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# *Pay and Non-pay Incentives, Performance and Motivation*<sup>‡</sup>

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## INTRODUCTION

The World Health Report 2000, *Health Systems: Improving Performance*, defines incentives as “all the rewards and punishments that providers face as a consequence of the organisations in which they work, the institutions under which they operate and the specific interventions they provide” This definition suggests that the organisation, the work that is done and the setting in which work takes place will determine the incentive used and its resulting impact. Buchan et al add another dimension by defining an incentive in terms of its objective: “An incentive refers to one particular form of payment that is intended to achieve some specific change in behaviour” (2).

This review is intended to provide an overview of the current evidence on the effect of pay and non-pay incentives on health workers' performance and motivation. The literature on incentives is primarily focused on the impact of specific incentives on provider behaviour, especially physicians. There is much less work on the structural and organisational aspects of incentives. This paper primarily uses as its base two papers recently completed for WHO and in publication (2, 3). The first paper is based on a search of English language publications, using library and CD-ROM facilities. The review as reported by Buchan et al covered the following databases: Social Science Citation Index (SSCI), BIDS, CHNAHL, Psyc Lit, FirstSearch, Medline and Health Management Information Consortium (HMIC). A total of 352 articles and papers were identified. The paper by Hicks and Adams is based on ten country case studies using a common framework for analysis developed by WHO. The countries in the study (Bahrain, Bangladesh, Côte d'Ivoire, Estonia, Ghana, Islamic Republic of Iran, Kyrgyzstan, Mongolia, Nepal and New Zealand)

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have all undergone health policy changes in the past decade which explicitly addressed incentives, especially in regard to providers.

These two very different approaches for collecting evidence and experiences are augmented by a selected set of recent studies that focus primarily on incentives and their impacts.

The paper is organized in three sections. The first presents the range of both pay and non-pay incentives and begins to link incentives to objectives. The second presents a review of evidence about the impact that incentives have on provider behaviour and the third section outlines some of the key factors in making incentives more effective.

#### RANGE OF INCENTIVES

Buchan *et al.* offer a typology of incentives that can be included in remuneration packages as represented in the following table. They define remuneration as “the total income of an individual and may comprise a range of separate payments determined according to different rules”. ‘Payments’ in this context refer to both financial and non-financial incentives.

*Table 1. Typology of Incentives.*

<i>Financial</i>	<i>Non-financial</i>
A. Pay	Holiday/vacation
B. Other direct financial benefits	Flexible working hours
Pensions illness, health, accident, life insurance,	Access to/support for training and education
Clothing, accomodation allowance	Sabbatical, study leave
Travel allowance	Planned career breaks
Child care allowance	Occupational health/counselling
C. Indirect financial benefits	Recreational facilities
Subsidized meals, clothing, accomodation	
Subsidized transport	
Child care subsidy, crèche provision	

SOURCE: Buchan J *et al.*, 2000 (2).

Chaix-Couturier *et al.* (4) in a systematic review of the effects of financial incentives on medical practice initially identified 130 articles on the subject and accepted 89 that met their defined criteria. They offer a typology of financial incentives inherent in different types of remuneration. The principal difference between the two approaches is their scope, with the typology used by Buchan *et al* comprising a total pay and benefit package and Chaix-Couturier *et al* focusing on types of payment that are typically used to remunerate physicians for providing medical care. The Chaix-Couturier approach is more in line with common interpretations of physician remuneration systems as incorporating one or more of four strategies: capitation, shared financial risk, fee-for-service and salary.

Prospective payment incentives provide a measure of risk to physicians. In capitation by physician the physician is given a sum of money to provide ambulatory care for his or her patient population and the sum is adjusted for financial risks incurred by the managed care plan. In capitation by patient the physician is given a sum adjusted to the number and type of patients who register in his or her office.

Bennet defines payment strategies, or mechanisms, and key incentives for providers (Table 2) (5). This approach is based on economic theory in which responses are assumed to reflect an effort by physicians, as suppliers of service, to maximize incomes subject to constraints imposed by fees set externally and payment mechanisms. In the case of medical care, economic incentives are one of many factors that influence practice patterns. Other considerations include professional ethics, training, experience and the nature of relationships between the provider and paying agency (6).

**Table 2. Key Payment Mechanisms**

Payment mechanism	Key incentives for providers
Fee-for-service	Increase number of cases seen and service intensity. Provide more expensive services.
Case payment (DRG)	Increase number of cases seen, decrease service intensity. Provide less expensive services.
Daily Charge	Increase number of bed-days (through longer stays or more cases)
Flat rate (bonus payment)	Provide specific bonus service (neglect other services)
Capitation	Attract more patients to register while minimizing the number of contacts with each and service intensity.
Salary	Reduce number of patients and number of services provided.
Global budget	Reduce number of patients and number of services provided.

SOURCE : Bennett S, 1997 (5).

#### ALIGNING INCENTIVES WITH OBJECTIVES

The economic approach to incentives in purchasing health services was discussed in WHO's World Health Reports (WHR) 1999 (7) & 2000 (1) under the heading of 'strategic purchasing'. The focus there was on purchaser provider relationships, and the objective was to develop relationships in which appropriate packages of health care could be purchased. These packages could include discrete services or they could encompass comprehensive care to be provided on a long-term basis. In these relationships capitation or fundholding and contracting involve risk sharing in the sense that the provider agrees to accept responsibility for providing a negotiated bundle of services according to agreed standards of care at a fixed rate; the purchaser undertakes to finance care for insured populations and to be accountable to the public (or clients if the purchaser is a social security plan or private insurer).

WHR 2000 (1) also discusses the effects of incentives on organisational performance – in effect extending the analysis of the role of incentives to health care funding agencies. Incentives that affect

organisational performance can be divided into internal and external incentives (Table 3). Internal incentives affect decision making powers and can have profound effects on performance. As an example, the degree of autonomy and accountability will determine the extent to which incentive mechanisms, rather than explicit direction, will be necessary to ensure best performance. There is an obvious analogy between internal incentives in organisational performance and internal incentives in the management of the staff of an organisation. External incentives refer to methods used by health systems to control the activities of health organisations or funders. Regulation, for example, is used to limit governance decision rights so that the public interest is not jeopardised. Private sector organisations typically have high levels of decision rights and require strategic regulation, whereas public sector agencies are normally subject to hierarchical control, obviating the need for regulation.

*Table 3. Internal and External Incentives*

<i>Internal Incentives</i>	<i>External Incentives</i>
Decision rights (autonomy) Accountability	Governance (responsibility for decisions and control over residual income).
Market exposure (risk)	Financing directed toward public policy objectives.
Financial responsibility Unfunded mandates (e.g. to care for those with special needs without extra compensation)	Control mechanisms (the degree to which regulations or financial incentives are necessary to obtain desired policy objectives).

SOURCE: WHO, 2000 (1).

The internal and external incentives discussed in WHR 2000 illustrate the pervasiveness of incentives in economic relationships and the need to link incentives to objectives. Research into the effectiveness of various incentives in organisational behaviour is clearly of interest to health policy makers. Within health organisations and agencies, incentives are similarly important to the achievement of objectives. Much of the research literature on incentives (e.g. contracting and regulation) can be classified as dealing with incentives to organisations or independent contractors (e.g. independent professionals). An understanding of how organisations or contractors respond to incentives is incomplete, however, without parallel

insight into how incentives affect performance within organisations or institutions.

The link between organisational objectives and personal motivation is the psychological contract between the individual and the organisation (8). This describes a reciprocal relationship which may be defined as the mutual expectations of the individual and the organisation with each other. The psychological contract is often unwritten and unspoken, but nevertheless represents each party's expectations for the relationship's continued existence (9).

The psychological contract, for many individuals, includes an intrinsic belief that their work will give them a fulfillment which has many dimensions: it concerns self-actualization, a sense of achievement, recognition, responsibility and the quality of personal relationships in the workplace. It is increasingly being recognized that these sources of motivation are vital for managers to consider in HRD (10).

#### FROM ORGANISATIONAL OBJECTIVES TO PERSONAL MOTIVATION

In the context of health human resource management, incentives to health workers are necessary to obtain system-wide objectives such as the right balance of skills in the workforce and an appropriate geographic distribution. Incentives are also important to internal efficiency and effectiveness – examples include the experience and skill levels of staff, ability to work as a team and motivation to identify personal accomplishment with the achievement of organisation objectives. As we will discuss later, there is a special need for research into incentives that seek to affect personal motivation rather than simply elicit an economic response.

Personal motivation of health workers often is not explicitly considered in health reform policies. The link between policy initiative and worker motivation is complex and careful study requires an intellectual framework that recognizes the importance of individual, organisation and societal factors in motivation. A conceptual framework developed by Bennett and Franco recognizes a number of factors (11): individual level determinants, individual needs, self-concept, expectations of outcomes or consequences of work activities; organisational context, salary, benefits, clear, efficient systems, HR management systems, feedback about performance, organisational culture, social and cultural context,

community expectations and feedback; health sector reform, communication and leadership, congruence with personal values of workers.

The framework was discussed at a workshop in 1998, where several countries reported experience with worker motivation in health sector reform (12). Positive experiences were reported by Kazakhstan, where primary care reform provided greater prestige for health workers while financial rewards and effective communication were used to recognize performance. Zimbabwe reported negative effects of reform on motivation, which were attributed to low salaries and limited or ineffective communication with workers. Mixed experiences were reported by Senegal and Chile, where success factors included financial and non-financial incentives (such as increased status and improved working environment); negative factors included changes in management structure due to decentralization that created conflict between local governments and workers. The need for clear lines of authority and for autonomy of senior personnel was also highlighted as important issues in motivation. Other analyses of decentralization have identified risks to worker motivation in decentralization of authority for health systems. Risks include the potential for organisational roles and responsibilities to become conflicting or inappropriate; changes to organisational or worker responsibility may be poorly communicated and managerial competence may diminish (13).

However, it is also worth noting Schein's Complex Model (14), in which he suggests that because human needs vary across a life-span and from person to person, incentives will vary in their impact on motivation depending on the person and upon the stage of life at which they are offered. He suggests that universal approaches to motivating the individual do not recognize the complexity of people. For this reason, measurement of worker motivation is important to develop appropriate feedback mechanisms for human resource management. While measures of responses to individual determinants may be reasonably similar in both developed and developing countries, the latter group of countries will require customized measures of responses to organisational factors, taking into account cultural incentives and environmental constraint (15). Decentralization requires a concerted effort to build management skills for planning, implementation and evaluation at local levels. Decentralizing the process for rewards and

promotions was also identified as a potentially important factor for worker motivation in Ghana (16).

### *IMPACT OF INCENTIVES ON BEHAVIOUR*

#### PHYSICIANS AND OTHER INDEPENDENT PROFESSIONALS

The choice of payment mechanisms has significant implications for mode of practice and work codes as a result of the tension between financial incentives and professional value (17).

There appears to be general agreement in the literature on the key differences between fee-for-service, capitation and salary in terms of their key incentives. The literature suggests that the impacts of incentives in general can be thought of in three ways: (i) financial impacts on providers in capitation or shared-risk plans; (ii) risks to the quality of care (4, 18, 19); (iii) impact on patient confidence. With respect to quality of care, the following risks in managed care and risk-sharing plans were identified in the review by Chaix-Couturier et al: limited continuity of care, in particular for patients suffering from chronic illness; reduced range of services offered to patients, particularly in the case of prevention and psychological support; under-use or improper use of emergency services resulting in delayed treatment - and related complications; risk of ethical conflicts; multiplicity of guidelines from different plans recommending different courses of action for the same condition; reduced time for teaching and research; reduced confidence of patients; the major risk identified remains that of conflict of interest between the physician and the patient, across all populations, including both low-risk and high-risk patients. The review found evidence of: increases in volume in response to fee freezes leading to higher expenditure; redistribution of patients from high income to low income physicians when ceilings were placed on annual earnings; higher rates of elective surgical procedures. Salaried physicians also referred patients less frequently than fee-for-service physicians; had lower levels of activity; and tended to have fewer home visits and to concentrate activities during office hours.

Another review that focused on salary payments found twenty-three papers in the international literature that dealt with practice patterns of salaried physicians(19) The papers suggested that salary reimbursement was associated with lower use of tests and fewer referrals compared to either

fee-for-service or capitation and fewer procedures per patient, lower patient loads, longer consultations and more preventive care compared to fee-for-service physicians. None of the studies were able to judge whether the more conservative patterns of salaried physicians were more efficient in terms of patient needs. It is also important to recognize that doctors' behaviour may be influenced by other incentives such as organisational level payments, limited drug lists, therapeutic protocols and high levels of peer review. A confounding factor in cross-sectional studies could be that physicians are attracted to certain remuneration modes as a result of their own preferences for particular practice styles.

Blended payment methods are being used increasingly in managed care plans in the United States. Blended payments usually combine fee-for-service for certain types of care and capitation for others services, notably primary care and prevention. A 1996 survey of independent practice associations in California, comprising 49,000 physicians, found that capitation tends to be used more frequently for GPs than for specialists (21). Evaluations suggest that blended payments perform better than non-blended payments in terms of providing incentives for types of care desired by the paying organisation (22).

Lessons about the use of payment incentives identified in the review by Chaix-Couturier et al were: practice changes in response to financial incentives result from economic factors rather than professional motivation; consequently they may not be effective as the only method of implementing public health policies; financial incentives should not be structured in a way that can create a conflict of interest between revenue and quality of care; adjustment of financial incentives to reward quality is very difficult in practice; disclosure of incentives is necessary to maintain trust in both physician and paying agency.

Financial incentives to physicians may cut across all payment mechanisms. A particularly controversial type of incentive consists of rewards or benefits provided by the pharmaceutical industry. A recent literature review of physician-industry relationships found that physicians' professional behaviour was affected by industry incentives and recommended the issue be addressed through educational programs and regulatory policy (23).

## DISCLOSURE OF INCENTIVES

Disclosure of incentives is a topical issue in the US due to regulations passed by the Health Care Financing Administration in 1998 in an attempt to avoid conflict of interest by physicians in managed care plans that treat Medicare and Medicaid clients (24). Disclosure is expected to improve patients' understanding of treatment rights (25). Some analysts suggest that patients may be reluctant to think of relationships with their physicians in terms of financial incentives, may not understand the relevance of information on incentives to their own treatment and may experience an erosion of trust in their physician (26). Others have suggested that disclosure of incentives be limited to the information that patients want at the time they need it, rather than blanket disclosure of all incentives that potentially influence care (27).

## PHYSICIAN RESISTANCE TO INCENTIVES

Financial incentives that limit incomes or non-financial incentives that increase administrative (transaction) costs and threaten professional freedom can cause resistance from physicians and impair the viability of policy initiatives. This appears to be the case with managed care strategies in the US, which have provoked a backlash from physicians and patients (28). In Canada there has also been a campaign led by physicians against cost restraint, and there are signs that central and provincial governments are abandoning reforms aimed at rationalizing physician supply and hospital resource use as a result.

## OTHER HEALTH STAFF

The review by Buchan *et al.* found: "a limited evidence base currently available on the impacts of incentives on health workers and/or associated service providers." Their study found 62 papers that dealt with incentives for independent professionals and other health workers. Medical staff, primarily physicians, were the subject of 80% of the studies focused on health workers, and most were based on experience in the United States or United Kingdom. The authors concluded that, with the exception of physicians: "...there is little evidence generated in this review on which to base an assessment of the likely impact of incentive interventions." The

dearth of studies on non-physician health workers may reflect a preoccupation among researchers with economic responses to incentives. There is a solid body of theory and a lively debate about the role of supplier incentives in controlling utilization of health resources. Health human resource (HHR) policy is not based on economics to the same extent as payment for medical care services. In addition to an understanding of the role of financial incentives, HHR policy requires evidence of how a range of non-financial incentives affect motivation, including factors such as loyalty to the employer or the organisation and perceptions of control or empowerment in the job environment. This knowledge is especially important where possibilities for economic rewards are limited by fiscal constraint and employers must seek non-pay incentives to motivate staff. This study has concentrated on English language literature. It will also be important to stay abreast of literature and research in other languages.

#### ORGANISATIONAL INFLUENCES AND POLICY CONTEXT

Buchan *et al.* make the following points about incentives, which could inform future research: if an incentive strategy is to be effective, it must be congruent with, and based on, the overall strategy of the organisation; the strategy must be appropriate to the objectives of the organisation and the context in which it operates; pay determination arrangements can limit the nature of sector reform policies and modify the adoption of incentive policies.

The importance of institutional and other contextual factors was also highlighted in the report by Hicks and Adams, which noted that “specific behavioural responses cannot accurately be predicted without knowledge of the context in which an incentive exists. A complex set of health care objectives and policies may result in many incentives, some of which act in opposite directions.” (3).

The report summarized health human resource incentives in the case study countries in terms of incentive packages, in which specific incentives were related to policy objectives and placed within a context that included complementary measures and constraints (Table 4). Most of the incentive packages were directed to salaried professionals rather than private practitioners. Some of the packages targeted or included non-physician staff, including nurses and primary care workers. The case studies found that remuneration policies or practices may determine whether or

not non-financial incentives will succeed. Examples included: a tendency for professionals in the public sector to spend most of their time and energy in private practice, or to charge informal fees, where salary levels are low or pay is delayed; a necessity for adequate remuneration (by country standards) in order for incentives aimed at recruitment and retention to be effective; opportunities for higher education or housing; and educational assistance for families.

*Table 4. Incentive Packages for Human Resource Issues from Country Case Studies.*

<i>Objectives</i>	<i>Incentives</i>	<i>Complementary Measures</i>	<i>Constraints</i>	<i>Results</i>
Recruitment and retention in country	Competitive salaries Seniority awards in pay scales <sup>1</sup> .	Fiscal policies that increase the after-tax marginal value of salaries.	Budget limitations. Low public service salaries.  Policies to reduce salaries as a share of operating costs.	Helps retain physicians in Bahrain.
	Allow after-hours private practice in public institutions.	Service standards and controls to prevent reduced work effort in the public system.	Work effort may be concentrated in private practice, leading to deterioration of quality in public service.	Considered successful in Bahrain. Other countries have experienced deterioration in the public system where providers also engage in independent private practice.

<sup>1</sup> Seniority as a basis for remuneration is often considered an inferior alternative to a results-based salary (which is not known to exist in any of the study countries). However, seniority can affect retention as noted by the Bahrain authors.

<i>Objectives</i>	<i>Incentives</i>	<i>Complementary Measures</i>	<i>Constraints</i>	<i>Results</i>
	Tolerate informal payments <sup>2</sup> .		Informal charges limit access and may impede reforms that involve formal user fees and exemptions.	In Ghana, informal payments are widespread and entitlements to exemptions from formal charges are not respected.
Recruitment and retention - rural areas	Higher salary or location allowances. Remuneration based on workload <sup>3</sup> .	Decentralized administration. Freedom to allocate institutional revenues or savings from operational efficiency to fund incentives. Improved infrastructure and staff competence.	Overall staff shortages. Budget limitations. Professional and lifestyle disadvantages. Greater potential in urban areas for earnings from private practice. Conflicting financial incentives. (e.g. loss of housing allowance in Bangladesh).	No identified successes.
Recruitment & retention - rural areas	Services in defined rural areas as a condition of licensing or specialty training. Opportunity for	Consistent application of policies for transfer and tenure.	Confidence may be lost if selection process is perceived to be arbitrary.	Aids retention of professionals in public service in

<sup>2</sup> Not official policy in any of the study countries. Ghana author speculates this may explain the « blind eye » to informal charges.

<sup>3</sup> Planned in Ghana, but not implemented. Not implemented in other countries.

<i>Objectives</i>	<i>Incentives</i>	<i>Complementary Measures</i>	<i>Constraints</i>	<i>Results</i>
	government sponsored higher education.		Provider concerns that temporary postings may become indefinite.	Ghana. In Nepal, providers are critical of policy, as opportunities to train abroad are not linked to performance.
	Provide housing and good quality educational opportunities for family.	Adequate salary.		Health sciences institute in Nepal reports success with nurses, but not with physicians.
Recruitment & retention – rural areas	Recruit trainees from rural areas.	Public health and family practice emphasis in training curricula.	Traditionally, urban area students are over-represented in student population.	No results reported in case studies.
Quality and availability of primary care.	Training and promotion opportunities for nurses and medical auxiliaries. Training of multifunction health workers. Community mobilization of women volunteers, TBAs and local leaders.	Clear job descriptions and criteria for promotion.	Opposition by professional associations to expanded roles for multifunction health workers.	Nepal reports success with a programme that allows health assistants and other health workers in rural areas to train for posting to

<i>Objectives</i>	<i>Incentives</i>	<i>Complementary Measures</i>	<i>Constraints</i>	<i>Results</i>
Encourage teaching and research	Pay non-practicing allowance in lieu of private practice.		Allowances may not be competitive with private practice earnings.	higher levels. No results reported in the country studies. Nepal reports success in basic medical sciences. In clinical departments, many physicians resigned their teaching positions.
Improve quality of care	Specify clinical guidelines in provider contracts.	Leadership role by professional organisations. Inclusion in curricula of medical schools.	Weak professional governance or management ability. Information systems.	New Zealand reports success in having guidelines adopted, although effects on clinical behaviour are not certain.
	Licensing of institutions and professionals based on defined standards.	Tradition of professionalism in medical culture. Acceptance of civil and legal authority.	Potential shortage of qualified inspectors and managers.	Estonia reports a reduction in the number of hospitals and unqualified doctors and an increase in quality.

## KEY FACTORS IN MAKING INCENTIVES MORE EFFECTIVE

The most important factor in making incentives more effective will be to extend the scope of research and evaluation to include a range of professions that reflects the actual composition of the health system workforce. Professions that should receive special attention include: nurses, whose roles have been changing to include more responsibilities while appropriate staffing levels have not been clearly established; primary health care workers, who comprise the main source of care in many developing countries; managers of health facilities, who must cope with new incentives and accountability relationships as a result of decentralization and cost restraint. Incentives must be viewed in a broad context in order to understand the constraints and success factors that will affect the chances of their success. Components of the incentives framework used in case studies for the Hicks and Adams paper include: macroeconomic restructuring and health policy reform; health finance; provider supply and practice characteristics; external constraints and enabling factors; professional environment; evaluation of funding systems and policy; sustainability of change (3).

HHR must be seen as an interrelated system involving staff with a complex mix of skills and motivations. The effects of incentives aimed at one group of professionals will reverberate through the entire system. Policy makers need to know if specific incentives will reinforce health system goals or upset a delicate balance in which systems may be 'just coping' under stress. The study of incentives is also relevant to the issue of health worker mobility. A number of 'push' and 'pull' factors affect movements of health personnel. Financial incentives are usually considered as an option to aid recruitment and retention in under serviced areas. Non-financial incentives also have a role in mitigating adverse conditions in areas that have difficulty maintaining sufficient numbers of personnel and the right mix of skills in the health workforce.

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