

STRATEGIES FOR HEALTH CARE COST CONTAINMENT IN SOUTH-EAST ASIA COUNTRIES

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ABSTRACT

Background: South-east Asia consists of eleven countries - Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam, they are collectively known as the Association of Southeast Asian Nations (ASEAN). To sustain universal health coverage, and with the factors contributing to healthcare cost escalation, countries have to implement cost containment strategies to overcome these issues. The aim of this article is to do a descriptive analysis of the cost containment strategies implemented in each of South-east Asia country.

Materials and Methods: A general review was done searching the articles related to cost containment strategies implemented in the South-east Asia countries. All eleven of South-east Asia countries are included. The search was conducted by using Public domain and journal search engines including PubMed, ScienceDirect, Google Scholar. Phrases used were "healthcare system", "health financing", "cost containment strategies", and the countries names. Publication of journals, articles, reports and book for the previous 15 years, those with full articles and assessable were included. Among the articles found, both primary screening and secondary screening were done.

Result: From the analysed articles, several cost containment strategies has been implemented in South East Asia countries and they can be classified as 1) Shifting the cost from the public sector to private sector, 2) To mobilize the health resources in the community, 3) Mobilizing health resources within the health system, and 4) Mobilizing external resources. The strategies will be described with examples in this article.

Conclusion: The most commonly used strategy was mobilizing resources from within the healthcare system, followed by mobilizing external resources, shifting the cost from public sector to private sector and mobilizing resources in the community.

Keywords: Health Care, Health Care Financing, Cost Containment Strategies, South-east Asia Countries

1.0 Introduction

South-east Asia (SEA) consists of eleven independent countries situated along the continental arcs and offshore archipelagos of Asia and the countries are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam — and they are collectively known as the Association of South-east Asian Nations (ASEAN). The region is home to more than half-a-billion (653.8 millions) people spread over highly diverse countries, from economic powerhouses like Singapore to poorer economies such as Cambodia, Laos and Myanmar (Worldometers, 2018).

1.1 Health Care System in South East Asia Countries

In South-east Asia region, the pressures placed on national healthcare systems by the recent demographic and epidemiological transitions, magnified by the rising demands and expectations of an educated and affluent population for high-quality healthcare (United Nations University, 2012). These are among the challenges that the eleven countries are facing, besides the increasing healthcare costs and expenditures that the system has to bear along the years.

In South-east Asia countries, the health services providers are divided into public health sector and private health sector. Public health sector, which is the government of each country, is the main health services provider to the population. The rising of private health sector is seen as the complementor to the public health sector in terms of services. Some of the most innovative and advanced forms of public–private partnership in health services have developed within the region, as for example, the corporatization of public hospitals in Singapore from as early as 1985 and later, the corporatization of the so-called ‘Swadana’ hospitals in Indonesia, the public hospitals that were given authority to manage their own personnel, finance and procurement (United Nations University, 2012).

Some countries, such as the Philippines, Vietnam and Indonesia, have radically decentralized their healthcare systems of health services to local governments - a restructuring that has affected aspects of systems performance and equity, even though initially, the drive for decentralization was mainly political (United Nations University, 2012). Consequently, to ensure increased financial coverage and affordability, many governments have passed laws to establish national health insurance systems and mandated universal coverage, although its implementation is very challenging. With existing policies of decentralization and liberalization, equity issues and poor infrastructure will continue to challenge the development of the health sector.

1.2 Health Care Financing in South-east Asia Countries

World Health Organization (WHO) recommends moving away from direct, out-of-pocket payments to using prepaid mechanisms to raise funds for health (World Health Organization [WHO], 2012). Therefore, WHO Member States, including the South-east Asian countries, have set themselves the target of developing their health financing systems, in order to ensure and sustain a universal health coverage, so that all citizens can use health services, while being protected against financial difficulty related with paying for them.

Following the lessons learnt from the past financial crisis, most countries have strengthened their social protection mechanisms and essential health services. Throughout the region, many innovative pro-poor financing schemes were implemented, such as the Health Card and 30-baht Schemes in Thailand, the Health Fund for the Poor in Vietnam, Health Equity Funds in Cambodia and Laos, and, even in wealthy Singapore, the Medifund, a subsidy scheme for poor patients (United Nations University, 2012).

Meanwhile, the healthcare systems with dominant tax funding are fairly stable, in view of the strong role of governments and effective controls by health agencies to overcome inequity problems. The example of Tax-based system, as in Malaysia, where the government finances the public health services through the Consolidated Revenue Fund under the Ministry of Finance, while the sources from the private sector are basically from the consumers (Thomas, Beh, & Nordin, 2011). However, there are crucial issues involving rising healthcare costs, future sustainability of centralized tax-financed systems, efficiency and quality of the public services, and higher public expectations.

1.3 Factors Influencing Health Care Cost Escalation

Globally, USD 6.9 trillion was spent on health in 2011. There is wide variation between countries in the total spending on health per person per year, ranging from as high as USD 9,908 in Norway to as low as USD 12 in Eritrea (WHO, 2012). WHO estimates that a minimum of USD 44 is needed per person per year to provide basic, life-saving health services, however twenty-six of WHO Member States spend less than this amount. The total spending on health per person for 2011 is directly proportionate to the wealth of a country (WHO, 2012). The higher the country's gross domestic product, the higher the health expenditure of that countries.

Even though the health expenditure is highly dependent on the wealth of a particular country, there are several factors that influencing cost escalation, which in the end, influencing the health expenditure of the country. These factors are:

- a) External factors / Environmental factors – Demographic changes, changing of communicable disease to NCD, insufficient in funding, increase consumer expectations
- b) Absence of free market
- c) Advancement of medical technologies
- d) Ineffective, inefficient management of administering the healthcare system
- e) Absence of strong cost containment strategies
- f) Market power of healthcare providers

(Thomas Bodenheimer, 2005)

1.4 Cost Containment Strategies

Cost containment can be defined as the process of controlling the expenses required to operate an organization or perform a project within pre-planned budgetary constraints (Business Dictionary, 2018). In other words, it is a process of attainment of optimal operating efficiency within the constraints of providing a high standard of service to patients. The cost containment process is an important management function that helps keep costs down to only necessary and intended expenses in order to satisfy financial targets. Below are cost

containment strategies explained by Hoare & Mills, which were implemented by countries around the world, including in the South-east Asia region.

- a) Shifting the cost from the public sector to private sector.
- b) To mobilize the health resources in the community.
- c) Mobilizing health resources within the health system.
- d) Mobilizing external resources.

(Hoare & Mills, 1986)

The aim of this article is to do a descriptive analysis of the cost containment strategies implemented in the eleven South-east Asia countries – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam.

2.0 Materials and Methods

A general review was done to search the articles related to cost containment strategies implemented in the South-east Asia countries. For this article, all eleven of South-east Asia countries are included – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam. The primary search was conducted via Public domain search engine and also journal search engine including PubMed, ScienceDirect, Google Scholar. For searching the articles, exact phrases like “healthcare system”, “health financing”, “cost containment strategies”, and all South-east Asia countries – “Brunei”, “Cambodia”, “Indonesia”, “Laos”, “Malaysia”, “Myanmar”, “Philippines”, “Singapore”, “Thailand”, “Timor-Leste” and “Vietnam”. Those phrases were combined by the Boolean operator “and”.

Date of the publication of journals, articles, reports and book for the previous 15 years, those with full articles and assessable were included and used. Among the articles found, both primary screening and secondary screening were done. By the primary screening, the titles and the abstract of the articles were screened, and those articles not related with cost containment strategies were excluded. By secondary screening, those selected articles were examined in full texts, and those that met criteria's will be used in this literature

3.0 Result and Discussion

3.1 South-East Asia Countries Profile and Healthcare Cost Containment Strategies Used

Country	Country profile	Shifting the cost from public sector to private sector	Mobilizing health resources into the community	Mobilizing health resources within the health system	Mobilizing external resources
Brunei	Population: 0.423 million in 2016* Annual population growth rate: 1.3% in 2016* Total expenditure on health as % of GDP: Public: 2.49%, Private: 0.16% in 2014* Leading causes of death: Ischaemic heart disease (18.1%); Stroke (11.2%); Diabetes mellitus (10.7%); Chronic obstructive pulmonary disease (4.5%); Lower respiratory infections (4.1%) in 2012** Health finance system: General Treasury primarily funds health care services and the budget for health care is allocated by the Ministry of Finance.	√		√	
Cambodia	Population in million: 15.76 million* Annual population growth rate: 1.6% in 2016* Total expenditure on health as % of GDP: Public: 1.25%, Private: 4.42% in 2014* Leading causes of death: Ischaemic heart disease (10.1%); Tuberculosis (9.6%); Stroke (8.7%); Lower respiratory infections (7.8%); HIV/AIDS (3%) in 2012** Health finance system: derived from various sources, including the Government budget, donor funding, insurances, Non-governmental Organizations (NGOs) and other charitable donations, the private medical sector and household out-of-pocket spending.	√	√	√	√
Indonesia	Population in million: 261.1 million in 2016* Annual population growth rate: 1.1% in 2016* Total expenditure on health as % of GDP: Public: 1.08%, Private: 1.77% in 2014* Leading causes of death: Stroke (21.2%); Ischaemic heart disease (8.9%); Diabetes mellitus (6.5%); Lower respiratory infections (5.2%); Tuberculosis (4.3%) in 2012**	√		√	√

	Health finance system: Indonesia healthcare finance was from the government and from the minimal consumer fees charged with the use of facilities to the community. Then they are moving towards other source of funding and since 2014, they have state-owned insurance companies as the major source of finance (Pisani, Kok, & Nugroho, 2017).				
Laos	Population in million: 6.76 million in 2016* Annual population growth rate: 1.4% in 2016* Total expenditure on health as % of GDP: Public: 0.94%, Private: 0.92% in 2014* Leading causes of death: Lower respiratory infections (11.3%); Ischaemic heart disease (9.6%); Stroke (8.7%); Dengue (8.1%); Diarrhoeal diseases (4.5%) in 2012** Health finance system: Most of health expenditure in this country was from out-of-pocket. In 2009, the total health expenditure was USD 36 per capita, of which 61% was paid by households, 16% by donors, just 19% by the government of Lao PDR and the remainder by insurances (WHO, 2012).	√		√	√
Malaysia	Population in million: 31.19 million in 2016* Annual population growth rate: 1.5% in 2016* Total expenditure on health as % of GDP: Public: 2.30%, Private: 1.87% in 2014* Leading causes of death: Ischaemic heart disease (20.1%); Stroke (10.6%); Lower respiratory infections (8%); Road injury (4.7%); Chronic obstructive pulmonary disease (4.6%) in 2012** Health finance system: Public sector in main provider for healthcare. Funding for the public health service mainly from tax revenue, others by out of pocket and third party such individual and employee based private health insurance (Ministry of health Malaysia, 2016; Verma et al., 2015).	√	√	√	√
Myanmar	Population in million: 52.89 million in 2016* Annual population growth rate: 0.9% in 2016* Total expenditure on health as % of GDP: Public: 1.04%, Private: 1.23% in 2014* Leading causes of death: Stroke (12.7%); Lower respiratory infections (9.2%); Ischaemic heart disease (6.8%); Tuberculosis (5.8%); Chronic obstructive pulmonary disease (4.4%) in 2012** Health finance system: Funding for health service is by government budget from taxation, out of pocket, national health insurance and private health insurance (Latt et al., 2016;	√	√		√

	Ministry of health Myanmar, 2016).				
Philippines	Population in million: 103.32 million in 2016* Annual population growth rate: 1.6% in 2016* Total expenditure on health as % of GDP: Public: 1.61%, Private: 3.10% in 2014* Leading causes of death: Ischaemic heart disease (15.4%); Stroke (11.1%); Lower respiratory infections (9.1%); Diabetes mellitus (5.9%); Tuberculosis (4.6%) in 2012** Health finance system: The funds in health sector are from taxation, national health insurance and out of pocket (Cetrangoloet al., 2013).	√			√
Singapore	Population in million: 5.61 million in 2016* Annual population growth rate: 1.3% in 2016* Total expenditure on health as % of GDP: Public: 2.05%, Private: 2.87% in 2014* Leading causes of death: Ischaemic heart disease (18%); Lower respiratory infections (17.2%); Stroke (8.9%); Trachea, bronchus, lung cancers (6.5%); Colon and rectum cancers (4.6%) in 2012** Health finance system: The public sector dominates by 80% of health sector. The health sector is funded through taxation, and mixed finance system by from public-private partnership.	√	√	√	
Thailand	Population in million: 68.86 million in 2016* Annual population growth rate: 0.3% in 2016* Total expenditure on health as % of GDP: Public: 3.21%, Private: 0.91% in 2014* Leading causes of death: Ischaemic heart disease (13.7%); Stroke (10.3%); Lower respiratory infections (9.4%); Road injury (5%); Chronic obstructive pulmonary disease (4.7%) in 2012** Health finance system: Since the introduction of Universal Health Care (UHC), public expenditure on health steadily increased from 56% in 2000 to 86% in 2011, while out-of-pocket expenditures decreased from 27.2% to 12.4% of total health spending.	√		√	

Timor-Leste	Population in million: 1.27 million in 2016* Annual population growth rate: 2.2% in 2016* Total expenditure on health as % of GDP: Public: 1.33%, Private: 0.14% in 2014* Leading causes of death: Tuberculosis (11.2%); Lower respiratory infections (10.4%); Ischaemic heart disease (8.6%); Stroke (7.1%); Birth asphyxia and birth trauma (5.1%) in 2012** Health finance system: Various sources from the Central Government, International funding, health insurance and from the community i.e. user fees and out of pocket (Ministry of Health Dili Timor-Leste, 2011).	√		√	
Vietnam	Population in million: 92.7 million in 2016* Annual population growth rate: 1.1% in 2016* Total expenditure on health as % of GDP: Public: 3.82%, Private: 3.25% in 2014* Leading causes of death: Stroke (21.7%); IHD (7.0%); Chronic obstructive pulmonary disease (4.9%); Lower respiratory infections (4.8%); Road injury (4.1%) in 2012** Health finance system: In 2013, the healthcare financing was from the government (42%), out of pocket (49%) and others (from International assistance and health insurance. *			√	√

Source: *The world bank, 2018; **World Health Organization, 2015

3.2 Healthcare Cost Containment Strategies Used and Their Examples

3.2.1 Shifting the Cost From The Public Sector to Private Sector

By adopting this strategy, the cost of providing a particular health services is shifted from the public sector to the private sectors, as they become the provider for that services. For example, in 1997, the government of Laos introduced the Revolving Drug Funds (RDF) - under a National Drug Policy, the Government allowed private pharmacies to develop, in order to improve the availability and supply of drugs. User fees for drugs are set at cost plus 25% to cover costs (Thomé & Pholsena, 2009). In Myanmar and Philippines, they used this strategy when they introduced health insurance in the country. In 2015 the Myanmar government introduced National Health Insurance and Social Security Scheme (Latt et al., 2016), (MoH Myanmar, 2016), while in Philippines, the mixed public-private system with national health insurance program named Phil-health program, which have several subprogram such employed sector program, individual paying program, sponsor program, overseas Filipino worker and lifetime member program (Cetrangolo et al., 2013), (Bredenkamp & Buisman, 2016). In Singapore, the government introduced compulsory health saving account called Medisave, a basic health insurance called MediShield Life and also private insurance like Integrated Shield plans, ElderShield And ElderShield Supplement to cover for health payment (MoH Singapore, 2017).

3.2.2 Mobilizing the Health Resources in The Community

This strategy encourages the participation from the community, as they contribute in paying, providing the funds and directly involve in maintaining their own health. As example, in Cambodia, The Health Equity Fund is a type of social transfer mechanism that provide subsidies for the poor, and can be implemented by international or local NGOs, using funding that may be provided by donors, Government or community collections (Thomé & Pholsena, 2009). In Malaysia, the strategy is in terms of empowering the individual, family and community in program such community based health promotion with local community as one of the stakeholder and also integrated school health promotion like 'Tunas Doktor Muda' at pre-school and 'IMFREE' program at primary school level (Ministry of Health Malaysia, 2016). The same goes as in Myanmar, Singapore and Timor-Leste. In Myanmar, they empowering the local as in community based organization (and religion based) to run the charity hospitals in providing services to the local people (Latt et al., 2016), (Myanmar Times, 2017). In Singapore, they empowering the community with health services delivered by the community volunteers at the community facilities with collaboration with ministry of health holding, Singapore, Singapore Business Federation and local networking (Introduction to Singapore Healthcare, 2016). In Timor-Leste, they reconstructing the health facilities, expanding community based health services such as the integrated community health services and a considerable number of national medical graduates have joined the health workforce, and are serving at district and administrative post levels (The National Strategic Development Plan 2011–2030 in Timor-Leste).

3.2.3 Mobilizing Health Resources Within the Health System

By adopting this strategy, the provider is trying to reduce the escalation of healthcare cost by increasing efficiency as well as resources reallocation. In Brunei, in order to manage the escalation of healthcare costs, user fees were introduced to patients, but these constitute a very

small percentage of the total healthcare funds (Arussalam, 2009). In Cambodia, Indonesia and Laos, they used the decentralization of healthcare system strategy. Cambodia in year 1996, as they allowed the health facilities themselves levy fees on an agreed scale, and 99 per cent of fee revenues are retained at the facility to be used for recurrent costs and staff incentives (Thomé & Pholsena, 2009). In Indonesia, they opted decentralization in 2001 – allowing different districts to adopt different approaches in providing the services (Pisani et al., 2017). In Laos, by decentralization of operation, the Provinces are the key actors in both financing and delivery of health services, but they are not accountable to the central administration (Thomé & Pholsena, 2009). While in Malaysia, the implementation of hospital cluster concept is one of the strategy in which the hospital with specialist will cover the consultation burden of district hospital (Ministry of Health Malaysia, 2016). Beside that, in this country, the practice of an extended hour clinic, for example in Selangor, by using the current healthcare worker from local health clinic to work during extended working hour in certain health clinic in selected area (State Department of Health Selangor, 2018). In Singapore, the Program of ageing - the government utilize their healthcare worker by increasing their efficiency in handling the home-based services to meet their needs (Introduction to Singapore Healthcare, 2016). In Thailand and Vietnam, the healthcare providers were focusing on the Cost-effective strategies – as the screening and vaccination strategies for cervical cancer prevention in Thailand (targeted to pre-adolescent girls at 80% coverage, followed by screening women over 30 years of age), as it was evidence-based the lifetime risk of cancer was reduce by up to 70%, provided screening coverage rates of 60% or greater (Sharma et al., 2012). In Vietnam, they were integrating screening for hypertension into routine medical examination that included in the coverage by health insurance (Nguyen et al., 2016). Screening for hypertension has a high probability of being cost-effective in preventing CVD.

3.2.4 Mobilizing External Resources

By opting the strategy of mobilizing external resources, the country had a loan, a donation, or an assistance and volunteer from outside of the country. In Cambodia, there was a rising level of donor funding for health care, reaching a total of USD 114 million in 2005, or USD 8 per capita per year (Thomé & Pholsena, 2009). In Indonesia, in 2013, due to the difficulty in finding a source for reimbursement, the Indonesian MOH encouraged hospitals to find external sources of funding to help ease the burden (Suharlim, Kompasiana, 2015). Back in 1998, Indonesia were using a loan from the Asian Development Bank, as the government began to issue the health cards, which allowed poor families to seek free primary health services (Pisani et al., 2017). In Laos, they get the assistance through involving and supporting different donor-funded programmes: for example the World Bank, the Asian Development Bank, and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Thomé & Pholsena, 2009). In Malaysia, by having the fund and volunteer from Tzu-Chi Free clinic, where it helps those below poverty both citizen and noncitizen people in Kuala Lumpur (Hion & Ying, 2017), and also the assistance from the United Nation High Commissioner for Refugee (UNCHR) where it helps government to manage and handle the refugee in Malaysia (United Nation High Commissioner for Refugee, 2018). Both Myanmar and Philippines were getting the international aids as in the form of non-governmental organization like Japan International Cooperation Agency (Latt et al., 2016), (Myanmar Times, 2017), and United State Agency for International Development (UNSAID) (UNSAID, 2017), respectively, in providing fund, training and research and development. Lastly in Vietnam, the United Nations are committed to the implementation of the One Strategic Plan 2017-2021, under the tripartite

leadership of the Vietnam government, the UN and donor organizations, bringing together the comparative advantages of the Participating UN System Agencies (United Nations, 2017).

4.0 Lesson Learnt

Based on the articles reviewed, the cost containment strategies implemented by all eleven South-east Asia countries can be classified into four strategies; shifting the cost from the public fund to private fund, mobilizing the health resources in the community, mobilizing health resources within the health system and mobilizing external resources. From these four strategies, the most commonly implemented was mobilizing the resources within the healthcare system, either cost sharing by imposing user fees, increase the effectiveness and efficiency of the management as well as resources allocation. This strategy is important for developing countries, in which most of the South East Asia countries are, to move towards becoming developed countries. The next popular strategy implemented was mobilizing the external resources, either by insurance schemes, external aids and loans. This strategy seems to be 'an easy and immediate' option to a particular countries, but without proper and efficient management it could be a drawback later in terms of debts and expenditure. The other two strategies; shifting the cost from public to private sector and mobilizing resources in the community, were less implemented in this region.

5.0 Conclusion

By doing this review, a full description of what the healthcare cost containment strategies and how they implemented the strategies in each of the South-east Asia country could be analyzed. The most commonly implemented strategy was mobilizing resources from within the healthcare system, followed by mobilizing external resources, shifting the cost from public to private sector and lastly mobilizing resources in the community.

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Declaration

Authors declare that there is no conflict of interests.

Authors Contribution

Author 1: Gathering information especially for countries like Brunei, Cambodia, Indonesia and Laos; Group Leader, and compiling of manuscript

Author 2: Gathering information especially for countries like Malaysia, Myanmar, Philippines and Singapore; Vice Leader and preparing manuscript draft

Author 3: Gathering information especially for countries like Thailand, Timor-Leste and Vietnam; Group Editor, editing and proofreading of manuscript

Author 4 & 5: Supervising, reviewing and editing of manuscript

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