

LS Ho 何樂生 ■

# Health care funding and delivery in Hong Kong: what should be done?

## 香港醫護服務架構及融資制度——何去何從？

.....  
 This paper outlines a taxonomy of alternative health care funding avenues and the implications of these alternatives. The current approach to health care funding in Sweden is highlighted and a similar proposal outlined to meet the Hong Kong situation. The benefits of the proposed combination of tax-funded and capped voluntary payments, supplemented by ‘moral hazard neutral’ fees are presented, in terms of expenditure containment, universal access to health care, and optimal resource allocation.

本報告概述了不同的醫護融資方法概念上的分別及利弊，並重點介紹瑞典目前採用的醫護融資和收費模式。作者認為香港可採用類似的融資方案。他指出以一般稅收融資配合「道德風險」中性的和設有上限的收費有三大優點，包括成本控制、全民共享及合理分配資源等。

### Introduction

Health care reform is a subject of universal interest and constant debate. Despite all the confusion, however, a number of things are clear. Universal access to health care is a cherished concept in many countries. A mechanism to avoid waste and to encourage people to practise preventive medicine is needed. It is also evident that expenditure on health care can be justified as long as benefits exceed costs. The question remains as to which method of funding health care can best achieve these goals.

There are no perfect solutions, but some options are obviously better than others. One such option is the ‘Swedish model’, arguably the best health care model available. Although not all aspects of the Swedish model may be appropriate to the Hong Kong situation—fees in Sweden tend to be low and taxes tend to be high—the practice of capping annual health care expenditure appears an eminently sensible idea, and one consistent with the concept of excessive burden insurance (EBI).

Various funding options for health care are outlined in this paper, including EBI—how EBI functions in Sweden and the benefits of EBI. The details and feasibility of applying this Swedish model of health care funding and delivery within Hong Kong will also be discussed from both an implementation and a political point of view.

### A taxonomy of funding options

Health care spending by individuals can be either enforced by government or voluntary in nature. Forced spending on health care can take the form of direct health spending programmes, such as mandatory medical savings plans and mandatory medical insurance plans, or indirect

#### Key words:

*Community health services/  
 economics;  
 Delivery of health care;  
 Efficiency;  
 Insurance, health*

#### 關鍵詞：

社會醫療服務／經濟學；  
 醫護服務；  
 效率；  
 保險，健康

*HKMJ 2001;7:155-61*

Centre for Public Policy Studies, Lingnan  
 University, Tuen Mun, Hong Kong  
 LS Ho, PhD, B Soc Sc

Correspondence to: Dr LS Ho

spending on health, funded by taxes. Voluntary spending on health care can be in the form of voluntarily subscribed health insurance, or voluntarily paid health care fees and charges. The Table lists alternative ways of funding health care and summarises the main advantages and disadvantages of each.

If information in the health care market were adequate, all forms of voluntary spending could be considered efficient. Those who spent would consider the benefits and the costs involved, and would not spend unless the benefits outweighed the costs. Such information is, however, far from adequate. Patients often have to rely on health care service providers to advise which services they will need. They may also purchase services without knowing if the services will actually bring them any benefits, or if the benefits achieved will be adequate. This matter of ‘information asymmetry’ between providers and patients has to be considered in any proposal for reform.

In general, forced medical savings plans are inefficient unless the bureaucrats administering these have a better appreciation of individual’s medical needs than the individuals themselves. As a rule, a medical savings plan will not open up new opportunities for the individual because any health purchasing that

the individual can make under a medical savings plan, he can also make without such a plan. On the contrary, it will reduce the individual’s health purchasing opportunities, so from this perspective it must be inefficient.

One possible benefit is that someone with a medical savings account may be more likely to seek medical attention before a problem becomes serious. The Singapore system of Medisave, however, does not allow outpatient services to be charged to a Medisave account.<sup>1</sup> It sets out specific terms under which the money can be used and how much can be used. On the other hand, a forced medical insurance plan such as the Singapore system does open up new opportunities. It has the potential for improved efficiency. A forced medical insurance plan can pool risks. It allows small contributions from individuals to generate large benefits in the form of protection in the event of significant illness. The ‘forced’ element helps to combat the problems of ‘adverse selection’ and ‘known cost drivers’. Adverse selection refers to the phenomenon whereby insurance plans attract high-risk patients seeking protection, whereas low-risk patients avoid insurance. ‘Known cost-drivers’ refers to patients who are known to be costly to treat, a group avoided by voluntary insurance agencies. Clearly, a case for mandatory health insurance can be made.<sup>3</sup>

**Table. A taxonomy of alternative funding options**

	Forced		Voluntary	
	Direct	Indirect	Market insurance or managed care plans	Market health care services
Mandatory insurance plan premiums	Mandatory medical savings accounts <sup>1</sup>	Tax-financed health care spending	Market insurance premiums or membership fees	Market fees and charges
<i>Disadvantages</i>				
Moral hazard on supply-side and moral hazard on demand-side if combined with market-based medical practitioners	Savings may be inadequate or excessive  Individuals lose autonomy and choice	Demand-side moral hazard if fees are subsidised  Medical personnel salaried  Possible loss of professional autonomy	Possible moral hazard problems  Co-payments, deductibles, and managed care plans may be needed to contain the problem <sup>2</sup>  Chronically ill and known high-risk individuals may not get coverage	Limits to accessibility  High financial risks (avoidable for those who can and will get market insurance)  Needed medical treatment may be delayed
<i>Advantages</i>				
Universal coverage can be guaranteed  Known cost-drivers and chronic cases can be covered	Government has the comfort of knowing citizens will not need to overburden the public purse	Containment of supply-side moral hazard  Can provide for public health care needs which may be under-provided in the market place	Consumers have autonomy and choice over the degree of protection desired	High fees and charges provide an incentive for individuals to take preventive care  Consumers have autonomy and greater choice  Doctors earn more if they work more

Mandatory health insurance potentially has an important drawback, however, that must be addressed. This is the problem of ‘moral hazard’, either on the supply-side or demand-side. Supply-side ‘moral hazard’ refers to suppliers of health care services giving unnecessary services for financial gain. Demand-side ‘moral hazard’ refers to patients consuming services excessively, in disregard of the costs involved. There is plenty of evidence to show that zero or low charges result in wasteful consumption of health services. The RAND Corporation Health Insurance Study,<sup>4</sup> for example, indicated that a person with full medical insurance coverage spends approximately 75% more on health care than someone without any coverage. Health care reform must address this issue.

Health care spending out of taxes is not made voluntarily by the taxpayers or by patients. Bureaucrats make the decision over how much to spend on health care and on what. While there is an element of compulsion, budget allocations on health care out of the general revenue can be efficient if a careful cost-benefit analysis is performed in evaluating whether or not a particular item is worth purchasing. The bureaucrats who make the decisions serve as agents for the taxpayers and for the community. While bureaucrats may well pursue their own interests, there is no necessary contradiction between the interests of the community and the interests of the bureaucrats, especially when they are responsible to politicians, who are in turn responsible to their constituents. To the extent that benefits outweigh costs, there is even a case for increasing taxes in order to finance worthwhile expenditure.

### Excessive burden insurance

It is commonly believed that the government should target its subsidies at the poor. Following this principle, there should be means-testing for every government subsidy programme, ranging from legal aid to health care. This logic appears to be sound, but is really flawed for the simple reason that government subsidies are always financed by those who pay taxes. While the case for taxpayers subsidising the poor when they need health care is clear, there is also a case, based on the insurance principle, for taxpayers subsidising those who are sick. It is noted that for health care, and by the same logic legal aid, expenditure that may be warranted to save a life or to restore justice, may stretch the personal resources of even the well-to-do. Thus, it seems unjust and unreasonable for taxpayers to pay for all the costs of health care for some individuals and yet be left unprotected at the very time when they themselves need help.

For this reason, there is a strong argument for EBI. Excessive burden insurance is the concept of requiring that individuals are responsible for their own expenditure for as long as they can afford, providing them with assistance when they find the burden excessive. In practice, in the case of health care, it is recommended that a yearly spending limit be set for each household. This spending limit would be based on the number of members in the household and in principle, should be based on the household income. Since assessing household income is not easy and is costly to achieve, a uniform yearly spending limit per person could be set for the majority of Hong Kong’s households, plus a concessionary spending limit for the poor. It should be noted that in this system, each household would be the unit for accounting purposes. In principle, the ability to pay should be based on household income, and dependency calculated using an equivalence scale. The health care spending of household members—children, unemployed, and employed members of the family—should be added together and tested against an aggregate of the household spending limit. Findings from an earlier survey in Hong Kong, suggest that the majority of respondents would be prepared to spend up to 6% of their income on health care.<sup>5</sup> On that basis, it is proposed that the spending limit should be set at 6% of the median household income, which in the third quarter of 2000 stood at HK\$17 600. Given that there are 3.3 persons per Hong Kong household on average, this equates to HK\$3840 ( $\$17\,600 \times 12 \times 6\% / 3.3$ ) per person. For the poor, it is proposed that the spending limit be set at half of this (HK\$1920). This means that each household would be responsible for health care expenditure up to their respective spending limits, but not any additional health care expenditure required. Of course, if members of the household were healthy, they would not necessarily spend up to their household limit.

The advantages of this system are obvious. The most important advantage, of course, is that no members of a household need be concerned about unpredictable health care expenditure they could not afford. The other advantage, also an important one, is that health care services could be priced closer to their direct costs and individuals would have a stronger incentive to use health care services carefully. They would also have a stronger incentive for adopting a healthy lifestyle and avoiding illness.

Both the incentives and the risks for households under this system would be quite unlike those that prevail in Hong Kong currently. At present, charges are unreasonably low. Patients pay only approximately

HK\$68 for a day of inpatient care, regardless of the treatment they receive, unless they need access to 'privately purchased medical items'. Clearly, such a low rate of charges would not even cover the cost of food provided, let alone the professional care, and the cost of maintaining a hospital bed. For outpatient care, the charges currently are approximately HK\$38 or HK\$44, depending on whether a general or specialist clinic is attended. Accident and emergency care, and ambulance services are currently free of charge. Such low charges inevitably must lead to excessive use and also siphon patients away from the private sector unnecessarily.

It should be noted that because of the huge demand for Hospital Authority (HA) facilities under such pricing, queues at HA hospitals are long. Patients in urgent need of care may have to consequently seek care in private hospitals, which can be prohibitively expensive for the individual. Patients are thus exposed to the risk of not being able to get the service they need in a timely fashion, and of having to pay possibly highly burdensome costs should they opt for private care. Even in public hospitals, patients may have difficulty in paying when privately purchased medical items are required. Although in principle, patients can ask for assistance if they can provide evidence of financial difficulty, this may not always be easy to prove. Presently, privately purchased medical items in public hospitals include:

- (1) Materials for percutaneous transluminal coronary angioplasty and other consumables for interventional cardiology;
- (2) Cardiac pacemakers;
- (3) Intraocular lenses;
- (4) Myoelectric prostheses;
- (5) Custom-made prostheses;
- (6) Implants for cosmetic surgery;
- (7) Appliances for prosthetic and orthotic services, physiotherapy and occupational therapy services;
- (8) Growth hormone supplements and interferon; and
- (9) Home-use equipment, appliances, and consumables.

As medicines are provided free, a limited budget has prevented the HA from allowing prescriptions of certain expensive drugs. More recently there have been complaints about the use of low-cost psychiatric drugs (eg haloperidol), rather than more expensive drugs with less serious side-effects (eg risperidone);<sup>6</sup> these figures are reported by the HA using Organisation of Economic Cooperation and Development Health Data (1999).<sup>7</sup> As a result, patients are deprived of the opportunity for better care. What is most unacceptable, is that patients do not have the option of

paying more to get a better and faster service under the current system.

One objection expressed about introducing EBI, is that it is a complicated system. Actually, this is not the case, and in fact, Sweden has practised EBI for years. Currently in Sweden, a primary health care visit costs an average of Swedish kronor (SEK) 100 and a hospital visit costs twice that amount. No individual pays more than SEK 900 per year, however.<sup>8</sup> Exemption from charges for children and young people was introduced in 1998 and remains in place in most counties. Charges for prescription medicine mean that the patient pays the full cost up to SEK 900, and thereafter there is a gradual fall in the proportion of the cost to be paid. No individual pays more than SEK 1800 during a 12-month period, however.

Statistics to date also show that Sweden has kept its health care expenditure at moderate levels, despite the fact that Sweden's population is ageing faster than that of Hong Kong and most other countries.<sup>9,10</sup> Population figures in 1997 showed that 18% of the Swedish population were above the age of 65 years, compared to only 10.5% of the population of Hong Kong. Health service expenditure as a percentage of gross domestic product in Sweden was only 8.6% at this time, however, a little lower than in 1988.<sup>7</sup> The comparable figure for Hong Kong was 4.8%, which was a significant increase from 1988 (3.3%). The Swedish health care system has been highly praised—life expectancy is long (76.5 years for men and 81.5 years for women), infant mortality rates are relatively low (4.1 per 1000), and Sweden spends less than its Scandinavian neighbours on health care, yet overall quality of health and health care is comparable throughout the Scandinavian region.<sup>9</sup>

While EBI in Sweden involves imposing a uniform annual ceiling on health care expenditure paid by the patients themselves, the charges on health services vary from county to county within the country. These variations notwithstanding, a basic principle is that quality health care services must be available and easily accessible to all residents regardless of financial circumstances.<sup>11</sup> This principle can be said to be universal, and is certainly equally applicable in Hong Kong. Swedish taxes tend to be high and medical charges tend to be low. While fees for clinic visits range from SEK 100 to SEK 140 in the state sector, the fee charged for a stay in hospital is a mere SEK 80 per day (note, one SEK is worth less than HK\$1). If in Hong Kong the aim is to ensure a high quality of services without excessively burdening the taxpayer,

it would seem that fees charged under EBI should better reflect direct costs. Although estimating direct costs accurately could prove difficult, precise estimates of direct costs are not really necessary. It does not require careful study to realise that current charges in Hong Kong are much too low and engender wasteful use of health care services.

### Details of the proposal for Hong Kong

There are several key elements in the EBI proposal for Hong Kong:

- (1) Pricing of covered health services at standard fees to reflect direct costs;
- (2) Setting of an annual spending limit for each person in a household;
- (3) Concessionary pricing and lower compulsory spending limits for the poor;
- (4) An option for private hospitals and medical practitioners to charge standard fees for covered health services in return for a lump sum grant;
- (5) Use of general tax revenue to fund lump sum grants, fixed health care expenditure, and the cost of EBI; and
- (6) A 'smart card' to hold medical records and accumulated health care expenditure.

The proposal requires that the fees now being charged for services rendered in HA hospitals and government-funded clinics be increased sharply, to reflect the direct costs of providing these services. Fees should be charged only at levels reflecting the direct, marginal costs of providing a service. They should be considerably higher than HK\$68 a day for inpatient care but definitely much lower than the HK\$3000 plus daily cost claimed by the HA. This would serve four purposes: to increase public awareness of costs, to better utilise the facilities now available in the private health care sector, to raise revenue, and to improve the quality of services.

There is plenty of evidence that raising fees would reduce demand. Provided that the raised charges were within the limits of affordability, this would not be at the expense of citizens' health. Higher charges would be necessary to promote the cause of sickness and accident prevention, and to prevent overuse/misuse of services. In principle, the charges, though higher than those currently, should be low enough to not affect supply-side behaviour. Suppliers of health care services should not oversupply for financial gain or undersupply to avoid financial loss.

The annual health spending limit would be the cornerstone of EBI. In its absence, one might worry

whether patients would seek medical care before it was too late. If the limit were set at a reasonable level, however, citizens would no longer need to worry about health care expenses exceeding their means. They would more readily obtain the care they needed. With misuse of services reduced and greater use of private sector facilities expected, individuals would have greater access to services. Clearly, the annual spending limit would bring 'peace of mind' and would make higher charges much more palatable to the public.

Concessionary charges and reduced compulsory spending limits for the needy are considered both politically necessary and socially desirable. The poor must be charged to some extent for their use of health care services because they also need to be aware of the costs involved. If necessary, a health care supplement could augment the current Comprehensive Social Security Assistance stipends—if recipients remained healthy, they would have additional income for other uses. In this way, the incentive to maintain health and to use health services judiciously would be preserved.

Private hospitals and medical practitioners could be given the option of joining the 'basic health care system' by pledging to charge standard, approved fees for these services. In return for charging lower fees, they would receive an annual lump sum grant, reflecting the range of services they provided and patient capacity. Private hospitals would make their own arrangements with doctors with regard to compensation for professional services rendered under their auspices. The HA would not be involved in the contractual arrangements between private hospitals and private doctors.

Once these arrangements were in place, there would be a flow of patients from the public health care system into the private health care system. The public sector would no longer need to expand as rapidly, thus saving a great deal of public money otherwise needed to build and equip more hospitals. Quality of service at HA hospitals would also improve, as queues for care became shorter and patient loads declined.

There would be no need to charge citizens for an EBI premium to fund the proposal. There is a common misconception that insurance schemes must imply an explicit insurance premium—actually the concept of insurance is based on the idea of risk pooling. A tax-financed insurance scheme may be preferable to charging premiums purely for the purposes of

distribution. Under the current proposal, the insurance scheme would be funded from taxes, meaning that those with higher ability to pay would pay more in support of the system. This being the case, there would no longer be any need to deprive the richer people of the right to receive subsidies. An advantage of this arrangement is that the system would not require payroll tax or direct health-care-related contributions from the workforce. Excessive burden insurance would also be fair, in that by making sick people pay more when they could afford it, it would protect healthy people from having to shoulder an unreasonable burden. While the sick would have to pay up to the annual spending limit per year, the healthy would not have to pay anything other than regular taxes.

The system would generate much needed revenue to improve the quality of health care—an increase of five-fold over current charges could be made (perhaps HK\$400 per night for inpatient care instead of HK\$68, and HK\$100 per visit for outpatient care instead of HK\$38 to HK\$44). Considering the cap proposed, it is estimated that approximately HK\$3 billion in revenue or perhaps 10% of the total recurrent HA expenditure in 2000/2001 could be collected in this way. The net increase in revenue would amount to approximately HK\$2 billion, which represents some 8% of total revenue from salaries tax.

While this may not seem a great amount, the fact that demand for services would be reduced, also needs to be taken into account. There would also be savings in terms of less need to build hospitals. Private doctors' incomes would rise, and so income taxes from private doctors would also be expected to rise.

The last element in the proposal concerns the introduction of a 'smart card' to carry patients' medical records and to record fees paid during the year. The 'smart card' would be linked to a central data bank and would be updated each time a patient paid eligible fees or received health care services. As soon as the annual spending limit had been reached, the patient would no longer need to pay fees, unless the individual accessed extra services that were not covered under the basic health care plan. The 'smart card', carried by citizens like an identity card, would provide important medical information in case of an emergency and would enable the individual's medical accounts to be updated automatically. The technology for such a card is readily available and would not be very costly. Since no collection of premiums or contributions would be needed, there would also be a saving in administration costs overall.

For Hong Kong, the annual spending limit and the range of health services covered under the basic health care plan would need to be developed with community participation. Although 6% of median earnings is proposed for the annual compulsory spending limit on health care, it is up to the community to decide if this is adequate. Clearly, if the range of services covered were to be wider, a higher annual spending limit would be necessary, meaning that each individual would be personally responsible for a larger amount of health care expenditure.

## Conclusions

The proposed EBI scheme is, on reflection, not a big departure from the health care system in Hong Kong today. Like the present system, the EBI scheme would be tax-funded. There would be no insurance premiums or contributions to collect. Like the present system, costs, particularly overhead costs, would be heavily subsidised. Charges would be set at 'reasonable levels'. The difference under the proposed scheme, is that 'reasonable levels' under EBI would be much higher and in principle reflect the direct costs of providing services.

Both the present system and the proposed EBI system place a lot of emphasis on accessibility. Whereas the present system tries to achieve accessibility by making prices very low, the proposed EBI system tries to achieve accessibility by capping health care expenditures borne by the individual. Hospital Authority hospitals would be funded in more or less the same manner as under the present system under EBI. There would be no mechanism specifically to allow 'money to follow the patient'. Since charges at public hospitals and subsidised private hospitals would be unified, however, patients would be much more ready to use private hospitals.

The 'professional model' is recommended for basic health care.<sup>12</sup> The professional model relies on salaried, professional doctors who are largely free to provide care independently of personal remuneration. The current HA follows the professional model and is largely independent of the bureaucracy. Market participation by doctors and insurers would provide useful supplementary services and would enhance choice. Citizens could opt to buy insurance to cover what they have to pay before the yearly spending limit has been reached, as well as to have coverage for services not covered under the basic health care plan.

In conclusion, for Hong Kong, a system of tax-funded excessive burden health insurance for financing health

care and a professional-led health care system for delivery of health services is highly recommended.

## References

1. Massaro TA, Wong YN. Medical savings accounts: the Singapore experience. National Center for Policy Analysis website. <http://www.public-policy.org/~ncpa/studies/s203/s203.html>
2. Cutler DM, McClellan MB, Newhouse J. How does managed care do it? *Rand Journal of Economics* 2000;31:526-48.
3. Schroeder SA. The medically uninsured—will they always be with us? *N Engl J Med* 1996;334:1103-3.
4. Keeler EB, Buchanan JL, Rolph JE, et al. The demand for episodes of treatment in the health insurance experiment. Santa Monica, CA: The RAND Corporation, Report R-3454-HHS; 1988.
5. LS Ho. Health care financing and delivery: a model for reform. Hong Kong: City University of Hong Kong Press, for Hong Kong Center for Economic Research; 1997.
6. Mentally ill man waves scissors to resist police. *Oriental Daily* 2001 Apr 13.
7. Hospital Authority website. <http://www.ha.org.hk/hesd/nsapi>
8. Patient charges and demand for care. Socialstyrelsen website. <http://www.sos.se/SOS/PUBL/REFERENG/0003008E.htm>
9. Swedish health care robust, despite regional disparities. *Ocular Surgery News*, May 1997. SLACK Incorporated website. <http://www.slackinc.com/eye/osni/199705/sweden.htm>
10. The health care system in Sweden. Fact sheets on Sweden, May 1999. Swedish Institute website. <http://www.si.se/docs/infosweden/engelska/fs76.pdf>
11. The Hong Kong Medical Association. Towards better health. A consultation document. Hong Kong Medical Association; 1993:6.
12. Ho LS. Principles of public policy practice. Boston: Kluwer Academic Publishers; 2001.