

Aging in Singapore

Implications for Long-Term Care Financing





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Table of Contents

Section 1: Background	4
1.1 Study Objectives	4
1.2 Methodology	5
Section 2: Population Trends	6
2.1 Current and future mortality and morbidity	6
2.2 Family Structure and Old Age Support	8
Section 3: Service Delivery and Financing.....	9
3.1 The Singapore Healthcare System in Brief	9
3.1.1 Service Delivery	9
3.1.2 Intermediate and Long-term care (ILTC)	9
3.1.3 Integration	9
3.1.4 Financing	10
3.2 New Developments In Response to Aging	13
3.2.1 Service Delivery	13
3.2.2 Financing	14
Section 4: Challenges for the ILTC Sector	16
4.1 Emerging gaps in access to and quality of care	16
4.2 Concerns about the adequacy and sustainability of financing	17
4.3 Physical and human capital constraints.....	18
4.4 Effective and efficient adoption of new health technologies	19
4.5 Increasing complexity and fragmentation	20
4.6 Rising caregiver burden on spouses and families	21
4.7 Low takeup of formal services vs inappropriate informal substitutes	21
Section 5: New Roles for Private Insurers	23
5.1 At the macro-level: Establish thought and research leadership.....	23
5.2 At the meso-level: Drive innovations in models of care and service delivery	24
5.3 At the micro-level: Educate consumers and support better decisionmaking.....	24
Section 6: Conclusions	26
References	27
About The Society of Actuaries.....	33

Section 1: Background

Singapore is an island state in Southeast Asia. Since achieving independence in 1965, it has experienced considerable economic prosperity, with average Gross Domestic Product (GDP) growth of a 5% per annum over the last 10 years (World Bank 2017). Indeed, Singapore boasts one of the highest GDP per capita among high-income nations (Statistics Singapore 2018): in 2017, Singapore's GDP per capita stood at US\$57,714.30, in comparison to US\$39,720.44 and US\$59,531.66 USD for the United Kingdom and United States respectively. Singapore's economic success has been partly achieved by continual investments into the development of the Singaporean workforce, with the government actively putting policies into place that would encourage the population towards greater education and productivity. In parallel, Singapore's government has also heavily invested in public health strategies and over the last few decades, has focused its efforts on designing a world-class health care system (Haseltine 2013).

Today, Singapore is one of the fastest aging populations in the world. With life expectancy currently in excess of 80 years and continuing to increase in the face of declining fertility rates, the percentage of citizens aged 65+ is estimated to double from 12.4% in 2014 to 24.0% in 2030, rising to more than 30% in 2050. However, even as lifespan lengthens, risk factors for ill-health (such as smoking and obesity) and chronic diseases such as diabetes and hypertension are becoming more prevalent.

Recent years have seen a rapid increase in both total and government healthcare expenditure, although the healthcare system is based on the underlying premise that citizens are responsible for their personal health and well-being and must co-pay for the health services they receive. As such, the system provides a mix of both public and private care with several tiers of service that are financed through a combination of designated savings accounts and government subsidies. While universal health care reforms driven by the public sector are in place, needs remain unmet, along with the ability to diagnose, treat and care for chronic illnesses. The underlying fiscal pressure of aging is likely to be further increased by more recent financing reforms relevant to the elderly population.

How will these trends, and potentially other still unforeseen economic, technological, demographic, social and policy changes affect the burden of care, financing needs and optimal resource allocation in the future? To date, the insurance industry has been mostly pre-occupied with repricing existing private health insurance products to contain the steeply rising costs of private hospitalization, rather than addressing broader issues of funding chronic care or holistic support for aging issues. In this environment, private health insurers experience a large amount of risk but also opportunity, in the midst of rapid change, to realize potential financial as well as social impact.

1.1 Study Objectives

As the initial phase of this study, an initial scoping review was performed to characterize disease and sociodemographic trends as well as trends in payments and insurance coverage, in order to provide background for further discussion the role of private insurance with key stakeholders in

this market. The review was intended to address the following two broad research questions: What are the current and future unmet needs related to aging in the Singapore population, and what can private insurers do to bridge these needs?

The specific questions the study addressed were:

- How will the incidence, prevalence and development of later-life illnesses evolve over the next decades for the population of Singapore?
- How has the supply of health care and financial services changed to meet these changing needs, and what impact has this had on access, cost and quality? What gaps in service delivery, financing or regulation remain that prevent the adoption of desirable new models of care?
- What avenues are available to private insurers to increase their relevance to the aged population, not just in terms of expanding the range of relevant product features, but also in other aspects such as funding infrastructure, engaging with service providers and improving consumer communications and awareness? What barriers and challenges in the insurance industry exist to taking up these avenues, in particular within the actuarial profession, and how can actuaries enable the development of new supportive solutions?
- What lessons from the experience of Singapore can be drawn for a broader audience?

1.2 Methodology

To address the research questions above, a search of peer-reviewed literature was first conducted such as PubMed and Google Scholar and the grey literature, including policy briefs and reports from the Ministry of Health and other agencies/non-governmental organizations, industry briefs, working papers, unpublished academic papers and technical reports. To supplement these, a search of articles in the popular press related to aging was also conducted.

Based on the initial review conducted in the first phase, key thought leaders were identified for interviews including government, senior management, actuaries from large locally-active companies, representatives of social care organizations, existing home care and delivery companies, patient advocates and voluntary organizations. A total of ten interviewees (see Appendix) were met in person by members of the research team and responded in their personal capacity. All quotes are attributed anonymously. The results were analyzed using thematic analysis and are presented in Sections 4 and 5 of the Report. Respondents also provided additional insights on the preceding sections and these observations were iteratively integrated into the discussion.

Section 2: Population Trends

2.1 Current and future mortality and morbidity

As life-expectancies rise and birthrates fall in Singapore, the population (a total of 5.64 million in 2018) is aging rapidly (Figure 1a and b). In 2018, the percentage of residents above 65 years of age peaked at 13.8%, increasing by 5% over the last decade (Statistics Singapore 2019). Many of these additional years are likely to be spent in good health: recent 2017 estimates from the Global Burden of Disease Study Group place Singapore at the top of the world for healthy life expectancy (HALE) for both men (72.6 years) and women (75.8 years) (GBD 2017).

At the same time, Singapore is completing an epidemiological transition from acute illness to chronic disease, contributing to a growing burden of disability. In 1940 mortality due to communicable diseases such as tuberculosis was the leading cause of death but mortality from cancer (29.7%), pneumonia (19.4%), ischemic heart diseases (16.7%) and cerebrovascular disease including stroke (6.8%) alone accounted for the majority of deaths in 2015 (Data.gov.sg, accessed 2019). Of the total 705,071 disability-adjusted life-years (DALYs) lost to mortality and morbidities in 2015, more than half were contributed by cancers (17%), cardiovascular disease (16%), neurological, visual / hearing / sense disorders (11%), and mental and substance abuse disorders (11%) (Lin et al. 2018). With aging in particular, a major concern are the individuals afflicted with multiple related conditions simultaneously: Picco et al (2016) place the prevalence of multi-morbidity in Singapore at 51% in the population aged 60 and above, associated with significantly higher healthcare utilization and costs.

Future projections from the existing literature suggest current trends in life expectancy and disability are likely to continue apace. In some projections Singapore is estimated to take only 27 years to transition from an 'aging society' in 1999 (7% aged 65+) to a 'super-aged society' (20% aged 65+) in 2026, beating rivals such as Japan, China, Germany and the United States (East Asia Forum 2015). By other projections, Singapore will have the world's oldest population in 2100 (with a median age of 56.4 years) (United Nations, 2013). Using the Future Elderly Model for Singapore, a dynamic Markov microsimulation model initially developed by the RAND Corporation for United States but adapted to the Singapore population, Chen et al(2019) forecast an increasing chronic disease burden in the population aged 55 and over from 2014 to 2050, with heart disease prevalence in this group increasing from 9 to 11%, diabetes prevalence increasing from 21% to 28%, and stroke prevalence from 5% to 7%. Correspondingly, disability related to activities of daily living (ADL) is projected to increase from 9% to 15% and IADL related to instrumental activities of daily prevalence is projected to increase from 23% and 32% respectively.

Figure 1a: Life Expectancy of Resident Population, Singapore

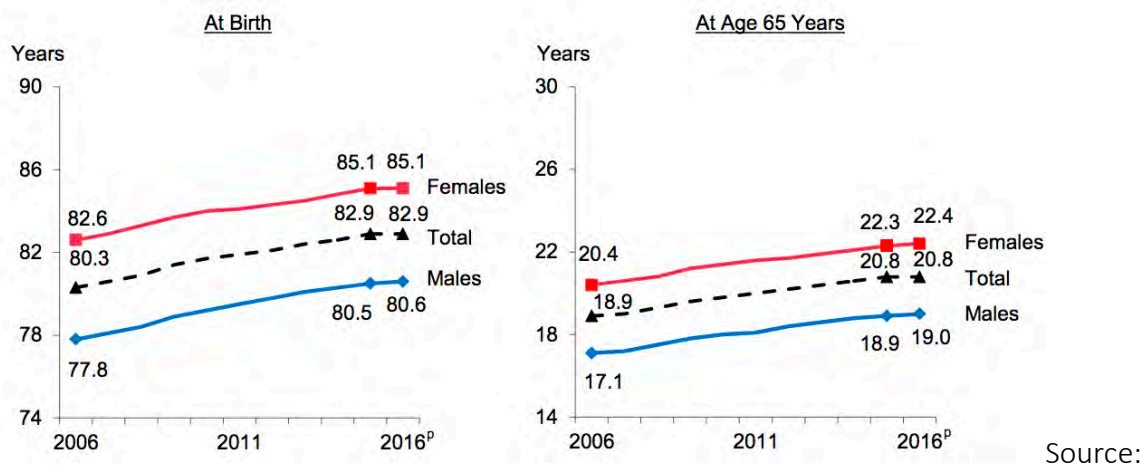
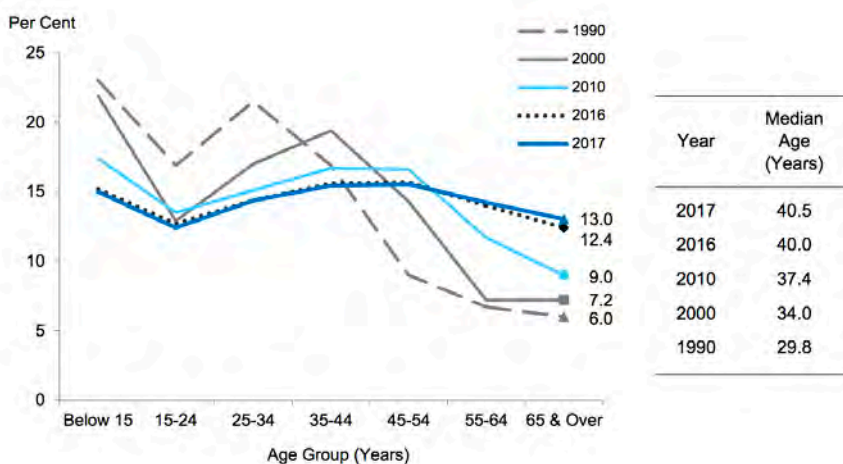
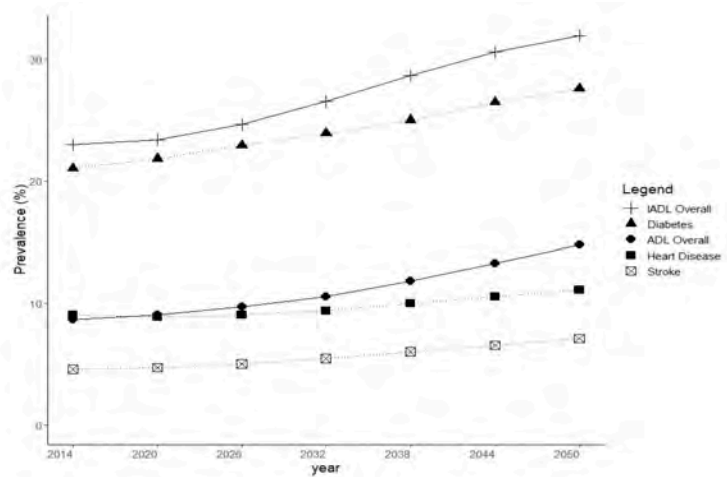


Figure 1b: Percentage of resident population by age, Singapore



Source: Singapore Department of Statistics, Population Trends 2017, last accessed on 29 November 2018 from <https://www.singstat.gov.sg/-/media/files/publications/population/population2017.pdf>

Figure 1c: Projected disease prevalence and disability for general population > 55 years old.

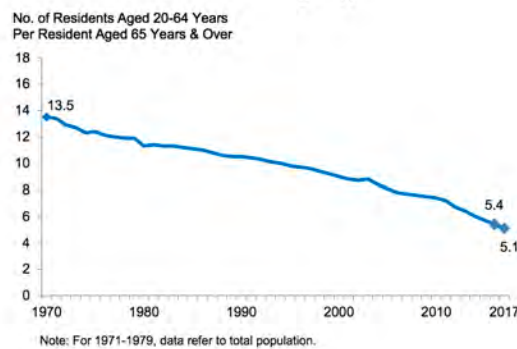


Source: Chen et al, (2019)

2.2 Family Structure and Old Age Support

These demographic changes have led to a precipitous decline in the old-age support ratio over time (Figure 1c), which has more than halved from 1970 until the 2018, with currently 4.8 residents aged 20-64 per resident aged 65 or older (Statistics Singapore, 2019) As households shrink, critical changes in societal attitudes and norms have also been observed (Teo 1994; Phillips and Bartlett 1995), particularly in relation to the notion of “filial piety” or the idea that children should assume the responsibility of caring for their elderly parents, both physically and financially (Teo 1994). While the cultural norm of sharing, informal care formed cornerstone of the early approach of the Singaporean government in many ways. It is increasingly common for older adults to be childless or to have children but live alone, with children living independently or even abroad. In 2011, it was estimated that 9% of seniors lived alone, with an increasing number of such single older adults being female (Linton et al 2018).

Figure 1d: Old-Age Support Ratio, residents of Singapore



Source: Singapore Department of Statistics, Population Trends 2017, last accessed on 29 November 2018 from <https://www.singstat.gov.sg/-/media/files/publications/population/population2017.pdf>

Section 3: Service Delivery and Financing

3.1 The Singapore Healthcare System in Brief

3.1.1 Service Delivery

Singapore has a mixed healthcare system of both public and private facilities overseen by the Ministry of Health. Although Singapore has a number of impressive fully private hospitals, 80% of acute care takes place in the public system at large regional “restructured” hospitals. These hospitals offer a tiered system of ward classes ranging from A-class (private single-bed rooms, without subsidies) to C-class (highly-subsidized beds in wards with basic amenities, available only subject to a means-test), and also house specialist outpatient clinics. While a range of primary care services can be obtained at public polyclinics, 80% of primary care takes place in the private sector which is made up largely of independent general practitioners (Lin et al 2018). To support healthier lifestyles via prevention, Singapore also has a Health Promotion Board (HPB) dedicated to population health initiatives such as reducing smoking and increasing physical activity.

3.1.2 Intermediate and Long-term care (ILTC)

Long-term care in Singapore has been traditionally regarded as the responsibility of family caregivers, supported by private and non-governmental volunteer welfare organizations (VWOs). The Ministry of Health defines “intermediate and long-term care (ILTC) services” as those typically required for persons who need further care after being discharged from an acute hospital as well as community-dwelling seniors who may be frail and require support with their regular routines. Within long-term care, step-down care is typically offered by community hospitals, while residential care is offered by nursing homes and hospices. Non-residential care refers to home or day care services that are either administered at the patient’s home or in designated community health centers. The ILTC sector is operated by private and non-governmental volunteer welfare organizations (VWOs), the latter being subsidized and overseen by the government’s Agency for Integrated Care (AIC) which coordinates access to appropriate and right-sited care for patients, and supports the primary and community care sectors.

3.1.3 Integration

To promote the integration of care across these various service delivery platforms and stakeholders, the administration of the public healthcare system is organized into three Regional Health Clusters, each forming a network of partners from polyclinic to the community-hospital that together offer a continuum of care services from prevention and health promotion to rehabilitation care. These are in turn anchored by a large public hospital whose RHS office works with service providers as well as the AIC and HPB. Flagship programs under this initiative include the Hospital to Home (H2H) programme, a national programme that employs multidisciplinary care teams with coordinators to manage care transitions from hospital to community by providing services such as nursing for recently-discharged patients at home, and initiating referrals to other providers as needed.

Services offered in the ILTC sector by provider include the following:

Care Services	Residential	Non-residential Care		Beneficiary
		Home-based	Centre-based	
Dementia Day Care			✓	Patient
Home Medical/Nursing/Personal Care/Therapy/Palliative Care		✓	✓	Patient
Meals-on-Wheels		✓		Patient
Medical Escort and Transport: For medical appointments and navigation inside facilities		✓		Patient
Rehabilitation Day Care			✓	Patient
Senior Activity Centre: Communal spaces for recreational and social activities			✓	Patient
Centre-Based Weekend Respite Care: Support services to care for elderly	✓			Caregiver

3.1.4 Financing

Singapore’s unique healthcare financing system is motivated by the twin philosophies of individual responsibility while safeguarding the provision of basic, affordable healthcare for all (Ministry of Health, 1993).. Financing policies aim to avoid over-reliance on the state and promote a shared responsibility approach in paying for healthcare. Healthcare costs are therefore typically covered by a mix of government subsidies, statutory financing schemes, private voluntary insurance, employer medical benefits, and out-of-pocket payments.

At all public facilities, patients receive drug subsidies based on their means and the scheme under which the drug is covered (the Standard Drug List (SDL), Medication Assistance Fund (MAF)). Outpatient care at polyclinics is also subsidized while visits to specialist outpatient clinics are subsidized conditional upon referral from the polyclinics (and otherwise charged at private rates).

Regarding hospitalization in the public healthcare sector, direct subsidies of up to 80% in government facilities are provided depending on the ward class. For the remaining out-of-pocket payment, three statutory financing policies (the “3Ms”) are central to healthcare financing: Medisave, MediShield Life, and Medifund.

- **Medisave**, implemented in 1984, is a mandatory medical savings account held by individuals and funded from payroll deductions that can be used to pay for hospitalization, day surgery, and approved outpatient expenses incurred by the individual or his/her immediate family members.

- **MediShield Life** is a universal health insurance scheme designed to pay for catastrophic medical expenses including large hospitalization bills and selected specialist outpatient treatments (e.g., chemotherapy, kidney dialysis). By pooling the financial risk of its members MediShield Life provides lifelong coverage for all residents including those with pre-existing conditions. Premiums for MediShield Life can be paid with Medisave balances. Individuals can purchase a variety of Integrated Shield Plans (private health insurance plans) as a “top-up” to Medishield to provide better coverage including treatment at private facilities; alternatively some individuals may be covered via employee benefit plans
- **Medifund** is the primary state-funded safety net in the form of a Government endowment fund-based subsidy available to those who are unable to pay for medical expenses despite Medisave, MediShield Life and other subsidies (Ministry of Health, 2018).

For ILTC services, subsidies for lower-income households are provided by MOH-funded institutions and day rehabilitation, home medical, home nursing and home palliative service providers.

- In addition to the 3M’s, the Singapore government introduced long-term care financing in the form of **ElderShield** in 2002 as an opt-out disability insurance scheme. Eldershield provides monthly cash payouts for up to six years to meet the long-term care needs of those experiencing disability related to 3 or more ADLs.

To bolster this basic framework, the government offers specific initiatives to lower out-of-pocket payment for healthcare, which indirectly address the needs of the elderly population. These include the **Chronic Disease Management Programme (CDMP)** which allows the use of Medisave to cover some outpatient expenses related to a list of 20 approved chronic conditions at private providers around Singapore, at a rate of up to S\$500 per year. For lower-income Singaporeans, the **Community Health Assist Scheme (CHAS)** allows means-tested beneficiaries to receive further subsidies for outpatient treatments for acute conditions, chronic diseases covered by the CDMP, as well as selected dental services at participating primary care and dental clinics near their homes. CHAS members also receive subsidized referrals to specialist outpatient clinics.

In addition to these two major programs, the table below shows additional available funding assistance, and where formal ILTC services may or may not be covered:

Financing Assistance	ILTC Services Covered			Agency
	Residential Care	Home-based services	Centre-based services	
Enhanced Screen for Life: Subsidies for chronic disease screening				HPB
Government-funded ILTCs Subsidies: Subsidies for MOH-funded ILTC services	✓	✓	✓	MOH, provided to MoH funded ILTC service providers
Enhancement for Active Seniors: Subsidies for installment of elderly-friendly items such as grab bars and slip-resistant bath floors				Housing & Development Board
ComCare Long Term Assistance: Cash relief for elderly unable to work due to old age, illness or family circumstances		✓	✓	ComCare
Silver Support Scheme: Monthly payouts for low-income elderly		✓		Ministry of Manpower/ CPF Board
Interim Disability Assistance Programme for the Elderly: Monthly payouts for elderly ineligible for ElderShield		✓	✓	Agency for Integrated Care
Medical Fee Exemption Card: Hospitalization coverage for low-income hospice/nursing home residents	✓			ComCare
Seniors' Mobility and Enabling Fund: Subsidies for assistive devices and home healthcare items		✓		Agency for Integrated Care
Caregivers Training Grant: Grants to receive caregiver training on needs of elderly				Agency for Integrated Care
Foreign Domestic Worker Grant: Monthly cash payouts to hire a foreign domestic worker to care for the elderly with disabilities in the family				Agency for Integrated Care
Foreign Domestic Worker Levy Concession: Concession on levy for hiring a foreign domestic worker to care for elderly with disabilities in the family				Agency for Integrated Care

3.2 New Developments in Response to Aging

Overall, there was strong consensus across stakeholders from all sectors that aging has significantly increased demand and cost pressures in the healthcare system, and will continue to do so, due to the increase in life expectancy and the concomitant rise in the prevalence of disability and chronic disease in a system initially built to cost-effectively manage acute care.

From the government perspective, the issue of an aging population has been on Singapore's radar since the early 80's when an inter-ministerial committee was convened to discuss the future implications of aging. Further recognition of the challenges related to aging followed with a second ministerial committee, formed in 2007 and the start of key initiatives mentioned above such as the Chronic Disease Management Programme and the Community Health Assist programmes. Today, aging is one of the foremost policy concerns in Singapore.

Although recognition of the issue has been long-standing, to date the Singapore government's approach to healthcare reform has been gradualist in nature. The government continues to espouse reliance on individual and family responsibility, while seeking to address these increasing needs through a combination of promoting prevention, increasing efficiency through health technology and strengthening social safety nets. In 2012, the Ministry of Health announced a general reform plan, "Healthcare 2020", based on three key aims: improving accessibility ("Better Health"), quality ("Better Care") and affordability ("Better Value"), partly in response to the recognition of these ongoing needs. At the end of 2017, the Ministry updated its overall strategy and issued three new aims known as the "3 Beyonds" – to move (i) beyond healthcare to health, (ii) beyond hospital to community and (iii) beyond quality to value

3.2.1 Service Delivery

Chronic illness, dementia and disabilities paired with changing social norms has long been forecasted by planners to increase the demand for long-term care (Phillips and Bartlett 1995). In the public sector, recent years have seen a strong and continuing focus on ramping up infrastructure to meet the growing demands of an aging population, with the completion of new hospitals, the expansion of institutional care options and community-based schemes to support a senior-friendly living environment.

HealthCare 2020 articulated ongoing plans to expand current healthcare infrastructure, including opening new wards at existing hospitals, and completing new healthcare facilities at the pace of one every two years. Two more new hospitals and 12 new polyclinics are also scheduled to be built by 2030. With respect to the healthcare workforce, the policies have included increases in medical student intake and steps to develop the allied health professions through professionalization and mid-career skills conversion programs.

With the 3 Beyonds, the government has further pivoted towards community-based services in order to support aging in place, minimizing hospital load and keeping people healthy as long as possible while at home. This includes launching new services, such as community nursing programs in each region of Singapore, while also leveraging partnerships with existing private sector providers, particularly in strengthening primary care for multimorbid patients with chronic conditions. In addition to continuing the CDMP and CHAS, this includes support for the

development of Family Medicine Clinics (private multi-doctor family practices set up specifically to provide one-stop services and team-based care for chronic-disease patients such as ancillary services, X-ray, counsellors, nurse practitioners, etc. in less-central residential town areas). In return, the clinics receive government support in terms of subsidies and land space, allowing for larger clinic spaces and economies of scale/scope.

A critical focus has been placed upon the development of active aging hubs in public housing to provide an integrated approach to health and social care for the elderly, increasing day care places and financing schemes for the elderly (Toh 2018). Other notable initiatives include expansion of community-based care including the launch of a community Pharmaceutical Care Services system, the expansion of the Care Close to Home (C2H) programme at senior activity centers, addition of Dementia Friendly Communities (DFCs) from 6 to 15 sites over three years, and the further expansion of the Community Network for Seniors, a network linking providers and community organizations together to provide more coordinated and comprehensive services.

There is an emerging understanding of the importance of the social determinants of health and the sizable risk that social isolation and loneliness to physical and mental health among the elderly. The 2018 Budget consolidated health and social care services for the elderly under the Ministry of Health, and the formation of the Silver Generation Office within the Agency for Integrated Care (AIC); whereas previously services related to health and social care were clearly demarcated between Ministry of Health and the Ministry of Social and Family Development.

3.2.2 Financing

While Bloomberg has named Singapore the 2nd most efficient system in the world, healthcare expenditure has already quadrupled within ten years from S\$2 billion (US\$1.5 billion) in 2006 to S\$8.5 billion (US\$6.4 billion) in 2015 (Chen et al 2019). In spite of efforts to increase the efficiency of the current system, growth in healthcare expenditures propelled by aging is expected to continue, with government budgets expected to rise by at least another S\$3 billion (US\$2.3 billion) in the next three to five years. (Chen et al 2019). In 2019, Singapore's recent budget included S\$6.1 billion for various welfare programs related to the elderly (in anticipation of an upcoming election). At the same time, the 2019 fiscal year that begins April 1 is expected to run a deficit of S\$3.5 billion, following surpluses since 2016. A major concern for aging has been the consequent burden on aging consumers. Health expenditure out-of-pocket as a percentage of total spending on health was 54.8% in 2014, higher than the OECD average of 13.6% in the same year (Lin et al, 2018)

Government subsidies in the past have largely applied to hospitalization for acute care and primary care in the government polyclinics. It remains the case that outside the public sector, with the exception of a small group of nursing homes, most private LTC are not eligible to receive government subsidies. However with sociodemographic pressures, the incentive structure has adapted to some degree (Low and Elias 2012). Liberalization of Medisave has been an ongoing process but has expanded in response to these needs. Medisave's guidelines were initially revised in 2007 to cover outpatient costs of management of chronic conditions under the CDMP. Coverage was initially limited to management of diabetes, hyperlipidemia and hypertension, but since then has been extended to a total of 10 conditions, including psychiatric illnesses like schizophrenia,

major depression and bipolar disorder. As of January 2014, this has been further extended to include 5 more chronic diseases (osteoarthritis, benign prostatic hyperplasia, anxiety, Parkinson’s disease and chronic kidney diseases). Further reforms have allowed use for preventive services such as vaccinations (Hepatitis B virus, Pneumococcus, HPV) and some health screenings (including screening for breast, cervical and colorectal cancers). In addition, a strong focus has on providing more lifelong support to meet healthcare and aging needs through initiatives such as expanding coverage under MediShield Life and special targeted subsidies such as the Pioneer Generation Fund (for the cohort born before 1949, who did not have the opportunity to accumulate significant Medisave balances).

In 2018-9, the government introduced significantly more funding for the Seniors’ Mobility and Enabling Fund (SMF) for frail seniors (\$100 million over the next five years, with an additional \$150 million in subsidies for transport to subsidized eldercare and dialysis centers) and announced the Merdeka Generation Fund (additional subsidies for the cohort born before 1959). In addition, the 3M framework will be enhanced with three key initiatives to support long-term care, to begin in 2020.

- **MediSave for Long-Term Care** withdrawals of up to S\$200 per month will be permitted for long-term care, allowing monthly cash withdrawals from MediSave for Singaporeans with severe disabilities.

ElderFund will be launched as an enhancement to Medifund, to further subsidize lower-income Singaporeans above the age of 30 with severe disabilities.

- To improve financial protection against the uncertainty of long-term care costs in light of increasing life expectancies and years lived with disability, Singapore will replace the existing ElderShield long-term care insurance with a new scheme, **CareShield Life**, beginning in 2020. Payouts through CareShield Life are higher than that of ElderShield (starting at S\$600 a month), have no cap on payout duration and extends inclusion into the program for a wide age range of Singaporeans (Koh and Jamrisko 2018). Like Medishield life, CareShield premiums will be payable by Medisave, and premiums will be subsidized for lower-income Singaporeans.

Section 4: Challenges for the ILTC Sector

In this section, and the next, a synthesis of the key sector-specific themes identified by respondents is presented. More general issues identified for the broader healthcare system also pertain to the primary and ILTC sector, including enabling the private sector to play a more meaningful role, raising productivity and catalyzing innovation (Tan and Lee, 2019). Specific challenges emerged from the literature review as well as the interviews related to the ILTC sector, where Singapore’s policy has to date preserved a vision of the family as the first line of support, buttressed by VWOs for service provision. However, demand pressure is rapidly rendering this problematic, with major concerns related to capacity and management (Chin and Phua, 2016) as waiting lists for services remain an issue. Interview respondents observed that a growing share of services for LTC are developing outside the public health care system. While this includes services such as private home nursing appealing to families who want greater choice and flexibility and who have the means to pay, (Chin and Phua 2016), the literature and interview respondents also emphasized an increasing reliance on foreign domestic workers (FDW).

4.1 Emerging gaps in access to and quality of care

The developments above clearly demonstrate proactive steps to adapt to population aging. At the same time, the system wide pressures of demographic change and changing social structures have nevertheless led to new or widening gaps in service delivery related to LTC. Study respondents generally reflected that in spite of the increases in government budget and increasing private sector participation, the speed of adaptation to date has been less than ideal. One respondent expressed that “at the policy level there is a clear vision, but this hasn’t been fully grasped by [local health systems] or service providers.”

The range of available services covers the full spectrum of professional care, but not all services are easily and widely accessible. Nursing homes in Singapore today remain specifically designed to serve individuals with multiple ADL impairments, but assisted living facilities remain relatively scarce, leading to a gap between home and nursing home care. In addition, most home care services are largely focused on providing professional nursing care; less intensive supportive services (e.g. home aides, medical escorts) for relatively able community-dwelling young-old are increasingly addressed by private professional providers but remain currently largely provided for by the family or by volunteers and “befrienders, leaving a gap between personal and medical care that remains to be filled”. As one respondent explained: “if aging in place means helping people to stay home...[we] still have limited access to services to support this as the 1-2 [impairments in] ADL space is the most relevant.”

On the ground some respondents felt that barriers to accessing existing ILTC resources, particularly community-based care, remained due to the mindset of both patients and physicians. Consumer preferences for care seeking as well as physician biases were described by one respondent as having “expectations that are still fixed on medical and not overall health care.” One noted that as the majority of local primary care continues to be largely dependent on private general practitioners, it would be imperative to involve this highly-accessed group to effectively

achieve systemic change, but that few strategies for engaging them as part of the ILTC ecosystem have been mooted.

With respect to quality of care, respondents from all sectors felt that with Medishield Life and the Pioneer Generation Package, older adults now feel more assured when seeking care in the public hospital system. Yet, strains are showing. Some respondents reported that growing constraints have been reflected in waiting times for services and “bed crunch” at major hospitals. The ability of private hospitals to provide faster and better service was cited as a factor leading to increasing disparities between individuals with and without private insurance. Waiting times for subsidized nursing and daycare are also likely to be significant: in 2018, the Lien Foundation reported that the median waiting time for general daycare was about 20 days, while that for dementia care was about 35 days. Respondents were in general agreement that basic care currently provided is acceptable relative to international standards. However, responsiveness to nonmedical needs and quality of life was felt to be less than ideal. One interview respondent noted “currently, there are no nursing homes that people would want to live in.”

Outside the formal government oversight of the hospital and nursing home sector, however, standards are still evolving and hence quality can be inconsistent. One respondent noted that “the perception is that community[-based care] is cheaper, but it may not be if we want to keep good quality.” Recently, guidelines for the assisted living sector have been developed by the self-organized Assisted Living Facilities Association but remain outside the official regulatory framework.

Finally, it was noted by several respondents that subjective perceptions of care are themselves changing over time, as Singaporeans become more educated and wealthier and as they begin to contemplate LTC for themselves rather than for an elderly parent or relative. As income levels rise, so do expectations for the non-medical aspects of the care experience. However, this implies that the bar for acceptable quality is also rising over time, and that what may have been considered basic but reasonable in the past may no longer be acceptable in the future.

4.2 Concerns about the adequacy and sustainability of financing

Respondents were universally concerned that costs in this sector will continue to rise with general medical inflation, especially with an increased focus on technology, while the healthcare financing system for ILTC, in the words of one respondent, remains “a work in progress.” Respondents generally viewed the liberalization of Medisave, the expansion of means-tested subsidies and the addition of the Pioneer/Merdeka packages and the introduction of Careshield as positive developments. However, there is a common recognition that resources remain insufficient, and that with the needs of the aging population the current financing system needs to continue to evolve. At the highest level, as one respondent succinctly noted that “spending of only 5% of GDP on healthcare cannot continue.”

Financing supports continue to focus on hospitalization and the group of patients with relatively extreme disability. While the government directly provides subsidies to nursing homes, community hospitals and day care centers, most sectoral stakeholders felt such funding for the community-based services and non-medical LTC services is not sufficient, making these services

noncompetitive with informal substitutes. The current government-sponsored insurance schemes technically provide universal health coverage, but existing provisions for LTC are limited. EldersShield/CareShield Life and existing top ups provide cash payments that can be used to cover ILTC but these are triggered only in relatively severe cases of 3 impairments in ADL. Another noted, while various aspects of ILTC services are occasionally reimbursed, that “there is no general program or coverage for eldercare more generally, and there has to be a precipitating event.”

The financial burden of ILTC thus remains a primary concern for Singaporeans. One respondent stated “the fundamental problem is affordability. If the cost... is not moderated, people will still not be able to afford it. Even if we have different ways of paying for it, the total cost is still going up so much, and we keep making people pay for it, it will still be a challenge.” Another noted that, despite new reforms, “the financial and mental stress of financing [LTC] still results in constraints”, which compounds the existing burden of caring itself. Even when subsidies are available, the structure of current system also generates perverse incentives (Tan and Phua, 2016), as the relatively generous coverage for hospitalization or institutional care leads families to prefer long and inappropriate hospital stays or nursing homes to the mental and financial load of home- or center-based care.

These rising pressures largely impact the middle class, as Singapore’s financial safety net has focused on reserving support for the lowest income who qualify for means-tested subsidized care at least within hospitals and nursing homes, and the expansion of cohort-based subsidy schemes such as the Pioneer and Merdeka Generation to provide direct relief to the older generations. The most visible strains are among the growing informally-termed “sandwich generation”: lower middle-income households who do not meet means-testing criteria for subsidies based on income but have high expenses (for instance due to caring for both elderly parents and young children). Such families undertake extended care of parents into old age, but then also cannot neglect work duties, in order to secure a steady stream of income (Mehta 2006). Effectively trapped between the gaps of the existing safety nets, they are most likely to fall back on a complex and shifting mix of professional and informal caregivers, government programmes, and family and friends (Ang , 2015).

4.3 Physical and human capital constraints

Over the past decade, Singapore has been heavily involved in a wave of construction across the healthcare sector. From a physical capacity point of view, the Ministry of Health is on track to develop 17,000 nursing home beds, 6,200 day care places and 10,000 home care places by 2020 to cater to the demand for aged care services, including piloting high-technology services for “nursing homes of the future”, expanding capacity for dementia care and integrating new facilities into public housing. Yet, while the built infrastructure of public healthcare facilities has seen considerable investment, the plans for such expansion take time. As one respondent noted, “It takes a very long time to build infrastructure and the problem has grown faster than the solutions.” Many others also noted that building needs to be focused “not just on hospital beds” and that the growth of community-based centers remains insufficient. Moreover, the capacity of private home and center-based providers that do not receive Government subsidies and serve only self-funded clients is not tracked, and hence remains an unknown factor.

At the same time, meeting the professional human capital needs to support an aging population remains challenging, with the LTC sector especially constrained and leading to serious concerns about sustainability (C. W. W. Chin and P 2016). There has been a historic shortage of manpower in the VWO sectors, where staff are often paid less than their counterparts in hospitals (Sin 2018). Respondents also noted that there is a common focus on doctors and nurses while other allied health professionals are overlooked. For example, the shortage of health care professionals, like physiotherapist, are rapidly likely to become increasingly visible.

Around 70% of direct care workers in the LTC sectors are currently non-Singaporeans , and the sector overall has therefore experienced problems attracting talent due to low pay, the lack of opportunity for advancement and the restriction placed on foreign workers (Lien Foundation 2018). Respondents noted that while the Ministry of Health has tried to improve the training pipeline and develop continuing education to meet these needs, there remains considerable uncertainty as retention of talent is also a major issue. The Lien Foundation estimates that as the LTC workforce is likely to also need to expand by 45% in 2020 to meet demand, such pressures are likely to becoming more acute while in addition, Singapore will increasingly need to compete for talent with other high-income aging societies in the region, such as, Japan, Korea, Hong Kong and Australia, countries with less reliance on foreign workers and higher wages (Lien Foundation 2018).

4.4 Effective and efficient adoption of new health technologies

Respondents felt that new technologies for personalized care such as telehealth and remote monitoring for chronic conditions hold great promise for revolutionizing long-term care and the viability of aging in place. The Ministry of Health’s Office for Healthcare Transformation is currently spearheading the use of such technology as a central enabler of community-based care in the future, and recent budget allocations reflect investments in supportive mobile health applications, including the development of a centralized Health Marketplace for community-based eldercare services and a “Dementia Friends” mobile app.

However, while various solutions have proliferated in this space, their application in practice as a mainstream modality often still requires experimentation in order to establish effectiveness and cost-efficiency in older age groups. One concern is that technological solutions that are adopted to efficiently address the needs of the population, may be ineffective or potentially even create exclusion for older adults. Adaptation to the needs and preferences of the aging population and the local may not be straightforward (e.g. in addition to universal design principles, user interfaces need to accommodate multiple languages especially in the oldest old). Moreover, respondents recognized that the root causes of the long-term care needs of some older adults may lie beyond the reach of technology alone: as one respondent noted “social connections cannot be delivered merely by technology”.

4.5 Increasing complexity and fragmentation

The complexity of care provided by the ILTC sector is likely to increase over time as multi-morbidity rises. Respondents also noted that community-based care is by nature less straightforward to navigate than institutional care, leading to suboptimal decisions. One noted that “care managers exist but are not really helping to navigate systems. There are also many different managers in different places, and nothing standard - some care managers are paid for by hospital programs, there are care managers at AIC...” A respondent summarized the effect of overwhelming complexity as leading to decision paralysis, stating that “ For people it’s too complex... to understand the whole process of illness... leading to inertia [based on the] presumption that things are very expensive... they do not even search for services but fall back on their FDW or just do nothing.”

With respect to financing, as noted Singapore’s philosophy has been to put choice in the consumers’ hands and preserve the principle of co-payment, with an extended set of safety nets for the lowest-income or most vulnerable. However, the complexity of such financing from the consumer perspective is increasing, reflected by the sheer number of schemes available to constituents with varying eligibility criteria available to finance the direct and indirect cost of care. One respondent framed the questions as follows: “Do people understand how to make sense of the system and plan their healthcare and financing? It’s not clear. Do people know how to maximize their benefits and choose the right treatment for themselves? Is that information being given in a clear way for informed choice, especially for older people? I’m not sure about that” While Singapore’s Silver Pages website acts as a national resource that aims to provide a comprehensive list of all the schemes and subsidies available for elderly care, not all services are represented. Changing nomenclature and eligibility for all the different schemes further complicates things, rendering them confusing to more vulnerable seniors, and challenging to navigate even for caregivers who are already under pressure. Consequently, there may be those who are eligible for greater assistance who do not receive it, choosing to pay out of pocket or refuse care.

From the provider perspective, while government grants are provided to public healthcare facilities and private providers across the service spectrum, most players in the ILTC sector rely on a mix of public, private and donor funds vary year to year. One respondent described funding in the sector as “very patchy, depending on funders, not secure like the hospital.” Even when government funds are stable, such as in the nursing home sector, the means-testing mechanism has implications for the flexibility of service provision. For instance, a nursing home is required to admit a certain proportion of subsidized patients, and hence cannot admit a subsidized patient if no subsidized beds are available and vice versa. The inability to load shift can result in long wait times and excess capacity at the same time. As one respondent said, “Means-testing has to be done, but then the regulatory environment makes adaptability and responsiveness a challenge”.

Despite government support, the lack of clarity and instability of the overall funding model as a major inhibitor for long-term sectoral growth. Several respondents referred to a “vicious circle” or “chicken and egg problem” of sustainable financing acting as a barrier to further progress in service provision. On the one hand, services are designed around payment levels rather than innovative

ideas while on the other, as one respondent stated, “no point providing financing when there are no services to pay for”. Others felt that “many pilots are started...but few become mainstream. There is plenty of innovation but [the models are] not realistic when it comes to funding”.

4.6 Rising caregiver burden on spouses and families

The demographics indicate that not only are there fewer children in a typical household to look after aging parents who are living longer lives (Mehta 2006), but these duties are becoming more burdensome. Furthermore, many family caregivers do not have flexible working arrangements or have dedicated leave of absence to care for their families. Many use their compassionate leave or vacation time to balance the needs of caregiving (Mehta 2006; Devasahayam 2003). Options for respite care are mostly limited to the day, costly (not covered by Medisave), and must be arranged far in advance (5 days for day time care, and up to 12 weeks for overnight care). Concerns about caregiver burnout and mental health are therefore escalating.

This is especially problematic when burdens of care disproportionately fall on the shoulders of individuals who are themselves already vulnerable, like women for example, who tend to manage the affairs of the household (Teo 2004; Devasahayam 2003), or on elderly spouses whose own health then begins to suffer as a result.

4.7 Low take up of formal services vs inappropriate informal substitutes

Respondents noted that the rise in observed costs is partly attributable to delay in initiating ILTC, which leads to escalation of chronic disease and frailty, and unnecessary hospital admissions and readmissions. One explained “people go only once it has become costly to manage. A lot of interventions have taken place at the societal level, but people still choose only to interface once the needs are already higher.”

As another pointed out, “we don’t really know why: we feel that patients should take services, but maybe they don’t really value the service? Is it affordability? Or the price is just too high? We don’t know. We think for instance many patients would benefit from day care, but the patients/family don’t want to take it up. We also postulate that other things matter e.g. transport, convenience of service provision for working caregivers”

In the cases where formal LTC is delayed or foregone entirely, families that have not been able to cope with the level of care needed or have not been able to afford formal LTC options or simply want to keep their parents at home, are increasingly resorting to the hire of domestic workers to shoulder these responsibilities (Yeoh and Huang 2009; Rozario and Rosetti 2012). Family caregivers, domestic workers and community volunteers however cannot be held accountable in the same manner as professionals (Chin et al. 2018; Yeoh and Huang 2009; Chin and Phua 2016). Many FDWs have only basic training, and the overlapping roles between domestic work and healthcare can be difficult to manage. In addition to an often unmanageable expansion of the scope of duties, many domestic workers often lack the skills to coordinate care, and must juggle between the differing sets expectations set by employers and the recipients of care (Chin et al. 2018).

The AIC has tried to address this problem with increased caregiver training grants and programs for FDW or family members to learn about managing the elderly. While respondents felt that this represented a step in the right direction, some felt that existing programs were not yet widespread or intensive enough. At a systems level, while these solutions may support some informal caregivers to bear these additional responsibilities, overreliance on informal channels is also perceived as further deferring care away from the state/formal healthcare system (Rozario and Rosetti 2012).

Section 5: New Roles for Private Insurers

To date, the structure of the healthcare system in Singapore has led to private insurers playing a comparatively limited role in the ILTC sector relative to others. Currently, Medishield Life and its associated private supplements generally exclude ILTC services (respondents identified only one insurer that offers an additional rider program that allows claims for a limited amount of post-hospitalization care). While three private insurers – Aviva, NTUC Income and Great Eastern Life Insurance – previously administered Eldershield, in January 2019 the Ministry of Health announced that from 2020, the government will administer the scheme on a not-for-profit basis as it transforms into CareShield, although private supplementary plans will still remain in place.

Respondents perceived that in the past, product development in Singapore had been largely driven by the government, with private insurers largely playing a supportive or reactive part. Across the board, respondents agreed that the nature of the sector indeed requires government to be the central driver, in order to provide initial funding and regulatory oversight, and to coordinate the multiple players. Insurers in general were characterized as having a more “traditional” and “conservative” stance related to the protection of their commercial interests, and being largely confined to more traditional insurance products that “do not push the envelope” with little incentive to innovate. On the other hand, respondents also were cognizant that such risk aversion could be justified against the background of other such LTC markets, including unsustainable product development in the US LTC market ultimately leading to collapse, and the relatively limited service offerings in comparable European countries.

The overwhelming majority of respondents felt that from an actuarial perspective, radical uncertainty about the future trajectories of health and life-expectancy has become a significant concern. While it is universally accepted that longevity risk is increasing, assessing the magnitude of such risk has become fundamentally problematic, as one respondent describes: “It is unclear where the biological limits of aging are and when we will have reached it.” In addition, there is increasing uncertainty about types of services and technologies that would be offered in the future given the pace of change, and the likely trajectories of cost.

However, despite these past and current challenges, respondents identified three broad avenues by which private insurers could play a role in the LTC sector’s response to aging at the macro, meso and micro levels of the healthcare system

5.1 At the macro-level: Establish thought and research leadership

While emphasizing the tremendous challenges of modeling and projecting risks that go beyond the current models, along with the accompanying difficulty of designing products in this environment, respondents also identified this as a transformative moment to revisit the role of private insurers and their potential to contribute more broadly.

By virtue of their business itself, the insurance industry may be in fact best positioned to assess and understand the nature of the changing ecosystem, while policy makers may struggle and find it “difficult ...to understand, because there is no precedent. Top down approaches have become

hard.” Private insurers therefore have the opportunity to advance the understanding of these new risks in a manner which serves the best interests of all stakeholders and to disseminate new research to the broader community as part of corporate citizenship. Respondents highlighted Prudential’s “Ready for 100”, an example of an industry-led initiative that generates relevant, accessible research and sector-wide discussion focused on individual and systemic preparation for healthy aging in Singapore.

5.2 At the meso-level: Drive innovations in models of care and service delivery

With the government potentially approaching bandwidth constraints and other sectors such as technology and pharmaceuticals recognizing and embracing opportunities from aging, the current environment may be increasingly open to ground-up, consumer-centric innovations. Insurance companies with international experience and a strong local track record may be uniquely positioned to explore this possibility.

Respondents focused on the comparative strengths of private insurers in certain aspects of product development. Namely the ability to design financial incentive schemes that activate consumers, incentivize staying healthy and rewarding wellness. Other areas that were identified by respondents included new technologies to deliver personalized medicine such as targeted chronic disease management as well as the range of low-cost, high-social value services that are less medical in nature. Respondents highlighted that private insurers may be less constrained in supporting the adoption of new technologies than the public sector, and may therefore be a stronger enabler in some instances. Perhaps most radically, one respondent suggested that insurance companies are well positioned to consider lifetime care i.e. introducing products tailored for the whole lifespan that could be purchased from a very young age but provide coverage throughout life and into old age.

Finally, it was also felt that insurers had the advantage of drawing upon and adapting their international experience to consider ways to support new models of care. For instance, they could assist in developing schemes to finance assisted living or retirement villages from earlier ages (rather than the nursing home/village) based on similar programs in Korea or Japan.

5.3 At the micro-level: Educate consumers and support better decision-making

Even though consumers report preferring home-based services, they are often not actually willing to pay, resulting in a lack of effective demand. Some hypothesized that consumer demand for services was limited due to feelings of “entitlement” i.e. households felt that they should not have to pay, or to lack of familiarity with the types of services provided. With rising education and exposure, expectations of care may also increase: one respondent noted “most think the government should pay... but this is not sustainable and results in no sense of value.” Insurance literacy is also part of the problem, respondents generally felt that healthy, younger consumers typically have a limited understanding of health insurance in general, and LTC in particular.

There is significant room to build greater awareness and financial literacy related to aging, strengthening household decision making for today but also laying the longer-term foundations for sustainable consumer demand tomorrow. Private insurers in Singapore are uniquely suited to this role, as they have a long track record of consumer education and are trusted brands. Respondents noted that “financial education or advice related to LTC financing is likely to be more successful from an insurer than from a VWO service provider”, and that bona fide education in this area benefits both the government as well as the insurance industry hence is “always appreciated”.

Section 6: Conclusions

While Singapore is aging rapidly, it is wealthier and slower to age than its regional counterparts. It is often argued moreover that the unique nature of Singapore's healthcare system makes it challenging to compare to others. Yet the concerns of the average Singaporean, however, resonate more broadly with aging populations around the world. As one respondent said:

"Aging in place as a concept has always been there, but now it is a concern. The answer is very obvious: I want to stay at home. But it is getting more difficult to do it in a dignified way...it's not about physical infrastructure, but about the need to stay home, well and dignified, with a trained and capable presence at hand"

Singapore's experience with these issues holds three important generalizable lessons for other countries:

- Even health systems renowned for efficiency and planning today will feel the strain of aging and long-term care in the future
- Universal health coverage notwithstanding, a significant fraction of care may take place already in the home and be paid for out of pocket
- Financing and service delivery ideally develop hand in hand, while LTC in particular requires leadership from both the government and private insurance sector
- Private insurers have important roles to play in ensuring access, coverage and quality today but also potentially in laying the foundation for a sustainable market in the future

Our study concludes that aging has profound implications for Singapore, not just with respect to population health but the economic, social and demographic context in which health decisions are made. The LTC sector is under significant pressure that may only intensify in the coming years but also faces particular challenges in being able to adapt and expand to meet such pressures. While government policy realistically will continue to be a primary driver, a more engaged and proactive private insurance sector is a critical partner with many roles to play. Private insurers have opportunities to leverage their inherent comparative advantages to contribute to the knowledge of a wide community of practice, to support the growth of new technologies and service delivery models, and to support the education and empowerment of consumers well into a long and healthy old age for all.

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