

# MANAGED HEALTH-CARE: MANAGING DEMAND THROUGH THE CONTROL OF SUPPLY

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## ABSTRACT

*Managed Care has been developed in the United States as a strategy over the failure of the insurance system in controlling costs and utilisation. It works through a model which incorporates financing and delivery of services, with the control of health-care providers, facilities and services, as well as programmes like quality assurance and utilisation review, to achieve its goal of providing adequate care at an affordable price. In economic terms, that is to manage demand through the control of supply. In Singapore, the National Trade Union Congress (NTUC) has launched the pilot large-scale managed care plan in 1994. It is not recommended in this article that the entire managed care model be transplanted into Singapore, but some of the principles could be used to improve our health-care system. Applicability of the managed care concept must be viewed with the peculiar health system in Singapore such as the already existing low-cost and easily accessible primary care service. More time would also be required to prepare the health-care professionals as well as the public for this new health-care venture.*

*Keywords: managed health-care, health maintenance organisation.*

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## INTRODUCTION

In September 1992, the National Trade Union Congress (NTUC) announced that it will launch a new system of health-care – the Managed Health-Care System (MHS) for its members through the NTUC Income Insurance Cooperative Limited. This system is based on the concept of Health Maintenance Organisation (HMO) in the United States. Since then, there have been much discussion on the subject including the setting up of the Adhoc Working Committee on Managed Health-Care System consisting representatives from the Singapore Medical Association, the Association of Private Medical Practitioners, the College of Family Physicians, Singapore, and the Singapore Dental Association. A conference on Health-Care Management was also held in May 1993.

The rise of the HMO model in the United States was due to the escalating health-care costs and the indiscriminate use of health-care services by the insured. Is Managed Health-Care the answer to the rising health-care costs? How does it operate? Is it applicable to Singapore?

The objective of this article is to examine the concept of Managed Health-Care, trace its historical development, give an account of the various models that have been implemented, analyse the advantages and disadvantages, as well as to discuss the situation in Singapore.

## MANAGED CARE CONCEPT

In the last decade, the United States has one of the fastest increase in health care expenditure in the world, reaching 12% of the

gross national product (GNP) in 1990, spending approximately US\$676 billion or US\$2,660 per capita<sup>(1)</sup>. One of the important causes of rising health-care costs is the failure of the insurance system. A major problem in the insurance system is that the insurance itself increases the use of services, a phenomenon known as “moral hazard”<sup>(2)</sup>. Since payments to health-care providers typically are made by third-party payers (insurers), most health-care consumers do not pay for services directly and have little incentive to look for or use lower cost health-care providers. Health-care providers have no link to the insurers and thus “cost-effectiveness” in management of patients is not a concern for most of them. The problem is of particular importance while looking at hospital costs, which represent 43.7% of the distribution of personal health expenditure<sup>(1)</sup>.

As such, the Americans introduced the concept to manage health benefits costs better by making arrangements which relate the beneficiary's coverage to the use of health care services and providers. Thus “Managed Care” refers to a wide range of techniques employed by third-party payers – employers, insurance companies, governmental insurance programmes, etc, to control health benefit expenditure through the control of the use of health-care services<sup>(3)</sup>. In addition, with the introduction of the Diagnosis-Related Groups (DRGs) System – prospective payment according to diagnosis, and Relative Value Resource-Based Scales (RVRBS) – a fee schedule trying to balance payments for procedural and cognitive services, health-care providers have been facing more and more constraints from utilisation control and fiscal accountability in every aspect of their practice. It is estimated that at present, almost every practitioner is to some extent involved in prepaid medicine<sup>(4)</sup>.

## How does managed care work?

Managed care works through the following ways in containing and controlling health-care expenditure:

1. *Control the selection of health-care providers* where third-party payers pre-arrange and select a panel of providers for the insured.
2. *Incentives to use certain providers* such as discounts given by physicians and pharmacies, or lower coinsurance and deductible.
3. *Risk-sharing with providers* when they accept pre-arranged fees or fixed monthly payments (capitation).
4. *Limit the use of services by prior approval procedures* to

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review all high-cost medical services such as hospitalisations and surgeries.

5. *Peer review and quality assurance procedures*, concurrently or retrospectively, to control unnecessary use of services such as medical procedures.
6. *Contractual reimbursement system* such as a fixed consultation fee per visit, to avoid unpredictable high reimbursement rates.
7. *Ground rules for payment* for patients needing multiple services, preventing providers charging more by billing every item separately, as well as maximal fee schedule when the insurer need only to pay up to a certain price for a particular service or diagnosis.
8. *Special review* for patients requiring extraordinary services such as magnetic resonance imaging.
9. *Organisational efficiency* such as the saving of administrative costs in some managed care models where the insurer and the provider are the same.
10. *Emphasis on primary health care* with the primary care physicians playing the roles of provider as well as gate-keeper.

### HISTORICAL DEVELOPMENT

In the United States, health-care financing was relatively straightforward in the last century. Activities of practitioners resulted in some form of direct rewards. There was literally no health insurance until the 1920s when third-party payment system began to develop. The original intent was to protect patients from catastrophic medical expenses during serious illness and injuries. For “routine care”, the public was expected to continue to pay out-of-pocket.

Prepaid health system also developed at the same period. The first prepaid health plan started in 1927 as a cooperative in Elk City, Oklahoma. In the 1930s, further development occurred around “labour environments” such as the Hoover Dam construction project. Kaiser Industries provided coordinated care for its employees in the form of prepaid health care at Kaiser construction sites, which later became the Kaiser-Permanente system, the “father” of prepaid health plans in the United States. In the 1940s and 1950s, other plans developed and later became giants of this industry. These include the Group Health Cooperative of Puget Sound in Seattle, the Group Health Association of Washington D C, and the Health Insurance Plan of Greater New York. However, these did not attract much attention at that time and were considered as anomalies of the health-care system by many physicians. Coming to the late 1960s when the impact of rising health-care costs was beginning to be felt, interest in prepaid health-care was rekindled. In the 1970s, under the influence of Senator Edward Kennedy (Democrat), there was pressure from the people to develop a national health-insurance system. The Republican responded advocating a form of socialised health system – encouraging private enterprise to develop prepaid health system. Paul Ellwood, who formulated many of these policies, coined the term “Health Maintenance Organisation” (HMO)<sup>(5)</sup>. In 1972, the Nixon Administration endorsed the concept of HMOs, leading to the passage of the Health Maintenance Organisation Act of 1973 (PL 93-222) which provided federal grants and loans for the development of new HMOs. Furthermore, section 1310 of this law requires any employer with 25 or more employees which operates within the service area of a federally qualified HMO to offer a federally qualified HMO in addition to any other insurance that the firm chooses to provide – the “dual-choice mandate”. During the late 1970s, many newly formed HMOs were not doing well financially despite generous federal aids due to a lack of managers

well-versed in health management and medical economics. In the 1980s, when the Reagan Administration came in, the government’s attitude changed and demanded actions for improvement or else the loans would be recalled.

So far, the development of HMOs was found mainly in the urban areas in which 71% of them were located. In 1985, Medicare (the federal medical plan covering senior citizens aged 65 and above) allowed its beneficiaries to enroll in HMOs in lieu of traditional Medicare coverage, leading to the doubling of HMO members since 1987. However, the number of HMOs has actually dropped by 126, with many of the smaller ones being forced to join larger plans. Besides the HMO models, many other managed care models have been added into the system such as the Preferred Provider Organisation (PPO) and Health Insuring Organisation (HIO)<sup>(6-8)</sup>. In 1972, there were fewer than 40 HMOs with about 3 million members. By 1992, there were 610 HMOs serving 40 million people, covering about 15% of the US population<sup>(9)</sup>.

### VARIOUS MODELS OF MANAGED CARE

#### A. Health Maintenance Organisation (HMO)

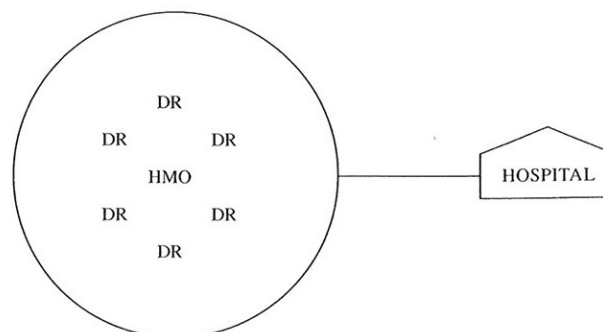
The US Department of Health and Human Services defines HMO as “a managed health-care plan that provides or arranges for the delivery of comprehensive, coordinated medical services to voluntarily enrolled members on a prepaid basis”. Richard M Cooper, past president of Focus Health Care Management Corporation defined HMO as “an organised system which accepts responsibility and risk for both the financing and delivery of comprehensive health care services to a defined, voluntarily enrolled population for a fixed monthly prepaid amount”<sup>(10)</sup>. Despite the many hybrids of HMOs, they share four common basic features:

- i. Combination of the roles of insurers and health-care providers.
- ii. Delivery of comprehensive health services.
- iii. Voluntary enrollment.
- iv. Fixed prepaid basis.

HMOs differ from health insurance companies in that the arrangement includes a health-care delivery network, conditioned benefit payments on the use of the services, as well as a set of referral and authorisation procedures. There is therefore a built-in incentive on the providers to control costs and the use of services as well as to engage in health promotion activities such as health education and disease prevention to keep their enrolled members healthy.

There are various models of HMOs in the US which developed out of different regional, community as well as professional influences. Basically, there are three types:

Fig 1 – Staff model HMO



### 1. Staff Model (Fig 1)

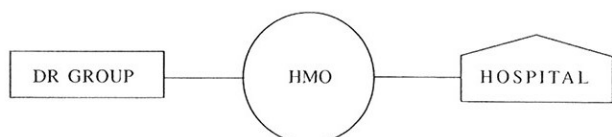
This is the traditional format in which the HMO employs the health care providers and they usually work together in a centre. The employed physicians are usually primary care practitioners. Except some larger HMOs which can afford to hire their own specialists, the usual way to provide specialist care is to refer their patients to certain contracted specialists on their own practices. The specialist fees are included in the monthly payment to the HMO and thus the HMO will try to minimise referrals and to treat or conduct laboratory investigations (if available) in the centre.

A typical staff model HMO will have a multi-storey building. The lower floors are used for consultations, emergency services, administration, as well as running a small pharmacy/dispensary. The upper levels are used as inpatient wards which cater for uncomplicated cases such as monitoring of hypertension, diabetes, or even administration of chemotherapy. These inpatient services will save the need to use expensive hospital service. Each enrolled member will choose a primary care physician in the centre as the “family physician”. This allows better follow-up of patients and doctor-patient relationship, which is believed to lower unnecessary referrals. Certain HMOs have a few days in the week where contracted specialists will come to run clinics in the centre, making referrals more convenient.

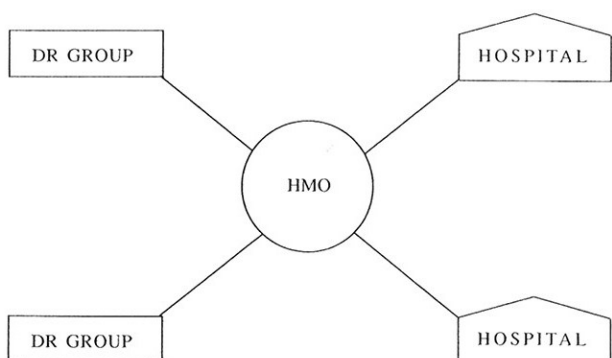
### 2. Group/Network Model (Fig 2)

In this model, instead of employing the health-care providers, the HMO contracts with one or more organised groups of physicians. The management of these physicians therefore rest on the medical director of the physician group, who also makes the contract with the HMO. Usually, this group of physicians

**Fig 2a – Group model HMO**



**Fig 2b – Network model HMO**

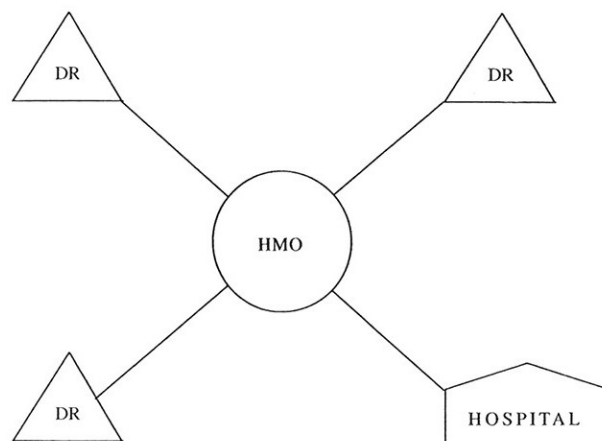


also work in a defined medical centre. The HMO often contracts with other health service organisations as well, such as pharmacies, laboratories, etc. There is greater flexibility in the choice of providers in this model. When the HMO contracts with more than one group of physicians, it becomes a network model.

### 3. Independent Practice Association (IPA) (Fig 3)

In contrast to the closed-panel models, the HMO in the IPA

**Fig 3 – Independent practice association**



contracts with physicians in their own offices. These physicians usually receive a capitation from the HMO or bill the HMO on a discounted fee-for-service basis. The physicians are bound by the rules and regulations of the HMO to which they have agreed. The physicians in the IPA model are different from those in the closed-panel models in that they bear a certain “risk-sharing” of the costs incurred by the patients they see.

### 4. Others

Some insurance firms such as Travelers, Prudential, and Aetna, have developed HMO-like insurance products. In the US, they are filed through the state insurance department rather than the HMO department, and thus regulated differently. These are usually nationwide plans compared to the regional or local characteristic of HMOs. The effect is that many previously “health-insured” patients who are reimbursed for whatever they spent are now under a managed care package and may need to come through a primary care physician rather than going to the specialist directly. In terms of authorisation process, telephone may be more likely used due to its nationwide scope. A few companies are experimenting with the “swipe-card” system to ease communication.

One example is the “Point-of-Service” (POS) Plan<sup>(11)</sup> where patients who are under insurance may continue to choose their own physicians or go to the specialists directly, or choose to go through a primary care physician and get referred to a participating specialist. If he/she decides to continue to use the services outside the network, he/she will still have coverage (as the insurance plan is still in effect), but at a reduced rate, eg 70-80%. There are also deductibles to be met.

### 5. Combination

Many HMOs now adopt various combinations of the above models, depending on their financial capability, enrolled population, region of practice, etc.

### B. Preferred Provider Organisation (PPO)

PPOs are quite different from HMOs and are very polymorphic, sometimes virtually impossible to give a definition<sup>(12)</sup>. In general, they are arrangements between health-care providers (physicians, hospitals, etc) and a health benefit purchaser (insurance companies, self-insured employers, etc). The agreement usually includes a discounted fee schedule, peer and utilisation review programmes, and incentives for the insured to use the “preferred providers”, such as lower deductible or copayment. In “direct

implementation”, the third-party payer contracts with providers directly. In “indirect implementation”, the third-party-payer contracts with an independent PPO to manage the arrangement.

The distinctive feature is that the patients are not lock-in and have greater freedom in a more open system. They are free to choose any provider, including those outside the network of participating providers. However, if they choose a non-participating provider, they will lose the financial incentives. When the patients are lock-in, they are called “Exclusive Provider Organisation” (EPO), which are not very common. Another important feature is their marketing aspect. In the arrangement with a purchaser, the PPO indicates that if the employer channels the payment through the PPO, it guarantees a certain percentage reduction of health expenditure over the previous year for the employer. The providers who contracted with the PPO (“preferred providers”) bill it at a percentage discount. The PPO chooses a pool of providers/physicians who are known to be more efficient in utilisation, thus expecting a saving in costs<sup>(11)</sup>.

The main focus of PPO is on fee schedules – price control, to gain purchasers’ contracts. However, health benefit costs do not rely on unit cost (fee schedule) alone, but also on volume (utilisation), of which it has little control (only in the form of review). It is therefore difficult to evaluate the effectiveness of PPOs in the control of health benefit costs. Because of this reason,

PPOs are less preferred than HMOs.

### C. Health Insuring Organisation (HIO)

HIOs are risk-bearing entities that arrange and provide a health benefit programme for an enrolled, defined population<sup>(13)</sup>. A fixed amount per capita is paid to the HIO which takes the risk that the payment is sufficient to cover a specified set of medical benefits. This concept has been taken up by the Medicaid Programmes (medical coverage for the poor and handicapped) in Kentucky and Pennsylvania. In these cases, the purchasers are the States’ Medicaid Programmes, which shift the risk to another entity – the HIO. In such a way, the States’ Medicaid expenditure are capped.

HIOs differ from HMOs in that medical coverage in HIO is mandated by the purchaser, eg the Medicaid Programme. Besides the “mandatory” enrollment feature which is different from the HMO’s “voluntary” enrollment, HIO employs most of the HMO’s operational characteristics.

## A COMPARISON OF THE VARIOUS HEALTH DELIVERY AND FINANCING MECHANISMS (TABLE I)

### Advantages of Managed Care

First, it is expected to be cost-saving. Employers are paying about

**Table I – A comparison of the various health delivery and financing mechanisms**

	Fee-for-service	Health insurance	HMO staff/group model	IPA	PPO
Cost	Depend on physicians, no way to predict or control	Premium paid to insurer, may have deductible and copayment	Capitation with services not covered to be paid by patient and may require copayment for certain services	Same as HMO	Discounted fee paid by third-party
Benefits	Whatever the patient can afford	Limited by insurance policy	Predetermined by contract	Same as HMO	Limits set by employers or payers
Choice	No restriction	No restriction so far within the highest reimbursement limit	Restricted to the panel of HMO’s staff	Same except that the HMO may have contracted more individual practitioners compared to the number of employed physicians	Free choice but incentives for using participating physicians
Access	Free access to any service according to patient’s ability to pay and availability of service	Free access to any service according to limit of reimbursement	Only to what is available in the HMO and what the plan allows for referral	Limited by individual physician’s office appointment availability	Limited by the number of services contracted
Quality assurance	Usually only in hospitals	Minimal, as patient is to decide which service is the best	Formal programmes within centre	Formal programmes but less power to control	Minimal because of difficulty to monitor
Primary physician gate-keeping	None	None	Mandatory	Generally required	Sometimes but not binding
Provider risk-sharing	No	No	Staff Model: No Group Model: Yes	Yes	Limited
Utilisation review	None	Minimal and difficult, mainly to deny reimbursement if patients did not follow proper procedures	Strict review	Mainly to monitor referrals as individual physicians absorb the utilisation expenditure	Review claims from providers



15% less per employee per year when they enroll their employees and families into HMOs compared to the traditional health insurance. Major surveys have also indicated that this saving did not affect the satisfaction of the enrolled members<sup>(14)</sup>. These results have been achieved through the various strategies of managed care. Employers can predict or cap their health expenditure and use the capital for other investments.

For the patients, they are able to enjoy a comprehensive range of health-care services having only to pay a “reasonable” amount of fee monthly and are protected from catastrophic loss. They have access to continuous care by a family physician, except in some very large HMO where the change of physicians may be quite frequent. Enrolling in a managed care organisation also save the effort to “shop around” for the right and appropriate services, which the lay people may find rather difficult.

For the physicians, particularly the junior ones, Managed Care provides a stable working environment as well as income. They need not be concerned with market competition and may be able to enjoy a better sense of idealism because they can make decisions without the fear of losing the patients. For those in their own practice, they are able to link up with a managed care organisation while maintaining their private patients. It is also a good way to get to know more patients. However, there is of course the loss of freedom to choose the type of patients they prefer or to avoid the “difficult” patients. Physicians may be saved from the worry of administrative and management issues compared to solo practice. There are also other benefits in an organisation, including vacation, having other physicians in the organisation to cover his/her patients while he/she is away. When a few physicians join to form a managed care organisation themselves, it also has the advantage of pooling capital together and save cost based on economies of scale. Physicians in a managed care organisation are able to seek better peer support and “expert opinion” within the organisation or from contracted specialists.

### **Disadvantages of Managed Care**

First, there is the question of choice. In managed care, where there is usually an arrangement with certain providers, patients either have no choice or forfeit the incentives if they decide to choose their own providers. There is also a restriction due to location. A HMO may have contracted with a hospital some distance away because it offers better fee schedules.

Second, there is the concern of quality assurance. HMOs may minimise the provision of services and the primary care physicians may be pressurised to deny specialist care or investigations to their patients. HMOs may employ more junior professionals to lower cost as the patients are already lock-in and have no alternative. There is also worry that the efficiency of service may be lowered since there is no incentive for the HMO's staff to work faster or harder. Of course, when the standards of service are lowered, such as difficulty in getting an early appointment, patients can always terminate the contract and go to another HMO. So far, there is no evidence that prepaid patients file more legal suits than their fee-for-service counterparts<sup>(15)</sup> but the worry that HMOs, which are paid a fixed monthly payment, will cut costs by doing the minimum still exists. In the US, this issue may not have surfaced yet because there is a strong tendency for malpractice claims as well as a better-developed quality surveillance system.

Third, there is the issue of “adverse selection”, a phenomenon where people know who are at greater risk and thus more likely to enroll in HMOs (the same phenomenon in health insurance). In turn, HMOs will try to maintain their profitability by identifying risk factors and structure their coverage accordingly.

Some exclude selected illnesses and the enrolled members have to find other means of coverage. One strategy to counteract “adverse selection” is to sell the package in group, eg to a whole company, hoping that the effect will be absorbed by the large population of that company.

Fourth, there is loss of autonomy for both the physicians and patients. This is expected as they now enter into a contract. Physicians have to be bound by various rules, regulations, utilisation and quality review processes, as well as administrative decisions by the HMO's management. For the patients, they are restricted to limited services, and the “necessity of care” will be determined by the HMO.

Lastly, it may be expected that the general incomes of physicians will be lowered compared to private practice. There is also worry that professional judgement has to give way to financial considerations<sup>(16)</sup> such as the granting of medical leave, when employers may expect the HMO to cooperate by not granting too much sick leave to their workers.

### **ISSUES FACING A MANAGED CARE ORGANISATION**

Managed Care could be considered as a relatively new concept to many health-care personnel, especially physicians – traditional education may not have prepared them adequately for this challenge. There are a few issues that need to be considered when taking up this new system of health care.

“You are what they sell, and they sell what you are” – a common idea in business. Marketing is an essential strategy if a managed care organisation wishes to do well in the health-care market. Physicians are asked to participate more in marketing with the marketing staff and may be required to give presentations or talks, and to answer questions on behalf of the managed care organisation on health-related issues. Marketing involves identifying clients' tastes as well as expectation. Managed Care Organisations must be able to provide packages that look attractive to its potential members. There is also the issue of realising the promises. From waiting time to access to “high-tech” subspecialties, or members will be hopping to another plan with better offers.

Efficient administration is equally important for the success of the managed care organisation. HMOs usually require physicians to do more paperwork so that they are aware of how much resources they are controlling. It is estimated that a HMO's primary care physician controls about US\$1 million of health-care expenditure each year<sup>(17)</sup>. Usually, the primary care physician is the person who knows best the care his/her patients are receiving, and therefore becomes the channel through which the HMO's accrue resources to pay the bills. It is also important to generate billing efficiently as time implies potential income.

In terms of finance, reimbursements to physicians' accounts form about 25-35% of an HMO's budget<sup>(17)</sup>. HMOs have strict systems in the documentation of physicians' expenses. There must be a checking system on physicians' time, productivity and ordering patterns as physicians employed are free from financial liability. However, physicians' productivity has been the focus particularly. Many HMO's physicians see fewer patients than their fee-for-service counterparts<sup>(18)</sup>. A primary care physician is expected to see about 20-30 patients in a seven-hour period. Some HMOs have implemented a system with bonus for seeing above a certain number of patients.

While controlling internal expenses, it is the responsibility of the management to increase the organisational asset by investing incomes. HMOs uniquely receive pre-payment before any service is provided, implying positive cash flow. This is a good opportunity for HMOs to make short-term investments. HMOs should also consider placing a portion of their incomes

in long-term investments which have relatively high yield.

Following marketing, there will be competition. Managed care organisations must present the lowest payment plan to attract members, yet be able to gain profit from it. Besides the investment value from pre-payment, the management must study carefully the services rendered, the number of physicians employed as well as the targeted volume of members. It is estimated that each physician should cover about 500 enrolled members before the fixed costs are met<sup>(19)</sup>.

Quality of service has been a major concern in prepaid health plans. Managed Care organisations must have a series of quality assurance schemes to protect the organisation from litigation. Regular collection of data must be done and analysed. Statistics should be made available to most staff, especially the physicians, so that they will be aware of the existing or emerging problems. It must also be able to trace the problem to a particular section or person responsible for the undesirable outcome so that corrective actions can be taken.

Utilisation review is needed in all aspects of practice in the organisation. It is the key to cost containment. Physicians' utilisation practices must be monitored closely, particularly in the IPAs where the participating physicians are not in daily contact and do not concern much about utilisation. Physicians who are "high-utilisers" will receive "counselling" and, termination of contracts, if no improvement is demonstrated. In turn, physicians may show the records of the visits made by the HMO's patients and renegotiate the contracts if they are proven victims of adverse selection.

With such strict utilisation review process, it is inevitable that some physicians will begin to feel that they are losing their professional dignity as well as trust. Relationship with physicians is very important if Managed Care organisations wish to do well. Many physicians are resentful about the "business-orientation" of Managed Care. Some feel that the honoured traditional doctor-patient relationship has deteriorated to a piece of contract, and every action has to be justified in terms of financial incentives. The moral responsibility of the profession has also been eroded by interference from a third-party. In the midst of this resentment, HMOs must be careful in handling their "industrial relation". Better welfare, benefits and security may be ways to attract good physicians to join the organisation. Physicians must also be given due respect in decision-making and avoid conflicts by holding regular meetings to ensure that they understand the organisational policies and operational conditions. Some HMOs have their physicians as share-holders to create a built-in incentive for improving the performance of the organisation. Some have also made physicians as managers to run the organisation and the primary care physicians as case managers to be in charge of all aspects of health care as well as financial issues.

#### **FUTURE DEVELOPMENT**

Managed Care organisations in the US are moving in the direction of a merged model. The distinction between various models is becoming blurred. Most will probably adopt a combination system to ensure wide coverage and availability of services. There may be multi-product choices so that potential members can choose from different plans with different health benefits at different price-levels. This will also allow employers to select the appropriate package for individual employee.

As Managed Care concept works on large-scale operations, small HMOs may lose out to the larger ones, leaving behind a few giants dominating the industry. Insurance companies as well as hospitals are also seeking opportunities to enter this new market, coming out with newer and more attractive products. Profitability will be the key concern of most Managed Care

organisations. Commercialisation will increase as more emphasis will be placed on cost issues and economic viability. Not-for-profit organisations are facing difficulty to compete with the for-profit companies and may be pushed out of the market. The management of these organisations will also become more professional, whether they are run by physicians or business experts. Enrolment into managed care organisations will further increase with subsequent decrease in the health insurance industry.

While Managed Care is moving on into the next century, the concept has also been considered by other countries. Some have formulated certain general guidelines for the introduction of Managed Care. These include: specify clear objectives for introduction of Managed Care; strengthen corporate culture; develop internal motivation for change; develop a practice criterion with health centre professionals; reduce workloads in order to provide development time; and promote better cooperation between general practitioners and specialists<sup>(20)</sup>.

#### **DEVELOPMENT OF MANAGED CARE IN SINGAPORE**

A decade ago, most physicians in Singapore either worked in the public sector (Ministry of Health) or in private solo practice, using fee-for-service as the method of payment. With the introduction of health financing plans such as Medisave and later, Medishield, it sparks off a search for better health delivery and financing system in this era of escalating health-care costs.

In the 1980s, there have been discussions on the possibilities of HMOs with a few attempts to introduce some form of Managed Care practice here. All these have only been small-scale experiments, partly due to the relatively low health-care expenditure, availability of affordable public health services as well as the unfavourable response from health professionals.

At present, some Managed Care practices exist in the private sector, almost all in the general/primary care practice. General practitioners have been grouping to form group practices to enhance survival, financial strength and better peer coverage. Many of these groups, as well as those in solo practice (though relatively more difficult), have contracts with companies and factories to provide services with "fixed-price" or discounted fee schedules while serving as their "company doctors". This arrangement resembles the IPA and PPO models of Managed Care. The discount scheme initiated by the NTUC is an example of PPO. Many companies also employ their own doctor or doctors, as well as other health professionals, depending on the company's size. They may have some "regular" outside specialists to supplement the service. These companies have actually form some kind of HMO as part of the employees' health benefits, which in this case is paid as well as operated by the companies themselves. Health services in universities may be seen as a kind of HMO where students pay a fixed amount of health fee each semester to receive a range of health benefits, including reimbursement for hospitalisations. However, in Singapore, most companies are not large enough to operate this.

The NTUC Income Managed Health-Care System (MHS) will be the first large-scale scheme of Managed Care in Singapore. It has been announced that employers as well as employees will have the choice of either joining NTUC Income MHS or retaining their present arrangement with their company doctors. The major difference between the current Income's insurance scheme and the MHS lies in the degree of freedom of choice of doctors. The MHS incorporates some degree of control over the providers and utilisation. It is also under consideration to implement financial incentives and disincentives to check excessive usage of the service as well as some form of gate-keeping mechanism in referrals. These are all characteristics of

a HMO except that initially, fee-for-service will be implemented instead of capitation. However, it is not clear yet which model or combination this project will adopt. So far, the proposed scheme includes primary, secondary and tertiary care, and the NTUC has assured that the scheme would be opened to all doctors. In this case, it will be very likely to consist of a strong element of PPO.

### APPLICABILITY OF MANAGED CARE CONCEPT IN SINGAPORE

Will managed care succeed in Singapore, or is it applicable to Singapore? First, Singapore's health service is still very much dominated by the government which provides health-care at a relatively low price. In primary care, managed care would not be a need as low-cost polyclinics as well as private general practitioners are widely available in this city-state. Unlike the US where primary health-care is also an important element in the escalating health-care costs. Seeing a primary care physician for simple cough and cold may cost US\$50, which some low-income families would not be able to afford without some kind of "risk-sharing" mechanism. So it remains a question of whether an ordinary Singaporean is willing to pay a monthly payment instead of paying the fee-for-service for each visit to a polyclinic or general practitioner's clinic.

In hospital care, the domination by the government as provider has been serving as a mechanism for price-control, which is absent in the United States. However, hospital fees have been rising in the recent years and the public has expressed worry over the ability to pay especially during serious illness. Will current health insurance scheme be sufficient to cover this worry? The main strategy in Managed Care to contain costs is by some form of control over the health-care providers. In Singapore, the government provides 80% of hospital care. The strategy of establishing "organised relationships" with hospital providers will not be practical, unlike in the US where subsidised hospital care is very limited. Therefore, if HMOs were to succeed in Singapore, they must be able to prove better than the government system or focus on the private sector – which many Singaporeans prefer if they are not required to spend very much more compared to the use of government hospitals.

Furthermore, Singapore needs more time to establish legislation for the monitoring and controlling of these new health-care products, as well as to address the moral and ethical issues associated with them. Health-care professionals also need to be informed, educated and accustomed to these concepts and their operations. Primary care physicians must be reoriented to the new role as gate-keeper and make sound judgement to balance between defensive medicine and medical malpractice<sup>(21)</sup>. Without the support of these professionals, Managed Care will not succeed in Singapore.

At present, there is not sufficient evidence that Singaporeans are over-using health-care facilities and services. However, the idea to introduce Managed Care now as a way to control utilisation and thus costs, or as a preventive measure, may be applicable. There is a need to consider the risk of "moral hazard" when enrolled members use the services more since they need only to pay a fixed capitation. The main advantage over the insurance system lies in the control of providers and utilisation.

### CONCLUSIONS

Managed Health-Care seems to be an attractive solution for the US rising health-care costs when the insurance system fails. It is a plan which patients, health-care providers and payers are all linked up for the goal of cost containment, yet quality care could be maintained<sup>(22,23)</sup>. In economic terms, it can be seen as a

mechanism of managing health-care demand (patients) through the control of supply (providers).

In Singapore, the public sector of health-care run by the government could be seen as a form of Managed Care providing different levels of care for people with varying paying abilities. The "capitation" will then be the taxes "prepaid" by the tax payers. Management, quality assurance and utilisation review are administered by the Ministry of Health, or Health Corporation, Singapore. Medisave will become the "copayment" while Medishield and Medifund become supplements as well as protection to those requiring high-cost services.

In the private sector, there are some rudimentary forms of Managed Care such as general practitioners contracting with companies and factories. There are still scope to further develop the concept of Managed Care or HMO, particularly in the specialised field. Private specialists may work together with their primary care counterpart to form Managed Care organisations to attract those who are willing to pay a bit more for "private service". However, careful planning must be taken, in view of the already existing and widely available low-cost primary care service provided by private practitioners and government polyclinics.

If Managed Care is going to develop in Singapore, should it be a national Managed Care plan by incorporating Managed Care element into the government health services, a free market for many HMOs to compete, a restricted market with only a few government supported plans, or a system that only develops in the private sector? It will require more studies in the areas of necessity, the model which will suit our local context, and the ways that it will help us contain costs and provide quality care. To transplant the entire concept and model of managed care or HMO is not appropriate as they are meant as a remedy for the failure of the insurance health care system. Insurance is still not an important element in Singapore health care system, and probably will not be though coverage by Medishield and other private health insurance plans is increasing. Nonetheless, many of the principles of Managed Care could still be applied, but in a modified way. The British "GP fundholding scheme"<sup>(24)</sup> where general practitioners receive funds from the National Health Service (NHS) to purchase health care services for patients registered with them is an example of modified Managed Care.

Finally, more time will be required to prepare the health care professionals as well as the public to understand and accept the new system. Government will also need to look into issues of legislation such as licensing and auditing. It is hoped that there will be a general consensus before embarking into this new venture.

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