A SYSTEMATIC REVIEW ON HEALTHCARE FINANCING IN SINGAPORE

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ABSTRACT

Background: Healthcare financing has been on the global agenda for many countries to elevate the health status of the citizens at the same time aim for a lean and sustainable health system. Singapore in particular has demonstrated progressive leaps in health care financing through various reforms.

Materials and Methods: A systematic review of articles related to health care financing in Singapore was compiled using a series of keyword search in various databases (Medline, CINAHL, and PubMed). Studies that were conducted from 1981 to 2015, written in English and used either a quantitative or qualitative design that focus on health care reform in Singapore were included in this study.

Result: Most of the studies revealed that the most innovative factor in the health care financing in Singapore was the structure and the comprehensive health insurance systems that are in place but it was not necessarily deemed beneficial or affordable to its citizens. The systematic review yielded over 125 results, only 7 of which were relevant to this study after examining in full text. A purposeful approach was then pursued. Snowballing on bibliographic references and undertaking key author and grey-literature searches proved as an effective complimentary approach to the original review and was reverted to in addition to the original search. This method brought the full-text results up to 5.

Conclusion: Healthcare financing have a direct influence on the citizens of Singapore and although comprehensive, it also has deficiencies and issues that still need to be addressed.

Keywords: Health care, Reform, Financing, Singapore, systematic review
1.0 Introduction

Singapore, in contrast to most countries in the world, spends a mere average of 3.7 percent of its GDP on health care, yet boasts both impressive health outcome indicators and some degree of universal health coverage (WHO, 2005). In Singapore, people live longer than those in the United States and many other developed nations. Men and women in Singapore not only enjoy longer lives, but they can also expect more of their life to be healthy. Per capita, Singapore’s total health expenditures equate to only $1,118 annually (World Bank, 2013). While a variety of factors influence these health outcomes, Singapore’s health system reform over the years that shifts focus on personal responsibility for health care has been the main driver for this success (Lim, 2004). This systematic review is conducted to analyze the transformation of the country’s health system.

Singapore’s philosophy to social welfare financing has been shaped largely by the beliefs of the leaders of the People’s Action Party (PAP), which has formed the government since Singapore achieved self-government in 1959. The first Prime Minister, Lee Kuan Yew, often stressed that the western-styled welfare state was not viable for Singapore because it bred dependency on the government and led to wastage and over-consumption. This belief has endured; subsequent generations of PAP leaders have adopted an approach where the individual, and not the state, are expected to bear the main responsibility for meeting his/her needs in healthcare, retirement, unemployment and other episodes of income volatility. The family is expected to buttress self-reliance by providing care to its members, and by providing opportunities for income and risk pooling at the household level. As a result of these normative principles, Singapore, in comparison to other advanced economies, provides relatively little by way of social protection and redistribution. There is no state pension, nor is there an automatic unemployment benefits in place (Alisha and Donald, 2013).

Although healthcare is subsidized, the government relies extensively on patient co-payments and other market mechanisms to ration demand and minimize the moral hazard of providing free or heavily subsidized healthcare. To be sure, Singaporeans were already familiar with the concept of co-payments for healthcare well before 1980; co-payments were introduced in 1960, when the then newly-installed PAP government imposed a user charge of 50 cents for each attendance at government outpatient clinics. Prior to 1960, the healthcare-financing framework in British-ruled Singapore was modeled after Britain’s National Health Service, that is, health services in government hospitals and outpatient clinic were provided for free (Phua and Yap, 1998).

These incremental steps of cost shifting to the individual and the family culminated in the 1993 White Paper on Affordable Healthcare, in which the Health Ministry formally identified personal and family responsibility as the cornerstones of Singapore’s healthcare financing framework. Since then, patient co-payment has become a central feature of Singapore’s healthcare system. This approach is widely seen to be the main reason for containing national and public spending on healthcare. Singapore’s national healthcare expenditure is only about 4 per cent of gross domestic product (GDP), with the state financing about a third (or slightly above 1 per cent of GDP) of costs – both very low by the standards of rich countries. Healthcare costs in Singapore are also contained through the government’s supply side controls through limits on the number of medical graduates, fee controls, and the ownership
of public hospitals. The principles articulated in the White Paper continue to guide policymaking in Singapore. This review is conducted to analyze the Singaporean health system in light of this philosophy of the government and how this influences reform in the country over the years. The World Health Organization’s Health System Performance framework (WHO, 2000) will be used to guide and analyze Singapore’s health system under this review.

Essentially, the health system is the health sector categorized (with linkages) according to core functions (financing, provision of inputs and service delivery/coverage), main actors (government and consumers/households) and outcomes (health, fairness in financing and responsiveness.

The WHO Health System Performance Framework defines the goals of health systems as:

- Improving the health of the population they serve
- Responsiveness, i.e., responding to people’s legitimate expectations
- Fair financing, i.e., providing financial protection against the costs of ill health.

Health system performance or efficiency can be examined in terms of the extent to which these goals are attained, given the resources available to the system. Responsiveness is defined as a measure of how well the health system responds to the legitimate expectations of the population (e.g. on waiting times, quality of care). Fair financing suggests every member of society should pay the same share of their disposable income to cover their health costs. However, for this review we will concentrate only on the first and last goals because they are easy to analyze while the second is a very diffuse concept that varies across population groups.

Health service provision is the combination of inputs in a production process that takes place in a particular organizational setting and that leads to the delivery of a series of health interventions. Therefore, the health service is the service that specifically aims to protect or improve health. Whether a health service is effective depends on what services are provided and how they are organized. Issues of equity and equality are particularly relevant here.

2.0 Materials and Methods

The systematic review is based on searches of electronic databases and of bibliographies of studies and previous reviews. A broad search of databases was conducted initially using generic terms to identify the relevant search terms. During the development of the search strategy, consideration was given to the diverse terminology used and the spelling of keywords as this would influence the identification of relevant studies. A combination of keywords including Singapore and “health system”, “health financing”, “health reform”, “health services” and more technical terms like “health expenditure”, “out of pocket health expenditure” were used. In order to ensure complete coverage of the literature the search strategies were developed to be sensitive (broad) rather than specific. The databases searched included Medline, CINAHL and PubMed.
3.0 Result

Over 125 results were returned, only 7 of which were relevant to this study after examining in full text. A purposeful approach was then pursued. Snowballing on bibliographic references and undertaking key author and grey-literature searches proved as an effective complimentary approach to the original review and was reverted to in addition to the original search. This method brought the full-text results up to 5. A major problem that was faced in this research is

Figure 1: Flowchart of the systematic review process.
that of little quantitative and empirical evidence which could be due to limitations in availability of databases with wide scope.

3.1 Selection

The inclusion criteria for publications in this review are as follows:
A study of a PHC system service reform or intervention, fitting the service system or clinical system criteria:

- If they were conducted on Singapore’s health system.
- Particularly on issues of health policy, health financing, and equity.
- Including only reviews, empirical studies, qualitative studies, government and non-governmental reports.
- English language.

3.2 Singapore’s healthcare financing policy

Singapore’s national healthcare expenditure is about only 4 per cent of gross domestic product (GDP), with the state financing about a third (or slightly above 1 per cent of GDP) of costs – both very low by the standards of rich countries. Healthcare costs in Singapore are also contained through the government’s supply side controls through limits on the number of medical graduates, fee controls, and the ownership of public hospitals.

3.2.1 Healthcare expenditure

Both public and private sectors making it a mixed system provide Singapore’s healthcare. The National Health Plan (NHP) of 1983 and the White Paper on affordable healthcare of 1993 are identified as the two key health policy documents in Singapore (Phua, 1991; Reisman, 2006; Asher and Nandy, 2006). Both these documents emphasize individual responsibility as the cornerstone of the country’s healthcare financing philosophy.

Health expenditure fell from 50 per cent in 1965 to 31 percent in 2012. Even though these policies entailed a concomitant increase in the private cost of care, the government has, for most of the previous four decades, enjoyed broad-based societal support, or at the very least acquiescence, for its healthcare financing policies. Academic Lim Meng Kin (2004) has argued that Singaporeans demonstrate “ready acceptance for a social contract based on “individual responsibility” and “co-payment”” because of three unique features of Singapore’s politico-social context.

Besides the individual, the family is adjudged to have a “primary” responsibility in caring for the aged. While promoting individual responsibility through a co-payment system, providing affordable healthcare to all Singaporeans is an essential ingredient of the public healthcare financing scheme.

As a result of these cost and risk-shifting policies, the Singapore government’s share of total healthcare expenditure fell from 50 per cent in 1965 to 31 percent in 2012. Even though these policies entailed a concomitant increase in the private cost of care, the government has, for
most of the previous four decades, enjoyed broad-based societal support, or at the very least acquiescence, for its healthcare financing policies. Lim (2004) has argued that Singaporeans demonstrate “ready acceptance for a social contract based on “individual responsibility” and “co-payment” because of three unique features of Singapore’s politico-social context.

First, Singapore has prospered in spite of great odds largely due to a strong government. As a result, the government has enjoyed enduring trust from the people as it delivered on its promises. Second, Singapore has no tradition of state largesse or generous welfare benefits. The colonial health system, though free, was primarily targeted at the colonizers instead of the colonized. Local residents relied mostly on traditional healers for healthcare. As a matter of fact, even though diseases and poverty were rampant in British Singapore, the first hospital, Tan Tock Seng hospital, was built using funds raised by Chinese community leaders (that is, by self-help) and not the state. Third, Singaporeans are pragmatic and understand that irrespective of whether the healthcare financing burden falls on taxes, Medisave, employer benefits or insurance, it is ultimately Singaporeans who pay.

3.2.2 Structure of the Singapore healthcare financing

Singapore’s healthcare financing framework comprises government subsidies for health services obtained at public healthcare institutions and select private general practitioners’ clinics, a mandatory savings account (Medisave), a catastrophic medical insurance scheme (MediShield), and a means-tested financial assistance scheme (Medifund). Together, they form what is commonly referred to as the “subsidies + 3M” framework (MOH Singapore, 2015).

1. Subsidies
The government provides means-tested subsidies to citizens and Permanent Residents for inpatient services, day surgery, and specialist outpatient treatments received in government-owned restructured hospitals. These subsidies cover between 20 and 80 per cent of the cost of treatment. Means-tested subsidies are also given for intermediate and long-term care (ILTC), while universal subsidies are provided to those who obtain general practitioner (GP) care at government-owned polyclinics. Private GPs provide the bulk of GP care (about 80 per cent of GPs in Singapore are in the private sector), but elderly citizens who pass a means test can apply for a Community Health Assist Scheme (CHAS) that allows them to receive subsidized care at private GP clinics (Reisman, 2006) (MOH Singapore, 2015).

2. Medisave
The primary aim of Medisave is to help individuals and their families save for their hospitalization expenses, including those that will be incurred during retirement. Employed individuals are required to make monthly contributions, which increases with age, to their Medisave accounts. To prevent over-consumption of health care and the premature depletion of Medisave, the Health Ministry sets detailed rules concerning the permitted uses of Medisave. Apart from individual responsibility, Medisave also incorporates the principle of family responsibility. Patients can use the Medisave of immediate family members for healthcare financing. This enables income and risk-pooling at the household level (Pauly, 2001) (MOH Singapore, 2015).
3. MediShield

The primary aim of MediShield is to harness the power of risk pooling for medical catastrophes or healthcare episodes for which it would neither be efficient nor equitable to require individuals to save. It is thus explicitly designed to address medical episodes that are infrequent in nature, but impose high financial impacts (i.e. low frequency, high impact events). Although it is a national insurance scheme, MediShield is quite unlike health insurance schemes in other developed countries for at least three reasons (Pauly, 2001) (MOH Singapore, 2015).

First, it is neither mandatory nor universal. Though, at present, everyone is automatically enrolled in MediShield by default, they can choose to opt out. The elderly above 90 are excluded and those with severe pre-existing conditions cannot re-join MediShield once they have opted out. Second, MediShield is not an open-ended insurance that covers all medical treatments. Instead, it covers only catastrophic illnesses. Third, MediShield is designed based on market, instead of equity, principles. High-risk individuals, such as those with severe pre-existing conditions and the very old, are excluded in order to keep premiums low. The premiums also increase with age to minimize cross-subsidization across age groups; in 2013, those aged 1 to 20 years old paid $50 in annual premiums while those between 86 and 90 paid $1,190. The MediShield claim limits – of $70,000 for each year and $300,000 per policyholder15 – and the absence of ‘stop-loss’ measures effectively transfers all the risk of catastrophic medical bills to patients and their families (Pauly, 2001) (MOH Singapore, 2015).

4. Medifund

While Medisave and Medishield were designed very much with efficiency considerations in mind, Medifund was designed to ensure a certain degree of social equity. If a patient who has received subsidized care cannot afford his bill even after using Medisave, MediShield and seeking help from his family, he can apply for financial assistance from Medifund, which serves as a safety net of last resort. The various public healthcare institutions administer Medifund. Since 2002, the subsidies + 3M system has accounted for between 31 and 39 per cent of the total health spending (Asher, 2006). Out-of-pocket payments by patients and other third-party insurers account for the remaining 60 per cent of the national health expenditure (Pauly, 2001) (MOH Singapore, 2015).

4.0 Discussion

Scholars and commentators have evaluated Singapore’s healthcare financing system in the past. First, Asher and Nandy (2006) argue that the financing system is inefficient because it has limited risk-pooling features such as mandatory health insurance or broad government subsidies, which are widely regarded as efficient as they address adverse selection and other market failures. As previously discussed, MediShield is not an extensive risk-pooling arrangement when measured against the universal health insurance of other developed economies. This is because MediShield operates very much like private insurance and is run on commercial, rather than social, principles. As noted, to prevent cross-subsidization, premiums are not pooled across age groups. MediShield also excludes both high-risk individuals (the elderly above 90 and those with severe pre-existing conditions), and a wide range of health risks from coverage. While private insurers have filled in the gap by providing
insurance plans that cover some of the health risks currently excluded from MediShield, these insurers stop short of providing affordable coverage for high-risk individuals. These individuals are thus forced to accumulate large savings to finance healthcare episodes that may or may not materialize, leading to an inefficient and inequitable curtailment of their consumption and well-being.

Second, Lim (2004) argue that the reliance on personal and family responsibility and co-payments means that the system is highly income dependent. This is not problematic if the healthcare financing system is progressive, that is, the government subsidies provided to lower and middle income Singaporeans are large enough to ensure that they spend a smaller fraction of their income on healthcare than richer individuals. There is admittedly little hard evidence that sheds light on the progressivity (or lack thereof) of the financing system.

A related concern is the extent to which the current healthcare financing system provides “peace of mind”. A 2012 survey by Mindshare revealed that 72 per cent of respondents agreed with the statement “we cannot afford to get sick these days due to the high medical costs”. The staggering agreement raises question about whether healthcare remains affordable and accessible for the majority of Singaporeans. If healthcare is affordable on average, further questions ought to be raised about the reasons for the gap between the actual and perceived cost of healthcare.

A discussion about the equity of the financing system will not be complete without considering Medifund, the means-tested financial assistance scheme. Medifund’s stringent and opaque eligibility criteria have led some to challenge its efficacy in providing assurance to Singaporeans facing large medical bills. For example, Member of Parliament Lam Pin Min recounted the story of Marjorie Soh who was diagnosed with bone cancer in 2003 and raked up an estimated $400,000 in medical bills. Her bills were financed through the sale of her family’s flat, her family’s savings, bank loans and the good will of friends. Lam asked his fellow parliamentarians if Singaporeans should be “subject to financial distress in seeking medical treatment”; if they should “have to borrow from banks and friends to pay their bills”; and if they should have to “sell their assets before they can qualify for medical assistance under the stringent eligibility criteria” (MOH Singapore, 2015). Cases like Marjorie’s, while not representative, demonstrate that some Singaporeans, especially those who do not (or cannot) accumulate sizable savings, might face significant financial distress when their family members experience a catastrophic health condition.

Third, there are signs that the financing system may be inadequate. Many Singaporeans do not meet the Medisave Minimum Sum, or the minimum amount of savings that they must accumulate in their Medisave when they turn 55. In addition, MediShield is not universal; as at the end of 2011, it covered 92 per cent of the population and excluded 35 per cent of elderly above 75. Moreover, though MediShield is ostensibly for protecting patients from catastrophic health expenses, Abeyesinghe, Himani and Lim find that MediShield covered only 40 per cent of the most expensive 10 per cent of medical episodes faced by elderly seeking treatment in a particular public hospital in 2007. Separately, academics Asher and Nandy have criticized the exclusion of high-risk individuals from Medishield and its exclusion of many health risks from coverage. Medishield also excludes those who cannot afford the premiums. Between 2006 and 2011, about 1 per cent of MediShield policyholders saw their policies lapse each year due to non-payment of premium caused by insufficient Medisave
balances. Low-income elderly Singaporeans, who have to pay high premiums, may be especially vulnerable to such lapses of their and their family member’s MediShield policies.

Overlaying the weaknesses of the financing system are the changes to Singapore’s socio-political context. Population ageing is producing a new set of policy and political challenges. As the population ages, the national healthcare spending (both public and private) will increase since older persons consume more healthcare than the young. The risks associated with ageing, whether retirement adequacy or healthcare financing, are mostly concentrated on the individual and the family. This financing arrangement accentuates the rising income inequality in Singapore because richer households are better placed to absorb the risks faced by an ageing member than a middle or low-income household. The rich may also be able to afford significantly better care for their elderly members. These divergent circumstances between the rich and the rest have the potential to offend Singaporeans’ sense of fairness, triggering a re-examination of a welfare regime founded on personal and family responsibility.

Apart from sharpening the differences in the quantity and quality of healthcare that rich and poor (or middle income) households can afford, income inequality can also reduce intergenerational social mobility. Economists studying Western economies have found a negative correlation between income inequality and intergenerational mobility – that is the higher the income inequality in a society, the greater is the correlation between the incomes of fathers and their sons. While there is no evidence as yet to suggest that social mobility has declined in Singapore over time, Prime Minister Lee Hsien Loong remarked in 2011 that “we are seeing our society stratifying, which means that children of successful people are doing better while the children of less successful people are doing less well … (MPs) see these in our daily lives, we watch out for it because we are shepherds and responsible for Singaporeans”. If the Prime Minister’s diagnosis is correct, declining social mobility will inevitably reduce the ability of “less successful” households to share and pool risks, and to improve the life chances of the next generation. This could well be another factor that could offend the sense of fairness among Singaporeans and lead to calls for greater social protection and more vigorous fiscal redistribution.

5.0 Conclusion and recommendation

To recapitulate, the main deficiencies of the healthcare financing system are its poor coverage in terms of the types of people and the types of health risks that it covers. Healthcare may be unaffordable, especially if patients face catastrophic medical bills. The system also falls short in giving Singaporeans “peace of mind”. The policy options available to the healthcare policy maker ranges from the incremental to the radical.

Declaration

The authors have no conflict of interest to declare.

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Authors contribution

Author 1: Main researcher on the search criteria and methodology

Author 2: Main researcher in the results and analysis

Author 3: Main researcher in the discussion and the analysis of review articles

Author 4: Main supervisor in the initiation of research, data analysis, results and discussion

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