

Methods of Cost Containment: Some Lessons from Europe

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Almost all European countries have introduced an enormous number of measures over the last twenty years aimed directly or indirectly at containing health care costs. Some of these have been quite successful, as can be seen from Table A.1 in the Appendix. After substantial growth in all health care expenditures as a percentage of GNP during the 1970s and 1980s, that percentage stabilized for most countries during the 1990s, as indeed it did in the United States. As yet we do not have comparable figures for the 21st century for either the United States or Europe; however, the belief that costs have taken off again in the United States (Enthoven 2003) is not – yet – mirrored in Europe.

So there may be some useful lessons that can be learned from European experience for other health care systems, such as that of California. The cost containment measures used in Europe have primarily been concerned with the part of health care costs that is publicly funded, since, as can be seen from Table A.2 in the Appendix, this comprises a much greater proportion of total spending than in the United States. However, some of the generalizations derived from studying these measures seem applicable across other countries and states, including ones with different funding systems, and this paper is an attempt to draw out some of these.¹

The paper also provides a way of classifying and analyzing cost containment measures that may be useful for more general purposes. Cost containment measures can be classified in a number of ways. The most common is to divide them into those designed to affect the demand for health care and those designed to reduce its supply. However, this is not refined enough for our purposes, and I adopt a different, fourfold classification of sets of measures: *budget shifting*, *budget setting*, *controls*, and *competition*. In what follows, I explain each class of measures and then provide some illustrations of their effectiveness drawn mostly, though not exclusively, from European experience. The evidence suggests that, of all of these, budget setting is probably the most successful instrument for cost containment. So I conclude the paper with a slightly more detailed examination of one budget setting

¹ A more extended discussion of much of the material can be found in Mossialos and Le Grand (1999)

measure that was rather successful and could be of wider interest: the United Kingdom GP fund-holding experiment.

Budget Shifting

Possibly the most common method of reducing health expenditure on one budget is to try to shift it on to some other budget, especially that of the patients themselves. Expenditure can be shifted on to patients either directly through introducing charges or co-payments for the use of medical services or indirectly through restricting the range of services covered by the health insurer.

Co-payments

It is well known that one of the major factors leading to upward pressures on health expenditures is the rather quaintly termed phenomenon of ‘moral hazard.’ Under most health systems, patients are not required to pay the costs of medical treatment they receive and therefore neither they nor their doctors have any incentive to economize on that treatment. The moral hazard problem, at least as it applies to patients, can be reduced by requiring the individual patients to pay a charge, or make a co-payment, for the use of health services, one that reflects part of the costs of medical care received. The co-payment could either take the form of a percentage contribution (each patient pays $x\%$ of the total cost of a given course of treatment) or a fixed deductible (the patient pays the first \$ x of the cost).

In theory, co-payments should be able to keep down the costs of treatment through discouraging the so-called ‘frivolous’ use of health services: consultations and treatment that are unwarranted by the severity (or rather lack of severity) of the condition concerned. Related to this, charges can be used as an incentive device to encourage cheaper forms of medical service utilization. For instance, charges can be levied on patients who go straight to the hospital without being referred by primary care practitioners, but not on those who are so referred. This would encourage the gate-keeping role of primary care and perhaps a greater use of (cheaper) primary care services themselves.

Most of the authors who have studied the operations of co-payment systems in practice are skeptical about their supposed benefits ever being achieved to any significant extent. Data from the U.S. RAND Health Insurance Experiment and other studies looking at, particularly, the effects of co-payments on drug consumption have found small price elasticities (Huttin 1994): that is, very little effect on

consumption of increases in co-payments. Moreover, the co-payments are usually set too low significantly to discourage use. As Alain Enthoven (2003) has pointed out, in the United States the 22% who spent \$2,000 or more on health care accounted for 77% of health spending. And a high cost episode of health care quickly absorbs most deductibles, at which point all incentives to economize disappear.

One answer to this last problem is to raise the co-payment. But if co-payments are raised to a level high enough to affect use, the individuals concerned are likely to take out further health insurance to cover the cost, with the consequence that the charges or deductible have little impact on use. For instance, in France there has always been a significant role for the 'ticket modérateur' (cost-sharing) throughout the history of the French health insurance scheme. However, 83 % of the population have private insurance that pays all or part of patients' share of the costs, thus virtually eliminating any impact on demand.

Moreover, insofar as co-payments do discourage use, they appear to discourage that which is 'worthwhile' as much as that which is frivolous (Abel-Smith 1994). Further, their capacity to affect demand is usually severely affected by extensive exemption systems that are administratively expensive to operate and that exempt very large proportions of users. In the United Kingdom there are charges for prescriptions; but the elaborate system of exemptions means 85% of all prescriptions issued are exempt.

The exemptions are, of course, usually part of an attempt to reduce the inequity that many would argue to inherent in a co-payment system. The poor generally have worse health and need more services than the better-off. Under a co-payment scheme their health care bill could suddenly become substantial relative to income when an expensive illness strikes. Yule *et al.* (1988) studying the impact of dental charges on utilization in the United Kingdom found that the utilization of low income groups was more sensitive to charges than that of high income groups. And co-payment may impact adversely on poor peoples' health. Brook *et al.* (1983), using data from the RAND Health Insurance Experiment, found that low income patients exempted from cost sharing had significant improvements in visual acuity and significant reductions in blood pressure compared with non-exempt patients.

Means-tested charges are often proposed as a way of making cost sharing more equitable. However, it is difficult to devise systems that are not abused and in which people pay according to their means. Who is to determine capacity to pay – the doctor, the pharmacist, some social welfare agency, or patients

themselves? Operating an effective means test for occasional expenditure is bound to be expensive administratively and can be divisive socially.

What is clear is that co-payment systems overall, especially with exemptions, tend to be complex and expensive to implement. Despite some evidence of its effectiveness as a device for encouraging greater use of the general practitioner as a gatekeeper, Austria may abolish its system of consultation charges because of the expense. Hospital patient charges in Greece have had a minimal effect, since for administrative reasons most hospitals simply do not levy the charge. In Portugal there are many examples of service providers forgoing charges because of the bureaucracy involved.

Funding restrictions

Restricting the number and type of treatments that are funded by the insurer can lead to a 'one-off' reduction in health care costs. The restrictions could be based on an examination of evidence concerning effectiveness, cost-effectiveness, and/or other considerations such as whether the treatment is largely cosmetic. Restrictions can take the form of positive or negative lists. A positive list details the treatments that will be funded by the insurer; a negative list details those that will not.

In a sense, funding restrictions can be viewed as the ultimate form of co-payment, in that the payment for the restricted treatment is shifted entirely onto the patient. That is, patients are not actually forbidden to have the treatment concerned; rather, if they do wish to have the treatment, it will have to be paid for entirely out of their own resources.

Most European states have introduced positive or negative lists for pharmaceuticals. These have usually been quite effective in creating at least a one off reduction in costs. However, their impact was often reduced by a shift in prescribing patterns towards reimbursable drugs (Mossialos and Le Grand, 1999, pp.84-86).

There have been far fewer attempts to impose treatment restrictions outside the pharmaceutical area. The well-known Oregon experiment provides an interesting U.S. example (Marmor 1999). In Europe in the 1990s, several governments (Denmark, Germany, Spain, France, the Netherlands, Finland, and Sweden) established committees that attempted to set priorities in health care. So, for instance, the

Dunning Committee in the Netherlands recommended the exclusion from public re-imburement of in vitro fertilization, homeopathic medicines, dental care for adults, and residential homes for the elderly. In Sweden a similar commission recommended (on the grounds of ineffectiveness) the withdrawal of public funding from the routine taking of specimens, mammography outside the age groups 50-70, tests for the exclusion of hypothetical risks, treatment of gastritis with antacid preparations, preventive treatment of high cholesterol blood levels with drugs, except in hereditary forms or severe situations, continued treatment for an incurable disease after the treatment had proved to be inappropriate, terminal care which prolonged the process of dying without palliative effect, surgery for minor prostate disorders, and several treatments for low back pain.

The Swedish and Dutch examples are interesting because in both cases the reports had some effect. In the Netherlands the government has withdrawn homeopathic drugs and dental care for adults from the scope of health insurance. And in Sweden some county councils excluded infertility treatment from reimbursement or reduced resources allocated to this type of treatment. Several hospitals have attempted to operationalize the Commission's recommendations and produce specific operational plans.

Finally, it is worth noting that the United Kingdom has set up the National Institute of Clinical Effectiveness (NICE), with the brief of assessing the suitability of drugs and treatments for public funding under the National Health Service. The principal criterion is cost-effectiveness, with a rough cut-off point of £30,000 per Quality-Adjusted-Life-Year or QALY. That is, any treatment that NICE assesses as costing more than £30,000 for each extra year of life, adjusted for quality, that it delivers should not be funded. But it does not take account of affordability: that is, the impact on the NHS budget or the opportunity cost of adopting its recommendations. In consequence, most of its activities so far seem to be approving drugs that meet its cost per QALY criterion, but are so expensive to buy that some commentators view it more as an instrument for cost-enhancement than cost-containment (Cookson, McDaid, and Maynard 2001).

Overall, it seems there is room here for some forms of cost-containment measures. However, it is worth noting that, in the cases considered, the excluded treatments often form only a small proportion of total health care expenditures. Moreover, as advances in medical technology lead to the approval of

expensive but nonetheless cost-effective treatments, the scope for having a major impact on overall cost increases via the funding restrictions route seems limited.

Budget Setting

Traditionally, many health services have operated with no budget at all. That is, all the relevant agents operated on what was effectively an ex post system of reimbursement. Thus, in such systems, hospitals and doctors worked on a fee-for-service basis, providing treatment to patients and then sending on bills for the treatments concerned to the insurer. If the insurer had not enough funds to meet these bills, then, provided it had the power to do so, it raised levies on the population it covered, either through raising premiums, as in the case of private insurance companies, or through raising contribution rates in the case of social insurance funds. If the agency did not have that power, as some social insurance funds, for instance, did not, it asked for money from the government. And if the government could not pay the extra out of allocated funds it made an appropriation, diverting spending from elsewhere, increasing government borrowing or raising taxes in one form or another.

Such systems have an obvious problem: no-one has any incentive to economize, since overspending can always be passed on to someone else. Hence they are extremely vulnerable to upward cost pressures. However, they also have an obvious solution: the introduction of fixed or hard budgets as crucial points in the system. If budgets are allocated to the relevant agents, and those agents have a strong incentive to spend within their budget (either through penalties for overspending, through rewards for underspending, or both) then cost pressures can be contained.

The budgets can be set at any (or all) levels. Different sectors could be given a fixed budget (in-patient care, ambulatory care, pharmaceuticals). In systems with a split between purchasers and providers, the purchasers could be given fixed budgets; in systems with no such split, the providers could be allocated budgets directly. Finally, patients themselves could be given a budget to spend on their own care, as they chose.

The budgets themselves can take different forms. They can be 'hard' in the sense described above, that is, with penalties for overspending and perhaps also rewards for underspending. The penalties can take the form of requiring the agent concerned to repay any overspending out of subsequent years' allocation,

or only partial reimbursement of overspending or, ultimately, of a complete withdrawal of budgetary power. In systems where the budget is used to reimburse fee-for-service providers, the fees can be automatically adjusted retrospectively to make sure that total expenditure remains within budget. The rewards can involve retention by the agent of some or all of any surplus made.

An alternative to hard budgets is target or 'shadow' budgets, where a record is kept of the costs of the transactions undertaken by the agent concerned, who is made aware of any overspending or underspending, but where no immediate penalties are applied and overspending is automatically met. Such budgets are less likely to be effective instruments of cost containment than hard budgets. However, they might not be totally ineffective; most agents would prefer to be known as running the kind of operation that keeps within a budget. 'Naming and shaming' agents who habitually overspend can have a salutary effect on behaviour.

Budgets can be set in a variety of ways. For agents serving a fixed population they can be set on a capitation basis: that is, the agent receives a fixed amount per person covered, regardless of the actual use made of the system. To take account of variations in need, the amount per person may be adjusted according to various risk factors such as age or health record: however, the more risk adjustments made, the more complex the system. Alternatively, budgets can be set according to historical spending or activity levels; however, unless those levels are an accurate reflection of needs, both now and in the future, this may simply perpetuate past inefficiencies in resource allocation.

Budgets do have their problems as instruments of cost containment. First, hard budgets with penalties for overspending but no rewards for underspending encourage agents to spend up to their limit. Second, most types of budget setting offer incentives for cream skinning and for budget shifting; that is, for agents to select the people covered by their budget so as to favor those who will make the least demands on the budget and to shift other, more expensive patients on to other budgets. Third, if budgets are successful in containing costs, then they are likely to create a need for rationing and waiting lists may develop, which can create political problems. Faced with these difficulties, the budget setter may be tempted to relax budgetary constraints; if this happens too frequently and if agents begin to suspect that, if they overspend, there will be little or no penalty, then incentives for cost containment will quickly

evaporate. Finally, if neither budget-setters nor patients can monitor quality effectively, there is a risk of undertreatment.

European countries' experience with budget setting has been generally positive at least as far as cost containment is concerned (Mossialos and Le Grand 1999, pp.114-118). Countries with national health systems such as the United Kingdom have always operated with budgets at some (usually most) levels of the system; and these are often countries with historically low levels of spending (for instance, the United Kingdom was spending just 7.3% of GNP on health care in 2000). In France the introduction of budgets for hospitals in 1984 played a significant role in reducing their share of overall health expenditure. They did so by reducing the volume of services, with the relative price of these services remaining constant. In Ireland a significant fall in the average length of stay in hospitals (28% from 1980 to 1993) was attributed to the efficiency pressures on hospitals resulting from tight budgetary allocations. In Germany the introduction of budgets for sectors and individual providers, although of various forms and efficacy, were generally more successful in containing costs than any other measure. Moreover, since those budgets were abolished in 1997, Germany again has experienced upward cost pressures.

European countries' experiences with budget setting also reveal some of the problems involved. In Greece hospital budgets were determined by historical costs and hence incorporated past inefficiencies. In France they were again determined on a historical cost basis; in addition, they were thought to discourage the introduction of new technologies and to encourage cream skinning. In Spain, although hospitals are paid on the basis of their activities by using resource-weighted health care units, in practice the financing method is still retrospective. In Germany hospital providers allegedly developed escape strategies and waiting lists, both of which contributed to the recent abolition of the relevant budgets. In Portugal supposedly hard budget constraints for hospitals were in fact soft, with expenditures over budget levels being regularly covered, with no penalty for the managers concerned.

Controls

Insurers can try to affect health care costs through controls on the way in which providers supply health care. One form of this is well known in the United States as managed care. Fees or payments made to providers can be controlled, and, in state systems, the prices of pharmaceuticals and other medical

supplies can be regulated, as can the profits of pharmaceutical companies or other medical suppliers. The utilization of procedures can be controlled by insurers, as with much managed care. Also, in state systems at least, the ‘inputs’ into the system can be regulated, with governments imposing restrictions on capital investments or on the supply of medical personnel.

As with other methods of cost containment, direct controls have their difficulties. As the U.S. experience of managed care has illustrated, both doctors and patients resent them – especially controls on procedure utilization. This can encourage costly efforts to evade the controls. Even if they are not evaded, there may be a ‘balloon’ effect, with the compression in one part of the system leading to expansion elsewhere. This is especially the case where one element of expenditure is controlled, but others are not. So if, for instance, the prices of pharmaceuticals are kept low, the demand for drugs expands, the quantity purchased increases and total expenditure on pharmaceuticals may increase. If the supply of doctors is restricted, their wages may increase, and again the overall wage bill for doctors may increase. Switching to cheaper technologies may simply expand the total volume of procedures undertaken and lead to no overall reduction in expenditure. Only if several elements are controlled simultaneously (price and quantity, wages and employment, technology and volume) are direct controls reasonably certain to have an influence in the right direction. But extending controls in this way inevitably complicates the system.

A relatively new approach to reducing the cost of pharmaceuticals, and currently under consideration in the United States, is the use of a reference price system (Mossialos and Le Grand, 1999, pp.126-130; Kanavos and Reinhardt, 2003). In this system a group of similar products is given a specific reference price that will be fully covered by insurance, subject to co-payment. The use of a reference price as a reimbursement benchmark implies that the insurer will only pay that particular price. Any excess above the reference price has to be paid by the insured person. The objective is to make the consumers more fiscally aware and to trigger price competition in the reference-priced part of the market. The issue of what criteria to use to select the ‘reference’ price is of obvious importance: it is generally based on low-cost benchmark drugs in therapeutic clusters.

The first scheme of this type was introduced by New Zealand. In Europe, Germany was the first to introduce a reference price system. A reference price system was introduced in the Netherlands in 1991,

in Denmark and Sweden in 1993, and in Italy in 1996. It has been proposed in Greece, Spain, Italy, and Finland, but not implemented.

The European pharmaceutical industry has consistently argued that reference pricing distorts clinical decision making, deprives patients of a choice of treatment, and removes incentives for research into new medicines. Nonetheless, governments argue that these systems have advantages for the industry. First, while the average prices of those products clustered together may be reduced, no firm is denied the market share it can earn by accepting the reference price. Secondly, the system is fully transparent. Thirdly, patented drugs are excluded in Germany, Denmark, and Sweden; the company can fix its own prices for these products. Thus these countries are not likely to lose the important position they have secured in world markets.

From the governments' point of view, the weakness of reference price systems, as the experience of the Netherlands and Germany has shown, is that their introduction does not necessarily decrease the drug budget. The reference price system stimulates the pharmaceutical industry to make major efforts to promote drugs that are not covered by the scheme. As a result the market share of these expensive products increases, and firms may raise the prices of these products further to recover losses caused by the reference price system.

The reference price system for pharmaceuticals in Germany illustrates some of these effects. One effect was a switch in prescribing expensive products not covered by the reference price system, for example, new antibiotics. Advertising by the companies encouraged this trend. In addition, pharmaceutical companies increased the prices of products not yet affected by the reference price system. Between 1991 and 1992 prices of drugs subject to reference prices decreased by 1.5%, whereas the prices of those that were not increased by 4.1%. Another structural component – changes in the package size of prescription drugs - also contributed to increases in pharmaceutical expenditure. This prompted the government to link co-payments to package sizes. Overall, the drug budget increased.

Competition

Competition in health care can take either or both of two forms: competition between insurers, and competition between providers. Support of the idea of competition in either form as an instrument for

health care cost containment can be found in the conventional economic theory of markets. Other things being equal, competition between suppliers for consumers will lead to greater efficiency with, in particular, production costs being driven down to a minimum level. Applied to health care, the argument would run that competition in both its forms would keep down costs: that between insurers will keep down premiums, while that between providers will keep down hospital and other medical costs.

However, there are objections to this argument, including ones from the world of economic theory itself. In particular, in a world of imperfect information, consumers may use the wrong signals to indicate what constitutes high quality care: in particular, they may take high cost as a signal of high quality. In consequence there might be a medical arms race (Robinson and Luft, 1985), with hospitals trying to convince potential patients of the merits of their facilities by emphasising their expensive equipment, and insurers trying to lure potential enrollees with the depth and breadth of their coverage, regardless of the low probabilities of some of the risks covered.

The empirical evidence concerning the impact of competition is mixed. In the United States, as Kessler and McClellan (2000) have shown, hospital competition in the 1980s appears to have led to higher costs and, in some cases, worse health outcomes. In the 1990s, in contrast, both theirs' and other research generally found competition leading to reductions in costs and improved health outcomes (Docteur, Suppanz and Woo, 2003). There seems to have been less research on the impact of competition among insurers, perhaps because, as Enthoven (2003), has argued, in a world of employer-based insurance, the extent of such competition is relatively limited. For reasons of administrative convenience and because of fears of adverse selection, both employers and insurers prefer to have a single source of insurance finance. In consequence, in 1997 only 23% of insured workers had a choice of carrier (Marquis and Long, 1999, quoted in Enthoven, 2003).

European experience with competition is of less interest than that of the United States, chiefly because there is relatively little of it. Some countries, such as the Netherlands, have flirted with competition between insurers, but have never implemented it in a serious way. Nor has hospital competition been widespread. A partial exception is the United Kingdom where, under the internal market that operated from 1991 to 1997, hospitals competed for contracts from a variety of purchasers, including GP fund-

holders. Studies of the impact of such competition suggest that it did have an impact on costs, but also may have led to some adverse health outcomes (Propper 2003).

Overall

Sufficient information is lacking on the long-term effects of many of the cost containment measures taken by European countries. An obvious difficulty is that one measure is often quickly followed by another – before there is time to see the effects of the first measure. Indeed, the effective life of different measures to contain expenditure is sometimes shorter than the time required to develop and introduce them. Moreover, cost containment measures are seldom introduced singly. Where more than one measure is introduced, it becomes difficult to assess the effect of each measure separately.

In addition, what may appear to be the effect of a cost containment measure may in fact be simply a reflection of an international trend. For example, the increase in turnover of hospitals may be due to technological change influencing all or most countries, such as the introduction or spread of key-hole surgery or day surgery. Thus national data need to be compared with international data. But such comparisons need to be carefully chosen and carefully handled in view of the possible lack of comparability of concepts.

However, from the experience of the countries in our study as summarized above, it is difficult to resist the conclusion that budget setting is one of the most effective ways of controlling public health care costs. Denmark, Ireland, Italy, and the United Kingdom all set budgets at a large number of points in their public health systems: all spend a low share of their GDP on health (less than the unweighted EU average) and all have a relatively low rate of growth of expenditures. Germany succeeded in restraining the growth in its already high share of GDP through the introduction of budgets at various levels. As Germany has now relaxed those budgets, it will be interesting to observe the future trajectory of health care costs. France introduced prospective budgets for public hospitals, which again seem to have been reasonably successful in controlling costs.

Nor does budget-setting appear to have many of the adverse effects predicted by commentators. Consumer satisfaction or dissatisfaction does not currently appear to be related to the presence or absence of budgets (Mossialos 1997). It may also be the case that, because overall budgets for health

services or for part of the health sector were imposed so late in the day (in most countries in the mid-1980s), the waiting lists that can accompany hard budgets are not yet as great a problem in Belgium, Germany, France, or the Netherlands as they are, for instance, in the United Kingdom. There may be, therefore, a change in the public's views in the future if health care in Europe becomes more managed, and if the pace of demand outstrips the pace of gains from efforts to increase efficiency. Indeed, this may be one of the factors behind the current relaxation of budgetary controls in Germany.

Budget setting at all levels is facilitated in countries with national health systems funded from general taxation; and it is surely no coincidence that countries with a long experience of such systems, such as the United Kingdom, Ireland, and Denmark, have relatively low public expenditures on health care, but also relatively low rates of growth. Generally, tax-financed systems or systems where there is monopsony power through a single purchaser organization seem to be more successful in containing the growth of health care costs. However, this is not to say that all other kinds of measures are ineffective, or that insurance based systems cannot control costs. Some insurance-based systems (as in the Netherlands) have also been successful in controlling costs through heavily regulating providers' fees and by implementing successful direct control measures. It is also obviously not impossible for countries with social insurance systems to introduce effective budgets, as Germany's regime indicates.

Of the other kind of measures considered, given the theoretical objections to the use of controls, and the absence of much positive evidence concerning their effectiveness, it is hard to recommend them. The experience of the United States seems to indicate that provider competition can work to keep down costs. Certain kinds of budget-shifting measures clearly can also keep spending down, as is illustrated by the experience of several European countries with respect to treatment restrictions on dental care and pharmaceuticals. Others are of more dubious value, including large-scale extensions of co-payments for basic medical services. To overcome the obvious equity problems associated with these kinds of co-payments, they are often coupled with elaborate exemption systems that are bureaucratic and expensive to enforce; this severely limits both their revenue-raising capability and their deterrent effect on use. In addition, if set sufficiently high, they encourage affected individuals to take out private health insurance to cover them, which further negates any deterrent effect on use. However, alternatives to hospital care, technology assessment and control, day surgery, and manpower controls do seem to have had an impact.

General Practitioner Fund-Holding²

Given the relative success of budget-setting measures, it is worth paying a little more attention to a particularly successful example, one hopefully with wider application. Among the quasi-market reforms of 1991 introduced by the Conservative Government into the British National Health Service, family or general practitioners (GPs) could volunteer to become fund-holders. GP fund-holders were given a budget with which to purchase drugs and certain hospital and specialist treatments for their patients. The treatments concerned were chiefly elective surgery and comprised about 30% of total referrals to secondary care. The size of their budget was determined by the GPs' patterns of referral in the year preceding their taking up of the fund-holding option.

The incentive structure of GP fund-holding was important.. Fund-holders who were concerned about their patients' health consequences had a strong incentive to use the funds as efficiently as they could. Since the fund was fixed, more needs could be met if the fund were used efficiently. But even more self-interested GPs had some incentive to use the funds efficiently, partly because they would wish to limit complaints and bother for themselves, and partly because - since patients could move - their case load and ultimately their incomes depended on the level of regard for their practice, including the success of their hospital referrals.

An important element of the incentive structure was that GPs could spend on their practices whatever portion of their funds they did not spend on outside services. This surplus was supposed to be used for the benefit of the patients, but since investments in the practice would otherwise come out of the GPs' pockets, the fund surpluses could easily redound to the income and comfort of GPs. Optimists could take comfort in the fact that the arrangement diminished the incentive to refer patients to others for services rather than providing them oneself, while pessimists were alarmed at the possible incentive to restrict access to secondary care. But, however one saw the arrangement, it bridged the gulf separating the costs of services provided within a practice and services provided outside it. If GPs could keep the surpluses, then referring a patient for treatment out of the practice, like treating the patient within the practice, had to be paid for, and whether self-interested or concerned for patients' well-being, GPs had an incentive to be economical in their referrals. The incentive structure was both robust, in that it

² For more detail and references see Le Grand (forthcoming 2003)

appealed to both to professional concerns and self-interest, and created incentives for economizing on expensive treatments.

So what were the effects of the scheme? Although there was some anecdotal evidence of abuse, in practice the surpluses of fund-holders were small and seem to have resulted more from shortages of specialist services and the need to ration the funds so as not to run out at the end of the year than from any desire to run a surplus for personal benefit. Indeed, in many cases, the surpluses were used to reduce waiting lists in the following year.

More importantly, there were improvements in the quality of treatment. There was a greater provision of out-reach services by fund-holders than non-fund-holders. They obtained quicker admission for their patients, significantly reducing waiting times. Fund-holders also kept down prescription costs relative to non-fund-holders. In fact, generally fund-holders appeared more successful than other forms of purchasers in obtaining responsiveness from hospital providers. However, on the more negative side, there was no evidence of increased choice for their patients.

Whether the improvements in quality generated by fund-holding outweighed in value terms any associated increases in costs (and thereby led to an increase in efficiency, properly defined) is not known. There is also controversy as to whether fund-holders' relative success derived from their being more generously funded than health authorities. However, the best evidence suggests that this was not so, and that in fact it was their ability as purchasers, not increased resources, that led to their success.

One of the expectations of the fund-holding scheme was that fund-holders would find it cheaper (and arguably more effective) to treat patients out of hospital than in it, and hence would reduce the number of patient referrals to the hospital. The evidence as to whether this actually occurred is mixed. Early work suggested that it did not; but more sophisticated studies have recently shown that fund-holders did reduce referrals, and, moreover, did so by a significant amount (Dusheiko *et al.* 2001). Of course, it is controversial whether a difference in referral rates represents a positive or a negative difference in the quality of care; but in some ways the interest for our purposes lies not so much in this question as in whether the financial incentive structure underlying the GP fund-holding scheme actually changed doctors' behavior.

Reinforcing the view that the incentive structure did lead to a change in GP behavior is an interesting study by Croxon, Propper and Perkins (2001) . This found that potential fund-holders ‘gamed’ the system, increasing referral rates in the year before they became fund-holders in order to get a larger budget (their initial budget being determined by their pattern of referrals in that year) and reducing them after they became fund-holders.

Finally, it is worth noting that there was little evidence of cream-skimming: the deliberate selection of patients by fund-holding practices who were easier or less costly to treat in order to protect budgets. Given that fund-holding offered incentives for engaging in this kind of selection, it is not immediately obvious why it failed to materialize. It may have been the result of professional motivation. Alternatively, the absence of cream-skimming may have been because there was an 'insurance' scheme by which fund-holders were not liable for the extra costs associated with very expensive patients - a fact which significantly reduced any incentive they may have had to exclude such patients from their lists.

On balance, then, it would seem that the robust incentive structure for GP fund-holding did change GP behavior and did so in a fashion that, mostly, led to tangible benefits.

A CONCLUDING WORD

Perhaps surprisingly, cost containment measures in Europe, especially those involved in budget setting, seem to have been quite successful. As a U.S. commentator on the Western European scene has noted, ‘in essence, having broadly contained health care costs, Western European countries have focused the preponderance of their reform efforts on introducing better managerial mechanisms within provider institutions’ (Saltman 2002). There are interesting reform efforts there that again other countries might benefit from hearing about; but that is for another paper.

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APPENDIX: TABLE A.1
Total Expenditure on Health Care
% GDP

	1970	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Austria	5.3	7.6	6.6	7.1	7.1	7.5	7.9	7.9	8.6	8.7	8	8	8.1	8
Belgium	4	6.4	7.2	7.4	7.7	7.9	8.1	7.9	8.7	8.8	8.5	8.5	8.7	8.7
Canada	7	7.1	8.2	9	9.7	10	9.8	9.5	9.1	8.9	8.9	9.1	9.2	9.1
Denmark		9.1	8.7	8.5	8.4	8.5	8.8	8.5	8.2	8.3	8.2	8.4	8.5	8.3
Finland	5.6	6.4	7.2	7.9	9	9.1	8.3	7.8	7.5	7.7	7.3	6.9	6.9	6.6
France				8.6	8.9	9.1	9.5	9.4	9.6	9.6	9.4	9.3	9.4	9.5
Germany	6.3	8.8	9.3	8.7		9.9	9.9	10.2	10.6	10.9	10.7	10.6	10.7	10.6
Greece	6.1	6.6		7.5	7.8	7.2	8.1	8.9	8.9	8.9	8.7	8.7	8.7	8.3
Ireland	5.1	8.4	7.6	6.6	7	7.6	7.5	7.5	7.2	7	6.9	6.8	6.8	6.7
Italy				8	8.3	8.4	8.1	7.8	7.4	7.5	7.7	7.7	7.8	8.1
Luxembourg	3.6	5.9	5.9	6.1	6	6.2	6.4	6.1	6.4	6.4	5.9	5.8	6	
Netherlands		7.5	7.3	8	8.2	8.4	8.5	8.4	8.4	8.3	8.2	8.1	8.2	8.1
Norway	4.4	7	6.7	7.8	8.1	8.2	8.1	8	8	8	7.9	8.6	8.8	7.8
Portugal	2.6	5.6	6	6.2	6.8	7	7.3	7.3	8.3	8.5	8.6	8.3	8.4	8.2
Spain	3.6	5.4	5.4	6.6	6.8	7.2	7.5	7.4	7.7	7.7	7.6	7.6	7.7	7.7
Sweden	6.9	9.1	8.7	8.5	8.4	8.6	8.6	8.2	8.1	8.4	8.1	7.9		
Switzerland	5.6	7.6	8	8.5	9.2	9.6	9.6	9.8	10	10.4	10.4	10.6	10.7	10.7
United Kingdom	4.5	5.6	5.9	6	6.5	6.9	6.9	7	7	7	6.8	6.8	7.1	7.3
United States	6.9	8.7	10	11.9	12.6	13	13.3	13.2	13.3	13.2	13	12.9	13	13

Source: OECD Health Data 2002

APPENDIX: TABLE A.2
Public Expenditure on Health Care
% of Total Expenditure on Health Care 2000

Austria	69.7
Belgium	71.2
Canada	72
Denmark	82.1
Finland	75.1
France	76
Germany	75.1
Greece	55.5
Hungary	75.7
Ireland	75.8
Italy	73.7
Luxembourg	92.9*
Netherlands	67.5
Norway	85.2
Portugal	71.2
Spain	69.9
Sweden	83.8**
Switzerland	55.6
United Kingdom	81
United States	44.3

* 1999

** 1998

Source: OECD Health Data 2002