

# Effects of Physician Payment Methods

*A Descriptive Study of the Situation in Norway, UK and Ghana*

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## SUMMARY

**BACKGROUND:** In view of the fact that payment systems for physicians may affect the efficiency and effectiveness of health care service provision, the design of compensation schemes is a major policy concern. According to standard labour economics and agency theory, fee-for-service and debatably pay for performance contracts are likely to provoke higher service production than salary contracts and capitation contracts. Compensation systems may also power service quality and the overall cost control. Regardless of the obvious policy significance of these issues, the accessible empirical research is very limited. This paper is a challenge to remedy this situation by addressing the impact of different contracts and payment systems on primary care physicians' service supply in Norway, UK and investigate if there are lessons Ghana can learn from these two countries.

**METHOD:** a search strategy was tailored to systematically identify relevant studies from Norway and UK. The following databases were searched: Econlit, Medline, and Google Scholar. Free text searches were carried out on the databases listed above with terms such as; salary or fee-for-service or capitation or reimbursement or payment for performance or quality and outcomes framework or incentive in juxtaposition with the following: general practitioner or family physician or general practice or primary health care or primary physician in either Norway or United Kingdom. Out of the results, ten studies with different methods were selected for the review.

**RESULTS:** The outcomes of the literature review give mixed effects of the different methods of physician compensation in Norway and UK. P4P or QOF were known to give strong incentives for improvement of quality of care after its introduction in 2004. Capitation was found to motivate GPs to increase their referral rates which would eventually increase cost of specialists' treatment and hence higher health care expenditure. However, the predictions from theory were not fully supported by the literature review on the effects of fee-for-service or salary.

**CONCLUSION:** The findings of this study show that the selection of payment methods for GPs is not a nonaligned verdict and has considerable practice and policy connotations. Therefore, any attempt to implement any of the methods of paying GPs must be based on the outcome of a sound and robust research.

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*“man shall not live by bread alone, but  
by every word that proceeds from  
the mouth of God” Math 4:4.*

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## **ABBREVIATIONS**

ADHA	Additional Duty Hour Allowance
FFF	Fee-For-Service
GMS	General Medical service
GPs	General Practitioners
NHS	National Health Service
NHIS	National Health Insurance Scheme
PCPs	Primary Care Physicians
P4P	Pay For Performance
QOF	Quality and Outcomes Framework
SSNIT	Social Security and National Insurance Trust
VAT	Value Added Tax

# CHAPTER 1

## 1.0 INTRODUCTION

### 1.1 BACKGROUND TO THE STUDY

Governments and Health policy makers in different countries have used healthcare reforms to influence the clinical behaviour of primary care Physicians. Primary care physicians act as gatekeepers and also spokesmen for patients. In the light of these roles, their payment methods be it capitation, fee-for-service, salary or pay for performance have implications on cost, quality of service delivery, physician satisfaction, patient satisfaction etc. Plan arrangements with physician groups start with one of three basic pure forms; salary, fee-for-service and capitation (Glazer 1970). All over Europe and North America, health authorities are or have reformed their general practice, especially in terms of physician payment methods. Many researchers have confirmed with empirical data the hypothesis that the ways physician are paid have influence on their clinical behaviour.” But physicians are also social and economic beings; their behaviour is, in part, determined by the way they are reimbursed” (Gabel R, 2000).

Thus, the design of financial incentives must be done on appropriate basis and with much knowledge about the effects of each payment method. Scheming payment systems that promote efficiency and equity requires understanding, facts and data not only of the objectives themselves but also of the consequences of different systems of payment on those variables relevant to the objectives, such as the use of resources and patient welfare.<sup>1</sup> There are studies proving that financial incentives can influence GP behaviour and that there is a rareness of research into the effects of remunerating GPs in different ways. The issue now is that, researchers should consider undertaking quantitative studies to throw more light on the effects of different methods of payment and also the combined effect of a blend system of any kind.

Many countries have now moved away from the system of single payment methods because of the devastating bad effects and have now adopted a blend system just to dilute the weaknesses of single system and reap the advantages mixed systems offer. Some

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<sup>1</sup> Scot A, J. Hall/ Health Policy 31(1995) 183-195

systems link payment directly with output which tend GPs to increase their services in order to increase income<sup>2</sup>. These drawbacks of relating payment to output, or fee for service, has lead many countries, an example is the UK, to the organization of a health care system which either split the link between compensation and output or at least rigorously adulterates its effects. Norway is another typical example of a blend system of payment. Though economic theory would argue that FFS payment method for GPs may be less cost effective there are counter balancing arguments, that formal ethical code and medical guidelines to which GPs are supposed to stick on. If such strong ethical guidelines exist, it could dilute or remove the motivation for GPs to provide ineffective, dubious or very costly treatments merely to increase their income<sup>3</sup>.

Furthermore, other systems of payment such as capitation in Norway have their own problems. For example, capitation method may be inefficient as it promotes competition for patients by GPs on the basis of quality of their care, so that by attracting more patients their income increases. This assumption of quality of care depends on the capacity of the patient to observe with full information which is an unconvincing assumption. In the nutshell, a satisfactory level of cure must rely on the doctors own ethical code of conduct. Again, the UK government perceiving these dangers of capitation introduced a whole range of financial incentives to motivate primary care physicians to meet up public health objectives.

“There are many mechanisms for paying physicians; some are good and some are bad. The three worst are fee-for-service, capitation, and salary. Fee-for-service rewards the provision of inappropriate services, the fraudulent upcoding of visits and procedures, and the churning of “ping-pong” referrals among specialist. Capitation rewards the denial of appropriate services, the dumping of the chronically ill, and a narrow scope of practice that refers out every time-consuming patient. Salary undermines productivity, condones on-the-job leisure, and fosters a bureaucratic mentality in which every procedure is someone else’s problem” ( Robinson J.C 2001). Ghana is one of the typical developing countries that use salary method of paying primary care physicians. The new NHIS introduced in 2004 aimed at improving access and equity has been a major health reform in Ghana after independence in 1957. Prior to the reforms, provision of healthcare services

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<sup>2</sup> Gosden T, Pedersen and D. Torgersen, 1999

<sup>3</sup> Gosden T, Pedersen and D. Torgersen, 1999

was financed by mainly out-of-pocket payments by patients. With such a major reform, there was much expectation that the primary care physicians will receive their fair share of the financing arrangements. To the surprise of many, Ghana's primary care physicians are still reimbursed mainly by salary. Thus the Ghanaian system has failed to recognize and to dilute the deadly effect of salary as a method of primary care physician remuneration. May be it is about time the country considered looking into the possibility of implementing an innovative methodology in physician remuneration.

In response to major challenges in the recruitment and retention of doctors in Ghana, the Ghanaian Federal Government in 1998 instituted a scheme known as the Additional Duty Hours Allowance (ADHA) Scheme<sup>4</sup>. This is a salary support system that rewards physicians for putting in extra hours of working. Primary care physicians can then increase their income by working more hours. In Ghana, public discussion, researchers, ministry of health and the Ghana health service tend to ignore the effects of physician payment methodology. Instead the general emphasis has been on the adequacy of the payment methods. So almost, there is non-existent of research work on the effect of physician payment systems in Ghana. However, Ghana cannot deny both the good and the bad effects of salary system of payment which has lead many countries to seek for middle ground between low and piece rates and straight salary.

It must be noted that physician behaviour may not necessarily be a response to only the financial incentives given, but other non-price mechanisms; monitoring, rewarding appropriate behaviour, promotion, socialization, profiling and practice ownership. Therefore Ghana may not rely on financial incentives to control physician behaviour in terms of resource utilization, but other ways as stated above. From this background, it is clear that the system in Ghana is quite different from both the UK and the Norwegian system of remuneration for primary care physicians. The context, health policy and the background for each of the three countries understudy forms the basis for the design of physician payment method.

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<sup>4</sup> Atim, C. (1999). "Social movements and health insurance: a critical evaluation of voluntary, non-profit insurance schemes with case studies from Ghana and Cameroon." *Social Science & Medicine* 48(7): 881-896.

Financial incentives to improve quality of care, sometimes called pay for performance schemes, have been introduced recently in many countries, including the United States, Spain, and Australia. The United Kingdom embarked on the most ambitious of these schemes in 2004 with an initiative in which 25% of general practitioners' pay was tied to a complex set of quality indicators, the quality and outcomes framework. In common with other countries, most of the indicators in the original UK framework related to clinical care.

Earlier in 1980s, primary care physicians rejected the so-called Practice Allowance on the basis of the fact that quality cannot be measured. The 1990s were the years of evidence-based medicine, when clinical professionals and policy makers came to the notion that there were better and worse ways of medical practising with justifiable limitations to individual autonomy in the healthcare locale. Also healthcare researchers established that there were extensive dissimilarities in the practice of medicine and that many patients were receiving less care than appropriate. The collective upshot of these conceptions was that it became progressively more important both to characterize high-quality care and to make available procedures that could be applied to evaluate some facet of the quality of care. To tie a substantial proportion of physicians' income to the quality of the care they provided would produce winners and losers. However, the British Medical Association was unlikely to negotiate a change in remuneration that would result in the loss of income for large numbers of its members. Therefore, the scale of the change that came about was possible only because in 2000 the government of the United Kingdom decided to provide a substantial increase in health expenditure (Roland Martin, 2004).

UK primary care physicians are independent contractors with the National Health Service (NHS), and they enjoy some considerable autonomy. Like the Norwegian health care system, every NHS patient is registered with a GP, who is a gatekeeper to NHS secondary specialist care and a spokesman for the patient. Earlier before the reforms in April 2004, the UK health system exhibited a "primary care-led" system where physicians are in charge of the local health system. A major character of the UK primary care system until the reforms in 2004 is the mixed system of remuneration methods; fee-for-service (about 15% of GP income), capitation (40 percent of GP income), salary (30 percent of GP

income), and capital and information technology (IT) (15 percent). The new GP contract is infused with a major change to the primary care incentives where primary care physicians' income is based on other quality measures. Thus, in addition to the blend system of physician remuneration in UK, physicians have quality targets and standards to meet and about 18 percent of their income is spread on the basis of quality measures. The main purpose of the reform is to reward practices rather than individual physicians so it will hearten collaboration and joint effort and peer review as well<sup>5</sup>.

The Norwegian health care system exhibits all the three methods of payment just as the UK health care system. The system in Norway is not exactly the same as the UK system; there exist some variability. This variability may be due to dissimilarities between governments and policy makers in their health care goals, the structure and organization of their health care sectors and the culture of the respective medical profession. Lack of consensus as to which type of payment system that has the most favourable impact on primary care physicians' behaviour may also be a justification for the variation<sup>6</sup>. Norway introduced a list patient or what we call capitation in 2001 where every patient is registered with a primary care physician. The essence of this policy was to maintain a stable relationship among primary care physicians and their patients<sup>7</sup>. In Norway, fixed salary, capitation, and fee-for service are the common methods of paying primary care physicians. Primary care physicians must fulfil certain requirements regarding opening hours and or working hours for his or her salary. Primary care physicians are paid a compensation for each registered person on his or her list of patients. Primary care physicians are also paid for every service they provide under the fee-for-service method in Norway. From the above, it is clear that some countries blend two or more of the methods of paying primary care physicians. Ghana seems to be solely paying primary care physicians by salaries among the three countries under.

Many a time public debate over payment methods fail to consider the implications of a mixed system. Instead, reviews have cantered on the nature and the effect of a particular

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<sup>6</sup> Godson T, Forland F, Kristiansen IS, Suttén M, Leese B, Giuffrida A, Sergison M, Perdersen L, April 2000.

<sup>7</sup> Luras Hilda, 2004

method. As already stated, a physician's clinical behaviour may not necessarily be a direct response to the way they are paid because there could be other nonprice means that needs to be incorporated into the theory of incentive contracting of physicians. This paper describes and analysis the impacts of physician payment methods; either single methods or mixed system. This description and analysis cannot be meaningful without resorting to both the conceptual and theoretical framework on incentive contracting and how physicians are paid by insurers or their own medical group. Agency theory would be employed in the context of imperfect information, risk aversion and information problems that may hinder achieving a particular health objective. This description would be centred on Norway, UK and Ghana. Thus, the description and the discussion will look at explicit objectives of physician payment methods, and the impact of the three most common methods and the innovations that blend two or more methods and the new QOF.

## **1.2 PROBLEM STATEMENT AND OBJECTIVE OF THE STUDY**

Of late many developed countries have reformed their general practice especially in the area of physician payment methods. Many of these changes have occurred against a background of little empirical evidence about the impacts of different forms of payments and that of a mixed system of primary physician payment on the cost of care and on the welfare of patients<sup>8</sup>. Thus without more research work and empirical evidence, these reforms may not be attuned with the efficiency and equity objectives of health care.

Manipulation of payment methods in an attempt to achieve policy objectives such as improving quality of care, cost containment and recruitment to under-served areas should be tested and evaluated against health care goals and desired outcome. UK, Ghana and Norway have different experiences in the area of physician remuneration. Many researchers have concluded that fee-for-service creates the incentives to deliver more service than appropriate in order to increase income. This can lead to supplier induced demand (SID) (Evans 1974) where patients would receive more care than they would have chosen if they had the requisite understanding.

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<sup>8</sup> Scot A, J. Hall, 1995

Salaried physician may not have the incentive for a particular care to be provided since physicians know their income in advance before any care is given. On the other hand, capitation leads to physicians having bigger patient lists sizes just to increase their income but then the workload may increase as well which will lead to shorter consultations and higher referral rates. Thus however, each of these methods presents both positive and negative outcomes; salary and capitation may contain cost but they could encourage under-treatment while fee-for-service may encourage over-treatment<sup>9</sup>. The new QOF has its own implications. There is a belief that quality and accessibility could be achieved with pay for performance. In effect then, it is difficult to draw major conclusion as to which type of payment method is better on patient health status since both under/over-treatment can be injurious to patient health. Norway, Ghana and the UK may have different experiences with these methodologies.

Based on the research problem, the following questions need critical consideration:

To what extent has the health sector reform, in particular, physician payment methods, impacted on the quality of health care delivery to patients? What impacts or effects have the different methodologies brought to bear on the health care objectives in terms of cost containment? What effects has capitation on GPs referral decisions? What challenges have service users and physicians themselves been facing in accessing Health Care/giving services under the various methods? These and other issues underpinned the researcher's interest to investigate the impact of the physician payment methods.

The main objective of the study is to investigate and describe the impact of physician payment methods in UK, Norway and make evaluation of whether or not the experiences in Norway and UK have any relevance in Ghana given the socio-economic, policy and cultural context. The outcome of this descriptive review should help the governments of these three countries especially Ghana, to appreciate the extent to which the physician payment methods have impacted on the health of service users, patient satisfaction, cost and equity of service delivery. In practice, the study would bring to the fore the views of researchers about the physician payment methods and the challenges associated with different systems. This will aid planning and monitoring of policies aimed at improving

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<sup>9</sup> Woodward 1984

access to health care services. The study would thus be of use to health policy practitioners in their decision making processes especially in the area of primary care physicians' remuneration.

This description is also being undertaken with the intention of broadening our knowledge and understanding of the impact of the different methodologies in physician reimbursement systems in general and how these methods have been of benefit to service users. It is hoped that the findings of this research would offer an opportunity to discuss theoretical and empirical insights into how the payment mechanisms should be couched to meet the tailored needs of service users. It will also identify vital areas that require further research.

### **1.3 SCOPE AND LIMITATION OF THE STUDY**

A study of physician payment methods in Norway, Ghana and UK is very wide as there have been many reform policies in recent times. As stated earlier, these reforms have looked at physicians as gatekeepers to the health sector and also spokesmen for patients and that their decisions have a lot of impact on the cost of health care and patient health status. This description would focus only on the effects of payment methods on the clinical behaviour of primary care physicians. Thus the study would consider the effects of salary, capitation and fee-for-service and pay for performance and a comparative discussion of these three countries.

Due to the fact that not so much has been written about this area especially in Ghana, it will not be easy to get much literature on the topic hence data and therefore this descriptive study will be limited to the extent to which books, articles, journals, internet sources will permit. Inadequacy of literature and secondary data in some instances will limit the extent to which closer description and evaluation can be made and also made it difficult to substantiate some of the arguments. Narrative or descriptive review would be the major methodology.

## 1.4 STRUCTURE OF PRESENTATION OF THE STUDY

The study has been organized into 7 chapters as follows:

Chapter 1: This highlights the background to the study including the circumstances that motivated the research work, the problem statement, and objectives of the study, significance of the study, and scope and limitations of the study. It seems from the literature on physician remuneration that there is a general consensus that primary care physicians respond to the way they are paid. This gives significance to economic theory and common sense. The three traditional ways of paying primary care physicians are fee-for-service, capitation and salary.

However, countries like the UK have performance based mechanisms that have improved their healthcare systems in terms of accessibility, efficiency and prevention and control of certain (chronic) diseases. Thus another important form of remuneration is the quality and outcomes framework (QOF) or pay for performance (P4P). In 2004, the United Kingdom committed £1.8 billion (\$3.2 billion) to a new pay-for-performance contract for family practitioners (Stephen Campbell, Ph.D., David Reeves, Evangelos Kontopantelis, Elizabeth Middleton, Bonnie Sibbald, and Martin Roland, 2007).

Chapter 2: This section puts payment systems into the right economic sense and elaborates on the relationship between agents and principals. The study also employs within this chapter, the principal -agent theory as the theoretical framework for describing and discussing the context of physician payment methods which falls within the larger literature of incentive and financial contracting. Means of paying primary care physicians is a form of financial contract between individual physician and a bigger corporation like government, insurer, a medical group or a sponsor. Because of such relationship, a full description of the effects of payment methods on physician clinical behaviour must embody the larger literature on contract and financial incentives called agency theory. A summary of payment methods and theoretical predictions have been tabulated at the end of this section.

Chapter 3: The introductory part of chapter one will introduce the differences and reforms in UK and Norway health systems. In this chapter, a brief description of health care systems in UK and Norway is presented including possible primary health care objectives. Every primary health care system has priorities and targets depending on the health care

objectives. One outstanding goal that cuts across almost all health systems is to provide equitable and universal accessibility of health service to all the population. Moreover, cost control and containment among others is very prominent in recent times because many systems are suffering from escalating healthcare budgets.

Chapter 4: This contains methodology and a descriptive review of existing literature on physician payment mechanisms and their effects on their clinical behaviour. It will throw light on the historical development of incentive contracting and payment methods for primary care physicians and how the various payment methods in other countries have impacted on the quality of health care delivery; cost containment, patient satisfaction etc. A search of the literature on physician incentives and their effects will be undertaken and the relevant literature would be picked for the review. Much of the literature would centre on the UK and the Norwegian experiences in terms of primary care physician payment methods and the effects they have on the clinical behaviour of the primary care physicians. Relevant examples would also be drawn from different settings to broaden the scope of the study so as to be able to draw both the theoretical and practical differences between different healthcare systems.

Physicians' payment designs can shape the quantity of services provided, the number of hours worked, how resourcefully the physician works and the quality of the services provided, whether physicians refer patients to specialists or hospitals rather than treating them themselves, and finally, the overall cost of physician services. This Chapter will describe the systems as they are, look out for findings and conclusions of other studies and review them in order to draw conclusions from the empirical evidences available. Books, articles and other relevant journals would be consulted.

Chapter 5: This chapter would focus on the possible lessons Ghana can learn and if possible adopt from the literature reviewed. Ghana embarked on health care financing reform which saw the old way of out of pocket payment discarded. The intention of the Government is to create equal access and encourage people to contribute to the new health insurance system among others. This objective and others require the cooperation of GPs to fulfil. This section would consider payments effects against Ghana's health care objectives.

Chapter 6: This chapter contains discussion of the included studies against the research questions. Both positive and negative effects of each payment method would be examined with relevant against the existing theoretical predictions. For example it is known that under capitation as a prospective payment method, primary care physicians know in advance the amount of payment they will receive before they offer care. This will encourage physicians to at least contain cost since the physician cannot increase his income by offering more care. This theoretical principle for example, would be discussed against the practical evidence available from various studies included in this dissertation.

Chapter 7: This offers conclusions and recommendations for possible adoption and implementation by stakeholders. Many available studies show evidence of the correlation between payment methods and the clinical behaviour of primary care physicians.

Researchers' evidence suggests that primary care physicians paid by fee-for-service offer greater quantity of care service compared with capitation or salary. Thus, the concern of political decision makers to contain cost could be thwarted if more robust systems are not adopted. Salary and capitation have the tendency to offer under treatment which could be harmful. It will therefore not be out of place to say that each method has its own pros and cons and thus their adoption should be based on the healthcare objective of a particular policy context. For example, Ghana's socio-economic conditions may not favour fee-for-service because of its incentive to escalate health care budget.

# CHAPTER TWO

## 2.0 PAYING PRIMARY CARE PHYSICIANS

### 2.1 PAYMENT METHODS AND AGENCY THEORY

Means of paying primary care physicians is a form of financial contract between individual physician and a bigger corporation like government, insurer, a medical group or a sponsor. Because of such relationship, a full description of the effects of payment methods on physician clinical behaviour must embody the larger literature on contract and financial incentives called agency theory<sup>10</sup>. An agency relationship arises whenever one or more individuals, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decision-making authority to the agents. The primary agency relationships in business are those (1) between stockholders and managers and (2) between debt holders and stockholders. These relationships are not necessarily harmonious; indeed, agency theory is concerned with so-called agency conflicts, or conflicts of interest between agents and principals. This has implications for, among other things, corporate governance and business ethics. When agency occurs, it also tends to give rise to agency costs, which are expenses incurred in order to sustain an effective agency relationship (e.g., offering management performance bonuses to encourage managers to act in the shareholders' interests).

Accordingly, agency theory has emerged as a dominant model in the financial economics literature, and is widely discussed in business ethics texts and applied both in the public and private sector. Agency theory raises a fundamental problem in organizations—self-interested behaviour. Agents may have personal goals that compete with the principal's goal of maximization or optimization. Since the principal authorizes the agent to administer the organization assets, a potential conflict of interest exists between the two groups. Agency theory suggests that, in imperfect labour and capital markets, managers will seek to maximize their own utility at the expense of corporate shareholders. Agents have the ability to operate in their own self-interest rather than in the best interests of the firm because of asymmetric information (e.g., agents know better than principals whether they are capable of meeting the principals' objectives) and uncertainty (e.g., innumerable

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<sup>10</sup> Milgrom and Roberts 1992; Pratt and Zeckhauser 1985; Sappington 1991

factors contribute to final outcomes, and it may not be evident whether the agent directly caused a given outcome, positive or negative). Evidence of self-interested managerial behaviour includes the consumption of some corporate resources in the form of perquisite and the avoidance of optimal risk positions, whereby risk-averse agents bypass profitable opportunities in which the firm's principals would prefer they invest. Outside investors recognize that the firm will make decisions contrary to their best interests. Accordingly, investors will discount the prices they are willing to pay for the firm's securities.

Within this context, primary care physicians cannot be exempted from these predictable problems that may superimpose the agent's interest over that of the principal. Therefore the design of the structure of incentive systems for physicians ought to give reference to this theory. It is vital to make out between the level of compensation and (the amount expected to be paid to the agent by the principal) and the structure of compensation (the style in which compensation is linked to specific measures of performance). The amount of payment must be equal to or more than the amount the agent could receive in other occupations and, in the situation of primary physician payment, will be resolved by inherent social judgements concerning the expenditures necessary for attracting talented individuals into the profession (Prendergast 1999).

The structure of compensation, which is the main concern of this study, is premeditated to offer the highest compensation to the agent at the lowest cost to the principal. Differences in the compensation among professions are explained by economic theory as reflecting the features of the assignments and the persons who perform them, including the level to which performance is easily observed and appraised, the degree to which persons are averse to risk, the degree to which the considered necessary behaviour consists of one or compound tasks, and the degree to which collaboration between many agents is a central feature of the job to be carried out.

Conceptually, piece-rate is quite a simple payment method that offers commanding and by far performance incentive linked to effort, as measured by number of seed planted or shirt sewn. Piece-rates payment is analogous to spot contracting among firms, and aligns incentives well in contexts where the required behaviour is simple and easily measured

(MacNeil 1978). In the context of primary care physician payments, fee-for-service is on the whole, obvious example of piece-rate. In this case, every clinical assignment is assigned a distinctive identifier that allows indexing and conversion into monetary units. Both within and outside medicine, fee-for-service is infrequent while many professions adopt low-incentivised forms of payment with frail link between performance and compensation (capitation and salary for example). Ubiquity of alternative payment mechanisms testifies to the fragility of piece rates in the context of incomplete information, risk aversion and wiliness of agents to pursue self-interest with guile when the opportunity arises (Robinson James C. 2001).

In principle, piece rates will render the principal to abuse in the contexts where the agent's specific activities undertaken cannot be observed and evaluated. The agent is therefore incentivised to render service and care beyond the lowest amount necessary to achieve the principal's goals. There is much incentive to work more in order to gain more. In general, piece-rates and other retrospective payment methods of payment result in an input-intensive form of service that burns up resources as they had no substitute use and enjoys life as if there were tomorrow. On the other hand, prospective forms of payment for example the Norwegian DRG pre-bid rates system for hospital care and capitation for primary care motivate a more economical and cost-effective form of production.

Prospective payments however have their own shortcomings. Cost to the principal may not necessarily come wholly from the effort of the agent but other factors that agent has no control over; macro and microeconomic conditions, weather etc).

Prospective payments expose the agent to financial risk to the extent that definite compensation may be higher or lesser than the amount required inducing the desired behaviour from the agent (Penner 1997). Since the agent is risk averse, he will bargain for extra compensation for accepting the risk of income underperformance yet there may be equal probability of income over performance. Here the principal's duty is to design payment structure that will minimize the risk premium demanded by the agent to mirror the agent's own performance which consequently swings the payment structure back to piece rates. In most policy context, the design of incentive systems for physician will intermingle components of prospective (capitation and salary) and retrospective (fee-for-

service) by integrating base salaries, commissions, bonuses, profit sharing, and other ingenious methodologies.

Sometimes, the agent can take actions with different expected cost and so transferring risk from the principal to the agent may be endangered to a certain degree because the agent can possibly choose an action from among many different actions with the least cost. Such action may conflict the desired performance which the principal believes can achieve his target. Prospective payment methods, for example salaries can increase the tendency for agents to repudiate jobs which are more difficult. A prospective payment in health care exposes the provider of services to extra costs, and hence lowers net income, for treating patients with more severe underlying disease and greater need for time and services (Newhouse 1996). Some health care systems have tried to bridge the variation in costs in treating patients with more severe illness by adjusting payment rates for the expected degree of the patient's illness.

The Norwegian DRG and the USA Medicare DRG have age and sex adjustments for physician capitation rates. However, there is a belief that these adjustments may not necessarily account fully for the variation in costs of treating capitated patients. Some physicians receive too much payments while others receive less in adjustment. The tendency here is that low-paid physicians may leave the market or try to avoid treating patients with greater severity and high cost of treatment. On the other hand, overpaid providers or physicians will harvest unmerited compensation (Chone 2004).

In the contexts where the conduct desired of the agent consists of different jobs with some easily observed and others unobserved, the principal faces a complicated design challenge. If compensation is linked to performance the agent is enticed to put in more efforts and time in the jobs that are easily observed and paid in order to increase earnings (Homstrom and Milgrom 1991). GPs under QOF may be enticed to offer more services in order to increase earnings.

Agency problems pose a design challenge for health care sponsors and governments to the extent that pure forms of either capitation or fee-for-service may not be optimized structures of compensation for physician services. No wonder many advanced health care

systems have adopted a mixed system of payments that dilute the disadvantages of pure capitation and fee-for-service. Many writers have looked at the key characteristics of clinical practice in terms of economic incentives. First, payment method is linked to physician output and patient service; medicine is a face-to-face and one-to-one provision in which physicians and clinicians are to be motivated to work for longer hours, execute many clinical procedures and pay attention to the needs of every individual patient. In this context, fee-for-service or QOF can have a great impact in getting physicians undertake the required actions in view of the fact that physicians earn more when they offer more service to patients. Clearly, prospective payments like capitation will not encourage physicians to offer more since payment is not tied to performance and the number of services, tests, procedures undertaken etc. Capitation sometimes over rewards physicians who offer less service and care while some of them are paid less even though they may offer many multifaceted services and procedures.

Another dimension of clinical practice is the fact that physicians are risk acceptors in that they treat and manage most or sickest patients. There shouldn't be any reward for physicians who avoid sicker patients in favour of healthy ones. Again fee-for-service or QOF is the option here since more is paid to physicians for treating patients who need more care and service like those with chronic diseases while less income is paid for treating healthy patients who need less treatment and care. Capitation executes very badly in this context because physicians know their income in advance irrespective of their performance.

To some extent, physicians can be motivated to increase their efforts when payment is adjusted for sex, age and severity of sickness. However, as already argued, even a well-adjusted capitation may not be able to make up for the variations in treatment costs among patients so in this case fee-for-service P4P would offer the right motivation for physicians to be compensated extra for accepting to treat patients with deteriorating conditions.

Efficiency and appropriate scope of service is a vital feature of clinical practice where physicians are entreated to offer appropriate service to patients by avoiding overtreatment and undertreatment. Incentive systems should pay physicians who choose appropriate action at the right time and in the right environment. Fee-for-service motivates physicians

to offer needless service simply because they can do the wrong thing and still be paid for it. For the physician under fee-for-service, every referral is a lost fee to the extent that patients could be upcoded and made to return for further treatment even if the treatment would not be appropriate.

Clearly, capitation and other prospective payment methods seem to offer financial remedy to this supplier-induced demand. Capitation pulls a break on offering more service than needed to treat patients because physicians do not increase their income by offering more service.

Finally, physicians have been encouraged to bridge the gap in offering different treatment to patients with almost same or similar symptoms across the healthcare system.

Evidenced-based medicine and cooperation among physicians and specialists should be a priority. Here it can be argued that fee-for-service is limited in achieving this objective. It provides no payment for adopting practice style, cooperation etc. Capitation could inspire greater cooperation and practice patterns in appropriate settings heartening resource-conserving attitudes and behaviour.

## **2.2 CHARACTERISTICS OF PAYMENT METHODS: PREDICTIONS FROM THEORY.**

Physicians' incentive systems have been viewed from different dimensions. One of the major areas of concern is the link between the physicians' income and their activities. This will invariably determine whether the physicians' payments are related to their actual cost or not. These among other different characteristics will possibly influence physicians' behaviour in diverse ways. The on the next page explains types and theoretical implications of payment methods;

1.1 Summary of payment methods

Payment method	Definition	Implications / Predictions
Fee-for-service	This is where payment is made for each service such as office visit, procedure or other health care service	Tendency to over-prescribe, over-diagnose, over-treat to secure more revenue since physicians earn a net profit on each visit, and procedure carried out (Evans 1974). More incentive to intensify treatment just to increase income. Physicians may induce demand for health care and service where patient constraints may exist. Low referral rate since every referral is a lost fee (Woodward 1984). Accessibility to health service and care is very high since physicians do not face any financial risk for the intensive care provided (Hellinger 1996).
capitation	Where payment is made to a physician for every patient on their lists. Health care service providers (physicians), are paid a set amount for each enrolled person assigned to that physician, whether or not that person seeks care, per period of time.	Since capitation does not reimburse physicians any more for taking care of their patients, and visits and procedures cost money, the contracting physician essentially lose money for every visit or procedure. This situation incentivizes the physician to reduce the effort spent on each patient which could increase referral rates (Maynard 1986). The corollary practice is to under-treat, under-diagnose to reduce cost (Gosden 1999). Physicians may compete for patients by increasing

		<p>quality of their service. Also, physicians may want to avoid high costs by offering preventive care (Shimmura 1988). Unadjusted capitation may encourage physicians to deselect sicker patients (Matsaganis 1994).</p>
<p>salary</p>	<p>Where a lump sum payment is made to a general practitioner for a set number of working hours or sections per week</p>	<p>Amount is fixed irrespective of output levels. Cost and expenses are known in advance (Woodward 1984). No reward for quality and efficiency as well as ensuring accessibility. No incentive for resource utilization. Low-powered system with weak link between payment and performance. No financial risk (Rosen 1989).</p>

# **CHAPTER THREE**

## **3.0 HEALTH CARE SYSTEM IN UK AND NORWAY**

### **3.1 PRIMARY CARE OBJECTIVES**

Most primary care organizations are identified with set goals and objectives. The ultimate goal is to offer better health for all (WHO). However, different healthcare systems may have specific targets. In general, policy makers would want to achieve some of the following.

1. Universal coverage: reducing exclusion and social disparity in healthcare and creating room for open accessibility and equity, health resources should be distributed fairly so that nobody is denied access to essential care.
2. Sustainability: the primary health system can continue to achieve its goals using available resources. Reforms and policies should be adopted when they can be sustained and improved.
3. Efficiency, Cost containment and control: Health improvements should be achieved at the lowest possible cost. In an era when many countries spend considerable fraction of GDP on health care, steps must be taken to make sure that health expenditures do not exceed targets while efficiency is being achieved.
4. Quality: Appropriate and safe clinical services, adequate amenities, skilled staff, and essential drugs, supplies, and equipment should be available.
5. Client responsiveness: The system should meet people's expectations and protect their rights, including their rights to individual dignity, privacy, autonomy in decision making, and choice of health provider. Stakeholder participation must be increased.

### **3.2 NORWEGIAN HEALTH CARE SYSTEM**

General Practitioners are key providers of health care and they act as the gatekeepers for Norwegian healthcare sector. This role puts them as the first point of contact during times of illness. General Practitioners then will decide on the level of treatment, length of consultation, prescription of medication and the decision to send patients to specialists. Thus their role in the health care sector determines the success or otherwise of the health care sector; cost containment, accessibility to health care, rate of referrals, right utilization of medical resources etc.

In 2001, Norway reformed its General Practice where a list patient system called capitation was introduced. This system ensures that every resident is registered with a General Practitioner and the General Practitioner will have a list of patients to offer service to. This reform is intended to cement the contractual relationship between a General Practitioner and a patient in a stable relationship and also offer every individual a General Practitioner ( Luras 2003). It is believed that the reform came with a lot of merits as compared with the old system. General Practitioners are now paid on a mixed system basis; fixed salary, capitation and fee-for-service. General Practitioners on fixed salary are required to fulfil definite requirements concerning opening hours and/ or working hours. Fee-for-service constitutes payment related to the General Practitioners provision of service to patients. Capitation pays General Practitioners for the number of registered patients on their list. Even though some systems are based exclusively on one of these methods, but a mixed system where two or more of these methods are usually used and here the Norwegian system combines more than one of the above methods.

In the period preceding the reform of the Norwegian General practice, private General Practitioners were paid partly by fee-for-service, practice allowance component and salaries. Salaried physicians represented approximately 19% of primary care physicians, and were employed by the municipalities and received a salary. About 66% of primary care physicians were contract physicians. Now, the new system has done away with practice allowance and has been replaced by capitation. And fee-for-service now constitutes a larger part of General Practitioners income in the new system than before. Practice allowance constituted 40% of an average General practitioners income and fee-for-service made up of 60% in the old system. Now with the reform in place, fee-for-

service makes up 70% with capitation of 30%. There are places where it is not easy to engage and maintain health professionals, and there are places where the inhabitants are too small to fill the lists satisfactorily. In these regards, some local authorities have chosen to sign up PCPs at fixed salaries to ensure incentive to stay and work. After the reform, more than 90% of the PCPs are entrepreneurs, in contrast to less than 70% prior to the reform. 98, 5% of the population are listed with a PCP, compared to 67% claiming having had a regular doctor before.

### **3.3 BRITISH HEALTH CARE SYSTEM**

Economic theory and common sense validates the fact that the way people are paid has significant effects on their working pattern and output. Linking reimbursement directly with performance or productivity will tend to incentivise workers to increase service in order to make more money. This notice of inefficiency of linking payment with production or fee-for-service has motivated, predominantly, UK to the organization of health care system that either breaks the links between payment and output or at least severely dilutes its effects (Gosden T. 1999). Fee-for-service systems may be inefficient to some extent but other counter-balancing arguments, for example, the presence of a formal ethical code for adherence to by doctors may go a long way to take away that incentive to provide overtreatment<sup>11</sup> just to increase income levels. Other systems of payment also go with problems. The capitation system in UK has its own weakness. GPs compete for patients on the basis of quality of their care so that by drawing more patients they increase their income. However this phenomenon will depend on the ability of patients to observe the quality of care, which might be a much unsubstantiated postulation.

These setbacks with capitation prompted the government of England to introduce a series of financial motivations to encourage primary care physicians to meet up public health goals. In light of the uncertainties surrounding a single method of payment, the UK government introduced a salaried option for primary care physicians to improve the quality of care. This option functions alongside the current mixed system of capitation, allowances, target payments and fee-for-service. And Norway is no exception. “In the UK

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<sup>11</sup> More service than what is clinically appropriate for the treatment or management of health problem.

and Norway, all three types of payments are used<sup>12</sup>. Ghana is different from these two health care systems by the fact that physicians are mainly paid on salary contrary to mixed nature of UK and Norway. One major difference in the payment methods of the two countries is the fact that the UK has recently introduced what is called financial incentives to improve quality of care, sometimes called pay for performance schemes (P4P) or quality and outcomes framework (QOF). The United Kingdom got on the most go-getting of these schemes in 2004 with an initiative in which 25% of general practitioners' pay was tied to a multifarious set of quality indicators, the quality and outcomes framework (QOF). In general with other countries, most of the indicators in the unusual UK framework are related to clinical care. These incentives were connected with hastened improvement for some aspects of chronic disease management and a reduction in inequalities in the delivery of primary care<sup>13</sup>.

And more recently, in 2004, United Kingdom dedicated £1.8 billion (\$3.2 billion) to a new pay-for-performance contract for family practitioners<sup>14</sup>. The essence of this commitment is to reward high-quality care. About 146 performance indicators forms the basis for quality measurement and each general practice will be scored on these indicators according to measured quality it delivers, and its accrued score will resolve the level of payment it receives. This arrangement puts about 18 per cent of the general practitioners practice earnings at risk. This quality improvement policy is to complement and further dilute the weaknesses of the mixed system<sup>15</sup> already in place in the British health Care System. And it should be stated that this pay for performance or quality improvement arrangement is in response to the fact that financiers and payers (in this case the NHS) have realised the potential for achieving quality improvements by directly compensating measured quality.

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<sup>12</sup> Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, Sergison M, Pedersen L. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians 2000(Review)

<sup>13</sup> Roland Martin , professor of health services research, Marc Elliott, senior statistician, Georgios Lyratzopoulos, clinical senior research associate, Josephine Barbieri, research assistant, Richard A Parker, research assistant, Patten Smith, director of research methods, Peter Bower, reader in health services research, John Campbell, professor of general practice and primary care: Reliability of patient responses in pay for performance schemes: analysis of national General Practitioner Patient Survey data in England 2009.

<sup>14</sup> Stephen Campbell, Ph.D., David Reeves, Ph.D., Evangelos Kontopantelis, PhD.,Elizabeth Middleton, M.Sc., Bonnie Sibbald, Ph.D., and Martin Roland, D.M.(2007)

<sup>15</sup> Capitation, fee-for-service and salary already in place in the NHS (National Health Service)

## CHAPTER FOUR

### 4.0 LITERATURE REVIEW

This contains methodology and a descriptive review of existing literature on physician payment mechanisms and their effects on their clinical behaviour. It will throw light on the historical development of incentive contracting and payment methods for primary care physicians and how the various payment methods in other countries have impacted on the quality of health care delivery; cost containment, patient satisfaction etc. A search of the literature on physician incentives and their effects will be undertaken and the relevant literature would be picked for the review. Much of the literature would centre on the UK and the Norwegian experiences in terms of primary care physician payment methods and the effects they have on the clinical behaviour of the primary care physicians. Relevant examples would also be drawn from different settings to broaden the scope of the study so as to be able to draw both the theoretical and practical differences between different healthcare systems.

Capitation, fee-for-service plans, salary, mixed system of payment, physician practice patterns, financial mechanisms and general practitioner working practice are some of the keywords that would be used for the search. Books, articles and other relevant journals would be consulted. Physicians' payment designs can shape the quantity of services provided, the number of hours worked, how resourcefully the physician works and the quality of the services provided, whether physicians refer patients to specialists or hospitals rather than treating them themselves, and finally, the overall cost of physician services.

Many writers and authors have studied and reviewed literature on General Practitioners and the effects of various payment methods on their clinical behaviour. Both medical and health economics literature have responded to the need to gather more information on general practice particularly on the payment methods and their effects (Scott, 2000 and Marc Jegers, 2002)<sup>16</sup>. Most of the recent and old literature on this issue almost point to the

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<sup>16</sup> Co-authored by Katrien Kesteloot, Diana De Graeve, and Willem Gilles. A typology for provider payment systems in health care 2000.

same direction in terms of conclusions. Paying General Practitioners by fee-for-service have sent many healthcare systems into escalating healthcare cost since such system encourages over utilization of resources and services since General Practitioners receive more if they offer more services (McGuire, 2000, Donaldson and Gerard 1989).

Theory and empirical predictions have proved that General Practitioners who are on salaries are not by any means able to increase their income if they provide more service to patients. Regardless of output levels, income remains the same so there is much incentive to offer less and lower services to patients. But salaries on the other hand are used in a positive way to reduce and contain cost in a context where the healthcare objective is to reduce or maintain a certain level of budget (Gosden 1999, Woodward 1984).

In view of the pros and cons of singular methods of payments, many systems have now responded by adopting mixed systems of payment that combine the advantages of fee-for-service, capitation and salaries and at the same time dilute the downsides, at least from theoretical perspective.

## **4.1 METHOD**

This narrative review is based on a systematic Pubmed/Medline, Econlit and google scholar searches of the terms; salary or fee-for-service or capitation or reimbursement or payment for performance or quality and outcomes framework or incentive in juxtaposition with the following: general practitioner or family physician or general practice or primary health care or primary physician. The search was limited to studies and publications from 2000 to 2010 relating to the effects of physician payment methods. As this study is to evaluate effects of physician payment methods in UK and Norway, results were limited from UK or Norway. The abstracts of the studies identified through systematic searches were screened for relevancy and applicability. The full texts of studies were examined based on the fact that; they were conducted in Norway or UK, they reported effects of physician payment methods and were published from the period of 2000 to 2010.

## 4.2 DESCRIPTION OF INCLUDED STUDIES

Owing to the search strategy and also the characteristics of the subject, 213 studies were identified. After examining titles and removing duplicates and studies not in English, 32 studies were regarded to merit further examination. Subsequent to a careful screening of abstracts for relevancy, 15 studies were read through among which 10 were selected for this narrative review. 1 paper of the included studies is cross-sectional study (Rune Sorensen, 2003), 3 studies are time series, Tim Doran 2007, S. M Campbell 2007 and David Reeves (2008). 2 studies were longitudinal, Diane Whally 2007, and Christopher M. 2007. Only 1 of the included articles is controlled before and after study, T Gosden 2002 and 1 exploratory study by Luras 2000. The following studies used qualitative methods with questionnaire administration and interviews, S.M Campbell 2008, Jostein 2000. The table below presents literature to be discussed.

### *1.2 Results and findings of the included studies.*

Title and study	Methods and characteristics	Results
Rune J. Sørensen, Jostein Grytten: Service production and contract choice in primary physician services, 2003.	A cross-sectional data derived from a comprehensive questionnaire survey of Norwegian primary care Physicians. Service production for primary care physicians was measured using indicators such as number of consultations and number of patient. The survey was carried out in November 1998.	Physicians with a fee-for-service contract produced a higher number of consultations and other patient contacts than physicians with a fixed salary. They find out that a change from a salary contract to a fee-for-service contract will increase service production by 20% to 40%. Salaried Physicians had the least mean number of consultations per year:

	<p>Altogether 2491 primary care physicians were selected to take part in the study. The sample was randomly drawn from the register of doctors held by the Norwegian Medical Association; this includes nearly all primary care physicians in the country. The response rate of 66%, which is considered to be satisfactory for this type of study. The sample represents 47% of all primary care physicians in Norway.</p>	<p>2341. The average number of consultations for contract physicians was 1337 higher than for salaried physicians. Contract physicians also had a higher number of contacts of other types than salaried physicians. Contract physicians have 43% more consultations and 80% more patient contacts of other types compared with salaried physicians. However, a part of the difference is due to a selection effect: Salaried physicians prefer shorter working hours and prefer to work less intensively. These results demonstrate that type of contract has significant effects on service production. The message from this research is simple: contract design affects primary care physicians' service.</p>
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<p>Christopher Millett, Jeremy Gray, Sonia Saxena, Gopalakrishnan Netuveli, Azeem Majeed: Impact of a pay-for-performance incentive on support for smoking cessation and on smoking prevalence among people with diabetes, 2007.</p>	<p>A population-base longitudinal study of the recorded delivery of cessation advice and the prevalence of smoking using electronic records of patients. With diabetes obtained from participating general practices. The survey was carried out in an ethnically diverse part of southwest London before (June–October 2003) and after (November 2005–January 2006) the introduction of a pay-for performance incentive.</p>	<p>Significantly more patients with diabetes had their smoking status ever recorded in 2005 than in 2003 (98.8% v.90.0%, <math>p &lt; 0.001</math>). The proportion of patients with documented smoking cessation advice also increased significantly over this period, from 48.0% to 83.5% (<math>p &lt; 0.001</math>). The prevalence of smoking decreased significantly from 20.0% to 16.2% (<math>p &lt; 0.001</math>). The reduction over the study period was lower among women (adjusted odds ratio 0.71, 95% confidence interval 0.53–0.95) but was not significantly different in the most and least affluent groups. In 2005, smoking rates continued to differ significantly with age (10.6%–25.1%), sex (women, 11.5%; men, 20.6%) and ethnic background (4.9%–24.9%). The introduction of a pay-for-performance incentive in the United Kingdom increased the</p>
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		<p>provision of support for smoking cessation and was associated with a reduction in smoking prevalence among patients with diabetes in primary health care settings.</p>
<p>Stephen M. Campbell, PhD, David Reeves, PhD, Evangelos Kontopantelis, PhD, Bonnie Sibbald, PhD, and Martin Roland, D.M : Effects of Pay for Performance on the Quality of Primary Care in England (2007)</p>	<p>An interrupted time-series analysis of the quality of care in 42 representative family practices, with data collected at two time points before implementation of the scheme (1998 and 2003) and at two time points after implementation (2005 and 2007). At each time point, data on the care of patients with asthma, diabetes, or coronary heart disease were extracted from medical records; data on patients' perceptions of access to care, continuity of care, and interpersonal aspects of care were collected from questionnaires. The analysis included aspects</p>	<p>Between 2003 and 2005, the rate of improvement in the quality of care increased for asthma and diabetes (<math>P &lt; 0.001</math>) but not for heart disease. By 2007, the rate of improvement had slowed for all three conditions (<math>P &lt; 0.001</math>), and the quality of those aspects of care that were not associated with an incentive had declined for patients with asthma or heart disease. As compared with the period before the pay-for-performance scheme was introduced, the improvement rate after 2005 was unchanged for asthma or diabetes and was reduced for heart disease (<math>P = 0.02</math>). No significant changes were seen in patients' reports on access to care or on interpersonal aspects of</p>

	<p>of care that were and those that were not associated with incentives.</p>	<p>care. The level of the continuity of care, which had been constant, showed a reduction immediately after the introduction of the pay-for-performance scheme (<math>P &lt; 0.001</math>) and then continued at that reduced level. Against a background of increases in the quality of care before the pay-for-performance scheme was introduced, the scheme accelerated improvements in quality for two of three chronic conditions in the short term. However, once targets were reached, the improvement in the quality of care for patients with these conditions slowed, and the quality of care declined for two conditions that had not been linked to incentives. Continuity of care was reduced after the introduction of the scheme.</p>
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<p>Toby Gosden, Bonnie Sibbald A, Jacky Williams B, Roland Petchey C, Brenda Leese : Paying doctors by salary: a controlled study of general practitioner behaviour in England (2002)</p>	<p>A controlled before-and-after study design to evaluate the effects of salary payment. From the study group of 46 salaried pilot sites, ten practices were sampled in which GPs had switched from standard GMS contracts to salaried contracts without moving practice (PMS practices). A sample of ten practices owned and staffed by standard contract GPs (GMS practices) was matched to the PMS practices in terms of the number of whole time equivalent (WTE) GPs and deprivation amongst the patient population. Diaries completed by GPs for a 1-week period in the first year of PMS (time period 1: December 1998-June 1999) and again 1-year later (time period 2: December 1999-June 2000) collected information on: time spent in surgery, practice administration, out-of-hours work, and other non-patient work; numbers of consultations; and the</p>	<p><u>KEY</u>  GMS (General Medical Service) =GPs on fee-for-service and capitation.  PMS (Personal Medical Service)=GPs on salary.</p> <p>PMS GPs provided relatively more surgery consultations and saw more patients out-of-hours compared with GPs in GMS practices. For both surgery and out-of-hours consultations, PMS doctors were providing relatively more consultations because the drop in the GMS group was greater than that observed in the PMS practices. Prescriptions were given in fewer consultations in PMS practices compared with GMS. Referral rates in both PMS and GMS practices were similar and changed little over time. None of these differences were statistically significant.</p>
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	<p>proportion of consultations in which a prescription was given or a referral made.</p> <p>Researchers attended on the first and last day of each diary period to measure consultation length.</p>	
<p>Stephen M. Campbell, PhD, Ruth McDonald, PhD Helen Lester, MD: The Experience of Pay for Performance in English Family Practice: A Qualitative Study 2008.</p>	<p>Using a semi structured interview format, they interviewed 21 family doctors and 20 nurses in 22 nationally representative practices across England between February and August 2007.</p>	<p>Participants believed the financial incentives had been sufficient to change behaviour and to achieve targets. The findings suggest that it is not necessary to align targets to professional priorities and values to obtain behaviour change, although doing so enhances enthusiasm and understanding. Participants agreed that the aims of the pay-for-performance scheme had been met in terms of improvements in disease-specific processes of patient care and physician income, as well as improved data capture. It also led to unintended effects, such as the emergence of a dual QOF-patient agenda within consultations, potential deskilling of doctors as a result of the enhanced role for nurses in managing long-term</p>

		<p>conditions, a decline in personal/relational continuity of care between doctors and patients, resentment by team members not benefiting financially from payments, and concerns about an ongoing culture of performance monitoring in the United Kingdom.</p>
<p>Iversen, T. And Luras, The effects of Capitation on GPs referral decisions, 2000.</p>	<p>Exploratory empirical study with data from a sample of GPs participating in the experiment. The experimental period was 3 years. Data were extracted in the municipality of Trondheim about the number of referrals GPs made during the experiment. Thirty-three replied, which is just above 37% of the GPs practising in the municipality. One important reason for the relatively low response rate is probably that Norwegian GPs receive many questionnaires and inquiries from health authorities, researchers and pharmaceutical firms.</p>	<p>The result shows that the total referral rate increased by 42% from 1993 to 1996 when the effect of other independent variables is taken into account. A closer look at the results from the estimation shows that the effect on the rate of referrals to privately practising specialists is positive and is also statistically significant. In a 3-month period, the average GP will refer six more persons to private Specialists. The effect on the rate of referrals to hospitals is positive, but is not significant.</p>

<p>Jostein Grytten, Rune Sørensen: Type of contract and supplier-induced demand for primary physicians in Norway 2000.</p>	<p>The main analyses were performed on a set of data which were collected using a questionnaire sent to a sample of contract and salaried physicians in 1998. From that set of data, the effect that (supplier-induced-demand) SID might have on the mean number of laboratory tests per consultation and the proportion of consultations lasting more than 20 min was examined. The population from which the sample was drawn encompassed all contract physicians (<math>n = 1818</math>) and salaried physicians (<math>n = 564</math>) on the register kept by the Norwegian Medical Association. This register is considered to include nearly all physicians in Norway. The response rate for Contract physicians was 68%, and for salaried</p>	<p>There was no difference in the mean number of laboratory tests per consultation between contract and salaried physicians. Contrary to predictions, contract physicians did not have more consultations lasting for more than 20 min than salaried physicians. The analyses of physicians' choice of contract showed the expected results-those physicians who give priority to family, leisure-time and community medicine duties preferred a salary contract. In conclusion, they did not find SID for primary physician services in Norway.</p>
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	<p>physicians 57%. The non-responders were evenly distributed according to gender, age and place of residence.</p>	
<p>Diane Whalley, Hugh Gravelle and Bonnie Sibbald : Effect of the new contract on GPs' working lives and perceptions of quality of care: A longitudinal survey 2007.</p>	<p>A longitudinal postal survey of English GPs in February 2004 and September 2005. Measures included reported job satisfaction (7-point scale), hours worked, income, and impact of the contract. The response rate to the 2004 survey was 54% and of the GPs responding in 2005, 63% responded again in 2005.</p>	<p>Responses were available from 2105 doctors in 2004 and 1349 in 2005. Mean overall job satisfaction increased from 4.58 out of 7 in 2004 to 5.17 in 2005. The greatest improvements in satisfaction were with remuneration and hours of work. Mean reported hours worked fell from 44.5 to 40.8. Mean income increased from an estimated £73 400 in 2004 to £92 600 in 2005. Most GPs reported that the new contract had increased their income (88%), but decreased their professional autonomy (71%), and increased their administrative (94%) and clinical (86%) workloads. After the introduction of the contract doctors were more positive than they had anticipated about its impact</p>

		on quality of care.
<p>Tim Doran, M.P.H., Catherine Fullwood, Ph.D., Hugh Gravelle, Ph.D., David Reeves, Ph.D., Evangelos Kontopantelis, Ph.D., Urara Hiroeh, Ph.D., and Martin Roland, D.M.: Pay-for-Performance Programs in Family Practices in the United Kingdom 2007.</p>	<p>Analysed data extracted automatically from clinical computing systems for 8105 family practices in England in the first year of the pay-for-performance program (April 2004 through March 2005), data from the U.K. Census, and data on characteristics of individual family practices. They examined the proportion of patients deemed eligible for a clinical quality indicator for whom the indicator was met (reported achievement) and the proportion of the total number of patients with a medical condition for whom a quality indicator was met (population achievement), and they</p>	<p>English family practices attained high levels of achievement in the first year of the new pay-for-performance contract. A small number of practices appear to have achieved high scores by excluding large numbers of patients by exception reporting. More research is needed to determine whether these practices are excluding patients for sound clinical reasons or in order to increase income. The median reported achievement in the first year of the new contract was 83.4 percent (interquartile range, 78.2 to 87.0 percent). Sociodemographic characteristics of the patients (age and socioeconomic features)</p>

	<p>used multiple regression analysis to determine the extent to which practices achieved high scores by classifying patients as ineligible for quality indicators (exception reporting).</p>	<p>and practices (size of practice, number of patients per practitioner, age of practitioner, and whether the practitioner was medically educated in the United Kingdom) had moderate but significant effects on performance. Exception reporting by practices was not extensive (median rate, 6 percent), but it was the strongest predictor of achievement: a 1 percent increase in the rate of exception reporting was associated with a 0.31 percent increase in reported achievement. Exception reporting was high in a small number of practices: 1 percent of practices excluded more than 15 percent of patients.</p>
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<p>Tim Doran, Catherine Fullwood, Evangelos Kontopantelis, David Reeves: Effect of financial incentives on inequalities in the delivery of primary clinical care in England: analysis of clinical activity indicators for the quality and outcomes framework 2008.</p>	<p>Data extracted automatically from clinical computing systems for 7637 general practices in England, data from the UK census, and data for characteristics of practices and patients from the 2006 general medical statistics database. Practices were grouped into equal-sized quintiles on the basis of area deprivation in their locality. The overall levels of achievement were calculated, defined as the proportion of patients who were deemed eligible by the practices for whom the targets were achieved, for 48 clinical activity indicators during the first 3 years of the incentive scheme (from 2004–05 to 2006–07).</p>	<p>Median overall reported achievement was 85·1% (IQR 79·0–89·1) in year 1, 89·3% (86·0–91·5) in year 2, and 90·8% (88·5–92·6) in year 3. In year 1, area deprivation was associated with lower levels of achievement, with median achievement ranging from 86·8% (82·2–89·6) for quintile 1 (least deprived) to 82·8% (75·2–87·8) for quintile 5 (most deprived). Between years 1 and 3, median achievement increased by 4·4% for quintile 1 and by 7·6% for quintile 5, and the gap in median achievement narrowed from 4·0% to 0·8% during this period. Increase in achievement during this time was inversely associated with practice performance in previous years (<math>p &lt; 0·0001</math>), but was not associated with area deprivation (<math>p = 0·062</math>).</p>
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### **4.3 EMPIRICAL RESULTS AND PREDICTIONS FROM THEORY**

The principal objective of the literature review was to discover the link between empirical evidence and theoretical predictions of effects of physician payment systems. Some of the evidences from the review give mixed messages. For example, Rune J. Sorensen discovered that fee-for-service GPs ordered more tests, more consultations and patients contacts than salaried physicians while Gosden T. did not find the same results in a controlled before and after study in UK. An earlier study by Jostein and Sorensen in 2000, did not find any differences in service production between salaried and fee-for-service physicians. These findings seem to present contradicting information. While some studies support theoretical predictions, others do not. Iversen T and H. Luras 2000, used exploratory study to confirm that patient list system or capitation can influence referral rates. GPs under capitation were found to have increased their referral rates by 42% after the new payment system was implemented.

All the studies on QOF or P4P in the UK have some agreement on the general improvement of quality after the introduction of the reforms. There were improvements in some aspects of clinical care over and above the underlying trend after the introduction of a pay-for-performance scheme (Stephen M 2007). In 2008, the same authors used interrupted time-series analysis to find out that QOF has brought accelerated improvement in quality of care. In the Christopher M. Studies 2007, notably more patients with diabetes had their smoking status ever recorded in 2005 than in 2003. The fraction of patients with documented smoking cessation advice also increased considerably over this period and the prevalence of smoking decreased also. Diane Whalley and Tim Doran 2007, made similar findings about the effects of P4P in the UK. The trend of the studies in UK supports theoretical predictions.

By conclusion, it can be said that empirical evidence supports the theory and predictions of QOF or P4P. This is from the fact that the literatures reviewed have shown improvements in quality of service delivery and also physicians' satisfaction in terms of pay increases. Capitation, as expected is proven to increase referral rates and may therefore not contain cost as already thought about. Referrals may reduce primary care cost but there could be cost transfer from primary care to specialists. The price would be paid at the secondary level which might be very more expensive. The findings did not give strong evidence to

support the fact that fee-for-service is a strong incentive for resource utilization as against salary.

# CHAPTER FIVE

## 5.0 POSSIBLE LESSONS FOR GHANA

### 5.1 HEALTH CARE SYSTEM IN GHANA

Ghana is a country of about 23 million inhabitants. The country is located on the west coast of Africa, about 750km north of the equator, between the latitudes of 4 ° -11.5 ° north. The total land area of the country is 238,540 km<sup>2</sup>. The country is bounded on the north by Burkina Faso, on the west by Cote d'Ivoire, on the east by Togo and on the south by the Gulf of Guinea.

The Ghana healthcare system has gone through so much financing arrangements. Before independence, health care was free for expatriates, Gold coast support workers and opinion leaders. After independence, health care was fully free for government officials and workers including school pupils and students. Token fees were introduced in 1972 and Significant fees introduced in 1985 “cash and carry”<sup>17</sup> backed by Legislation. The aim was to recover 15% public sector operating costs. However major problems with financial access and equity especially for expensive illness episodes became a public issue.

This and other problems prompted the government of Ghana in 2003, to introduce the National Health Insurance Scheme (NHIS) with the slogan ‘Sharing our care the traditional way’ when it was fully launched (Ministry of Health, 2002). The introduction of Ghana Health Insurance was partly triggered by evidence, politics, donors and the international financial organizations. The scheme uses barely salaries for remunerating physicians. Cost containment might be the major reason for implementing such a low intensive resource utilization technique when the majority of Ghanaians may not have access to basic healthcare services.

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<sup>17</sup> This was a system of financing health care where patients had to pay out of pocket whenever they sought medical service.

Under the new financing arrangement (National Health Insurance Scheme NHIS), where health to a large extent would be financed by taxes and premium contributions as summarised below;

1. 2.5 % SSNIT contribution of workers (Social Security Contributions)
2. 2.5% VAT levy of selected goods and service
3. Minimum premium of 72,000 cedis (7.74 US\$) per annum from informal workers,
4. Parliamentary approval from the consolidated fund.
5. Donation, grants, gifts other voluntary contributions
6. Money that may accrue from the investment by National Health Insurance Company (NHIC).

The government and for that matter the Ministry of Health set goals and objectives for the country's healthcare system;

1. Assure equitable universal access for all residents in Ghana to an acceptable quality of essential health services. It is compulsory for all residents in Ghana to belong to at least one of the three types of permissible schemes.
2. To replace "Cash and Carry". The old system is to be done away with and create access to benefit package irrespective of one's socio-economic status. Meanwhile, healthcare expenditures should be made within budget targets to control and contain cost.
3. Ensure every resident in Ghana belong to a health insurance scheme within five years from start of the programme.
4. Risk Equalization: risk of illness is equally shared among all; hence, disease burden and mortality pattern shall serve as one of the basis for the allocation of funds to geographical areas in the country. This was to be based on the following design principles;

Cross subsidization:

1. Ability to pay (Graduated premiums)
2. Rich subsidizes the poor
3. The healthy subsidizes the sick
4. The economically active adults pay for children, indigents and the aged.
5. Quality care: Value for money.
6. Solidarity: Vulnerable group- children, aged and the poor need the support of the healthy. And the concept of positive externalities prevails

Over the past four decades, Ghana has implemented several health policies aimed at reforming the healthcare sector (Krasovec. K., and Shaw, R. (2003). These policies include Free Health Care policy, Cost Sharing (user fees), Cash-and-Carry System and more recently, the National Health Insurance Scheme. The government has also embarked on organizational and policy changes which has brought into being a decentralized health service, the establishment of the Ministry of Health as an autonomous institution by an Act of Parliament etc. The key objectives of these reforms relate to issues such as improving equity of access to services, effectiveness of care, efficient utilization of resources, cost containment and control, satisfaction of users, and sustainability as stated above.

## **5.2 LESSONS FOR GHANA FROM THE REVIEWED STUDIES**

Ghana's vision for the new reforms in 2003 as stated by the Ministry of Health, 2002, says to assure equitable universal access for all residents in Ghana to an acceptable quality of essential health services. The Government is also keen to ensure efficiency and maintain expenditure within budget allocations. And further, the new health care reforms have been summarised as, to replace "Cash and Carry", ensure every resident in Ghana belong to a health insurance scheme within five years from start of the programme, equal access to benefit package irrespective of one's socio-economic status, risk of illness is equally shared among all; hence, disease burden and mortality pattern shall serve as one of the basis for the allocation of funds to geographical areas in the country. With these objectives and vision, there is no doubt that GPs have a part to play to make the reforms fruitful.

For Ghana's health sector to achieve a reasonable and satisfactory level of its set objectives, great lessons should be learnt from the Norwegian and the U.K systems. Obviously, most developed economies like Norway and U.K, have responded to the weaknesses of singular methods of remunerating GPs. Salaried GPs are known to order less tests, longer consultation times and less regard for ensuring accessibility of care just because income is well known in advance and so changes in output do not affect physician earnings. So there is no incentive to improve quality, yet alone to make use of office hours efficiently.

Some writers argue from a perspective that, the nature of physician socialisation and training serves as enough check to guide their decisions to be mainly based on patients' health status. This argument is not so much supported by existing literature at least not by this review.

Consequently, since salaried GPs are associated with lower levels of tests and less intensive care provision, the argument follows that it can be a great tool for cost containment if the health care objective is to contain or maintain a certain level of budget.

However, this theoretical prediction was not fully supported by the literatures reviewed. In the Gosden 2002, referral rates were similar and even though fee-for-service Physicians provided relatively more surgery and consultation than salaried Physicians, the authors found the results to be scientifically insignificant. Also, in Jostein 2000, opposite to predictions, fee-for-service Physicians did not have consultation period different from salaried physicians and that incidence of supplier induced demand was not found. However, in Rune 2003, as predicted, fee-for-service Physicians undertook more consultations and other patients' contacts. These disagreements over salaries and fee-for-service make it difficult to predict any lesson for Ghana. However, this should challenge the Government of Ghana to undertake scientific research into the effects of these payment methods.

From the objectives of Ghana health care, universal accessibility ranks very prominent. This requires motivated GPs to ensure more patients are taken care of. Fee-for-service could be a good tool to ensure universal coverage. At least from the literature reviewed, Rune J. Sørensen, Jostein Grytten, 2003 showed that fee-for-service GPs produce higher patient contacts and consultations than salaried GPs. Doctors make more money if they treat more illnesses and undertake more clinical procedures. Again I will say that more insight and research are needed into the link between fee-for-service and access to health care. The culture and the economic circumstances in Ghana would have to be taken into account on GPs attitudes to financial incentives. As Jostein Grytten, 2000, indicated, GPs preferences affect their choice of contract. GPs who would like to enjoy family life and have more leisure time would prefer salary contracts.

With the introduction of pay for performance in UK, great lessons can be learnt by Ghana and Norway even though not so much studies have evaluated the impacts so far. Available evidences show that quality is improving at least for certain chronic diseases (the table above). However, these evidences of the impacts of physician payment methods may not be vigorous enough to be fully applied in every policy context. Therefore it should be the

interest of Governments and other stakeholders to evaluate these payment methods, if at all possible, use randomised controlled trial studies or prospective study designs if relevant.

Since Ghana uses salary as the major payment mechanism, there might be the need to consider other options depending on what the country wants to achieve. The evidences available from Norway and U.K plus other studies will give Ghana very good lessons for any major policy reforms of its general practice especially in the area of physicians' payment methods. And it must be stressed that any major policy in this area must take into account the economics of principal-agent theory. As already explained, the tendency for physicians to pursue selfish interest ahead of the principal complicates the design of incentive systems. All the systems that link performance to payment like FFS, QOF or P4P may give an unscrupulous agent the chance to offer more service than needed by the patients just to increase income. In this wise, Ghana will have to adopt other control measures in order to limit the agency problems if any reform are to be carried out within its primary physicians' remuneration system.

The area of cost control and containment has been a concern to health care policy makers. Ghana is not an exception. With the new health insurance system, health administrators are required to spend within budgetary allocations. This objective cannot be achieved easily alongside other equally important ones. Capitation have been known to contain cost but the findings of Luras, 2000, shows that GPs increase their referral rates which could transfer cost from primary care to secondary health care Institutions. In the end, cost would not be contained because every referral would go a long way to increase Government expenditure. And besides, treating patients at the primary level is less expensive than referring to specialists.

From the review so far, a combination of fee-for-service, capitation and salary could be a better option than barely implementing a singular method as currently exists in Ghana. Also, pay for performance can be an option as has been experimented in the UK in areas of chronic disease management. Maybe the current reform needs further reforms to position GPs rightly in the general practice in order to achieve the objectives and the healthcare vision of Ghana. In conclusion, I will say that this review cannot predict an optimized

system of paying GPs for Ghana given the inconsistent findings of some of the included studies.

## CHAPTER SIX

### 6.0 DISCUSSIONS

This paper represents an attempt to study the impact of payment methods on GPs' behaviour in the U.K and Norway and to analyse if there are lessons Ghana can learn and apply given the socio-economic system and cultural values of Ghana. Bearing in mind the small number of studies, the methodological quality included in this review is variable.

The very objectives of this review were to unearth facts on PCPs behaviour with regard to the way they are paid. The first was the impact of payment methods on health care cost, whether payment methods can increase cost or contain cost. In the Rune J. S and Jostein G, 2003, physicians with fee-for-service produce higher number of consultations and other forms of patient contacts than physicians with fixed salary. They found out that changing from salary to fee-for-service had the potential of increasing service production by 20% - 40%. These results demonstrate that type of contract has significant effects on service production. This finding is supported by Davidson, 1992, who found that the number of primary care physicians visits in the new fee-for-service group was greater than the number provided by capitation doctors.

A similar study by Kristiansen and Hjortdahl 1992, on GPs in Norway pointed to the same direction. They support the findings of Rune J and Jostein G. Fee-for-service GPs were likely to order more urine tests, more likely to have shorter consultations, more likely to undertake home visits than salaried GPs. However, Gosden, 2002, did not find the same with British NHS. Even though, PMS GPs provided relatively more surgery consultations and saw more patients out-of-hours compared with GPs in GMS practices. For both surgery and out-of-hours consultations, PMS Doctors were providing relatively more consultations because the drop in the GMS group was greater than that observed in the PMS practices. However, none of the above was statistically significant and he concluded that switching to salary payment may not adversely affect GP productivity or quality of care. GPs on salary payment did not behave as expected with regard to the number and length of surgery consultations, surgery hours worked, time spent working out-of hours, list sizes or prescribing. Also, regardless of the incentive to do so, there was

no difference in the mean number of laboratory tests per consultation between contract and salaried physicians. Contrary to predictions, contract physicians did not have more consultations lasting for more than 20 min than salaried physicians, (Jostein Grytten, Rune Sørensen (2000)).

The authors did not find supplier-induced-demand among Norwegian physicians. This is reinforced by earlier study of the Canadian system by Hutchison 1996, who found out that when payment method was changed, capitation did not lower hospitalization rates.

However, the results of this study must be interpreted cautiously since the response rate for both salaried physician and fee-for-service physicians were 57% and 68% respectively. Even though the response rate is that high, the other non-responders could change the entire outcome of the study. In summing up, there is inconsistent evidence to believe that the quantum of services offered by primary care physicians under fee-for-service was greater than that provided by salaried physicians in both Norway and England.

Secondly, an important issue that warranted this study was whether quality of service delivery and patient satisfaction could be achieved under any of the methods of payments. In tackling this question, it is likely that capitation, in order to attract more patients may offer more service as a sign of quality and also deliver services that reduce future cost, for instance, health promotion, and preventive care etc. Also, Quality and Outcomes Framework (QOF) or Pay for Performance was expected to convey greater incentive to meet targets leading to high quality and expenses, increased administrative etc since GPs receive more upon meeting the quality indicators targets.

The Christopher Millett study, 2007, found out that, significantly more patients with diabetes had their smoking status ever recorded in 2005 than in 2003. The proportion of patients with documented smoking cessation advice also increased significantly over this period. The prevalence of smoking decreased significantly ( see table 1.2). Thus, the introduction of a pay-for-performance incentive in the United Kingdom increased the provision of support for smoking cessation and was associated with a reduction in smoking prevalence among patients with diabetes in primary health care settings. This conclusion is supported by Tim Doran, Catherine Fullwood, Evangelos Kontopantelis, David Reeves (2008)

Also, M Campbell, 2007, found that between 2003 and 2005, the rate of improvement in the quality of care increased for asthma and diabetes but not for heart disease. By 2007, the rate of improvement had slowed for all three conditions, and the quality of those aspects of care that were not associated with an incentive had declined for patients with asthma or heart disease. No significant changes were seen in patients' reports on access to care or on interpersonal aspects of care. Also, in 2008, the same authors found out from a semi-structured interview with some British nurses and PCPs who believed that the financial incentives had been sufficient to change behaviour and to achieve targets. The Participants agreed that the aims of the pay-for-performance scheme had been met in terms of improvements in disease-specific processes of patient care and physician income and satisfaction, as well as improved data capture.

Whalley, (2007), made similar findings. The mean overall job satisfaction among GPs increased. The greatest improvements in satisfaction were with remuneration and hours of work. Most GPs reported that the new contract had increased their income (88%), but decreased their professional autonomy (71%), and increased their administrative (94%) and clinical (86%) workloads. GPs in UK, according to this study, were more positive than they had anticipated about its impact on quality.

In conclusion, it seems that quality of care has improved with the introduction of the pay for performance scheme in UK. The evidence concerning access to care and GPs job satisfaction and quality of care given seems to agree. The methodological weakness inherent in some of the studies, for instance, Stephen M. Campbell, 2008 interviewing 22 and 21 doctors and nurses respectively may weaken his findings. Therefore, strict conclusions about quality improvement with the introduction of pay for performance may be misleading. None of the studies included reported on how capitation or salary or fee-for-service affects quality of service. However, the Luras study 2000, examined the impact of capitation on GPs referral rates. The authors did not consider the relationship between capitation and quality of service delivery.

Another issue intended to be addressed by this review was the link between capitation and referral rates among PCPs, whether capitation increases referral rates. The expectation was that capitated PCPs would refer patients to specialists in order to reduce cost (Stearns et al. 1992). One of the studies reviewed (Iversen/Luras 2000) examined the issue of referral rates among physicians in the Norwegian health care system. There was evidence that the overall referral rate increased by 42% within a period of three years during the experimentation. This finding is contrary to an earlier study in Ontario, Canada. The author, Hutchinson 1994, found out that hospital utilization rates and GP referral rates did not differ between capitated and fee-for-service practices.

However, Iversen and Luras are supported by the Krasnik 1990 study which investigated the effects of a change from capitation system to a mixed of capitation and fee-for-service on the practice patterns of a sample of GPs in Copenhagen city. After the change, the rates of examinations, diagnostic, and curative services were significantly higher. Rates of referrals to hospitals and specialists however decreased remarkably. This is a clear message that introduction of fee-for-service remuneration as compared with capitation payment alone may encourage doctors to increase utilization of their own service, reduce referral rates and reallocate their time to more profitable services. Thus the conclusion reached by Iversen and Luras may have support from the empirical literature. However, a response rate of 37% renders the outcome of the study quite unreliable to make a generalization.

The issue of accessibility of health care service is very critical for many health care plans. Christopher Millett, 2007, found out that more patients with diabetes had their smoking status recorded under the new QOF system. He used a population-based longitudinal study in south London. The outcome confirms that introduction of a pay-for-performance incentive in the United Kingdom increased the provision of support for smoking cessation and was associated with a reduction in smoking prevalence among patients with diabetes in primary health care settings. So it can be argued here that physicians' clinical decisions are not only determined by patients' health status but also, the payment methodology. Thus these findings add to existing literature that doctors when given apposite incentive (fee-for-service), can manipulate demand for health care service and as a result patients'

use of services. As noted by Hickson, Gerald B. (1987), this finding substantiates, with direct evidence, the observation made by Rossiter and Wilensky (1983) that physicians induce or initiate demand for care.

The applications of the findings of the included studies were not scientifically assessed and can be questioned. There were different GPs and nurses involved in the studies and the background and context of each study were very diverse. The different professional, organizational and cultural settings between practices and countries would affect the generalisation of the findings.

## CHAPTER SEVEN

### 7.0 CONCLUSION AND RECOMMENDATIONS

The results of the literature reviewed confirm that selection of payment methods is not a nonaligned verdict and has considerable policy and practice connotations. The degree to which these factors influence care patterns depends on the interplay of financial incentives, disincentives, urgency of patient need and the doctor's value system. In this thesis, a description of the health care systems, in particular physician remuneration systems, in Norway, UK and Ghana were made. My objective was to look at the impacts of these systems to find if there are possible lessons Ghana can learn from these two countries given the health care objectives and socio-economic situation in Ghana.

The literature review give a variety of effects on the behaviour of GPs. Payment systems and financial incentives do influence the behaviour of primary care providers. However, how precisely and to what degree depends on a number of other influences such as ethical and professional constraints and the context of the health system. Thus, the practice of one country with payment systems and financial incentives cannot easily be repeated in another country – even if there is a soaring degree of civilizing and institutional similarities.

Much has been published on effects of payment systems and financial incentives on primary care physician behaviour. However, most of these publications cover the anticipated and expected effects of payments systems and financial incentives only. Moreover, in general, empirical evidence from studies with high methodological values is scarce. The methodological standards alone probably make the results of studies into elements of payment systems less applicable. The quality of the included studies is variable. Data constraints, faulted methods and researchers' biases among other problems render some of the studies less robust to draw strict conclusions. However, some of the findings of the included studies are supported by empirical evidences from the health economics literature.

There were disagreeing evidences over the effects of fee-for-service and salaries. While fee-for-service is known to be a strong incentive for intensive resource utilization, the studies reviewed did not agree with each other and therefore one cannot firm up the theoretical predictions of either salary or fee-for-service.

Primary care physicians paid by capitation were found to have more referrals to specialists and to hospitals. As supported by Krasnik 1990, higher referral rates are more costly to the society if the same sickness or illness can be treated by a GP. So therefore capitation may not necessarily be a cost effective technique if not were regulated especially in the area of referrals and also capitation ought to be well adjusted to achieve its goals.

Finally, the QOF or P4P has been tested to be a strong incentive for chronic disease management, high quality service delivery and physician satisfaction. Even though most of the studies included did not take account of patients' opinions, the outcomes cannot be completely ignored. Therefore, to conclude, I will say that it is not so simple to predict with confidence an optimal payment system for primary care physicians. Even though it is known that payment systems have effects on GPs behaviour, much more robustic research is required before policy recommendations can be made. Effects of payment methods are quite demanding to assess in health care systems where remuneration systems do not change and different methods do not exist in the same setting. The use of superlative study designs like randomised control trials (RCT), is rarely feasible on the fact that GPs income are at stake. The used of other study designs have therefore been the major limitation in the literature reviewed here in this thesis.

Based on the findings of the study, some recommendations should be noted:

Reforms should be predicated on proper identification of the health care needs of the people so that policies can be well tailored to meet the needs of the service users. Policy reforms such as the salary system in Ghana seemed to have not considered the needs, preferences and accessibility of patients to quality health care and the overall health care objectives of Ghana. Scientific studies should be used to identify the best possible payment method for GPs in Ghana. Many health care plans are moving towards a mixed of the three basic methods, and Ghana can experiment it if even on a pilot bases.

Health sector policy reforms should be holistic in dealing with all the elements essential to providing health care that meets the needs of the users. For example, to manage chronic diseases, experience in UK shows that the QOF or P4P has been very positive and therefore Ghana and Norway can experiment it. It seems to be so far so good with the reform which the UK introduced in 2004. The evidences available show that quality and accessibility as well as physician satisfaction have improved. This is a good basis for any country to undertake a trial before actual reformation.

Many a time policy makers get busy with manipulating physicians with financial incentives without pondering over doctors' office quality. It is recommended that more explicit guidelines should be adopted on the way doctors perform their clinical duties in their offices.

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