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Chapter 4

Understanding How Incentives Influence Motivation and Retention of Health Workers

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ABSTRACT

A critical factor in addressing the human resources crisis in low and middle income countries (LMIC) is the ability to recruit, motivate, and retain health workers. Failure in this area is one of the main causes of decline in availability of services and quality of care. Various financial and non-financial incentives have been implemented and this chapter will explore available evidence to see whether they have influenced motivation. Additionally, Maslow's hierarchy of needs is used to determine if there is a hierarchy of how incentives are valued. While Maslow's model is a useful tool to classify themes of health worker needs, it would appear that workers are motivated without each level having to be fulfilled in turn. While financial incentives may help with retention, they can cause erosion of professional ethos, do not increase job satisfaction, or act as motivators to perform well. More research needs to be done in order to design more effective human resources strategies.

BACKGROUND AND CURRENT UNDERSTANDING

Efforts to improve access to health services across the world are being constrained by severe shortages of health workers. Without the appropriate

number of health workers it is not possible to deliver services effectively and efficiently. The human resources crisis is particularly evident in sub-Saharan Africa, where triple the current number of health workers, or at least 1 million more, are needed if they are to come close to ap-

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proaching the Millennium Development Goals (MDGs) for health (Chen et al., 2004).

There are three major factors affecting health workers, namely the AIDS epidemic, the migration of skilled labour (the “brain drain”), and a history of massive underinvestment in human resources. These factors are affecting the low and middle income countries (LMICs) the most and placing additional strains on already fragile health systems (Chen et al., 2004).

The AIDS epidemic is challenging capacity particularly in sub-Saharan Africa where services are being completely overwhelmed with people who need treatment, as well as by reducing the number of health workers, who are themselves dying from the disease. Health workers are directly impacted through increased workloads and increased exposure to the risk of contracting HIV through a work related injury. Morale is further reduced as health workers see increased numbers of their patients dying (Chen et al., 2004).

Health worker migration is not confined to international movement; internal migration is also widespread, with workers moving from rural to urban areas and from public to private practice. Rural areas have been worst hit by migration leaving many rural facilities understaffed, and this is affecting the morale of staff who remain there (Awases, Gbary, Nyoni, & Chatora, 2003). Despite evidence showing the detrimental effect of migration of health workers from LMICs, many high income countries have grown reliant on importing health workers from these countries (Hongoro & Normand, 2006).

Early responses to the shortage of skilled health workers in LMICs have focused mainly on issues of training capacity, but it has become increasingly clear that the more important issues are of incentives, retention, and motivation of those who remain. Until issues that are leading to “de-motivation” of health workers are addressed, high quality care cannot be provided (Agyepong et al., 2004). There is evidence, particularly in Thailand (Wibulpolprasert & Pengpaibon, 2003),

of incentives that can retain and motivate health workers. Both financial and other incentives are important in motivating professionals, but such research also shows that the necessary financial incentives may involve very large increases in salaries. This is often not a sustainable option and so alternative incentives must be found and put into place.

It is important to note that the human resources crisis is a worldwide phenomenon and all countries, rich or poor, are affected by imbalances in their health workforce. It is estimated that by 2011 Canada will have a shortage of 78,000 nurses (Gagnon, Ritchie, Lynch, & Dronin, 2006). The shortage is being created by not enough people being attracted to the profession, in addition to the increased care demands created by an aging population. A study of nurse retention found that only 50% had a firm intention to stay in nursing. The main sources of dissatisfaction cited included lack of professional support and recognition, heavy workload, lack of equipment, and poor physical work environment (Gagnon et al., 2006).

While this chapter will focus mainly on the situation in LMICs, as they are affected by the greatest burden of disease, migration, and chronic underinvestment in health care, we will also look at challenges surrounding motivation and retention of health workers in high income countries. It is critical that all countries implement health plans to reflect the health needs of their population and workforce strategies must be put in place to facilitate this. Furthermore, if issues surrounding motivation and retention were to be addressed in high income countries it may reduce their dependency on recruiting health workers from LMICs. Therefore, it is clear that a better understanding of the critical factors influencing human resources capacity is needed globally in order to deliver equitable, effective health care.

First the literature around motivation, incentives, and retention will be reviewed and it will be important to see how much of this is actually

borne out in practice. In particular, the authors ask several questions:

- What incentives are being provided to retain and motivate people?
- What incentives positively affect the retention of staff and their motivation to do their job well?
- Are some incentives more important than others?
- Are incentives addictive and do some compete with others? Furthermore, can incentives that help retention impede motivation?
- Is there a sequencing of health worker needs as seen in Maslow's hierarchy of needs?

The remainder of this chapter seeks to draw together evidence to answer these questions and draw out some policy implications. There has been an explosion in human resources research over the last decade, however while not all the evidence exists in the published literature to definitively provide answers to all these questions, it is worth reviewing the available material. Furthermore, the raising of important questions is still useful, not least in identifying gaps and important areas for further research.

A Review of Current Understanding and Key Concepts

While recent research has had an understandable focus on retaining health workers in LMICs, retention is an issue that affects health workers globally. There is no guarantee that retained health workers will be productive or motivated to provide a high quality of care. Retention does not guarantee productivity and it is debatable whether retention even in rural and remote areas without productivity is better than no retention. Retained staff may simply be stuck for alternatives or apathetic about moving. Governments can hire health workers

to improve the health system but governments must also ensure that these workers will act in the best interests of the health system and so make the investment worthwhile. Given such concerns about both the retention *and* productivity of health workers it is worth reviewing some key concepts in the literature and theories about the importance of different types of incentives.

The authors take *retention* to be concerned with maintaining staff in post and not losing them to other organizations or to migration. This is one of the key objectives of managing human resources (Salaman, Storey, & Billsberry, 2005). Management needs to be particularly concerned about poor retention of highly skilled cadres because of the scarcity of such labour and the economic investment needed to develop staff with the right skills. Different dimensions of retention that health system analysts are typically interested in relate to:

- loss from public service,
- loss from rural/underserved areas, and
- loss from the country (emigration).

Motivation is a more debated concept and there are several streams of thought about what motivates people to action (Ramlall, 2004). Nevertheless, it is agreed that motivation can be seen as “as a psychological process that causes the arousal, direction and persistence of voluntary actions” (Mitchell, 1982) (pg.81). This has been adapted to a more practical definition within the health sector, with motivation being defined as “an individual's degree of willingness to exert and maintain effort towards organizational goals” (Franco, Bennett, & Kanfer, 2002, p.1). In this context motivation is job-specific and related to delivering mandated health services. Motivation is paramount to achieving higher productivity within the health sector, but is not sufficient by itself to ensure effective health care provision, as infrastructural conditions and other contextual factors may also have an impact.

A related concept to both retention and motivation is *organisational commitment* which represents an employee's attachment to the organization for which they work. Meyer and Allen (1991) explore different components of this whereby the employee:

- Wants to belong to the organisation (they like it, desire to work there) – *Affective Commitment*
- Has to belong (through economic necessity, lack of alternatives, or has invested in the job) – *Continuance Commitment*
- Ought to belong (they feel a moral obligation – either through their own set of values or they feel the need to pay back the organisation) – *Normative Commitment*.

In a fascinating article, Meyer and Herscovitch (2001) explore how these different components of commitment impact on behaviour (i.e., in terms of staying in the organisation, doing what is required, and doing more than what is required). Affective commitment is the most important in terms of the probability of employees doing their focal work and going above and beyond their duties. High normative commitment alone leads to a high probability of employees exerting effort on key tasks and a lower probability of exerting effort on extra tasks. High continuance commitment alone suggests employees will, on balance, exert effort on doing what is required but will not exert effort on extra tasks. Consequently, health workers with continuance commitment will be retained, but their motivation is low and health system productivity will also be low.

Two different areas of motivation are often confused: motivation to be in a job and motivation to perform. Retention does not ensure job satisfaction and/or exertion of effort to achieve mandated goals. In this regard, Herzberg (2003) reviewed intrinsic and extrinsic factors which impact on levels of job satisfaction. Intrinsic factors relate to job content, e.g. achievement, recognition

for achievement, the work itself, responsibility, growth or advancement. Extrinsic factors relate to features of job context or conditions and include company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and job security ("job context").

Herzberg maintains that if intrinsic factors are satisfied workers are encouraged to work harder and better. Extrinsic factors, in contrast, are more related to accepting and being retained in the post. In summary, salaries and working conditions are important to retain staff and produce continuance commitment, but alone are insufficient to lead to better staff performance. Recognition and feelings of achievement are more likely to influence staff motivation, effort and, therefore, performance.

A Hierarchy of Needs?

Maslow (1943) proposed a hierarchy of needs for individuals that has been an extremely influential paradigm for exploring behaviour and motivation. The model has five levels, or sets of needs. Each level must be fulfilled before the individual can progress or turn his/her focus to the next level. There is thus a natural sequence of needs; once needs have been met in the lower level these will no longer be prioritized.

The first level is associated with physiological needs which must be met for the human body to survive and include the need for water, air, and sleep. The highest level is self actualization, where there is a desire for self-fulfilment in order to reach personally set goals. Spear (2006) has translated these needs into a healthcare system setting, where the levels correspond to health worker needs. The lowest level corresponds to basic work needs, such as income and time off, level two is a safe work environment, level three is a supportive working environment, level four relates to achievement and status and the highest level is personal growth. All of these levels are outlined in Figure 1.

Figure 1. Maslow's hierarchy of needs and what is included in each level for health professionals

Spear (2006) conducted a study in Australia to determine what motivated mental health professionals using Maslow's hierarchy as a framework. It was found that esteem and self-actualization were powerful motivators. Additionally, reasons cited by health professionals for wanting to perform well in their work included "sense of achievement", "helping others", "contributing to the community" (esteem values) and "personal development and fulfilment" (self-actualization values).

Measures can be taken to ensure that Maslow's hierarchy of needs can be met in the workplace: basic needs through fair payment and reasonable working hours; security through having a safe and functioning workplace; social belonging through encouraging team work and formation of good relations with patients. Esteem can be fulfilled by providing training opportunities, career development, and celebrating success; and finally self-actualization can be met by job variety (for instance, combining clinical work with research or teaching) and the ability to do meaningful work (Spear, 2006). The Maslow model and its adapta-

tion present a means for understanding what health worker needs are irrespective of a developing or developed world context.

EVIDENCE ON INCENTIVES

Motivational indicators (both positive and negative), such as longer working hours, doing a second job (or private practice), lower absenteeism, provision of better quality of care and job satisfaction can be used to try and evaluate whether incentives are improving motivation.

Incentive packages have increasingly been introduced into many countries and there is growing literature on assessing the impact that incentives have had on the ability to recruit, retain, and motivate health workers (Bennett, Gzirishvili, & Kanfer, 2000). Additionally while health reforms are not generally designed with the goal of increasing motivation, the changes in overall organisational relationships and economic incentives which often go along with these reforms frequently do have

an impact on motivation (Abzalova, Wickham, Chukmaitov, & Rakhimbekov, 1998).

Studies reviewing incentive packages have reported mixed findings on their impact on motivation. It is often found that where financial incentives have been introduced these have been unequally distributed and that inadequate opportunities for career development and training remain (Awases et al., 2003). A review of non-financial incentives in East and Southern Africa found that there was widespread evidence that incentives are being used to address training, career development, and social needs (e.g. housing, provision of childcare, staff transport); improved working conditions; development of human resources management (HRM) systems; and workplace HIV programmes. However, there were no clear plans for monitoring and evaluating the incentives to determine the impact on motivation and retention. There is some evidence that training programs have encouraged workers back to the public sector, but information is limited and, as these incentives were in conjunction with financial incentives, it is difficult to attribute any success purely to the non-financial incentives (Dambisya, 2007).

A recent systematic review explored initiatives to promote motivation in LMICs and identified seven major motivational themes (Willis-Shattuck et al., 2008). These are: financial rewards, career development, continuing education, hospital infrastructure, resource availability, hospital management, and recognition/appreciation. It is clear that financial rewards are a core motivational factor; however, they cannot be implemented alone, as career development and management issues are highly influential motivational issues. Furthermore, recognition was found to have a powerful effect on motivation.

Management of health workers is an important determinant in health worker motivation and can significantly affect general satisfaction, organisational commitment, and indeed improve relations between management and other staff members. Health workers need to have a clear job defini-

tion that gives guidelines to the worker, as well as guidelines to the supervisor for assessing their performance (Bennett et al., 2000). For this reason supportive supervision, performance appraisal, career development, and transparent promotion have been prioritised in many motivational programmes (Manongi, Marchant, & Bygbjerg, 2006).

While this highlights the importance of financial and non-financial incentives, there is insufficient evidence on the impact that each incentive currently being implemented is actually having on motivation and retention.

The Importance of Financial Incentives

Remuneration has been cited by some analysts as the single most important intervention that can improve motivation (Bennett et al., 2000). If workers are paid a fair salary it means that they will not spend time looking for ways to increase their income either by searching for new jobs with higher salaries or through income generating activities to supplement their salaries such as drug stores, private practice, agriculture, and informal fees as is often the case in LMICs (Dieleman, Viet Cuong, Vu Anh, & Martineau, 2003; Kyaddondo & Whyte, 2003). Certainly virtually all initiatives in LMICs to increase health worker retention and motivation give a prominent place to financial rewards (Willis-Shattuck et al., 2008).

Maynard (2006) classifies incentives as implicit or explicit, both of which have internal and external components. Implicit incentives refer to issues around trust, for instance, with physicians seen internally through their Hippocratic Oath and externally through patient confidence that supports the belief that they are trusted. Explicit incentives revolve around regulation by authorities (internal) and payment (external). In the context of European health systems, Maynard (2006) documents the decreasing reliance on implicit incentives with the increased use of financial incentives to motivate providers.

Nevertheless, it is important to reflect on the precise financial incentives offered. The type of incentives available will affect the behaviour of providers and hence the quality of care received by the patient (McPake & Normand, 2008). In health care there are generally three methods of payment: salary (time rates), fee-for-service (piece rates), and capitation (being paid for each person on a practitioner's patient list). Fee-for-service is a direct inducement to increase activity. It encourages physicians to see more patients and perform more procedures. Once a fee has been introduced it is difficult to remove it. Capitation and salaries may induce under-treatment and the shifting of tasks (i.e., junior doctors and nurses having to carry out complex tasks) (Maynard, 2006). In their systematic review, Chaix-Couturier, Durnand-Zaleski, Jolly, and Durieux (2000), note that providers paid on a capitation basis for their patients would supply up to 25% fewer prescriptions than those paid on a fee-for-service basis.

Maynard (2006) confirms that the method of payment can affect motivation, with fee-for-service acting as an incentive to increase activity, whereas other payment methods, such as receiving a salary based per unit of time worked or capitation may act as an incentive to decrease activity. Conversely, in Rwanda, capitation payments have created an incentive for health workers to focus on preventative health care and only provide necessary services (PHR*plus*, 2002). This in turn has motivated attention to patient satisfaction and quality of care. Capitation payment has been coupled with a performance-based payment to providers in Egypt, leading to decreased patient waiting time and delivery of preventative care being rewarded (PHR*plus*, 2002).

A more fundamental critique of the "finances first" approach is given by Bowles (2008), in his review of economic experiments. He argues that economic incentives may have unintended but counter-productive effects:

- when they promote selfishness,
- compromise an individual's sense of self-determination and degrade intrinsic motivation,
- or convey a message of distrust and disrespect.

Bowles claims that people act in a certain way so as to be perceived of as a certain type, i.e., a good person or one esteemed by others, and not just to acquire economic goods. Economic incentives may both undermine esteem and create a culture where economic incentives are more important than morals. In addition some may argue that if wages are increased that this will not act as a motivator to perform well, but will only motivate people to seek the next wage increase.

In Le Grand's important article (1997) on human behaviour and social policy he asks whether it is more effective to treat people as "knights" who will work altruistically, or as "knaves" who are solely devoted to self-interest. Certainly he notes a move toward people focusing on self-interest as part of social policy. He notes that by introducing incentive patterns which focus on self-interest these may effectively undermine more community-serving goals (see also Goodin, 1996; Pettit, 1996). In effect a culture of self-interest may follow that changes behaviour and the factors that impact on motivation. Hence financial incentives may well undermine other forms of motivation, and care is needed when using financial incentives, as rewards are often related to activity rather than to indicators of patient satisfaction or quality of care.

It can be argued that increasing pay is only a temporary measure in terms of satisfying the recipient. It may well be that the more providers earn the more they want. Increasing remuneration may wet the appetite for more and that creates a real challenge for policy makers as continual increases are not sustainable. Additionally, salary may be effective in terms of drawing people to facilities, but may not motivate health workers

to perform well. Furthermore, salary increases are often not uniformly implemented across all levels of workers and this can lead to discontent

Professional Ethos

Health workers are not just interested in salary and career, but have often gone into the profession because they want to help others and they have an intellectual interest in medical matters. Professional ethos is particularly strong amongst health workers, as their main priority is the well being of their patient and this has a major influence in their motivation to perform their duties (Mathauer & Imhoff, 2006).

It has been found that health workers working in resource-poor areas are often “de-motivated” as they are unable to satisfy their professional conscience because they have not been able to provide the best standard of care (Mathauer & Imhoff, 2006). Often how health workers perceive their relationship with the community affects their job motivation and performance (Ssengooba et al., 2007). Nevertheless, lack of resources does not affect professional ethos and the desire to provide care for people. In countries where there are minimal resources, health workers have stated that they were encouraged by being useful to society and taking care of people (Dieleman, Toonen, Touré, & Martineau, 2006). Additionally in Zimbabwe, nurses working in the public sector were highly motivated to perform well despite increased pressures due to lack of resources and HIV/AIDS (Stilwell, 2001).

It is important to review whether professional ethos changes as incentives become more widespread. Is there evidence of a culture of incentives that ultimately de-motivates health workers and undermines their professional ethos? Experience in China has found that financial incentives have a powerful effect on the behaviour of physicians, leading to an erosion of their professional ethos. Bonuses are tied to revenues and profits so physicians over-prescribe drugs and expensive tests;

for example 75% of patients suffering from a common cold were prescribed antibiotics when this was not necessary (Hsiao, 2008). However, in this review of physician behaviour in China there is no information given about the motivational levels of the physicians and it is likely that they have resorted to being driven by profit because they are poorly paid and have not been set appropriate performance targets.

More Evidence of Incentive Conflict: Use of Informal Fees

Informal fees are unreported payments or unregistered illegal payments that are received, either as cash or gifts, in exchange for the provision of a service (or of a faster or better service) that was officially free (Balabanova & McKee, 2002).

There is growing evidence that use of informal fees for health care services are common place in many LMICs (Gaal, Belli, McKee, & Szocska, 2006). In fact, a relationship between inadequate salaries and the opportunities to raise income by charging informal fees has been strongly suggested (Ensor & Witter, 2001; Gaal & McKee, 2005; Lewis, 2007; Muula & Maseko, 2007).

Informal payments are reported to have a negative impact on equity and quality of care (Balabanova, McKee, Pomerleau, & Haerpfer, 2004; Falkingham, 2004; Maestad & Mwisongo, 2007; McPake et al., 1999); however, it has also been suggested that they may contribute to health worker motivation and retention (Ensor & Witter, 2001; Van Lerberghe, Conceica, Van Damme, & Ferrino, 2002).

However, the relationship between motivation, retention, and seeking additional income in the form of informal charges may not be straightforward. The use of such a practice can cause rivalries among health workers due to competition, particularly among the lower cadres of workers who do not receive a high share of the payment (Maestad & Mwisongo, 2007). Furthermore there is evidence that this practice can de-motivate health

workers more than motivate them through feelings of guilt and general discomfort from charging patients additional fees, especially in rural areas where patients are poor. Given the significance of motivation and retention issues in human resources for health, a better understanding of the relationship between informal payments and motivation is needed. Consequently the authors explore associations between motivation, retention and informal payments using a case study from Tanzania.

Tanzania: A Case Study

The authors carried out a study in the district of Kibaha, Tanzania to investigate whether informal payments from patients to health workers were being used and, if they were, to determine if they had a motivational effect (Stringhini, Thomas, Bidwell, Mtui, & Mwisongo, 2009). Focus groups were conducted in three facilities and a total of 64 health workers, from different cadres, participated in the discussions. Ethical clearance was obtained to conduct the study.

The study confirmed the use of informal payments and interestingly it was found that these payments were more commonly patient-initiated, rather than provider-led. Informal payments were found to be used in order to obtain better or faster services, for example, by jumping the queue, or in order to access private health services.

It was found that in general, health workers were not satisfied with their jobs. The main source of dissatisfaction was low salary and difficult working conditions and it was felt that salaries were not adjusted according to risk and responsibilities.

Although informal payments provide additional income for health workers, it was found that they do not have an overall positive effect:

"I just want to say that for those who are engaged in informal payments they are not happy of that."
(Health Worker, Dispensary of Mwendapole)

Health workers said that informal payments were a type of bribery, making them feel enslaved by their patients and resulting in loss of self-esteem:

"Bribery is a torture to health attendants, because even when you succeed to receive bribery from a person or patient then you will be locked to him for he won't allow you to serve anyone else than him." (Midwife, Tumbi Hospital)

Furthermore, there was a feeling of guilt and discomfort as health workers knew they were involved in a situation that has serious consequences on poor peoples' access to health services.

"On my side bribery is a trouble and a disturbance, and pity to those who are unable to give anything to be treated." (Midwife, Tumbi Hospital)

Informal payments appear to be contributing to an environment of corruption and dishonesty which in turn creates dissatisfaction, discomfort, and de-motivation among health workers. Fear of detection was another major de-motivating factor. All these factors appear to counterbalance the positive effect of receiving the additional income.

"When you receive bribery you become uncomfortable, even if you receive corruption from patient you become afraid, you become insecure in such a way that sometimes when you hear a knock in your office you become afraid or if one talks about bribery you become confused. We don't like this situation, really it's not good." (Midwife, Tumbi Hospital)

Informal payments were not found to be strongly related to retention of health workers. However in this setting there was not a great interest in moving from working in the public sector to the private sector. In fact, the private sector was not always viewed favourably.

“Some hate to be in private sector simply because there is no job security, people are offended, no job satisfaction, tyrannies, and you can even lose the job anytime.” (Doctor Specialist, Tumbi Hospital)

In general, money was not found to be the most important factor in the decision to stay in the public sector. First of all, job security was mentioned as extremely important. Additionally, opportunities for further education and training were considered important by certain categories of health worker, such as nurses and midwives. Mid-level providers, namely the clinical officers, reported that due to their “non exportable skills” it meant they were not able to switch to the private sector or to migrate so easily, so they are being retained in their current jobs often because there are no other options.

This study showed that the practice of informal payments contributes to general de-motivation of health workers and negatively affects access to health services and quality of the health system. Policy action which not only provides better financial incentives for individuals, but also tackles an environment in which corruption is endemic is needed. In addition, this study shows that patterns relating incentives, motivation, and retention may depend on the local context. In the particular context examined in this study, financial incentives, when obtained in an illegal and uncomfortable manner, were counterbalanced by non-financial factors and contributed to de-motivating health workers more than motivating them. Moreover, in a context of high unemployment, health workers may respond to non-financial incentives, such as job security, in their decision to stay in the public sector, instead of switching to the private sector for higher salaries.

What is an Effective Incentive Package?

It is widely agreed that financial incentives alone are not sufficient and any incentive package must

include non-financial incentives. There is currently limited information about the effectiveness of incentive packages as there is little rigorous monitoring and evaluation being conducted. Furthermore it is often difficult to attribute outcomes to a specific element of a broad package. However, characteristics for effective incentive schemes have been identified (Weller, 2008) and these are:

- has clear objectives
- is realistic and deliverable
- reflects health worker needs and preferences
- is well designed, strategic and fit for purpose
- is contextually appropriate
- is fair, equitable and transparent
- is measurable
- incorporates financial and non-financial elements.

Success of retention strategies has been documented in Thailand, Uganda, Canada, and the U.K. (Baumann, Yan, Degelder, & Malikov, 2006). Each country has made considerable investments in health with a comprehensive health policy framework and a professional body in place to ensure strategies were being implemented. All strategies focussed on financial and non-financial incentives. Uganda, for instance, from 2001 to 2006 had several policies which included: increased numbers of nurses, upgrading of skills, harmonisation of posts, opportunities for professional development, increased salaries, housing allowances, lunch allowances, and special allowances/incentives for health workers in rural areas (Baumann et al., 2006). Although no data is available for the number of nurses currently retained by these interventions, Uganda has a relatively low number of health workers considering emigration (Awases et al., 2003). Furthermore there is no information about health worker motivation and how this has been affected by the retention strategies. However, it would appear that a similar, multi-faceted ap-

proach as used in Uganda could be applied in other settings.

REVISITING MASLOW

It is important to review the evidence and consider whether there is a hierarchy of needs for health workers. Maslow's hierarchy of needs has been used as a model for understanding motivation in business (Benson & Dundis, 2003) and, if this were to be the case for health workers, it would make sense that incentives to improve motivation would target each level in turn, starting at the basic level of fulfilling financial needs and, once this has been achieved, to progress to fulfilling needs of safety, and so on (see Figure 1).

There are arguments for and against the concept of a hierarchy of needs for health workers. It is evident that multiple factors are needed for a health worker to be motivated and clearly financial needs must be met first, particularly for those who work in resource poor settings. Conversely, in high income countries general practitioners are less interested in salaries, but more interested in job quality and opportunities of teaching medical students (Van Ham, Verhoeven, Groenier, Groot-hoff, & De Haan, 2006), thereby illustrating that they have fulfilled the first level of the hierarchy and are now looking to fulfil levels higher up in the sequence.

Issues of safety are a very real concern for many in LMICs where there are poor and often hazardous working conditions. Willis-Shattuck et al. (2008) note that health workers are working in conditions where simple protective measures, such as gloves, are not available to them. This is contributing to the risk of infection from HIV and other communicable diseases. Conversely in high income countries safety was not perceived to be an issue as work environments tend to be well resourced, thus minimizing the risk of hazardous incidents (Spear, 2006). Again, this shows that once safety needs have been met, it is

possible to concentrate on fulfilling higher needs. Furthermore, there is overwhelmingly evidence that belonging and esteem are a major theme and effective human resources management strategies are important to their fulfilment. It could be argued that once financial needs have been met and the worker is in a safe environment it is natural that the next needs which need to be fulfilled are those of belonging and esteem. What this means in terms of motivating health workers through incentives is that an approach would need to be taken to ensure that all needs are being fulfilled sequentially.

However, it can also be argued there are several sets of needs, as outlined in Figure 1, but these do not have to be fulfilled in sequence. A health worker can be motivated while not having satisfied each level in turn. Although financial interests must be met, we have presented evidence that there is a price to pay for using financial incentives and that increasing financial incentives may actually produce de-motivation. They also appear to have an eroding effect on some of the "higher needs" such as esteem and belonging. Furthermore, increasing financial incentives for some cadres or departments and not others may produce de-motivation for those who don't benefit. This is likely to create tension and result in difficulties within the work place environment. Hence, different incentives may not only de-motivate some, i.e., those who don't receive them, but may also produce a general malaise in the workforce.

The power of non-financial incentives used on their own without any financial influence has been demonstrated in Zambia. A study (Furth, 2006), in which one district had a financial incentive and the other had a non-financial incentive in the form of performance awards found that workers in the district with the financial incentive were frustrated and distrustful of the incentive and it had no impact on motivation. However, in the district with the performance awards, that were awarded to teams rather than individuals, workers were motivated and encouraged to do well and felt that they got

better support from their supervisors (Furth, 2006). Nevertheless, the interpretation of this may be questioned. It may be claimed that Zambian staff had their basic needs (namely salary) met first and so were more amenable to higher level pursuits. Nevertheless, given the systemically low levels of salary and remuneration in Zambia and the activation of additional financial rewards in one pilot, this is highly unlikely.

How an incentive is valued will also depend on the profile of the worker, with age, gender, number of dependents, stage of career, and professional background all acting as influential factors (Reid, 2004). There are suggestions that those with families place greater value on income and social factors, such as schools, and young workers place greater value on post-graduate training and career development (Reid, 2004). Additionally people will have their own set of personal values which may influence their decision to work in a rural or urban setting or in private or public practice.

There is limited information regarding how motivational factors are valued by different cadres. A recent study in Malawi (McAuliffe, 2008) has found that mid-level medical cadres are significantly more dissatisfied than nurses. Their main frustration is the lack of continuing education and career progression available to them, whereas nurses were more likely to cite income as the main reason for considering migration. This is consistent with other findings (Willis-Shattuck et al., 2008) which suggest that nurses rank financial rewards higher than other cadres. This is likely to reflect the fact that they are poorly paid and work long hours.

On balance, the required ordering and mix of incentives is more complex than portrayed by Maslow's hierarchy of needs, where a person will not progress from one level of need to the next without having fulfilled that level. Many workers in developing countries are motivated to help their patients despite receiving inadequate financial remuneration.

FUTURE RESEARCH

As it has been shown, there are strategies in place throughout the world to improve motivation and retention. As health professionals are a scarce resource, all countries need to implement plans for effective human resources management, targeting career paths, performance appraisals, clear job descriptions, and ensuring continuous training and education. However, there is still insufficient evidence to reveal the precise interaction between different incentives, context, cadres, and personal needs. Work needs to be done to bridge this gap and thoroughly evaluate the impact of both financial and non-financial incentives in different circumstances. There is limited information as to the extent to which motivational factors are valued differently by different cadres. It would be beneficial to improve understanding of the relative power that each motivational factor has for each cadre. In order to do this, discrete choice experiments (DCE) could be used to evaluate the relative importance of the different factors affecting where health workers choose to work and how productive they will be. In DCEs participants are asked to make a number of choices between packages of attributes, such as salary, work conditions, and career development opportunities, in a hypothetical work environment. While there are only few initiatives in this area at present, the potential is significant to help understand and develop incentive packages to fit each country's health workforce.

CONCLUSION

It is evident that motivational factors are complex and intertwined so that it is not desirable to focus exclusively on one motivational theme at a time, following Maslow's model. Rather, for an effective intervention to improve motivation and retention, it will be necessary to target several themes simultaneously. As health worker needs change,

how incentives are valued will also change and, consequently, interventions to improve motivation must also respond and constantly evolve. This is a key challenge for health system policy makers and human resources managers.

It is essential that health professionals are paid an appropriate wage. Yet financial incentives that may well help with retention do not generally appear to affect motivation and productivity (except when targeted at a specific activity, for instance through a fee-for-service payment). Financial incentives are crucial, but they need to be handled with great care. They can create competition and division, producing not only de-motivation in those cadres who don't receive them, but also tension in the entire workplace through financial competition between winners and losers. They can also promote a culture of personal financial reward over professional ethos. Ethos and esteem are vital motivators for many health professionals and their commitment to help their patients and their communities is often paramount, even in adverse conditions, and for this they should be highly commended. Poorly designed financial packages, that may erode this commitment, may do more harm than good.

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