected to different levels of flexibility. Experience to date in some developing countries shows that de-linking civil servants from central management (e.g., Public Service Commission) is politically difficult (Kamwanga et al., 2000, Ssenooba et al., 2000).

The rigidities associated with bureaucratic systems have a direct impact on HW behaviour and retention. In such systems salaries tend to be guaranteed, “high-flyers” are not recognised in any meaningful way because of weaknesses in the reward system, non-performers can easily “free ride”, and working conditions are generally not conducive to high performance.

In hierarchical systems, staff deployment is the domain of the centre and concerns over equity in staff distribution are common. Whilst equity is indeed a major concern, governments tend to ignore the implications of work location to individuals’ career prospects and personal development. The manner in which HW deployment is packaged and managed is important in any attempt to retain health workers wherever they are posted.

Public health workers suffer from chronic low morale due to poor remuneration and working conditions. As a result they engage in different forms of income generating activities to supplement their low and unreliable government salaries (McPake, 1999, Delcheva E et al., 1997, Killingsworth et al., 1999). Opportunities for public health workers to engage in dual practice or informal income generating activities are facilitated by existing management regimes where a culture of “who cares since everyone does it” is dominant. Management teams are equally demoralised and therefore tend to assume a casual approach towards such activities. In many cases, management is equally involved in these activities. The problem is compounded by lack of institutional capacity to effectively enforce laws and regulations pertaining to professional and private practice (where they exist) (Konde-Lule et al., 1998, Hongoro and Kumaranayake, 2000). The biggest challenge facing policy makers in the health sector lies in how to tackle this “perverse” working culture given deficiencies in financing, regulation, organisation and management of public health systems.

4.4 Regulation

The rationale for government intervention in the health sector is to ensure that the market for health services meets the goals of health policy. Consumers are (relative to providers) ignorant about their health status and the impact health care has on their health (Jacobs 1996). Such ignorance may lead to provider dominance, and over-servicing (or under-servicing) of patients which in turn leads to less than optimal use of societal resources, and poor quality of care (which may be harmful to patients). Jacobs argues that unfettered health care markets may operate in the interests of (sometimes unethical and incompetent) providers. Thus the government attempts to regulate key players in the health care market including health professionals: physicians, nurses and other professional categories.

There are two main reasons why health professionals are regulated. First, to ensure that they are adequately trained to provide quality services. Second, to ensure that, even the well-qualified professionals do not provide redundant care and engage in opportunistic behaviour. Laws and regulations are thus used to alter provider behaviour for the benefit of patients. The legal mechanism for assessing provider qualifications is usually through a credentialing process. Health practitioners are required to have appropriate credentials in

order to provide medical care. However, regulation of the quantity and quality of health providers is a necessary but not sufficient condition for ensuring that the market works in the interest of the public. Opportunities for perverse behaviour may still exist. From a public interest perspective more regulations are required to control the quantity, quality and price of services. The rationale being that regulations create disincentives for opportunistic behaviour. However, it is often argued that regulations are more likely to work if they are a result of consultation of specific interest groups (the public, politicians, professionals and bureaucrats) who have a voice in what should be regulated and how it should be regulated-public choice theory. The behaviour and attitudes of health workers is likely to be different in cases where they are consulted compared to where they are not.

The execution of laws and regulations is usually done by independent agencies with the authority of the legislature (state or federal). The regulatory agencies are responsible for licensing (and re-licensing) health workers to practise medicine. The process involves checking if potential providers meet given criteria. For example, doctors are expected to be medical school graduates, to have been accepted to a doctor's association, and to have successfully completed an internship programme. Regulatory agencies may also be involved in continuous professional education (CPE), setting professional exams, professional discipline and inspection of health facilities and training institutions (Kumaranayake et al., 2000). Training institutions, just like professionals, need to meet defined standards before they are registered or recognised. However, in poor and transitional economies some training institutions operate outside the national policy resulting in different quality standards and focus from national policy. Regulatory compliance is affected by the extent to which regulatory agencies are independent.

The remit of regulatory agencies varies across countries or even states. Representatives of professional associations, and government usually constitute boards of regulatory agencies. Because of limited involvement of the public and civil society in these boards, the majority of board members tend to be professionals themselves, which may pose high risks of "regulatory capture". It is worth exploring how regulatory capture shapes the incentives of particular professional groups.

In some cases, professional associations or councils have the mandate from government to license/re-license, retrain, discipline health personnel, and implement agreed codes of practice (professional self-regulation). Professional councils determine practice requirements for different professionals: that is, what they can and cannot do. This is commonly done within the context of overall medical practice and appropriate medico-legal instruments. The success of self-regulation amongst health professionals in PTC varies. Understanding the circumstances surrounding the success or failure of professional self-regulation are important in comprehending health worker dynamics.

Specialty certification is another form of professional licensing for those doctors who want to practice certain specialties. This is usually done through specialty associations, which set requisite board exams. Although such certification does not result in the acquisition of extra-privileges from those available to any licensed doctor, it increases the marketability of specialist physicians. This is particularly true in the USA where some hospitals expect such certification before deciding on whether to employ a doctor as a part-time or full-time employee (Jacobs, 1996).

The ease with which health practitioners can establish private health care facilities or practise privately partly depends upon the nature of the existing regulatory framework. Private facilities (e.g. hospitals and equipment) might require state or federal licensing. Licensing entails meeting defined minimum requirements (staff, equipment, ablution facilities etc.). In addition to controlling quality, regulations are sometimes used to control resource use or costs in the health sector. Controls could be imposed on capital expansion as a mechanism for ensuring that there is unnecessary duplication (or addition) of services. Health Systems Agencies (HAS) which were common in the USA in the early 1970s provide a typical example of state control on investment in health care facilities. A certificate of need (CON) is required before a new facility or expansion of an existing one is approved. Any institution that expanded without a CON was subject to legal sanctions (Jacobs 1996).

At an individual level, private practice is generally proscribed within existing laws. Health providers are either licensed to do private practice or are simply required to meet defined educational and experience criteria before they can practice privately. The latter assumes

that professionals are capable of self-regulation and therefore government intervention is unnecessary. Professional councils are expected to carry out peer reviews and random medical audits of its member activities as a way of controlling both the quantity and quality of services provided. In practice, the reality may differ from the policy. The lack of clarity of the laws and policies governing private practice usually breeds various forms of informal private practice amongst health professionals. In addition, such practices are nurtured by prevailing political and economic circumstances, which tend to favour strong professional groups at the expense of the voiceless ? the sick and poor.

The regulatory environment forms part of the macro-environment that impact on health worker motivation and performance. The rationale, nature and degree of enforcement of regulations have variable impact on human resource training, deployment and practice and generate different incentive regimes that drive observed provider behaviour. An examination of the existing regulations in different contexts might provide insights into provider behaviour.

4.5 Health worker motivation

An attempt has been made this far to show how some health system factors relate to HW training, deployment and retention and how this might affect provider behaviour. The concept of motivation in the work context is explored in this section. In order to do that a number of questions merit attention: “What is motivation in the context of work? What factors influence motivation in the work place? How does motivation influence performance? How can motivation problems be addressed?” Motivation is variously defined in the literature but the underlying themes are the same. Three definitions are shown here:

“Motivation in the work context can be defined as an individual’s degree of willingness to exert and maintain an effort towards organisational goals. It is a transactional process reflecting the fit between the individual, the organisational context and the broader societal context” (Bennett and Franco, 1999).

“ ..willingness to perform well. Work motivation exists when there is alignment between individual and organisational goals and when workers perceive they can carry out their tasks” (Martinez and Martineau 1998).

“Motivation is concerned with whether an individual wants to perform the task well” (Wright, 1991) or more narrowly and within the organisation context as “the willingness to expend effort on a particular task in order to attain an incentive or incentives of a certain type” (Wright, 1987)

From these definitions it is clear that motivation has to do with willingness to expend effort towards achieving an individual goal that is consistent with that of the organisation or system within which the individual works. Given that complete alignment of individual and organisational objectives might be difficult to achieve in practice, what matters is the degree of alignment of these objectives. Interventions that attempt to increase the alignment of individual and organisational objectives are likely to enhance individual motivation. Bennett and Franco (1999) argue that motivation is an internal psychological process which is difficult to directly influence and observe. What can be observed are the results of the motivational process such as improved performance.

There are several motivational theories in the literature (Handy 1993). One motivation theory that can allow us to answer some of the human resource questions raised earlier is the Expectancy Theory, first enunciated by Vroom in 1964. According to this theory, the level of work motivation depends on two factors: *value of outcomes*, and *effort-output expectation*. Value of outcomes refers to individual's preferences to possible outcomes that may result from performing a specific task. These outcomes (positive or negative) can be intrinsic (such as sense of achievement, pride, accomplishment, guilt, and embarrassment) or extrinsic (such as more money, recognition, promotion etc.)⁴. Effort-outcome expectations refer to the individual's belief that expending a certain amount of effort performing a particular task will result in the expected outcome. There are two aspects to such expectations. First, is *effort-performance* expectations, that is the individual's beliefs concerning the level of performance she is likely to achieve by investing a certain amount of effort in the task. Second, *performance-outcome* expectation, that is, the individual's beliefs concerning the outcomes, which are likely to result from achieving that level of performance. According to this theory, if either of these variables is zero, then motivation is zero. For instance, relating staff promotion to productivity levels will not increase the

⁴ Intrinsic rewards are those derived directly from the task itself and we award ourselves depending on how well we feel the task was performed and extrinsic rewards are those given to individual workers by other people

level of employee motivation if; (i) the employee has no interest in promotion, (ii) the employee believes the productivity levels set for promotion are unachievable, or (iii) the employee does not believe that she will actually be promoted if she achieves those set productivity levels. There might also be negative consequences of achieving set productivity levels by individuals. For example, resentment from colleagues, loss of leisure time and so on (Wright 1991). Employee motivation can only increase if the three conditions are met, and the positive outcomes outweigh the negative ones. There are other important factors that influence individual performance and these are summarised in Table 2.

Table 2: Other determinants of individual performance levels

Goal clarity	The extent to which the individual has a clear understanding of the objectives which he or she should be achieving in relation to the task in question
Ability	The extent to which the individual has the knowledge and the skills required for the task
Resources	The extent to which the individual has the equipment, raw materials, support staff, etc., required to perform the task

Adopted from Wright (1991)

Expectancy theory has practical limitations associated with the measurement of values, expectations and effort, but it provides a credible framework for analysing HW behaviour. It suggests that what motivates individuals is not just money, and that individual satisfaction depends on the level of alignment of work outcomes with individual aspirations. The theory is based on the assumption that human beings consciously or unconsciously assess their preferences and expectations in a rational manner in order to decide how much effort to put into a task (Wright 1991).

Another motivation theory of interest in studying HW behaviour from an economic perspective is that of incentives. Incentive theories⁵ are based on the assumption that individuals will work hard if they are given specific rewards for their work effort. The role of incentives in driving individual and organisational behaviour is thus key to

⁵ The underlying assumption is that people are economically rational, can bargain and are concerned about work, money and conditions of service (Handy 1993). The conventional view of motivation is based on *homo economicus*, a rational human being who will make choices at the margin based on personal and financial gain (Crilly, 2000)

understanding organisational dynamics and systems performance. The key question is what are those things that make people in an organisation work harder or not (the motivators). Bernard (1938) argues that “the contributions of personal efforts which constitute the energies of organisations are yielded by individuals because of incentives”. Incentives can be monetary or non-monetary as in job autonomy, status, power, authority and interesting work. Money is important in our thinking about causes of behaviour both because of what it can purchase and because of the status attached to it (Pfeiffer 1995, Handy 1993).

In public systems where HWs are usually paid non-performance-related salaries, annual money rewards (e.g. global bonuses) may not necessarily motivate people but if high rewards are perceived as returns for individual effort, HWs might be motivated to work harder (Xingzhu 1999). A bonus system can be effective if it meets the criteria set out in the Expectancy Theory described above or those described by Handy below. In cases where HWs are not paid according to performance, non-monetary incentives (e.g. prizes, promotion, job enrichment, recognition, access to continuous professional education, workshops and loans) may be more relevant in influencing individual and group behaviour. For these rewards to be able to motivate people to improve performance they must be distributed in ways that are perceived to be related to work effort, performance must be measurable and attributable to the individual, the individual must expect the reward, and the increased performance must not become a new minimum standard for future assessments (Handy 1993, Pfeiffer 1995). In some scenarios (e.g., a hospital situation) individual performance might be difficult to measure because of “jointness” of activities between different staff categories (e.g. doctors and nurses) which might require complex reward systems (Xingzhu 1999). The behaviour of employees can be controlled by offers to provide and withdraw these rewards in return for compliance or defiance with respect to management decisions (Buchanan and Huczynski 199: pp 712.). However, political systems based upon rent-seeking and patronage are unlikely to support merit-based systems of promotion and may jeopardise the credibility of leaders (Bennett and Franco, 1998)

It is important to distinguish between those incentive structures that reduce staff turnover and those that motivate people to work more in an organisation. For instance, it may be argued that high salary, subsidised accommodation and job security may reduce turnover

but not necessarily motivate people to perform better. This depends on the structure of the reward system. Furthermore different groups within an organisation or system may have different incentives, and therefore behave differently which might lead to sub-optimal performance (Harris 1977, McPake and Archard 2000). Differences in incentive structures might create tension within and/or between staff groups.

4.6 Impact on the Health System

Human resources affect the performance of the health system in a variety of ways: (i) equity of access to health services, (ii) quality of health services, and (iii) consumer responsiveness (Table 3). The categories are not completely distinct because they overlap in practice. For instance, consumer choice is part of consumer responsiveness, and a discussion of equity inherently involves differences in quality of services.

Table 3: The relationship between human resource issues and system performance

Health System Performance	Links between HW and Performance
Equity of access	<ul style="list-style-type: none"> • Availability and distribution of different categories of HWs [urban versus rural, across geographical regions, public vs private] • Non-availability of HW may mean non-availability of particular services [public versus private]
Quality of services	<ul style="list-style-type: none"> • Availability and quality of HW in terms of training, experience, competencies and mix of HWs • HW morale and its impact on provider-patient relationship • Waiting times
Consumer responsiveness	<ul style="list-style-type: none"> • Availability and distribution of HW influences system's responsiveness to consumer needs. • HW morale affects the interface between the system and consumers (or community in general) • Availability of HW in both the public and private sector provides choice for consumers • Feasibility of private practice, dual practice, or informal activities

(i) Equity of access to health services

Equity of access to services is defined here as equal access to services for equal need. Among the various constraints that health systems in developing countries face in relation to human resources, such as lack of skilled staff or low motivation and productivity, is the inequitable distribution of health personnel across regions. Rural and remote areas often suffer from under-supply of medical doctors, nurses, managers, dentists and other

categories. On the other hand, these professionals are usually in over supply, or at least in higher supply in urban areas. For instance, in Cambodia 31% of HWs are based in rural areas, and in Angola only 15% (WHR 2000).

Unequal distribution of health professionals within urban areas is also common, in particular areas with problems of transport or high rates of criminality are likely to be relatively under-served. For example the city of Sao Paulo of Brazil has a high percentage of health professionals overall compared to rural areas of the country, but faces large difficulties in maintaining health centres operational in the periphery, where crime rates are high.

Inequities apply to HW distribution between public and private sectors and may be particularly acute for specialist medical practitioners. Differences in quality of HWs, measured in terms of skills and qualification, or motivation may also exacerbate urban/rural and public/private inequities.

(ii) Quality of health services

The availability and distribution of health workers constitutes a component of structural quality of services. Differences in numbers of professionals including substantial discrepancies in the qualifications of professionals across areas and sectors are not uncommon in PTC. In some countries, for example recent graduates are expected to spend a specified amount of time in a remote area of the country. This raises the problem of insufficient staff with long experience which influences the quality of care provided. However, because of general shortages of professional health workers in such contexts, the presence of a doctor may mean marked improvement in the quality of services. Lack of staff with specific skills, such as managerial ones, is another example. This problem may have been further exacerbated in countries that have implemented reform policies of decentralisation without human resource capacity building components.

Lack of qualified health workers in the context of growing demand for services is a source of frustration and demoralisation of health workers. Health worker morale and motivation

influences the nature of health workers' relationships with clients. Long queues and short consultation times result from lack of human resources (among other causes).

(iii) Consumer responsiveness

World Health Report (2000) defines consumer responsiveness as “..not a measure of how the system responds to health needs, which show up in health outcomes, but of how the system performs relative to non-health aspects, meeting and not meeting a population's expectations of how it should be treated by providers of prevention, care or non-personal services.” It essentially has two parts: respect for persons which involves respect for persons' dignity, confidentiality and autonomy in making choices about one's health, and client orientation which involves prompt attention, quality of amenities and provider choice. The greater part of this definition concerns human treatment of clients or patients in which HW behaviour plays a fundamental role. As earlier mentioned, provider behaviour depends on how different components of the health system affect incentive structures. A demoralised health workforce is likely to contribute negatively to the health system's responsiveness to consumers.

Freedom to select which provider or organisation delivers one's care is in part explained by availability of different providers, and in part by ability to make choices ? for example ability to pay. In countries where human resources are unevenly distributed, and have limited options for private practice, consumer choice may be limited.

5 The Way Forward

Human resource capacity in health is clearly a problem for PTC. Health systems research might provide approaches to finding mechanisms to redress human resource problems. We argue in this paper that in order to raise our awareness of provider behaviour in health we need to understand basic issues that relate to health worker *training, deployment and retention*. Table 4 provides a summary of broad study areas in human resources in health and some suggestions of possible data sources that can be used to study them. The matrix also attempts to highlight key questions related to different health system components. Understanding all the relevant systems factors and how they relate to HW behaviour

requires a multi-disciplinary approach. The specifics of the research studies will depend on individual country circumstances and the nature of the problem.

Table 4: Study Domains and Methods Matrix

Study Domain	Relevant Questions [Training/Deployment/Retention]	Possible Data sources
Human Resource Policy in Health (HRPH)	<ul style="list-style-type: none"> - Is there a specific and clearly understood HRPH? - What aspects of HRD does it address?⁶ - Is the human resource policy considered effective? [against the Mission/Goals of the health system] - Who are the major players in the implementation of the policy and what is their role? - Is the level of policy practice explained by its design (or content), implementation process or both? - Is the HRPH reviewed regularly? - NB: What is the number and mix of training institutions? Who determines national human resource needs? How are these needs established? How is the planning process? How are private sector activities co-ordinated? 	<ul style="list-style-type: none"> - Ministries of Health - Development Partners - Research Institutions - Public Service Commissions - Training institutions (public and private) - Private employers - Local government
Financing	<p>a) <i>Training</i></p> <ul style="list-style-type: none"> - What financing mechanisms are used to fund training institutions and individuals? - How much is spent on training and re-training of HWs? <p>b) <i>Deployment</i></p> <ul style="list-style-type: none"> - Is there any relationship between funding policy on HW training and their deployment? - Are there incentives related to deployment? [E.g., opportunities for more training, promotion, location allowances and other benefits] <p>c) <i>Retention</i></p> <ul style="list-style-type: none"> - How do salary levels compare between the public and private sector, and regionally? - What monetary incentives exist for public HW? <p>How are these monetary incentives financed (direct budget support or user fees) and given (reward system—seniority or performance based)?</p>	<ul style="list-style-type: none"> - Ministry of Finance - Local government - Public Service Commissions - Training institutions (public and private) - Private Employers - Development Partners - Research Institutions

⁶ To include issues like planning, management & supporting professional development, financing, regulation, public-private mix and others]

Study Domain	Relevant Questions [Training/Deployment/Retention]	Possible Data sources
Regulation	<ul style="list-style-type: none"> - Are there regulations that govern the activities of training institutions and providers of health services? Can be looked at two levels: <ul style="list-style-type: none"> (a) <i>Training institutions (public/private)</i>: Registration/licensing and re-licensing [accreditation processes], tuition fees, entry qualifications, professional curricula, validation of degrees or other qualifications etc. (b) <i>Provider level</i>: deployment, registration, licensing and re-licensing, private practice (setting up private practice, dual practice and informal activities) - Who enforces these regulations and how? - What is the impact of enforcement of these regulations on professional practice and retention? - How is the “general public” involved in regulating provider behaviour? 	<ul style="list-style-type: none"> - Ministries of Health - Professional Associations - Regulatory Agencies - Public Service Commission - HWs - Local government - Private employers
Health system Organisation & Management	<ul style="list-style-type: none"> - How is the health system organised and managed? [level of bureaucracy and decentralisation] - Do managers at different levels of the health system manage their staff in a way that recognises their role in implementing the HRPH? - How does the existing health system organisation and management structure impact on: <ul style="list-style-type: none"> - Training and retraining of HW - HW deployment - Supervision, lines of authority and accountability - HW discipline - Career structures, promotion and performance review processes - Reward systems - Organisational culture/working environment - Opportunities for private practice and informal activities 	<ul style="list-style-type: none"> - Ministry of Health: (state/federal) - Professional Associations - Public Service Commissions - Private employers (for-and not-for-profit) - HWs
Health Worker Motivation (Incentives)	<ul style="list-style-type: none"> - What are the main factors influencing health worker behaviour? - What are the perceptions of HW regarding: <ul style="list-style-type: none"> a) Training: financing arrangements, regulations, and organisation and management of human resources b) Deployment: policies, strategies, and related incentives c) Retention: financing (monetary and non-monetary incentives), regulation (professional practice and opportunities for private practice), organisation and management (working environment, career structures, promotion and performance assessment systems, reward systems, training opportunities, etc..) 	

Study Domain	Relevant Questions [Training/Deployment/Retention]
System Implications:	
• Quality	See Table 3
• Equity of access	See Table 3
• Consumer responsiveness	See Table 3

Throughout the analyses depicted in Table 4, attempts should be made to document what human resource strategies and/or policies have been successful in the study countries and the reasons for success. A similar analysis for failures would be equally beneficial.

Priority Areas for Research in 2002-2004

From the discussion above it is clear that there are many aspects of human resources in health that require investigation. Table 5 is a summary of the priority research areas that are likely to add to existing evidence and knowledge on human resource dynamics in health in PTC. Underlying this research agenda is the recurring theme of health worker incentives and behaviour.

a) Impact of reforms on health workers

In the last two decades developing country governments have implemented a variety of reforms in the health sector with the hope of creating the right individual and institutional incentives for improving system performance. However, reforms have not always been initiated with due consideration of human resource issues that are relevant to their success. This has often led to inefficiencies, reduced responsiveness and unattained targets (WHO, 2000). Research into why and how well intended reforms have failed to achieve set objectives will inform future reforms. Of particular interest, is how reforms have reshaped health worker incentives and hence affected performance.

b) Private practice among Midwives

The programme intends to work in collaboration with other institutions on how private practice, particularly among publicly employed midwives has impacted on public services: access (especially for the poor), costs and quality of health services. Included in the study will be an analysis of: the nature and magnitude of private practice, the regulatory environment, the incentive structures and the characteristics of providers. The study will provide an opportunity to explore issues related to the public-private interface, the role of government, human resources and incentives, access and quality of services, which are part of the health systems development programmes' objectives.

Table 5: Selected priority areas for research in human resources (2002-2004)

Research Proposal	Research Objectives/Questions	Methods	Expected Results
1) Impact of Health Sector Reforms on human resources in health	<p>1.1 To critically analyse health sector reforms in relation to the macro-level environment for the health sector</p> <p>1.2 To examine the impact of reforms (decentralisation, user fees, regulation) on the incentive environment for health workers</p> <p>1.3 To explore the impact of changes in the incentive structures due to reforms (decentralisation, user fees and regulation) on staff performance</p> <p>1.4 To assess how decentralisation, user fees and regulation changes impacted on human resource capacity</p> <p>1.5 To make policy recommendations on how to improve health systems performance through human resource capacity development.</p>	<ul style="list-style-type: none"> • <i>Review of policy/reform documents on human issues</i> • Stakeholder analysis • Health Worker interviews using structured questionnaires • Inventory of human resources. Map the drifting of human resources in the health system over time (by sector and location)? use health worker concentration maps (GIS or EPIMAP) 	<ul style="list-style-type: none"> • A macro-level analysis of health sector reforms and their impact on health worker incentives • An analytical review and synthesis of changes in incentives and motivation • A comprehensive assessment of the impact of HSR on Human Resource Capacity
2) Dual practice amongst public midwives: its nature, magnitude and impact on public services [Collaborative research]	<p>2.1 Review the existing public policy and regulatory framework concerning midwifery practice.</p> <p>2.2 To determine and establish the magnitude of different forms of private practice amongst public midwives.</p> <p>2.3 To establish the characteristics of midwives and their incentive structures.</p> <p>2.4 To identify and evaluate the consequences of private practice by public midwives on public services: access (especially for the poor), costs and quality of health services</p>	<ul style="list-style-type: none"> • Policy level analysis: review existing policies and regulations, stakeholder analysis • In-depth interviews with public midwives using a structured questionnaire • Interviews with users and non-users using a structured questionnaire (include wealth variables) • Estimation of Opportunity Cost of private practice by midwives 	<ul style="list-style-type: none"> • A detailed description of the policy and regulatory framework • Characteristics of midwives involved in private practice • Characteristics of users and non-users (including wealth/socio-economic rankings) • Cost to the public sector of private practice by midwives
3) Labour markets in health in three countries (PTC): what works and what does not?	<p>3.1 What are the characteristics of labour markets in health in PTC?</p> <p>3.2 To analyse demand and supply side analysis of labour in health?</p> <p>3.3 What are the causes of labour market failure/success in such contexts?</p> <p>3.4 What are the implications for government involvement in labour markets in health?</p>	<ul style="list-style-type: none"> • Review of relevant documents and interviews with human resource experts in the sector using a structured questionnaire • Supply-side or demand side models/function ???? to discuss with Prof Normand 	<ul style="list-style-type: none"> • Market structure: characteristics of suppliers and demanders • Labour marker performance measurement????
4) Social elements of health worker incentives ???	<p>4.1 To apply the Expectancy Theory Framework in understanding health worker incentives and worker behaviour</p> <p>4.2 To assess how non-monetary incentives (e.g. work culture, self-concept) affect behaviour. The hypothesis being that, ceteris paribus, health worker behaviour is influenced as much by non-monetary incentives as by monetary incentives.</p>		

- c) Analysis of labour markets
- d) Social aspects of health worker incentives

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