Models of Care: some European perspectives

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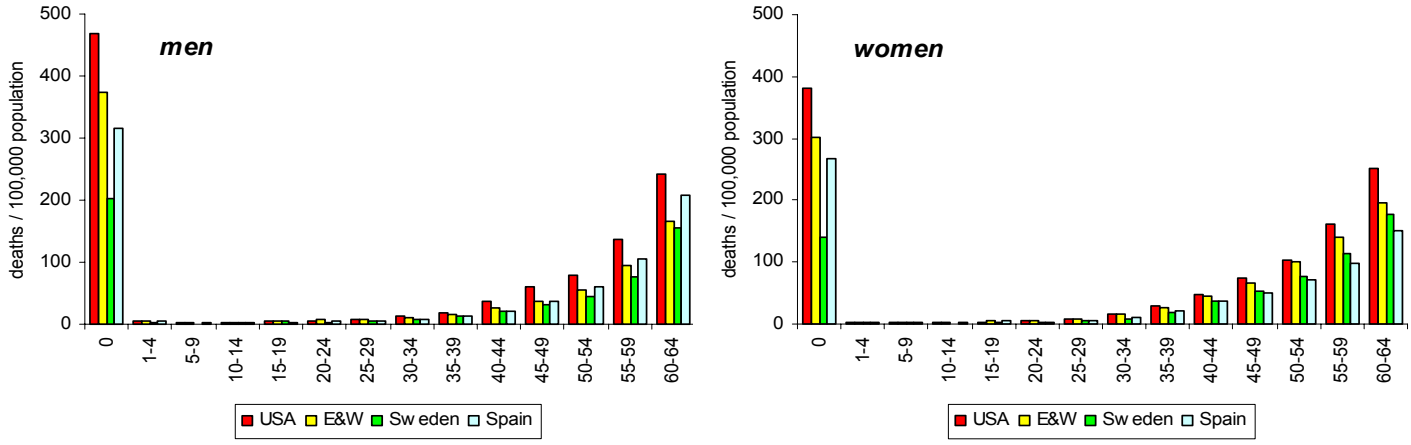
INTRODUCTION

All the countries of Western Europe have achieved virtually universal coverage of health care in the last 20 years and have seen deaths from causes affected by health care fall considerably (Nolte and McKee (2004)). Whilst the cost of this has not been insignificant, this outcome is superior to that in the United States where the probability of dying prematurely from a range of common conditions that are amenable to treatment, is higher than in Europe (McKee and Nolte (in press)). Thus, countries such as Spain, Sweden, England and Wales are performing better relative to the USA both in absolute terms and across age ranges (Figure 1).

Figure 1 Age specific death rates (per 100,000) from conditions amenable to health care, 2000



Furthermore the gap is widening even though the Americans spend 40 percent more than the most expensive health care system in Europe (that of France). Despite this superior European performance, many problems remain in the delivery of evidence based and cost effective care, in particular to patients with chronic illnesses, a group that is increasing in number as populations age and whose needs are often complex.

What are the problems?

The fragmentation of health care delivery and the systems of funding it and the remuneration of those who deliver care are the principal problems thwarting those seeking to achieve improvements in avoidable morbidity and mortality.

The fragmentation of service delivery has three aspects. The first is very familiar: the fragmentation in health care of the primary care system and hospital care, and its fragmentation from the provision of social care. In England the Primary Care Trust (PCT) is the purchaser and provider of primary medical care (general practitioners, and their support staff of nurses and other professionals) and community nursing services. Acute hospitals are separate entities, funded by PCTs by contract. Mental health providers may be autonomous and contracted to PCTs, or funded and managed by PCTs. Social care, in particular community social work and the public funding of nursing and residential care, is funded by local government who employ social workers but contract with nursing and residential homes, the majority of which are now private institutions.

At each of the boundaries of care in this fragmented system there are incentives that may or may not facilitate the provision of co-ordinated care for the patient. The success of service provision depends on the behaviours of decision makers at the boundaries of care with and between both organisations and professional groups.

This first type of fragmentation is complicated by a related problem of lack of integration. This is created by the fact that many chronically ill people, who also may be old, have multiple morbidities. For instance, integrated care for a patient with kidney disease, diabetes and heart disease who is also depressed or with progressive dementia calls for a team of many talents supported by co-ordinated systems of institutional activity and funding.

However, this is a-typical of most health care systems and compounded by the third aspect of fragmentation: individual provider payment systems. The division of labour in health care is influenced by the ways in which practitioners are paid. Robinson (2001) has remarked, "There are many ways of paying doctors. Some are good and some are bad. The three worst are fee for service, salary and capitation".

He went on to argue that in the United States, a solution to this problem was the use of "blended" or mixed payment systems. Such systems in the USA and Europe can be used in relation to the organisation employing health professionals and to the professionals themselves. For instance, a care team might be funded on a salary basis even though its employer's income is from capitation. Another example would be that the team's income may be determined in whole or in part by fee for service payments, but the remuneration of

individual members is salary or capitation. The important element in such funding arrangements is that it incentivises the team to collaborate rather than compete for territory and income. Typically in most countries until recently, the design of such financial incentives has been ignored.

One of the characteristics of salary and capitation payment systems is that practitioners may positively support the delegation of tasks to nurses and other professionals because this both reduces their workloads and even more importantly, does not threaten their income and employment directly. Thus, unsurprisingly, in the UK-NHS there has been a rapid increase in the use of nurses in primary care, with increasing numbers, for instance, having significant prescribing powers. Nurse substitution is also emerging in the acute sector e.g. in endoscopy and anaesthetics, and in radiology, non-medically qualified radiographers are taking over tasks previously the domain of medically qualified radiologists.

Such developments are more difficult where doctors are paid fee for services. Thus in the NHS vasectomies are done by consultants because they are paid a fee, even though the task is simple and could be carried out by junior doctors or nurses. In Germany, where fee for service dominates ambulatory care, practitioners are reluctant to delegate tasks as sickness fund payments can only be made to the medically qualified and if this rule was changed, doctors' incomes would be at risk following any change in skill mix. Similar considerations underlie the obstacles to the development of midwifery and the extensive use of nurse anaesthetics in the USA.

The subtle ways in which these three elements interact to inhibit integrated care provision for the chronically ill are obvious and long standing. The evidence base to identify cost effective solutions in provision, funding organisations and rewarding practitioners remains limited.

English Policy Developments

There are four (4) National Health Services in the United Kingdom. Their funding is similar (tax finance) and the payment of the workforce is largely identical. However, the organisational structure of each country's service varies considerably e.g. the purchaser-provider split has been abolished in Scotland and in Northern Ireland health boards are also responsible for social services. This section deals with the English NHS only.

National Service Frameworks (NSFs)

As part of the Blair Government's decision to 'modernise' the NHS with large increases in the (real) level of funding averaging 7-8 percent per annum over a five year period and beyond, the Department of Health has published ambitious and largely evidence based National Service Frameworks (NSF). These set standards that have to be met by PCTs, hospitals and other providers of care and take a broad view of health improvement, covering primary and secondary prevention, diagnosis and treatment, and rehabilitation.

For instance, the coronary heart NSF identifies as immediate priorities, achievement of which is monitored nationally, explicit improvements in the provision of smoking cessation clinics, rapid access to diagnostic facilities for patients with chest pain, quantified targets for the speed of delivery of thrombolysis for those with myocardial infarction[*], and targets for increased used of drugs such as beta-blockers and statins in patients post infarction.

The list of NSFs published or in preparation is as follows: cancer, coronary heart disease, diabetes, mental health, older people, paediatric intensive care, renal services, long term conditions (with a focus on neurological conditions) and children.

The NSFs are ambitious. In conjunction with access (i.e. waiting time for a range of surgical procedures) and quality targets (e.g. the modernisation of stocks of capital and equipment, the systematic evaluation and approval of (mostly new and mostly pharmaceutical) technologies by the National Institute for Clinical Excellence (NICE)[~], as well as programmes to reduce medical error rates by creating better safety systems (clinical governance)), they create a formidable agenda for increased expenditure (Wanless 2002)). Even though Government funding of the NHS has increased considerably in real terms, most providers face considerable problems in expanding services. This is partly the product of the large gap between Government targets (and public expectations) and available funding: it is practically impossible to cost the Government agenda. This problem is compounded by capacity constraints (e.g. staffing and facilities) that are difficult to reduce rapidly in the short run.

[*] In thrombolysis ambulance "call to needle" and hospital "door to needle" performance times are published by the Royal College of Physicians for the Government

[~] The 'guidance' of the National Institute for Clinical Excellence (NICE) is mandatory. The appraisal of new technologies by NICE is based on evidence of cost effectiveness. Curiously its work on clinical guidelines remains based on clinical rather than cost effectiveness

Thus, uncertainty about future costs is exacerbated as supply constraints in the face of increased demands from additional funding lead to cost inflation, e.g. large increases in the pay of hospital consultants with little *quid pro quo* in terms of management of variations in activity and improvement in patient outcome.

Even though many of the architects of the NSFs have struggled valiantly to identify and use evidence in establishing their programmes, knowledge of the precise workings of many policies is not available. For instance, whilst there is evidence that specialised stroke units improve patient outcomes, understanding of the precise contributions of the component parts of such care is absent. Stroke units and other elements of effective care appear to be "black boxes" and, indeed, some commentators argue that their dependence on context is such that evaluations should focus on the functions that are being sought rather than the form they take (Hawe et al (2004)).

New payment systems

In an effort to improve workforce participation and activity, the contracts of hospital consultants and general practitioners have been reformed radically. The new GP contract is focused on the practice (i.e. groups of GPs and their supporting teams) and involves the creation of a quality framework (NHS Confederation and BMA (2003), Maynard and Bloor (2003)). This framework includes ten clinical areas, each of which has been assigned points in relation to achievement. Depending on achievement, point awards create additional income for the practice with each point worth $130. The ten clinical areas (with points for each) are: coronary heart disease including left ventricular failure (121), stroke and transient ischaemic attack (31), cancer (12), hyperthyroidism (8), diabetes (88), hypertension (105), mental health (41), asthma (72), COPD (45) and epilepsy (16). In addition to these 550 points for clinical care, there are additional points for organisational indicators (184), additional services (36), patient experience (100), holistic provision (100), quality practice (30), and access bonus (50), making 1050 points in total. The new contract has been implemented since April 2004, and is expected to improve the volume and quality of care. (McElduff et al (2004)) (although see below)

The consultant contract was reformed from April 2003. The BMA resisted the introduction of fee for service payments for surgeons and the salary system was maintained with the scope

for substantial increases in annual payment, ranging from £15 – 20,000. This expensive agreement included re-emphasis of job planning and other mechanisms that have failed to reduce practice variation and deliver care cost effectively in the past. Whilst the new pay levels may reduce private practice (as it is now financially less attractive), its impact on NHS activity and outcomes may be meagre (Maynard and Bloor (2003)).

The right person for the job

These developments do not, in themselves, address the key issue; how best to ensure that the most appropriate person is doing the job. There is, for example, much evidence that nurse led clinics may be clinically and cost effective in the management of chronic obstructive airways disease and asthma (Vrijhoef et al (2003)), heart failure (Stromberg et al (2003)), diabetes (Vrijhoef et al (2001)), and those on anticoagulant therapy (Connor et al (2002)). Whether this task delegation is cost effective is less clear and of course will depend on national context. A Cochrane review has shown that patient outcomes are improved with nurse-led community based management of chronic airways disease when the disease is moderate but not when it is severe (Smith et al (2001)). In tax based systems such as the UK such delegation is becoming quite common with for example nurses in primary care settings providing a large amount of routine diabetes care (Pierce et al (2000). However, a noticeable characteristic of all these studies, like those reviewing the skill mix literature (e.g. Horrocks et al (2002) and Sibbald et al (2004), is that the focus is on effectiveness, with evidence of cost effectiveness being much less clear.

In summary, therefore, three key components of the English NHS reforms are related to the creation of improved systems of care for the chronically ill: the NSFs, the GP contract and nurse substitution. Continuing challenges are inherent in these policies, particularly the need to evaluate rigorously these radical changes.

Continuing Problems in England

While the Government has set out ambitious, and often evidence based targets in the National Service Frameworks, there is as yet little evidence about their impact on population health. However, this has not prevented the Government from making 'bold' claims about the success of its policies e.g. citing declining mortality from heart disease and cancers when

these trends may be continuations of past trends or the effect of events earlier in life rather than the product of very recent Government policy initiatives (Department of Health (2004)). For example, the decline in mortality from lung cancer among Russian men during the 1990s can be attributed to Stalin, who initiated a post-war austerity campaign that included cigarettes, rather than Yeltsin (Shkolnikov et al (1999)).

At the same time as they have made these claims, the Government has set out its agenda for 2004 – 2008 and indicated how it will "make it happen". This entire agenda is plausible at the level of principle but lacking in a firm evidence base about its effectiveness and cost effectiveness.

Government proposals to support long term conditions (Department of Health (2004) chapter 3) focus on efforts to give such patients more control of their conditions, the implementation of the GP contract, the creation of "community matrons" and the rapid take-up of "cost-effective" drugs approved by the National Institute of Clinical Excellence (NICE).

Much of this is problematic. For instance, the "community matron" policy has all the characteristics of a "policy wheeze": involving re-branding of existing service to create short term media attention but with little substance in terms of delivering demonstrably different and cost effective care to patients (Maynard and Sheldon (1997)). The prompt take up of new drugs recommended by NICE is of dubious benefit to the NHS as it is approving expensive new drugs of marginal cost effectiveness (Cookson, McDaid and Maynard (2001), Maynard, Bloor and Freemantle (forthcoming 2004)). This is well illustrated by the recent evaluation of donepezil which showed no clinically significant benefit of an expensive new drug marketed for Alzheimer's disease when used in "typical" patients (AD2000 Collaborative Group, 2004).

The Department of Health's plans to implement these policies are similarly superficial (Department of Health (2004) Section 3). For instance, the plan to recreate NHS (Foundation) Hospital Trusts by 2008 throughout the English health care system, develops the Thatcher model repudiated by Blair in 1997, is not evidence based and there are no plans to evaluate systematically the early "waves" of this policy volte face. The plans to increased NHS capacity, involving radical alternatives in the role of the private sector in NHS provision, is similarly not evidence based and will create a significant private interest in the

legislative processes in health care. It also faces the continuing problems of inadequate existing capacity and already procedures that were designed to ensure that existing NHS staff and facilities were not recruited by the private sector have been waived in places.

The Governments' plans also highlight changes in the GP contract as a means of delivering better care to chronic groups. The management of the "quality framework" will be demanding e.g. the transactions costs of creating system of monitoring practice and minimising 'gaming' will be high. Moving (i.e. improving) the quality standards over time will be challenging as this will alter the GP income distribution and create resistance. As with all systems of performance related pay, there may be problems if performance increases above what is budgeted. Such quality incentives also create the problem of "what is not incentivised, is marginalised". What will GPs give up as they shift the focus of their activity to achieve quality targets? There are reports of GPs refusing to carry out tasks they did freely before this new contract, e.g. monitoring immuno-suppression in patients after kidney transplants. GPs, in an effort to maximise income from their new contract, may shift care to others, particularly those in the hospital sector. Such costs have not been estimated, are not being evaluated systematically and may be inconsistent with the delivery of cost effective care to the chronically ill. At the margins of primary and secondary care, instead of integration and collaboration, there may be gaming and cost shifting as primary care practitioners seek their new and considerable fees for service.

Some Continental Lessons

The lessons from Continental Europe are that whilst local cultures and health care structures differ, similar problems are evident. In Scandinavia, Italy, Spain, Portugal and the Netherlands where, as in the UK, primary care is based on multi-professional teams of physicians, nurses and other health professionals, patients are generally registered with a particular facility, which acts as a gatekeeper to secondary care. With the exception of the Netherlands, patients in other European countries using the social insurance model have free choice of physician and specialists working in primary care. In this model, the norm is for practitioners to work on an individual basis usually paid fee for service, and this does not facilitate delegation of tasks between professionals.

Many countries share with the UK the problem of patients inappropriately occupying acute care beds. While their capacity to benefit from acute hospital may be absent, their need for social care in residential and nursing homes is often considerable. This problem is more evident in Northern Europe (where for instance by 1994 only 3 percent of Danes over 65 lived with their children, while 42 percent of Spaniards of the same age lived with their offspring) but is rapidly increasing in Southern Europe.

The latter can learn from the experience of the Northerners who have invested in improved discharge planning and 'hospital at home' schemes. The latter, according to a Cochrane review, gives mixed effects: reductions in hospital stay are offset by higher costs in the community, and whilst patient satisfaction rose, carer satisfaction may have declined. (Shepperd et al (2001)).

Tax based systems have also used financial incentives to improve discharge levels. Thus the English have emulated the 1992 Swedish policy by which those local government agencies (which is responsible for residential and community care of the elderly) that fail to fund placements for acute care patients awaiting discharge, are fined and the monies are used to 'compensate' hospitals. This sharp incentive to drive down "bed blocking" levels appears to have been effective but evidence from systematic evaluation is absent.

In social insurance schemes attempts to create "Transmural Care" in the Netherlands have produced inconclusive outcomes (e.g. Temmink et al (2001)). In Germany the rigid payment system combined with a consensual approach to reform has made change difficult. Four disease management programmes have been articulated (in type II diabetes, breast cancer, asthma and coronary heart disease), with the first two now being implemented (Advisory Council (2001), Busse (2004)). These programmes recognise that traditional fee for service payments do not facilitate the efficient development of integrated care and are funded by alterations in the risk management structure which creates incentives to enrol patients. By adjusting the Federal risk structure compensation (RSC) mechanism which adjusts funding in relation to risk structure of the competing Social Insurance Funds, the government translated them into "players rather than just payers" who now saw the chronically ill not as bad risks but as rewarding subjects for their enrolment. As Busse points out, this nice example of changed financial regulation (adjusting the RSC) combined with careful regulation of care packages has led to changes in provision which caused significant political ferment because

of its impact on physician autonomy and income (Busse (2004) p64). However, the extent of policy changes is muted. Whilst the social insurance funds are anxious to garner the nice rewards from the readjusted RSC payments, ambulatory physicians, with close and established relationships with the patient base, are striving successfully to retain their patients (and the resultant income).

These examples from continental Europe illustrate the nature of the problems facing tax funded and social insurance health care systems. However, they also illustrate the significant obstacles to change that create slow progress being made in creating new and effective structures of organisation and finance, which facilitate rather than inhibit integrated system of care.

OVERVIEW

A lesson to be learnt from the European experience in developing better care for the chronically ill is that greater success can only be achieved with careful regulation of the finance, provision and organisation (?) of care. The British and the Germans have chosen to manipulate financial reward systems (the fee for service quality framework in the NHS and the RSC reform in Germany) to change provider practice, with both requiring enhanced regulatory control. The comparative performance of the German reform, with its focus on the patient, and the British reform with, its focus on primary care, needs careful evaluation. The continuing purchaser-provider split in England must also be questioned and better evaluated in terms of facilitating the efficient provision of coordinated care for patients. How can contracting be reformed to facilitate more efficient trading across the boundaries of care?

The three problems articulated initially remain to challenge all reformers: fragmentation of the component parts of the NHS, the difficulties of managing simultaneously the often multiple morbidities of the chronically ill, and the perverse financial incentives which reward isolated rather integrated care practice by individual practitioners and their teams.

The design of future policies should confront a simple set of questions before proceeding to reform and use the answers to monitor progress:

i. What are the objectives of the health care system? What is the ordering or weighting of these objectives and how do they change overtime?

ii. Who is responsible for the control of the fragmented systems of care, and who controls resource use (both capital and current) and movements over the boundaries of care? Many reforms shift these boundaries rather than remove them.

iii. What incentives, both monetary and non-monetary are there (or lack of them) for individual decision makers and organisations at the margins of care? Why do they do what they do?

iv. Who rations what and how? Are the results of rationing consistent with social objectives?

v. Are outcomes, in terms of equity and efficiency consistent with the system's objectives?

The management of chronic diseases in particular and the "quality agenda" in general would benefit from more systematic measurement of patient outcomes. Complementing the measurement of ADL (activities of daily living) with appraisal of anxiety and depression (e.g. the Hospital Anxiety and Depression (HAD)) instrument might inform carers better of patient needs. The routine use of generic measures of "success" in improving patients' health related quality of life (e.g. Short Form 36 (SF36) and EQ5D (the Euroqol) might also be usefully piloted. Instruments such as these could assist the prevention of acute episodes and reduce hospital admissions (Kind and Williams (2004), Appleby and Devlin (2004)).

In England non-evidence based and ad hoc organisational change (e.g. the purchaser-provider split, the primary-secondary care divide and "innovations" such as ' Foundation Trust' status for hospitals and systems of national tariffs (based on the principle of DRGs but with much less refinement) to reimburse them can reinforce the obstacles to developing integrated care for the chronically ill. Furthermore myopic and isolated reform of payment systems for physicians may have significant costs and benefits for some patients. The failure to adopt such reforms in an integrated manner that facilitates better care for chronically ill people is very evident. Similar problems are also evident in the US where the Rand Corporation argue only 55 percent of appropriate care is delivered to patients (Kerr et al (2004)) and where

innovative reforms such as the Program for All-inclusive Care for the Elderly (PACE) have failed to flourish (Gross et al (2004)).

In both organisational and financial reform, evidence based practice is unusual with policy makers uttering the rhetoric of improved care but moving inefficiently and crablike to this destination, desired by so many patients throughout Europe.

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