

FUTURE OF LONG TERM CARE IN SINGAPORE



POLICY ANALYSIS EXERCISE

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EXECUTIVE SUMMARY

With a rapidly increasing elderly population, how should Singapore's long-term care (LTC) system evolve? This Policy Analysis Exercise (PAE) aims to formulate LTC policies for the ageing society in Singapore. We focus on the two key research questions: (i) How can Singapore deliver a sustainable LTC system in terms of financing, delivering and regulating the services? (ii) How should the roles be allocated among the public, private and people sector?

The future demand of LTC is increasing and multiple challenges lie ahead. In 2030, the numbers of elderly will increase to 18.7%. The situation calls for an increase in LTC capacity and manpower, an affordable and sustainable financing model, and a sound LTC regulation standards.

In terms of delivery, we propose the recommendations in three areas namely capacity (infrastructure), capability (manpower) and service coordination. At present, the LTC capacity faces an inability to scale up due to limited space, a dependence on charity dollars and an uneven playing field between the private sector and VWOs. As such, we propose the mixed system where the government will determine proportion of LTC services provided but allow for flexibility of individual choices to match various services. The private sectors and voluntary organizations will provide services for the elderly at different income segments.

In terms of capability, Singapore encounters problems of a lean workforce, a heavy reliance on foreign domestic workers, and limited resources for LTC training. In this light, we propose to increase manpower tools through state-led initiatives, such as attracting retired nurses or redesigning caretakers' career path, decrease patient load and employ technology to assist the LTC personnel in providing care. In terms of coordination where there is currently a heavy reliance on residential care, we recommend further enhancing the case management system.

In term of financing, we recommend modifying the Eldersshield insurance scheme to improve LTC financial sustainability. The current obstacles are that the increasing elderly population will lead to substantial burden on public finance, while the LTC costs in individual level are significantly high. By modifying the Eldersshield to cover LTC, the individuals and government are required to increase their contribution. But the scheme will provide a payout based on the elderly's health status, income and availability of family support. Payout in voucher and cash will also incentivize family care to promote active ageing at home.

These policies could be achieved through a collaboration of the public sector, private sector and the community. The government should establish a sound system and provide the funds need. The private sector should provide services and focus on improving service quality. While the community sector should also run LTC services and promote informal community care. We believe that the proposed recommendation and collaboration will pave a solid roadmap towards a sustainable, equitable and effective LTC system.

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We would also like to express our profound thanks to our school and client, the Gerontological Society of Singapore. Without their help and support, this project would not have been possible.

Finally, the successful completion of our thesis is dedicated to all the respondents from Hong Kong and Singapore, who specially took out valuable time to be involved in our interviews. A list of our interviewees is as follows:

Hong Kong

- Prof. Alfred Chan Cheung-ming from the Elderly Commission
- Prof. Chow Wing Sun, Nelson from University of Hong Kong
- Prof. Lieu, Geoffrey Sek Yiu from Institute for Health Policy and Systems Research
- Dr. Lam Ching-cho from Haven of Hope Christian
- Prof. Yuen Pok-man, Peter from the Hong Kong Polytechnic University
- Choi Wan Estate Community Centre
- Jockey Club Centre for Positive Ageing

Singapore

- Dr. Dennis Bingzhu Chia from Agency for Integrated Care (Singapore)
- Dr. Gerald C H Koh from Saw Swee Hock School of Public Health
- Dr. Jennifer Lee from Agency for Integrated Care (Singapore)
- Dr. Ong Yunn Shing from Ageing Planning Office, Ministry of Health
- Dr. Shiou Liang Wee from Geriatric Education and Research Institute

Alas, we hope that our research will to some extent be of value in responding to the challenges of the long term care system in Singapore.

1. INTRODUCTION

1.1 Ageing population in Singapore

Developed countries are currently facing two major trends that contribute to an aging population – a low birth rate and increasing life expectancy. With an aging population come multiple challenges to tackle. Firstly, there will be an increased demand for both healthcare and long-term care (LTC) services. Secondly, sustainable financing methods for such services will have to be developed. Relying purely on a taxation system will not be ideal since there is now a larger dependency ratio, where there are more elderly dependents per individual in the working population. At the same time, a copayment system may put great strain on the individual if the rates are not appropriately determined. Finally, standards and regulation of the LTC services have to be implemented and monitored.

Singapore, being a developed country, similarly faces the two major trends. Birth rates are declining below the replacement rate of 2.1, while life expectancy is on the rise.

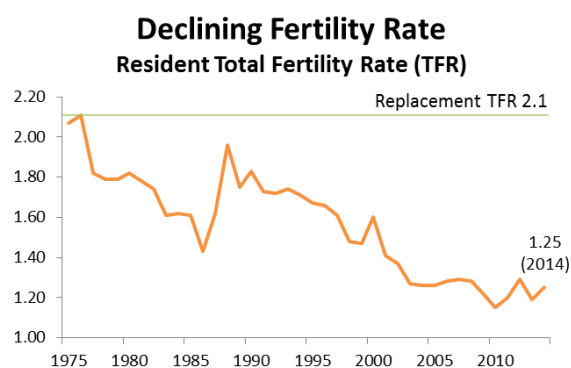


Figure 1: Declining Birth Rates (DOS, 2015)

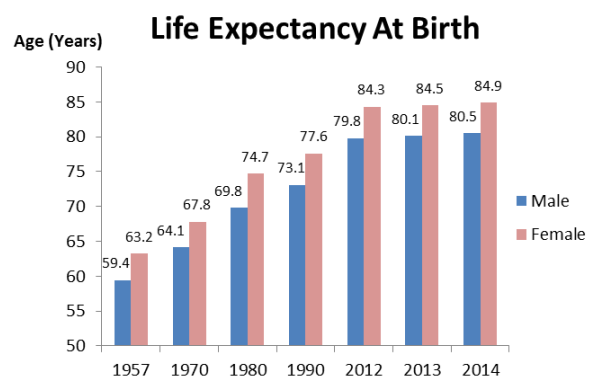


Figure 2: Rising Life Expectancy (DOS, 2015)

The old-age dependency ratio is increasing, from 13.5 in 2012 to 15.2 in 2014 (Ministry of Health, 2015). Family structures are also changing, where extended families are now reduced to nuclear families and women's labor force participation is on the rise; thus changing modes of care for the elderly. Also, the elderly now has different living arrangements, with growing numbers staying on their own, only with their spouses or in residential care facilities.

1.2 Key research questions

This phenomenon then gives rise to our research questions.

1. How can Singapore deliver a sustainable long term care system (LTC) in terms of financing, delivering and providing, while regulating the services for a growing elderly population?
2. How should the roles be allocated among the public, private and people sectors while building a working partnership in the management of LTC services?

In order to better understand policy options available, we will engage with country comparisons. Furthermore, we will conduct a field trip to compare Singapore's long-term care system to Hong Kong's long-term care system and draw from key lessons to make recommendations.

2. BACKGROUND

2.1 What is Long-Term Care (LTC)?

For the purpose of this paper, we define long-term care to be that of a continuum of care services to assist an elderly person¹ to function in activities of daily living. This is clearly differentiated from the health care an elderly receives in the acute care setting (hospitals). There are various models for providing long-term care, including institution-based care such as nursing homes, as well as community-based services such as day-care centres.

2.2 Country of interest: Singapore

Singapore's healthcare system is based on the key principle that no medical service should be provided free of charge. This is in line with welfare principles - family rather than state as the first line of support - and has been extended as fundamentals of the development of the LTC sector. With an increasingly aging population and demographic shifts, the healthcare system is not well-equipped to deal with LTC needs since many elderly individuals suffer from complex and multiple chronic conditions. Thus, they require coordinated LTC services.

It is predicted that the total number of seniors will increase to 18.7% by 2030 (873,300 in absolute terms). This implies increasing efforts are needed to develop our LTC system to deal with this 'Silver Tsunami'. Evidently, the government has begun by increasing spending levels on the LTC sector. The current spending levels are at 0.1% of Gross Domestic Product (GDP) or 3% of National Health Expenditure. It has grown from 145 million in 2011 to 260 million in 2013 (Ministry of Health, 2014). However, this is still less than the 1-2% of GDP that other developed countries spend on their LTC².

2.2.1 Provision of LTC Services

The Ministry of Health (MOH) and Ministry of Social and Family Development (MSF) are currently responsible for the planning and management of the LTC sector. Singapore's LTC services are managed as such - the government takes on the role of funding and regulating the services, while the voluntary welfare organizations manage the provision of services. The private sector also provides LTC services although they are not subsidized.

¹ Elderly person aged 65 and above.

² For instance, Finland, with an ageing population of 16% spends 2.1% of GDP on LTC.

The LTC services are split into two main categories – community care and institutional or residential care. As of 2014, the distribution between public, private and VWOs in terms of elderly care services are as follows:

Residential Care	Nation-wide
1 Community Hospital	5
2 Voluntary Welfare Organization (VWO) - run Nursing Homes	29
3 Private Nursing Homes	11
4 Private Nursing Homes with Portable Subsidy Beds	21
5 Psychiatric Nursing Homes	3
6 Inpatient Hospice	3
Community-based Care	
Center-based Care	
1 VWO Day Rehabilitation Centres	41
2 VWO Dementia Day Care Centres	11
3 Social Day Care Centres	36
4 Senior Care Centres	1
Home Care	
1 VWO providers	34
2 Private providers	12

Figure 3: LTC Services in Singapore (AIC, 2014)

In general, there have been a growing number of LTC facilities and services over the past 10 years. In order to support the establishment of LTC facilities, the government initiated the Eldercare Fund in 2000, which is an endowment scheme to provide operating subsidies. Compared to 2006, the number of nursing homes (institutional care) increased from 62 to 65 and day-rehabilitation centres (community care) increased from 28 to 38. Efforts are continually being stepped up to develop more aged community facilities in the Housing Development Board towns. By 2016, there will be 56 new senior activity centres³, 39 new senior care centres⁴ and 10 new nursing homes to deal with the increased demand. In order to assist with allocating the elderly to the appropriate facilities, the Community Case Management Service and Integrated Care Services were developed. The success of the system however remains to be evaluated.

For a long time, LTC services in Singapore predominantly focused on residential care. Within this domain, there are nursing homes, community hospitals and respite care services. For elderly who do not have family members or caregivers to look after them at home, they are placed at nursing home. Nursing home could be divided into four types according to Provident, 2008 as follows:

- **Private Nursing Homes, which are not under the MOH portable subsidy scheme** are those that cater to full-paying patients only.
- **Private Nursing Homes, which are under MOH portable subsidy scheme** are those private nursing homes that set aside some of their beds to be used by patients who are eligible for MOH subsidies and are placed by the Integrated

³ Senior activity centres (SACs) allow the elderly to make friends and be involved in social activities.

⁴ Senior care centres (SCCs) provide day care, dementia day care, day rehabilitation services and basic nursing services.

Care Services (ICS). It is important to note that these private nursing homes' main clients are full paying patients.

- **VWO Nursing Homes, which do not receive MOH subsidies** are self-funded by VWOs through fund-raising and do not receive any subsidies from MOH. Although patients here are not subsidized by MOH, these VWOs are able to provide the necessary financial and social assistance to patients who are unable to afford the Nursing Home fees.
- **VWO Nursing Homes, which receive MOH subsidies** are VWO nursing homes that acquire monetary assistance from MOH, but also provide additional support if the patient requires further financial and social assistance.

2.2.2 Financing of LTC Services

In Singapore, no medical provision is provided free of charge. The Singapore's philosophy in social welfare financing is shaped by the first Prime Minister, Lee Kuan Yew, who strongly advocated that the free welfare will lead to moral hazard in the healthcare system (Gill, 2013). Instead, the individual or family members are expected to take main responsibility via family risk pooling. They are required to make payment by out-of-pocket spending, through cash, insurance or savings, which inherently would make them more aware and selective of the services they engage in and in turn curb overconsumption in healthcare (Yiling, 2012). Nonetheless, the Singapore government has also provided subsidies to alleviate healthcare burden of the people. The components of the health expenditure are described below

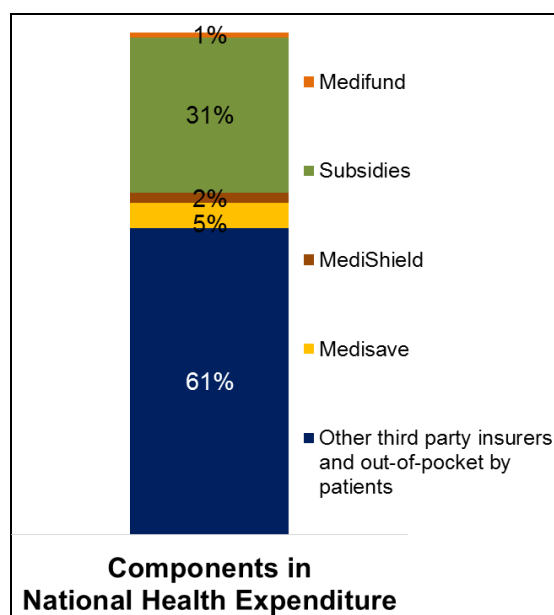


Figure 4: Components in National Health Expenditure

Source: (MOH - Healthcare Financing source, 2013)

The government uses four tiers of protection to ensure that no Singaporean is denied from access to basic health care. Government subsidies represent the first tier provided at the

public healthcare institutions. Medisave, the compulsory personal saving is the second tier, which could be used to pay for medical fees of the individuals and family members. The third tier is a basic health insurance - the Medishield-life scheme. The fourth tier is Medifund which acts as a safety net for low income Singaporeans and is provided on a case-by-case basis. (Ministry of Health, 2016)

The government also provides support for the LTC services in the form of subsidies and insurance. There are several subsidy schemes, including subsidies at a community hospital, residential services (nursing homes mainly) and community based services (home care). These subsidies are provided on a mean-tested basis.

Household per capita monthly income	Subsidy rate at community hospital	Subsidy rate at residential services	Subsidy rate at community care services
\$0 to \$700	75%	75%	80%
\$701 to \$1,100	60%	60%	75%
\$1,101 to \$1,600	50%	50%	60%
\$1,601 to \$1,800	45%	40%	50%
\$1,801 to \$2,600	40%	20%	30%
\$2,601 and above	20%	0%	0%

Table 1: Various subsidy rate at LTC service providers (Ministry of Health, 2013)

Other subsidies include:

- i) Foreign Domestic Worker Grant - for the hiring of caretakers to take care of the frail elderly with at least moderate disability
- ii) Senior Mobility and Enabling Funds - for the individuals to remain mobile and to use transport services
- iii) Pioneer generation - subsidies for the elderly aged 45 years old and above.
- iv) Interim Disability Assistance Programme for the Elderly (IDAPE) – the government's assistance scheme for the disabled and low income elderly.
- v) Silver Support Scheme – a new programme that provides cash payout for the elderly between \$300 and \$750 per quarter. The payout amount depends on various types of residential places that the elderly lives in.

In terms of insurance, the government established the Eldersshield scheme, which is a social insurance for the disabled elderly that require LTC services. The payouts are around \$300 a month.

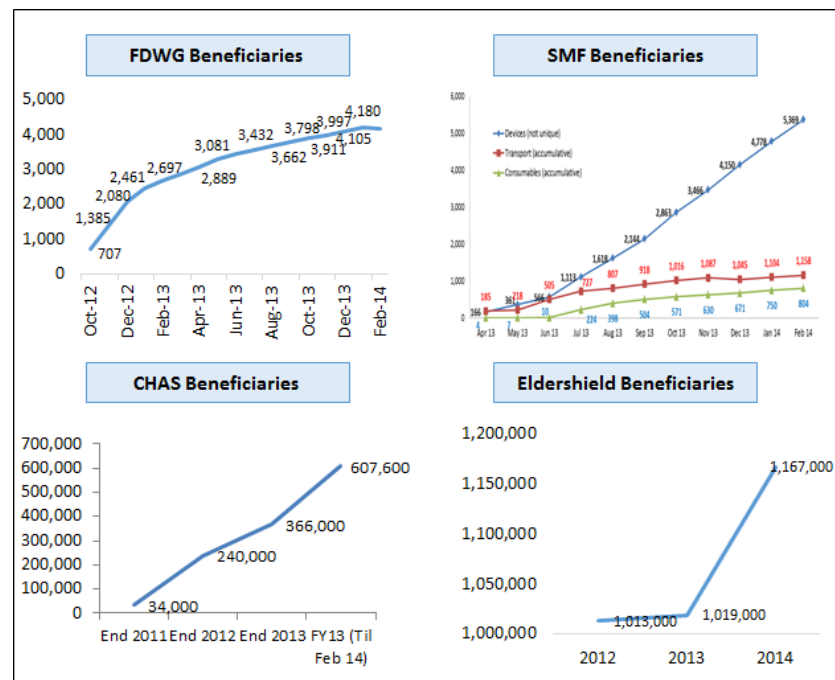


Figure 5: Beneficiaries of the elderly supporting schemes
(Agency for Integrated Care, 2015) (Ministry of Health, 2016)

2.2.3 Challenges for LTC Sector

Policymakers have long been entrenched in a mentality of supply-induced demand, where the provision of healthcare services is determined by the demand of the population. The demand for healthcare has also been associated with an insatiable need. This relation is further extended to the demand for long-term care services, thus discouraging the implementation of a long-term care insurance, for fear of moral hazard. However, it is essential to realize that the demand of long-term care to be dealt with in the next 10 to 20 years will increase steeply; with the group of baby boomers (born between 1947 and 1964) coming of age to require long-term care services. As such, the current mentality has to be tweaked in order to tackle the multiple issues the Singapore's LTC sector faces in the future.

Firstly, the rising demand of LTC services calls for a corresponding increase in capacity to cater to the needs of the aging population. However, the lack of land area and players who want to be involved with LTC services poses a crucial problem. Furthermore, the lack of coordination among various types of care services may have posed a lower efficiency level and have not been able to provide users with the optimal benefits of engaging in care services.

Secondly, the changing care setting, as well as the increased reliance on foreign domestic workers within a household is a cause of concern. Since both females and males participate actively in the labor market these days, the elderly is either placed in a formal care setting or taken care of by the domestic care helpers. The government has supported this via the foreign domestic worker grant. However, many domestic workers do not have the skills to care for the elderly and may worsen the care situation (Tai, Foreign domestic workers help

ill-equipped to care for frail elderly, 2013). Survey results have also shown that majority of the elderly prefer to stay at home, rather than be placed in a nursing home (Figure 6). As such, LTC policies have to be carefully determined, taking these factors into consideration.

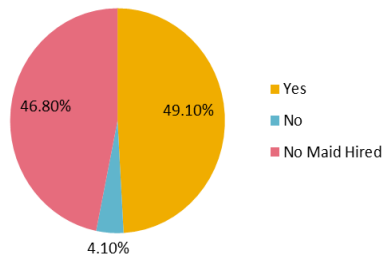


Figure 6: Hiring of Foreign Domestic Worker,
(Chan, Ostbye, Malhotra, & Hu, 2012)

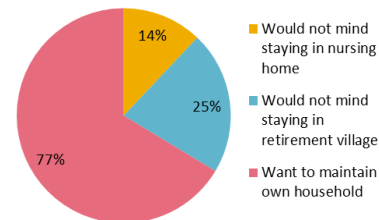


Figure 7: Elderly Living Arrangements,
(Lotus Eldercare, 2014)

Thirdly, the lack of manpower to support the system has to be addressed. The Ministry of Health has undertaken measures to ensure the adequacy of manpower for LTC by ensuring competitive pay levels and providing additional funding to VWO nursing homes to increase their staffing ratio (Ministry of Health, 2012). Investments have also been made to improve the quality and productivity of the LTC sector, as well as to emphasize on the importance of skills and professional development.

Fourthly, the financing of long-term care proves to be a crucial issue. The reliance on co-payment would mean that the system is still highly income dependent. Even though there is the provision of subsidies, it still costs around 12% of a Singaporean's income, who has 4 family members including the elderly, spouse and 2 children, and is earning the median wage of SGD3120⁵. There is also limited coverage for individuals who do not have the CPF account, such as housewives or individuals who do not work for various reasons. In the long run, this relatively high share of private spending may cause a group with insufficient financial provision for long-term care to be unable to access long-term care services (Low & Elias, Population Ageing Requires Adaptive Responses, Not Just Technical Ones, 2012).

Fifthly, there is a need to intensify and step up on standards and regulations for the quality and management of the LTC services. This is to ensure that the facilities will be appropriately equipped and maintained. Furthermore, efforts for case management also need to be intensified and streamlined to better allocate resources. As such, there is a need for the government to develop partnerships with not only voluntary welfare organizations, but also the private sector to better address these challenges.

Lastly, there is a need to review the overall healthcare structure and framework, to ensure a functioning and effective LTC sector. The current system has placed a large emphasis on the

⁵ This is calculated after CPF deductions.

development of the acute care sector, while the primary care sector is left largely to the private sector. At the other end, the LTC sector is run mainly by VWOs even though funding comes partially from the government. This has resulted in a fragmented system of healthcare. Current efforts are shifting in the direction of an integrated healthcare system, but this will not be possible without the development of an affordable and comprehensive LTC system, to be able to successfully place discharged elderly patients back into the community.

2.4 Comparison between Hong Kong and Singapore

Hong Kong is chosen as a country of comparison because of its many similarities to Singapore. Hong Kong has a population of approximately 7.2 million, compared to 5.4 million in Singapore. Both Singapore and Hong Kong also have high economic growth levels. Being referred to as the Asian Tigers, both Singapore and Hong Kong are well recognized for their highly free-markets and developed economy. As a result of economic liberalization and a correspondingly fast development, these two countries now rank among the highest in life expectancy but the lowest in birth rates. Singapore and Hong Kong have become one of the fastest aging societies, whose populations are aging vertically in urban environments, i.e. high rise buildings. Hong Kong has an ageing population, with 14.2% aged 65 and above (Legislative Council Secretariat, 2014), compared to Singapore's 11.4%.

The ideology of the welfare system in both countries are largely similar, where they are being influenced by Confucian ideas – such as placing the role of the family above that of the state and the importance of filial piety. This influences the mindset of the population, as well as the policy options undertaken by the state.

Up till the 1960s, Singapore and Hong Kong, both British colonies, shared many common features in the organization and financing of the healthcare system. The care services in both countries were provided universally without means testing. This system was adopted from the National Health Services (Ramesh, 2004). In 1960, under the ruling of the People's Action Party, Singapore "introduced for the first time a system of user charges, charging 50 cents per attendance at government outpatient clinics and doubling the fee to SGD1 on public holidays" (Meng-Kin, 1998). This then marked the divergence of the two countries' policy direction.

Hong Kong adopts a dual-track healthcare system, with the presence of both public and private healthcare service providers. The government is the main provider of healthcare services, complemented by the private sector. Public healthcare services are financed almost entirely by the government's tax revenue as compared to Singapore's reliance on out-of-pocket payments. As such, issues of sustainability have surfaced in recent years due to a continually low tax rate with a growing elderly population.

This difference has since stretched into the underpinnings of the LTC system. LTC in Singapore is not provided universally and tax funded like that in Hong Kong. In response to the increasing needs of an aging population, the Singapore government set up EldersShield in 2002. Later Interim Disability Assistance Programme for the Elderly (IDAPE) was introduced to help who were not eligible to join ElderShield when it was launched. These two schemes offer help to older adults with a Medisave account and are medically certified by a physician to be unable to perform three or more out of six Activities of Daily Living (ADLs). Monthly payout of \$400 for up to 72 months could be given under the former, or \$150 or \$250 per month (dependent on means testing) for up to 72 months given for the latter.

Despite their different approaches to health care, figure 8 shows a convergence in the two countries' policy direction for LTC (putting financing aside). The concept of aging in place, as put by the Ministerial Committee on Aging (MCA) is to "enable our seniors to age-in-place gracefully and continue to enjoy a high quality of life as they age" (Ong, 2014). The MCA aims to achieve this in two areas by (1) to keep seniors healthy, active and safe in the community, and (2) to provide good aged care.

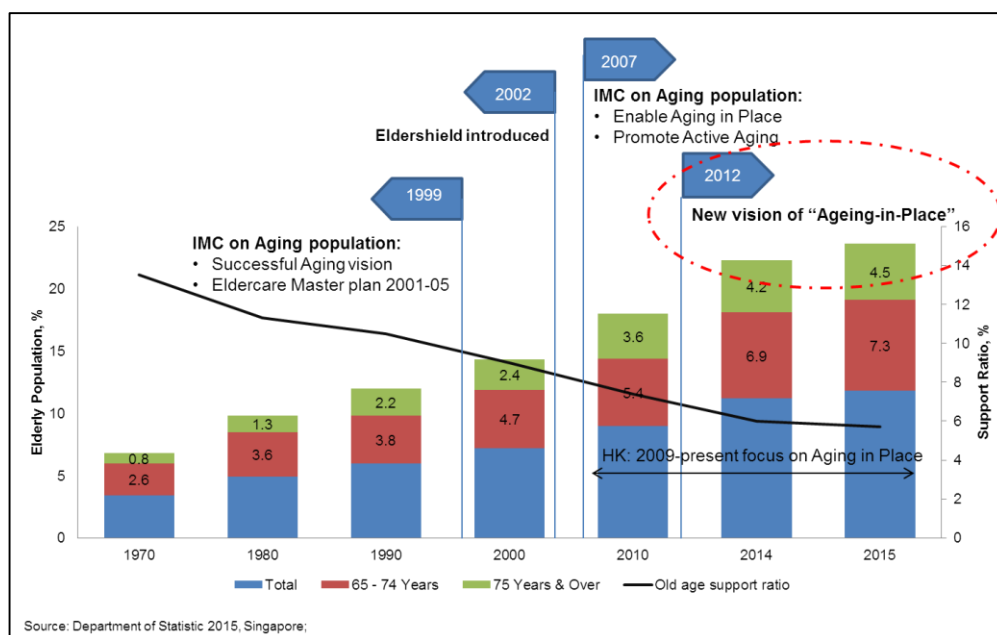


Figure 8: LTC Policy development and timeline

3. LITERATURE REVIEW

This section will cover a review of LTC policies currently provided in other developed countries such as Germany, Japan, Hong Kong and Netherlands, before looking at LTC frameworks that have been adopted to evaluate these policy choices. Germany, Japan and Netherlands were chosen as countries to review because of their developed LTC systems and successes of either the provision or financing of the LTC services. The literature review will serve to provide an overview on the varying systems and outcomes of the LTC sector.

3.1 Model of LTC

According to the OECD classification, countries can be classified into three broad clusters based on two main criteria.⁶ The three broad clusters are – universal coverage, the mixed model and the means-tested model. Nordic countries such as Norway, Sweden, Denmark, and Finland provide universal, tax-funded LTC services. In these countries, LTC is a component integrated into welfare and health-care services for the entire population. The other form of universal coverage is a “stand alone, dedicated social insurance arrangement” for LTC services (Colombo, Llena-Nozal, Mercier, & Tjadens, 2011), which is seen in countries such as Germany, Japan, Korea, Netherlands and Luxembourg.

On the other hand, there is the means-tested safety net scheme, employed mainly by United States and United Kingdom (excluding Scotland). In this model, the funding of long term care targets those who are unable to pay for care services only. Lastly, the mixed model is practiced in countries like Ireland, Italy, Spain and Switzerland. The mixed model is a system where the source of financing is a combination of taxation, insurance, and out of pocket. It is observed that there has been a general movement in recent years toward universal coverage across OECD countries, based on the rationale of fairness and efficiency (Colombo, Llena-Nozal, Mercier, & Tjadens, 2011).

3.2 Reviews of LTC in other countries

3.2.1 Germany

Definition and System overview

LTC in Germany targets the frail individuals. In legal terms, the needs for LTC services refer to individuals who are subjected to physical diseases, psychological illnesses and disabilities. Such individuals require a significant daily living assistance over a minimum period of six months.

⁶ OECD classified countries based on scope of entitlement and long term care coverage.

The Federal government of Germany provides long term care insurance (LTCI) in the form of a social insurance system. In Europe, most of the social policies can be categorized into three models - the state responsibility model, the family care model, and the subsidiary model. LTCI falls in the last category, with the government providing universal healthcare coverage. Approximately 90% of the German population is covered under this LTCI through a mandatory participation of the public health insurance scheme while the other 10% are top tier income earners who opted out for a private mandatory LTCI.

Delivery

Similar to other LTC systems, the German LTC encompasses both home care and institutional care. The beneficiaries can choose LTC services according to their healthcare demands, including respite care, institutional care and community care. The institutional care services, including formal care services and semi-residential home, are provided by private organizations (OECD, 2013). The quality of German institutional care is high, as demonstrated in the absence of significant waiting times or shortage of bed in institutional care (OECD, 2005). Cash allowance is provided for homecare, where informal cares by family members play an important role. These carers are entitled to attend training courses, reap cash benefits and social securities (OECD, 2005). The OECD report discussed that this form of cash-benefits can control the pressure of increasing costs from formal channels and reduces demand for expensive forms of care.

Regulations

The pre-entry assessments for beneficiaries are developed in the form of a case management system. The German Medical Service (MDK⁷) team comprising of healthcare professionals and nurses, will examine individuals who wish to claim LTC benefits based on their ability to carry out basic activities of daily living (ADL). The beneficiaries who pass the assessment will then be categorized into three groups, depending on the level of dependency, as well as the expected time period and frequency for care by non-professional caregivers (OECD, 2013).

The German model promotes discharges from the acute setting, where beneficiaries are entitled to a maximum span for two years. After which, they will be released for step-down care and family care instead. The government adequately prepares the caretaker workforces by recruiting potential caretakers from specific target groups e.g. young generations that will enter labor market, developing free educational and training course, establishing caretakers as a distinguished job, as well as ensuring job security by compensating them with paid pensions (OECD, 2005).

Financing

Beneficiaries generally do not engage in co-payment at institutional care, but are subjected to out-of-pocket payment if the healthcare treatment is more expensive than monthly

⁷ Medizinischer der Krankenversicherung - MDK

insurance coverage. The German LTCI receives funds from public and private channels. The public income-based contribution mandates a salary deduction at 1.95% of wages contributed by the employers and employees equally. Spouses and children with income not exceeding the threshold levels are not required to pay additional contribution. The retirees are obligated to pay full contribution rate.

On the contrary, private mandatory LTCI is funded by a capital covering insurance premium (Schulz, 2010). The OECD complimented the pre-funding LTCI as a way to promote sustainable financing and intergenerational equity. As such, there can be a shift into a fully pre-funded system to combat uncertainty and increasing future liabilities (Schulz, 2010). However, some argue that income deduction dis-incentivizes workers to work and employers may prefer to substitute capital for employees, which are increasingly the trend with the changing nature of jobs (Rothgang & Engelke, 2009).

3.2.2 Japan

Definition and System overview

There is currently no clear definition of LTC in Japan (Tsutsumi, 2014). However, we infer from Japan's Long Term Care Insurance (LTCI) the two targets groups – i) elderly individuals aged 65 years old and above who require assistance in daily living and ii) individuals aged between 40 to 64 years who suffer from aged related diseases such as cancers and cardiovascular diseases.

The Japanese government established LTCI in 2000. The system is operated by municipalities under central government legislation. The program has four main objectives: reducing family burden in taking care of the elderly member, providing comprehensive care through a hybrid of medical and LTC programs, reducing unnecessary hospitalization and linking benefits to premium costs (Gleckman, 2010). In 2011, the LTCI provided insurance for approximately 29 million primary insured persons and 42 million secondary insured persons at the cost of 8,322,300 million yen (Ministry of Health, Labour and Welfare of Japan, 2012).

Delivery

Similar to other LTC schemes, the Japanese model provides homecare services and institutional services, while distributing cash grants. The beneficiaries are able to receive in-home services such as home-visit nursing care services and out-patient rehabilitation, as well as institutional care services provided by formal healthcare providers and community based services. The good practices in Japan's LTC system lies in the personalized services provided for each patient. This is made possible via the case management system, which is adapted from the German model.

It works such that case managers evaluate the level of assistance needed and act as a contact point between services providers and the beneficiaries. The eligible person is obligated to take healthcare assessment supervised by the case manager. The results will be passed onto case conferenced supervised by healthcare professionals and municipal long term care council. The beneficiaries will be categorized into six groups based on severity of health status. Each group is entitled for different types of care, care intensity and fee schedule. This helps to reduce time, costs and the provision of unnecessary care services for the beneficiaries (OECD, 2013).

Regulation

The manpower in Japan LTC encompasses many trained and experienced workers, yet the quantity is lacking. To become an entry level carer, the individual must undertake 130 hours of training⁸. The care takers are required to take state examination and acquire training for 2-4 years or education attainment at college (OECD, 2013). As for case managers, they are seen as sophisticated professionals who have at least 5 years of clinical experience and are responsible for the entire LTC services for each individual, starting from pre-entry assessment to case updates and LTC discharge (OECD, 2013). These demanding requirements of training and comparatively lower wages are causing problems of a shrinking workforce.

Financing

Unlike other countries, Japan's insurers bare major costs. Under the LTCI scheme, the insured person pays merely 10% of the cost of services. The program funding comprises of 5 sources: the primary premium deducted from the monthly income of elderly population age 65 years and above (21%), the secondary premium from the working population aged 40-64 years old (29%), tax revenue from the central government (25%), prefectural government (12.5%) and municipal government (12.5%) (Ministry of Health and Welfare, 2012). This differs from other countries as presented in the OECD study, where major LTC expenses are shared by the private household. The amount varies across countries as follows: Spain (70%), United States (41%), Germany (42%) and Australia (33%).

3.2.3. Hong Kong

Definition and System overview

Hong Kong faces a fast aging population, the country is expected to have the largest proportion of population aged 65 years and above (42%) in Asia by 2050 (Pham & Yun, 2015). This calls for immediate attention to develop a comprehensive and sustainable LTC system. LTC in Hong Kong is described as a continuum of health and social services delivered to individuals with characteristics like "frail with functional disabilities, incapable of self-

⁸ This is made in comparison to 2 weeks of training in the US.

care, medically stable, but requires multiple and long term basis of care.” (Chi, Mehta, & Howe, 2001). Although it is mostly elderly that are frail and in needs of care, LTC in Hong is not confined to just the aged population. It seeks to cover other age groups with disabilities and long term care needs, i.e. the stroke patients.

Delivery

Currently, LTC services in Hong Kong are split between residential care services (RCS) and community-care services (CCS). The community LTC services are predominantly provided by non-governmental organizations (NGOs) while the residential care services are co-provided by both NGOs and the private sector (Figure 6)⁹.

Within the domain of CCS, there are home-based and centre-based services, which include three aspects of enhanced home and community care services, integrated home care services, day care centres and day care units (Elderly Commission, 2011). These services are mainly provided by NGOs with limited presence of the private sector. The NGOs receive subsidies of up to 80% of the service cost, which is funded chiefly through taxes and partially by user-fees.

As for RCS, there are hostels for the elderly, homes for the aged, care and attention homes for the elderly and nursing homes. It is mainly targeted at those aged 65 and above who cannot adequately be taken care at home. However, the younger old, aged in between 60 and 64, may apply for placement as long as there is a proven need.

The Hong Kong government provides a substantial amount of subsidies to support the NGOs in the operations of the facilities. However, there is an imbalance between residential and community-based care in terms of utilization rates and government financing. The institutionalization rates in Hong Kong surpass many other developed countries, reflecting a huge reliance on residential care. The waiting list for a place in a subsidized nursing home is extremely long and can take up to a period of 29 months while securing a place in a care and attention home can take up to 19 months (Social Welfare Department, 2015).

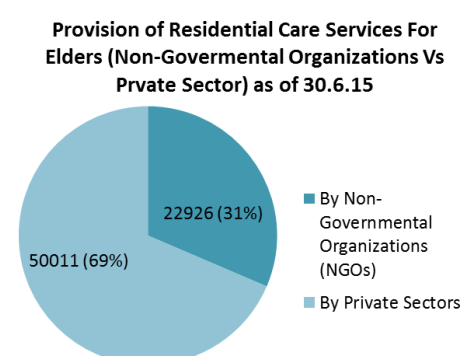


Figure 9: Sectors of Residential Care, (Social Welfare Department, 2015)

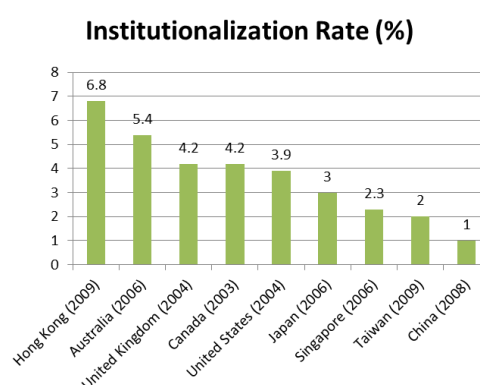


Figure 10: Institutionalization Rates, (Research Team - The University of Hong Kong, 2009)

⁹ 70% of the homes are privately operated and 30% are publicly operated.

In order to tackle the problem of the long waiting lists, the government introduced the Standardized Care Need Assessment mechanism for elderly service to assess the care needs of the applicants.

Regulation

The Hong Kong government uses ordinance, code of practice and licensing to ensure a standardized quality of care services. For instance, the Residential Care Homes (Elderly Persons) Ordinance, which was put in place on 1 June 1996, covers registration, license, appeals, inspection, and operation. The key requirements include ensuring building and fire safety, complying with space standards, and having an adequate staffing ratio (Kwong, 2002).

The code of practice tries to uniform the standards of operation and management. It lays out principles, procedures, guidelines, and standards for the operators to follow. On the other hand, licensing helps the government to monitor the service standards provided to the elderly. Normally, it is issued, inspected and renewed by the Social Welfare Department. (Kwong, 2002).

Financing

As of 2004, the LTC spending level was at 1.4% (Chung, et al., Long-term care cost drivers and expenditure projection to 2036 in Hong Kong, 2009). Due to the reliance on taxes to finance the LTC system, the government's fiscal burden has grown drastically with a shrinking working population, along with a growing size of the elderly population. There is no form of means-testing, where the charge of a public nursing home is standardized at 1994 HKD per month and a low fee of US\$42 to US\$47 is charged for community care service users, depending on the facilities used. Recently, a pilot scheme on community care service voucher for the elderly was rolled out (Social Welfare Development, 2015), allowing for elderly individuals to choose community care services that will match their needs.

3.2.4. Netherlands

Definition and System overview

LTC services in Netherlands are universal and provided to individuals based on their needs level. Prior to 2015, LTC was classified under the General Exceptional Medical Expenses Act (AWBZ). Previously, it offered a compulsory insurance that covered care services for the disabled, chronic mental health care, and care for the elderly (OECD, 2011). However, starting from 2015, LTC is governed by two acts, namely the Long-Term Care Act (in replacement of AWBZ) and the Social Support Act.

Unlike its predecessor, the Long-Term Care Act targets the most vulnerable groups in the society, such as elderly people in the advanced stages of dementia, people with serious physical or intellectual disabilities and people with long-term psychiatric disorders. As for

the Social Support Act, it targets people with both physical and mental disabilities. It includes both the young and old, such as those with learning disabilities and the elderly with multi-morbidities (Ministry of Health Welfare and Sport, 2016).

The Social Support Act is decentralized and services are implemented by local authorities or municipalities. The services have been revised and are now divided into two broad categories - *“General provisions are intended for the community as a whole: this might include, for example, coffee mornings at the local community centre, buses that transport the elderly to shops, “meals on wheels” services, or free or discounted transport for all people aged 75 and older. Personalized provisions are designed for a single person; this might include domestic assistance and support (cleaning and organisation), support in keeping personal records, or an arrangement involving multiple types of support”* (Ministry of Health Welfare and Sport, 2016).

Delivery

LTC in the Netherlands can be classified into three broad categories - informal care, formal care at home and formal institutional care (Mot E. et al, 2010). Informal care is mostly provided by women to their parents or spouses. In 2007, 61% out of approximately 1.7 million informal carers were women (Schäfer W. et al, 2010). They usually provide care in the form of emotional support, doing housework, accompanying the elderly during visits to care providers and helping with the administration process, which could take more than three months in a year and on average more than five years.

Formal care at home is provided by home care organizations, residential homes and nursing homes (Schäfer W. et al, 2010) Home care includes “home nursing (e.g. giving advice on how to cope with an illness, dressing wounds, administering medication), personal care (e.g. assistance with dressing, bathing, personal hygiene, eating and drinking), home help and housekeeping (e.g. cleaning, tidying and preparing meals), day care, respite care, night care, assistive device and a special service called Alpha Care consists of home care that is provided by housewives” (Alzheimer Europe, 2009). Although there is a wide range of services, only around four out of ten people who received home care get help with housekeeping (Statistics Netherlands 2008a; Statistics Netherlands 2009 in Schäfer W. et al, 2010). Of the services mentioned above, those provided by the local authorities are (e.g. assistance and day program, transport, and sheltered accommodation) to people who have difficulty participating in society or who cannot take care of themselves or have a need for sheltered accommodation or support. The objective is to ensure that people can continue to be productive members of society and to enable them to continue living at home.

The formal institutional care covers both nursing homes and residential homes, which merely differs in the level of medical care provided. *“Nursing homes are especially for people with severe conditions who require constant nursing care while residential homes provide accommodation for people who need less care. However, the care provided in residential homes has become more complex over the years and the boundary between*

nursing homes and residential homes has become more and more diffuse” as put by (Schäfer W. et al, 2010).

Regulation

The Netherlands model places emphasis on user choices that aims to increase consumer powers (OECD, 2011). Consumers, together with the central government, the authority for consumers and markets, the Dutch healthcare authority, and the Dutch healthcare inspectorate, ensure care providers are kept in check. Different roles of these actors as put by the (Ministry of Health Welfare and Sport, 2016) are *“(1) the central government is responsible for ensuring that the healthcare system functions properly by determining the quality requirements which the providers under must satisfy, (2) the authority for consumers and markets oversees competition in the healthcare sector, so that individuals can benefit as a result, (3) the Dutch healthcare authority ensures that healthcare services are provided efficiently and in accordance with the rules and (4) the Dutch healthcare inspectorate oversees and enforces the quality and safety of care”.*

The current model requires individuals to contact the Care Assessment Agency, which will then determine the type of care they need. After an assessment, the agency will notify the healthcare administration offices. The administration offices will then discuss the diagnostic result with the individuals and take into account the individuals’ circumstances. Unless the individuals opt to purchase and organize their own LTC services, the administration offices will purchase on the individuals’ behalf from specific healthcare providers.

Financing

All citizens in the Netherlands have to make a mandatory contribution for the mandatory social insurance based on his or her income levels through their pay-roll tax. The amount of the premium is based on a fixed percentage (9.65%) of the income tax, or a maximum amount of EUR 33,589 (Ministry of Health Welfare and Sport, 2016). All contributions are deposited into the Long-Term Care Fund, which is managed by the National Healthcare Institute. The government also tops up public funds through tax contributions (OECD, 2011) if the funds are too low (Ministry of Health Welfare and Sport, 2016).

Under the social insurance program, individuals can choose to opt for either contracted care services or personal healthcare services. Since the responsibility of purchasing and organizing care services fall on individuals or their representatives, those who choose the personal healthcare system are assumed to be rational to choose the best type of care services that maximize their utility. It should also be noted that funds under the personal healthcare budget are managed by the Social Insurance Bank, while the Central Administration Office manages contracted care. Through the personal budget scheme, family members can then be hired to become paid caregivers (OECD, Netherlands: Long term care, 2011; Ministry of Health Welfare and Sport, 2016). Aside from these forms of

finance, the out of pocket payment in the form of copayment is also used to minimize abuse of the social insurance system.

3.3 Framework of LTC analysis by World Health Organization

In order to have a clearer understanding of the evaluation methods of LTC systems, we refer to the framework provided by the World Health Organization (WHO) and the European Commission.

The WHO framework for evaluating healthcare systems covers six dimensions – effectiveness, efficiency, accessibility, patient-centeredness, equity and safety (World Health Organization, 2006). Adapting the above-mentioned WHO framework, Itziar Larizgoitia suggests a conceptual framework to look at performances of LTC systems. She argues for the need to “identify the specific subset of health and responsiveness outcomes which are a direct consequence of the long-term care received” (World Health Organization, 2003). She suggests that some health dimension outcomes of LTC include improvements in functional ability and in the perceived quality of life. On the other hand, the responsiveness dimension should look into issues such as access to social support networks and quality of basic amenities among others. Effective coverage of health interventions and ensuring the quality of long-term care are also important criteria in the analysis of LTC systems. An issue to keep in mind would be the lag-time of outcomes after health care interventions, as well as other factors that may affect the outcomes.

A separate framework was also developed by the European Commission under the European Partnership for the Wellbeing and Dignity of Older people. This detailed framework provided quality principles and areas of action, highlighting the desired outcomes of the LTC system. Indicators included availability, accessibility, affordability, comprehensiveness and transparency amidst others (Larizgoitia, 2003). Recommendations for implementation were also put in place and examples of quality tools were recommended.

4. ANALYTICAL FRAMEWORK

The analytical framework consists of five parts as illustrated in a figure below;

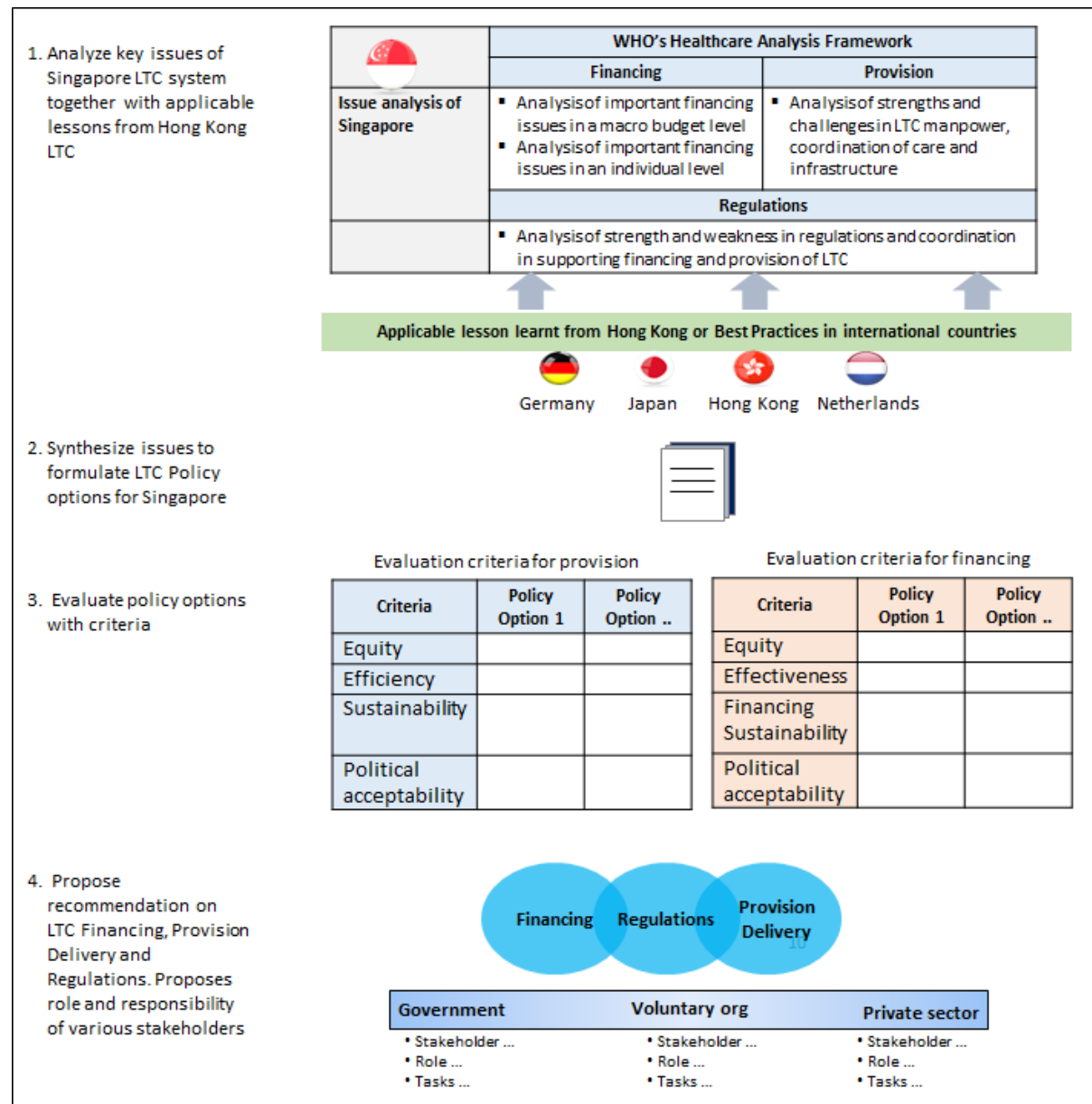


Figure 11: Analytical Framework

Step 1 – We will analyze the key issues of Singapore's LTC system and map them with the applicable lessons from Hong Kong. In this regard, we use World Health Organization (WHO)'s healthcare analysis framework which comprises three components; provision, financing and regulation to analyze the situation. In terms of provision, we will investigate issues relating to capacity (infrastructure), capability (manpower), coordination of care and quality of care. In terms of financing, we will analyze the crucial financing issues from both a public expenditure and individual expenditure point of view. We will incorporate the discussion of LTC regulation, such as the standards of care and coordination model, into the provision and financing part.

Step 2 – In order to formulate the policy options, we will integrate the findings and lessons from interviews in Singapore and Hong Kong, as well as refer to the country cases we looked at in our review. Bearing in mind the complexity of the LTC system, we propose two policy options and evaluate them in this report. The first policy option will address the challenges of provision delivery on how Singapore government could enhance the capability and capacity of LTC. The second policy option will address the challenges in financing model on how financing should be made and what form of financing benefits should be provided.

Step 3 – We will evaluate the policy options for provision and financing by using the evaluation criteria shown below.

Evaluation criteria for provision

Criteria	Description
Equity	Whether all groups of people can access services with similar standards
Efficiency	The allocative and technical efficiency of the system in producing required outputs with available resources
Sustainability	Whether quality and quantity of services can be maintained in the long-term
Political acceptability	Whether the stakeholders' interests contradict largely, looking at the various trade-offs

Table 2: Criteria for Policy Evaluation (Provision)

Evaluation criteria for financing

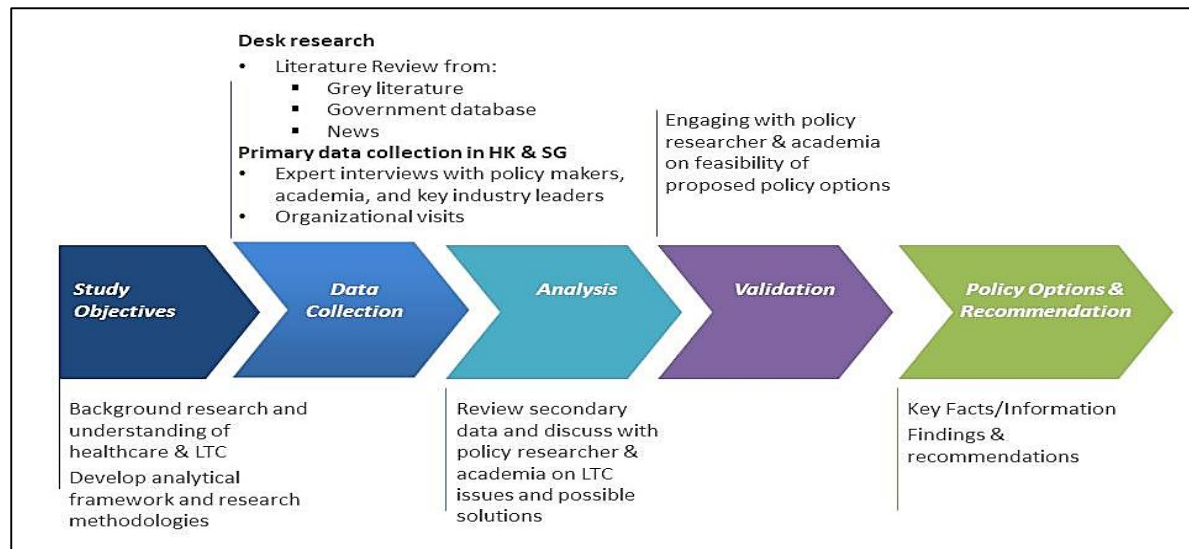
Criteria	Description
Equity	Whether the policy option take into account an equal distribution of the benefits conferred.
Effectiveness	Whether the policy option can effectively address financial issues from the standing of both people and public sector. Concurrently, the policy option should also preserve individuals' choice as well as incentivize service providers to improve their LTC service quality.
Financing Sustainability	Whether an increase in financial revenue is likely to meet LTC expenditure in the long term, without placing excessive burden on any one stakeholder.
Political acceptability	Whether the stakeholders' interests contradict largely, looking at the various trade-offs

Table 3: Criteria for Policy Evaluation (Financing)

Step 4– Based on the selected policy option, we will develop our recommendations for the LTC sector in Singapore in terms of provision, financing and regulations. The proposal will integrate an implementation roadmap in terms of the participation and responsibility of the three sectors - specifically the public, private and community.

5. RESEARCH METHODOLOGY

Our study of the LTC sector is largely qualitative-based and consisted of five phases. In phase one, study objectives were formulated through thorough background research to scope our understanding of LTC in general. In this phase, our key objectives were developing analytical framework and research methodologies.



Phase two consisted of desk research and primary data collection. Our desk research involved the collection of a large amount of both academic and grey literature, such as government reports and news articles. The literature review served as the fundamental work in the study of long term care financing. It was a two-phase review, where phase one revolved around the cultural aspects and philosophy/principles of the health and social welfare system of Japan, Germany, Singapore and Hong Kong. The objectives were firstly, to get an overview of the LTC system and to analyze the successes in countries such as Japan and Germany; as well as secondly to understand what, why, and how Hong Kong and Singapore have similarities and differences in their LTC system.

This was essential for us to formulate a long term care definition for Singapore, to better define the existing research questions, and to strengthen the analytical framework by seeing how others with similar research questions approach onto comparative studies. We also had to focus on breaking down the components of LTC into three domains - financing, provision and regulation to better analyze the overall situation.

Desk research was followed by primary data collection, which was done in both Hong Kong and Singapore. We consulted with academia, researchers, providers, and decision makers in the LTC sector. The main objectives of the fieldwork were to validate the literature and to find out about aspirations on and implementations of long term care. Overall, we have a total of 10 interviews and 2 organization visits. The interviewers' list, interview questions and findings from Hong Kong and Singapore can be found in Appendix A.

Phases three and four are our analysis and validation steps. In these phases, we reviewed both primary and secondary data collected, drew out key challenges, and proposed policy options to address the identified problems. Then, we validated with various policy researchers, practitioners and academics to discuss the feasibility of our proposed policy options. Doing so allowed us to test the validity of our analysis, consolidate ideas and suggestions, as well as to redefine our potential policy adoptions.

After our policy options were validated, we proceeded to our final phase, which was evaluating our policy options and providing policy recommendations.

5.1 Limitations

A number of limitations have been identified. Firstly, there could have been a selection bias in the choices of our interviewees. Before the fieldwork in both Hong Kong and Singapore, we did a literature review. While reviewing the literature, we also conducted backward and forward snowballing, in order to build our initial list of individuals to contact. We then continued to build our list by asking our interviewees to provide names they deem suitable for us to approach. There could thus have been a bias in the information we acquire, with a strong emphasis on certain challenges.

Secondly, our literature reviews of ageing policies are from countries that are still constantly amending their policies to tackle LTC issues. Therefore, the results still remain to be seen and conclusions may have been drawn too early.

Thirdly, our lack of with regards to actuarial knowledge may have provided a superficial analysis of the financing issues since we are unable to come up with the exact values.

Finally, a key impediment to our study is the unavailability of data, i.e. statistics about LTC caretakers in Singapore, status of case management. Without these, our initial plan of using a mixed methodology of both quantitative and qualitative approaches failed. Also, the analysis would be less robust.

6. FINDINGS AND ANALYSIS

6.1 Provision and Delivery

6.1.1 Overview

In terms of provision and delivery of LTC services, Singapore faces a multitude of issues to tackle. The following diagram provides an overview of the key issues of the LTC sector, as well as identifies the linkages with both the primary care and acute care sector.

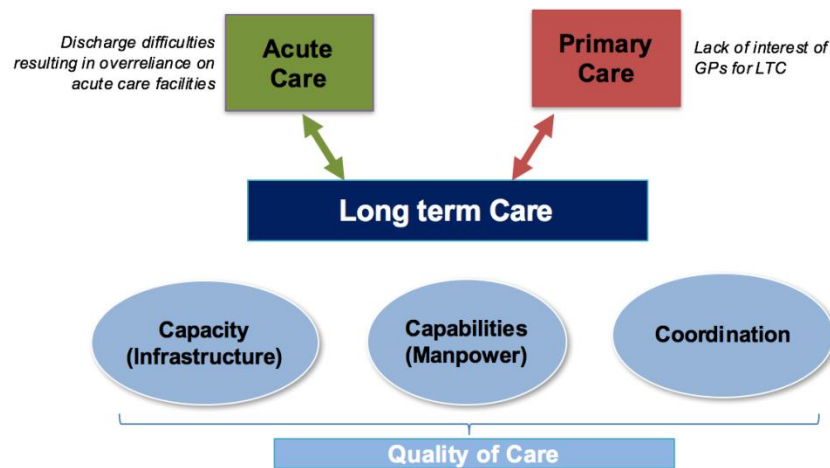


Figure 12: Issues in the LTC sector

In order to identify issues with the LTC sector, it is first essential to determine the links between the LTC sector, the primary care sector, as well as the acute care sector. The inter-connectivity plays a huge role in determining the success of the LTC sector. The current healthcare framework is dominated by the acute care institutions, where the institutions and facilities are adequately developed with a sound financing model, keeping costs at an affordable level. Comparatively, the LTC sector is still in its earlier stages of development, resulting in a lack of confidence and incentive for individuals to move into the LTC services. Not only that, the lack of provision of services and low capabilities of the LTC providers, accompanied by poor discharge planning at the acute hospitals have led to continual readmissions and overreliance on the acute care facilities (Agency for Integrated Care, 2016).

On the other end of the spectrum, with 80% of the primary healthcare represented by the private sector (GP clinics), there is hardly any incentive for elderly patients to be managed long-term by the family physicians, in terms of disease management. Furthermore, there has not been an attractive route for physicians in the public sector pursuing family medicine - where doctors are not attracted by the notion of staying in a polyclinic or nursing home, given the low level of recognition without commensurable levels of incentives.

As such, the Agency of Integrated Care has put in measures to resolve this fragmented healthcare structure, pushing towards an integrated pathway via increasing allied health

support for the primary care sector, increasing services for the LTC sector and developing national care assessment tools to match patients to the suitable LTC services.

6.1.2 Issues with Singapore's LTC System

The issues that lie with the Singapore's LTC system can be categorized into three main areas – capacity, capabilities and coordination. Capacity refers to issues such as the number of facilities available and the corresponding allocation in services among the different players. Capabilities covers issues related to manpower recruitment, allocation and development, while coordination looks into the types of services that should be provided to various groups of elderly and what would be an appropriate mix. The final issue we look at under the provision of LTC services is the quality of care, which overlaps with the outcomes of LTC capacity, capabilities and coordination. In our analysis, we further incorporate learning points and relevant comparisons with the LTC situation in Hong Kong.

6.1.2.1 LTC Capacity

With a growing elderly population and a continual increase in referral load, the LTC capacity has to grow correspondingly to deal with the demand. However, due to space constraints and an overreliance of VWO care services on charity dollars, there is an inability to scale up rapidly. Currently, a large proportion of LTC services are provided for by VWOs that rely largely on charity dollars and government funding. The private sector takes up 30% of the market of community hospitals, care homes, hospices and nursing homes (Agency for Integrated Care, 2016). Frequently, the concern has been that there is an uneven playing field, where the VWO providers have more available resources and funding. This makes the market conditions for private operators unattractive. As captured in the expert interview with Dr. Jennifer Lee, Chairman of AIC, *“(The) private sector says it is an uneven playing field; so far, no private sector has won an RFP and there is slow movement in the take-up even though there are schemes such as the portable subsidies programme.”*

A recent report also brought out this disparity, where the plans for the private nursing home, Peacehaven, were stalled due to inability to secure government subsidies (Tai, 2015). Even though the proposed model of the nursing home is different from the normal nursing home and has led to discussions on a fundamental divergence on what is medically necessary and a luxury, it also reflects a level of inflexibility on the government's end to accommodate the development of different care models by the private sector.

In the long run, the issue of uneven playing field between private and VWO providers if left unresolved could lead Singapore to experience similar situation like Hong Kong. Based on our fieldwork in Hong Kong, uneven playing field between private sector and VWOs hampers both quantity and quality of nursing homes. According to an interview with Dr. Lam from Haven of Hope Christian, private nursing homes cannot compete with VWOs that

are currently receiving public funding. This leads the private players to charge at very high price as compared to the VWOs'. Despite charging at higher price, they are unable to offer decent quality of care in par with the VWOs.

This is in agreement with Professor Nelson from the University of Hong Kong, *"Normally, the fees private players receive is minimal, so they can only meet the minimum requirement set by the government, such as requirement on space and manpower ratio. If they are given subsidies from the government (which is generally quite generous), then the providers can do something more, which is above the set standards."* Furthermore, the increasing numbers of the elderly population have *"no choice"*, but to *"wait for placement at subsidized VWOs"*. This partially explains current long waiting time in Hong Kong where VWOs nursing homes are saturated and private nursing homes market is underdeveloped.

6.1.2.2 LTC Capabilities

A crucial issue to consider within the umbrella of provision and delivery of LTC services is that of inadequate capabilities. The shortage of manpower and expertise within the LTC sector in Singapore has posed a major problem in the development of this sector. The current workforce is lean, made up of approximately 85% of foreigners (Agency for Integrated Care, 2016). This workforce constitutes of not only doctors and nurses, but also allied health professionals and social workers. Exacerbating the problem of shortage is limited resources dedicated to training and the lack of career paths to develop LTC professionals.

Comparison with Hong Kong Case

With poor allocation of manpower due to uncoordinated policies, Hong Kong is currently dealing with a shortage of manpower. However, the government has done well by leveraging on community housing, NGOs and volunteer sectors by providing annual funds, training and regulating standards of care. Hence, the government can reduce its own manpower resources from the local workers who are familiar with the community culture and surrounding to run nursing homes. The organization we visited (Jane Shu Tsao Neighborhood Elderly Centre) even hired a group of healthy elderly as workers as a localized solution to enhance communication among the elderly and provided employment simultaneously.

The larger problem then seems to be that with incentives since NGOs are unable to offer comparable salary rates as that to a hospital and thus the nurses that flood residential care facilities tend to be nurses from Mainland China. Furthermore, working in a LTC facility usually means that there is no chance of receiving adequate training, which also means less career progression in the long run.

Box 1: Comparison with Hong Kong case

Lean Workforce

Contributing to this shortage of manpower in the LTC system is the inability to invest sufficiently in the development and the lack of career paths and leadership progression. Currently, a limited resource of only 1%-3% of the annual payroll is dedicated to training. There are also very few training providers available, other than the AIC learning institute, that can assist in enhancing the skills and knowledge of the LTC workforce. This has caused not only a low take-up rate for the profession, but also a high turnover rate since it is a challenge to retain individuals.

With a growing number of facilities – be it residential or community care services – being developed, this means manpower has to increase significantly to match up to the new load. Using the total number of doctors and nurses available for the whole population, we estimate the ratio of elderly individuals to doctors. The ratio has improved over the years from 2006 to 2014. However, upon taking future projections of a 70% of increase in medical personnel in 2030 (NPTD, 2012), the ratio increases substantially, reflecting more elderly per medical professional. If the projection does hold true, it is essential that the manpower problem be adequately looked into to ensure that the elderly is provided with the necessary care they require.

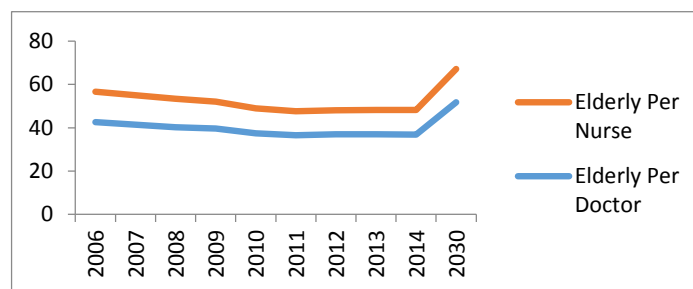


Figure 13: Ratio of elderly per nurse/doctor

Heavy Reliance on Foreign Domestic Workers

Another key issue of concern in terms of manpower is the heavy usage of foreign domestic workers due to the higher opportunity costs for family carers to now remain at home to care for the elderly. In order to stick to the elderly's choice of relying on their family when they fall ill, as per the results of a survey where 92.1% of senior citizens preferred to rely on their family (MCYS, 2005), families usually engage a foreign domestic worker. The government has also endorsed the use of foreign domestic workers with the Foreign Domestic Worker Grant (FDWG), which provides a monthly grant of \$120 to reduce costs of hiring a foreign domestic worker to care for the elderly. The number of beneficiaries under this scheme has increased over the years, till a level of 4180 in 2014 (Agency of Integrated Care, 2015).

Many a times however, this is associated with low levels of quality due to the lack of training and knowledge of these foreign domestic workers. Even though the cost may be

significantly lower than the placement of the elderly into the nursing home, the outcome may be that the expenses spent on the elderly for reoccurrence or worsening of illnesses turns out to be higher.

6.1.2.3 LTC Coordination

Through our interviews in Singapore, it is undeniable that the LTC sector is currently characterized by a fragmented and segregated system of services and a lack of flexibility in choices. Current trends see an unequal usage of facilities, where there is relatively lower usage of community care services and a high reliance on residential care services. There is also a lack of flexibility for an individual to choose from and match various LTC services.

The fragmented and segregated system is mainly due to current weak case management system. According to Dr. Dennis Bingzhu Chia, a public health practitioner, *“each organization in Singapore has their own executive autonomy, depending on their strategic intent and their resource constraints. As a result, they may provide services selectively, focusing on high-demand services.”* With government intervention however, the home care capacity is growing and a target capacity of 10000 is expected to be reached by 2020. This also corresponds to an increase of 3,332 new places by 2015 since 2011 (Agency for Integrated Care, 2015)

High Reliance on Residential Care Services

Residential services, especially those of nursing homes, are very highly utilized. With 32 VWO-run nursing homes and 21 private nursing homes, the bed occupancy levels are consistently high at levels ranging from 95% to 97% (Agency for Integrated Care, 2015). In order to cater to the increasing demand, the government has ramped up its efforts to allow for more residential care services. The total number of beds offered in institutional care has increased largely from 10,692 in 2012 to 12156 in 2014 (MOH, 2015), while the total number of elderly¹⁰ has increased from 378001 to 433518 (MOH, 2015). The percentage of beds per elderly has thus decreased slightly from 2.83% to 2.80%. Strong contributing factors are that of high opportunity costs for family members to stay at home and care for the elderly, as well as the convenience and familiarity of a care setting similar to that of being within an acute hospital.

Continuing with this trend however means that new infrastructure has to be continually built, manpower continually sought for and investment in technology has to be developed to sustain the increasing number of elderly. With the limited land area and lack of interest in entering the LTC job market, this proves to be an uphill task. Furthermore, if not properly

¹⁰ Singapore residents only.

managed in the long run, residential homes may be developed into a 'dumping ground' of sick and immobile elderly individuals

Low Utilization of Community Care Services

Apart from the high reliance on residential care services, there is a low utilization of community care services (excluding care from foreign domestic workers). Through the extensive interviews conducted, we have drawn out a similar trend of thought. The fragmentation and segregated system of services provided, inadequate services, and lack of flexibility in choices accompanied by a weak case management system have contributed to a continual reluctance of usage of LTC services. Furthermore, many are unaware of the various community care services available.

The fragmentation of services occurs in instances of a division between medical care versus social services (Teo et al, 2003). Even though there is the presence of case management where case managers at AIC help with the process of assessment and planning of the elderly individuals who require LTC services, it is still inadequate in terms of attaining the objective of integrating medical and social help – partly due to the lack of manpower and partly due to the lack of overall coordination. The Senior Care Centre (SCC) attempts to solve this fragmentation of services by integrating facilities of the day centre to provide both social and health care services. Furthermore, in order to promote coordinated services, Singapore has also introduced the Singapore Programme for Integrated Care for the Elderly (MOH, 2013). In order to tackle the weak case management system, AIC has also launched the Aged Care Transition Programme since 2008, which is set up in acute hospitals and community hospitals. This has seen a decrease in readmission rates from 8.9% in 2008 to 5.9% in 2012 (Agency of Integrated Care, 2015). However, case management still has to be further enhanced to allow for the flexibility of matching various options for the LTC services provided. Community services provided as of now are also insufficient in terms of the capacity levels and lack flexibility in terms of matching different types of services required. Even though research has shown that community care services are generally more cost-effective and allow the elderly to integrate back into his/her living environment more effectively, the uptake is still low. As such, the government is thus shifting to boost the presence of community care facilities, aiming to reach the target capacity of home 10,000 for home care by 2020 from 7,100 places in 2015 (Agency of Integrated Care, 2015). AIC is helping to facilitate capacity expansion through the Tote Board Community Healthcare Funding (TBCHF) and RHS-RF funding.

Comparison with Hong Kong's LTC System

Hong Kong faces similar issues as Singapore, if not more severe problems in terms of the high reliance on institutional care. In Hong Kong, the overemphasis on residential care services has undermined the government's "pledged principle of community care" (Chui E. W.-t., 2011). This is evident in the high institutionalization rates and underfunding of government expenditure on community care services. In 2015, the elderly population totaled approximately 1.12 million in Hong Kong (Census and Statistics Department, 2015). In comparison, 31,665 beds were available in all residential care services, be it care and attention homes or nursing homes (Social Welfare Department, 2015).

This gave a figure of 2.81% of beds per elderly, similar to Singapore's figure for nursing homes purely. This has however been insufficient to meet demand, given the long waiting time of 29 months (Social Welfare Department, 2015), compared to 4 months in Singapore (The Straits Times, 2012). In terms of government expenditure, residential care services received US\$295.3 million while community care services received only one-third of that amount, US\$97.7 million in 2009 (Chui E. W.-t., 2011).

Also, the case management system in Hong Kong is not developed in a full scale like in Japan and Germany, such that there is a lack of flexibility in the matching of services. It currently operates by the standardized care need assessment mechanism for elderly services, where assessors can vary from social workers, nurses, occupational therapists and physiotherapists. (Social Welfare Department, 2016). Recently, the voucher system has been introduced to tackle this problem and allow for an increased choice for services and to develop private market.

That being said, the strengths in the provision of LTC services include high locational coverage and a diversity of services. This allows for elderly in all areas to have access to LTC services. The community support is also higher since most of the initiatives are ground-up. This corresponds to a higher take-up rate of community-care services.

Box 2: Comparison with Hong Kong case

6.1.2.4 Quality of Care

According to WHO, the quality of care of LTC services is determined by two major factors - namely the type of care that is provided and the lack of integration with healthcare services (World Health Organization, 2015). Similarly, the way the LTC sector is currently funded, organized, provided and delivered impacts greatly on the quality of care in Singapore.

Here, we identify three areas which hamper the quality of care. They are (I) an uneven playing field between private and VWO providers with regards to funding, which affects capacity outcomes; (II) uncoordinated and poor integration among long term care providers as well as between long term care and the primary and acute healthcare sector both administratively and at the points of use that affect coordination outcomes and (III)

shortage of manpower, which affects capability outcomes. This links to the three main issues we have pointed out above.

At the same time, an overarching problem that also impacts quality of care exists - the lack of overall regulatory body and standards. This is in line with the WHO finding where the quality of care across the world is undermined by the lack of effective regulations and standards (World Health Organization, 2015). Two main reasons are highlighted to explain the lack of overall regulatory body and standard in Singapore.

Firstly, it is unclear which entity carries out the work to assess whether the services provided are up to certain standards. Intuitively, Ministry of Health would act in the role of a regulator to audit the providers on a regular or yearly basis. However, frequency of these audits is unclear due to knowledge gap resulted from insufficient literature.

Secondly, it is unclear what quality indicators the providers should uphold as the government is still in the process of understanding the operational issue in providing services. Aside from the Enhanced Nursing Home Standards, the rest of the ILTC service providers do not seem to have explicitly drafted or available service guidelines. For example, service providers under centre based care are lumped together regardless of their purposes. The same holds true for home care services provided. This raises questions about the uniformity of service quality standards within and across the LTC sector.

6.1.3 Policy options and recommendations - LTC Provision and Delivery

To tackle the above-mentioned problems, we propose the following recommendations to be considered.

6.1.3.1 LTC Capacity

The decision of the development of LTC capacity has to be made by first determining who the providers should be. As such, we look at a government-led and market-led system at the extremes, as well as a mixed system and the respective roles they play. We propose three policy options as follows:

- 1) A government-led system
- 2) A market-led system
- 3) A mixed system

Option 1 - Government-led system

In a government-led system, we propose that the Singaporean government will take the lead in expanding LTC services and determining the proportion of services providers among the government, VWOs and private sector. The features of this option are described as follows:

- Government take the lead in LTC expansion – Based on the state's projection and planning, the government will decide where to establish LTC services centres, the number of service providers required, as well as allocate and determine the budget and manpower. This option is feasible in the context of Singapore, where the government already has the ease of access to necessary information.
- Government imposes standards on LTC services – The government will allocate the individual to various services according to a stringent criteria process. Factors taken into consideration include the individual's health situation, mean-tested income, residential areas etc. As the services provided are run by the government or VWOs, they will be regulated in terms of LTC price setting, the types of compulsory LTC services that should be provided, the management of LTC discharge plans and standard for quality of care.
- Private sectors run LTC services with limited assistance – Private sectors will continue to operate LTC services based on the market share they are able to capture. The state will provide limited assistance for private service providers. As observed from Hong Kong's LTC system, which is dominated by the state, there will be a segmentation of groups of the elderly where high income earners or elderly individuals who are unable to wait for long waiting queues will choose the private service providers. On the other hand, the low income to middle-high income earners will mostly opt for public LTC.
- The voluntary group will continue to provide services – The VWOs will receive funding from the state and charity providers in order to operate LTC services for all income groups. Hence, there is a need for the government to collaborate closely with VWOs to provide compulsory trainings, manpower and resources needed.

Option 2 - Market-led system

In a market-led system, we propose that the private service providers will expand LTC services based on future LTC demand by responding to the market. The features of this option are described as followed:

- Private sectors take the lead in LTC expansion – Since the elderly population is projected to rise to 18.7% by 2030, we expect the private services providers to see a potential market and thus have an incentive to establish LTC services earlier to further capture a greater market share. With increasing competition, we foresee that the private providers will innovate and improve on the LTC services provided (such as technological

improvements) and deliver a higher quality of care. This option allows for a greater diversity of services and an increased freedom of choice.

- Government will impose regulation – The LTC price will be determined by the demand and supply of the LTC services, where the market mechanism will function to allocate consumers to the service providers according to their preferences and ability to afford them. However, the government should put in place clear regulations on the standard of care and take action for cases of abuse.
- The VWOs will continue to provide services– This option will lead to a clear market segmentation, where the elderly who can afford the private services will pay for them. On the other hand, elderly from the lower income tiers who are unable to afford private care can still seek assistance from VWOs. These VWOs will then have to continually rely on funding from charities and government.

Option 3 - Mixed System

In a mixed system, we adopt the combination of the two above-mentioned policy options. Like the government led system, the state will determine the proportion of services to be provided but gives choices to individuals and allows for flexibility in matching the various LTC services provided. Similar to the market-led system, the private sector then runs the LTC services with some assistance from the state in terms of funding. The private sector will still engage in active competition and have to continually improve the range and quality of services in order to capture the market share. The voluntary sector works similarly to the private sector, but by providing services mainly to the lower-income groups while receiving funding from both the government and charity organizations.

A scan across the spectrum places Hong Kong closer to that between a government-led system and a mixed system and Netherlands closer to that between a mixed system and market-led system. In Hong Kong's case, it was noted that many elderly individuals opted not to stay in the private residential care homes because of the low quality of care. This reflects the potential of the private sectors not having sufficient funding to match up to the services that the government and VWOs can provide. In Netherlands's case, the satisfaction of individuals increased since emphasis is placed on the users' choice.

6.1.3.2 Evaluation of Policy Options – LTC Capacity

After looking through the policy options with regards to LTC capacity, we should evaluate them based on the following four criteria:

- Equity – Whether all groups of people can access the services with similar standards
- Efficiency – The allocative and technical efficiency of the system in producing required outputs with available resources
- Sustainability – Whether quality and quantity of services can be maintained in the long-term
- Political acceptability – Whether stakeholders' interests contradict largely depending on trade-offs

The evaluation matrix is shown below:

Criteria	Government-Led	Mixed System	Market-Led
Equity	High	Medium	Low
Efficiency	Medium	Medium	High
Sustainability	Medium	High	Medium
Political Acceptability	Medium	High	Low
Rank	2	1	3

Table 4: Evaluation of Policy option in LTC delivery

In terms of equity, the mixed system is rated at a medium level since the market forces are partially at work and the elderly who have low-income levels may not be able to afford the premium services that may be more conducive for their rehabilitation. This is as opposed to the government-led system where the government is able to decide who gets placed in which facility depending on their conditions and subsidizes them for it.

In terms of efficiency, the mixed system also scores a medium level since the government has a say in terms of the proportion of services to be provided and may cater services that will benefit a larger group at the expense of efficiency where resources may not be efficiently allocated. This is in contrast to the market-led system since we assume the market will efficiently allocate individuals to the respective care services.

In terms of sustainability and political acceptability, the mixed system ranks high since all stakeholders, be it the government, VWOs or the private operators, have an incentive to keep the system in check and have their interests represented.

6.1.3.3 LTC Capabilities

In order to deal with the shortage of manpower, one can either focus on strategies that aim to increase the bulk of manpower, decrease the load or increase productivity levels; or choose a combination of all 3.

In order to increase the manpower pool, incentives prove to be a useful measure. Pay levels for LTC staff can be further increased, coupled with training and a more structured career path. This measure has been undertaken by both Germany and Hong Kong. In the case of Singapore, the Family Medicine residency can be tied more tightly to a career in the LTC sector for doctors. For nurses, more avenues can be provided for retired nurses to assist in the LTC sector since they have the relevant skills and expertise. It would be useful to then set up a training facility to provide the necessary and relevant upgrading courses for these individuals. Germany, for instance has free educational and training courses available, aimed to boost the skill levels and to increase the recognition of the LTC profession.

In terms of decreasing the load, there can possibly be an increase of responsibilities to the family. Incentives can be provided to families to take care of the elderly. For instance, caregiver grants either in the form of increased subsidies for foreign domestic workers or payouts to family members who provide care can be disbursed. In Germany, cash allowances are provided to family members if they attend training courses. Certainly, preventive measures of early intervention can also help to decrease the load but this would require a wider system intervention of improving the current primary care sector and to build on the case management system to decrease readmissions or instances of worsening conditions that could have been better prevented.

Finally, in terms of increasing productivity levels, investment in technology can be made such that attention can be spread across more elderly individuals within a facility. Not only that, simple processes that occur regularly can be made more time-saving. Also, LTC professionals at different levels (doctors/nurses/allied health) should work in teams to ensure that a patient is provided with the necessary treatment required, instead of rendering different treatments that may prove to be repetitive or unnecessary.

6.1.3.4 LTC Coordination

To increase the flexibility that the elderly can have in terms of choosing their services, the case management system can be further enhanced via regulation. This will help to reduce the reliance on residential care services and to increase the use of community care services. As such, there is a need for the government to develop partnerships with not only voluntary welfare organizations, but also the private sector to better address these challenges.

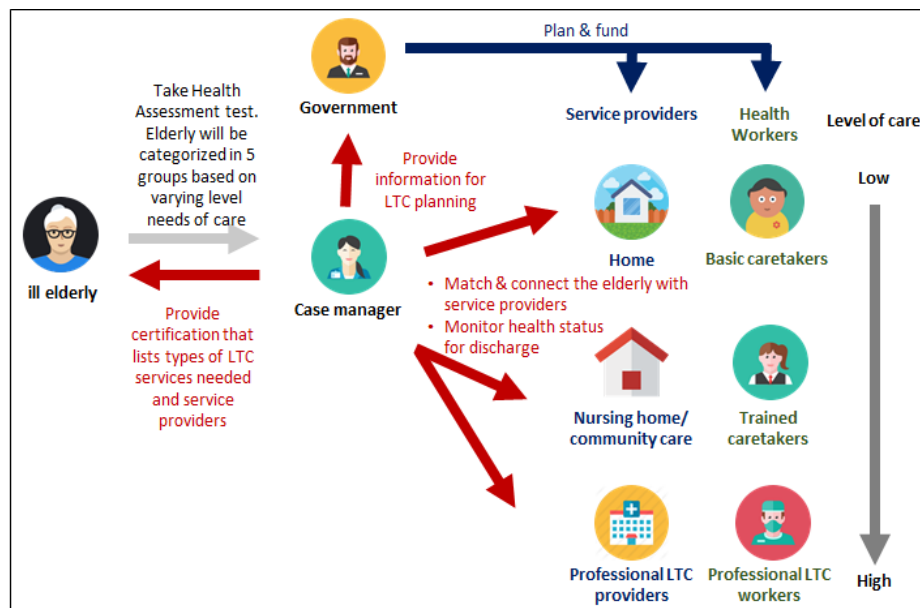


Figure 14: Japan's case management system

From the literature review, countries that are implementing case management system are Germany, Japan, Hong Kong, and Netherlands. Potential candidates for Singapore to look at are the ones from Japan and Netherlands.

Between the two, we recommend the Japan Case Management System to improve LTC management and coordination in Singapore because (I) Japan have successfully adapted the Germany case management system and implemented for quite sometimes and (II) Netherlands' case management system is very new due to its reform recently took place in January 2015. Moreover, in our interview with Professor Alfred Chan from Hong Kong Elderly Commission, he believed that an *"ideal case management system for Hong Kong should resemble the Japanese case management model in which case managers play important role in analyzing the needs of care and arrange best-fit care services catering to needs."*

The figure above shows the Japan's case management system. We recommend importing and adapting to fit with Singapore's LTC context. In this system, the case manager, who a professional care worker, will conduct a health assessment of the eligible persons based on the ability to carry out daily activities, cognitive ability, financing ability and other relevant areas. They will then be categorized into five groups, where each group has varying level of dependency and needs for living and care arrangement. This way, the case manager will be able to determine the level of care for each beneficiary and match specific needs to the service providers (hospital, institutional care) and out-patient caretakers (care at institution and at home). At the same time, the case manager forwards the information of beneficiaries to the local government to facilitate LTC planning decisions. In Singapore's case, this can be to the various family/elderly service centres. The practice reduces unnecessary reliance on LTC services and leverage simple nursing tasks to external caretakers (OECD, 2013). It is important to note that the Japanese government require the case manager to have at least

5 years of clinical experiences and must pass necessary exams and training to acquire national care manager licenses. (Watanabe, 2013)

6.1.3.5 Quality of Care

Although outcome measures are perceived to be the best measure of quality of care, regulations in many countries have focused more on structure. This is so because structure indicators are tangible and it is easier to collect data for measurement. For instance, UK and Japan are focusing more on the structure than processes and outcomes (Ikegami N. Ishibashi T. & Amano T., 2012). This has resulted in criticism that the quality of care becomes suboptimal and does not necessarily reflect the needs of society. Given this, we recommend Singapore LTC to look at all three indicators, while recognizing methodological challenges in data collection.

Structure indicators

We recommend that the quality of care be self-regulated by service providers. In this regard, service providers are responsible for monitoring their processes and operations to ensure the quality of care at their own premises. This includes hiring qualified staff, conducting frequent staff training and carrying out regular evaluation of the organization's performance. Suggested key indicators service providers need to comply with in addition to the indicators stated in the Enhanced Nursing Home Standards are as follows:

Manpower qualification, training & ratio

Nurses play an important and increasingly larger role in providing care to the elderly. A typical nursing home employs a mix of professional nursing staff and nonprofessional staff (Sloan F.A. & Hsieh C.R, 2012). Nursing staff include professional nurses, licensed practical nurses and nurses' aides, who provide direct care to patients, such as helping them with basic activities of daily living. It includes eating, dressing, bathing, toileting and walking. In the context of Singapore, professional nurses are commonly known as registered nurses (Ministry of Health, 2014). Registered nurses also provide in-house training for the nursing aide staff. They deal with medical emergencies, sometimes until a physician can be consulted.

Since they differ greatly in terms of their education levels and training backgrounds, they are imperfect substitutes for one another. Therefore, nursing homes are recommended to employ all three categories of nurses. On average, the nursing ratio is recommended to be 1 resident to 1.5 nurses. Of which, 10% should be registered nurses, 20% should be licensed practical nurses, and the remaining 70% should be nurses' aides.

Size & design of premise

The size and design of the premise of care facilities also have to be further studied. From an organizational visit in Hong Kong, the way space is utilized is very important. It does not only affect the adequate provision of personal space and privacy, but also affects the manpower needed, where good spatial design allows nurses to work more efficiently. For example, we picked up on the use of mirrors in the common area inside the room where nurses conduct small group meeting, so they can still monitor what the residents outside the room are doing.

The equipment use is also designed to maximize nurses' productivity. The pictures below illustrate how technology and elderly-friendly design could improve LTC services. From left to right pictures, the first picture shows the elderly resident room where each elderly individual is assigned to a different bed with bright bed sheets, helping them to easily recognize their bed from a color. The second photo shows an elderly toilet where handle and seat are provided to prevent them from falling. The third photo reveals a uniquely designed table that the elderly has to take some time in getting up, allowing caretakers to take time to approach the elderly before he/she moves around. The fourth to sixth photos show how simulation games and equipment with different motions and color can be used to stimulate the elderly's sense of functioning. The seventh photo shows a bottle containing different spices to stimulate the sense of smell. Lastly, the eighth and ninth photos show a portable blood-pressure monitoring and elderly exercising machine in a fitness room.

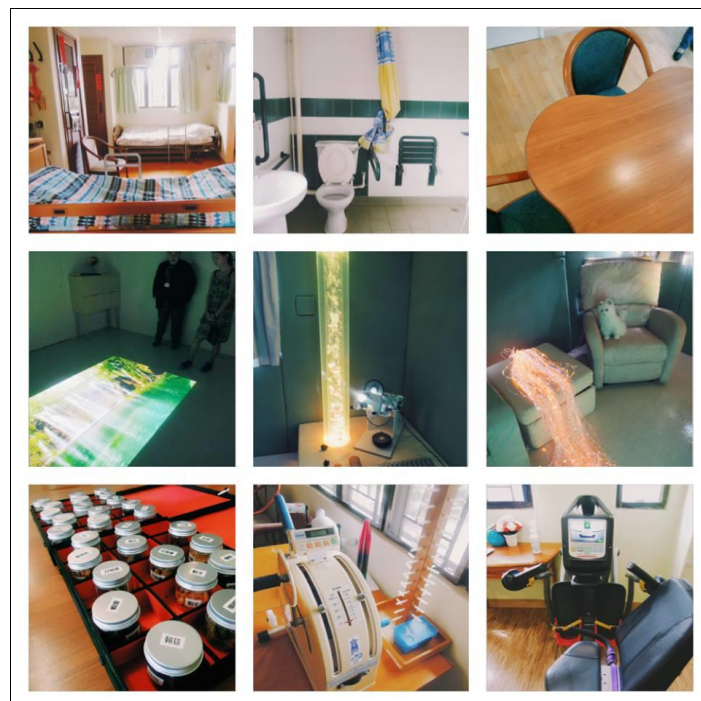


Figure 15: Organizational Visit to Dementia Care in Hong Kong

Process and Outcome indicators

Although service providers are recommended to be the responsible for the quality provided, the government should still take on the role as an inspectorate to ensure the service providers fulfil their obligations. This means the government asides who collect the quality assurance report done by the providers should conduct both announced and unannounced inspection visits to the actual premises. This practice is seen in countries like UK and Hong Kong. In the UK, nursing homes must be inspected twice a year by health authorities (one visit unannounced) by law (Care Standard Act 2000, n.d.). As for Hong Kong, the license for operating the facilities can be revoked if the organization is found to have continually failed to meet the quality standards.

From our organizational visits in Hong Kong, we learnt that both public and private providers are required to submit reports on an annual basis. It ranges from basic statistics like the staff ratio and the number of beneficiaries or clients they have served to financing statistics like operation cost. The survey measures performance in various areas including (i) number of elderly membership (ii) elderly attendance (iii) numbers and turnover of active counselling case (iv) elderly's satisfaction on facilities and services (v) involvement of the elderly in planning and implementing activities (vi) stress reduction and (vii) network expansion.

In addition to disclosing this data to the government, the service providers are inspected through surprise visits from various agencies like the fire department and social welfare department. In an interview with the Jockey Club Centre for Positive Ageing (a private provider of care for dementia patients), the manager mentioned that there have been multiple cases where licenses have been revoked, with a significant number being private service providers.

Upon reviewing practices in various countries, we believe the role of an inspectorate should be carried out by one independent body instead of multiple agencies. This independent body should focus on collecting and analysing data, monitoring quality of services through announced and unannounced inspection, penalizing facilities that breach the standards and publishing relevant data and helping public to make sense of it. They also have to work closely with the Ministry of Health and to advise the Agency for Integrated Care on the necessary changes to be made to regulation. Further elaboration on the exact way in which the inspection rating can be carried out can be found in appendix C.

6.2 Financing

6.2.1 Issues of LTC financing system

We identified three critical issues of the LTC financing systems as follows:

Pioneer Generation Package - Not a long term solution

In 2014, the government established an S\$8 billion Pioneer Generation fund, which will be catered to the elderly Singaporean (over 65 years old) born before 1949. All pioneers are entitled to outpatient care discounts, Medisave top-ups and life-long subsidies for MediShield Life. The scheme is eligible along with the Community Health Assist Scheme (CHAS) (Singapore Budget, 2014). Even though the Pioneer Generation Package has been lauded for providing the elderly with their deserved assistance, critics are doubtful of the financial sustainability if this is done for the long-term as well as of its ability to encourage successful ageing.

The cost of the policy is projected at S\$9 billion. However, it is difficult for the government to acquire funds for new beneficiaries because approximately one million baby boomers will turn 65 in foreseeable years (Low, Interview on LTC in Singapore, 2016). In addition, a long-term solution does not only involve increasing the spending levels, but also improving the coordination of the healthcare system, providing appropriate incentives to various stakeholders and changing mindsets and norms to support active ageing. (Low, Population Ageing Requires Adaptive Responses, Not Just Technical Ones, 2012)

Increasing public financial burden to meet future needs

The increasing LTC expenditure may impose threats to financial sustainability. The Ministry of Health projects that the elderly population will rise from 11.8% in 2015 to 18.7% in 2030. With a similar growth rate, we project that the LTC expenditure will rise from S\$260 million in 2011 to S\$1,160¹¹. At the same time, the old age support ratio will fall from the ratio of 4.8 to 2.1 persons. With an increasing expenditure and a decreasing support ratio, the working population and government are thus expected to take more responsibility in LTC financing.

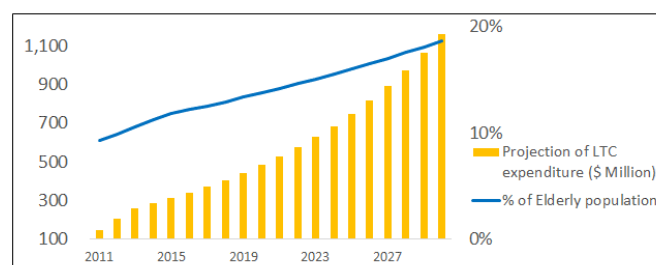


Figure 16: Projection of LTC expenditure

¹¹ The projection assumes that LTC expenditures grow at the same rate of elderly population growth at 6%. It uses the annual inflation rate 3% which is the average-10-year inflation rate in Singapore (World Health Organization, 2015)

Burden on current individual expenditures

Even after deduction from subsidies provided, the current LTC cost incurred is still high for individuals. At present, the Ministry of Health allocates subsidies for the low income group to use LTC services at community hospital, residential homes (nursing home) and community based services (including community health centers and home care).

In the table below, we estimate that the cost of LTC expenditure after subsidy deduction still stands at about 44% of the income in the case of residential home, followed by 30% for community hospital and 20% for community based care. The amounts are still considerably high for low-income individuals. The detailed calculation and sources are in appendix D.

	<div style="display: flex; justify-content: space-between; align-items: center;"> Low Affordability High </div>					
Household per capita monthly income	Residential Home		Community Hospital		Community Health Center	
	Subsidy level	Proportion of Cost on income (after subsidy deduction)	Subsidy level	Proportion of Cost on income (after subsidy deduction)	Subsidy level	Proportion of Cost on income (after subsidy deduction)
\$0 - \$700	75%	43%	75%	30%	80%	18%
\$701 - \$1,100	60%	53%	60%	37%	75%	18%
\$1,101 - \$1,600	50%	44%	50%	31%	60%	19%
\$1,601 - \$1,800	40%	42%	45%	32%	50%	19%
\$1,801 - \$2,600	20%	44%	40%	27%	30%	27%
Above \$2,601	0%	37%	20%	24%	0%	14%

Table 5: Estimation of proportion of LTC cost (after subsidy deduction) on household per capita income
Source: Author's calculation

It is worth noting that the government is becoming more favorable for LTC community based care. This is seen in comparatively higher subsidy levels provided at community care and the introduction of using Medishield to pay for LTC services.

Lessons learnt from Hong Kong: LTC Financing

The LTC system in Hong Kong relies heavily on the government. The Social and Welfare Department (SWD) subsidizes 80% of service costs for public providers through tax and non-tax revenues. This figure is considered substantial as the tax rate in Hong Kong is only 15%. Unlike Japan and Singapore, the uses of Hong Kong LTC services are not mean-tested, but instead LTC services are provided to all elderly, including the healthy ones. Such practice is not seen in Singapore.

The high coverage of beneficiaries has however led to the over-reliance and excess demand in LTC services. Since high income earners and healthy individuals are also eligible for subsidized public LTC, the problem of moral hazard arises where elderly opt for the services provided regardless of health status. This is reflected in the high institutionalization rate of 7% in Hong Kong for residential care services, as compared to China (1%), and Singapore (2.3%) (Research Team - The University of Hong Kong, 2009). The health experts in Hong Kong have thus recommended that the Hong Kong LTC system should undergo change to enable the elderly to live independently as much as possible.

Firstly, in order to reduce moral hazard, the system should only cover the vulnerable elderly whose health and physical status puts them in need of daily activity support. The care services provided should also be mean-tested to eradicate the overconsumption from high-income earners. Secondly, the government should encourage retirement saving and provide health education for the working population, which will help them to age more healthily and independently. However, we recognize that increasing retirement saving will be more difficult due to people's expectation from the current government and the refusal to change the status quo. Thirdly, the government is currently piloting the voucher system to pay for LTC services. This voucher system has several advantages including enhancing individuals' choice and consumption; driving competition among service providers to improve quality of LTC delivery; incentivizing caregiving from family members, thus promoting the elderly to be taken care at home and controlling for irrelevant consumption that is not relevant to LTC service (The author's field visits in Hong Kong, 2016)

Box 3: Lesson for LTC Financing in Hong Kong

6.2.2 Consolidation of issues

The figure below consolidates problems of LTC financing in Singapore, the potential policy solutions, and issues that the policy options should recognize. The potential policy solutions include the reduction of the number of beneficiaries at expensive LTC services, the lowering of prices of LTC services and the increasing support for the elderly. We will formulate policy options based on the potential solutions, Singapore's healthcare principles and lessons from Hong Kong's LTC system.

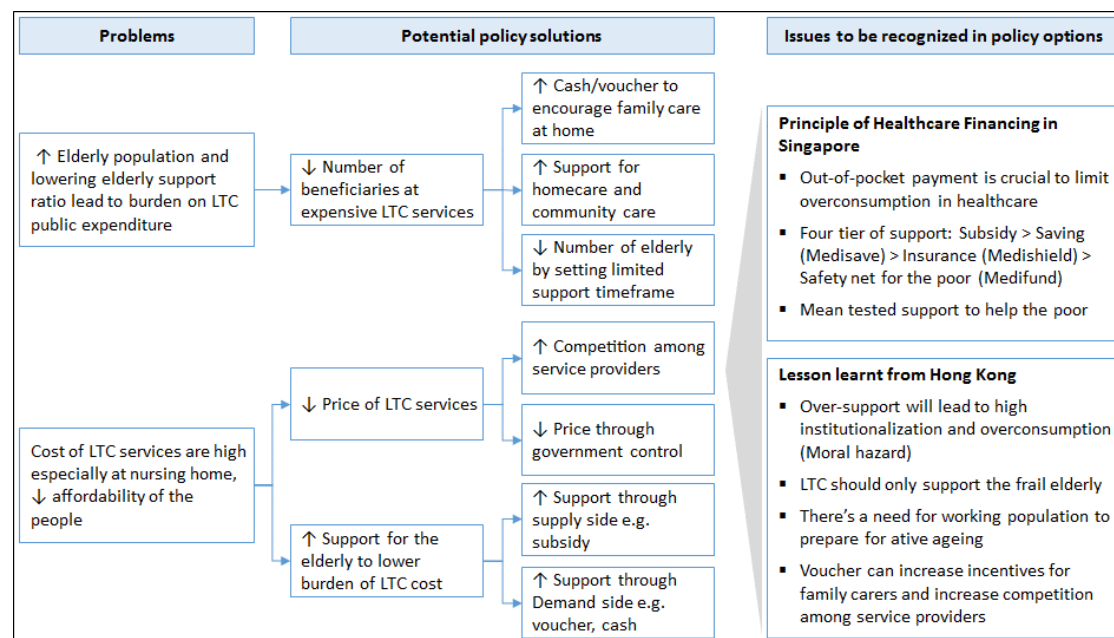


Figure 17: Consolidation of LTC financing issues and potential policy solutions

6.2.3 Policy Options – LTC financing

To address LTC financing challenges Singapore, we propose three policy options as followed:

- 1) A modification of Eldershield
- 2) An increase in CPF payout
- 3) A modification of Hong Kong's tax based system

Option 1 – A modification of Eldershield

In this policy option, we recommend a modification of Eldershield to cover LTC services at public institutions. At present, Eldershield serves as disability insurance scheme, providing a fixed monthly income (S\$400) for a maximum of 72 months. We propose the modification of the scheme as follows:

- Expand the coverage of Eldershield to cover LTC services at public LTC providers – This requires an extension of eligible criteria for the potential beneficiaries. As such, not only the disabled persons but also individuals whose health conditions require a certain level of assisted-daily living (ADLs) should be eligible for Eldershield payouts. The beneficiaries would then be able to use the Eldershield payouts at public LTC services such as public community care services and public nursing homes. Such an extension will allow an increase in LTC coverage, the preservation of individual's choice to a certain level of freedom (within public services) and will encourage competition among service providers while potentially improving the quality of care among public providers.
- Adjust payout amount – Instead of maintaining a fixed payout amount at S\$400 per month, the individuals should receive varying amounts based on their income levels, the amount of insurance premium paid and the severity of ADL needs. The payout should then be inflation adjusted to reflect the real cost of services. The government will also assist in providing greater payouts to elderly with low-income levels but high needs.
- Allow payout in form of cash and voucher – Payout should be made in a mixed form of cash and voucher. Cash payouts could allow more flexibility to incentivize family carers and purchase basic necessary consumption that may not be LTC services such as food; while the voucher system can promote consumption of LTC services and in turn help to increase competition among service providers.
- Enforce default enrollment and increase insurance premiums – In behavioral economics, the default enrollment solves the issue of an individual's inertia to opt-in to a program. This is also ideal since they are less likely to opt out of the scheme. This can increase enrollment rates and enhances population's risk pooling. The individuals should also increase premium levels while the government should increase LTC funds, to match up to an increasing expenditure.

In summary, the strategy of this policy option emphasizes on increasing support for the elderly and reducing the number of beneficiaries at expensive LTC services via using cash payouts to pay for the services of caretakers.

Option 2 – An increase in CPF payout

In this policy option, we recommend that the government tops up CPF levels after retirement to enable market-based solutions, to increase competition and to empower consumer choices. We propose the scheme as follows:

- Increase top-ups of CPF payment after retirement – This policy option requires individuals to increase CPF contribution levels, and therefore be eligible to receive higher CPF payouts after their retirement. This will also allow the individuals to choose their LTC services based on their preferences of type of services (be it in residential care or community care facilities), price and service providers. The elderly can also use the payouts to purchase private insurance and to hire foreign domestic workers. The increased cash payouts will also potentially promote competition among LTC service providers while maintaining a mechanism to prevent overconsumption of LTC services because out-of-pocket payment is required.
- Increase CPF contribution and government fund – To meet increasing payouts, both individuals and the government will have to increase their CPF contribution through higher CPF contribution rates and a larger government budget allocation. This will allow for risk-pooling within the family and for the government to manage these CPF funds specifically required for LTC services in advance as well.
- Maintain assistance for the low income groups – Since CPF has an element of being mean-tested, it is important for the VWO to continue supporting the welfare of the lower-income elderly who do not have high CPF contributions.

In summary, the strategy of this policy option emphasizes on increasing support for the elderly to lower the burden of LTC cost.

Option 3 – A modification of Hong Kong's tax based system

In this policy option, we recommend adapting the Hong Kong tax-based system with a modification to the Singapore context. We propose the scheme as follows:

- Adopt tax-based financing and increase LTC community care centers – The government will finance the establishment of community based care services as well as to subsidize LTC services via tax financing. This policy option focuses on community care services because it provides the cheapest and long-term solution for LTC services compared to nursing home and community hospitals. The community care services provided in community care facilities, similar to Hong Kong's, can be funded by the government and operated by social workers. The centers will only support the frail elderly based on their

health assessments results to prevent over-consumption while individuals whose health conditions do not require daily assistance on a long-term basis should continue to depend on their own budget for community hospital or short-term nursing home services.

- Increase tax rates and government funds – To meet the increasing expenditure level, the government has to increase tax revenue from the working population as well as to allocate a larger budget to LTC expenditures.
- Encourage use of voucher – Similar to option 1, this option encourages the use of voucher to increase competition among service providers. The amount of voucher should be mean-tested and reflect the level of ADL needs. The main benefit will be the allocation of direct subsidies to individuals to use LTC services provided by public providers

In summary, the strategy of this policy option emphasizes on reducing the number of beneficiaries at expensive LTC services and increasing the support for the elderly to lower burden of LTC cost.

6.3.4. Evaluation of policy options

We employed four criteria to evaluate the financing policy options as follows:

- Equity – Whether the policy option take into account an equal distribution of the benefits conferred.
- Effectiveness – Whether the policy option can effectively address financial issues from the standing of both people and public sector. Concurrently, the policy option should also preserve individuals' choice as well as incentivize service providers to improve their LTC service quality.
- Financial sustainability – Whether an increase in financial revenue is likely to meet LTC expenditure in the long term, without placing excessive burden on any one stakeholder.
- Political acceptability – Whether the stakeholders' interests contradict largely, looking at the various trade-offs

Our evaluation revealed that Option 1 – Modification of the Eldersshield is the most favourable policy option for the following reasons:

Criteria	Modification of Eldersshield	Modification of CPF	Modification of HK system
Equity	High	Low	High
Effectiveness	Medium	High	Low
Financial sustainability	High	Medium	Low
Political acceptability	Medium	Medium	Low
Rank	1	2	3

Table 6 – Evaluation of financing policy option

Option 1 achieves a high score under the equity criteria because the government assists the low-income individuals further according to their LTC needs even though it adheres to a co-payment system (a core value of the Singapore's healthcare system) with the presence of risk-pooling. On the contrary, option 2 is ranked lower on the equity criteria because the low-income-individuals whose incomes are not low enough to receive VWO's assistance will have a lower ability to contribute to CPF and thus receive lower pay-outs. Option 3 on the other hand also achieved a higher score in terms of equity because it is a tax based system and all tax payers are bounded to receive subsidized LTC services.

Option 1 receives a medium-high score in terms of effectiveness. This option addresses financing difficulty by acquiring both contribution from people and public sector. It also preserves the individual's choice to choose service providers and enhance competition of the service providers through the use of a mixed cash and voucher system. However, the 2nd option receives the highest score because it allows for the use of LTC services provided by both the public and private operators and gives more flexibility with cash hand-outs to incentivize family carers. This in turn maximizes the choices of the beneficiaries. The 3rd option has the lowest score because it fails to account for the heavy burden on the working population and government. In addition, the forms of benefits (voucher and system) are stricter than the other two options.

Option 1 scores the highest in terms of financial sustainability because it enables a higher level of individual contribution and risk-pooling from the family and population level, such that the state does not bear the entire burden. Option 2 requires the government to increase funding to a large group of middle-low income individuals who may not be able to increase their CPF contribution. Option 3 has the burden largely falling on the government, such that it may not be sustainable in the long run and may in turn produce adverse effects in terms of high reliance on public LTC services.

Finally, both option 1 and option 2 have a medium level of political acceptability because the individuals are involved in co-payment and do directly incur cost, along with the government's top-up. All stakeholders thus have to bear the burden.

In conclusion, policy option 1 – modifying the current Eldersshield scheme is the most preferred.

6.3.5. Recommendation on LTC Financing

We recommend option 1 – modifying the current Eldersshield scheme while infusing certain ideas from policy option 2 as follows:

- Modify the coverage of Eldersshield – As stated in policy option 1, we recommend extending the Eldersshield scheme from the disability insurance to cover the use of LTC services. The individuals can use the payout, in the form of cash and voucher, to cover LTC expenses at LTC public service providers, including community care services, community hospital and public nursing home. The use of voucher can promote competition in services and quality of care among the service providers while the use of cash can incentivize family carers and can be used to purchase basic necessities.
- Allow segmentation of population for payment and financial benefits – Payment to the Eldersshield and payouts should be inflation adjusted and segmented by three criteria - (i) the needs of assisted daily living (ADL) that reflect the individuals' age and health condition (ii) availability of family support and (iii) income level. In this regards, the government should continue to support the low income individuals who are unable to afford Eldersshield premiums. To enable segmentation, we recommend enhancing the Case Management program so that the case manager can scrutinize the health status and an individual's financial situation upon their enrollment for LTC benefits.
- Promote higher savings/increase CPF contribution levels– We recommend that the Singapore government should urge individuals to contribute more their CPF account. This recommendation is adopted from option 2, where a higher cash payout from CPF upon retirement would allow for greater flexibility and enhances individuals' choices in making decision for the usage of LTC services. To help with encouraging savings, the government could exploit behavioral insight such as the "Save more tomorrow" program where the employers require the individuals to set aside higher saving only when their future salary increases. The scheme addresses hyperbolic discounting and loss aversion of the individuals since they are likely to overestimate their ability to save in the future and will not feel like their money is taken away today.

- Enforce mandatory participation at 40 years old – Initially, the enforcement of the modified Eldershield scheme should be based on an opt-out scheme, which gets around the issues of inertia, in order to increase the participation levels. This is also seen in Germany where 90% of the population is covered for LTC services under the mandatory participation in a public health insurance scheme. At the same time, the 10% top tier income earners can choose to opt for private insurance. The Singapore government may thus implement a similar scheme by enforcing mandatory participation at 40 years old to pool the risks of the entire population. The top tier income earners will also have the choice to purchase private insurance in addition to the Eldershield.
- Impose clear capped amount and set standardized prices - The government should impose a clear capped amount and require co-payment from the individuals to prevent overconsumption and moral hazard. At the same time, the government should set a standardized price of LTC services so that individuals can access the information and benchmark the quality of service providers, improving transparency levels and reducing the problem of asymmetric information.

7. CONSOLIDATION OF PROPOSED LTC POLICIES

7.1 Consolidation of policy issues and recommendation

LTC issues	Recommendation	The role of government, private sector and voluntary organization
Capacity (Infrastructure) <ul style="list-style-type: none"> Inability to scale up rapidly Uneven playing field for public and private providers 	Choosing between the Government-led vs. Mixed Market vs. Market-led system	(G) Determine ratio of services; fund VWO/private sector (P) Run LTC services; Innovate/cut-cost (V) Run LTC Services
Capability (Manpower) <ul style="list-style-type: none"> Shortage of manpower Heavy reliance on foreign domestic workers 	Increase manpower bulk & Decrease patient load & Increase productivity levels	(G) Allocate & regulate manpower, standardize training (P) Recruit, train and pay caretakers (V) Organize voluntary caretakers / informal care
Coordination <ul style="list-style-type: none"> High reliance on residential care services Low utilization of community care services 	Enhance the case management system & Develop partnerships across all stakeholders	(G) Regulate case management system (P) Work closely with case managers & integrate care services (V) Same as private sector
Quality of Care <ul style="list-style-type: none"> Capacity, Capability and Coordination issues that hamper quality of care Lack of overall regulatory body and standards 	Self-regulation while complying to key indicators Establish an independent body as inspectorate	(G) Determines standards & assists in regulation (P) Ensure compliance and continually innovate (V) Ensure compliance and continually improve
Financing <ul style="list-style-type: none"> An increasing elderly population and lowering elderly support ratio lead to burden on LTC public expenditure Cost of LTC services are high especially at nursing home, reducing affordability of the individuals 	Extend Eldershiel to cover LTC at public service providers Promote family care & competition of service providers using cash & voucher Default enrollment	(G) Modify Eldershiel to increase coverage, pay-out and premiums (P) Establish administrative system with government and improve standards (V) Promote informal care through cash and voucher

Figure 18: Consolidation of policy options, recommendation and the role of stakeholders

7.2 The role of the public sector, private sector and people sector

LTC capacity – The government plays a pivotal role in funding and regulating LTC service providers for both the private sector and VWOs. While VWOs should continue to receive block grant from the government, we recommend partial funding should also be given to private LTC service providers to create a more level playing field. This should then assist private providers to tackle the high start-up cost levels and to continually innovate and engage in improving service quality. In terms of regulation, the government should determine the types and ratio of services so that a greater diversity of services that can efficiently cater to various groups of elderly is available in the market. At the same time, they need to ensure that consumers have choice. To create competition and heighten

quality of care, the government should also mandate service providers to share data and comply with inspection and the publication of results.

LTC capabilities – While the people sector should organize pools of voluntary caretakers and promote informal care, they should also actively adopt technology to aid their staff in delivering better quality of care in a more cost effective manner. The private sector should continue to be engaged in the latter goal as well. Both the private and people sectors should not only conduct regular training in house, but should also collaborate with each other to exchange knowledge and expertise. In order to increase the manpower pool, the government should act as a funder and regulator. As a funder, the government should increase scholarship places for students to take degrees in, i.e. elderly nursing and social work, while as a regulator, the government should allocate manpower strategically, standardize training, and regulate pay levels in order to incentivize people to enter the LTC profession.

LTC Coordination of care – To enhance coordination and develop strong partnerships across all the stakeholders, the government should strengthen the mechanism of the case management system. This includes establishing a database platform that synchronizes information among patients, service providers, community and government, recruiting and training more case managers, as well as regulating mechanisms related to the case management system. This includes setting services fee and standards and adequately reviewing the patients' health status to promote discharge. In this case, the role of the private sector and people sector/VWOs would be similar to each other - to coordinate and work closely with the case manager to provide information of their LTC care services, prices, numbers of rooms and beds available as well as thoroughly understand their patients' health status.

LTC Financing – The public sector will take the lead on the implementation of the extended Eldersshield scheme. To modify the Eldersshield, the government will have to look into the actuarial system to calculate insurance premiums and payout levels, taking into account the different population segment in terms of health status, family support and income. The government will have to enforce default enrolment to ensure financial sustainability. At the same time, the government should also promote higher pension savings via CPF contribution. The role of the private sector would be to emphasize on establishing administrative systems to accept the use of LTC voucher, while continually improving on the availability and quality of LTC services. Concurrently, the community should promote informal care from the family and assist in improving standards of domestic workers via the use of cash and voucher. It is important to note that the recommended financing scheme would allow for LTC services to be affordable while encouraging the elderly to live at home and within their communities as much as possible.

8. CONCLUSION

Our report has identified key challenges that the Singapore's LTC system faces in the areas of provision and financing. Under the provision umbrella, we have categorized the issues according to capability, capacity, coordination and quality of care. Drawing upon policies and practices from other developed countries, as well as from our interviews with experts in both Singapore and Hong Kong; we have proposed recommendations in each of the above-mentioned areas.

In order to deal with delivery and provision issues, the government should adopt a mixed system to develop the capacity of LTC infrastructure. At the same time, measures should be taken to increase the manpower bulk, decrease the patient load and increase productivity levels to ensure the LTC capability is met while not comprising on the quality of care. The case management system also has to be further enhanced to allow for greater coordination among different stakeholders in the LTC market. Increased levels of regulation, transparency and accountability should also be put in place to monitor and strengthen the quality of care. On the other hand, financing should be looked at by segmenting the population. Our corresponding recommendations would thus be to modify the coverage of Eldersshield and to promote higher and mandatory CPF contribution levels.

The success of these recommendations can only come about if the various stakeholders work together, in the form of a public-private-people partnership. It is thus necessary for the government to seriously consider the issues and key recommendation we raised in order to work towards a LTC system that can be sustainable, equitable and effective.

Appendix A – Interview compilation

Question 1: LTC definition (healthcare components should be covered & target of LTC coverage)

- **Component:** LTC should be provided on a continuous, regular basis and long term till the end of life. In other words, there is no end in the provision of service. Also, it should be holistic and cover a wide spectrum of care that includes not only health care, but also housing, health education, leisure and mobility.
- **Target:** While some believe LTC should be provided not only to elderly population but also those younger ones with stroke and disabilities that need the services, others believe it should only target the frail and vulnerable elderly. In particular, LTC should target those at the age of 75 years old mostly. As for those healthy elderly (age 65 years old and above), they should be allocated to public or private housing instead.

Question 2: The strength, bottlenecks and challenges of Hong Kong LTC

- **Strength:** Hong Kong's strength in the provision of LTC is the availability of LTC services close to home.
- **Bottleneck & Challenge:** Several bottlenecks and challenges are identified in the Hong Kong LTC system. They are the high cost levels, underdeveloped private market, high reliance on government for funding, manpower and insufficient retirement security, long waiting time, and quality of care.

Question 3: Strength/gaps of LTC facilities in terms of quantity and quality

- **Strength & Gaps of LTC in terms of quantity:** There is a split between those who view current quantity of LTC in Hong Kong as strength and gap. While Dr. Lam Ching-cho believed strength of LTC is related to high locational coverage and high diversity of services, Prof. Alfred Chan Cheung-ming felt that the quantity is being undersupplied as evidenced from long waiting queue. Currently, proportion of residential care outnumbers that of community care. Prof. Yuen Pok-man, Peter viewed that the building of more homes will just make the system more unsustainable. Quantity of LTC in Hong Kong is without a gap. The gap is related to care not being customized to meet different demands of the consumers and their families yet.
- **Strength & Gaps of LTC in terms of quality:** From our interviews, there are more gaps than strength in term of quality. Dr. Lam Ching-cho and Prof. Alfred Chan Cheung-ming shared similar view that the quality of care at public LTC services (provided by VWOs) is decent and transparent with good control and cheaper in price. However, both of them expressed concerns about the quality of care at private settings. Cares provided by private service providers are lower in standards if compared to the publics. This is in agreement with Prof. Yuen Pok-man, Peter and Prof. Lieu, Geoffrey Sek Yiu who believed that quality of care in Hong Kong is very much hampered by the lack of coordination and integrand of both services offered by both public and private providers as well as manpower.

Question 4: Ways to improve provision/delivery

- **Ways to improve provision/delivery** can be done through regulation. According to Prof. Alfred Chan Cheung-ming, both wage and standards of care should be improved. More training should be given to those involving in care profession. Currently, the Hong Kong government acts as a policy maker while NGOs provides training and workshops. The training system in his view should be under government's approved system. Additionally, the government should encourage innovation and customization in LTC services while regulating the standards of care should provide funding based on an interview with Prof. Yuen Pok-man, Peter.

Question 5: LTC responsibility sharing among the public, private and people sector. Ways to incentivize each player to improve quality of LTC services and promote LTC discharge.

- **Role of the Public, Private, and People** should remain the same as current status where the government is subsidizing the service providers (VWOs) according to Prof. Yuen Pok-man, Peter. However, Prof. Alfred Chan Cheung-ming believes that there should be a tweak to existing role sharing which he suggested a combination of 20% public contribution, 50% private contribution and 30% people contribution (family and subsidized community care).
- **Incentives** to improve quality of LTC services suggested to be both demand and supply side driven. On the demand side, the consumers should be empowered to pick and choose LTC services best meet their own needs and preferences. Dr. Lam Ching-cho believes that the government should play a major role in getting the voucher system works in order to realize such outcome. And to promote LTC discharge, both Dr. Lam Ching-cho and Prof. Alfred Chan Cheung-ming share similar view that a proper case management system is in need in order to build a a system that sync services to correspond with specific needs. Also, timeline and step-down care should be enforced. For example, the residential care services should only take the elderly who are in needs of 24-hour-care. It will have maximum staying term of 1 – 1.5 years. After that, the elderly will be in transitional care by professional caretakers before releasing to family caretakers.

Question 6: Performance of case management system in Hong Kong. Application of the Japanese case management to incorporate to Hong Kong case management.

- **Performance** of case management system in Hong Kong is there. However, according to Prof. Yuen Pok-man, Peter there is more room to improve the implementation and management of the system. While Prof. Yuen Pok-man, Peter felts the Hong Kong case management system needs to be improved, Prof. Chow Wing Sun, Nelson thought that the system is doing fine. As for Dr. Lam Ching-cho, he described both pros and cons of the current Hong Kong case management system. While the team could provide customized services to the elderly, the team has limited research expertise and manpower. This calls for voucher system for the elderly so they can purchase these services.
- **Application** of the Japanese case management to incorporate to Hong Kong case management is building case managers. In Hong Kong, there are only social workers who deal with crisis and accidents. The elderly gets in touch with LTC services through direct contact or referral of social worker or doctors. In fact, there are no case managers in Hong Kong due to shortage of manpower according to Prof. Alfred Chan Cheung-ming.

Question 7: Improvement of financial sustainability of LTC to meet future demands. Mix of contributed by the public, private and people sector.

- **Improvement** to ensure financial sustainability of LTC should be done in three ways by incorporating elements of co-payment from consumers, saving, and streamline financing toward community care rather than residential care. Prof. Alfred Chan Cheung-ming believe that current challenges in financial sustainability is (1) the working population pay tax (as low as 15%) but the elderly reap benefits of LTC (2) a socialist system makes every elderly receive equal supports regardless of their income level. No mean-tested is imposed currently. To deal with such challenges, he suggested the system should take into account of co-payment from family and community care services, adopt mean-tested to provide different support for people with different income level, and encourage individual to save for retirement more. To him, the contribution should be 20% public contribution, 50% private contribution and 30% people contribution. Dr. Lam Ching-cho shared similar view with Prof. Alfred Chan Cheung-ming in terms of encouraging people to increase saving toward retirement as current retirement provident fund is insufficient. Prof. Yuen Pok-man, Peter took a rather different stance. To him, it is tough to get people to contributory system because they are not used to it. Therefore, it is not viable in the context of Hong Kong due to political difficulties. Instead of

asking the people to save, he believed the government should be the one to save. When there is a surplus, the surplus should be channeled into an earmarked fund for LTC to ensure sustainable provision. Because financing is currently too geared toward supporting residential policies, he thought it should move towards supporting for community services. This is to ensure more cost effective use of financing.

Question 8: Ways to ensure equitable distribution based on suggestions in question 7

- **Ways to ensure equitable distribution** is through mean-tested voucher.

Question 9: Current challenges of LTC manpower. what could be the incentives for carers, who provide the incentives, and how to improve the standards of carers?

- **Challenges of LTC manpower** were fleshed out in previous questions. To solve the issue in manpower, Prof. Alfred Chan Cheung-ming suggested co-caring system where elderly will not only rely on professional caretakers but also family and neighbor carers. To implement this, there has to be case management system that dissects level of care. For example, family, neighbor or children carers could perform simple tasks, such as housekeeping and age-watch (observing the elderly and making sure they are in safe environment). This will leverage burdens from professional carers.
- **Incentives** suggested by Prof. Alfred Chan Cheung-ming are targeted to family members to share responsibility of elderly care. Ways to incentivize family members are flexible working hours, encouragement and title recognition of hard work, or small cash grants to compensate loss of income. It is important to not make incentives as an income (job replacement) because it will destroy the relationship between the carers and the elderly. For Dr. Lam Ching-cho, a voucher system should allow hire of family members and this encourages workers to take care of their parents. Currently, Hong Kong is also pilot a project of carers allowance as well.
- **Standards** as suggested by Dr. Lam Ching-cho are for government to set qualification framework for training system. The training should be funded by government or could be refunded as the carers who start working. Prof. Yuen Pok-man, Peter believes that most manpower has statutory licensing regulation but it could be too strict. To him, many roles do not need highly qualified people. These roles require more generalists to help with planning of activities, arranging hospital trips, social life improvements etc. Therefore, there is a need to form a new breed of carers.

Question 10: Suggestion on optimal regulation/management model to enhance quality standards, cost effectiveness and financial sustainability of the LTC system. Describe the stakeholders and collaboration in need.

- **Regulation/management model** to enhance quality standards can be done through case management, customized services, and greater care coordination. Prof. Alfred Chan Cheung-ming suggested the following on case management:
 - The case manager analyzes the services that address needs of the specific elderly. The case manager then connects the elderly with LTC services and regularly tracks them to promote LTC discharge.
 - The LTC services specify maximum term that individuals could be taken care. It then passes the elderly to step-down care and family care eventually.
 - The caretakers could take form of professional, family, neighbor and children carer – each perform different tasks depending on the needs of the elderly under a “skill regulation system”. The training for caretakers should be standardized and provided under approved system. Wage of professional carers should be increased. While incentives for informal carers such as flexible working hours, title recognition, small cash compensation should be provided as recognition of hard work instead of strong monetary incentives which will change nature of relationship.

- Dr. Lam Ching-cho thought model to enhance quality standards should be through customized services that combine services of residential care, housing and other sectors.
- Prof. Yuen Pok-man, Peter called for greater care coordination among agencies through restructuring of institution. To him, there should be a merge of the Food and Health Bureau with Labor and Welfare Bureau. This is to minimize separation and maximize better understanding of the overall long term care system instead of stretching the A&E system. Doing so will result in all stakeholders being grouped under the same umbrella and under one budget. Currently hospital authority under Food and Health Bureau while nursing care under Labor and Welfare Bureau, for example.

Question 11: The future of residential and community care service. How should the government regulate to ensure the standard of care?

- Prof. Chow Wing Sun, Nelson envisions **residential care service to be lesser than community care service in the future**. The trend will continue to become a formalize community care service. He thought the reliance on family will not be feasible and the formalized community care is not going to be a cost cutting alternative of residential care either. Two quotes from the interviews are extracted below:
“Don't expect the family to perform informal care anymore. Time is gone for the family to do all sort of things. We have to accept the reality that most couples have only either they have no children at all or have one or two.” “Formalizing the care costs money. I meant the cost is very high. Don't imagine that the community care is a cheaper choice. It may be more expensive than residential or institutional care when we have to provide.”
- How the government should regulate to ensure the standard of care as suggested by Prof. Alfred Chan Cheung-ming is through a “skill management system” which resembles Australian’s model of Qualification Framework. It is when individuals are trained or care services in each level e.g. Level 1 – Basic housekeeping, age watch, Level 2 – Assisted living in daily life Level 3 – Basic nursing care, Level 4 & 5 – Professional services provided by trained caretakers

Wrap up: The latest development of LTC in Hong Kong? Is there any debates coming to your attention?

- Ageing in place: Leverage care services at home and community as much as possible to reduce resources burdens on public services.
- Self-care training: Every citizen in Hong Kong will know how to take care of their health in order to prepare young generations to age healthily.
- Dementia care: Citizen should understand and know how to provide basic care for persons with dementia.
- The elderly service care plan provided by the elderly commission. This care plan delivers to the customized needs.

Interviewers’ notes

- Not all responses of our interviewees are similar. Some of the responses are of conflicting with one another and at time are of conflicting with our literature review.
- We postulate that such is due to our respondents carry their own institutional views strongly. For example, Prof. Chow Wing Sun, Nelson is one of the pioneers of current case management system in Hong Kong and therefore, his view about the performance of case management system may differ from that of other respondents. In the same vein, Prof. Alfred Chan Cheung-ming and Dr. Lam Ching-cho hold senior positions in the Elderly Commission, a policy making body of LTC that is affiliated with the government of Hong Kong.

Figure 19: Consolidated Interviews in Hong Kong

Question 1: LTC definition (healthcare components that should be covered & target of LTC coverage)

- **Component:** LTC includes all types of care services excluding acute care services. LTC will cover a wide continuum of care including disability care, terminal care and even social support.
- **Target:** Prof Dennis believes the target group should be limited to high potential utilizers.

Question 2: The strength, bottlenecks and challenges of Singapore LTC

- **Strength:** Mr. Ong Yunn Shing sees friction in the system as a strength, so people don't have an overreliance on residential services since the focus is on successful ageing and the use of LTC residential services should be seen as a last resort.
- **Bottleneck & Challenge:** Prof Dennis sees disorganized efforts of service providers where each organization has its own executive autonomy depending on their manpower and financing capacity. As a result, they provide services selectively (focusing on high-demand services or services that can charge at higher prices). Hence, we need to find minimum standards of services and regulate the quality control. However, if we mandate too tightly, the service providers will close down because they don't have sufficient resources and manpower to provide all types of services. Dr. Wee Shiou Liang sees the problem with the low income individuals that miss the cut-off and have to rely on acute care and community hospitals with higher prices instead. Professor Gerald identified the challenge being the ability to catch up with demand and the type of services to be provided. Furthermore, there is a need to identify the different between caregiver support and patient support.

Question 3: Strength/gaps of LTC facilities in terms of quantity and quality

- **Strength:** Prof Gerald views a strong government support that keeps up with the demographic change, while Dr. Jennifer Lee describes an increase in collaboration across ministries and service providers to improve quality of LTC services.
- **Gaps:** Prof Dennis sees gaps as the over-demand and under-supply of LTC service providers. Dr. Wee identified gaps in complementing the formal and informal care system, which can be tackled with a referral system and to increase awareness of LTC services. He shares that many people who use community services may not actually use them.
 - Home care services: people only use 40-50% for the first time
 - Nursing home services: people use 80-90% for the first time

Mr. Ong highlighted the cheap cost of the acute care sector as a gap, so people will exploit the system and just send the elderly to the hospital. Dr. Jennifer Lee further describes the uneven playing field between the private and public sector.

Question 4: Ways to improve provision/delivery

- **Ways to improve provision/delivery** can occur via redesigning services in a way that that i) increases utilization rate ii) promotes education on LTC and health diagnosis iii) designs education and financing system to complement what is currently being provided iv) allows flexibility to launch a combination of services e.g. dementia care at home v) develops the quality of care metric and makes them transparent vi) enhances nursing home standards (Dr. Wee). Prof Dennis concurs with the need to set a standard framework for the quality of care while providing more LTC training and increasing the number of caretakers. Dr. Jennifer Lee adds the need to look at the circumstances and constraints to determine the coordination of

care services and synergies between residential and community care services, while keeping in mind the need to provide a wider range of options possible with flexibility for individuals to make choices of their preferred services.

Question 5: Performance of case management & issues with foreign domestic workers

- Dr. Wee mentioned the case management focuses on solving complicated cases when the elderly has many problems.
- Prof Dennis identified the issues with foreign domestic workers as the cultural difference. The elderly prefer caretakers who speak similar language and understands their cultural background. This problem can be partly resolved if more neighbours and local volunteers take part as caretakers. Prof Gerald saw that Singapore is still in need for foreign domestic workers to leverage the burden.

Question 6: Ways to improve financial sustainability & equity

- Prof Dennis and Dr. Wee proposed that payment should be proportional to the service received and subsidies should be provided upon means-testing. Prof Dennis further suggested that the EldersShield should be expanded to cover LTC services. He raised the challenge in providing allowance for a personal care budget – indicating the possible increase in competition among service providers but the potentially complicated audit process because people might not be spending on basic necessity. Prof Gerald suggested to not touch MediShield Life since it is designed to cover most of the healthcare needs and the government should review the ElderShield's annual expenditure to see whether the program is in surplus or deficit and to determine the average care expenditure per person. This will help the government to estimate future funds needed to top up the EldersShield. Mr. Ong raised that there is currently charity dollars and MOH has to be careful not to intervene excessively. Dr. Jennifer Lee then suggests looking at package fees.

Question 7: Challenges of LTC manpower

- According to Prof Gerald, we have a shortage of manpower and need to rely strongly on family carers and domestic workers. The government can then provide caregiver supports in terms of subsidies that help to lessen the burden of out-of-pocket spending. Other type of supports that make elderly care easier for caretakers can also be introduced e.g. providing rehabilitation to the elderly before passing the role onto caregiver, social and psychological supports for carers, etc. There may also be a need to push for further remuneration for family physicians, geriatricians etc. Mr. Ong suggests changing the training to hospitals and to better brand LTC jobs to encourage more manpower.

Question 8: Improvements to the coordination of care services

- Prof Dennis suggests getting general practitioners to lead in the LTC sector and for community care services to tap onto the community networks and provide in-house services as "anchor providers". In order to launch this, there is a need to expand the capacity of the organization. Mr. Wee echoed this thought in terms of building services that are integrated with the community and to train foreign domestic workers and family members further. This will help to discharge the elderly from the acute care setting and focus on transitional care instead. Prof Gerald highlighted the use of technology to solve complex care cases, improve efficiency and collaboration between stakeholders.
- At the same time, aging in place should be redefined (Prof Gerald). There should be more emphasis on social support and home modification. We should then promote the elderly to

live in their neighborhood with their family instead of relocating them to build elderly villages. Mr. Ong then suggests injecting more day care services into estates such as at void decks, as well as to integrate senior and child care centres. Prof Dennis further incorporated the notion of elder care requiring both healthcare and social needs. This means initiatives such as encouraging elderly to stay with their family by allowing for flexible leave, providing training and incentives to neighbours and family members should be introduced.

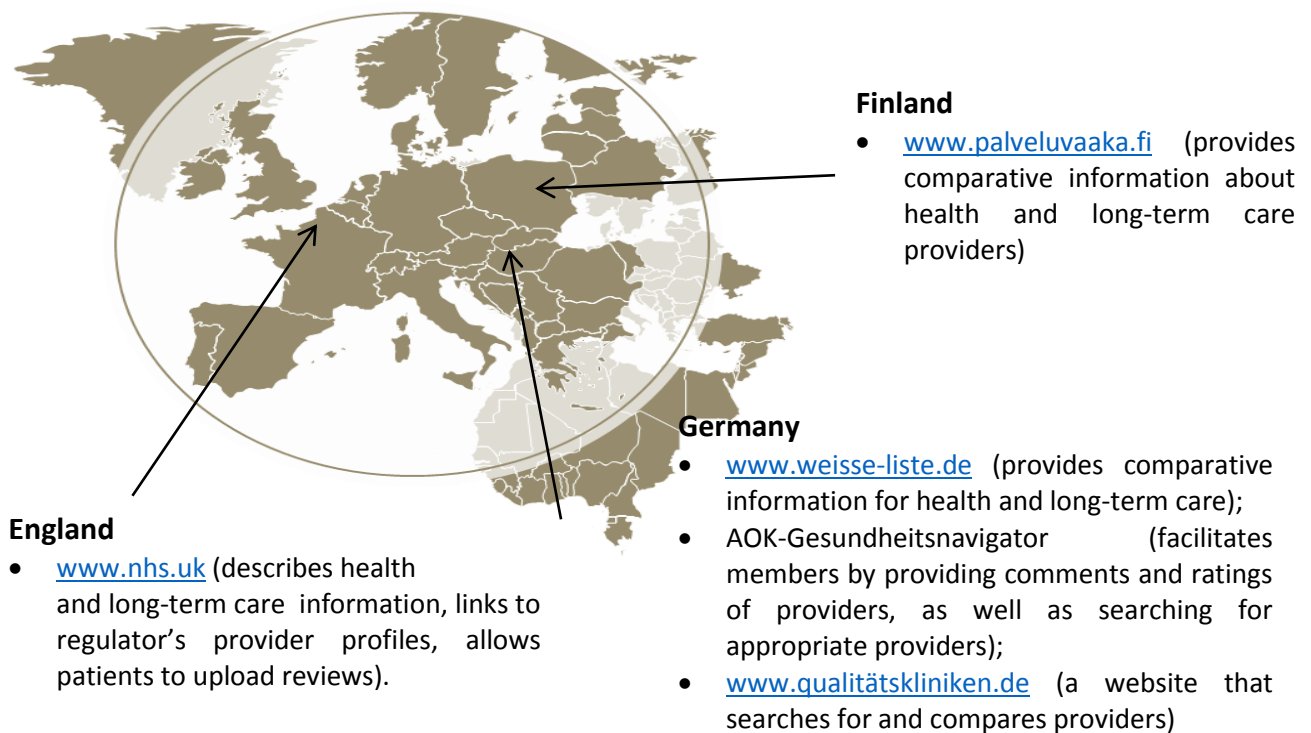
Figure 20: Consolidated Interviews in Singapore

Appendix B – List of Services and Corresponding Charges, AIC 2015

Category	Type of Service	Price Range (low)	(high)
Home Care	Meal Delivery	4	6.1
Home Care	Escort Service	3	85
Home Care	Ensuite Package	2.7	30
Home Care	Home Therapy (PT/OT/ST)	100	
Home Care	Home Nursing	60	
Home Care	Home Medical	140	
Home Care	Hospice Home Care	100	150
Day Care	SPICE	64	70
Day Care	Senior Activity Centre	Free	
Day Care	Hospice Day Care	10	15
Day Care	Day Rehabilitation Centre	700	1200
Day Care	Social Day Care	250	600
Residential Care	Nursing Home	1200	3500
Residential Care	Shelter/Community Home	400	700
Residential Care	Inpatient Hospice	7000	
Residential Care	Community Hospital	110	360
Respite Care	Nursing Home Respite Care	?	
Respite Care	Centre-based Weekend Respite Care	36	70

Appendix C – Quality of care

After reviewing how data is being compiled and how quality of care is reported to the public in UK, Germany, and Finland, we selected the one used in England where the quality of care is being reported through a combination of traffic light colours, ticks and crosses as shown below. We recommend this as it is easy for the public to comprehend and digest information when comparing and choosing service providers for the elderly.



What our icons mean		Close
<h3>Inspection ratings</h3> <p>We rate most services according to how safe, effective, caring, responsive and well-led they are, using four levels:</p> <ul style="list-style-type: none"> ☆ Outstanding – the service is performing exceptionally well. ● Good – the service is performing well and meeting our expectations. ● Requires improvement – the service isn't performing as well as it should and we have told the service how it must improve. ● Inadequate – the service is performing badly and we've taken enforcement action against the provider of the service. ● No rating/under appeal/rating suspended – there are some services which we can't rate, while some might be under appeal from the provider. Suspended ratings are being reviewed by us and will be published soon. <p>> More about ratings</p>	<h3>Ticks and crosses</h3> <p>We don't rate every type of service. For services we haven't rated we use ticks and crosses to show whether we've asked them to take further action or taken enforcement action against them.</p> <ul style="list-style-type: none"> ✓ There's no need for the service to take further action. If this service has not had a CQC inspection since it registered with us, our judgement may be based on our assessment of declarations and evidence supplied by the service. ✗ The service must make improvements. ✗ At least one standard in this area was not being met when we inspected the service and we have taken enforcement action. <p>> More about services we haven't rated</p>	

Figure 21: Inspection Rating in UK

Besides providing rating levels, the NHS also provides detailed explanations after each inspection as shown in figure 21 and 22. The website also provides general information such as the location of facilities to consumers, and allows for multiple facilities to be selected by various characteristics such as size, ownership or specialized services. There are also reports that compare the selected facilities in terms of staffing levels, inspection results and quality measures.



Figure 22: Example of a rated facility in UK

Last updated 1 April 2016

We carried out this inspection under Section 60 of the Health and Social Care Act 2008 as part of our regulatory functions. This inspection was planned to check whether the provider is meeting the legal requirements and regulations associated with the Health and Social Care Act 2008, to look at the overall quality of the service, and to provide a rating for the service under the Care Act 2014.

This inspection took place on 18 January 2016 and was unannounced. It was carried out by two adult social care inspectors. Before the inspection, the provider completed a Provider Information Return (PIR). This is a form that asks the provider to give some key information about the service, what the service does well and improvements they plan to make. We looked at the information in the PIR and also looked at other information we held about the service before the inspection visit.

During the inspection we spoke with 24 people who lived at the home, two visitors and eight members of staff. We also spoke with three visiting healthcare professionals. The registered manager and operations manager was available on the day of the inspection.

We observed care practices and interactions in communal areas. We observed lunch being served. We looked at a selection of records which related to individual care and the running of the home. These included eight care and support plans, three staff personnel files, minutes of meetings and the medication administration system.

Figure 23: Example of inspection details

Additionally, a list of facilities' names being penalized and the amount they are penalized for is provided in the website. We believe this is a good case practice in giving signal to both the consumers and providers. This helps by (i) addressing the information asymmetric between consumers and providers, (ii) allowing consumers to select care providers more wisely, and (iii) pressurizing providers to meet standards due to pressure from both the government and market.

Data.Medicare.gov | Get started | Info | Developers | Search | SIGN IN

Penalties
A list of the fines and payment denials currently displayed on Nursing Home Compare.

Find in this Dataset | Manage | More Views | Filter | Visualize | Export | Embed | About

	Federal Provider Number	Provider Name	Provider Address	Provider City	Provider State
1	015019	MERRY WOOD LODGE CARE AND REHABILITATION CENTER	P O BOX 130	ELMORE	AL
2	015037	WOODLEY MANOR HEALTH & REHABILITATION	3312 WOODLEY ROAD	MONTGOMERY	AL
3	015053	CLEBURNE COUNTY NURSING HOME	122 BROCKFORD ROAD	HEFLIN	AL
4	015053	CLEBURNE COUNTY NURSING HOME	122 BROCKFORD ROAD	HEFLIN	AL
5	015060	TERRACE OAKS CARE & REHABILITATION CENTER	4201 BESSEMER SUPER HIGHWAY	BESSEMER	AL
6	015060	TERRACE OAKS CARE & REHABILITATION CENTER	4201 BESSEMER SUPER HIGHWAY	BESSEMER	AL
7	015076	FAIR HAVEN RETIREMENT CENTER	1424 MONTCLAIR ROAD	BIRMINGHAM	AL
8	015083	ELBA NURSING AND REHABILITATION CENTER, LLC	987 DRAYTON STREET	ELBA	AL
9	015091	NORTH HILL NURSING AND REHABILITATION CTR, LLC	200 NORTH PINE HILL ROAD	BIRMINGHAM	AL
10	015091	NORTH HILL NURSING AND REHABILITATION CTR, LLC	200 NORTH PINE HILL ROAD	BIRMINGHAM	AL
11	015103	ASHLAND PLACE HEALTH AND REHABILITATION, LLC	148 TUSCALOOSA ST	MOBILE	AL
12	015113	RIVER CITY CENTER	1350 FOURTEENTH AVENUE SOUTHEAS	DECATUR	AL
13	015114	SHADESCREST HEALTH CARE CENTER	331 WEST 25TH STREET	JASPER	AL
14	015128	NHC HEALTHCARE, MOULTON	300 HOSPITAL STREET	MOULTON	AL

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Figure 24: Example of facilities being penalized

In addition, state inspectors who are in charge of determining the nursing homes' quality should use information relating to quality measure performances to guide their inspections and focus on the aspects of the care process in which the facility appears to perform most poorly. In this case, we recommend the use of adjusted interRAI Long-Term Care Facilities Assessment System which quality indicators used to evaluate care are a combined of both process and outcome indicators. The interRAI Long-Term Care Facilities Assessment System (interRAI LTCF) is being used in many countries around the world such as Australia, Belgium, Canada, England, Finland, France, Germany, Iceland, Italy, Netherlands, New Zealand, Norway, Spain, Sweden and Switzerland. In Asia, Hong Kong, Japan and Korea are also using it (interRAI).

interRAI LTCF is both a clinical and functional assessment instrument that covers prevalence and incidence indicators as shown in a figure below.

Type of indicator	Specific indicator
Prevalence indicators	
1 Mental functions	Behavioral problem prevalence, Depression prevalence
2 Health problems	Bladder/bowel incontinence prevalence, Urinary tract infection, End of life infection (Pneumonia infection, STD infection, Viral hepatitis infection, Septicemia infection), feeding tube prevalence, low body mass index prevalence, inadequate pain management prevalence, pressure ulcer prevalence, Burns/skin tears or cuts prevalence.
3 Treatments and procedures	Little or no activity prevalence, antipsychotic prevalence, antidepressant prevalence, influenza vaccination prevalence, indwelling catheter prevalence, physical restraints use prevalence.

Incidence indicators

1	Physical functions	ADL decline, ADL decline following an improvement, ADL improvement, Locomotion worsening, Falls increase.
2	Mental functions	Cognitive decline, communication decline, Delirium new or persistent, behavioral problem decline.
3	Health problems	Bowel continence decline, bladder continence decline, weight loss, pain worsening, pressure ulcers worsening.
4	Treatments and procedures	New indwelling catheter

Figure 25: interRAI LTCF Indicator

Of these original interRAI LTCF, we recommend adjusted indicators to fit into current Singapore LTC development and context as shown in a figure below.

Area	Specific indicator	Weight
Safety	Falls incidence, injuries, neglect/abuse, Inadequate Meals	+
Cognitive/behavioral function	Depression prevalence, Cognitive decline, communication decline, memory, requiring supervision.	++
Physical function	ADL decline, ADL decline following an improvement, ADL improvement, Locomotion worsening.	+++
Medical status	Little or no activity prevalence, antipsychotic prevalence, antidepressant prevalence, influenza vaccination prevalence, indwelling catheter prevalence, physical restraints use prevalence, blood pressure, visual ability, weight Loss, dehydration.	+++

Figure 26: Adjusted Indicators for LTC in Singapore

Appendix D – Estimation of LTC expenditure for the individuals

1) Expenditure at community hospitals

LTC Expenditure at Community Hospital						
Household per capita monthly income	Income level for calculation	Assumption of ward	Median Exp at hospital in each ward	Subsidy rates at hospital	Subsidy amount	Out of pocket (Expenditure - Subsidy)
\$0 to \$700	700	C	842	75%	632	211
\$701 to \$1,100	900	C	842	60%	505	337
\$1,101 to \$1,600	1350	C	842	50%	421	421
\$1,601 to \$1,800	1700	B2	986	45%	444	542
\$1,801 to \$2,600	2200	B2	986	40%	394	592
\$2,601 and above	6000	B2+	1804	20%	361	1,443

Note

- Income level of \$6000 is monthly GDP per capita (Department of Statistics, 2016)
- The elderly's median expenditure in the hospital is used as an indicator of LTC expenditure at the hospital. We use median instead of mean expenditure due to a long tail distribution (Tilak Abeysinghea, 2010)
- Subsidy amount is indicated by MOH (Ministry of Health, 2013)

2) Expenditure at residential homes and nursing homes

LTC Expenditure at Residential services (Nursing home)						
Household per capita monthly income	Income level for calculation	Expenditure at residential services	Subsidy rates at residential services	Subsidy amount	Out of pocket (Expenditure - Subsidy)	Proportion of OOP on income
\$0 to \$700	700	1200	75%	900	300	43%
\$701 to \$1,100	900	1200	60%	720	480	53%
\$1,101 to \$1,600	1350	1200	50%	600	600	44%
\$1,601 to \$1,800	1700	1200	40%	480	720	42%
\$1,801 to \$2,600	2200	1200	20%	240	960	44%
\$2,601 and above	6000	2200	0%	-	2,200	37%

Note

- Charges of residential home range between 1200 – 3500 SGD/month. (Agency for Integrated Care, 2016) The average monthly expenditure at a residential home is 2,200 SGD.

3) Expenditure at community based care and home care

LTC Expenditure at Community Based Services and home care						
Household per capita monthly income	Income level for calculation	Expenditure at community based services	Subsidy rates at community based services	Subsidy amount	Out of pocket (Expenditure - Subsidy)	Proportion of OOP on income
\$0 to \$700	700	636	80%	509	127	18%
\$701 to \$1,100	900	636	75%	477	159	18%
\$1,101 to \$1,600	1350	636	60%	382	254	19%
\$1,601 to \$1,800	1700	636	50%	318	318	19%
\$1,801 to \$2,600	2200	848	30%	254	594	27%
\$2,601 and above	6000	848	0%	-	848	14%

Note

- The community based care and home care operates for 5 working days per week. We assume that the elderly with income lower than \$1,800 use the service usage at 3 days per week, while the elderly with income higher than \$1800 will use the services at 4 days per week.
- We estimate that the cost of using home care services per day is at \$53. The estimation comprises of i) 2 meals per day with an average price per meal of \$4 ii) average transportation cost of \$25 and iii) an ensuite service of \$20 per hour. (Agency for Integrated Care, 2016)

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