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PARTNERSHIPS FOR BETTER HEALTH

PAYING FOR MEDICINES
Overseas models for a UK re-think

By Ian Senior*

The NHS was founded in 1948 with the brave ideal that all medicines should be free; or, to be more precise, free at the point of delivery. However, in response to the high demand opened up by this policy, prescription charges were first introduced in 1952. They were abolished in 1965 but soon reinstated, in 1968.[1]

Since then, prescription charges have become a permanent fixture — except that fewer and fewer consumers pay them. Today about 85 per cent of prescriptions dispensed by community pharmacists in England are exempted from payment, and exemption rates are generally higher in Scotland, Wales and Northern Ireland.[2] Medicines dispensed to hospital patients have always been free.

But the world has changed dramatically since 1948, and will continue to change. The concept of free medicines provided in such a generous proportion has been discarded in most developed and developing countries alike. As in the UK, most EU states provide free medicines for some defined groups of people or conditions, but other patients make significant co-payments. Why should the UK be such an exception?

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Demand will continue to rise and new medicines will become more expensive

The reasons for increasing demand are simple and well understood. We are taking more medicines: in England in 1989 the number was 8.0 prescriptions per head per year; in 1999 it was 10.6.[3] And people are living longer, not least because new medicines have increased life expectancy and will continue to do so. The number of prescription items for people over 60 is about 25 per head per year.[4]

The prices of *new* medicines will continue to increase. The cost of bringing a significant new medicine to the market continues to rise. In 1990 it was US$500m[5] (£350m) and the current cost is likely to be considerably higher. Research-based companies fund the discovery of the new medicines of tomorrow from their profits on today's portfolio.

In most EU states, governments hold down the reimbursement prices of prescribed medicines. Short-term political popularity and the desire to contain expenditure take

precedence over the longer term need to discover treatments for conditions such as Alzheimer's, MS and AIDS. Paradoxically, the UK, which is among the EU's lowest spenders on medicines, is also one of the EU's most liberal regimes in permitting the research-based industry freedom to set the initial prices of new medicines sold to the NHS.

To set against this liberal policy, British governments for years have tried to limit if not actually ration the value of medicines prescribed by doctors. GPs are encouraged to prescribe generic medicines — those that are cheap because the original molecule is out of patent — which clearly is reasonable. Under the Conservatives, fund-holding doctors were allowed to use savings on their medicines budgets to improve their practices. A practice's value is an asset that each doctor expects to sell some day. Should doctors have an incentive to prescribe cheaply and benefit financially at a later time? Many would argue that they should not, and the system was abolished by the present government.

Another type of rationing has been to let health authorities decide that some medicines cannot be reimbursed within their area. This has led to "post-code prescribing" under which some expensive medicines, for example beta-interferon to treat MS, are either available or not available depending on where you live. Since the authorities who make the decisions are accountable to nobody, the system is democratically flawed and politically unpopular.

A groundswell against post-code prescribing, and the long-established desire to get best value for the public money spent on medicines, led the Labour government to establish the National Institute for Clinical Excellence, universally known as NICE. The rationale for NICE is that it should make evidence-based recommendations on whether certain medicines — particularly new and expensive ones — should be reimbursed under the NHS.

The complaint against NICE, both as a concept and in its functioning, is that it is another form of rationing, and that it was designed to take unpopular decisions in order to shield the government of the day. NICE categorically denies the charge, but its function as a rationing agency seems indisputable.

The conclusion to be drawn so far is that successive governments have tried a variety of instruments to contain expenditure on medicines based on the assumption that consumers of medicines have no role in the demand/supply equation.

What is wrong with the flat-rate prescription?

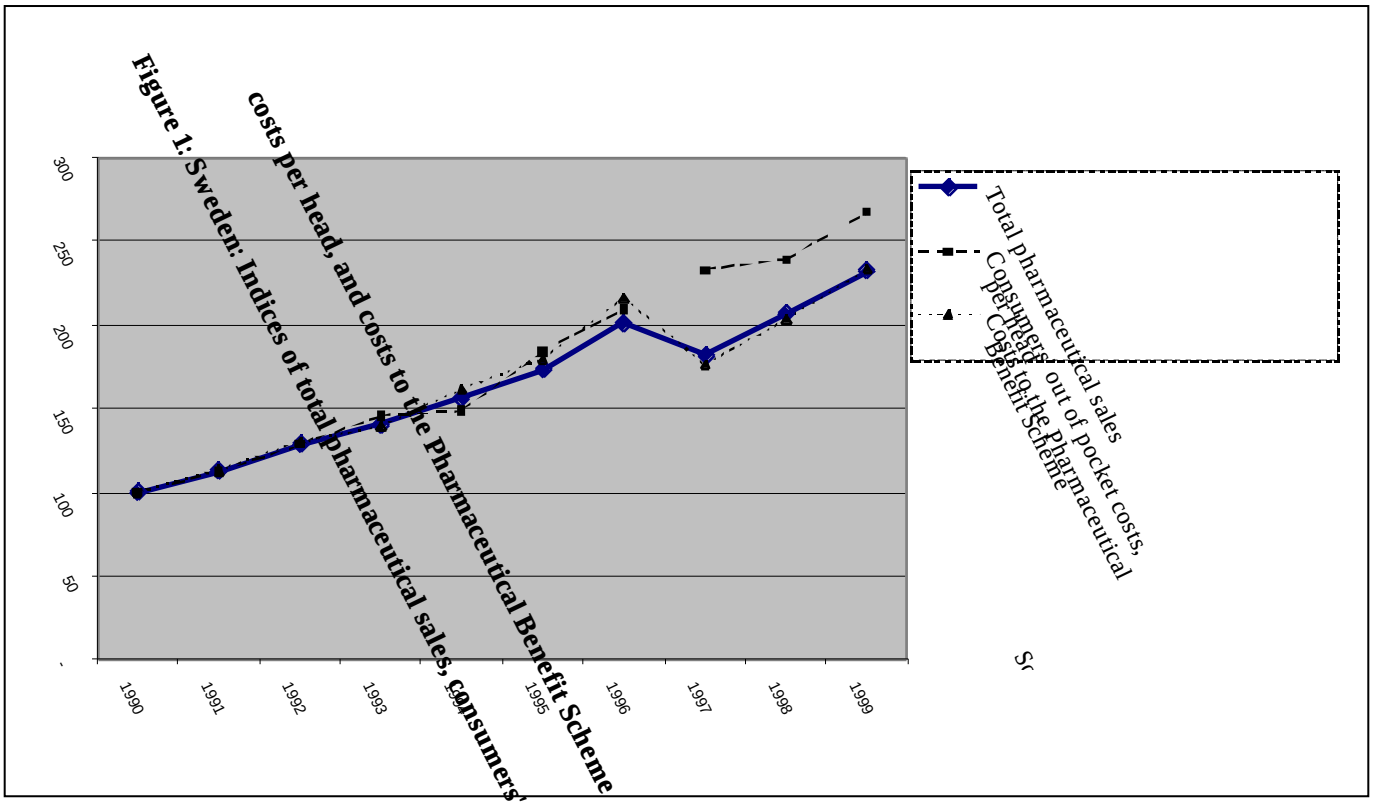
The short answer is virtually everything. For example:

- As a way of raising finance for the government to pay for prescribed medicines it is a failure. In England in 1989, prescription charges financed 26.5 per cent of community prescription costs. Since then the percentage has drifted down, to 19.6 per cent in 1999.[6]
- As a way of containing demand for medicines it is ineffective. Prescription charges have been raised every year on 1 April since 1982, normally in line with inflation, while the number of prescribed items dispensed by chemists and appliance contractors has risen every year since 1985.[7]
- A flat-rate charge denies consumers all knowledge of the cost of their medicines. It denies them the possibility of choice, for example between a new medicine costing £12 and an older one costing £2, and leaves to the doctor the largely automatic decision to prescribe the older, cheaper product.
- If a flat-rate charge is thought of as a form of social solidarity, it fails when a worker on £5 per hour pays the same charge for a given medicine as the next patient earning £50 an hour.

The *only* argument in favour of a flat-rate charge is that it easy to understand and to administer. While simplicity is indeed a cardinal virtue in any transaction that involves the state, this single benefit is manifestly outweighed by the system's failings.

The Nordic system of patient co-payments

Nordic countries have an enviable reputation for high standards of health care coupled with social solidarity. Against this background, the system which Sweden adopted in 1997 is of considerable interest in the context of the need to reform the British co-payment system. Denmark introduced a



similar system in 2000, and Finland's system is based on the same concept.

The essence of the Swedish co-payment scheme is that *all* consumers pay for their medicines up to defined thresholds. The only exception is that insulin is free, but even this exception may be abolished.[8] The first threshold is about £60 and in each year consumers pay for their medicines in full up to that amount. Above this point, individual consumers pay a proportion until their annual total reaches about £120. Thereafter their medicines are free. There are no exceptions on socio-economic grounds.[9]

This system still leaves a low paid patient paying the same as a highly paid one, as in the UK; so how does it improve on the British flat-rate charge? There are many benefits, but two stand out in particular:

- First, *it brings in new private money to pay for medicines*. Since its introduction in 1997 Swedes have paid about 25 per cent of the cost of their medicines compared with 22 per cent previously.
- Second, for the great majority of patients without chronic and expensive conditions, *it sensitises people to the cost of their medicines*, and it opens up the possibility of genuine choice. A doctor may ask the patient whether to prescribe a low-cost generic medicine or a more expensive brand-name one. Patients then become empowered to make rational decisions in their personal circumstances.

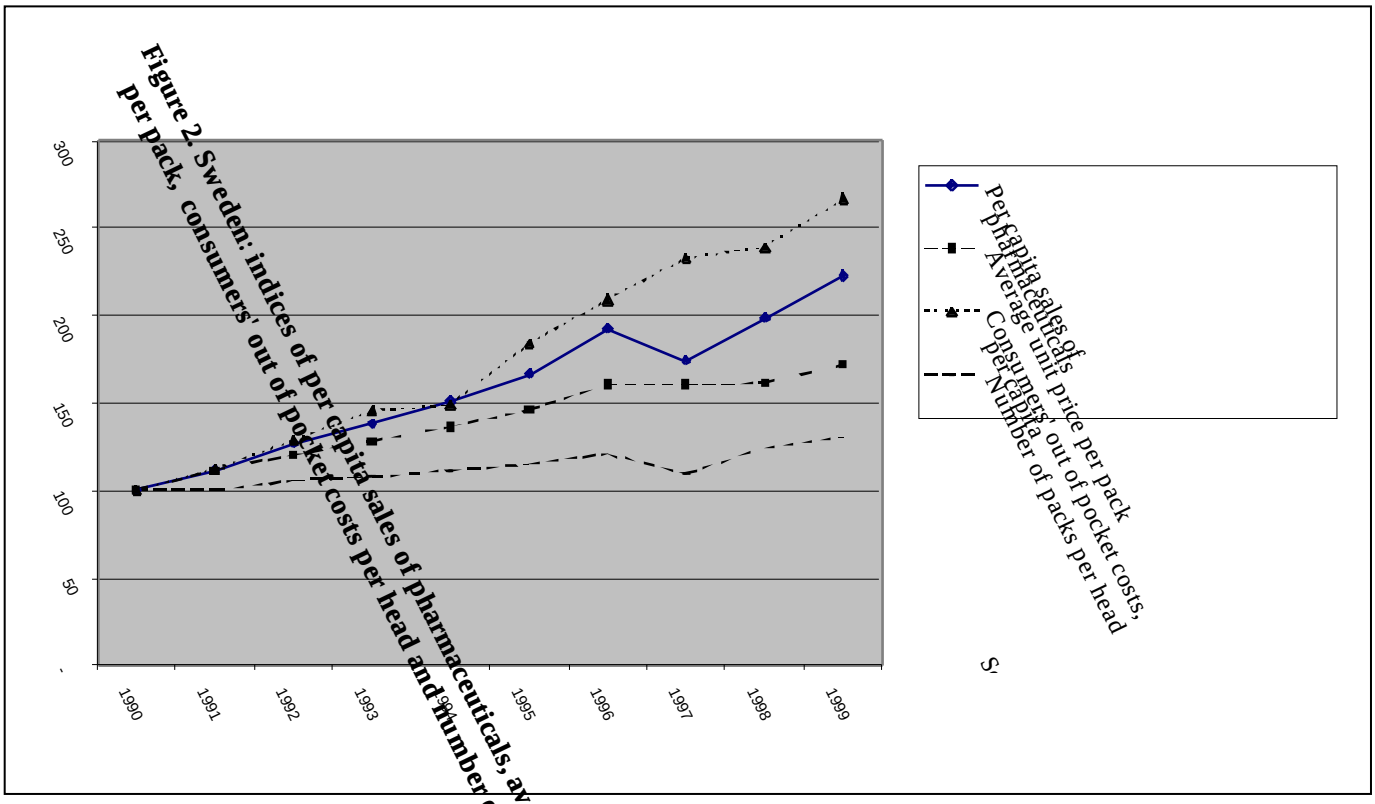
Prescription smart cards

The Swedish co-payment system has been made possible by the use of smart card technology. The smart cards embody a chip with substantial data storage capacity. The customer hands the smart card to the pharmacist who tells the customer how much to pay. The amount depends on the price of the medicine and the cumulative total that the consumer has paid thus far that year.

When people have been told by the pharmacist of their total expenditure for the year to date, they can make further rational decisions when they next go to their doctor and are offered a choice.

This system, though more sophisticated than the single flat-rate charge in the UK, is conceptually extremely simple once the IT equipment is in place. And its sophistication makes other benefits possible. For example:

- Requiring consumers to pay in part or whole for their medicines might increase compliance in taking the medicines. Non-compliance even in the case of life threatening conditions is known to be high.[10]



The smart card could readily contain consumers' medical histories and a record of their medicines. This would be particularly valuable in emergencies. Even in ordinary circumstances it would enable all health professionals including nurses and pharmacists to advise patients better and to reduce the risk of contraindications. Adverse side-effects, which are believed to be significantly under-reported, could be spotted more quickly.

Impact of the new Swedish system

What happened when the new system was introduced in Sweden is illustrated in Figure 1 and Figure 2, which graph a number of relevant indices.

In Figure 1 we see that total pharmaceutical sales fell in 1997, after the new system was introduced, but resumed their upward trend in 1998. This suggests that there may have been some fat in the system, which was squeezed out when consumers became better sensitised to the cost of their medicines. Costs to the Pharmaceutical Benefit Scheme (i.e. public funds) also fell, but then resumed their upward trend. The gap between consumers' out of pocket costs and costs to the Scheme from 1997 onwards represents a continuing saving to public funds.

In Figure 2 we see that the number of packs consumed per head dropped in 1997 but then resumed its upward trend, though more slowly than the other three indices (per capita sales of pharmaceuticals, average unit price per pack, and per capita out of pocket costs). The average unit price per pack fell in 1997, suggesting that consumers were more price conscious and more willing to accept generic medicines.

Taking these indices together we see that requiring consumers to contribute more for their medicines produced a downward shift in all the other indices. This suggests that consumers are likely to make rational choices about medicines when they are given the chance to do so. And it would be hard to argue that Swedish health was damaged by the change in the co-payments system. Assuming simplistically that if more medicines are consumed health has improved, then the Swedes were *more* healthy in 1999 than in 1996.

Likely objections to the Nordic system

The first and highly simplistic objection to the Nordic system is that individuals' ill health is beyond their control and that they should not be required to pay for treatment.

Table 1. Family spending in the UK, 1998-99

	Lowest 10% of household incomes	All households
Weekly expenditure by income group, current system, 1998-1999, £		
Medicines	0.60	2.30
Alcoholic drink	4.20	14.00
Tobacco	3.70	6.80
Leisure goods	4.80	17.80
Leisure services	8.80	41.90
Total	22.10	81.80
Weekly expenditure by income group, threshold system 1998-1999, £		
Medicines, family of four (2 adults, 2 children under 15)	3.40	3.40
Medicines, family of two elderly people 60 or over	2.31	2.31
Medicines, family of four, as a percentage of alcohol, tobacco and leisure	15.8%	4.3%
Medicines, family of two elderly people, as a percentage of alcohol, tobacco and leisure	10.7%	2.9%

Source: Ian Senior from DoH and ONS data

In fact some forms of ill health, such as smoking-related conditions, sexually transmitted diseases and obesity, flow demonstrably from personal behavioural choices. Conversely, good health can be greatly influenced by healthy living. Paying up to a defined threshold for medicines would reinforce the incentive to lead healthy lifestyles.

The usual arguments about those on low incomes will be put forward. However, Table 1 shows that British families spend a very small amount on medicines compared with alcohol, tobacco and leisure. It seems clear that our priorities are wrong — and, indeed, are being reinforced as such because we are insulated from the cost of medicines by the current flat-rate prescription charge with its very widespread exemptions.

Impact on low-income families

When a significant change in any form of taxation is made, social solidarity requires that its impact on those with lowest incomes should be considered. Let us make the following simplifying assumptions:

- the threshold for reimbursement begins at £60 per person per year; and
- even people in families in the lowest 10 percentile are required to pay the first £60.

Consider a family of two adults and two children in the age range 0 - 15 years, with the whole family in the lowest 10 per cent of household incomes. As shown in Table 2, under a £60 threshold system, the family would pay £3.40 per week for medicines. This would be equivalent to only 15.8 per cent of their discretionary expenditure on alcohol, tobacco and leisure combined.

A family of two people of 60 or over, and who are also in the lowest 10 per cent of household incomes, would be spending £2.31 per week on medicines, equivalent to only 10.7 per cent of their discretionary expenditure on alcohol, tobacco and leisure.

It must be a political judgement whether low income families should pay for their medicines as happens under the Nordic system; but it does seem reasonable to expect the elderly to spend more on their health than younger people. They would still be substantially supported by public funds, since their large requirement of medicines would still be free above the threshold. The underlying concept that all families should be willing to spend at least as much on medicines as they do on tobacco or alcohol seems powerful.

Table 2. Co-payments that would have been made in 1999 under a threshold system of £60

	Avg scrips	Avg cost £	Total £	Weekly £
Children 0-15 years	4.3	6.59	28.34	0.54
Other Elderly, 16-59	6.3	9.59	60.00	1.15
Elderly, 60 and over	24.8	9.59	60.00	1.15
Family of 2 adults and 2 children 0 - 15 years	21.2	9.59	176.67	3.40
Elderly couple	20.6	9.59	120.00	2.31
Single adult using a pre-payment certificate	20.1	13.96	84.60	1.63
Single elderly-list adult	20.1	13.96	60.00	1.15

Source: Ian Senior from DoH and ONS data

Impact on different age groups

A further way of looking at the effect of the new system is to see what impact it would have on different age groups. In Table 2 (and using data for England only) we see that children (0 - 15 years) and others (16 - 59 years) consumed 4.3 and 6.3 prescriptions respectively in 1999, far below the 24.8 consumed by those aged 60 and over. Under the threshold system a family of two adults and two children would pay a total £176.67 per year. An elderly couple would pay £120.

It is for debate whether this balance is equitable. Not all elderly people are poor, as often assumed. Couples with two dependent children may have one (or two) incomes, but many are likely also to have mortgage repayments, which those over 60 may not.

Patients who pay for their prescriptions by

Table 3. Estimated impact on the financing of medicines dispensed in the community under a threshold system of £60 (England, 1999)
Comparison between threshold and current systems

Consumer payments, threshold system	**Million**	**Scrips per head**	**Avg cost per scrip £**	**Total £m**
Children 0-15 years, 1998	10.1	4.3	6.59	286
Others 16 - 59 years, 1998	29.3	6.3	11.61	1,758
Elderly, 60 and over, 1998	10.1			607
Total payments under a threshold system, £m				2,650
Consumer payments, current system				
Revenue from flat rate charges	51.4		5.90	303
Revenue from 788,000 pre-payment certificates	0.8			67
Comparison				
Cost of medicines, community pharmacies, current system				4,836
Net cost to the NHS, current system				4,466
Net cost to the NHS under a threshold system				2,185
Increase in amount of consumer payments = reduction in cost to NHS				2,280
Proportion of medicines' bill paid by consumers				55%

Source: Ian Senior

an annual pre-payment certificate (discussed later) would have paid £24.60 a year less in 1999 under the threshold system.

Impact on NHS funds

A third question of interest is what effect would the threshold system have on the cash totals paid by consumers and by the NHS. In Table 3, I make the simplifying assumption that following the introduction of the threshold system there is no reduction in the number of prescriptions or the average cost of each. Clearly this assumption does not reflect what happened in Sweden when their new scheme was introduced. However, the Swedish experience was that by the following year the volume of consumption measured by packs was back to the pre-change level and rising again. Therefore the simplifying assumption in the case of the UK can reasonably be used as a starting point for the purposes of estimation.

Table 3 shows that, under the threshold system, in 1999 the total of co-payments from consumers in England would have been £2.7 billion and the balance paid by the NHS would have been £2.2 billion. Thus the additional revenue from co-payments would have been £2.2 billion. Consumers would have paid 55 per cent of the medicines bill in community pharmacies instead of 20 per cent.

Raising an additional £2.2 billion from consumers would be a major increase and it might be advisable to bring in the threshold system over, say, three years. The threshold might be set at £40, £50 and £60 in consecutive years.

Inevitably there would be opposition to any move away from "free" medicines. Particular hostility could be expected if the funds raised by threshold co-payments simply disappeared into the Treasury's maw. However, the additional funds should specifically be used for two clearly defined purposes:

- Firstly, the NHS would be able to afford new and sometimes expensive medicines instead of rationing them as at present.
- Secondly, the funds could and should be urgently used to upgrade the hospital system whose standards, as is now well known, have been reduced in many cases to quite unacceptable levels. Reports attest to one third of hospitals having "filthy" wards, to shortages of beds, to overstretched accident and emergency facilities, to shortages of doctors and nurses now hastily being recruited from abroad, sometimes with linguistic problems, and to a dramatic loss of morale among staff at all levels. Applying the revenue from pharmaceutical co-payments to remedy these problems would be a clear form of social solidarity since it is the elderly and those with acute and life-threatening conditions who make most demands on medicines generally and hospitals' resources in particular.

A British precedent for a threshold system

It is generally easier for new systems to be gain public acceptance if there are precedents. The Nordic systems have already been mentioned. But more significantly the NHS has a scheme known as the pre-payment certificate.

Under the pre-payment certificate, NHS patients who require regular repeat prescriptions but who do not qualify for exemption can choose to buy a pre-payment certificate for £86.20. This entitles them to unlimited free medicines for one year. In England in 1998-99, about 788,000 pre-payment certificates[11] accounted for 5.8 per cent of the total cost of community medicines.[12] Thus, in this rather restricted case, the NHS *already has a threshold system*.

Conclusion

Requiring all consumers to contribute significantly to the cost of their medicines in a direct, tangible way would of course represent a seismic change in the NHS. However, it would be no more than following the path of most industrialised countries in the EU and beyond. Put simply, there seems no reason why many British people should pay little or nothing for their medicines and yet pay substantial sums for cigarettes, alcohol and entertainment.

A patient co-payment system that addresses the current rationing of certain medicines, that injects much needed funds into hospitals, that helps to empower consumers and still unambiguously retains a concept of social solidarity would have much to commend it in the UK.

Notes

[1] Reekie W D. "Prescribing the price of pharmaceuticals" IEA 1995
[2] Office of Health Economics. *Compendium of Health Statistics 1999,* part 4, figure 4.19, p59
[3] Department of Health. *Prescriptions dispensed in the community. Statistics for England 1989-1999,* table 1
[4] *OHE Compendium of Health Statistics 1999,* table 4.27, p53
[5] PhRMA. *Industry profile 2000,* p25
[6] DoH. *Statistical Bulletin. Prescriptions dispensed in the Community, England 1989-1999,* table 2b
[7] OHE *Compendium of Health Statistics 1999,* table 4.26, p56
[8] Institute for Health Economics, Lund, Sweden. *IHE Information,* 4/2000, pp2,3
[9] Macarthur D. *Handbook of Pharmaceutical Pricing and Reimbursement, Western Europe 2000.* Informa Publishing Ltd, ISBN 1859784011, p107
[10] See Merck Sharp and Dohme and the Royal Pharmaceutical Society: "From compliance to concordance: achieved shared goals in medicine taking", 1997
[11] DoH, private communication, 6 February 2001
[12] DoH *Statistical Bulletin: Prescriptions Dispensed in the Community, England 1989-99,* Table 2b

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