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Discussion paper 4

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A research review

Evidence and Information for Policy
Department of Organization of Health Services Delivery
World Health Organization
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Incentive and remuneration strategies

Health workforce incentive and remuneration – A research review –

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Introduction

Remuneration strategies in health care are coming under increased scrutiny as organizations in the health sector seek to motivate their staff and improve efficiency and effectiveness. Specific "drivers" include the implementation of health sector reforms, particularly decentralization of management structures and introduction of "professional" management practices, the establishment of performance management frameworks or contracting relationships between purchasers and providers, and the introduction of reward strategies developed in the private sector service industries.

This review examines the research base underpinning the application of remuneration and incentive strategies in health care. It is one of two papers in the OSD (Organization of Health Services Delivery) Series which examine aspects of remuneration and incentives for health workers. A complementary publication (Hicks & Adams, 2000) focuses on country case studies, and on the lessons to be learned from an assessment of policy drivers and constraints when examining the implementation of incentive strategies in health care

This review examines the application of remuneration and incentive strategies in health care. It has the following objectives:

- to develop a typology of the incentive and remuneration strategies used in health care, describing the main characteristics of each approach, and to report on any published evaluation of the implementation of these strategies;
- to assess the impact of contextual factors, such as the organizational climate, cultural and social factors, policy and practice in employee relations, governmental policy and health sector reforms, and the role of trade unions and professional organizations;
- to highlight any evidence of the "globalization" of remuneration and incentive strategies, in terms of cross-national, cross-cultural and cross-sectoral transfer of ideas and practices;
- to recommend areas and issues for future research.

The structure of the review is described below.

Section 1 defines the terms 'remuneration and incentives', and distinguishes different rationales underlying these approaches to reward. Attention is drawn to the importance of the employment relationship in shaping the use of remuneration and incentive practices. A simple typology of remuneration and incentive practices is presented, as well as their main characteristics.

Section 2 considers the purpose and rationale underlying the introduction of remuneration and incentive schemes. This is approached from two perspectives. Firstly, by reviewing the most important theoretical underpinnings of this field; and secondly, by considering the organizational rationales and objectives informing the introduction of these pay schemes. The diverse and sometimes contradictory objectives being pursued by organizations and the problems that can arise are discussed.

While there is interest in the extent to which 'global' approaches to healthcare management can be identified, Section 3 looks at the factors that may work against such models in the remuneration and incentive area. Consideration is given to institutional

variation in healthcare systems, funding differences, and the organization of management. These institutional patterns are seen as critical in shaping the remuneration and incentive choices that can be made in different healthcare systems. This is illustrated by reference to doctors / physicians in different healthcare regimes. We question the extent to which a universalistic or unitary "best practice" model is appropriate and emphasize the importance of contingency factors in shaping remuneration and incentive strategies.

Section 4 reviews and classifies the literature on remuneration and incentives for healthcare staff, differentiating them on the basis of the healthcare system, the evaluation measures used, and the healthcare staff covered. An organizing framework for the systematic analysis of the literature in this area is developed.

Finally, Section 5 identifies the gaps in research and makes recommendations on future activities.

1. Remuneration and incentives: definitions

Analyses of the impact of pay are littered with a range of terms such as reward, compensation, remuneration, incentives, and performance pay. It is therefore important in this review to clarify what we mean by the two terms 'remuneration' and 'incentives'.

Remuneration is traditionally seen as the total income of an individual and may comprise a range of separate payments determined according to different rules. For example, the total remuneration of medical staff may comprise a capitation fee and a fee for services, or it may include a salary and shared financial risk. A remuneration strategy, therefore, is the particular configuration or bundling of payments that go to make up an individual's total income.

In a review of remuneration strategies for medical staff, Kingma (1999) identified four different types of remuneration strategy:

1. *Capitation.* Doctors are allocated a fixed amount of money to service the health needs of their registered patients.
2. *Shared financial risk.* Doctors are subject to financial incentives, which mean that if they save on healthcare delivery costs, they benefit personally; but if they go above the allocated costs, they will lose money. This system is most often deployed for groups of doctors working in managed healthcare organizations in the private sector.
3. *Fee-for-service.* Doctors are paid on the services they provide. In other words, the more services they provide and prescribe, the greater their income.
4. *Salary.* Doctors are paid on a salary scale, which reflects their experience and contribution. There is no financial incentive for the individual to behave in a different way.

An ***incentive*** refers to one particular form of payment which is intended to achieve some specific change in behaviour. Incentives come in a variety of forms, and can be either monetary or non-monetary. Examples of monetary incentives are bonus payments for achieving a target, or an increase in budget levels. Non-monetary incentives could include study leave or enhanced leisure time. A range of potential monetary and non-monetary incentives is shown in Table 1.1.

This review focuses primarily on financial incentives, but we recognize that it is the combination of non-monetary and monetary incentives which may be highly important in creating a reward strategy that meets the needs of individuals as well as the organization. The importance of different rewards to different individuals is brought out in section 2.1.2 (see below) on motivation theories.

However, the importance of combining a wide range of non-monetary and monetary incentives may be important from another perspective. There is a growing awareness across the social science and management disciplines that a systems perspective (i.e. a set of interconnected components that work together) is an important way of viewing the workings of effective organizations. Looking simply at one particular dimension of organizational management may not be as helpful as considering it in terms of its interaction with other elements in the system. It is this embeddedness, and the dense web of interconnections, that may be important in explaining the efficiency and effectiveness of different organizations.

Table 1.1 ***Types of monetary and non-monetary incentives***

Monetary

- Pay
- Other direct financial benefits:
  - Pensions
  - Illness/health/accident/life insurance
  - Clothing/accommodation allowance
  - Travel allowance
  - Child care allowance
- Indirect financial benefits:
  - Subsidized meals/clothing/accommodation
  - Subsidized transport
  - Child care subsidy/crèche provision

Non-monetary

- Holiday/vacation
- Flexible working hours
- Access to/support for training and education
- Sabbatical/study leave
- Planned career breaks
- Occupational health counselling
- Recreational facilities

The implication of this perspective is that the replication of practices becomes more difficult, because effectiveness is shaped by the interaction of incentive pay with a broad range of other policies and practices in the organization (job design, for example). Therefore, each organization has a specific configuration of reward practices that meet its needs. The question then becomes which contingency factors appear to be important in making some choices of remuneration and incentive more effective than others.

This matter is important in the context of this review because, in the following sections, we underscore the importance of institutional and organizational variations in the adoption and effectiveness of remuneration and incentive schemes. In other words, we question the extent to which we can prescribe a specific remuneration or incentive for healthcare workers, regardless of the national and local institutional context.

We turn now to consider the different types and forms of incentives.

1.1 Remuneration and incentives: varieties and applications

In reviewing the use of remuneration and incentives for healthcare staff, it is important to understand the varieties and applications that are possible for healthcare organizations. In this section we consider the wider literature on incentive and remuneration systems.

We can order choices of pay strategy along two main dimensions: individual and collective, input and output (see Table 1.2 below). The first dimension relates to the focus of the incentive, i.e. is it aimed at stimulating changes in an individual employee's behaviour or is it geared at work group or organization-wide changes in performance? The collective dimension needs to be addressed at two levels, because some pay schemes

are designed around organization-wide measures and others around work groups and teams.

The various options available to organizations are given below. The individual-output system tends to link pay to quantifiable measures of the employee's performance (i.e. a commission system based on the sales achieved, or piecework on the number of units produced against standard performance measures). *Individual performance-related pay* has been included within this category because some schemes are objective or output driven. It is distinguished from *merit pay,* the main form of individual-input schemes because this tends to focus more heavily on behavioural traits—such as flexibility, problem-solving and time-keeping—which workers and employees tend to bring with them to the job.

Skills-based pay rewards individuals for the acquisition of skills and not necessarily their deployment. The notion underlying this approach is that it increases the overall level of human capital in the organization and thereby confers higher levels of adaptability and flexibility. Furthermore, it is often seen as part of a high-involvement management approach. For example in the nursing profession, there is growing interest in how skills acquisition (and deployment) can be used to differentiate levels of employee performance, which in turn can structure the career steps in an internal labour market. This model is known as *career ladders* and is most widely practised in the USA(see Buchan & Thompson, 1998).

One of the recurrent problems with the skills-based pay approach is the tendency to generate wage inflation since employees are given an incentive to acquire skills but not the organizational structure within which they can be used. Job design often lags behind the abilities of employees and this can lead to not only paybill costs but also employee dissatisfaction.

To counteract this problem, *competence-based pay* has been introduced in some employing organizations. This is a difficult concept as it straddles the line between an input- and output-based scheme. Competence pay schemes can combine both trait-based and output-based measures to provide a more fully rounded picture of employee performance. These systems are generally integrated with sophisticated appraisal systems and are based on detailed work to develop competency frameworks (an organizationally specific language to describe levels of employee performance). The performance of employees is generally measured using a combination of output-based measures (i.e. what skills did they use and to what effect) with trait-based measures (how did they use their skills).

Competence-based pay schemes reinforce the importance of organization-specific skills and knowledge, and also recognize the tacit basis of knowledge acquisition and use. However, the schemes can also be problematic. Because jobs are distinctive to the organization it can make pay comparability difficult and lead to complications in setting adequate market rates. Although some organisations tend to move away from job evaluation in the process of adopting competence-based pay, many retain job evaluation as a shadow system to make sure their pay systems are equitable and above all defensible. This can be important in countries where equal pay legislation is enforced. There are a variety of *team-based performance pay* schemes. These can be straight bonus type systems where the output of a workgroup or organizational subunit can determine a payment. These payments can be either spread equally or on a pro-rata basis. There is an increasing trend for organizations to use appraisal reviews to generate both individual and team performance payments. This is to overcome 'free-rider' problems wherein individuals may not contribute fully to the team, but can still receive a flat-rate bonus.

Gainsharing is attracting renewed interest at both the organizational and team level. The principles of design are similar at both levels in that they are based on determining a set of controllable costs of units or outputs. A benchmark set of measures is taken at the beginning of the period and progress against cost-saving targets is monitored on a regular basis (weekly, monthly). The savings generated are then split between employees and the organization based on a predetermined formula. These plans were developed in the USA and there are standardized formulas such as the Scanlon plan, Rucker plan and Improshare, which place emphasis on different measures. These plans are generally introduced as part of a wider participative management strategy.

Table 1.2 Performance characteristics and reward practices

Type of performance	Unit of performance		
	Individual	**Team**	**Organization**
Output	Piecework		Gainsharing
	Commission	Team bonus	Profit sharing
	Individual bonuses	Team gainsharing	
	Individual Performance-Related Pay (IPRP)		
Input	Skills-based pay/clinical ladders		Employee share ownership
	Merit pay		
	Competence-based pay		

2. Remuneration and incentives: theories and rationales

In this section we look at the purpose and rationale for introducing remuneration and incentive schemes. This is approached from two perspectives. Firstly, we consider the theoretical underpinnings—why should we expect financial incentives to make a difference to individual behaviour? Secondly, we look at the pressures on healthcare systems and organizations which may explain the orientation towards certain forms of payment and the range of objectives that are being pursued.

2.1 Theoretical perspectives

A number of theories are helpful in understanding the role of incentives in organizations. In this section we describe three different theoretical perspectives:

1. Agency theory
2. Motivation theories
3. The psychological contract

2.1.1. Agency theory

An agency relationship occurs whenever one party (the principal) hires another person (the agent) who possesses specialized knowledge and skills. Proponents of the agency theory assume that each party acts in its own self-interest, and this gives rise to one of the problems of agency theory because the interests of the two parties may not coincide. Where the agent has a high level of autonomy and independence, the risk of 'moral hazard' may increase. This happens when the agents participate in activities that are not in the interest of the principal, such as using work time and organizational resources for personal gain.

Given this agency problem, the principals develop mechanisms to minimize the moral hazard. These might include a system of rules introduced to monitor the behaviour of agents (such as having to provide certain types of information regularly to the principal) or the introduction of incentives. This incentive mechanism is based on rewarding specific outputs that are of interest to the principal (such as profits, or growth in market share), while the first is geared towards supervising the input or behaviour of the agent.

Principals (e.g. healthcare organizations or systems) may prefer to use incentive regimes in certain circumstances. For example, where information on the agents' activities is very limited, or difficult to interpret, or too time-consuming to gather, or where it is virtually impossible to observe and evaluate their activities, it is more likely that the principal will rely on an incentive system that tracks outcomes.

The importance of the agency theory can be seen in relation to developments in health care in the USA. A large-scale study of U.S. senior-level hospital administrators (Lambert & Larcker, 1995), in the context of a change in the reimbursement of Medicare costs, found that both monitoring the activities of administrators and using bonuses were important to improve hospital efficiency and performance. Hospitals that were inefficient at the time of the change,from a retrospective to a prospective method of reimbursement, tended to offer much higher bonuses as a percentage of the base salary.

According to these researchers (Lambert & Larcker, 1995), *"Hospitals with a relative financial position most adversely affected by the regulatory change seem to have used bonus contracts in an attempt to motivate the administrators to improve operating efficiency and performance. The results also show that hospitals were less likely to use bonus-based compensation contracts if the hospitals activities were closely monitored (by the Board of Directors or the State)".*

The moral hazard problem, a key issue in the agency theory, is clearly illustrated in the design and implementation of an incentive systems for doctors(Adinolfi, 1998). This looked at the introduction of performance-related pay for doctors in the Italian healthcare system and found that many doctors acted in a self-interested way under such systems. After the creation of the Italian National Health Service, which abolished private health insurance bodies, the practice of 'revenue-sharing'—whereby doctors received part of their income from a share in part of the revenues derived from health insurance bodies and paying patients—was abolished. This system generated problems in that doctors were given an incentive to use outpatient services as they received part of the revenue from this service.

With the introduction of the Italian NHS, the government was faced with the prospect of declining productivity of hospital doctors and a potential shift towards the use of private health facilities. In response, it introduced a new incentive scheme which was based on a piecework logic and rewarded medical staff for the provision of outpatient services beyond normal contracted hours. The monies dedicated to this scheme equated with the previous revenue-sharing scheme in operation.

The scheme failed in practice and one interesting outcome was that doctors who were paid a higher rate for outpatient work in their 'plus-hours' (i.e. hours beyond the contract) tended to concentrate their outpatient work in these plus hours. This also led to an artificial growth in outpatient services.

Analysing the failure of the incentive scheme, Adinolfi (1998) concluded (p. 213): *"... the design of the two incentive schemes was the result of a compromise between two contrasting pressures—i.e. to satisfy pay claims at a time when wages for health employees had fallen significantly below those of equivalent jobs in the private sector; to safeguard vested interests through the conservation of acquired rights in a transition from the old to the new health system; to reduce expenditure on contracted clinical services; and to enhance the productivity and efficiency of NHS staff. The result was a hybrid regulation which contained several contradictory elements."*

Most research in the agency tradition has looked at senior managers in private sector companies in the context of corporate governance, but the framework has had some limited application to the healthcare sector (e.g. Lambert & Larcker, 1995). The agency theory has been criticized because it fails to take account of the difficulty in setting meaningful measures for employees with complex and intangible roles. Furthermore, organizational behaviourists query its inability to deal with the political and behavioural aspects in setting and monitoring performance. Others have warned of the dangers associated with concentrating managerial attention on a limited range of factors, which might lead them to neglect important areas of organizational effectiveness.

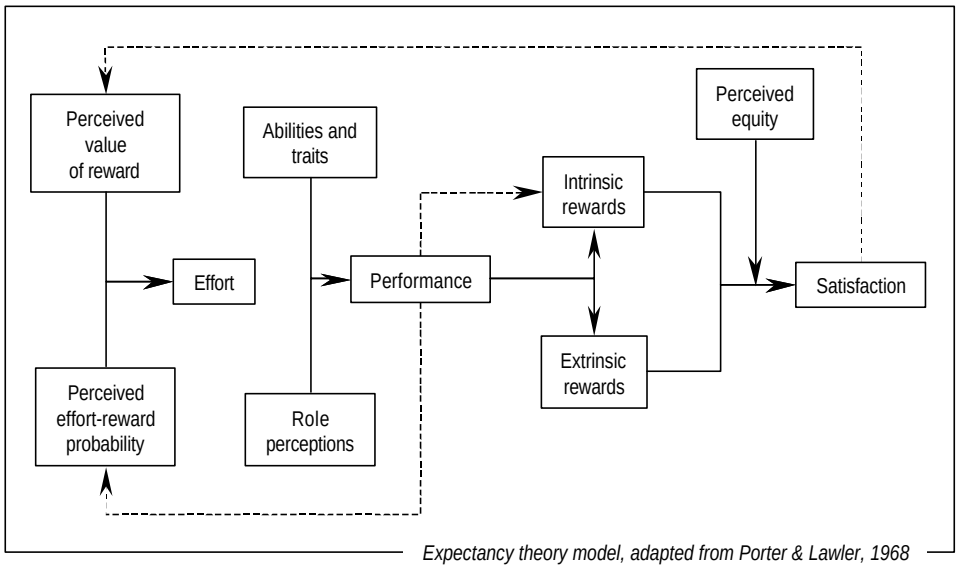
2.1.2. Motivation theories

Motivation theories can be classified into two distinct types—'content' and 'process' theories. *Content theories*, as the phrase suggests, are interested in the 'what' of motivation. They seek to identify the rewards that are most important to individuals, and the best known work in this area is Maslow's hierarchy of needs. This theory suggests that human beings have an ordered hierarchy of needs, ranging from basic physiological needs (food, water, shelter) up to what he termed 'self-actualization' which relates to personal fulfilment through work. This theory has been criticized for its strong normative bias and there is practical evidence that individuals do not see their needs in a hierarchical and sequential way. Indeed, individuals can neglect basic needs (such as safety) and be motivated by higher order needs (such as esteem).

Process theories are concerned more with the 'how' of motivation. *Expectancy theory* is the most widely accepted and utilized theoretical framework from this perspective and is based on three premises—expectancy, instrumentality, and valence. The first premise, 'expectancy', refers to the employees' perception that a certain level of effort will lead to a certain level of performance. The second, 'instrumentality', is based on the belief that the level of performance achieved will in turn lead to required outcomes (i.e. rewards). Finally, 'valence' refers to the perceived attractiveness of the rewards. In other words, if the rewards are of low value to the individual they are unlikely to encourage the individual to exert more effort.

The expectancy theory is the most widely used framework to understand the design and outcomes of performance pay systems (see Fig. 2.1). The theory rests on an economic model of human behaviour and assumes that individuals have preferences regarding the rewards they will receive in exchange for their investment of time and resources. They use these preferences to select amongst an array of possible behaviours. The theory recognizes the differences between individuals in the valence of various rewards and helps explain why some workers are more highly motivated when certain rewards are provided and others are not.

Figure 2.1 Expectancy theory



Expectancy theory model, adapted from Porter & Lawler, 1968

There are other process theories underlining the importance of goal-setting in stimulating motivation. For example, the *goal theory* suggests that the joint setting of objectives, feedback and involvement, which are all part of a managerial approach, can improve motivation. The theory places particular emphasis on goal-setting behaviour and stipulates that the goals need to be clear, specific and achievable if they are to motivate.

Another perspective is the *reinforcement theory*, which suggests that behaviour can be modified if individuals receive the reward at the time they exhibit the desired behaviours. An important assumption in this theory is that rewards can become an acquired right if they are delivered on a regular basis.

The *equity theory* posits that because employees in organizations expect to be rewarded like other employees for similar levels of input, the distribution of rewards becomes important. It is the perceived equity of the effort-reward balance that is important in determining the employees' level of motivation. If employees feel that the rewards are not equitable, they will take action by, for example, reducing effort, absenteeism, or minimal involvement in certain activities (meetings, social events, etc.). This theory implies that it is not necessarily the type or level of reward that is important, but the extent to which the employee perceives this as equitable.

Adinolfi (1998) conducted a detailed review of the workings of incentive and performance pay over a period of two years in ten hospitals in Italy, drawing upon the expectancy and equity theories. He concluded that many of the problems in the operation of the pay schemes were due to 'deficiencies in PRP [performance-related pay] design and implementation' (in other words, the 'process' aspects).

In nine out of the ten hospitals, the results were broadly negative; in the one positive case, the success could be explained by managerial behaviour. In this hospital, considerable attention was given to integrating the performance pay scheme with the prevailing culture and work processes. This focus on implementation led to changes in information systems, improved communication, greater involvement of staff in the objective-setting process, and higher investment in training.

Interestingly, the hospital where PRP was most effective was also able to diffuse resistance to the belief that economic rationales are not consistent with the professional ethos of doctors. Through an education process it was demonstrated to the doctors that resources were limited and that improved clinical outcomes depended on the best use of these resources (i.e. based on the decisions of individual doctors). The interdependence of resource allocation with these individual decisions was established and doctors had a broader view within which clinical decisions could be made.

In the majority of hospitals, however, the PRP scheme led to many unintended consequences and behaviours. In particular, it led to disharmony amongst employees because of the differential treatment of those providing outpatient care who received performance pay enhancements and those who did not, the manipulation of data to improve PRP outcomes, and gamesmanship.

In general, the use of incentive payments for doctors and other health workers appears to be based on two broad objectives which may be in conflict. The first objective is the desire to improve clinical effectiveness by influencing clinical behaviour—for example, influencing short term prescribing activity (e.g. providing payments for vaccination programmes, or the ordering of health tests). Such payments will cease once a target has

been reached (e.g. when 80% of children aged 4–6 years have received vaccinations). This type of payment is output-based, with simple objectives and specified time horizons.

The second type of objective is to promote budget-based health care. The driving goal here is to reduce overall healthcare expenditures. This approach identifies the behaviour of doctors or other health workers as a key cause of increased expenditure, so that the main goal is to alter their prescribing and referral activities. These models tend to be more complex because the behaviour of doctors varies widely and is shaped by a range of factors (patient mix, level of continuing professional development, size of the practice, position in the health sector, etc.). The diverse forces at work make it difficult to design schemes that can take into account all such complexities and be consistent.

Reviewing the operation of a wide range of performance pay schemes, Gomez Mejia (1992) concluded that in the majority of circumstances it is best to ensure that there is a loose coupling of pay and performance. In the case of specific outputs such as tests or vaccination programmes where the goals are easily defined and monitored, it may be practical to forge a tight link between pay and performance. However, in many other circumstances such a tight link may lead to considerable problems. For example, a tight link may lead to single-minded behaviour on the part of employees and cause them to neglect other valuable aspects of their role. This may happen in schemes to improve the coverage of specific clinical interventions, as a result of which doctors may focus on a particular clinical area at the expense of others.

Research has revealed a wide range of other potential problems connected with the application of performance pay schemes, such as:

- Lack of control over performance, e.g. other employees may exert considerable influence over the ability of individual employees to reach their goals.
- Measurement problems, e.g. rating errors, ambiguous attributions of causality, political manipulation of measurement data, etc.
- Resistance to changes in payment systems because a specific approach becomes embedded and accepted within the workplace social system. Too many people may have a vested interest in maintaining the status quo even though the payment system is no longer doing the job it was meant to do.
- Valued intrinsic motivators may be undermined by an over-emphasis on extrinsic rewards and lead to even poorer levels of performance.

The risk in forging a tight link between pay and performance is that in high-level jobs with wide powers of discretion many important attributes, which are hard to specify because of their intangible nature, may get “lost” or omitted in determining performance.

2.1.3. Psychological contract theory: redefining the employment relationship

More recently, the field of work psychology and organizational behaviour has studied motivation in the context of the changing nature of the employment relationship, spurred on by the scale and pace of technical changes. The changing nature of the employment relationship under technological, economic and social pressures has seen a growing interest in the so-called *psychological contract* at work. The psychological contract refers to

"the understandings people have, whether written or unwritten, regarding the commitments made between themselves and their organisations" (Rousseau, 1995).

From this perspective, the changing nature of the employment relationship is an important contextual feature shaping individual responses to the rewards offered by organizations. It may also influence the overall levels of motivation and commitment of employees. Research has identified the emergence of two distinct employment relationships—the *transactional* and the *relational*. The former is based on a clear statement of the expectations of both parties to the employment relationship. The exact requirements may be specified in a written contract with a finite end. An example of a pure transactional relationship would be a fixed-term temporary employment contract to provide specified services (e.g. secretarial support). The more common *relational* form of employment is based on a long-term relationship between the employer and employee, where the organization's requirements of the employee are more open-ended and continually negotiated.

Researchers active in this field argue that there has been a shift in the content and the nature of the psychological contract on the relational-transactional continuum. They argue that there is greater desire for the employer to move to a transactional model because of the environmental context of heightened uncertainty in which organizations must function. It is argued that this will provide greater flexibility and make more explicit the contribution of individual workers to the organization's performance. There is also evidence that younger employees in some countries and cultures (the so-called "Generation-X") have a much more transactional view of the employment relationship and do not value loyalty to organizations to the same extent as did earlier generations.

In practice, these conflicting behavioural models of organizations are likely to give rise to quite distinct sets of employment policies and practices, particularly in the area of rewards. A relational model is more likely to see the use of long-term incentives and deferred payments in order to align the interests of the individual with the long-term performance of the organization. It is also more likely to have structured internal labour markets with career ladders, promotion criteria, and "felt-fair" transparent processes for determining progression. The balance between the base salary and variably determined pay ("pay at risk") is likely to be low to moderate, with an emphasis on job security as a reward. There may also be heavy investment in training and development of workers.

In the transactional model, the balance of rewards to risk will be much more heavily weighted, with a high level of remuneration in the form of incentives and performance payments. These payments are likely to be short term in nature and linked to specific short-term goals and objectives. Job security will not be emphasized, and career horizons may be limited. There is likely to be a proliferation of short-term and temporary employment contracts.

It has been argued that the psychological contract in organizations (particularly those in the public sector) can be severely damaged by the introduction of new reward systems. Given that the studies looking at the content of the psychological contract have not moved much beyond the traditional conceptualization of intrinsic and extrinsic elements, the shift in the organization's balancing of these elements can have quite a serious impact on the morale and motivation of employees.

In a study of the introduction of performance-related pay into the federal government in the USA (Perry, 1986), researchers found that the increased emphasis on extrinsic monetary incentives had served to undermine the individual worker's commitment to the

organization. This in turn led to greater inefficiencies as a more contractual employment model proved costly and inflexible. A shift in value systems from normative (i.e. based on public service ethos) to instrumentalist (based on monetary benefits) was seen by the authors as damaging to the employment relationship.

A study in the United Kingdom after the introduction of performance-related pay into a government department (Marsden, 1993; Marsden & French, 1998) found that motivation had declined over the period of its operation. The study, using the expectancy theory to explore the effectiveness of the scheme, suggests that not only do such schemes lead to dissatisfaction but they can also undermine the nature of the psychological contract for public service employees.

A recent study, which compared and contrasted the motivation of private and public sector managers (Public Management Foundation, 1999), found that there were distinct differences between the two, and that it would be wrong to think that private sector managerial practices can easily be transferred to public sector organizations. The study emphasized the specific intrinsic motivators clustered around the notion of 'public service', which differed from the norms of self-interest more prevalent among private-sector managers.

It can be seen that a number of useful theoretical lenses can be used to look at the use of remuneration and incentives by organizations for their employees. These perspectives shed light on the different dimensions and, as such, need to be considered in their entirety (in the absence of one unifying theory) when considering the design, implementation and evaluation of new schemes for remuneration and incentives. From a practitioner's perspective, the expectancy theory is probably the most tested and most reliable framework to use when designing, implementing and evaluating such schemes.

2.2 Remuneration and incentives: organizational strategies

The notion that an organization would see its reward policies and practices as a strategic tool to achieve specific goals is a relatively new way of looking at pay in organizations. The idea of 'strategic pay' is based on the idea that it is possible to identify and implement an appropriate set of reward practices that support organizational objectives.

Thus, for example, an organization seeking to encourage greater flexibility in the range of skills in its workforce might introduce a skills-based pay system in the hope that it would encourage employees to develop a wider set of skills. Central to the notion of strategic pay are the ideas of contingency and fit. Organizations need to be clear about the objectives they hope to achieve and also be aware of the organizational factors that may shape the reward strategies.

More recently, the idea of strategic pay has also been seen as advocating specific forms or types of pay systems. Typically, these might include merit pay, competence pay, and team-based pay. This perspective, known as the 'new pay', argues that considerable organizational benefit can accrue from implementing these new pay forms. While this perspective acknowledges the importance of contingency and fit, the emphasis is more strongly on the effectiveness of certain pay practices.

In the context of international healthcare systems, there is the added problem of what we mean by the 'organization'. It could be the healthcare sector as a whole where there is a

dominant public sector system, and in such cases it raises issues about the extent to which sector-wider strategies can be effective, given the different nature and objectives of subunits (e.g districts or hospitals). If by the 'organization' we mean a subunit of a healthcare system, the issue is the extent to which knowledge, skills, abilities, and resources are available to implement a strategic pay approach both at system and sub-unit levels.

In the rest of this section we consider a range of these issues and their implications for incentive and remuneration strategies.

Summarized below and in Table 2.1 are a number of reasons why healthcare organizations in many countries are reviewing current remuneration systems or implementing new approaches for the remuneration of healthcare workers (see also Hicks & Adams, 2000):

- As a direct result of the stimulus given by health sector reforms to improve cost effectiveness; since labour costs typically account for 70% or more of the recurrent costs in health systems, there is a tendency for labour costs to be a major focus of the reform process.
- As an element in developing a systematic approach to performance management at the organizational or national level; this can include the introduction of a "purchaser / provider" or contractual relationship in public sector health systems.
- As a mechanism for improving the recruitment, retention, or geographic distribution of healthcare workers.
- As a method for stimulating increased productivity and / or quality improvements at the level of the individual or the organization.
- As an element in the approach to change the management in an organization, where the objective is to achieve restructuring, "re-engineering" and other changes in culture.
- As a mechanism for increasing the "flexibility" of the workforce, in terms of working patterns, working hours and / or work behaviour.
- To facilitate the integration of health workers into multidisciplinary teams and encourage teamworking.
- To encourage health workers to continuously update their skills, and acquire new competences ("lifelong learning").

Table 2.1 ***Reasons for implementing remuneration and incentive strategies***

• Cost-containment (health sector reform)
• Performance management
• Staff recruitment/retention/geographic distribution
• Productivity/quality improvement
• Restructuring/ Culture change
• Workforce "flexibility"
• Teamworking
• Lifelong learning

It is evident from the above list, which is by no means exhaustive, that there are many overlapping rationales for developing or changing a remuneration and incentive strategy. One key message from this review is that for a remuneration and incentive strategy to be **effective**, it must be congruent with and based on the overall strategy of the organization. Another is that the strategy has to be **appropriate** to the specific objectives of the organization and the context in which it operates.

"Getting it right", in terms of remuneration and incentives, will facilitate the achievement and maintenance of the organization's objectives. Getting it wrong will, in the worse case scenario, prevent the attainment of these objectives.

The latter point is of particular significance to the health sector in the many countries now undergoing health sector changes, reforms or reorganization (see the country case studies highlighted by Hicks & Adams, 2000). These changes can have many intended or unintended effects on the healthcare workforce (ILO, 1998). The use of appropriate remuneration strategies may facilitate the achievement of positive changes during health sector reforms and may mitigate the effect of any changes perceived by workers to be negative.

Given the importance of contingency factors in shaping policy choices, we devote the next section to discuss these issues.

3. Remuneration and incentives: contingency factors

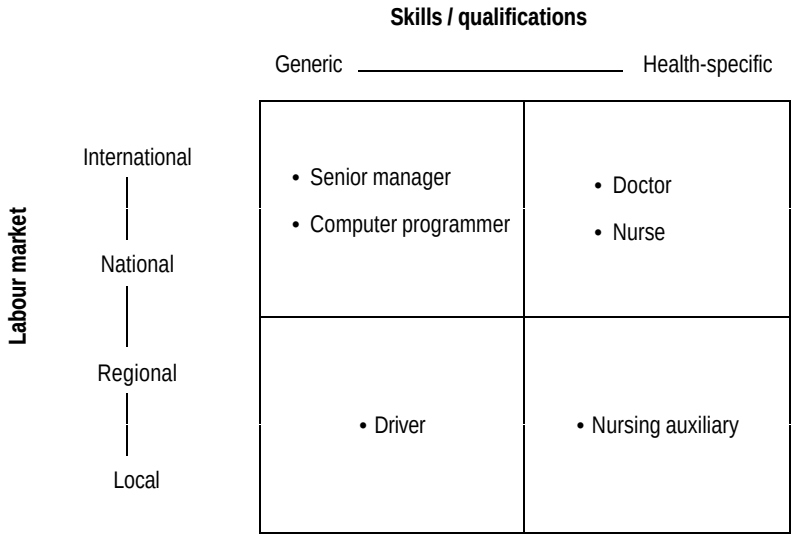
A range of factors may influence the adoption and diffusion, as well as the effectiveness of remuneration and incentive systems. It is important to understand these in the context of globalization of health care and the proclivity to think in terms of universal policies and practices which can be implemented in a range of different contexts. In this section we consider several contingencies, which may be important in shaping the type of remuneration and incentive programmes that can be adopted.

3.1 Occupational factors

The healthcare workforce is complex, comprised of diverse groups, occupations and professions. The levels of skills and qualifications vary markedly, as does their labour market mobility—both in terms of sector and geography. In considering the effectiveness and appropriateness of remuneration and incentive strategies it is important to recognize this complexity and diversity. What "works", in terms of incentive and remuneration strategies which achieve the desired objectives, may differ between groups and professions.

The Human Resources Policy matrix (see Fig. 3.1) provides guidance on considering and identifying effective and appropriate policy interactions. Two key dimensions have to be considered—the extent to which the workers within a profession or occupation have health sector specific skills and qualifications, and the extent to which the profession or occupation functions in local, regional, national, or international labour markets.

Fig. 3.1 ***Human Resources Policy matrix***



Source: *Buchan*

Identification of appropriate human resources (HR) policy interventions has to take account of the extent to which a health worker occupation has transferable skills, and the level of geographical mobility of the occupation. While general HR policy interventions can be applied across all four quadrants of the matrix, it is often the case that specific policy interventions have to be targeted at specific groups. The appropriate interventions for a nationally (or internationally) mobile, health-specific occupation, such as doctors,

will often be significantly different from those that will be effective in a "generic" occupation, such as computer programmers. The health sector has to compete with many other employing organizations and sectors to recruit, retain, and motivate these generic workers.

The case of doctors is illustrative in this context because of the wide variations in labour supply across healthcare systems. In some countries (e.g. Italy, Germany, and some Latin American countries) there is a reported oversupply, whereas in others an insufficient number of doctors are being trained, which can lead to a large inflow of internationally trained staff.

The variations in the supply of doctors lead to quite different patient-doctor ratios across healthcare systems and, as a result, a differing cost base. These variations in labour market circumstances may also influence the behaviour of doctors. In countries where there is an oversupply of doctors and a payment system linked to services and referrals, the increased competition between doctors in an overheated market may push up the supply of medical services leading to a strong growth in health expenditure. In countries with a less competitive labour market, healthcare dynamics are likely to be quite different, and the relative power of medical practitioners may be an important factor shaping the introduction of policy reforms, such as new remuneration and incentive systems.

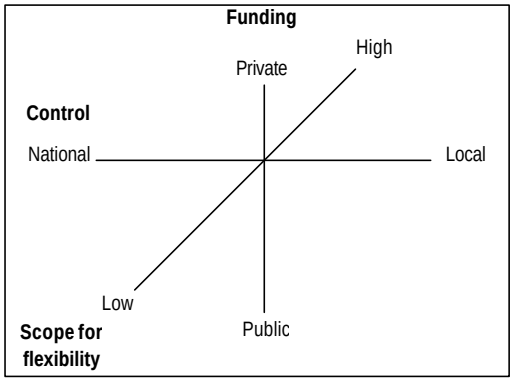
Generally, the more that an occupation or group is located towards the upper right quadrant of the matrix in Fig. 3.1, the more likely that the health sector will have to develop specific human resources policy interventions, rather than apply general HR approaches that are utilized in other sectors. As regards remuneration and incentive strategies, what is effective for doctors may not work for drivers, and vice versa.

3.2 Funding regimes and control mechanisms

A second major determinant of the effectiveness and appropriateness of incentive and remuneration schemes will be the organizational context. Two significant dimensions are the extent of local control over decisions on human resource policy and practice, and whether or not the employing organization is part of a public sector health system and subject to external regulatory and / or fiscal constraints.

Fig. 3.2 illustrates the control and funding dimensions, and in so doing highlights the extent to which the scope for flexibility in the use of incentives and remuneration may vary between organizations and healthcare systems.

Fig. 3.2 ***Funding mechanisms and locus of HR management control in healthcare organizations***



The significance of Fig. 3.2, in relation to the development of effective and appropriate remuneration and incentive strategies, is that the organizational context can play a major role in facilitating or constraining successful implementation. The incentive and remuneration strategy must align appropriately with existing fiscal and funding arrangements, and must be within the management's span of control if it is to be effective. Span of control will be dependent on management capacity, the extent to which decision-making and resource allocation have been decentralized (the degree of "flexibility"), the power relationship between different players (management, government, trade unions, etc.), and the regulatory environment.

3.3 Collective bargaining and pay determination

With the rise in healthcare costs, many countries have sought to contain the growth in their health sector paybills through reforms in the pay determination practices. Two main trends can be discerned. Firstly, there has been a drive to decentralize pay determination. This has happened either as part of a process of devolving authority within the health system in order to make pay more responsive to local conditions, or by "delinking" employment policy in the health system from other parts of the public sector or civil service. Secondly, in some countries there have been initiatives to reward performance at an organizational level (e.g. healthcare organizations), at the team level (i.e. groups of healthcare workers), or at the individual level (i.e. through merit pay).

However, pay determination and job classification systems vary immensely between countries, as do the organizational contexts. In some countries, there can be considerable diversity in labour market conditions (e.g. in the USA); in others, financial constraints have been particularly severe as a result of government fiscal policy (e.g. in New Zealand in the late 1990's), or because of health sector reforms driven by cost-containment.

In many countries, most health care is delivered through public sector systems. The pay determination systems for public sector employees also vary widely between countries. In a review of these systems, Marsden (1993) classified four main pay determination regimes:

- Unilateral employer regulation (e.g. in Turkey and the 'Beamte' in Germany)
- Free collective bargaining (e.g. in Sweden and Ireland)
- Independent pay review (e.g. in Japan and nursing staff and teachers in the U.K.)
- Fixed rule employer regulation (e.g. federal employees in the USA).

In some countries, more than one pay determination system may exist for staff in the same public sector organization. For example, in Germany, while the *Beamte's* (doctors and specialist medical staff) pay is regulated unilaterally and there is a no-strike clause in their employment contracts, other health workers (the *Angestellte*) have their pay set through collective bargaining.

These different institutional arrangements are important in shaping the scope for reform of pay practices at national and local levels. Also important is the strength of employee representation. Levels of unionization vary widely between healthcare systems—the Scandinavian countries and some Latin American countries have almost universal coverage, while others such as the USA have quite limited coverage, and some countries have no union representation.

This means that some healthcare systems can tolerate high levels of experimentation and innovation in reward practices (e.g. in the USA), while in others the cost of coordination among key players means that innovation is slow and uneven. In systems like those in Germany and Sweden, the corporatist collective bargaining framework is designed to achieve consensus-building, with the result that it takes time to negotiate, agree and implement new 'rules', which once agreed will probably be universally applied. Once embedded, new rules can take a long time to change. The institutional differences across healthcare systems can therefore play an important part in determining the type of remuneration and incentive scheme that can be introduced.

3.4 Management ideologies

Much of the recent focus on introducing new remuneration and incentive schemes to public sector health systems can be characterized as the "importing" of private sector management practices in human resources management, sometimes termed "new public management". It can also, to some extent, be characterized as the "export" of management theories from influential sources in some countries like the USA and their application in other countries. International management consultants or funding agencies are often the route by which these ideas are transferred and applied across national boundaries.

A question must be asked about the cultural, social, economic and political appropriateness of such an attempted implementation. An incentive scheme which is effective and appropriate to an organization located in the top right quadrant of Fig. 3.2 (e.g. a private sector hospital in the USA) may not be relevant or effective in an organization in the bottom left quadrant (e.g. a primary care clinic in Mexico). Many public sector health systems are undergoing reform with the objective of shifting the span of control from the national to local level and hence raising the scope for flexibility in local management. However, a question remains about the extent to which the proposed remuneration and incentive schemes can have universal applicability, given the variations between countries and organizational contexts.

3.5 Summary

The nature and types of healthcare institutions, professional bodies, and collective bargaining systems, as well as the historical development of the health professions in a country may all be important in shaping both the remuneration practices and the incentives used in different healthcare systems. Fundamental differences between individual healthcare systems constrain the choices open to key actors and, in particular, the reform strategies adopted by each country. Given the specific focus on remuneration and incentives in this review, it is important to note that the pay determination arrangements in a healthcare system can set limitations on the shape and direction of organizational and sector reforms.

In this section we have reviewed the contextual factors that are important when considering the universal application of specific forms of remuneration and incentive system. It is clear that a wide range of institutional pressures will mould and determine the adoption and diffusion of such reward innovations and may indeed lead to a number of unintended consequences. Institutional factors can therefore play a very important role in determining remuneration and incentive policies.

4. Reviewing the literature

4.1 Introduction

A literature review was conducted, with the main focus on incentives for health workers, based on a literature search of English language publications, using online, library and CD-ROM facilities. The review covered the following databases: SSCI (Social Science Citation Index), BIDS, CINAHL, PsycLit, FirstSearch, Medline, and HMIC (Health Management Information Consortium).

Key words used were: financial incentives, economic incentives, remuneration strategy, performance related pay, incentive pay, doctors, nurses, midwives, physicians, health workers, health employees.

The review covered articles published since 1989, and focused primarily on health sector staff—doctors, nurses, and other health workers.

A total of 352 articles and papers were identified, but prior to reviewing the key messages from this literature, the following limitations must be acknowledged:

- The review focused only on English language publications.
- While the review focused on publications, some unpublished or 'grey' literature was identified; however, many more unpublished (but publicly available) reports and official publications are likely to be relevant to the scope of this paper.
- Within the time scale and resources available, many of the identified publications could be assessed only on the basis of the online information; this often provides only a short abstract of the full publication. As the review was based in the United Kingdom, UK publications were more likely to be identified, and to have been subject to comprehensive review.
- Cross-checking with the results of other recent review publications (e.g. De Maeseneer et al., 1999) has revealed that each of these reviews listed some papers and articles not identified in other reviews. The issue of incentives and remuneration is one which cuts across many other aspects of human resources in health care (e.g. motivation, recruitment, retention, finance, appraisal). This suggests that the extent and choice of selection of key words for the search can lead to significant variations in the lists of references.

This review had two main objectives. Firstly, to provide an overview of the pattern of available published evidence on the evaluation of incentives for health workers. The limitations noted above mean that the current review, and other recent review publications in this area, must be regarded as incomplete. Secondly, to assist in developing a draft typology-based template, which could be used in the future for systematic analysis of publicly available documents (including grey literature) on incentives for health workers.

4.2 Overview of the findings

The first point to note in relation to the review is that there is likely to be publication bias; papers or articles reporting the successful implementation of incentives are more likely to be published than those which report a failure. A second source of bias is the likelihood of over-representation of English language and UK literature, given the location of the review.

It became apparent in reviewing the literature that many of the publications fell short of providing a full description and evaluation of the effects of the incentives being used. Many articles were short descriptions with no evaluation or context analysis, and therefore of negligible value to our review. Some papers reported on unintended ("perverse") incentives, while others described the intended use of incentives but not their implementation. Many reported a broad range of health-policy-related economic and financial incentives, only one component of which was incentives for health personnel.

An initial screening was carried out to identify which of the 352 papers were of direct relevance to this review. A typology of four categories was used in the screening process (Table 4.1).

Table 4.1 ***Screening typology in four categories***

1.	Did the paper report on direct implementation and/or evaluation of incentives related to health workers' behaviour and performance?
2.	Did the paper report on the implementation and evaluation of incentives related to changing or reconfiguring service provision, including staffing?
3.	Did the paper describe one or more proposed direct interventions in relation to incentives for health workers, but without giving details of any subsequent implementation or evaluation?
4.	Did the paper describe or examine health policy, where incentive was only an indirect or contextual factor?

A total of 150 papers passed this screening process. Table 4.2 shows their distribution in the four types of category.

Table 4.2 ***Distribution of publications, by type of category***

Type	No.	%
1. Implementation/evaluation: Workers' performance	62	41.3
2. Implementation/evaluation: Service provision	19	12.7
3. Proposed intervention	30	20.0
4. Indirect context	39	26.0
Total	150	100

A total of 62 papers were identified which were primarily about the implementation and/or evaluation of specified incentives for health workers, and 19 on service provision. These are listed separately in Appendix 1.

Table 4.3 below provides an overview of the 150 papers, by country of origin. As can be seen, close to half (44%) were from the United Kingdom, and a quarter (24.6%) from the USA. This finding highlights the extent to which the focus on published or publicly "obtainable" reports in the English language was likely to bias the coverage of the review. It is the opinion of the authors of this review that a broader-based attempt to identify grey literature would provide a more balanced source database.

Table 4.3 ***Distribution of publications, by country or continent***

Country	No.	%
USA	37	24.7
United Kingdom	66	44.0
Canada	4	2.7
Australia & New Zealand	4	2.7
Africa	3	2.0
South America / Caribbean	3	2.0
Europe	18	12.0
South-East Asia / China	4	2.7
Pakistan	1	0.7
Multiple	7	4.7
Not specified	3	2.0
Total	150	100

The papers were also classified by the category of health workers described in the publication.

Table 4.4 ***Distribution of publications, by category of workers***

Category	No.	% of total
Medical staff	77	51.7
Nursing staff	8	5.4
Other health professionals	2	0.7
Multi-professional	9	6
Management	20	13.4
Management and others	1	0.7
All groups	20	13.4
Unspecified	13	8.7
Total	150	100

As shown in Table 4.4, the majority of publications focused on incentives relating to medical staff. In particular, general practitioners in the United Kingdom and Scandinavia have been the focus of various attempts to use incentives to structure changes in their

behaviour, in relation to prescribing patterns for example. The other main focus was on US-based hospital physicians, with many studies describing attempts to change the patterns of clinical intervention by the introduction of incentives.

With a few notable exceptions (e.g. Godson et al., 1999), the papers reported on single cases or single interventions.

4.3 Lessons from the initial review

Whilst acknowledging the incomplete nature of the information base, our review of papers identified in categories 1 and 2 (i.e. workers performance / service provision) gives some indication of the limited evidence base currently available on the impact of incentives on the behaviour of health workers and / or associated service provision. Except for the body of work identified relating to the behaviour of medical staff, particularly physicians in the USA and general practitioners in other countries, there is little evidence from the present review on which to base an assessment of the likely impact of incentive interventions.

Many of the reported studies lack a complete description of the types of incentives, and few provide a robust method of evaluation. There is little evidence that methods of evaluation have been replicated.

4.4 The way forward: a template for evaluation

There are two main prerequisites for developing a more comprehensive body of evidence on the impact of incentives: 1) to identify more evaluative research or undertake more such research, and 2) to replicate methodologies in order to provide greater scope for comparison. To meet the first prerequisite, more resources and effort are required to acquire grey literature and to identify potential case study 'targets' for evaluation. To meet the second, it is necessary to develop a common template which will enable cross-comparisons and aggregation of relevant information on the effect of incentives on health workers.

An outline template developed on the basis of the lessons of this review is shown below *(Template 1)*. The aim of the template is to provide a standard instrument for collating information on the evaluation of the use of incentives.

Template 1: Possible template for reviewing studies on incentives of health workers

ID:	
Author1:	
Author2:	
Author3:	
Title:	
Source:	
Year:	**Volume:** **Part:** **Pages:**
Study type:	
Incentive:	
country:	
Staff group(s):	
Location:	
Specialty:	
Setting:	
Aim:	
Design:	
Size:	
Staff numbers:	
Timeframe:	
Outcome:	
Tool	
Sample size:	
Cost measure(s):	
Critique:	
Description:	
Conclusion/1:	
Conclusion/2:	

5. Conclusions and recommendations

This document reviews the incentive and remuneration strategies that have been directed towards health workers. Section 1 outlines a typology of rewards and incentives, while Section 2 considers the theoretical underpinnings of reward and incentive strategies. Section 3 examines the impact of variations in the institutional and sector context. Finally, the current literature is reviewed in Section 4.

In Section 2 are highlighted the overlapping rationales for developing or changing a remuneration and incentive strategy. One key message is that for a remuneration and incentive strategy to be effective, it must be congruent with, and based on, the overall strategy of the organization. Another is that the strategy has to be appropriate to the specific objectives of the organization and the context in which it operates. "Getting it right", in terms of remuneration and incentives, will facilitate the achievement and maintenance of the objectives of the organization. Getting it wrong will, in the worst case scenario, prevent the attainment of these objectives.

The latter point is of particular significance to the health sector in the many countries going through health sector change, reform or reorganization. These changes can have many intended or unintended effects on the healthcare workforce. The use of appropriate remuneration strategies may facilitate the achievement of a positive change during health sector reforms and may mitigate the effect of any changes perceived by workers to be negative.

Section 3 emphasizes the point that the nature and type of healthcare institutions, professional bodies, and collective bargaining systems may all be important in shaping both remuneration practices and incentives in different healthcare systems. The different logic, culture and structure of different healthcare systems and organisations constrains the choices open to key actors and, in particular, the reform strategies that can be adopted. Given the specific focus on remuneration and incentives in this review, it is important to note that the pay determination arrangements in a healthcare system can set limitations on the shape and direction of organizational and sector reforms. Institutional pressures will mould and shape the adoption and diffusion of such reward innovations, and may indeed lead to a number of unintended consequences. Institutional factors can play a very important role in determining remuneration and incentive policies.

Section 4 examines the limited evidence base for the impact of incentives on health worker behaviour and/or associated service provision. Except for the body of work on the behaviour of medical staff, particularly physicians in the USA and general practitioners in other countries, little published evidence appears to be available on which to base an assessment of the likely impact of incentive interventions.

Many of the reported studies lack a complete description of the types of incentives, and few provide a robust method of evaluation. There is little evidence of replication of methods of evaluation.

One of the main findings of this review is that little reliable evidence is available on the impact and effect of incentive and reward strategies in health care. Organizations, health professionals and managers looking for an evidence base to assist in informing their decisions on "what works" and what does not work, in relation to incentives, will find

little assistance. Much of the available information is of limited utility, as it is more descriptive than evaluative.

In order to develop a more comprehensive body of evidence on the impact of incentives, this review makes two major recommendations: 1) to identify more evaluative research or undertake more such research, and 2) to replicate methodologies in order to provide greater scope for comparison. To meet the first objective, more resources and effort are required to acquire grey literature and identify potential case study 'targets' for evaluation. These target sites will be organizations or sectors that are currently utilizing one or more types of incentives in the employment contract with health sector workers.

To meet the second objective, it is necessary to develop a common template which will enable comparisons and aggregation of relevant information on the effect of incentives on health workers, thereby building up a data base. Section 4 provides a draft template. The use of incentives is a potentially powerful tool in the employment contract and psychological contract between health workers and healthcare provider organizations. The present review has clearly shown that this area is currently under-researched in relation to its potential significance for policy and practice. Given that a major emphasis for research in human resources in health care in many countries is to identify and implement innovative methods for improving the performance and productivity of health workers, there is an urgent need to explore this area in greater depth and with more clarity.

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