Health Service Delivery Primary Health Care

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4.1 Introduction

The term 'primary health care' (PHC) has been operationalised in a variety of ways since it was first coined as part of the historic Alma Ata Declaration (Box 4.1). In this chapter, we operationally define PHC to cover the 'first level of contact of individuals, the family and community with the national health system' and 'reflect(s) and evolve(s) from the economic conditions and sociocultural and political characteristics of the country'. The elements of PHC we will focus on include 'education concerning prevailing health problems, ... maternal and child health care including family planning and immunization, and appropriate treatment of common diseases and injuries'. Other aspects of PHC, such as safe water and basic sanitation, prevention and control of locally endemic diseases, and provision of essential drugs, are covered in other chapters.

This chapter explores the development of PHC during the 60-year period after Malaysia achieved independence (1957–2018). The development process is viewed in the context of the interaction of various components of the health system, as well as the interactions with other sectors and the influence of international movements. Two distinct phases of development are evident, as described in Sections 4.2 and 4.3.

4.2 The First Phase of PHC Development (1960s–1990s)

4.2.1 Drivers and Contexts

At independence, about 75% of the population lived in rural areas, and almost half the population lived in poverty (Mohd Ashad & Shamsudin, 1997). The ethnic composition reflected the urban-rural divide, with ethnic Malays being largely rural, ethnic Chinese largely

Box 4.1 Excerpts from the Declaration of the Alma Ata International Conference on Primary Health Care, September 1978

- Primary health care is essential health care ... made universally
 accessible to individuals and families in the community through
 their full participation and at a cost that the community and
 country can afford.
- It is the first level of contact of individuals, the family and community with the national health system . . . and constitutes the first element of a continuing health care process.
- Involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; ... and demands the co-ordinated efforts of all those sectors.
- Sustained by integrated, functional and mutually supportive referral systems, leading to the progressive improvement of comprehensive health care.

(www.who.int/social_determinants/tools/multimedia/alma_ata/en, accessed September 2019.)

urban and ethnic Indians largely in the rubber estates. Maternal and child mortality was high, nutritional status was poor and the incidence of infectious diseases was high. Table 4.1 provides a glimpse of Malaysia's health status at independence and its evolving status during the subsequent 30 years.

The PHC system developed for Malaysia was built on the healthcare system inherited from the British colonial system. It consisted of outpatient clinics attached to hospitals, a few dispensaries and infant welfare centres provided by the government, and private sector clinics operated by doctors (general practitioners, or GPs). Almost all of these services were in urban areas. This healthcare system evolved from the requirements of the expatriate governing staff, that is, the more educated and affluent urban population.

The predominantly rural population depended on practitioners of traditional medicine, while workers in the larger rubber estates

	1957	1970	1980	1990
Life expectancy at birth, male (years)	55.8	61.6	66.4	68.9
Life expectancy at birth, female (years)	58.2	65.6	70.5	73.5
Maternal mortality ratio per 1,000 live births	2.8^{1}	1.6^{2}	0.6	0.2
Infant mortality rate per 1,000 live births	73.0^{1}	43.8^{2}	23.8	13.1
Toddler mortality rate per 1,000 population	8.9^{1}	5.0^{2}	2.1	1.0
aged 1–4 years old				

Table 4.1 Health indicators in Malaysia, 1957-1990

Source: Suleiman and Jegathesan, n.d..

depended on estate clinics provided by employers. However, four years prior to independence, the country introduced a service to serve the rural population, which evolved into the Rural Health Service (RHS) in 1956, just before Malaysia gained independence (Rudner, 1972; Ismail, 1974; J. H. W. Wong et al., 2019).

Independence brought into power an elected coalition of ethnically based political parties, led by the ethnic Malay political party. Unsurprisingly, the political focus shifted to prioritise rural communities to reflect the location of strong Malay support. The major thrust of development was to achieve socio-economic transformation by developing the country's basic rural infrastructure, modernising agricultural production in rural areas and improving education and health (Federation of Malaya, 1960; Rudner, 1972; Lee & Lee, 2017). Infrastructure development was an integrated approach that included rural roads, drainage and irrigation, schools and clinics (Mohd Ashad & Shamsudin, 1997). Planning and development was co-ordinated by the Economic Planning Unit in the Prime Minister's Department, and the progress of all elements within each administrative district was monitored in an integrated fashion through a 'Red Book' that commanded the attention of politicians and civil service administrators at national, state and district levels. The RHS was a major component of this integrated development, such that a district would receive an integrated package that increased physical access to basic education and healthcare, while parallel initiatives addressed its economic needs.

¹ 1956-1960

² 1966-1970

4.2.2 The Rural Health Service

The RHS was government funded. A basic RHS unit served 50,000 population. It consisted of a main health centre (MHC), 4 sub-centres (HSC) and 20 satellite midwife clinics, each with an attached residential facility for the midwife (MCQ). This basic unit was designed to provide 'integrated curative and preventive health services' (Jayasuria, 1967). Table 4.2 illustrates the services and notional staffing pattern of the basic RHS unit. The number of rural health facilities increased significantly between 1960 and 1980 (Table 4.3).

During the first 10 years, the major challenges included difficulty in matching the rate of facility construction with that of population growth, inadequately trained staff for facilities that had been completed, and prevailing cultural beliefs and taboos that hindered service utilisation. After 15 years of development, by 1975, the facility-to-population ratios showed that only 50% of population coverage targets had been achieved. A community survey showed that 24% of the rural villages in the survey areas were 'underserved' (Noordin, 1978). To increase access, the static facility-based services were supplemented with mobile clinics-cum-dispensaries that travelled by road or river, and dental clinics funded by the government, all providing free access to the population (Ismail, 1974; Tate Abdullah et al., 2005). These teams visited remote villages and provided a PHC package consisting mainly of curative, MCH and immunisation services periodically.

4.2.3 The Influence of the Alma Ata Declaration on the RHS: Community Mobilisation, Enhanced Intersectoral Co-ordination, Referral Systems

By the time of the Alma Ata Declaration (1978), Malaysia had already adopted many of the basic concepts of the Declaration. The serving Director-General of Health, Dr Raja Ahmad Noordin, stated: 'Malaysia viewed PHC as an extension to its existing health care services' (Noordin, 1978). The major contribution of Alma Ata was to provide a fillip for the conceptual enhancement of PHC services by spurring the introduction of community mobilisation, enhancing intersectoral co-ordination and strengthening referrals to and support from hospitals (secondary healthcare) (Box 4.2).

Table 4.2 Rural Health Services and notional staffing pattern

Facility	Services	Notional staffing pattern
Main health centre (designed for 50,000 population)	1. Outpatient care with essential drug list, maternal and child health (MCH), domiciliary midwifery, immunisation, family planning, nutrition education, school health services	Doctor, medical assistant, dispenser Nurses (public health, staff, assistant) and mid- wives
	2. Sanitation and safe water supply	Public health overseer and public health inspector
Health sub-centre (HSC, 10,000	3. Dental care Outpatient care	Dental nurse Medical assistant (with visiting doctor)
population)	MCH and family planning, and midwifery	Nurses and midwives (with supervisory nurses from MHC)
Midwife clinic and quarters (2,000 population)	Domiciliary midwifery	Midwives (with supervisory nurses from MHC or HSC)

Source: J. H. W. Wong et al., 2019.

Main health centres	Sub-health centres	Midwife clinics			
8	8	26			
39	122	643			
1970 44 180 943					
73	246	1282^{1}			
77	252	1465^{1}			
	39 44 73	39 122 44 180 73 246			

Table 4.3 Number of rural health facilities in Peninsular Malaysia

- Use of trained allied health personnel (particularly nurses and midwives) instead of reliance on doctors. Infrastructure development quickly outstripped the availability of human resources. Rapid but strictly regulated training of nurses and midwives, with registration, defined roles with relevant competencies, and appropriate deployment was a success (see also Chapter 8).
- Partnerships with traditional birth attendants (TBAs). In the Malay communities, TBAs (*bidan kampung*) were influential. In 1967, about 3,000 TBAs conducted an estimated 47% of the 174,000 deliveries (Peng, 1979). In some areas, the percentage could reach 80% due to both the shortage of midwives and the belief system of the community (Ali & Howden-Chapman, 2007). Recognising the key position of TBAs in rural communities, the Ministry of Health introduced a training programme for TBAs in 1965 (Suleiman and Jegathesan, n.d.) to change their role. They would recognise the danger signs of pregnancy and childbirth, avoid harmful practices and conduct home visits to encourage women to utilise midwife clinics and health centres for antenatal and postnatal care. They also provided support to certified government midwives during home deliveries. The TBAs were allowed to continue to perform harmless traditional practices such as postnatal massage.
- Community mobilisation. Several parallel thrusts mobilised community support. Health officials took advantage of the system of village development committees established by the rural development programmes to mobilise the support of the *penghulu* (village headman) and his committee for various health issues

- (Pathmanathan et al., 2003). Women's development programmes provided entry points to raising awareness and providing practical avenues for better child-rearing and nutrition. The school health programme provided the vehicle for mobilising school children not only to understand and improve their own lifestyle but also to influence their parents' health behaviour.
- Partnerships with other public sector agencies with grassroots presence. Police posts in rural villages had the function of issuing birth certificates and burial permits. Midwives and nurses obtained data on births and deaths in their districts from the police. Similarly, police communications systems (radios) provided the means for front-line health staff to call for ambulances and assistance during medical emergencies.

Dr Noordin spearheaded community mobilisation to make it an integral complement to expanding health services. Additionally, facility expansion was accelerated such that the RHS configuration was modified to extend the coverage of the basic unit to serve a population of 20,000. Staffing profiles changed accordingly. Emulating the successful experience in one state (Sarawak), midwives were upgraded to become rural (community) nurses and given a wider scope of responsibility (Chapter 8). Accelerated training of nurses and midwives enabled rapid upgrading of the quality of services. Simultaneously, community mobilisation took several forms, with active efforts to encourage communities and families to promote health, prevent illness and utilise health services appropriately. Health staff became focal points for organised community efforts, as exemplified in the rural sanitation programme (Chapter 7). Nursing and midwifery staff gained entry to male-dominated village development committees by working in partnership with sanitation staff. This approach enabled them to promote safe childbirth by sensitising communities to the danger signs in childbirth and pregnancy and encouraging the acceptance of prompt medical intervention to save the lives of mothers and babies. Pregnancy care included supervision of childbirth at home by trained, certified midwives, followed by 10 days of daily postnatal home visits that enabled the visiting health staff to build a rapport with the family and the community while establishing breastfeeding and healthy nutritional habits (Pathmanathan et al., 2003).

Inter-sectoral co-ordination became a part of service delivery as well as infrastructure development. Child health included growth monitoring, oral re-hydration techniques, breastfeeding, immunisations, food supplementation, female literacy and family planning. Partnership with rural women's development programmes enabled health staff to raise awareness of hygiene and nutrition. Health topics were integrated into school curricula through interagency co-ordination between the Health and the Education Ministries, and school visits by nurses and dental nurse teams brought basic screening, referral and simple treatment to the doorstep of the expanding school-enrolled population. Partnership with traditional birth attendants (TBAs) reduced unsafe childbirth while giving the TBAs a continuing role in supporting birthing women (Pathmanathan et al., 2003). Nutrition demonstration sessions by nurses in rural clinics gained popularity. The Applied Food and Nutrition Programme, implemented in districts with high levels of malnutrition, is an example of a partnership with the agriculture, rural development and women's empowerment initiatives.

Regional disparities in social status and poverty led to targeted poverty reduction programmes. These programmes included initiatives for better access to healthcare and for addressing childhood malnutrition in disadvantaged areas. The prevalence of childhood malnutrition was used as a surveillance tool, while the prevalence of undernourished children was a criterion for identifying low-income families to receive food supplementation as well as assistance with education, housing and employment (Economic Planning Unit, 2004).

Another influence of Alma Ata was to highlight the health needs of remote populations, including the indigenous people (*Orang Asli*), who had limited access to transport to and communication with healthcare facilities. Mobile teams had to travel over unsealed roads, by river and on foot to serve these communities periodically.

The effectiveness of these measures, in combination with the broader socio-economic development issues discussed in Chapter 3, is evident, for example, in the rising levels of childbirth attended by skilled birth attendants, immunisation coverage and declining maternal and child mortality (Table 4.4) (Suleiman & Jegathesan, n.d.). The proportion of deliveries by trained personnel increased from 77.2% (Peninsular Malaysia) in 1975 to 95.2% (Malaysia) in 1996 (Suleiman & Jegathesan, n.d.). Referral systems were established particularly for maternity and for infectious diseases such as malaria and tuberculosis (TB). When nurses based in rural

Table 4.4 Percentage of institutional deliveries and immunisation coverage, 1970–1990

1970 1980 19

	1970	1980	1990
Place of delivery			
Government hospitals	30.0^{1}	43.9^{1}	59.1
Other medical institutions	11.4^{1}	10.7^{1}	16.1
Home deliveries	58.6^{1}	45.4^{1}	24.8
Immunisation coverage			
Bacille Calmette-Guerin (BCG) (infant)	46.6	88.2	98.7
Diphtheria, pertussis and tetanus (DPT)	15.0	67.0	92.0
(3rd dose)			
Polio (3rd dose)	15.0	72.0	91.5
Measles (infant)	10.0	20.0	69.6

Source: Suleiman and Jegathesan, n.d..

clinics referred patients with obstetric problems to hospitals, these patients were given priority and prompt attention. Pregnant women and young children carried personal health cards displaying their pregnancy and healthcare information, thereby facilitating information exchange between PHC and secondary levels of care (United Nations Development Programme, 2005; Awin, 2011). The major communicable disease control programmes established similar referral systems (Chapter 6). The parallel development of rural roads and the provision of ambulances stationed at the MHCs facilitated the movement of referred patients, thereby supporting the referral system. This service delivery system in turn enhanced the credibility and acceptability of health services for the rural population. Senior obstetricians who served in public sector hospitals during that period freely attributed the decline in maternal death to the sterling efforts of rural-based nurses and midwives in identifying complications of pregnancy and childbirth and getting patients to hospital in time for effective interventions (Pathmanathan et al., 2003).

4.2.4 PHC in Urban Areas

Public sector. During the first three decades after independence, the ambulatory health service component of PHC in urban areas was

¹ Peninsular Malaysia only.

provided by a combination of government-funded public services, the private sector (funded through out-of-pocket expenditure by users) and non-governmental organisation (NGO) services supported by civil society and government grants. There was very little co-ordination across these sectors. However, these services are collectively credited with raising awareness and acceptance of allopathic medical interventions, particularly among those who had relied mainly on traditional remedies and were steeped in cultural beliefs that were obstacles to the use of effective healthcare.

The public sector hospitals each had outpatient (ambulatory) services that provided walk-in care mostly geared to acute episodes of illness, as well as accident and emergency (A&E) services that were available 24 hours a day. In the larger hospitals, doctors aided by hospital assistants (later re-named medical assistants) were backed by pharmaceutical services (Suleiman & Jegathesan, n.d.). These services provided referrals for admission and specialist care when needed. Almost all of these hospital-based outpatient services were confined to curative care, except for pregnancy, for which antenatal and postnatal clinics provided counselling and services, including that for family planning. Additionally, in the larger urban configurations, the local authority (such as the city council) provided maternal and child health services through a network of clinics. These services predated independence and were the prototype that was later used by the RHS for maternal and child health services. All of these services were provided for nominal or no fees, and utilisation rates in ambulatory facilities were very high, resulting in queues and long waiting times. During the third decade post-independence (the 1980s), the state of the overcrowded, understaffed services began to cause concerns about the quality of care. This contributed to the genesis of the Quality Assurance initiative (see later in this chapter and Chapter 5).

Private sector. The private sector complemented the public sector in urban areas. Medical doctors (GPs) owned and provided healthcare, including dispensing medication through small clinics that operated from modest premises. Most were in 'shop houses', that is, two- or three-storeyed premises with the clinic on the ground floor. The higher floors sometimes served as short-stay hospitals for patients and came to be known as nursing homes or as private hospitals. Such premises were flanked by other shops. Most patients paid a fee for the service, which

was generally very low, affordable and popular with the urban population. They received 'one-stop' care by the doctor, sometimes assisted by trained nurses or medical assistants; medication was dispensed on the spot, and minor surgery was performed on the premises.

Non-governmental organisations (NGOs). NGOs played a small but very significant role in the development of PHC in urban areas. Some NGOs, such as St John Ambulance and Red Crescent, filled gaps in the services provided by the public sector. Others, such as the family planning associations (FPAs) (Box 4.3) and several associations related to special needs, such as impaired hearing, vision and disabilities arising from illness (e.g. leprosy) or genetics, provided small-scale models of care and strong advocacy that served to mobilise civil society to recognise unmet needs. They established partnerships with the public sector, which provided financial grants. For example, the FPAs received an annual grant of RM 200,000 from the government from 1962 until the early 1980s (Tey, 2007). In later years, when capacity grew, the public sector took over many of these services and used the care models developed earlier by the NGOs.

Box 4.3 The role of NGOs in a health system dominated by the public sector

The FPAs (now known as the Federation of Reproductive Health Associations, Malaysia, or FRHAM) were largely led by prominent obstetricians and personalities active in civil society. They had the ear of policymakers, although the services they provided were limited mainly to small clinics situated in urban MCH clinics and hospital postnatal wards. The uptake of contraceptives was not impressive. The West Malaysia Family Survey conducted in 1966 found that the contraceptive prevalence rate was only 8.8% (Ahmad et al., 2010). Advocacy and the service models used by the FPAs contributed to the establishment of the National Family Planning Program under the First Malaysia Plan in 1966 to improve families' health and welfare and promote national economic development. The programme was expanded and integrated into RHS in the mid-1970s to serve rural and remote communities. The rapid expansion of the MCH and FP services have been a major factor in lowering the infant mortality rate across the country (Pathmanathan et al., 2003).

Traditional and complementary medicine (TCM). Although traditional practitioners were and continue to be widely available, there is little information about them. They were not registered, and their practice was not regulated. More recently, there has been stronger oversight of the products they use, and this is discussed in Chapter 11.

4.3 The Second Phase: The Continuing Journey towards Integrated PHC Services (1990–2017)

4.3.1 Drivers of Change

Economic growth continued over the following 30 years, although there were a number of setbacks, including the Asian financial crisis. The population became increasingly urban, reaching almost 70%, and the proportion of teens and young adults increased, followed by an increase in the number of elderly people (Chapter 3). Lifestyles and health-related behaviour, particularly around food and physical activity, began to change. For example, during the 1990s, tobacco smoking and drug addiction were major concerns, while in the 2000s, the obesity epidemic took centre stage (Suleiman & Jegathesan, n.d.). As people became increasingly well-connected with the world through media and travel, public expectations of healthcare increased.

Rising healthcare costs competed with other priorities in the national budget and increased pressure on the health sector to consider alternate approaches for healthcare financing (Chapter 9) and cost containment. The voices of civil society became stronger, with a growing dichotomy between conservative and liberal value systems. This generated debates and tension on many health-related issues, such as reproductive health and HIV/AIDS. Additionally, international pressures, first towards achieving Millennium Development Goals (MDGs) and subsequently re-aligning towards Sustainable Development Goals (SDGs), influenced national health goals (Chapter 6, Case Study 6.1).

All of these interacting forces were drivers that influenced health policy and the evolution of PHC, first towards the provision of a greater range of services to cater for new and emerging needs; second towards better integration between services. Integration and co-ordination were needed to remove institutional barriers between the multiple healthcare services that catered to any particular family and to focus on providing health services to meet the needs of people within their

families and communities. The rapid urbanisation also required different modalities from rural settings for the provision of integrated PHC.

The Seventh Malaysia Plan (1996–2000) marked a change for PHC with the establishment of a new PHC division in the Ministry of Health (MoH) (Economic Planning Unit, 1996). The evolving PHC services during this period had two major characteristics. First, in the public sector (mainly MoH services), there was convergence of the hitherto separate services for promotional-cum-preventive health provided at health centres and the curative outpatient services provided by MoH hospitals and health centres. Second, in the private sector, serious stresses emerged in services provided by GPs, associated with issues of financing and competition from public-sector clinics and by specialist practitioners who also provided primary care (Chapter 4, Case Study 4.2).

4.3.2 PHC Services in the Public Sector

The overarching goal of the public sector was to achieve equitable access to more comprehensive primary care. Three threads of interlinked thrusts towards this goal are discernible, namely:

- Expanding the scope of PHC services to encompass additional age groups and health needs.
- Integrating preventive-cum-promotional services with curative services to address segmentation and compartmentalisation and provide seamless care for individuals, families and communities.
- Improving the quality of services to respond better to expectations in the community and professional groups.

4.3.2.1 Expanded Scope of Preventive PHC Services in the Public Sector

During the 1990s, responding to demographic and morbidity trends, the preventive and health promotional services provided by health centres expanded to include additional age groups (adolescents, adults, women's and workers' health, the elderly, children with special needs) and health problems, such as mental health and screening for iodine deficiency and glucose-6-phosphate dehydrogenase (G6PD) deficiency, while the national childhood immunisation programme expanded to

include measles, mumps and diphtheria, and *Haemophilus influenzae* (Suleiman & Jegathesan, n.d.).

The clinic-based services were complemented by communitybased programmes. The nutritional surveillance of children and pregnant women conducted in 1988 provided valuable input to the national poverty reduction initiatives and rehabilitation efforts (National Coordinating Committee on Food and Nutrition, 2006). The Food Basket Programme (also known as the rehabilitation programme for malnourished children) for children with poor nutritional gain continued to reach out to poor communities (National Coordinating Committee on Food and Nutrition, 2006). Clinic-cum-community services were also initiated to support anti-tobacco smoking efforts, which included smoking cessation clinics. The health clinic advisory panels (panel penasihat), with local community representatives, worked with health staff on four major areas: healthy ageing, advocacy for immunisation, dengue control, and diabetes and overweight management (Mustapha et al., 2014).

Simultaneously, the hitherto rural health services gradually increased their coverage to include urban areas in response to demands from local authorities that had little interest in providing services that did not generate revenue. This required organisational re-structuring, including the transfer of authority, staff and some physical facilities from the local authority to the national MoH, particularly in the metropolitan cities of Penang, Melaka and Kuala Lumpur. It also paved the way subsequently for easier integration of preventive and curative services.

Gaps in and limitations to expansion. Financial and human resources constraints limited some of the service expansion. For example, cervical cancer screening had already been planned to incrementally cover larger sections of the target age group, but laboratories could not cope, and the turnaround time was slow. Screening reached only 6% of eligible women (aged 20–65 years) between 1996 and 2003 (Figure 4.1) (Ministry of Health Malaysia, 2005), and follow-up call services were inadequate (L. P. Wong et al., 2008). Also, other components of the health system interacted with PHC services in the public sector to initiate, facilitate or limit the expansion of PHC services. Examples are summarised in Box 4.4.

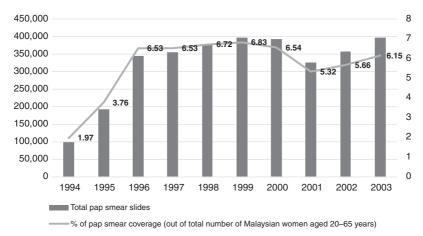


Figure 4.1 Pap smear slides taken and coverage in Malaysia, 1994–2003. Source: Ministry of Health Malaysia, 2005.

Box 4.4 Influence of other health system components on PHC: summary of illustrative examples

Examples of Limiting Factors

Finance: Dictated the speed and influenced the scope of expansion. While new programmes were added, some existing programmes, such as family planning and cervical cancer and breast cancer screening programmes, failed to gain traction.

Workforce: Upgrading the competencies and recruitment of new categories with different competencies needed, such as finance, training and managerial support. For example, the lack of trained staff hampered the ability to provide rehabilitation, occupational therapy, home visits and home care nursing services for the elderly.

Examples of Enabling Factors

Medical products and technology: Additional affordable vaccines (measles, mumps and rubella (MMR), hepatitis B, human papillomavirus (HPV)) and the availability of simple field tests (G6PD and hypothyroidism screening) enabled the expansion of services. Staff training and financial support enabled this expansion.

Health information: Nutritional surveillance identified anaemic pregnant women and malnourished children and enabled the

provision of food baskets for them as part of multi-sectoral poverty reduction; Teleprimary Care enabled better management of diabetes and hypertension by providing data for targeted monitoring and follow-up.

Governance: Community mobilisation and inter-sectoral co-ordination supported strategies for reducing disease risk factors. Grants were allocated for promotion, prevention, early screening and rehabilitation care. Illustrative examples are the mobilisation of teens through peer-to-peer counselling within school communities for targeted purposes such as tobacco smoking and drug use (PROSTAR) and for more general behaviour change purposes such as healthier lifestyles (Doktor Muda) (Ministry of Health Malaysia, 2005). New legislation established standards for care, including care of older people in private healthcare facilities, and also mandated the sale of iodised salts in districts with high risk of iodine deficiency disorders.

Sources: Government of Malaysia, 1998; 2012; 2018; Ministry of Health Malaysia, 2003; 2007; 2012; 2013.

4.3.2.2 Integration of Preventive and Curative Services in the Public Sector

Prior to the mid-1990s, curative PHC services were provided by:

- Outpatient departments (OPDs) of public sector hospitals and some satellite clinics for free or for a nominal charge.
- Public sector health centres and dispensaries, also free or for a nominal charge.

During the 1990s and early 2000s, two related organisational changes within the MoH led to better integration of preventive and curative services. First, the implementation of a policy decision to move OPDs out of hospitals and into health centres began in the late 1990s and continued incrementally over the next decade. Second, this move was followed by the re-organisation of services in the health centres to better serve the goal of developing people-centred PHC.

Transfer of OPDs. Historically, hospital OPDs primarily catered for acute episodes of illness, rarely providing health prevention or promotion,

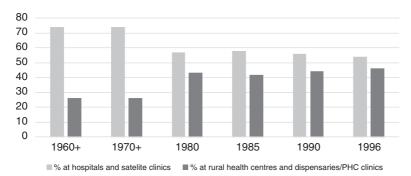


Figure 4.2 Trends in the utilisation pattern of OPDs.

Source: Suleiman and Jegathesan, n.d.

and were not geared for the continuity of care essential for non-communicable disease (NCDs). Conversely, health centres had separate arms – the family health arm had good competence for providing preventive and health promotional services for family health aimed at clients in various phases of the life cycle (pregnancy, childhood, adolescence, old age), including individuals, families and communities on a long-term basis. However, the outpatient arm of the health centres mainly provided for walk-in patients. The utilisation of OPD services evolved, with the health centres gradually overtaking the hospital OPDs in terms of volume of utilisation (Figure 4.2).

Additionally, by the late 1990s, the proportion of patients with illnesses such as hypertension and diabetes, which require long-term management, was increasing. Meanwhile, public sector hospitals had difficulties managing outpatient services (OPDs), as their focus was mainly on secondary and tertiary care. Therefore, a policy decision was implemented to transfer OPDs from hospitals to health centres.

Re-organisation of health services. The outpatient services in health centres were re-vamped to cater to the integration of preventive and health promotional services with illness management (Economic Planning Unit, 1996). The health centres adopted a new approach that integrated basic PHC concepts in addressing the continually expanding initiatives required to deal with NCDs. Box 4.5 summarises the concepts involved, and the illustrative case study on REAP-WISE (Reviewed Approach: Wellness, Illness, Support Services, Emergency Information) elaborates on the initiative. Imaging, laboratory and

Box 4.5 The journey towards integration

The health centre services renewed the PHC concept with a new approach to accommodating its additional services, namely:

- 1. Preventing and reducing disease burden by treating the ill, managing those with risks and preventing the onset of preventable risks.
- 2. Enhancing healthcare delivery for fast access to safe and high-quality services with greater comfort in a hassle-free environment.

The wellness focus

covers the life-course from antenatal to child and geriatric age for early identification of and management of medical conditions. All new activities for wellness are mapped against age group needs. Teams oversee policy development for the collective activities for each age group in order to integrate workflow processes, accounting for monitoring indicators, quantity and quality of human resources required, the diagnostic equipment, pharmaceutical requirements, and physical space for these activities. These workflow processes are then phased in at clinics nationwide. (Jaafar et al., 2007)

pharmacy facilities were upgraded progressively as staff and physical infrastructure became available (Economic Planning Unit, 1996; 2001). Communication between primary, secondary and tertiary care was strengthened, and information systems were upgraded to include electronic personal medical records that facilitated the integration of information from the various services that catered to each patient and family (Economic Planning Unit, 2001).

Gaps and limitations to the integration and re-organisation. This reorganisation process required the re-allocation of budget and human resources between hospitals and health centres, and it also required re-engineering health information systems to provide realtime access to patient information for care providers at primary and secondary level. Table 4.5 illustrates the gaps and challenges in integration and re-organisation as well as the action taken to address such challenges.

Table 4.5 Gaps and challenges and action taken in integrating preventive and curative services

	Gaps and challenges	Action taken
Finance	Limited	Transfer of OPDs was done incrementally over a period of more than a decade
Health workforce	Rapid turnover of staff, particularly junior doctors who needed rotational postings as part of career development	• Family medicine specialists (FMSs) were placed at health centres to oversee and manage patient care teams
		 Multi-disciplinary team approach rather than individual doctors to serve clients from specified geographic zones
Medical products	Hospitals and health centres have separate budgets for pharmaceuticals – it was difficult to estimate the portion of hospital pharmacy budget needed for OPD as separate from inpatient care	State-level pharmacy departments took over budget management for pharmaceuticals for both health and hospital services
Service delivery	 Existing building spaces and facilities could not accommodate the expanded functions Staff who had hitherto provided either curative or preventive/promotional services needed guidance on how to merge both components of care 	 New building designs for health centres were created for integrated services Laboratories and imaging services had to be updated to support the upgraded clinical services Practice guidelines were implemented for the newly expanded team of FMS, medical officer, medical assistant and nurses

Sources: Economic Planning Unit, 1996; Awin, 2003; 2004.

4.3.2.3 Focus on Improving Quality of Care

During the late 1980s, the rising expectations of the public, as well as the strong commitment of professional leaders to quality of care, led to the introduction of a variety of quality improvement initiatives in the MoH (Suleiman & Jegathesan, n.d.). The scope of quality improvement was defined as including technical quality of care, client satisfaction and resource utilisation. This compares well with the statement 30 years later by the Organisation for Economic Co-operation and Development (OECD), the World Health Organization (WHO) and the World Bank defining the 'measurable characteristics of quality as effectiveness, safety, people-centeredness, timeliness, equity, integration of care and efficiency' (OECD et al., 2018). The key initiatives included raising the levels of competence in the PHC workforce and introducing systematic monitoring of quality followed by measures to identify and address systemic weaknesses that contributed to inadequate quality.

Higher levels of competence in the PHC workforce. Medical officers, who were the front-line providers of care for illness episodes in health centres and OPDs, had no post-graduate or vocational training and had limited ability to manage more complex and chronic conditions, such as NCDs and mental illness. Years of effort by professional leaders (Rajakumar, 1984) culminated in universities offering a new post-graduate training programme of Family Medicines, while the MoH created a new cadre of specialist: the family medicine specialist (FMS). This new category of FMS was expected to provide leadership in upgrading the quality of primary care services that included a more holistic approach of seamless care for health promotion, disease prevention, illness management and rehabilitation for individuals and families (Awin, 2004).

In tandem, the competencies of nurses and medical assistants were upgraded. The local production of allied health professionals, such as diagnostic radiographers, medical laboratory technologists, physiotherapists and dieticians, was stepped up with a higher level of qualifications and was modernised through integrated training approaches. Previously, the services of these allied health personnel were available only in hospitals, but now they were added to PHC teams (Ministry of Health Malaysia, 2006).

Box 4.6 Dimensions of quality that were monitored and improved

- Workforce skill levels and competence
- Outcomes of prevention and management of illness
- Client satisfaction
- Resource utilisation

Quality monitoring and improvement strategies. Hitherto focused on monitoring and improving ethnic and regional disparities in equitable access to care and health outcomes, PHC services added new dimensions to their performance monitoring (Box 4.6). Table 4.6 shows illustrative examples. The conglomerate of activities created a 'bottom-up' quality culture within the organisation.

4.3.3 PHC Services in the Private Sector

In the private sector, doctors (GPs) provide ambulatory non-specialist curative services on a fee-for-service basis. In the 1980s and 1990s, as rural to urban migration increased and the economy improved, the size and utilisation of the private sector increased rapidly (Figure 4.3).

Box 4.7 summarises the characteristics of GPs, who provide about half of ambulatory care in Malaysia. Despite their importance in the health sector, governance and financing arrangements result in GPs having few incentives to provide prevention and promotion services. Their fee schedule is per visit and has not been adjusted for inflation over the past 15 years (Maharajah, 2018). It is not geared to reward the time and effort spent on health promotion. For many GPs, the fee is so low that it is not financially sustainable, and they rely on the sale of medications to maintain financial viability. Patients are free to move between doctors; doctor-hopping is frequent and therefore continuity of care could be compromised, and it can be difficult to build a trusting and long-standing relationship between providers and clients and their families. Additionally, there is no restriction on patients seeking primary care from doctors who practise as specialists in any discipline in the private sector. Therefore, specialist doctors are in direct competition with GPs.

Table 4.6 Quality monitoring and improvement: examples of experiences in primary care

Approaches to quality improvement	Examples	Benefits derived from the initiative
MoH Quality Assurance Programme adopted the approach of: Nationwide monitoring of selected indicators of system failure, for: • Identification of outlier units in relation to agreed expected standards • Analysis of root causes and implementation of remedial action	 During the early stages of the programme, indicators were: Eclampsia of pregnancy Puerperal sepsis Severe neonatal jaundice During later stages, indicators included: 	 Improved health information: Accuracy and timeliness of data Use of data in problem-solving Increased appreciation of quality and its relationship to clinical outcomes, resource utilisation and patient satisfaction
Participation in nationwide quality improvement strategies by health districts, health centres, hospital OPDs, laboratories and pharmacies	 Appropriate management of asthma Appropriate management of diabetes Appropriate admission to medical wards Quality control circles (waiting times, counter services) Client charter Work culture MS ISO 9000 certification 	 Improved managerial competence at local level Improved resource utilisation Improved client satisfaction

Sources: Suleiman and Jegathesan, n.d.; Ministry of Health Malaysia, 2004.

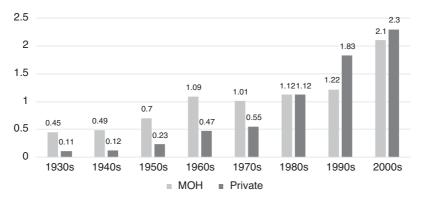


Figure 4.3 Estimated outpatient visits to clinics per capita per annum, Malaysia, 1930s–2000s.

Note: Private outpatient refers to outpatient visits to both hospitals and clinics. *Source:* Health Policy Research Associates et al., 2013.

Box 4.7 What are GPs?

- GPs are medical doctors.
- Few have any specialist or vocational training to function as providers of comprehensive PHC such as the requirements for GPs in the United Kingdom or Australia.
- Most GP clinics are urban and semi-urban, with fewer than six staff members. They use private laboratory and imaging services.
- GPs prescribe and dispense medicines.
- The public utilises GP services largely for acute illness episodes while largely visiting public PHC clinics for more chronic and complex conditions (Table 4.7).

A Quality and Costs of Primary Care (QUALICOPC) study showed that three-quarters of the patients who visited private clinics reported that they did not have a primary doctor to follow up on their condition (Sivasampu et al., 2016). Health information systems are underdeveloped. Few patients' medical records are computerised and there are no incentives for recall and follow-up of patients who require long-term management. There is no systematic monitoring of the quality of care (Sivasampu et al., 2016). In contrast, for example, in Australia, there

Table 4.7 Top three reasons for encounters in public and private clinics

	Rate per 100 encounters
Public sector primary care clinics	
Hypertension	31.3
Diabetes	22.5
Lipid disorder	18.5
Private sector clinics	
Fever	28.3
Cough	26.5
Runny nose/rhinorrhea	19.4

Source: Clinical Research Centre, 2014.

Box 4.8 System observations: when systems outcomes diverge from stated goals

The policy environment in which private clinics currently operate presents obstacles to preventative and chronic care. This shows how stated goals, such as the aim of the MoH to increase integration and comprehensiveness of primary care, may differ from systems outcomes. Policies and resources for public clinics have enabled significant advances toward these goals. However, private clinics operate under fee structures, lack of integrated information systems and other policy obstacles that create barriers to preventative and chronic care. Private GPs have persisted in health promotion despite these obstacles (Table 4.9). The MoH needs to invest in an enabling system for private GPs to sustain and maximise their contribution to comprehensive primary care.

are targeted incentives for private sector primary care providers to support immunisation and cervical smear testing and for installing information technology (Khoo, 2002).

Additionally, GPs face serious economic challenges arising from the introduction of third-party administrators (see Case Study 4.2). On top of that, medical insurance schemes generally do not cover ambulatory care. In a recent survey, 70% of GPs interviewed cited as serious threats

market competition from community pharmacies, and 55% cited market competition from the public sector 1Malaysia clinics (Kenny, 2017).

4.3.4 Traditional and Complementary Medicine

TCM is responsible for about 6% of expenditure on ambulatory care. For the first 50 years after independence, the allopathic healthcare system adopted an attitude of peaceful co-existence with TCM, responding only to curb practices that were known to be dangerous to health. This chapter is hampered because there is little empirical evidence of TCM practices or their outcomes. During the last 10 years, initial efforts were directed at establishing a database of practitioners and practices and developing regulations to set standards for practitioners (Mahmud et al., 2009; Division of Traditional and Complementary Medicine, 2017). These were the first steps in integrating TCM into the country's PHC system. Case Study 11.1 provides insights into some of the challenges.

4.3.5 Outcomes of PHC in the Public and Private Sectors

Access, satisfaction, quality and continuity of care. A QUALICOPC study showed that patients generally did not perceive barriers to access (physical and financial) to care and were satisfied with the care they received at both public and private clinics (Table 4.8) (Sivasampu et al., 2015; 2016).

The large majority of doctors in both public and private clinics were reportedly involved in health promotion as part of their normal patient contact, though not in group sessions (Table 4.9).

Referral linkages with secondary and tertiary care were not strong (Table 4.10), particularly in terms of feedback from secondary to primary care level and in horizontal communication between primary care providers.

As the doctor-shopping phenomenon was observed and there was a lack of longitudinal continuity at private primary care clinics (Sivasampu et al., 2016), it is not surprising that significant differences were noted in aggregated performance indicators of quality of care

Patients' perceptions of accessibility of	% of patient	s interviewed
primary care and satisfaction with care	Public clinic	Private clinic
Clinic not too far away	77.5	85.4
Opening hours not restricted	59.2	73.3
Able to get a home visit	43	18.9
Out-of-office hours	58.3	68.1
Never postponed or abstained from a visit when needed	80	85
Satisfied with the duration of the	96.7	96

Table 4.8 Access to and satisfaction with primary care

Sources: Sivasampu et al., 2015; 2016.

consultation

Table 4.9 Doctors reporting involvement in health promotion during routine patient encounters

	Proportion (%)	
	Public clinic	Private clinic
Smoking	88	95
Diet	92.8	97.9
Problematic use of alcohol	52.9	66.5
Physical exercise	85.5	98.7

Sources: Sivasampu et al., 2015; 2016.

between public and private sector primary care, with the public sector surpassing the private sector (Table 4.11).

4.4 Summary of the Malaysian Experience

Although the PHC services predated the Alma Ata Declaration of 1978, the guiding principles used in Malaysia were akin to those formulated in Alma Ata. Over 60 years, these services evolved in incremental stages in response to population dynamics and behaviour, changing disease patterns and economic pressures, taking advantage of local opportunities and recognising constraints. The government

Proportion (%) of doctors stating: Usually/always Occasionally Seldom/never Public Private Public Private Public Private clinic clinic clinic clinic clinic clinic Received patient 36.2 7 51.6 39 12.2 54 records from previous doctor Used referral letters 99 91 Obtained feedback 19 19 30.8 31 50.2 50 from specialists

 13.7^{2}

 29^{2}

58.4

49

Table 4.10 Referral experiences reported by doctors

Sources: Sivasampu et al., 2015; 2016.

 27^{1}

Obtained discharge

report from hospital

Table 4.11 Clinical outcomes for the management of diabetes and hypertension

 22^{1}

Percentage of:	Public	Private
Controlled diabetics ¹ Hypertension management ² Hypertension management ³	38.1 44.1 50	35.5 39 n.a.

Source: Ministry of Health Malaysia & Harvard T. H. Chan School of Public Health, 2016.

assumed responsibility for free public sector services that led the way and dominated the subsequent evolution of PHC in the country. Achieving equitable access for a wide range of 'essential services',

¹ Within 1–14 days.

² Delayed by >14 days.

¹ MHSR (Malaysia Health Systems Research) analysis using NHMS (National Health and Morbidity Survey) 2015 data. Fasting blood glucose of 4.0–6.1 mmol/L or nonfasting blood glucose of 4.4–8.0 mmol/L.

² MHSR analysis using NHMS 2015 data. Target blood pressure of ≤140/90 mmHg.

³ MHSR analysis using Teleprimary Care data, which relates only to care at MoH clinics. n.a. – not available

including PHC services, has remained a cornerstone of the evolution. These services included preventive and health promotional services, including nutrition, as well as curative services provided at hospital OPDs and by the private sector.

PHC services retained the focus on people throughout the evolution – variously reaching out to communities to mobilise them in improving or sustaining health. The process of evolution saw a progressive expansion of the range of preventive and promotional services – beginning with pregnancy, childbirth and infancy and progressing through each age group to old age while simultaneously addressing specific localised concerns, such as iodine deficiency and mental health, as they arose. The parallel evolution of ambulatory curative services saw a progression from managing acute illness episodes to dealing with illnesses that require long-term care, such as hypertension and diabetes. The evolutionary process recognised the benefits of merging the parallel development of preventive/promotional services with the curative stream, and the system was able to accomplish rather complex organisational restructuring to achieve such merging.

The other cornerstone of the evolution was the continuing thrust to improve quality. The features of the success in Malaysia are: strong and sustained leadership and commitment to quality; adherence to basic principles of quality improvement, including monitoring; and improvement that originated from the service providers themselves, thereby reducing the fear of punitive repercussions and increasing accountability and transparency.

Several challenges surfaced from time to time. As elaborated on in Chapter 8, some were addressed successfully, while others continue to haunt the evolutionary process. For example, the evolving profile of a workforce with higher qualifications has created demands for higher remuneration and better career paths. The workforce in the public sector PHC service is part of the larger civil service in the country. Hence, change is fraught with repercussions. Meanwhile, the private sector is reluctant to absorb higher-paid categories and prefers task-shifting, for example, using nurse assistants in place of trained nurses.

In the past, the private sector has complemented the public sector by providing care for those who were able to pay out of pocket for prompt and convenient care. The last couple of decades has seen publicly funded primary care growing faster than the private sector. While the public sector moves closer to comprehensive primary care and keeps an

Box 4.9 System observations: overcoming limits to growth

The development of PHC clearly illustrates the systems concept *limits to growth*, in which a previously successful strategy runs into a new limitation that requires a new approach. We see in this chapter the rapid expansion of maternal and child health clinics to improve coverage, followed by the expansion of services, which in turn led to the development of multi-disciplinary teams. Each of these developments came about as the prior strategy encountered limitations in improving population health, and they required substantial re-alignment of clinic organisation, practices and personnel. The growing challenges of chronic care and health promotion in urban settings will probably require similar experiments and paradigm shifts among public primary health clinics.

eye on quality and responsiveness, the private sector is struggling with issues of governance, financing, skills in the workforce and disincentives to move towards comprehensive care. There is a risk that public perceptions of public and private services will change. Wealthier sections of the population might change their health-seeking behaviour accordingly and drift towards the highly subsidised public sector despite being able to afford private services. This would have a negative impact on PHC by overburdening the government budget. Efforts to establish a more collaborative model of operation have been repeatedly frustrated by political pressures and priorities.

4.5 Key Messages from Malaysia's Experience

4.5.1 What Went Well?

- PHC is part of rural development; PHC benefits from the development of education and communication and contributes to rural development.
- The cornerstone of PHC is equitable access to services; close linkages with secondary care and community mobilisation are key; urban settings require different modalities from rural settings in the provision of integrated PHC.

- Appropriately trained and supervised allied health workers provide low-cost, high-impact PHC.
- Systematic monitoring, focused on identifying and resolving systems issues rather than creating a blame culture, improved quality of care.

4.5.2 What Did Not Go So Well?

- The dichotomy between the public and private sectors in terms of financing and governance continually generates challenges that have not been addressed adequately.
- The rigid structure of the civil service (including the public sector health services) and the fee-for-service mechanisms of the private sector continue to be major constraints in the development of PHC.

4.5.3 Trends and Challenges

Epidemiologic, demographic and technological trends will require flexible adaptive responses from PHC.

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SYSTEM ANALYSIS CASE STUDY 4.1: REAP-WISE: MALAYSIA'S EXPERIENCE IN INTEGRATED PRIMARY HEALTH CARE SERVICES

Shiang Cheng Lim, Safurah Jaafar and David T. Tan

Expansion of PHC Services Creates Integration Needs

PHC services in Malaysia were initially targeted at maternal and child health. As significant gains were made, the scope of services offered in primary health centres expanded, beginning in the 1980s (Figure 4-A), towards comprehensive primary health, targeting additional population age groups, namely adolescents, adults and the elderly. An unintended consequence of this expansion was the proliferation of parallel

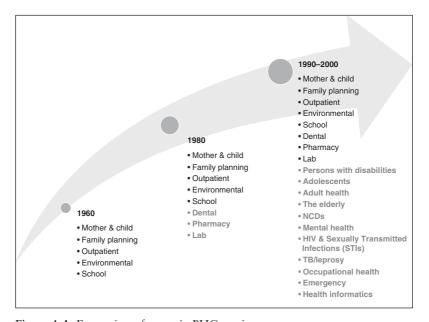


Figure 4-A Expansion of scope in PHC services.

clinics operating independently of each other and altering the ecosystems of PHC clinics. Monitoring indicators for these clinics were limited to the number of cases seen or managed, such that the impact on the overall function of PHC clinics was not monitored.

Forward-looking leaders in the MoH saw the need to integrate healthcare services to achieve continuous and co-ordinated care. The keynote address delivered by Tan Sri Dato' Dr Abu Bakar Suleiman, then MoH Director-General, at the Directors' Conference in 1999 emphasised that 'the successful health system of the future must be an integrated system of networks that share information and resources, and that is responsive to social needs as well as to advances in technology. There will be an emphasis on equity and the two key concepts would be universal coverage and care according to needs, consistent with available resources' (Suleiman, 1999).

Reviewed Approach: Wellness, Illness, Support Services, Emergency Information (REAP-WISE) and Its Transitions

In response, the Reviewed Approach (REAP) of PHC, with a focus on Wellness, Illness, Support, Emergency and Information (WISE), was introduced under the Ninth Malaysia Plan (Jaafar et al., 2007). The goal of REAP-WISE was to integrate PHC clinics' operations to deliver comprehensive and continuous care and strengthen the focus on population-based outcomes (Box 4-A). Achieving this would require major disruptions to the existing operations of PHC clinics. While the silos created by the parallel clinics approach were unintentional and suboptimal, institutions, culture and practices in primary health centres had developed around the existing practice (Figure 4-B). This included: (1) locus of financing and decisionmaking, (2) scope and alignment of healthcare staff responsibilities, (3) professional development pathways, and (4) set-up of facilities and operations. These created an ecosystem that reinforced the status quo, requiring an ecosystems overhaul of these feedback loops to achieve the desired changes (Figure 4-C). Each of these four changes is described in the following sections.

Re-orientation of Policies on Delivery of Care (R1a and R2a)

Before REAP-WISE, MoH officers in the federal-level MoH programme, such as control of non-communicable diseases (NCD), who



Figure 4-B Approaches to healthcare require supportive practices and systems, which in turn create an ecosystem that is aligned to and facilitates that approach. Shifting a healthcare approach requires comprehensive changes to the healthcare ecosystem.

were responsible for implementing new health initiatives had the direct authority to direct PHC clinics to implement these activities. While each new programme and clinic had funding and possibly staffing segregated from the PHC clinics' operations, they nonetheless competed for the clinics' resources and services, including funding, human resources, laboratory services, etc. This competition and lack of coordination led to duplication of efforts, inefficiency in care delivery and fragmentation of the system. An unintended consequence of this approach was the creation of 'little clinics' within a PHC clinic, such as an occupational health clinic, hypertension clinic, diabetes clinic, adolescent clinic, elderly clinic and more. Furthermore, these new initiatives were often not sustainable, creating further disruptions when they ended.

WISE addressed this by placing the Family Health Development Division (FHDD) in the federal-level MoH as the co-ordinator for the new initiatives and programmes and providing an overarching framework (Box 4-A) to rationalise the integration of new activities. All aspects of programmes carried out in PHC clinics, including funding, staffing, monitoring and reporting, were integrated into the existing primary care plan and framework and co-ordinated by the FHDD. This shift in implementation authority ensured that healthcare providers at the PHC clinics could deliver healthcare services seamlessly according to patients' needs and not merely to satisfy a particular programme target (Figure 4-C, R1a and R1b).

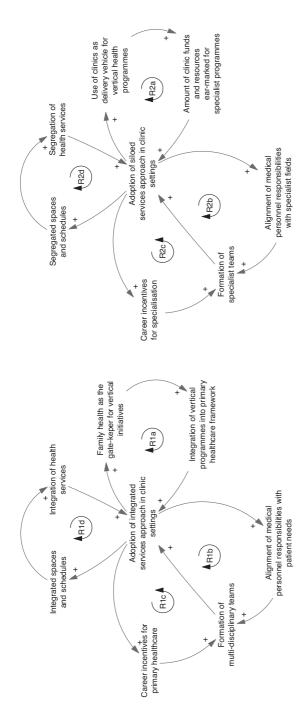


Figure 4-C Four changes to the PHC clinics' setting were critical to the ecosystem change: locus of financing and decision-making, scope and alignment of healthcare staff responsibilities, professional development pathways, and facilities and operations.

Box 4-A Reviewed approach of PHC: wellness, illness, support services and emergency information (REAP-WISE). Reviewed Approach of Primary Health Care (REAP) - WISE Clinical Governance Community Participation Community Triaging Consultation Examination Screening Investigation . Reproductive Geriatric Acute Management Anti-Smokine Adult Treatment Minor Procedure Early Early Healthy

Information

HMIS

Support

Cost Effectivene

Pooling

Regionalists

Management

Hour

Early Management

In Clinic

Ambulance Transportation

Emergency

Transportation

Follow Up

Follow Up

Referral

Liaison

NGOs &

Private Provider

Early

Response

Triaging

Infectious

Infant & Child

Nutrition

Appropriate

Secondary

Health Care

Quality

Figure 4-D Reviewed approach of primary healthcare (REAP-WISE). Source: Fadzil et al., 2018.

Advisory Panel

REAP-WISE is a framework for facilitating integrated service in the delivery of PHC. Central to the operation of the framework is the PHC information system, which includes the health management information system (HMIS) and Teleprimary Care (TPC) electronic system, which provides a monitoring mechanism that tracks achievements and gaps in service delivery.

Wellness covers the life course from antenatal through childhood and geriatric age for the early identification and management of medical conditions. All new activities that support wellness are mapped against age group needs. Teams oversee policy development for the collective activities for each age group to integrate workflow processes, accounting for monitoring indicators, quantity and quality of human resources required, diagnostic equipment, pharmaceutical requirements and physical space for these activities. These workflow processes are then phased in at clinics nationwide.

Illness covers early management of the acute, chronic and infectious conditions patients present with at clinics, as well as those in the community. Infectious diseases are assigned a separate patient workflow. Different processes for acute cases and chronic conditions were established to improve the utilisation of resources, waiting times and patient outcomes.

Support covers the three main diagnostic support arms (lab, pharmacy and radiology) in PHC. The level of support services has been reviewed to make it commensurate with the expansion and integration of PHC.

Emergency covers cases on site, in the clinic or during transportation to or from the clinic and hospitals, and it addresses the critical hour of management. Services have been expanded from stabilisation and referral to hospitals only to more extensive treatment services.

The framework is supported by strong community participation and the collaboration of an advisory panel. The relationship with the community, NGOs and private providers, secondary healthcare providers and strong clinical governance provide a robust foundation for strengthening PHC (Jaafar et al., 2007).

Alignment of Healthcare Providers' Responsibilities and Introduction of Multi-disciplinary Team (R1b and R2b) and Career Pathway Creation (R1c and R2c)

At the implementation level in health centres, REAP-WISE required the re-distribution of work and responsibilities among healthcare providers. The previous method of implementing new medical services and activities had created dedicated healthcare teams trained to deliver task-specific services, such as MCH services or specific clinical examinations or procedures. The implementation of REAP-WISE required the

re-distribution of work among healthcare providers' responsibilities, equipping healthcare personnel to perform a much wider range of tasks, and the creation of multi-disciplinary teams to replace the previous specific-services-based setup. The multi-disciplinary teams include the FMS, medical officer, pharmacist, nutrition science officer, health education officer, counsellor officer, medical social worker, dietetic officer, dental officer, assistant medical officer, nurse, environmental health officer and radiographer (Family Health Development Division, 2015). The multi-disciplinary team shares the responsibility to provide comprehensive healthcare to the patient and family rather than focusing on specific ailments or types of service.

The creation of a workforce capable of handling the increased scope of services required a new level of qualifications. One such change was the adoption and rapid increase of allied health personnel with diplomas and degrees in primary health centre settings. Previously, many categories of allied health personnel, such as dietitians, nutritionists, etc., provided services only in hospital settings. Now, they provide services in health centres as well. Not only has the overall number of posts in each category increased in line with service expansion, but additional promotional posts and new categories of professional staff have also been created to increase the stature of primary healthcare careers.

On the other hand, for medical officers, practice in PHC clinics was seen as less desirable. Career incentives led to medical officers preferring to pursue specialist pathways leading to hospital practice. This created a situation where medical officers in PHC clinics were mainly those who were less experienced and less qualified and had high rates of turnover. To address this situation, a new category of specialist doctors with post-graduate training in Family Medicine (FMSs) was introduced in 1997 for PHC clinics. They were expected to improve the quality of PHC services by overseeing and managing patient care teams. The FMSs are given the same recognition and remuneration as hospital-based clinical specialists so as to retain their presence in the public PHC clinics.

Concerns that the new FMS category of specialists would overlap in function with other existing specialists led to initial resistance. However, a clear definition of the roles expected of them within the REAP-WISE strategy in PHC clinics managed to establish firmly the need for specialist doctors working at primary care level. FMSs are

expected to provide leadership and set standards for clinical practice, encourage teamwork, emphasise integration of health screening and facilitate long-term treatment of chronic conditions. The creation of this cadre provided a career development pathway aimed at retaining experienced doctors in the primary care setting.

Two major constraints affect the implementation of this approach. First, the rate of production of FMSs is relatively slow (Ministry of Health Malaysia, 2007). In 2016, almost 20 years after the cadre was created, only about one-third of public sector primary health centres had an FMS (Ministry of Health Malaysia, 2016). Second, many FMSs, being trained by doctors from other specialities, lack the generalist approach required at primary care level.

Re-arrangement of Space and Scheduling (R1d and R2d)

The PHC clinics that were built during the previous three decades were no longer suitable, in terms of size or layout, for the increasing complexity of the new scope of services. PHC clinics had been taking over outpatient services from hospitals, and the rise of NCDs requiring long-term treatment, continuity of care, and preventative and health-promotional services made PHC clinics the appropriate locus for outpatient services. Indeed, this shift contributed significantly to the proliferation of health services and activities that necessitated the integrated framework provided through REAP-WISE. Apart from increased patient numbers, the rapidly increased scope of services required additional and more complex equipment, along with the space to house it.

The physical layout of PHC clinics posed a challenge to the goal of REAP-WISE. For historical reasons, maternal and child healthcare was frequently physically segregated from other outpatient care and integrated services, often having separate registration counters and even buildings, and were managed by a separate team. Furthermore, to achieve human resources efficiency, a 'clinic day' concept was adopted, in which specific days of the week were allocated for a particular population, health condition or service. Re-allocation of space and scheduling was necessary to achieve service integration and multidisciplinary teams.

Substantial resources were also invested in re-designing the physical spaces of PHC clinics to accommodate the new functions and workflows. An Operation Policy for Health Clinics (*Polisi Operasi Klinik*

Kesihatan) was developed as a guide for PHC clinics to implement REAP-WISE (Family Health Development Division, 2015). The 'daily clinic concept' was adopted, and individuals or patients with any condition can now access the services they need on any day of the week. Central and integrated registration and triage systems were put in place to support the holistic treatment of the patient.

Outcomes of the Transition

The PHC services in Malaysia have been evolving over the years. The initiation and adoption of REAP-WISE demonstrated the strong commitment of the MoH to improving the quality of care at PHC clinics by integrating preventive and health-promotional services with illness management. While there is a lack of evidence, such as impact evaluation, for outcomes of REAP-WISE, the QUALICOPC study showed that almost all health centres have services for early detection and health promotion as an integral component of cliniczal management, and user satisfaction is high (Sivasampu et al., 2015). Nonetheless, there are gaps in continuity of care (due to fast turnover of doctors), while the referral and counter-referral systems between primary and secondary/tertiary care need to be strengthened to ensure optimal patient outcomes.

Systems Lessons

Systems analysis identifies complex structural changes that are required for the successful implementation of apparently straightforward and rational changes in service provision. The transformation from silo-oriented service provision towards integrated, people-centred care required a fundamental change in mindset from healthcare providers that had to be supported by systemic change of the healthcare structure. Four categories of structural changes are discernible. First, re-alignment of managerial authority and responsibility to integrate initiatives aimed at different disease entities or population groups, re-designing of workflows, and development of explicit standards and operational guidelines. Second, human resources development, including definition of roles and re-distribution of workload, upgrading competencies, and creation of career paths. Third, re-design of the physical configurations of clinic spaces. Fourth, several of these required additional financial

support, and this has been a limiting factor in the speed at which the full scope of transformation can be implemented nationwide.

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System Analysis Case Study 4.2: Managed Care Organisations as Intermediaries in the Provision of Healthcare by GPs to Private Sector Employees

Kuan Joo Lim, Milton Lum, Indra Pathmanathan and David T. Tan

Medical Care for Private Sector Employees

Private sector employers provide health and medical benefits to their employees as a job perk rather than as a means to achieve comprehensive medical coverage. No law requires them to provide benefits. As such, the extent of healthcare benefits provided to private sector employees is dependent on the desire of employers to attract and retain

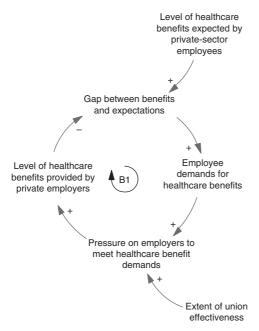


Figure 4-a Employee expectations and unionisation determine the effectiveness of their demands of employers for healthcare benefits.

employees and on employees' ability to unionise and make demands of employers (B1 loop) (Figure 4-a).

Before the advent of third-party administrators (TPAs), employers either appointed selected private GPs or private hospitals to medical panels to treat employees or purchased medical insurance policies that covered employees and dependents. Both approaches paid fees for services, with negotiated discount rates. The employers' human resources departments monitored and controlled utilisation, which was burdensome to the employer and in some cases very weak or absent. Consequently, the system was open to abuse, including the provision of services unrelated to the condition of the patient or the supply of non-therapeutic items. Some employers perceived that this could increase the costs to employers.

Third-Party Administrators (TPAs)

Consequently, TPAs, commonly known in Malaysia as managed care organisations (MCOs), have emerged and rapidly increased in number.

MCOs enter into contracts with employers to manage medical benefits on behalf of employees and charge the employer an administrative fee.² Their services include the selection of care providers, monitoring and managing utilisation, and providing recommendations to the employer on reimbursement to care providers. As they provide services to multiple employers, MCOs pool administrative and monitoring costs. MCOs surmised that they would be able to reduce the medical care costs for employers by negotiating with care providers. They reckoned that they would have strong bargaining positions, as each MCO would represent several employers, not an individual employer, while most GPs were individuals or small-group practitioners and were increasingly dependent on appointment to employer panels.

MCOs control progressively larger proportions of the patient market; currently, this is an estimated 10% of private sector employees (Malaysia Productivity Corporation, 2016). Unlike MCOs in the United States and Singapore (Phua, 2000), the contracts signed between MCOs and GPs in Malaysia are based on a fee-per-visit basis, rather than capitation. MCOs introduced practices to limit the pay-out of health benefits. Their high bargaining power enabled them to dictate conditions. The conditions they imposed have shifted hidden portions of the costs of healthcare to GPs and patients and have generated maladaptive responses with negative consequences for patient health.

A prime example is the common practice of capping reimbursement per visit regardless of the condition of the patient (Rauber, n.d.). These rates have often been set at the low end of the legally approved fee schedule, often alleged by GPs to be too low to cover costs, which affects their management of patients (Chan et al., 2016). Struggling to recover costs due to low caps per visit, GPs tend to limit the supply of medicines to a maximum of three days and medical leave to a single day. Thus patients often have to return to the clinic for multiple visits (Figure 4-b).

This passes the burden to the patients. At a minimum, patients suffer the inconvenience and costs of multiple visits for the same episode of illness. More worrying is that some patients are unable or unwilling to make the multiple visits necessary to receive the full scope of care. Patients with chronic illnesses that require long-term care and medication, such as hypertension and diabetes, are especially disadvantaged. As the benefit packages offer very limited benefits, the cost of any

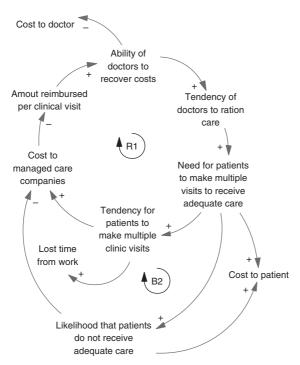


Figure 4-b MCO-imposed caps on per-visit reimbursement generates hidden costs through multiple visits (R1) or inadequate provision of care (B2). These hidden costs are largely borne by GPs, patients and employers instead of the MCOs.

complications arising from inadequate care is not usually passed on to the MCO or employer. Rather, the system shifts the costs (Figure 4-b: R1 loop) to patients in the form of out-of-pocket payments, loss of earnings and/or poor health.

Impact on Healthcare Delivery

MCOs' practices have impacted health benefits and delivery in many other ways. MCOs have attempted to bill doctors with administrative charges, although this move was aborted due to questions of legality. Employees are often not privy to the contract conditions and benefit limits, leading to higher expectations of medical care than the GP is allowed to provide (Chan, 2017). Many MCOs are financially

Supplementary Table 4-a	Problems encountered by GPs who had
contracts with MCOs	

GPs surveyed (n = 1,800)	Proportion of clinics (%)
Contract with MCOs	78
Interfered with choice of treatment and consultant	51
Reimbursement within 60 days	9
Received no reimbursement	69
Received less than invoiced	76

Source: Kenny et al., 2017.

mismanaged, delaying payments from 90 to 360 days, while several have collapsed, with unpaid debts (Malaysia Productivity Corporation, 2016) (Supplementary Table 4-a).

Impact on Employer-Employee Relationships

Apart from the impact on health delivery, the outsourcing of medical benefits to MCOs is likely to make employers less responsive to employee demands for health benefits (B1b loop, Figure 4-c). This is because MCOs have less incentive than employers to take care of employee welfare. Even when employees persuade employers of the need for better healthcare benefits, it takes time for managed care company contracts to be re-negotiated or for companies to switch MCOs (delay arrow in B1b loop). MCOs sell their services by highlighting the reductions in administrative and direct costs to employers, and both parties overlook the hidden costs to employees and employers. Therefore, employers do not have incentives to pressure MCOs into improving healthcare benefits (B3 loop). In the long term, this arrangement encourages employers to think of healthcare benefits only as a cost to the employer. Another predictable outcome is the likelihood that some of the healthcare costs of private sector employees will shift to the subsidised public sector. Patients who develop medical complications requiring expensive long-term management are likely to seek care in the public sector when they exceed the limits of their private sector benefits packages. Adequate management at an earlier stage could prevent such incidents.

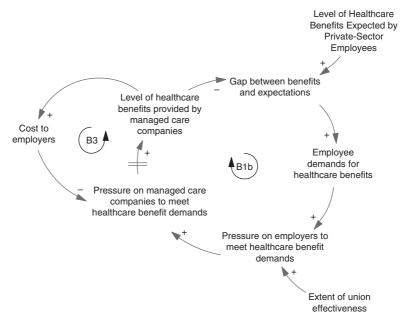


Figure 4-c Impact of MCOs on employer–employee–union dynamics changing the prior system (Figure 4-a) in ways that result in lower health benefits for the workforce.

Governance

Currently, the governance of MCOs is limited or absent. While the MoH assumes responsibility for healthcare providers and the Central Bank (Bank Negara) is responsible for insurance companies, neither is directly responsible for MCOs. The response from the government to the health challenges created by MCOs has been limited.

The MoH has attempted to use the existing Private Healthcare Facilities and Services Act of 1998 to address problems stemming from MCO practices. However, this has been limited to issuing guidelines to healthcare providers, has few enforcement provisions and does not recognise the weak bargaining position of GPs. Thus they are unable to address most of the key problems. Why has the government been reluctant to intervene more vigorously?

Systems analysis of the situation enables us to postulate two factors (Figure 4-d).

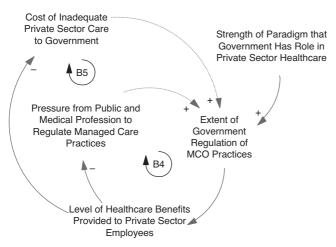


Figure 4-d Pathways toward government regulation of practices related to healthcare benefits are ineffectual due to limited ability of the public and medical professionals to organise (B4 loop) and lack of information on how these practices affect the burden on the public healthcare system (B5 loop).

First, pressure from the medical profession and the public is not sufficient to attract and compel a response from the government (the dotted arrow in B4 loop, Figure 4-d). The medical profession at large has only exerted concerted pressure in response to specific issues that affect daily practice, such as revision of the fee schedule and MCOs' attempts to impose administrative fees. The majority of GPs do not comprehend the full nature and implications of the involvement of third parties. Similarly, patients/the public are even less aware of the issues involved and how they affect their own families. Additionally, they lack the organising mechanisms to lobby for change. Thus political pressure is weak.

The other potential pressure that could energise regulator action is evidence that inadequate patient management due to MCO-imposed conditions results in increased costs to public sector services (the dotted arrow in B5 loop, Figure 4-d). This could happen due to patients choosing public sector care despite having MCO coverage, or after developing costly but avoidable complications as a result of MCO practices. Such information is not being tracked, however, and thus the government has low motivation to act, as it becomes aware of problems only from sporadic complaints either by patients or by doctors.

Systems Lessons

Problems arising from the behaviour and interactions of multiple actors are often perceived from the perspective of one or other of the actors, thereby producing finger pointing and blame games. Systems analysis supports a holistic perspective that re-frames these narratives in light of systemic structural issues. This often reduces points of conflict and increases the likelihood of finding win-win solutions.

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Notes

- 1. Except for the Social Security Act, which applies only to accident-related injuries among employees earning less than RM 2,000 per month.
- 2. Some MCOs also act as TPAs for insurance companies. They are not included in the scope of this paper.