POLICY REVIEW

Developing the Malaysian Health System to Meet the Challenges of the Future

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Summary

The Malaysian health care system is a success story among countries of equivalent socio-economic status. However there are numerous challenges faced by the nation, which create the need for changes and reform. There is rising consumer demands and expectations for high technology and high cost medical care due to improved standards of living, changing disease patterns and demographic changes, inadequate integration of health services, maldistribution of resources and the threats as well as opportunities of globalisation and liberalisation. The changes in health policy, priorities and planning for the country are guided by the country's development policies, objectives and the challenges of Vision 2020, Vision for Health and the goals of the health system in ensuring universal access, improving equity and efficiency and the quality of life of the population. The essential services in the health system of the future are information and education of individuals to empower support for the wellness paradigm. There is also a need to restructure the national health care financing and the health care delivery system. The present roles and responsibilities of MOH also need to be reviewed.

Key Words: Issues, Challenges, Health policy, Wellness paradigm, Restructuring)

Introduction

This paper is intended to highlight briefly the Malaysian health care system and some of the Ministry of Health (MOH) main experiences in developing the Malaysian health care system to meet issues and challenges of the future. The changes in health policy and priorities described are guided by the country's development policies, objectives and the challenges of Vision 2020, Vision for Health and the goals of the health system in ensuring universal access, improving equity and efficiency and the quality of life of the population.

The Malaysian Health Care System

Health care in Malaysia is presently provided by different agencies, namely the public and private sectors and the non-governmental organisations. The major provider and financier of health services is the MOH, which is responsible for the health of the population, as stated in the Federal Constitution[1,2]. In year 2001, there were 204 mobile teams, 843 health clinics, 1,924 rural clinics, 115 hospitals and 6 medical institutions, throughout Malaysia. These hospitals provide a total of 29,123 acute beds for secondary and tertiary care while the medical institutions provide 5,551 chronic beds, mainly for psychiatric care[1].

Other government agencies such as the Ministry of Education, Ministry of Defense, Ministry of Local Government and Ministry of Human Resources, complement and supplement the role of the MOH, in order to safeguard the health of the people[1,2].

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The private health sector is the second major provider of health services, provided through private hospitals and clinics, which have been mushrooming throughout the country, especially in the urban areas. Over the past few decades, there has been an increasing role of the private sector towards the provision of health care for the country thus complementing the Government's efforts in this regard[2]. For example, in 1980, there were 50 private hospitals with 1,171 beds, and in 2001, the number had increased to 224 hospitals with 9,949 beds. Most of these hospitals are concentrated in the state capitals and urban areas. It is estimated that there are about 5,000 private general practitioner clinics providing a range of primary health care services in Malaysia[1].

Other providers of health care include the traditional and complementary medicine (TCM) practitioners and the non-governmental organisations. TCM in Malaysia comprised traditional Malay, Chinese, Ayuverdic Medicines and others and is well accepted by both rural and urban communities[1,2].

Some non-governmental organisations (NGOs) also contribute towards the provision of health care. Most of these NGOs complement tasks undertaken by the Ministry of Health especially in areas that are not covered by the Ministry[1,2].

Achievements

Malaysia has greatly improved the health status of its population, dramatically reducing mortality indicator rates and increasing life expectancy at birth, since independence in 1957. It compares favourably with other countries in the region[2]. The life expectancy at birth of male and females has increased to 70.3 years and 75.2 years respectively in 2001[3] as compared with 55 years and 58 years in 1957. The maternal mortality rate has significantly reduced from 0.6 per 1,000 live births in 1980 to 0.2 per 1,000 live births in 2001[3]. The infant mortality rate has declined to 7.9 per 1,000 live births in 2001[3].

Data from the United Nations Children's Fund (UNICEF) 2002 indicated that the health indicators of Malaysians were much better compared with some ASEAN countries. For instance, in 2000 the infant mortality rate (IMR) in Malaysia was 8 per 1,000 live births as compared with that of Indonesia and Thailand, which was 35 and 25 respectively. However, it is still considered high if compared with the IMR of Singapore (4/1,000 live births), United Kingdom (6/1,000 live births) and United States of America (7/1,000 live births) [4].

Basic health care through health facilities is currently available to and accessible to more than 95 percent of the population in Peninsular Malaysia and about 70 percent of the population in Sabah and Sarawak. These estimates are higher if outreach services, such as travelling dispensaries and riverine services, the flying doctor services, mobile health teams and dental clinics are taken into account[2].

Health and medical care services are gradually decentralised to the regions, states and districts to increase efficiency. This is done together with the implementation of the National Referral System to ensure provision of integrated health care to the population. This referral system serves to provide highly specialised care to augment the basic care services provided in health clinics. A key objective of this system is to provide greater equity, accessibility and better utilisation of resources. Primary health care is therefore the thrust of the Malaysian health care system, and is supported by secondary and tertiary medical care[2,5].

Issues and Challenges in the Malaysian Health Care System

Although the Malaysian health care system is a success story among countries of equivalent socio-economic status, there are still numerous challenges faced by the nation, which create the need for changes and reform. There is rising consumer demands and expectations for high technology and high cost medical care due to improved standards of living, changing disease patterns and demographic changes[1].

Inadequate Integration Between the Public and Private Health Sectors

There is inadequate integration between the public and private health sectors. The private health sector concentrates mainly in urban areas, leading to inequitable distribution of health services and resources. There are also differences in the range, scope and quality of services provided at primary, secondary and tertiary care levels. In addition, access to private hospitals is mainly to those who can afford to pay higher fees. The growth of the private health sector has triggered the steady migration of senior doctors, specialists and experienced allied health professionals from the public sector to the more lucrative private health care sector. The ensuing imbalance is causing a strain on the human resources in the public sector[1].

Inadequate and Maldistribution of Human Resource

The shortage of human resource in the public sector is well acknowledged, as reflected by the long waiting time at outpatient departments and specialist clinics and the high workload per staff in most health facilities. In 2000, 46.2% of all doctors were in the private sector and were responsible for only 20.3% of hospital beds while 53.8% of the doctors in the public sector were looking after 79.7% of the beds. A similar situation is observed for all categories of professionals including pharmacists, dentists, nurses and health engineers[1,6].

The 1999, the MOH Health Directors' Conference reported that in 1997, 58.8% specialists were located in the private sector managing only 27% of the total hospital beds in the country while approximately 41.2% in the public sector manage 70% of in-patients, including the more complicated and resource-intensive cases[1].

While still grappling with the need for adequate personnel with basic qualifications, there is a growing expansion of specialities and subspecialties with concomitant demands. New categories of staff such as speech therapists, audiologists, system analysts, medical social workers, counsellors are urgently required to fulfil the growing complexity and variety of services required by the health sector. Therefore, in addition to the challenge of equity and accessibility, an even greater challenge continues to be the maldistribution of human resource in both the public and private sectors[7].

Escalation of Health Care Costs and Limited Financial Resources

The MOH operating expenditure in 1990 was RM1.27 billion, increasing to RM4.21 billion or a jump of 231% in 2000. For the year 2003 the MOH operating budget has been increased to RM5.76 billion representing a jump of 353% as compared to 1990[7]. *(Note: These figures are calculated based on current prices and did not take into account the inflation rate).*

Rising health care costs is inevitable. Demographic changes and changes in disease pattern and lifestyle would influence health care costs. The introduction of new technologies and ever-increasing consumer expectation for high cost quality care, are factors contributing to rising health care costs. Demands for new expensive medications such as anti-hypertensive drugs and new types of high cost services such as transplants and implants and ICT based services, will have a significant impact on the limited health resources available[7].

There is also a concern regarding the increasing trends of private health care expenditure including the out-of-pocket expenditure. This trend must be controlled to ensure that health care is not left to market forces, which may result in greater inequity. The high out-of-pocket health expenditure exposes the family to unexpected financial risks. The out-of-pocket payment is one of the least efficient and most inequitable means of financing health care. The World Health Organisation (WHO) has proposed that some form of prepayment mechanism be introduced to ensure a more equitable, affordable and efficient health services[8].

Overdependence of Public Hospital Services

Overdependence of public hospital services is also an issue of concern particularly for inpatient care, maternity care and care for chronic illnesses. Some 80 percent of hospitalisations occur in public hospitals[7].

Health services provided at the public sector is highly subsidised by the government. In 2001, the revenue collected by MOH from providing medical, health and dental care services accounted for approximately 2.2% of the total operating budget of the MOH[1].

The Potential of Information Communication Technology (ICT)

The efficiency of using ICT in hospitals in Malaysia in terms of health outcome in view of the cost development, training and maintenance has yet to be proven. With the development in ICT, it is expected that there will be changes in the structure, organisation and functions in the delivery of health care and development of health facilities. Health care providers need to be constantly updated on issues on health management and this is best assisted by ICT. The present legislation available is insufficient and outdated. Confidentiality of information needs to be developed for patient protection and security across networks[7].

The Need for Research and Development

Clinical research, public health research, health policy research in health management, environmental health and health promotion are some of the areas that need further emphasis. This is to address the gaps in these areas mentioned according to our current and future needs. Researchers and support staff must be expanded to cater for the increased tasks and responsibilities. Therefore, training and development programmes must be appropriate, better structured and intensified to produce skilled health care workers. The mechanisms for utilisation of research findings should also be emphasised[7].

Health Tourism

Health tourism is seen as the catalyst for growth and a potential source of economic development. It has been implemented in many countries such as Thailand, South Africa and United Kingdom. Health tourism is believed to benefit health care markets and will help to boost the economy of the country[1]. Relevant monitoring systems such as Quality Assurance Programmes, Clinical Practice Guidelines, credentialling and accreditation have to be developed and instituted. There is inadequate and less coordinated measures undertaken by various relevant agencies to market the potential of health tourism activities for the country. However, this initiative is also seen to be predominantly benefiting the private sector in terms of increased patronage while the fully utilised public sector may not benefit from it.

The Threats of Globalisation and Liberalisation on Health

Today, globalisation has become a generic term for a defining phase of the present modern era, but it is often narrowed down to mean economic globalisation which is gaining a bad reputation for inequity. The overriding concern has been that globalisation is weakening the capacity of sovereign states to resist international market forces, maintain their independence, and contribute to the well-being of their citizens and the wider goals of peace, security and sustainability. There will also be effects on competition in domestic health care market[9].

Changing Demographic Profile

There are already marked changes in the Malaysian demographic profile. These changes will affect the health care costs and provision. According to the 2000 census, the total population of Malaysia has increased to 23.37 million as compared to 18.38 million in 1991 thus giving an average annual population growth rate of 2.6% over the 1991-2000 period. The country's population is mainly a young population, with the proportion of population below 15 years of age in 2000 census being 33.3%. Conversely, the proportion of population 60 years and over for Malaysia in 2000 was recorded at 6.1% compared to 5.9% in 1991. Population density for Malaysia as a whole stood at 71 persons per square kilometre in 2000 compared to 56 persons in 1991. Among the most densely populated states were Wilayah Persekutuan Kuala Lumpur, Pulau Pinang and Wilayah Persekutuan Labuan. With respect to urbanisation, it was observed that the proportion of urban population had increased to 62.0% in 2000 from 50.7% in 1991[10]. All these changes in demographic profile will affect health care provision and costs of health care.

Changing Disease Trend and Pattern

Communicable diseases still persist despite the general improvement in socioeconomic status, environmental sanitation and better surveillance of diseases such as tuberculosis, malaria, cholera and dengue. It is noted that the percentage of HIV infection rate among TB patients in Malaysia has increased from 0.05% in 1990 to 4.04% in 1999. This increase in incidence of HIV/AIDS is associated with the resurgence of communicable diseases like tuberculosis, as well as the increasing problem of emerging drug resistant pathogens. Malaysia, like many other countries in the world, will be challenged with this rather complex mix of health problems. The 1997-98 outbreak of Japanese encephalitis and the 1999 outbreak of Nipah virus infections plus the looming threat of new viruses, such as Hendra-like virus infections all pose new challenges to our country. These challenges will require more sophisticated surveillance systems as well as more advanced treatment regimens, with even greater costs[7].

Chronic and degenerative diseases related to changes in lifestyle and behaviour as well as those associated with ageing remain a challenge in most countries, including Malaysia. Changes in characteristics of the population which come of age in the next two decades are going to affect the demand for geriatric and mental health services, as well as the contexts in which services are delivered. The demographic profile indicates that with improving longevity, there will be a resultant increase in the proportion of people at or over 60 years of age. It is projected too that by the year 2010, some 2.1 million or 7.3% of Malaysians will be 60 years old and above and the number is expected to increase almost to 3.2 million or nearly 9.5% by the year 2020[3]. Therefore, geriatric care and gerontology services must be expanded to meet this new future demand. Community support for these activities as well as affordable private medical care is essential to assist the Government to cope with these more expensive health care activities[7].

Marginalised Population Health

Rapid industrialisation, socioeconomic changes and urban migration have resulted in a segment of the population becoming marginalised. Examples of these are the urban poor, displaced people, "orang asli", people living with HIV/AIDS, intravenous drug users and commercial sex workers. The urban poor are more vulnerable to chronic illnesses. There is an unequal distribution of health care services and disparities in health status among the urban population such as squatters and the homeless[7].

Immigrant Health

It is estimated that about 5% of the Malaysian population or nearly 1 million people consist of foreign workers, some of whom are illegal. The number of non-Malaysian citizens has increased from 805,376 in 1991 to 1,384,774 in 2000, thus representing an increase of about 72% over 1991-2000 period. Although the presence of these immigrant workers (and their families) are to help in the development of the Malaysian infrastructure, they may harbour dangerous illnesses, usually communicable diseases which they carry from their country of origin[1].

The Importance of Traditional Complementary Medicine (TCM)

Traditional medicaments constitute a significant market and much of these products are imported. It is necessary to monitor and evaluate, and support, where appropriate, the promotion of safe and ethical practices and quality products as well as the development of mechanisms for rationalisation of the practice and use of TCM in our setting. Therefore, appropriate policies regarding recognition, regulation, control and integration of the TCM are needed[7].

Wellness Paradigm

Maintaining wellness has been identified as the way forward for the Malaysian health system. It is one of the health services goals for the designing and planning of health care in this country. However, current health promotion and prevention services are still perceived to be disease oriented rather than wellness orientated, not only by health care providers but also the people at large[1,7].

The concept of the wellness paradigm is not well understood and/or accepted by all stakeholders in health. Unless the concept is uniformly understood and embraced by policy makers and health care providers and is translated into action and strategies, the advantages of the wellness paradigm will be limited. The health system must be orientated to respond to the paradigm shift from the illness to wellness mode and facilitate changes toward this end. Development of wellness plans and health risk assessment tools will further enhance this move[7].

Bioterrorism and Sabotage

The more recent incidents of bioterrorism and acts of sabotage elsewhere in the world have taken the challenge of crisis management to a new dimension requiring anticipatory preparedness in handling and mitigating these deliberate criminal acts. The recent anthrax scare incidents have tested our preparedness in this area. The lessons learnt are that effective inter agency collaboration and coordination must prevail. These acts of bioterrorism and sabotage pose a grave risk to the general population and intentionally cause damage and disrupt the functioning of key installations like dams, power stations, reservoirs and others[7].

Internalisation of Quality in Health

Quality aspects have not been adequately internalised and institutionalised although a strategic plan for quality in health has been formulated in 1998 following a comprehensive review and evaluation of all MOH quality initiatives. The plan is intended to provide the impetus and direction for the MOH as well as all stakeholders in health[1,7].

Indicators to measure health status need to be reviewed with the view to formulate additional and/or new ones. A broader definition of health encompassing physical, mental and social well-being needs to be developed the future challenges in health.

Health Regulation

The government will gradually reduce its role in the direct provision of health services and instead, increase its regulatory and enforcement functions. There is an urgent need to build-up institutional capacity to fulfill this role in a satisfactory and effective manner. The MOH needs to review its legislation and strengthen its enforcement capabilities, including those related to ICT and telehealth activities.

MOH Planning Process

Health policy changes in the Malaysian health care system are planned using three types of planning horizons, namely the five-year socio-economic development plan, the medium term plan as well as the long term plans[11]. Besides these, health policy changes in the country are guided by the health situational analysis, economic and social influences both locally and internationally, Vision for Health, goal of health system and input obtained from various stakeholders in health[5].

Five Year Development Plans

In its five-year Malaysian plans, the MOH has adopted both rational and pragmatic approaches to health planning, incorporating a strategy of setting priorities. This policy to action strategy has made optimal use of the limited resources available for health. Improvement

in the health status of the population provides evidence for the success of this approach[2]. Currently Malaysia is in the Eighth Malaysia Plan cycle (2001-2005).

Medium Term Plan or Outline Perspective Plan (OPP)

The medium term plan is also known as the Outline Perspective Plan. The first OPP, for the period 1971 - 1990 was implemented through the New Economic Policy. Its objectives were to restructure the community and to eradicate poverty. The Second OPP which covered the period of 1991 - 2000 was implemented through the National Development Policy to achieve the objectives of growth with equity[1,11]. Now Malaysia is in the Third OPP (2001-2010), which is also known as the National Vision Policy with the objectives of achieving national unity and solidarity and using ICT and the knowledge-based economy (k-economy) to improve the economy of the country[1].

Vision 2020

Malaysia also has a long term plan to be a developed country in its own mould, by the year 2020, with a Vision launched in 1991 by the Prime Minister, Dato' Seri Dr. Mahathir Mohamad. This 30-year planning horizon is also known as Vision 2020. The ultimate aim is that by the year 2020, Malaysia will be a united nation, with a confidence that the Malaysian society, infused with strong moral and ethical values, will be living in a society that is democratic, liberal and tolerant, caring, economically just and equitable, progressive and prosperous, and in full possession of an economy that is competitive, dynamic, robust and resilient. Among the challenges, which have more direct reference to health care, are access to health, quality, a caring culture and an ethical society[1,2,12].

Vision for Health

Vision 2020 sets the framework of action by all sectors including health. The Vision for health, which provides a common goal and direction in all health-and health-related concerns, will inculcate a sense of commitment in working towards the goal of Vision 2020. The Vision for Health is *"to develop a nation of healthy individuals, families and communities, through a health system that is equitable, affordable, efficient, technologically appropriate, environmentally adaptable and consumer-friendly, with emphasis on quality, innovation, health promotion and respect for human dignity, and which promotes individual responsibility and community participation towards an enhanced quality of life"*

Mission of MOH

As an accompaniment of the Vision for Health, the MOH has declared its mission to build partnerships for health, to facilitate and support the people to attain fully their potential in health, to appreciate health as a valuable asset and take positive steps to improve it.

Goal of the Health Services

In achieving the Vision for Health and Mission of MOH, the activities carried out by the health sector must be in line with the eight goals of the health services namely, the wellness focus, person focus, informed person, self help, care provided at home or closer to home, seamless continuous care, services tailored to individual or group need and finally effective, efficient and affordable services. The health service goals articulate the pressing elements for the transformation of the present health system into the health system of the future. New concepts, strategies and services will need to be created, and there will be new ways of delivering healthcare through telehealth[13,16].

Future Health Plans and Priorities

The objective of the health services is to raise and continuously improve the health status of individuals, families and communities[14]. The essential services in the health system of the future are information and education of individuals to support the wellness paradigm, consultations to maintain health or provide early treatment of illnesses. Thus, the health system of the future will be different from what we are familiar with today, and will not focus only on care using the present health care delivery system. The vision for health empowers individuals, families and communities, emphasises wellness and care as well as achieving an enhanced quality of life[14].

Eighth Malaysia Plan (2001-2005)

During the Eighth Malaysia Plan period, the focus will be to further improve the health status of the population, particularly the low income and the disadvantaged groups and optimise utilisation of resources in the health sector. Primary health care will remain the focus of national health development while concerted efforts will be made to improve equity and quality in the provision of health services for the population. This will include further development and expansion of the scope of primary, secondary and tertiary health care, greater use of ICT as well as more emphasis on increasing the quantity, capacity, capability and quality of health

personnel to meet future demands. Specific programmes such as occupational safety and health, geriatric care, mental health and prevention and control of emerging diseases and reemerging infections will be expanded. In addition, the governance of the health sector will continue to be strengthened to ensure efficient and effective utilisation of resources and balanced development of the sector [14].

Integrated planning to ensure equitable distribution of health care services between rural and urban areas and public and private sectors will be implemented. Priority will also be given to the recruitment and training of additional health professionals and allied health professionals[14].
The strategies for health sector development during the Eighth Malaysia Plan period are as follows: [14]

- Improving accessibility to affordable and quality health care among others through appropriate balance of infrastructure and services
- Expanding the wellness programme
- Promoting coordination, collaboration and integration between public and private health sectors
- Increasing the supply of various categories of health personnel
- Strengthening the telehealth system to promote Malaysia as a regional centre for health services
- Enhancing research capacity and capability of the health sector
- Developing and instituting a national health care financing mechanism and
- Strengthening the regulatory and enforcement function to administer the health sector, including traditional practitioners and medical products.

National Health Financing Mechanism

It will be difficult to cope with rising health expenditure if health care funding remains dependent only on general tax revenue, which is limited. There is a need to look into possible avenues of unlocking additional resources for health spending.

As stated in the Seventh and the Eighth Malaysia Plans, there is a need to establish a suitable, appropriate and acceptable national health financing scheme for Malaysia. It is proposed that the main source of collection shall be from the National Health Insurance. Those who can afford to pay will have to contribute, while the government will contribute for the disadvantaged groups such as the poor, the elderly and the disabled.

There is also a need to establish a National Health Financing Authority (NHFA), under the MOH, as a not-for-profit entity to manage the National Health Insurance[1, 12].

The proposed new national health financing scheme will emphasise on equity, efficiency, acceptability, accessibility, affordability, comprehensive coverage, in line with the wellness paradigm. The new scheme should provide flexibility, innovation and improvement in quality. The new health care financing scheme should also be based on cost and risk sharing and made compulsory for everyone who can afford. The new system should be able to create greater integration of health services at primary, secondary and tertiary levels and also within the public sector and between the public and private sectors[1, 12].

In line with the National Development Policy, the private sector is considered the engine of economic growth and this sector, therefore, is encouraged to expand and complement the services provided by the government. Any private health insurance that is developed must complement and not compete with the national health financing scheme[1, 12].

Restructuring the Health Care Delivery System

There is also a need to restructure the MOH's health care delivery system to provide more flexibility and autonomy in the provision of health care services. It is hoped that the proposed restructuring of MOH hospitals and clinics will be able to reduce the 'brain-drain' of health personnel from the public sector to the private sector by providing a more conducive working environment, reducing the heavy workload and bureaucracy and providing better remuneration. Restructuring may also help to enhance integration and reduce maldistribution or duplication of health resources. A restructured entity will be more competitive in the provision of more efficient health care services. It is suggested that the restructured MOH's entity should not to be privatised and should maintain its social obligation in providing health care services to the community[1].

National Health Advisory Council

There is also a need to establish the National Health Advisory Council (NHAC), which consists of representatives of stakeholders in health to advise the MOH, on issues related to health [1].

The Changing Role of the Government

As mentioned in the World Bank's Development Report 1993: Investing In Health and World Health Report 2000, government's intervention in health is required through regulation, monitoring and financing, in the interest of both justice and economics. As for Malaysia, the future role of the government would be regulatory, policy formulation, monitoring, financing and the provision of some health services. The stewardship role of the government needs to be enhanced. The government should continue to run specific public health programmes regarded as public goods. In providing health services to the consumers, quality of care must be addressed at all times through the introduction of a certificate of need, right to practice, an accreditation programme and regulation of fees and charges, tariffs and hospital budgets. The government must ensure equity and accessibility of all population groups to health care[1,2,5,12] . The MOH needs to be restructured to cater for these new roles and responsibilities.

The implementation of the Private Health Care Facilities and Services Act 1998 is imperative. It requires commitment particularly in the regulatory components. The implementation should also see great improvements in zoning and distribution of the health care facilities[15].

The Telemedicine Act needs to be reviewed to include a new approach to teleconsultation and also other applications that are not provided for under the act. Confidentiality of information needs to be developed even though some of these aspects are covered in the Malaysian Data Protection Act[7].

Information and Communication Technology (ICT)

The MOH is developing an ICT system for hospitals and health clinics. To create truly "paperless hospitals", a fully computerised system or Total Hospital Information System (THIS) was introduced during the Seventh Malaysia Plan period (1996-2000). Two THIS hospitals were completed and operationalised in Seventh Malaysia Plan. Currently 6 new THIS hospitals are underconstruction in the Eighth Malaysia Plan.

The application of five telehealth projects namely the Lifetime Health Plan (LHP), Lifetime Health Records (LHR), Continuing Medical Education (CME), Mass Customised Personalised Health Information and Education (MCPHIE) and teleconsultation, will be expanded nationwide in phases to support the government's efforts to develop the Malaysian Multimedia Super Corridor (MSC). The MSC has seven "flagship applications" namely an electronic government, a smart school, telemedicine (telehealth), research and development clusters, a national multipurpose smart card, borderless marketing centres and worldwide manufacturing webs[1,2,5,16].

It is hoped that the goals of the health system of the future will be achieved through the implementation of telehealth. To facilitate the implementation of ICT, the government has given special emphasis on this aspect, in the Third OPP which is known as the National Vision Policy[1]. The evaluation of some telehealth projects have been conducted by the MOH. The existing ICT blueprint of the MOH is also currently being reviewed.

Internalisation of Research in Health

Appreciating the growing importance and need of research, the MOH has established the National Institutes of Health (NIH) which consists of the Institute of Medical Research (IMR), the Institute for Public Health, the Institute for Health Management (IHM), the network of Clinical Research Centres (CRC) and the Institute for Health Promotion (IHP). Research activities have been given greater emphasis in the Eighth Malaysia Plan (2001-2005)[1,17].

Health Tourism

In order to attract foreign patients, our health sector, be it public or private, must introduce features which are in line with the vision for the development of Malaysian health care services for foreign patients, which states that "Malaysia will develop a vibrant health care service sector for foreign patients, drawing on an international reputation for excellence in the provision of health care, bearing the hallmarks of high levels of efficiency, quality and skills, at competitive prices, without compromising the health care needs of Malaysians"[18]. The MOH has developed a committee to study the potential for health tourism, with membership representation from relevant agencies in both public and private sectors.

Globalisation

Under the General Agreement on Trade in Services (GATS), Malaysia has identified conditions to trade in two areas in health namely the medical and dental services and hospital services. Issues of concern are the effect on domestic competition, the quality of health care, and the question of affordability, equity, efficiency and others. The most direct impact on liberalisation is the non-discriminatory privilege of foreign specialists practising in Malaysia. The negotiation process is on going and Malaysia should fully negotiate within the available timeframe. The implication of the Agreement

on Trade-Related Aspect of Intellectual Property Right (TRIPs) is the issue of access to affordable medicine. To ensure affordable drugs are accessible to the public, Malaysia should be allowed to use the flexibility under TRIPs such as parallel imports and compulsory licensing[7].

Crisis Preparedness

Over the years, most of the health related crises have been mainly due to infectious diseases outbreak and also as a result of seasonal floods, which occur as a naturally occurring event. Recently crises arising out of different circumstances have emerged, such as the industrial and petrochemical explosion, bioterrorism and acts of sabotage. Malaysia needs to urgently educate and train both the personnel handling the crises and also the affected population in terms of preparedness and appropriate response so that the intensity of impact caused by these crises can be minimised to reduce mortality and morbidity. There should be adequate funding available to provide appropriate resources to address the shortcoming in emergency crisis preparedness and response[7].

Conclusion

Malaysians enjoy a comprehensive range of health services, with the government being committed to the principle of universal access to high quality health care, with the objective of raising and continuously improving the health status of individuals, families and communities. Like other countries, Malaysia faces major challenges in meeting the increasing demands with limited resources, changes in demography, increasing consumer expectations, new technologies, the impact of globalisation and liberalisation and many others. The essential services in the health system of the future are information and education of individuals to support the wellness paradigm, consultations to maintain health or provide early treatment of illness. There is also a need to restructure the national health care financing and the health care delivery system. The roles and responsibilities of MOH also need to be reviewed to cater for these challenges and impending health reforms. MOH recognises that health planning is a dynamic process and managing change requires the ability to anticipate challenges and threats and curbing them before they can cause a crisis in the health organisation.

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