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Review article

Health insurance in developing countries: lessons from experience

BRIAN ABEL-SMITH

Department of Social Science and Administration, London School of Economics and Political Science, UK

Many developing countries are currently considering the possibility of introducing compulsory health insurance schemes. One reason is to attract more resources to the health sector. If those who, together with their employers, can pay for their health services and are made to do so by insurance, the limited tax funds can be concentrated on providing services for fewer people and thus improve coverage and raise standards. A second reason is dissatisfaction with existing services in which staff motivation is poor, resources are not used to best advantage and patients are not treated with sufficient courtesy and respect.

This article describes the historical experience of the developed countries in introducing and steadily expanding the coverage of health insurance, sets out the consensus which has developed about health insurance (at least in Western European countries) and describes the different forms which health insurance can take. The aim is to bring out the advantages and disadvantages of different approaches from this experience, to set out the options for developing countries and to give warnings about the dangers of some approaches.

Introduction

The historical development of health insurance

Historically, health insurance developed as a way of solving the problem of access to an income to replace earnings when sick, and generally later to secure the provision of an acceptable standard of health care. Those originally covered from the early nineteenth century were the more skilled workers and not too poor farmers (Abel-Smith 1989). These groups had too low an income to be able to afford to pay private health professionals for their services when they became ill, and could not afford to use hospitals (public or private) which charged their patients. Often the only alternative services available were of low quality and designated for the poor. The essence of health insurance was weekly or monthly payment by the insured when well (supplemented by employers' contributions in some central European countries), in order to have the right to services when sick, from acceptable providers at specially negotiated low prices which the insurer could achieve by being a bulk buyer for its members. Together, these provisions made the services affordable.

Some funds were started by employers, but many others by groups of working men either engaged in a like occupation or living in a certain locality. Rating of risks was avoided by covering a group, though an already sick individual would be likely to be refused membership. As the system expanded, disputes arose with providers about the low levels of payment which competition forced them to accept, and the system of contracting only a limited number of providers (Abel-Smith and Creese 1989; Hogarth 1963). This encouraged providers to organize themselves and to try and negotiate collectively.

Compulsory insurance, started in Germany in 1883, was built on these precedents (Zollner et al.

1982). Compulsion had the advantage that now the employer could be compelled to contribute. This enabled somewhat lower income groups to be brought into the scheme - particularly if contributions were related to earnings. It also enabled dependents to be covered. Again risk-rating was avoided: contributions did not vary according to the number, if any, of dependents covered. Thus the ideology of social security developed: people paid according to what they earned and the basic health needs of the earner and the family were met - whatever the health risk and whatever the family size.

There were many ways of securing the provision of services. Some used what the International Labour Office classifies as the direct method - professionals were salaried, and the fund built and organized the facilities where the services were provided (Abel-Smith et al. 1990). This pattern was particularly likely to be chosen where services were underdeveloped. Others used the indirect method - existing local providers were contracted. Often the direct method was opposed by health professionals, arguing that this challenged professional freedom, though what was often feared even more was the loss of economic freedom. Moreover, under the indirect method, there were prolonged disputes about levels and methods of payment - issues which were not unrelated (Hogarth 1963).

Once most of the regularly employed were covered, the problem facing policy-makers wanting to extend rights to health care was how to cover the self-employed - particularly farmers, fishermen and others, many of whom had relatively low earnings and no employer to share the contribution. One solution was to keep the cost of insurance down for *all* insured persons by providing highly subsidized public hospitals of acceptable quality as in Scandinavia (Borgenhammar 1984). Another was to leave hospitals out of insurance and leave this to voluntary organizations to provide on an informal means-tested basis as in Britain (Abel-Smith 1964). A third was to make the other funds cross-subsidize the low income self-employed. A fourth was to subsidize all compulsory health insurance with public funds or only those funds for the self-employed (Powell and Anesaki 1990). Many ways were devised to try to collect some contribution from farmers - taxes on land according to its potential profit (as in Italy), taxes on agricultural produce (as in Brazil) and contributions collected as part of the income tax, knowing full well that farmers were well-placed to understate their incomes (as in the Netherlands, France and Belgium).

The final stage of development was services available to all. Britain set the precedent in Western Europe in 1948. Scandinavia and Japan followed in the 1960s (Powell and Anesaki 1990), Canada in the 1970s (Soderstrom 1978), Italy in 1980 (Ministero della Santa 1979), Portugal, Spain, and South Korea in the 1980s, with Taiwan to follow in 1994. (It should, however, be added that health insurance of different kinds has a very high coverage in the other Western European countries).

Nearly all countries which have achieved very high or complete health insurance coverage have gone through a transition of a compulsory health insurance scheme, available to only that part of the population which paid contributions, or shared payment with their employers. How did they make the transition to services available to all? Usually those not covered included the unemployed, the elderly and the disabled. Some countries covered the elderly as dependents of insured persons. Others built rights to health care on to cash benefits, given as part of their social security schemes. Thus people receiving benefits for sickness, disability or unemployment, or pensions for widowhood or old age were deemed to have prepaid, while they were at work, for cover to health care, to be continued while they were on benefit or pension; otherwise a modest contribution was taken from the pension while it was in payment. Those on social assistance had their contributions paid for them by the central or local government agency which provided the assistance.

Three important points should be made about this stage of development:

(1) Countries generally retained their previous arrangements for the provision of services. The United Kingdom was exceptional in choosing this moment to put nearly all its hospitals under central government ownership.
(2) Most countries retained health insurance contributions as one of the sources of finance for the universal services. How far

they did so depended on the balance decided upon between different ways of raising money for public services, taking account of ease of collection and the side-effects of the economy on the operation. An exception to this pattern is Denmark, and a partial exception is the Netherlands, where social security contributions are collected as part of the income tax, but still separately labelled. However, this option is not available in countries with poorly developed income tax systems.

(3) Whether the system of universal health provision was called a national health service, national health insurance or national health system was simply a question of political choice. Not surprisingly the term health insurance was retained in such countries as Japan, Korea, and Canada where the use of the term 'a national health service' might sound socialistic, and will be retained in Taiwan for the same reason. Nor is it surprising that the term 'a national health service' was preferred by some left-of-centre governments and by the right-wing government of Italy when it depended on the left to keep it in power. The Scandinavians have been much more relaxed about nomenclature. They see no more advantage in talking about a national health service than of a national education service. Both are seen largely as the routine functions of local government, like providing fire services.

Countries which have not developed universal services have chosen not to do so for a number of reasons which need to be appreciated. The attempt failed in the Netherlands in the 1970s because of opposition from the trade unions. They realized that their members would have to pay more for their health services if everyone was covered on the same basis. No longer would providers give their members favourable terms if they could no longer make high charges to the higher-income groups who were covered by voluntary insurance. This opposition looks set to be overcome when the new reform is put into effect (Hurst 1991). A similar consideration operates to some extent in Germany, but there is also the fact that many of the high-income groups with low health risks who are excluded from health insurance can buy the private health insurance they want cheaper than if they were forced to pay a contribution related to their earnings. There is also a problem when there are many different funds. None of them may want to take in uninsured people, some of whom it is feared, will include high health risk persons who are currently a burden to social assistance services and not to sickness funds.

Alternatives not accepted in Western Europe

The countries of Western Europe are agreed that the provision of health services cannot simply be left to the private market. If it were, health care would become very costly and there would still be unacceptable gaps in insurance coverage.

One way in which national health insurance might be achieved is by requiring everyone to insure with a private insurer for a defined package of services. Subsidies might be available for the poor up to a level of 100% for the poorest. The result would be far from equitable. First it would be administratively difficult to find all the poor for subsidy. Secondly, those non-poor persons identified as bad health risks would have to pay much more than those with good health. The premium would also vary according to age, sex and the size of the family. Ability to pay would come into the picture only to the extent that there were subsidies available to the poor. There would be very high administrative costs as the competing insurers attempted to attract and service individual clients. Government would also need inspectors to ensure that the law was being obeyed. Presumably because of all these disadvantages for equity and cost containment, no country uses this model for national health insurance. But some of the disadvantages of private health insurance are apparent from the experience of the United States which has the most costly system of health care in the world.

A variant would be to require employers to take out defined insurance for their employees and their dependents, and to require individuals not in employment to buy their own policy again with subsidies for the poor. This could lead employers to seek to hire single persons and to sack them on marriage or the birth of a child. The premiums paid by employers of clerical staff (such as banks or insurance companies) would be much lower than those in hazardous industries.

The cost of individual premiums would be much higher because of the extra administrative cost and once again these premia would be related to health risk, age, sex and family size. Again, presumably because of these disadvantages, no country uses this system for national health insurance, though certain better paid groups may be given the option to choose a private insurer.

It was to avoid 'family size rating' as well as 'health risk-rating' that, when compulsory health insurance was introduced in Europe, standard charges were generally introduced for employees and employers and were usually a proportion of earnings, to reflect ability to pay and to avoid hitting hard at employers of low paid labour. This meant that there had to be special arrangements for cross-subsidy, or a statutory monopoly insurer to even out risks. The latter option had the additional advantage that administrative costs could be kept low as the costs of sales promotion were saved.

The consensus of Western Europe

Linguistic distinctions between health insurance and national health services and political rhetoric can easily conceal the underlying convergence of principle in Western Europe on the following vital principles:

(1) Nobody is denied any important health care because of inability to pay. Dentistry, other than emergency dentistry, and optical care are often regarded as less important services, at least for adults, which people can save up to buy (Abel-Smith 1992). How much to cover is a political decision.

(2) With the possible exception of higher income groups, health insurance is prevented from developing risk-rating, either according to individual health risks, or according to the number of an insured person's dependents. Health insurance deliberately avoids applying strict actuarial principles. National health insurance is very different from private health insurance.

(3) Again with the possible exception of the higher incomes groups, health services for the compulsorily insured are not left to the functioning of the unregulated free market because three vital elements for the functioning of such a market are missing. The first is informed consumers, who know precisely what they want to buy. Secondly, the need for health care cannot be known in advance and, when it comes, it can be very expensive indeed. The third is the lack of separation between the functions of authorizing purchase and supplying it. Doctors and dentists do both (Barr 1987). For these reasons:

- health services are prepaid by some mix of taxes and health insurance contributions (which may be voluntary for the higher income groups in some countries).
- governments intervene in a whole variety of ways to try and secure value for money. Health systems differ according to whether the emphasis is on control through ownership and salaried employment or on regulation of price, payment system and/or supply. They also differ according to the bodies who do the controlling and regulating - central government, local government or the insurers who pay the bills. Often a complex mix of regulators and controllers has emerged according to the political traditions, historical experience and power groups within each country. And it is because of these differences that *a system which works well in one country cannot simply be transferred to another and produce the same good results*. Each country must make its own choice, taking into account the likely behaviour of the different actors.

The current meaning of health insurance

Health insurance has two aspects. First, it is a way of raising all or part of the money to pay for health care. Second, it is a way of securing the provision of services. Each aspect needs to be considered separately.

Financing services

As a way of raising money, health insurance contributions have a number of advantages:

(1) The contributions are administratively easy to collect - at least from those with employers. Indeed the employer is induced to act as a 'tax' collector, deducting the employees' contribution from the pay of each employee, as well as paying over his own share. The calculation of the sum due is relatively simple compared with income tax.

(2) The contribution is more willingly paid than a tax, as the employee is aware that he or she

gains a personal and identifiable benefit from paying - the right to such health care as defined in the regulations. But the employee will only pay willingly for what is seen as a good service. If costs go up or the range of benefits is widened, an increase in the contributions due can be readily explained and is normally accepted with little complaint.

(3) An earnings-related contribution paid for a benefit whose value does not vary to this extent between income groups is redistributive from the better-off to the poorer.

(4) Contribution income is predictable in the short-run, varying with the level of unemployment, inflation and economic growth.

It is often argued by employers that their contribution adds to labour costs and is thus damaging to employment, raising prices and damaging exports. But it is much more likely that the employers' contribution ultimately affects the employee, by limiting pay rises.

How can one explain the use of insurance contributions for financing services if they are available to all, even though not everyone pays the contributions? One country (Costa Rica) uses the term 'insured by the state' to justify the fact to other contributors that the same rights to health care are being given to people who are poor (Abel-Smith 1989). The dilemma is political. Countries want to retain contributions as a source of revenue, which in the case of the employed worker is simple to collect and not easily evaded. But the more people have been taught that this particular 'tax' buys them the right to health care, the more difficult it is to explain why the same rights to health care should be given out of taxation to people who have not paid for it. How health care for the uninsured urban population should be paid for became a very hot political issue in South Korea, early in 1989. Countries which have long had compulsory health insurance do in practice manage to retain contributions levied only on those at work when they make the transition to universal health care.

For these reasons, many countries use both taxation and contributions to finance services, but keep them closely co-ordinated. Multiple sources of finance which are not closely co-ordinated can lead to waste, as shown by the experience of the US.

Securing the provision of services

As a way of providing services, health insurance has the advantage that the insurance agency or agencies have a wide variety of options for securing services. There is no need to use the direct method if some alternative is thought to produce better results. The insurer can make contracts only with those providers who give a quality service at a favourable price. If desired, each insured person can be given a choice of provider, thus generating competition for the insured person's custom. Competition in health care as elsewhere makes those competing keen to satisfy the consumer that they are providing a good, courteous and readily available service. Those who do not will lose customers.

These advantages could of course be obtained by a tax-financed service, but in practice they usually are not. Conventionally, ministries of health choose the direct method of providing services. They own the health facilities and recruit salaried health professionals to work in them.

Types of health insurance fund

The organizational pattern of insurance funds differs according to their historical evolution and political culture. The possibilities include the following:

(1) Some countries have one insurance fund covering all the insured, though powers may be delegated to local areas. This simplifies administration when people change employer or place of residence.

(2) An alternative is to have a series of local funds to bring control nearer to the consumer. Cross-subsidies may be needed between richer and poorer areas.

(3) A third pattern, found in such countries as Germany, Japan and South Korea, is a system of insurance largely based on industry, which was the way in which health insurance developed in those countries. Under the law all funds have to provide certain defined benefits: some other benefits may be optional. Within the regulations, employers and employees can jointly control their own schemes. The trend over the years however, has been to amalgamate insurance funds to prevent any of them being too small to achieve economies of scale. Decentralization to a number of separate funds gives the

advantage that unions can negotiate for extra benefits beyond those which the law requires. Additionally, joint control between workers and managers may help to secure more harmonious working relationships, but it does not necessarily lead to much competition between funds. Nor does it lead to tight control over costs. Indeed, insurers have nearly always found it necessary to negotiate prices and contracts with providers through a federal organization. It has, moreover, been found that control over price, but not quantity, is far from giving control over total costs.

(4) A fourth possibility is to have competition between funds for members, with a central body collecting the contributions and distributing them among the chosen insurers according to the risks of their members, as recently planned for the Netherlands (Hurst 1991).

Types of health insurance system

It is not possible to make a comprehensive typology of systems of organizing national health insurance, as most are complex mixes of different types of provision. At one extreme are the direct systems, with salaried professionals with, usually, their own hospitals and health centres. This model is to be found in several Eastern European countries (Kaser 1976), though many are currently planning to change it (Cichon 1991); in Greece; Portugal; Spain and many countries of Latin America. At the other extreme are countries using the indirect method, where health insurance funds contract all services paying private doctors on a fee-for-service basis. This is the pattern in Belgium, Canada, France, Japan, Luxembourg and Germany. It does not follow that the insurers are left alone to get on with the job. Central government plays a very active regulatory role, and is constantly intervening with new measures in an attempt to contain costs and secure value for money.

In Denmark, the Netherlands, Italy and the United Kingdom, general practitioners generally work in their own offices and are paid on a capitation basis or some variant of it. The hospitals used are owned by local government in Denmark, mainly by central government in the UK and by a mix of public and private agencies in the other two countries. Sweden has local government hospitals and the option of primary care from free local government health centres, with salaried doctors or private fee-for-service paid doctors where the patient has to pay part of the fee.

Another way of delineating systems of national health insurance is to show 'who has the power to decide what' within each system. Who decides the number of insurance funds? How are the members of each fund selected? Who chooses the providers, the prices and the scope of the packages of care? Some of these decisions may be taken by government (central or local), some by the funds, some by the providers or by the insured persons themselves.

What must be recognized is that health insurance changes the behaviour of patients, doctors and hospitals. Thus the terms on which providers are contracted (if they are not under direct control as salaried employees), are critical issues which need to be carefully designed from the start, if the cost-escalating experience which has overwhelmed so many health systems is to be avoided. This issue is therefore discussed next.

Methods of securing that providers are paid

Reimbursement without negotiated rates

Under this system, providers fix their own charges and the patient is fully reimbursed, reimbursed a proportion of the charges or reimbursed on a standard scale laid down by the insurer. The larger the reimbursement, the more providers are encouraged to raise their charges and increase their services. This is the opposite of cost containment.

A more common system, at least under private health insurance, is for the insurer to reimburse at standard rates laid down in the policy. This also encourages providers to raise charges and increase services. This is what has happened over many years in the United States. For this reason, very few countries use this system under compulsory health insurance. It does, however, operate under the 'Medicare' scheme for hospital insurance in the Philippines. When the scheme began in 1972, it was reimbursing 70–100% of hospital costs. Owing to higher prices and the in-

clusion of dependents, by 1982 the proportion of costs covered had fallen to 48% for primary care hospitals, 30% for secondary hospitals and 15–18% for tertiary hospitals. Moreover, the admission rate rose from 3% per year to around 6.5% per year, partly because care outside hospitals was not covered (Patag 1983).

Where reimbursement is used, the compulsory insurance scheme normally negotiates charges with associations representing providers and expects them all to observe them. There is often a continuing conflict with those providers who refuse to observe the contract negotiated by their association. This has been the experience of France over many years (Saint-Jours et al. 1982). There was a similar conflict with doctors in Canada until finally a federal law was passed by which no reimbursement was given to the patient unless the doctor charged at the negotiated level. Naturally patients would avoid any doctor who placed themselves outside the scheme in this way.

It is because of these problems that most compulsory health insurers themselves pay providers contracted rates, agreed in advance by negotiation. These rates cannot be exceeded. Any charges which can be levied on patients or co-payments also form part of the contract. Such contracts can take a variety of forms. Any system of reimbursement has the disadvantage that the patient has to find the money to pay for services before he can go and claim reimbursement. Poorer people may find this difficult and so hesitate to use the services.

Contractual payments to doctors

Salary – the direct method

There are obvious advantages in the direct method. Doctors can, in theory at least, be deployed where they are needed, trained to use resources economically and have a strong preventive orientation.

The system works well, if expensively, in a country like Sweden with a very long tradition of salaried doctors. The high cost of the system appears to be due to a relatively slow pace of work. But the tradition of the dedicated and conscientious salaried doctor is not easy to create and, in most other countries, direct provision is much less successful – at least in giving an acceptable primary care service.

In many Latin American countries, as in Central and Eastern Europe, doctors arrive late and leave early, patients complain of lack of courtesy and there is often low morale among the doctors. In some countries, patients are told which doctor they will see (they have no choice), there are long delays before treatment and doctors use the service to recruit the better-off patients for their licit or illicit private practice after working hours. Nor is the system always as cheap to operate as it could be – if doctors insist on seeing only three or four patients an hour and refer a third of them to specialists inside the health centre. To add to this, there are problems of 'gratitude payments', 'the top drawer' or 'envelopes' from patients determined to obtain the best attention and resources in what is nominally a free service. Such practices disadvantage poorer patients who lack the resources to pay in these ways. Costa Rica is changing the system of payment for health centre doctors from salary to capitation, because of public dissatisfaction with the salaried service (Abel-Smith 1989).

A salaried service more often works successfully in hospitals. It is generally applied to all doctors, from the leading specialists and professors, down to the housemen or interns. Thus it is considered successful in Germany, the UK, in the public hospitals of France and other countries of Europe and there are no plans to change it. In some cases the specialists can supplement their salaries by treating patients on a paying basis in special private wards or private hospitals.

The disadvantage of this is that a 'dual tract' system may develop as in the UK. Many of the higher income groups do not use the national health service for specialist and minor hospital services (although they still have to pay their share of the costs). They prefer to take out private insurance so that they can have private rooms, more choice of time of admission for non-emergency care, and the knowledge that the specialist they have chosen will be directly responsible for all their care rather than delegating some of it to junior doctors. It is notable that there is hardly a 'dual tract' in Denmark or Sweden.

Fee-for-service

This system is used in such countries as Canada, Australia, New Zealand, Japan, South Korea,

Belgium, Germany and Norway. In several of these countries it was adopted because the doctors refused to participate in a scheme which paid them on any other basis. The advantage for the doctors is that it gives them the flexibility to increase income by providing further services. Payment is for work done. The disadvantage is the time needed to record and claim for each service and deal with queries raised by the insurer.

The advantage for the patient is that it can provide complete free choice of doctor, general practitioner or specialist, for each illness or even during the course of the same illness. In practice the system encourages patients to go direct to the specialist who may order more diagnostic tests than a general practitioner. If the doctor has access to a hospital, the patient can be treated by the same doctor in and out of hospital. The doctor has incentives to make the services attractive, prompt and courteous. There is, moreover, no incentive to under-provide. As a result, the insured person will find the premium high because of the high utilization it encourages.

While the insurer derives satisfaction from contented users, the disadvantages for the insurer are escalating costs due to growing utilization and the administrative cost of monitoring claims. Under negotiated standard fees, the only way doctors can augment their income is by providing more services, and this they are in a position to do. Even when there are only two fees, as in Ireland, for a home visit and for an office call, they can encourage repeat visits. When the fee schedule includes over 1000 medical acts as in Germany, or over 2000 as in South Korea, doctors can provide more technical procedures and order more diagnostic tests. Some procedures are bound to be particularly high-earning for doctors for the time involved, and this will encourage their use. For example, diagnostic tests were identified as a problem in Belgium, until the relative payments for them were reduced. And where doctors have purchased a particular piece of medical equipment, there are strong financial incentives to use it so as to pay off the capital cost as soon as possible. This has been a special problem in (Western) Germany. Now costs are contained by fixing a budget for all technical services provided by all doctors under statutory health insurance. If the number of medical acts increases, the rate of payment for each goes down proportionately (Hurst 1991).

Repeat visits may lead to further prescriptions. There is evidence that doctors paid on a fee-for-service basis tend to prescribe more drugs; this is one of the reasons Italy changed to a capitation system of payment for all general practitioners. If doctors do their own dispensing, as in Japan, making a profit on every drug (and particularly if they are paid extra for injections), there are major incentives to over-prescribe (Powell and Anesaki 1990).

Concerns about quality can arise in a number of contexts. Where doctors are paid on a fee-for-service basis for surgery, there is the possibility of some of it being unnecessary. A much-quoted study from the United States showed that varying geographical rates of surgery seemed to be explained by the number of surgeons in each geographical area (McPherson 1981). Doctors may be tempted to undertake surgical procedures of which they do not have recent experience. Patients who can visit several doctors during the course of an illness and receive drugs from each may take them in a dangerous combination.

To try to limit these problems, the insurer needs to monitor claims closely and maintain statistics of each doctor's usage - to use 'doctor profiles' to ascertain which doctors make high claims and in what respects. Sanctions may be applied against doctors with high claims. Claims may be queried when the procedures appear inconsistent with the diagnosis, if this is disclosed. Moreover, there is always the possibility of fraud either from patients (such as cashing prescriptions at the pharmacist for cosmetics) or from doctors (such as colluding to share the profits with a laboratory for pathological tests which were never done). An alternative way of limiting over-utilization is to require prior approval for hospital admission or surgery. All this makes such systems expensive to administer. Moreover, while fee-for-service payment may at first sight appear to interfere least with the clinical freedom of the doctor, it may end up interfering far more than any other system of payment.

A further way of keeping the cost under control is to make the patient pay part of the cost. In South Korea, outpatient visits rose from 4.8 per

person per year in 1980 to 7.4 in 1985. Only when co-payment was more than doubled was the increase checked. But by that time the patient was required to pay 65% of the cost of an outpatient visit (Kim 1987). This considerably reduced the value of the insurance which it was originally intended to provide. Co-payment has a negligible impact on usage in France however, where most people take out private insurance which reimburses the co-payments.

Capitation

Under this system doctors are paid a negotiated sum per month for each person who chooses to register with them for primary care, whether that person uses the service or not. Thus a patient can normally only visit that doctor until the insurer is notified of a change to another doctor. Access to specialists is restricted to cases referred by the general practitioner, except in emergency, and this helps to keep down costs. Under most systems, the doctor has responsibility for the listed patients 24 hours a day and 7 days a week, though a deputy can be appointed by the doctor for some nights and week-ends. The doctor is not allowed to see a listed patient on a private payment basis. Thus there is very substantial continuity of care.

This system has long been used in a pure or modified form in Denmark, the Netherlands, and the United Kingdom and more recently in Italy. It is currently being introduced in Finland, and Indonesia as well as Costa Rica. It is also used in some health maintenance organizations in the United States (Luft 1991).

The advantage for the patient, compared with using a salaried doctor in a health centre, is that they have their own personal doctor whom they have chosen (up to the limits imposed on doctors' list sizes). This doctor has continuous responsibility for the patient's care outside hospital. When the patient is sent to hospital, the general practitioner receives a report from the hospital with recommendations for the later care of the patient. The disadvantage is that the patient cannot go direct to a specialist, and another doctor takes over their care if they are sent to hospital. The general practitioner may have poorly equipped and poorly furnished premises, as in a pure capitation system the doctor has to pay for the upkeep of his premises out of his capitation payments.

The advantage for the doctors is that they are their own bosses and can run their practice in their own way. The only paper work, other than the maintenance of patients' medical records, is to report additions and departures from their list of patients. The only limitation on their clinical freedom is that their prescribing may be monitored by the insurer. If they are members of a partnership, this has been by choice and they have chosen with which partners to work and what supporting staff there will be, and what they will be paid. The disadvantage for the doctors is that they may achieve the maximum permitted list size in their early thirties and then, unlike other professionals, their income cannot increase except through the negotiation process which affects all doctors. Moreover doctors who want to combine general practice with hospital work will find it hard to do so.

The advantage for the insurer is that the cost is predictable (though the cost of the doctors' prescriptions are not), if they are separately paid for. Moreover, capitation payment does create some incentive for doctors to be evenly spread in relation to the population. There is some incentive for doctors to adopt a preventive approach where they think it will save them time in the long run. Doctors and patients are likely to be reasonably content and there is a simple answer to a dissatisfied patient – which is to try another doctor. Administrative costs are low as all that is needed is to keep records of which doctor should be paid for which patients, and to operate a procedure for dealing with complaints, or to sanction doctors who break the crucial rule that doctors cannot see their own listed patients on a private, paying basis. There may be worries about doctors with poor premises or the overuse of deputies or excessive referral to specialists. But evidence from countries where it is used shows that the latter is not a major problem.

A pure capitation system can be modified to take account of special problems. For example, higher capitation payments can be paid for elderly patients, allowances can be added for seniority, for working in remote areas and attendance at continuing education. The doctor's rent can be reimbursed to encourage spacious premises which can then be made subject to inspection. Fees or bonuses can be paid on top for defined preventive work as in the UK, or for each

visit made by patients as in Denmark. To place a ceiling on the cost of the doctors' prescriptions, the capitation payment can be extended so that doctors have to pay the pharmacist for what they prescribe for patients or do their own dispensing. This last model was extensively used in Europe in the last century and is now being tried out in Indonesia on an experimental basis. In the UK and Germany, it has recently been decided to give each general practitioner an 'indicative budget' for prescribing, with the possibilities of penalties in the long run for exceeding it.

Contractual payments to hospitals

Allocating a Fixed budget

Budgets can be given not only to hospitals owned by the service, but also to privately owned hospitals, as in Canada. While a budget gives a hospital manager incentives to use it most effectively in purchasing supplies and hiring staff, what it does not do is to give managers any incentive to encourage doctors to reduce lengths of stay to the minimum needed for effective treatment. If there are patients waiting to come in, shorter lengths of stay will lead to more admissions. As the early days of treatment are the more costly for the hospital, the shorter the length of stay, the larger the budget required. The incentive of the manager is above all else to keep expenditure within the budget allocated. Pressure can be put on managers by closing adjacent hospitals, but this may only result in longer waiting-lists. The problem can be eased by supplementing the budget by a payment for each admission as in Massachussetts, or taking account of work done in the previous year in fixing the next year's budget. Moreover, much depends on how far clinicians are willing to play an active part in management.

Payment by itemized bill

Payment by itemized bill has the obvious disadvantage of encouraging escalating costs on a scale even greater than payment of the doctor by fee-for-service. While the level of charges for each item can be negotiated, the doctor responsible for the patient is in a position to order more and more tests and undertake more and more procedures. The temptation to behave in this way is likely to be greatest when the doctor owns the hospital. The insurer is in a weak position to question afterwards how much was really necessary.

Payment by a daily rate

Many countries in continental Europe have for many years paid hospitals on an inclusive daily basis covering all costs, even that of the doctors. While this gives the hospital an incentive to economize, it has the serious drawback that it encourages long stays because the later days of stay are less costly for the hospital. This can be countered by the insurer employing doctors or nurses to visit patients in hospital to review the possibility of early discharge. Or the insurer can state the number of days allowed according to diagnosis on admission: the hospital has to request permission for further days from the insurer.

Payment by diagnosis

An alternative method is to pay by diagnosis. The United States has developed a complex system of classifying diagnoses into some 480 groups, for each of which a lump sum is paid to the hospital for the whole period of stay. Several European countries have been working on systems which might be used in their own countries. The system has the advantage of cost control, as payment is related to output and it removes the incentive for long stays. But the hospital can manipulate the system by discharging and readmitting the patient, choosing the more expensive diagnosis when a patient has, or may have, more than one condition - or transferring extra costs to care out of hospital, if this is separately paid for. While controls can be introduced to monitor readmissions, the system depends crucially on the honesty of the hospital in reporting the diagnosis correctly. In some countries, the system would open up the field for corruption.

Some countries use a mix of systems. For example, rates can be negotiated for normal and abnormal confinements, while for other cases, payment can be on a daily rate with extra payments for three different classes of operations. Length of stay is controlled as mentioned earlier.

Contractual payment to the pharmacist

It is generally the practice in Europe for private pharmacists to dispense prescriptions written by

doctors working outside hospitals. The prices of the drugs sold to the pharmacist in bulk are regulated and the permitted mark-up of the pharmacist is negotiated. If this is a percentage of the cost, the pharmacist has an incentive to dispense the more expensive brands where he has discretion to do so. A flat rate dispensing fee does not have this effect. Nor does payment on a capitation basis, as is being tried out in the Netherlands. This, of course, means that the patient has to register with one pharmacy. Another way of encouraging the pharmacist, where he has a choice, to select a cheaper product, is used in Germany. The insurer fixes the maximum which it will pay for each range of similar products. The pharmacist then knows that he will have to charge the patient any extra cost plus an extra penalty payment.

The pharmacist sends his prescriptions each month to the insurer who prices them and pays the pharmacist. This enables the insurer to see that only those drugs permitted under the regulations are prescribed, and to keep computer records of the prescribing of each doctor and use them to inform that doctor of their prescribing pattern, and apply sanctions in cases of excessive prescribing.

Conclusions on payments to providers

As shown above, every system of securing the payment of providers has potential disadvantages. There is no right answer. All of them can, however, give satisfactory results. Ways have been found of overcoming the worst disadvantages of nearly all systems. But some of them are costly to operate and what would be tolerated by providers in one country, may be opposed to the point of strike action in another. This is why each country must work out what scheme would suit it best.

Conclusion

It will be clear from the above that establishing a health insurance system can be a formidable administrative task. As a system adapted from experience elsewhere may not work well in a new context, there is a very strong case for trying out new models in one local area before applying them nationally. The transition may well take several years and cannot be hurried for the following reasons:

(1) An administrative agency or agencies will need to be established or adapted, and the composition of the controlling board or boards decided, members appointed, staff appointed, equipment selected, ordered and installed for financial control and monitoring usage. Staff will need substantial training.
(2) Establishing a system of collecting contributions, if it does not exist already, is by no means easy. Where there is no income tax, it will be very difficult to create a system of collecting compulsory contributions from the self-employed.
(3) Contracting providers, selecting and defining payment systems and contract terms, as well as negotiating initial rates of payment, can be a time-consuming and contentious operation.
(4) Establishing in advance the information system needed to monitor utilization, costs and quality is a further major task.

This paper is intended to show the range of complex issues which need to be addressed when introducing a national insurance system. It is not just a matter of securing insurance. Indeed, no country uses private profit-making insurers for its national health insurance. Where different non-profit insurers are used, they become highly regulated by the central government. Establishing a central mechanism for collecting the money does not rule out consumer choice between suppliers, to help generate efficiency. Alternatively, people can be allowed to choose their insurer, but insurers will still need tight regulation if risk-rating is to be avoided.

Competition between providers, coupled with consumer choice, can go a long way towards creating both efficiency and consumer satisfaction. The methods of controlling supply and securing the equitable distribution of health resources and paying providers are central to the objectives of equity and cost containment. In choosing between ways of paying providers, the administrative cost of different systems should not be overlooked. The aim is not to minimize such costs, but to ensure that such costs are balanced against the efficiency gains which can be generated by them.

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Biography

Brian Abel-Smith MA,Phd, MD (Hon caus.) is Emeritus Professor of Social Administration at the London School of Economics and Political Science.

He obtained his PhD at Cambridge University in 1955 and was appointed lecturer at the London School of Economics. He was appointed Professor of Social Administration in 1965. In 1982, he was awarded an honorary degree in Medicine by a University in the Netherlands (Limburg).

Between 1968 and 1970 and again between 1974 and 1978 he was Senior Adviser to the British Secretary of State responsible for the National Health Service. Between 1978 and 1979 he was Senior Adviser to the British Secretary of State for the Environment. For four years he was Senior Adviser to the Social Commissioner to the European Community. Since 1982 he has been chairman of the Advisory Committee on Health for All for the European Region of the World Health Organisation and between 1975 and 1985 was Senior Adviser (Economic Strategy for Health for All) to the Director General of WHO.

Correspondence: Professor Brian Abel-Smith, Emeritus Professor of Social Administration, London School of Economics and Political Science, Houghton Street, London WC2, UK.