



SENIOR HOUSING: A BUSINESS CASE FOR INVESTMENT IN HONG KONG

October 2023

 **Urban Land
Institute**


CHINACHEM GROUP
華懋集團

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Chapter 1: Background

This chapter gives an overview of the demographic shift of Hong Kong’s population and the health care needs of the senior community, as well as their financial capacity. These form the background of senior housing market development in Hong Kong.

Defining Senior Housing

The emerging global trend of population ageing has been a challenge to governments around the world, including in Hong Kong. It creates opportunities for new market development of private senior housing. Broadly speaking, senior housing can be defined as an exclusive community

for seniors that allows them to enjoy their later years and provides additional supportive resources.

While the Hong Kong government defines retirement age as 65 years old, senior housing targets retired seniors usually aged 60 or older, who enjoy their retirement life with additional supportive resources that can include housekeeping, technology support, and community activities. Senior housing often allows a more flexible age range, permitting admission of early retirees and seniors who wish to move in before retirement. Different from Residential Care Homes for the Elderly (RCHE), senior housing requires less-intensive nursing and health care and provides a greater variety of recreational amenities and community activities.

Table 1 summarizes the key differences between senior housing and RCHE.

TABLE 1 Comparison between senior housing and RCHE

	Senior housing	Residential Care Homes for the Elderly
Living options	<ul style="list-style-type: none"> An ecosystem for seniors to spend their later years, that allows privacy in their own home Freedom to come and go as they wish Health care services available when needed 	<ul style="list-style-type: none"> Facility must be licensed by the Social and Welfare Department Room design follows government standards; residents need to undergo medical examination by a registered medical practitioner before admission to an RCHE, and priority may be given to seniors who require more health care attention services Permission is often required to leave the facility
Objective	<ul style="list-style-type: none"> Provide residential space, personal care, and limited health care for seniors with the ability to take care of their own daily living activities 	<ul style="list-style-type: none"> Provide residential care, meals, personal care, and nursing care for seniors suffering from poor health or physical/mental disabilities unable to perform activities of daily living
Eligible age	<ul style="list-style-type: none"> Typically, 60 years or older 	<ul style="list-style-type: none"> 65 years or older
Facilities	<ul style="list-style-type: none"> Recreational facilities such as library, clubhouse, and theatre, with community activities for intergenerational connection 	<ul style="list-style-type: none"> Majority as health-care-related and rehabilitation facilities, with occasional community activities

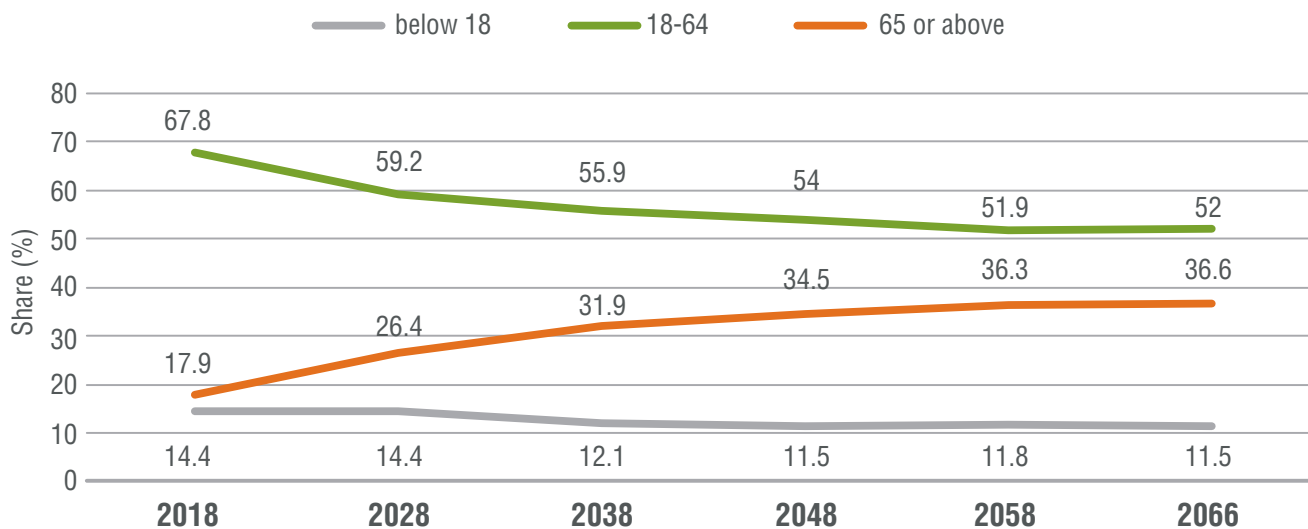
Senior housing can be categorized as independent living and dependent living with health care:

- Independent living – an environment that allows seniors in good health to access additional resources, including dining programs, housekeeping, events/activities, home maintenance, and personal care services. Independent living allows seniors to pursue their retirement life with health care support when needed in the future.
- Dependent living with health care – includes assisted living, skilled nursing, and memory care, and provides further health care assistance to seniors with limited ability in caring for themselves.

The Ageing Population

During the past 10 years, the ageing trend in the population has continued. In Hong Kong, the proportion of persons aged 65 and older in the total population rose from about 13 percent in 2011 to about 20 percent in 2021.¹ The senior population is projected to continue to increase during the next 20 years, with 31.9 percent of Hong Kong’s population, equivalent to some 2.44 million individuals, reaching age 65 or older.² In other words, nearly one-third of the population will be considered seniors by 2038.

FIGURE 1 Total population share of Hong Kong by age group

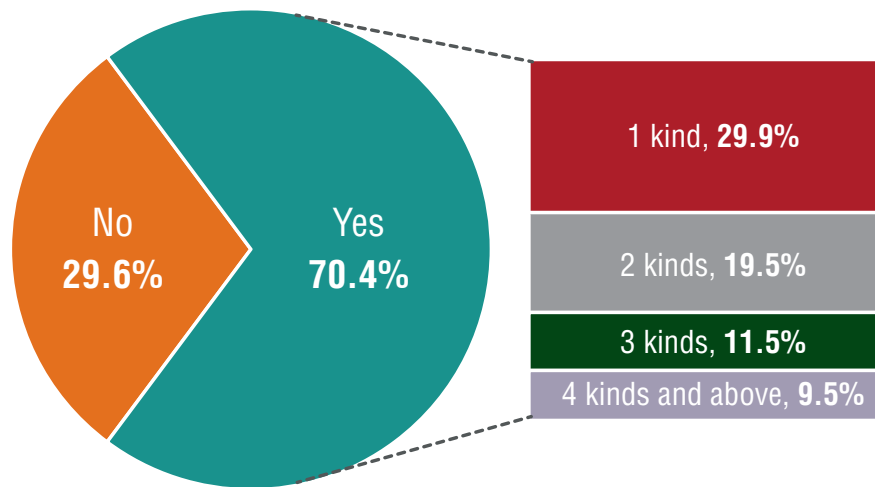


Source: Office of the Government Economist. (2019). Population ageing trend of Hong Kong.

Since the late 1990s, Hong Kong’s population growth rate has decreased. The pace of ageing became faster in recent years, mainly attributable to the post-war baby boomers entering old age and longer life expectancy. Hong Kong has the world’s longest life expectancy, with an average age of 85;³ seniors are expected to live about another 20 to 25 years after they reach the age of retirement. During their

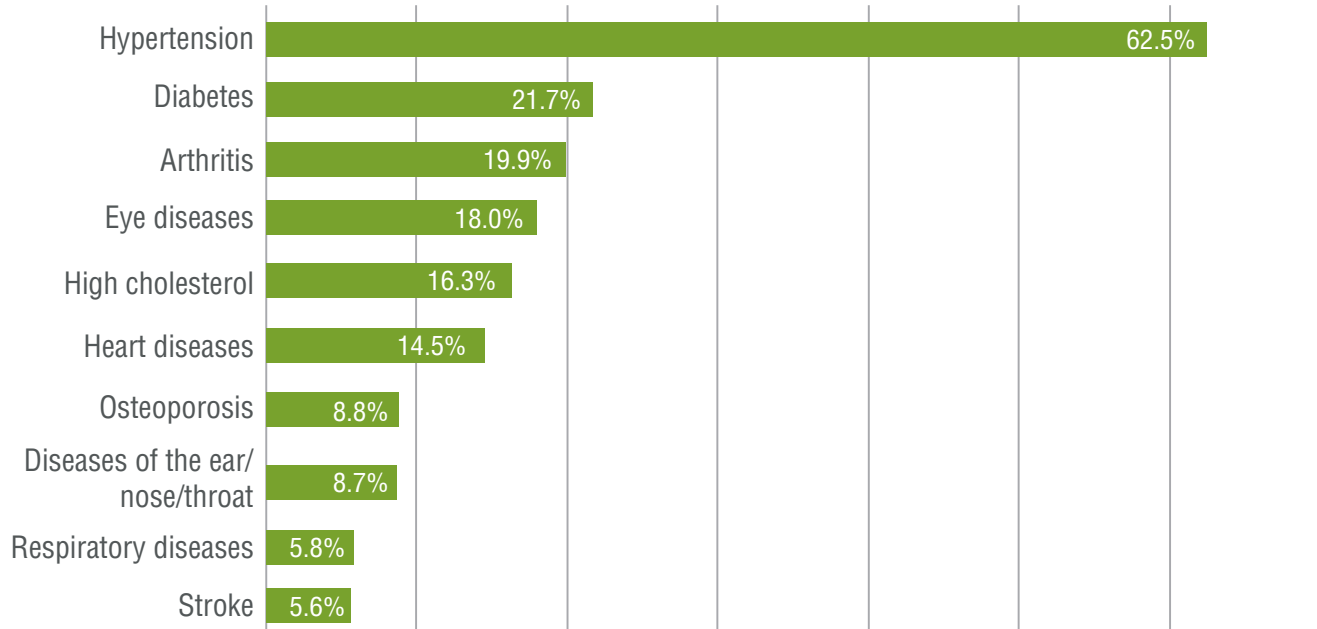
retirement living period, seniors may require various levels of health care support as 70 percent of seniors may suffer from chronic diseases, including hypertension, diabetes, arthritis, eye diseases, high cholesterol, and heart diseases.⁴ Among seniors with chronic diseases, hypertension is the most common, accounting for 62.5 percent of chronic disease, followed by diabetes, affecting 21.7 of seniors.

FIGURE 2 The proportion of seniors suffering from chronic diseases



Source: Census and Statistics Department. (2009). Thematic Household Survey Report No. 40: Socio-demographic Profile, Health Status and Self-care Capability of Older Persons.

FIGURE 3 Types of common chronic diseases among seniors



Source: Census and Statistics Department. (2009). Thematic Household Survey Report No. 40: Socio-demographic Profile, Health Status and Self-care Capability of Older Persons.

While most seniors are able to perform daily living tasks such as meal preparation, ordinary housework, managing their finances, managing medications, phone use, and

transportation, senior housing provides a living option for retirees including health care that can support ongoing monitoring of chronic diseases.

Financial Capacity of Seniors

The senior labour force is growing, accounting for 1.8, 3.3, and 5.4 percent of the population in 2011, 2016, and 2021, respectively. There has been a threefold increase of the senior labour force in the past 10 years, which could be caused by longer life expectancy and improved health of seniors.

Moreover, affluence in Hong Kong has been rising, as of 2021. Affluence is defined as those persons with total net assets of HK\$10 million or more and liquid assets of at least HK\$1 million. These affluent individuals account for 7.4 percent of the population ages 21 to 79 in Hong Kong,⁵ who

have median total net assets of HK\$15.7 million. In 2018, the median age of millionaires was 58 years. These affluent citizens will soon reach their retirement age, and many may seek some form of senior housing or assisted living. They have the financial capacity to look to higher-end senior housing options for retirement.

Following the challenges that the world faced under COVID-19, these affluent persons are changing their priorities, with a goal of finding a better quality of retirement living, improved personal health, as well as improved lifestyle and wellness,⁶ which aligns with the objectives of senior housing.



Chapter 2: Market and Demand

This chapter looks at senior housing development in Hong Kong and other Asia Pacific countries in recent years. Through understanding the opportunities in Hong Kong and comparing it with markets across the region, this report hopes to demonstrate the basis for Hong Kong's senior housing market development.

Types of Senior Housing

Different from RCHE facilities, where most of the residents require intensive health care attention, senior housing caters to a wider range of seniors, including those who may not need health care attention at the time of admission. Senior housing can typically be categorized into three major types based on the level of assistance required: namely, independent living, assisted living, and continuing care retirement communities (CCRCs). Generally, independent living is suitable for seniors in good health who require little to no daily health care attention; assisted living is suitable for seniors requiring assistance with day-to-day daily tasks, such as mobility assistance and meal preparation. Seniors who require more intensive health care attention may consider RCHE and nursing home options. Besides independent living and assisted living, CCRCs combine both living styles into a single community, facilitating a smoother transition as seniors' health care needs evolve. The different types of senior housing cater to the different aspirations of seniors and target seniors with various levels of mobility.

Independent Living

Independent living is a type of senior housing that is designed exclusively for senior-friendly purposes. This type of senior housing often targets seniors who require less health care and attention and aims to provide an environment that allows seniors to pursue their desires without worrying about access to medical care when needed, daily household maintenance, and daily chores.

In an independent living unit, seniors may often consider themselves retirees who are ready to enjoy their later lives. They may not want to label themselves as seniors as their physical conditions present little to no difference from those of other adults. Therefore, the design of independent living is expected to be similar to that of commercial housing, other than that it could be easily retrofitted into a senior-friendly interior design. In addition, community engagement and activities would be a key resource for seniors to realize their aspirations after retirement.

Assisted Living

Assisted living offers more day-to-day assistance than independent living, such as mobility assistance and meal preparation. Assisted living enables seniors to perform daily activities in a safer manner, and assistance with mobility and emergencies would be provided. With the further assistance required by seniors in assisted living, the interior design of units is expected to be modified into a senior-friendly design typically with more spacious rooms and wider corridors to accommodate wheelchairs.

In addition, other than the community activities that are designed for independent living, further medical assistance will be provided in assisted living. If a senior requires further medical assistance, the individual may consider senior housing that provides skilled nursing care or memory care, which is similar to RCHE options provided in Hong Kong.

Continuing Care Retirement Community

In the existing housing market for seniors, some developers may opt for developing a CCRC that includes both independent and assisted living – sometimes with skilled nursing care – within the community. It allows the community to provide an environment and services that smooth the transition from independent living to assisted living, or even skilled nursing care, as the senior ages. It also creates synergies between the operations of independent living and assisted living at a lower operating cost.

Intergenerational Community

Another concept that is frequently discussed in recent years is the development of an intergenerational community, where senior housing is a part of the overall community development program. The community is not specifically designed for seniors but with a broader consideration of all ages, from children, youth, and adults to seniors. Such a community allows seniors who seek to contribute and connect with the younger generations to realize their aspirations by engaging the different generations.

Market Development in Hong Kong

As the senior housing market starts to emerge in Asia Pacific, the market development in Hong Kong is largely driven by the local government. In the early 2000s, the government started to develop senior housing projects for seniors meeting the total asset worth requirement for their later living.

This subsidized senior housing was the only senior housing option in Hong Kong before a number of private developers started to develop senior housing in the mid-2010s. By 2022, three subsidized senior housing projects and two private (non-subsidized) senior housing projects were available in Hong Kong.

TABLE 2 Independent and assisted senior housing options in Hong Kong

	Subsidized/ non-subsidized	Number of units	Application requirement
Jolly Place Location: Tseung Kwan O	Subsidized	243	A Hong Kong permanent resident age 60 or older with total asset worth within the required range or a guarantor
Cheerful Court Location: Ngau Tau Kok	Subsidized	333	A Hong Kong permanent resident age 60 or older with total asset worth within the required range or a guarantor
Blissful Place Location: Hung Hom	Subsidized	312	A Hong Kong permanent resident aged 60 or older with total asset worth within the required range or a guarantor
Tanner Hill Location: North Point	Non-subsidized	588	A Hong Kong permanent resident age 60 or older
Ventria Residence Location: Happy Valley	Non-subsidized	168	A Hong Kong permanent resident age 60 or older through membership

Subsidized Senior Housing

The Hong Kong Housing Authority and the Hong Kong Housing Society are responsible for managing the subsidized senior housing-related schemes in Hong Kong. Under the Housing Authority, several schemes are in place to accommodate seniors in need who meet the income requirements of a public housing solution with priority given to elderly public rental housing applicants. Seniors can apply through schemes⁷ including the 'Single elderly persons priority scheme,' the 'Elderly persons priority scheme,' or the 'Harmonious families priority scheme. In general, the Housing Authority offers two kinds of housing designs for seniors who are living alone, communal and private. The communal apartments can have shared living spaces, kitchens, dining rooms, or social rooms. Some apartments

offer private bedrooms with shared spaces, while others offer shared bedrooms and spaces. These schemes provide priority to seniors in public rental housing; however, the housing design is not guaranteed to be senior-friendly and elder care may not be available in the neighborhood.

The Hong Kong Housing Society, as a non-profit non-governmental organization, has various schemes catering to seniors' needs, including the Ageing-in-place scheme, Senior citizen residence scheme and residential care homes for the elderly. Their Senior citizen residence scheme offers subsidized senior housing units at Jolly Place, Cheerful Court, and Blissful Place, for applicants that meet a certain range of total income and asset requirements. In addition to the three completed projects, three more projects are in the pipeline in Fan Ling, Kwun Ting, and Shau Kei Wan.

Case Study



Jolly Place, Cheerful Court, and Blissful Place

Jolly Place, Cheerful Court, and Blissful Place are the three subsidized senior housing projects in Hong Kong. The first two were completed in 2003 and 2004, respectively, while the last was completed in 2022. Managed by the Hong Kong Housing Society, the three estates provide a total of 888 units for seniors under the Senior citizen residences scheme. The estates provide facilities including a clinic, gymnasium, swimming pool, and library, allowing senior residents to remain connected with their families and neighbors in the communal space.

For senior applicants who meet the total income and asset requirements, they are required to pay an entry fee ranging from approximately HK\$770,000 to HK\$2.7 million,



depending on the type of unit and the number of tenants in the unit. In addition, the residents will pay a monthly fee for basic property management and health monitoring.



Private (non-subsidized) Senior Housing

In Hong Kong, the private senior housing market is in its early stage of development, where fewer than a thousand units are currently available in the market. The Tanner Hill and Ventria Residence are the private senior housing options available in Hong Kong, which provide less than 800 units

in total. The two projects target affluent seniors who aspire to better retirement living and improved health care. Due to the limited land resources in Hong Kong, the number of units provided by each senior housing project is limited. Although Tanner Hill is offering the most senior housing units, its long waiting list reflects the gap in supply and demand for private senior housing.

Case Study



Ventria Residence

Located in Happy Valley, Ventria Residence positions itself as a premium retirement community that integrates modern living, medical and nursing care, gourmet dining, and recreational programs in the project. Ventria Residence aims to allow residents to pursue passions and focus on leading purposeful lives during their retirement. Main services include independent living, assisted living, memory care, rehabilitation and wellness.



The Ventria Residence opts for a membership model for a more exclusive experience for residents, along with a monthly rental fee and subscription to other services.

The project is currently under construction, and it is expected to be completed in 2023 and will be in full operation in 2024.



Demand in Hong Kong

Before COVID-19, luxury senior housing had challenges in attracting and retaining residents reluctant to incur the higher prices. The pandemic has shifted the attitude of many, as one's health and quality of living have reached the forefront of attention. Now, those seniors who can afford high-quality care and amenities are able to justify the fees. Furthermore, demographic trends demonstrate that the need for senior housing is not dissipating any time soon.

In addition to the changing goals of retirees and the growing senior population, the increasing trend of out-migration by younger families contributes to the higher demand for senior housing options. In mid-2022, a net outflow of 95,000 persons⁸ was recorded, a 26 percent increase from the net outflow of 75,300 persons⁹ in mid-2021. With the various migration pathways offered by overseas countries such as the UK, Australia, and Canada, many have decided to take advantage and seek opportunities overseas. In the past, it was part of Chinese culture for seniors to live with their children and grandchildren. However, with the increase of people moving out, seniors are alone and more vulnerable. As younger families leave, provision of senior housing options for retirees will be increasingly more important. Many will look to senior housing as an option to combat social isolation or to assist with daily activities, playing a role once fulfilled by family.

A study shows that seniors remaining in Hong Kong for their retirement prefer ageing in place over moving into RCHE facilities even when health care assistance is needed. Among the seniors residing in domestic households, 96.4 percent do not intend to move into local RCHE facilities. Even when their health condition deteriorates, 81.4 percent of the surveyed seniors prefer to remain living at home, that is, ageing in place, instead of moving into a RCHE facility.⁴ Senior housing is able to meet the needs of seniors to age in place while providing professional health care monitoring and assistance.

Competition

Despite the increasing demand for senior housing in the city, the market faces competition from other regions in Asia. As Hong Kong is one of the cities with the highest cost of living globally, retirees may seek cheaper retirement living options in the Greater Bay Area or Southeast Asian countries. These regions usually offer a lower cost of living; however, retirees may have to adapt to a new living environment and an unfamiliar health care system.

Moving to the Greater Bay Area

As the transportation network between Hong Kong and other cities in the Greater Bay Area continues to develop, travelling to cities in Guangdong Province becomes more convenient. According to statistics from the Immigration Department, about 89,000 seniors aged 65 years or older were living in Guangdong Province as of mid-2019.¹⁰

The Hong Kong government realizes the increasing number of seniors moving to the Greater Bay Area for retirement living and therefore has started to provide assistance and incentives for seniors living there. Incentives in recent years have included the extension of health care voucher coverage to the Shenzhen Hospital of the University of Hong Kong and a living allowance encouraging retirees to reside in Guangdong Province.

Second-home Options in Southeast Asia

In addition to the Greater Bay Area competition, a trend exists of retirees moving to Southeast Asian countries after retirement. For example, the Malaysia My Second Home programme promoted by the Malaysia Tourism Authority and the Immigration Department Malaysia offers visas for foreigners to stay in Malaysia for 10 years. Many retirees choose to move to Southeast Asian countries for a lower cost of living and a better living environment.



Market Development in Other Regions

In the Asia Pacific region, the senior housing market is an emerging sector in real estate. Japan, Australia, Singapore, and Mainland China are each establishing a market for senior housing. Investors in these regions see senior housing investment as providing a steady long-term income with low risk, which accelerates the development of the market in Asia Pacific.

Japan

The Japanese senior housing market started to develop around 20 years ago when health care policies (i.e., the long-term care insurance system) that favour the development of said market were announced. From 2011 to 2018, the capacity in the private senior housing market expanded by over 160 percent.¹¹ As the annual expenditure in 2025 for long-term care social programs is expected to be 2.3 times the expenditure in 2012, potential exists for the market to continue expanding to meet the demand of demographic challenges in Japan.

In Japan, most of the senior housing projects focus on dependent living with health care, where seniors typically move in at the age of 80 to 85. These seniors require skilled nursing services and memory care. Under the long-term care insurance system, the cost of health care services is usually covered by insurance, which gives insurance companies an incentive to provide health care services.



Singapore

Following the announcement of Singapore's first Action Plan for Successful Ageing in 2015, it was revealed that

seniors are eager for a retirement environment with healthy physical, mental, social, and emotional support. Since then, the Singapore government has taken the lead in developing various models of senior housing and incorporating senior-friendly designs in public housing development. As the market is still in an early stage of development, most senior housing projects are provided by the government, along with a few privately-owned senior housing options targeting higher-end customers.

Besides senior housing options, the Singapore government offers various schemes that improve neighbourhood design for senior residents, such as the Silver Zone Scheme, which facilitates ageing in place. The Singapore government has set an example for developers and operators to demonstrate the creation of a senior-friendly community.

Australia

As one of the most established senior housing markets, Australia provides a variety of senior housing options, from independent living to assisted living and CCRCs. Seniors are offered flexible options that are able to cater for their needs. With the support of the government, initiatives such as land sourcing and land leases with restrictions are given to senior housing developers, enabling a lower cost of development, which promotes the development of the local market. In addition, health care services in Australia are largely subsidized by the government-led health care scheme, lowering their operation costs and further encouraging seniors to access senior housing options.

Mainland China

The senior housing market is relatively new in China, where insurance companies are the key player in the market. Insurance companies entered the market in senior housing after the revision of China's Insurance Law in 2009, which allows insurers to invest in properties. Insurance companies may leverage their existing expertise in health care and property investment and operation for more effective and efficient management of senior housing projects.

Senior housing projects are usually developed in tier 1 cities such as Beijing, Shanghai, Guangzhou, and Shenzhen, targeting a higher-end market and attracting affluent seniors across the country, including Hong Kong senior citizens. Senior housing projects developed by insurance companies usually position themselves as more exclusive communities in the form of membership, where customers of the insurers may have priority for such membership.

Chapter 3: Policies in Hong Kong and Other Regions

This chapter explores the different policy frameworks and developments in Japan, Singapore, and Australia. It also discusses the role of government policy as a facilitator in private senior housing market development.

Policies in Hong Kong

At the moment, there are no senior-housing-specific policies in Hong Kong. Under the current policy framework, when developing a senior housing project, the developer has to overcome a number of challenges, discussed in the following sections.

Land Use and Land Premium

Currently, there is no designated land use category for senior housing. If a developer wishes to develop a senior housing property, it has to be built on residential land. Without a designated land use category, the developer may have to give up a portion of target customers, that is, the younger generation, for senior living development, which appears to be less encouraging for developers.

In addition, the high land premium for residential land is another barrier for developers. The current land premium calculation system does not consider the differences between traditional residential properties and senior housing properties. It may cause a misfit of land premium calculation for senior housing projects, which greatly increases the cost of senior housing development.

The Hong Kong government may consider referring to overseas policies, such as the Australian or Canadian approach. The Canadian government announced in 2021 it would issue funding up to C\$12.5 million through the National Housing Co-investment Fund. The funding is used for a senior housing project developed by a non-profit senior housing provider.¹² In addition, the government provides preferential premiums or free land grants to developers for senior housing unit development, with restrictions of sales and resales to seniors only. Senior housing projects that have benefited from such policies are permitted to sell units only to eligible seniors, and restrictions on reselling to eligible seniors are incorporated into the selling terms. In contrast,

in Australia a majority of the revenue sources for senior housing come from government subsidy schemes. In fiscal year 2019/2020, about 60 percent of the revenue sources for residential care of the aged came from Commonwealth care subsidies.¹³ Other Australian government policies on senior health care and housing support are discussed in the section “Policies in Japan, Singapore, and Australia”. These approaches also promote public/private collaboration in addressing the ageing population challenge in the region.

Long Return on Investment Period

The business model for senior housing usually does not allow the unit to be purchased; residents may own the right to live, but they do not own the unit itself. This is to ensure residence criteria are maintained and limited to those who meet the admission criteria. Under such a business model, senior housing has a longer period for return on investment than commercial housing. Without policy incentives, it largely reduces the cash flow of developers and again appears to be less encouraging for developers.

High Operating Costs in Relation to Health Care

Currently, limited subsidy is provided to seniors by the government. The Elderly Health Care Voucher provides an annual amount of HK\$2,000 for seniors with an accumulation limit of HK\$8,000. Moreover, the public health care system is subsidized so that citizens can enjoy public health care services at a low cost. These policies encourage citizens to use public health care services over private operators, as the latter are often not subsidized.

In Hong Kong, the community care and support services schemes for seniors are limited to non-profit/non-governmental organizations, where private operators are not eligible for such schemes. Moreover, most of these schemes are designed to be associated with RCHE facilities, which also limits the coverage of benefited seniors. Retirees who require little to no health care assistance may not benefit from these schemes. As one of the highest costs for senior housing is the operating cost and provision of health care services, it is challenging for private operators to maintain quality services with limited support from the government.

Policies in Japan, Singapore, and Australia

Understanding the policy frameworks in comparable regions allows an understanding of the key elements of an emerging market and the roles of government. By looking at Japan, Singapore, and Australia, which use different approaches in senior policy, various driving factors for the private senior housing market development can be discerned.

Japan

Japan recognizes the challenges of the ageing population and has been increasing input in improving social security benefits for seniors. Up to 2018, the scale of social security benefits in Japan reached ¥121.3 trillion, which accounts for 21.5 percent of Japan's gross domestic product (GDP).¹⁴ Since the launch of Japan's long-term care insurance system in April 2000, the senior housing market in Japan is largely supported. It is a system that provides benefits for the long-term care of older persons where seniors over age 65 can receive the same health and welfare benefits regardless of needs and income. The seniors are required to pay up to a 20 percent co-payment for medical expenses, and the rest is settled through insurance. The system helped shape the community-based integrated care system.

Before the creation of the long-term care insurance system, Japan's health and welfare provisions for seniors had a number of shortfalls, as follows:¹⁵

- The welfare services and service providers were appointed by the municipal governments, which limits the choice for the users, and services provided may not be able to cater for seniors' needs in a timely manner.
- The users' contribution to service fees was dependent on their income, which poses a financial burden for middle-income seniors.
- The health care incentives provided by the government cover hospitalization services only, which means that the expenses for hospitalization may be less than other health care and welfare services for middle-income seniors. Therefore seniors tended to rely excessively on hospitalization, increasing pressure on public health services.
- Hospitals, which were largely used as care facilities before the introduction of the long-term care insurance system, are not designed for long-term senior care services. It may not be the ideal environment for seniors in later life.
- The previous welfare system required that seniors move into care facilities, which limits the coverage of such services to a smaller population of seniors.

In view of these limitations, the Japanese government introduced the long-term care insurance system, aiming to build a social insurance system that is user oriented and that is able to support the independence of seniors in their retirement living. The system brought industry players, including senior living developers, operators, and insurance companies, into the system where the operating cost of health care services could be largely covered, encouraging seniors to use facilities and services provided by other senior living options.

Singapore

Singapore first announced the Action Plan for Successful Ageing in 2015, which formed the country's blueprint for the ageing population. The Action Plan was developed by the Ministerial Committee on Ageing, which is responsible for the coordination of government policies and the execution of the Action Plan. The Action Plan defined 10 focused topics, namely (1) employability, (2) lifelong learning, (3) senior volunteerism, (4) health and wellness, (5) social engagement, (6) aged care services, (7) housing, (8) transport, (9) public spaces, and (10) research. The government promotes ageing in place and purposeful retirement living.

In the Action Plan, it is mentioned that the government has planned to build large Active Ageing Hubs in housing developments, providing active ageing and assisted living services to seniors. In addition, the National Research Foundation has set up S\$200 million for a National Innovation Challenge on Active and Confident Ageing with the goal to build a wider range of home and community options. The Singapore government launched a series of programmes and pilot schemes related to senior housing, including the Silver Zone Scheme, Enhancement for Active Seniors (EASE) programme etc.

In addition to introducing public assisted living flats known as Community Care Apartments in Bukit Batok in 2021, the Singapore government has expanded the housing options for seniors through partnering with the private sector to co-create innovative assisted living models. The government has released a site at Parry Avenue as a pilot private assisted living development project in 2022, which is expected to begin operations by 2029.¹⁶

TABLE 3 Selected programmes and pilot schemes of the Singapore government related to senior housing

Programme	Description
Silver Zone Scheme¹⁷	Implementing a series of traffic-calming measures and senior-friendly road safety features in areas with a high proportion of senior residents to enhance road safety for the elderly.
Enhancement for Active Seniors (EASE) programme¹⁸	Retrofitting scheme subsidizing home improvement such as slip-resistant treatment to flooring and grab bars for toilets to make flats more senior-friendly and improve mobility and comfort for senior residents.
Silver Housing Bonus¹⁹	Provides incentives for seniors who wish to downsize their flat or private housing into a three-room or smaller flat. The schemes provide up to S\$30,000 bonus that will be a top-up to the senior's Central Provident Fund Retirement Account.
Lease Buyback Scheme²⁰	Allows seniors to continue to stay in their current flat while selling part of their flat's lease back to the Housing & Development Board, providing a steady stream of income in seniors' retirement years while allowing them to continue to live in their flat.

In response to a greater diversity in experiences, aspirations, and needs of seniors, as well as the new operating environment from COVID-19, a refreshed Action Plan²¹ was launched in 2023. The Plan centers around three key themes of Care, Contribution, and Connectedness (3Cs). Some key initiatives and targets include the following:

- Increase the number of Community Resource Engagement and Support Team (CREST) from 61 to 73 and triple CREST-Post Diagnostic Support teams for dementia management to six by March 2025.
- Increase the number of Active Ageing Centres to 220 by 2025.
- Implement 50 Silver Zones and retrofit lifts at 100 pedestrian overhead bridges near places with a high number of senior pedestrians by 2025.
- Set up 25 Therapeutic Gardens across parks island-wide by 2027.
- Promote senior volunteerism at 750 corporations and reach more than 70,000 senior learners in the next five years.
- Reduce hospital deaths from 61 to 51 percent in the next five years.



Other than related housing policies, Singapore's Community Health Assist Scheme for Merdeka and Pioneer generations provides subsidies on medical care regardless of needs and income, which largely reduces the medical expenses of senior citizens. Through various programmes addressing the needs of seniors on the focus aspects, Singapore aims to build a "City for All Ages", which sets out a desirable environment for private senior housing development.

Australia

Since 1997, the Australian government has set up laws and regulations on care for the aged, where the Department of Health is responsible for the execution of related programmes. After 25 years of development, the Australian aged care system is designed to support seniors in their later living through a variety of programmes, taking care of seniors who need home care, respite care, residential care, and flexible care. Health care expenses of seniors are subsidized under the system. In 2017, the Australian government also published the Aged Care Diversity Framework, which aims to ensure the existing aged care services are respectful of human rights and inclusive to all seniors. In fiscal year 2021-2022, the Australian government spent over A\$24.8 billion on aged care, an increase of 4.9 percent from the previous year.²²

Understanding the high land price and premiums in the city center, the Australian government also provides incentives for senior living developers, including special land premiums or changes in land use on light industrial lands. In 2021, the Government of New South Wales announced the State Environmental Planning Policy (Housing) 2021, implementing several incentives, including the following:²³

- List of identified areas where senior housing is permitted;
- Simplified site compatibility process;
- Bonus floor space incentives of 15 to 25 percent to encourage senior housing developments in higher-density areas; and
- Specific State Significant Development pathway for senior housing.

When the policy was first introduced, the development of independent living units was not allowed in R2 Low Density Residential Zones as any senior housing development in such zones must be operated as a retirement village. This would significantly lower the availability of senior housing options in these zones. With the amendments made on 1 July 2022, the government has reversed this decision. With the amended policies, developers may develop senior living projects with greater flexibility at a lower cost.

In addition to subsidies on health care expenses, the Australian government supports the development of the aged care industry, including senior living facilities, by providing funding to aged care providers, which could be the operators of senior living. The Australian Trade and Investment Commission acts as a platform for the senior living and health industry to identify the capability and capacity of the market as well as facilitates cooperation between organizations.

The policies executed by departments across functions contributed to the shaping of the Australian senior living market into one of the most robust markets globally.

Policy Gap between Hong Kong and Other Regions

While Japan, Singapore, and Australia use different approaches to tackle the challenges of an ageing population, policies play an essential role in incentivizing the development of the senior living market. The government acts as a facilitator in the industry and uses policies as a driving tool in the development of senior housing options to meet the needs of seniors.

Currently, Hong Kong has limited ageing policies in place. Even though an ageing population is recognised as one of the most urgent issues in Hong Kong, there is a lack of overarching ageing policy and intergovernmental collaboration. This stands in contrast to neighbouring regions, where a holistic plan is established with various departments involved in the execution of the overarching plan. Moreover, the current ageing policies have a limited scope focusing on funding to non-profit/non-governmental organizations. The private sector is not able to leverage the support from the government. An understanding of the policy approach from other regions, however, indicates that both land supply and housing development and health care policies are able to lower the cost of development and operation.

TABLE 4 Summary of senior-related policies by aspect

	Land supply and housing development	Health care
Hong Kong	X No specific policies for senior housing	✓ Health Care Voucher that provides limited subsidy on health care expenses
Japan	X No specific policies for senior housing	✓ Subsidized health care expenses
Singapore	✓ Pilot housing programmes for senior market development	✓ Subsidized health care expenses
Australia	✓ Lower land price/premium with leasing and reselling units for senior living	✓ Subsidized health care expenses and funding to operators

(✓) – with relevant policy in the region; (X) – without relevant policy in the region.

Second, the coverage of health care policies directly affects the composition of industry players. The markets in Japan and Australia expanded quickly when relevant health care policies covered and provided funding for private operators. Such policies encourage public/private-sector collaboration while easing the burden from the public sector. Learning from the experience in other regions, the Hong Kong government might want to consider the following strategies to promote public/private-sector collaboration in tackling the ageing population challenge in Hong Kong.

Land Supply and Housing Development

Land use category and premium. The high land premium is the first and one of the largest challenges for senior housing projects in Hong Kong. Under the current policies, senior

housing projects are to be built on residential land use lands. This provides little incentive for the private sector to target seniors only as customers, considering the return on investment.

It is suggested that the government could offer preferential premium or land grant of designated land, with restrictions on sales and reselling of senior living units, which would encourage the private sector to become part of the ageing population solution.

Concessions for senior housing designs. To promote ageing in place, it is suggested that concessions could be provided for developers who incorporate senior housing designs into property development projects. Referencing the current gross floor area (GFA) concession scheme of green building designs, a similar GFA concession mechanism may also be provided to development projects with senior-friendly

designs. Such a concession mechanism may also facilitate the development of relevant guidelines and standards in senior housing design.

Development of intergenerational community. The development of an intergenerational community is one of the trends that other regions have been exploring in recent years. An intergenerational community promotes the use of public services for all ages, including seniors. The inclusion of senior housing options as part of the intergenerational community not only promotes public/private collaboration but also enables the provision of special care to seniors and the fulfilment of their aspirations.

Health Care

Expand the scope of senior-related schemes to private sectors. The current senior-related schemes are available only for non-profit/non-governmental organizations, which

hinders the participation of the private sector in the industry. It is suggested that the scope of such schemes could be expanded to private operators, allowing them to provide senior-related services outside RCHE facilities. This will enable the expansion of the coverage of such services to a wider community of seniors.

Adopt health care subsidy schemes for health care expenses. The regions studied in this chapter indicate that health care subsidies play an important role in solving the challenges of an ageing population. Such subsidies not only allow the private sector to take on the responsibility of supporting the needs of an ageing population but also ease the burden on the public health care system by allowing part of senior health care activities to be performed outside hospitals. The cases from Japan, Singapore, and Australia show that a health care subsidy does not necessarily need to be a full subsidy of health care expenses: a partial subsidy could make a difference in the health care ecology.



Chapter 4: Creating a Liveable Community

This chapter discusses the hardware and software of senior housing, as well as how internal design and outdoor facilities can promote the health and wellness of senior residents, and more important, the role of the developer/operator in maintaining such an environment. In recent years, technology has been an essential element of senior housing development. This chapter also explores the role of technology and its impact on building a liveable community.

Liveability

Senior housing aspires not only to provide a healthy and safe living environment for seniors but also to facilitate purposeful retirement living. According to the public consultations of Singapore's Action Plan for Successful Ageing, seniors aspire to

- Stay healthy physically, mentally, socially, and emotionally;
- Continue being purposefully engaged, whether in formal work, volunteerism, or lifelong learning; and
- Remain socially included in society and live an independent and active life through accessible services and well-designed housing, transport systems, and other public spaces.

The planning and design of a senior housing property should create a liveable community, where interior design of the unit, communal space, the living experience, and the community activities available are all factors that make up a liveable community.

Housing Design

On average, people spend 90 percent of their time indoors.²³ Therefore, the interior design of independent living and dependent living with health care should reflect the needs of seniors and their aspirations.

Independent Living

Living an aspirational life is the key priority for independent living residents requiring little health care attention. These seniors often consider themselves young retirees who do not want to be labelled as seniors. To enable ageing in place, the

interior design should make the residents feel at home but at the same time prepare for future care needs as they age. While the interior design could be personalized according to the residents' preference, the space planning of the units has a few rules, as follows:

Spacious. For senior housing, in consideration of ageing in place, the space planning of a unit should consider both the present and future needs of the senior residents. For instance, independent living residents may not use a wheelchair often when they move into the unit, but the frequency of wheelchair use may increase as they get older. Therefore, the unit should be spacious enough for purposes including wheelchair accessibility.

Flexible. For seniors who do not require a wheelchair, the additional space reserved for wheelchair access may distort the balance of liveability within the unit. The unit may no longer feel domestic and creates unnecessary costs. Therefore, the interior design of the unit should be flexible and able to be retrofitted into a senior-friendly design.

For example, in a wheelchair-accessible kitchen, additional space will be reserved for the wheelchair entering the kitchen, but such a design may be too spacious for an independent resident. In this case, an extended workstation may be installed in the kitchen.

In addition, senior-friendly designs to be installed in the future, such as handgrips and health monitoring systems, should be considered from the beginning. To maintain the homey feeling of the units, such installations should not distort the overall design and habitability of the unit.

Lighting. Exposure to natural lighting is beneficial to seniors who spend most of their time indoors. Natural lighting can help signal the passing of time and maintain a healthy living style and sleeping patterns. Studies also find that not getting enough sunlight can contribute to symptoms of depression.²⁴

In addition, lighting at home has an association with health.²⁵ Adequate illumination at an appropriate lux level is needed for visual performance and safety, as well as for reducing falls and injuries. During the times that natural light cannot enter the unit directly, the colour of artificial light affects the mental health of residents. When residents are exposed to a cooler light, they experience a lower daytime anxiety level when compared to warmer light. However, a cooler light is also associated with worsened subjective sleep quality. Therefore, the planning of colour temperature in rooms should be considered.

Case Study



Spring Harbor Senior Living

The Spring Harbor Senior Living is a continuing care retirement community in the U.S. state of Georgia, where it allows seniors to upgrade their level of care in one place. Spring Harbor Senior Living offers a wide range of independent living apartments for seniors. The smallest apartment is a studio flat with a size of 607 square feet, while the largest apartment is a three-bedroom flat with 2,422 square feet.

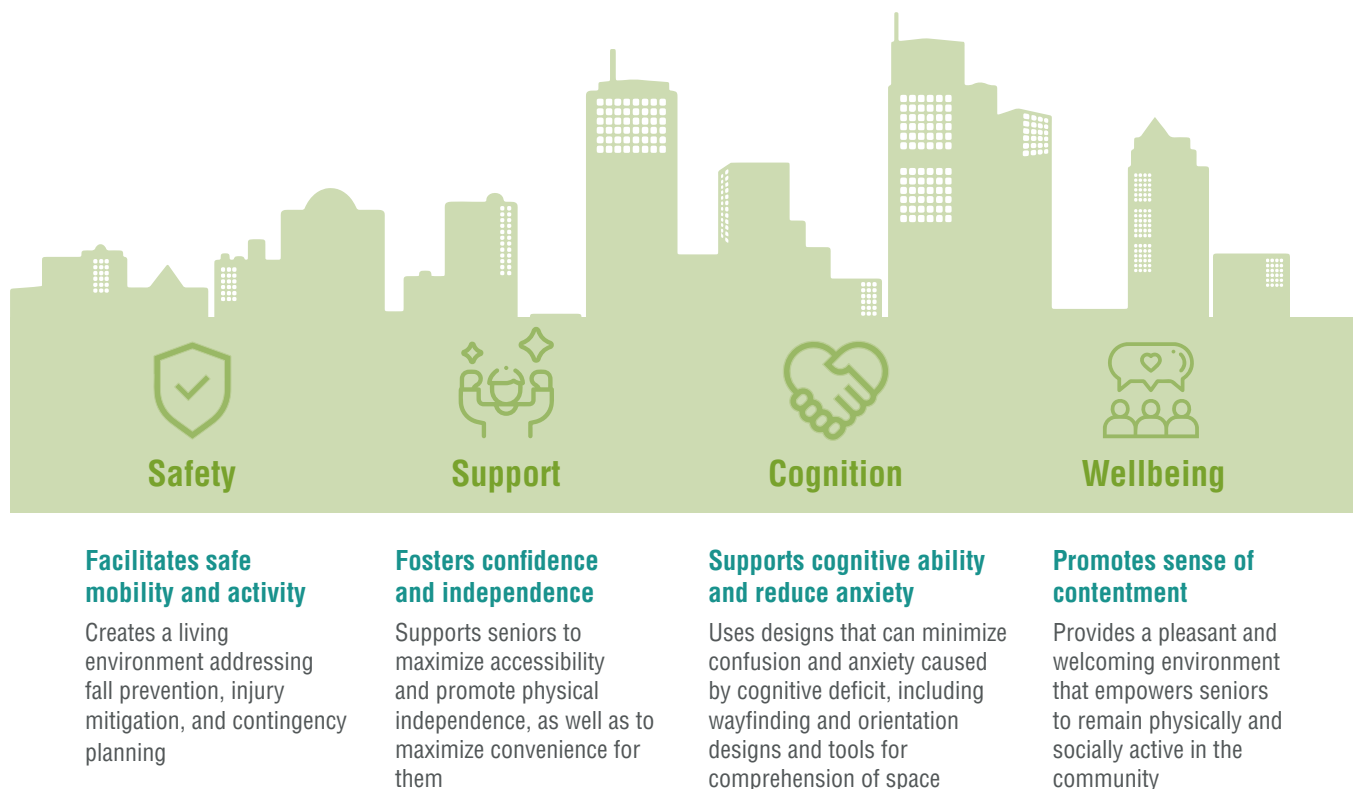
All of the apartments in Spring Harbor Senior Living feature a housing design that is domestic and has senior-friendly features, such as wheelchair-accessible rooms, high ceilings with generous natural lighting, and walk-in showers with safety systems. The CCRC provides maintenance services that allow residents to conduct simple retrofitting within the apartment when more senior-friendly features are needed. There is also flexibility to move into other floor plans as needed.

Dependent Living with Health Care

For seniors who require further health care attention in assisted living, the housing design should include additional senior-friendly features to the design features discussed above. In general, the unit should be barrier-free and

wheelchair accessible. Hong Kong's Architectural Services Department published Elderly-friendly Design Guidelines, which give out a set of overarching principles for senior-friendly design. The four principles aim to address the physical, behavioural, mental, and social wellbeing of seniors.

FIGURE 4 The four overarching principles for senior-friendly design



Source: Architectural Services Department. (2019). Elderly-friendly Design Guidelines.

In addition, the safety of seniors will be the priority of interior design, including installation of emergency buttons. Some of the other following features could also be considered:

Barrier-free. In addition to wheelchair accessibility of the unit, obstacles such as furniture that can block the pathway should be minimized. To lower the risk of injuries, furniture should be made of durable materials with round edges and fewer detachable parts.

Safe Flooring. Slip-resistant flooring throughout the unit is essential; tile materials such as marble and granite may not be a safe option for senior housing. Elimination of tripping hazards and variations in floor level can also reduce the risk of injuries. Cables and wires should be hidden in the wall to avoid tripping and falling hazards.

Safe Bathroom. The bathroom is one of the rooms where most accidents happen. For a senior with limited mobility, standing in the shower and sitting in the bathtub can be uncomfortable and dangerous. A walk-in shower with a built-in may be a better option for seniors. Moreover, handgrips next to toilets and showers should be installed to prevent falls.

Safe Kitchen. The rule of a senior-friendly kitchen is increased accessibility. Kitchen items should be easy to reach; as such, an overhead compartment may not be a desirable option for seniors, as it increases the risk of injuries. To prevent fire hazards, an electric stove should be installed instead of a gas stove.

Case Study



Tanner Hill

Tanner Hill is the first non-subsidized senior housing project in Hong Kong, incorporating senior-friendly features in its architecture and interior design, ensuring more facilities and equipment can be used by all. Senior-friendly features of Tanner Hill include the following:

- Wheelchair friendly designs
A wide entrance with a U-shaped lever handle at a desirable height, a curbless entrance, two-level security viewers, a bathroom with a shower curtain, and a demountable cabinet in the open kitchen
- Other senior-friendly designs
Large button switches and socket outlets at desirable height, two-way light switching system, night light, lever tapware, and contrasting stripes on the shower sliding glazed door
- Safety features
Emergency call buttons/units inside the bathroom and shower space and visual fire alarm and alarm sounder



Application of Technology

Whether it is big data management that enhances health monitoring or AI/robotics that can reduce loneliness of seniors, technology has become an essential part of senior housing management. In fact, there has been an accelerated adoption of technology since the outbreak of COVID-19. In a survey conducted by *Senior Living News* with professionals in the senior living industry, 78 percent of respondents reported their technology spending increased during 2021, and over 70 percent of the respondents are planning to increase their technology budget for senior housing in 2022.²⁷

While technology could promote effective management of senior housing, similar technologies are already available in the market for other purposes. Developers and operators can explore the modification of current technologies and conduct pilot schemes for technologies that are customized for senior housing.

Health Monitoring

Technology on health monitoring is one of the most popular adoptions in senior housing. Health monitoring systems in various forms could be adopted to enhance health care service quality. For example, the use of big data and the Internet of Things (IoT) allows caretakers to understand the needs of seniors and make adjustments to create a more desirable environment according to weather conditions and seniors' living patterns.

Although technology brings convenience to our daily lives, privacy is one of the major concerns when using technology applications. Technologies for senior housing often involve the monitoring of seniors' activity and health condition, which collects personal information and activity data. Therefore, the balance between privacy and effective health monitoring is the key to quality health care services. In Japan, some senior housing may assign residents to units according to the level of care they need. For seniors who require more health care attention, further health monitoring systems such as motion sensors will be installed in common spaces, such as corridors on the same floor. This is to ensure such activity data are collected from seniors that require health care attention while maintaining privacy for other senior residents.

Telehealth

During the outbreak of COVID-19, telehealth was one of the fastest growing health care technologies and has been widely adopted in senior housing facilities. As seniors are deemed

to be at higher risk of mortality from COVID-19, virtual physician appointments may lower the risk of infection from going out, and hence, telehealth has become a norm. With telehealth services integrated into senior housing facilities, seniors may conduct regular check-ups at home without commuting.

Motion Sensors

Motion sensors are widely used in senior housing facilities because they allow caretakers to understand seniors' health condition without collecting unnecessary information, as opposed to cameras installed in the units. Alerts may be triggered when seniors fall or are injured, ensuring timely assistance. In addition, if the motion sensor is inactivated for a long period of time, it may also alert the caretakers to check on the seniors' health condition.

Internet of Things

IoT is a key technology that is widely adopted in the real estate industry when it comes to smart homes. In addition to entertainment, IoT, connected with sensors, could monitor the senior housing's environment, including air quality, temperature, and humidity. Monitoring of such metrics may promote the health and comfortability of the living environment.



Case Study



Singapore's Elderly Monitoring System under Smart Enabled Home Initiative

As part of Singapore's Smart Enabled Home Initiative, the Elderly Monitoring System is a system that learns the habits of seniors through the help of motion sensors and alerts family or other caretakers when irregular patterns in behaviour are detected. The system consists of three sets of sensors:

- **Motion sensors**
A set of non-intrusive sensors that detect motion and alert caretakers when irregular patterns are detected, such as an unusually long period of inactivity.
- **Door contact sensors**
Sensors detect the pattern of seniors going outside the flat. Alerts may be triggered for irregular patterns, such as door contact sensors triggered at midnight.
- **Panic button**
The panic button is designed for seniors to call for immediate help in case of emergency.

The Housing and Development Board partners with service providers to conduct trials in smart home projects where the system is integrated into the smart home system for families with seniors.

Case Study



Singapore's Alert Alarm System under Project LIFE

The alert alarm system is a system provided by the Singapore government that is integrated with a 24/7 telecare service. The system is manned by the Senior Activity Centre during office hours and by CareLine after office hours. Seniors can trigger the system for help when they experience episodes of distress. As the system is linked to a Case Management System, responders can receive notifications and case information when it is triggered. The staff on duty can then contact the senior via the two-way communications feature in the device to triage the situation and respond quickly, such as activating ambulance service if required.

Engagement

During the pandemic, it became more challenging for seniors to stay connected with their friends and families. With the social distancing and border restriction policies implemented, gatherings and family visits are restricted, especially for family members living overseas. Digital communication tools have become a medium for seniors to stay connected with their family and the community.

Communication Tools. Tools such as virtual video calls and messaging tools allow seniors to keep connected with their families and friends even under restrictions due to the pandemic. Some of the senior housing offers the installation of smart home devices that allow such communication by devices like tablets and smart TVs.

Robotics. Robotics take seniors' daily communication to the next level offered by some companies, such as robots equipped with video screens to enhance the communication experience of seniors with family, friends, and physicians. The robots can move around in the unit, making communication more interactive.

Common Space Community

Senior housing plays a key role in promoting active ageing, during which residents will be able to maintain social participation and contribution according to their desires and capabilities. Senior housing is more than a physical space; it is the building of a common community through a "people-centric" approach. The provision of community initiatives and the incorporation of evidence-based shared space designs could foster a positive ageing experience by helping senior residents stay mentally and physically active, plan for their later years, and encouraging them to remain connected to family and friends and the wider community.

Creating a Community

Active and purposeful community participation contributes positively to seniors' health and wellbeing and helps create a sense of satisfaction and purpose. Recreation programming that provides opportunities to connect with the local community and facilitates intergenerational interaction is therefore essential.

Following are common ways that senior housing developers/operators can collaborate with local organizations and community groups to promote active ageing:

Lifelong Learning. Learning enhances seniors' quality of life and helps them better adapt to later-stage life changes. Benefits of informal and formal learning activities and programs according to a study²⁸ include the following:

- Learning new knowledge and developing new interests to continue to better themselves;
- Preventing and slowing down the decline of mental ability;
- Acquiring a sense of achievement and recognition by attaining qualifications; and
- Making new friends through participation in learning courses.

The operations team of the senior housing could form partnerships with relevant organizations (e.g., art associations and schools) to plan and offer a variety of on-site educational courses that match the residents' needs and preferences. If some of the residents are willing to become course instructors, training could be provided to train these elder learners to become instructors or teaching assistants.

Volunteerism. Volunteering is shown to be associated with the following three positive ageing outcomes²⁹:

- Good health;
- Caring engagement with significant others; and
- Productive engagement in the community.

Providing volunteer training and outward-facing volunteer opportunities could allow senior housing residents to serve and interact with other generations in society and apply their skills and expertise through service.

Wellbeing and Wellness Activities. Apart from learning and volunteering initiatives, activities that promote wellbeing and wellness such as the following examples could keep residents mentally and physically active:

- Provision of regular health checks, screening, and vaccination services conducted by registered nurses;
- Health education talks and coaching conducted by health care professionals on potential topics such as nutrition, emotional health, and muscle health; and
- Personal training for seniors at the gym and swimming pool.

Case Study



Health District @ Queenstown Pilot

The Queenstown Health District is a pilot scheme of the Singapore government where various initiatives are implemented to enhance health and wellness for citizens of all ages in the district. It is also a first-of-its-kind collaboration between the public and private sectors. Science-backed initiatives are implemented to extend healthy longevity and enable a purposeful life in the long run.

Queenstown is envisioned to be an inclusive community where residents lead healthy, active, and productive lives across their life course in a high-quality living environment, which sustainably addresses the determinants of health (social, economic, behavioural, and structural) and enables ageing in place.

Shared Space

The design of shared space is an important aspect to better facilitate social interaction, create a sense of belonging, provide an uplifting environment, and reduce negative feelings associated with social isolation and loneliness.

Senior housing operators could consider the option of opening access to the facility's shared spaces to the neighbourhood to further facilitate intergenerational social interaction with the wider community.

Indoor Shared Spaces. Indoor shared spaces should be designed to encourage socialization among residents and their visiting families and friends.

A central clubhouse with multiple facilities and shared activity offerings that allows residents to casually interact with each other and host their visiting families and friends is essential for forming and maintaining relationships. It is important to offer a variety of spaces to suit different individual needs and preferences in terms of the nature and size of the activity. Multi-functional rooms that allow a certain degree of flexibility and customization, and a communal restaurant or café that facilitates regular forms of socializing are identified as the most important specifically designed spaces to better facilitate socialization.

Apart from a centralized social space, circulation spaces and spaces along the path of movement scattered in the building such as lobby, elevator landing space, and end-of-corridor space should not be overlooked for their potential to become casual, sociable spaces for random encounters with neighbours.

When designing indoor shared spaces, the use of colour, art, music, and greenery as well as manipulation of daylight can enliven the space and create an uplifting indoor environment that helps address feelings of anxiety or depression. Among the aspects mentioned above, access to nature is particularly essential for both mental and physical wellbeing. The visibility of outdoor greenery with the use of large, unblocked windows, the strategic placement of artificial greenery in areas without access to outdoor greenery, and barrier-free physical connection to gardens and terraces are key to reducing stress and improving mood.

Outdoor Shared Spaces. Outdoor shared spaces should be designed to promote intergenerational exchange to help connect the seniors with their families and the community as well as providing sensory stimulation. Outdoor shared spaces should include a combination of specifically programmed and flexible unprogrammed spaces that give users the option of carrying out passive and active activities.

TABLE 5 Examples of programmed and unprogrammed spaces

Type of space	Examples
Programmed space	<ul style="list-style-type: none"> • Floral garden path • Playgrounds for seniors and children • Community garden • Outdoor chess tables
Unprogrammed spaces	<ul style="list-style-type: none"> • Shaded seating areas • Multi-purpose space configured for group exercises, BBQ etc.

The overall design of outdoor shared space should consider additional senior-friendly measures to ensure safety and accessibility:

- Widening of paths accommodating wheelchairs, walking aids, or a walker if needed;
- Closed loop paths that ensure people do not get lost and can easily return to entrances or exits;
- Plenty of flat surfaces to increase accessibility for seniors with limited mobility;
- Shallow slopes for wheelchair users or seniors using walking aids;
- Use of rubber and concrete pavers rather than gravel and cobbles as materials for pathways to ensure safety and comfort; and
- Adequate lighting along the pathway to help with visibility in the evening and at night.

Case Study



Yuimarl Fuku

Yuimarl Fuku is a privately owned senior housing facility that provides assisted living. There are a total of 53 units, and they are currently 90 percent occupied. The facility is close to hospitals, supermarkets and commercial shops, and public transportation. Yuimarl Fuku also has access to a nearby “green corridor” featuring a pedestrian path in parkland, where seniors can take a walk uphill.

During the planning stage, Yuimarl Fuku consulted seniors on their wants and needs to decide on the facilities and amenities, and it is one of the reasons that a large portion of outdoor space is reserved as a community garden. Because the garden is located at the centre of the facilities, residents are still able to enjoy gardening, and it is a popular activity among the residents.

Management

Different from commercial housing, senior housing requires more stakeholder involvement during operation. The owner, often the developer or a conglomerate, plays a role in connecting all stakeholders to form an effective ecosystem. Stakeholders including health care service providers, property managers, and technology providers all have their expertise, but none of them will necessarily be equipped with an all-around experience in senior housing management. This is where the owner may step in to coordinate with the stakeholders in building the ecosystem. Usually, the management approach of the senior housing is agreed by all key stakeholders, and it may be aligned with the owners' overall group strategy. Owners may choose different operating modes as they see fit, according to resources and availability of expertise.

Among all services offered by senior housing, the provision of medical services for the elderly are highlighted in the following sections, as securing such good-quality services is one of the largest challenges for senior housing with health care in Hong Kong.

Operating Mode

The operating mode, team size, and dynamic of a senior housing facility are determined based on the type of senior housing, the scale of development, and the number of facilities, services, and initiatives to be offered. As the operating mode, team size, and dynamic of senior housing are linked to the management of operational costs and reputational risks, these factors should be carefully considered by the senior housing provider during the planning and design phases.

In house. The in-house operating mode is where all on-site services during the operational phase of the senior housing are provided by staff directly employed by the senior housing provider or its management subsidiaries.

This approach allows the senior housing provider to retain maximum control and ensure the quality of the services. This model is beneficial for those who are building up or had built up their expertise and service offerings through direct employment and training and/or acquisition. For example, a property developer who would like to develop its health care and senior care business but with no or limited senior care expertise may consider building an in-house medical services team to provide senior care by acquiring companies that specialize in such services.

Both the design and operating teams of the facility could work closely to leverage each other's competence during the planning phase to design infrastructure and services that best suit the needs of seniors.

Outsource. The outsourced operating mode refers to the appointment of third-party service providers to perform all services operation and maintenance work. It is a common operating model for typical residential buildings in Hong Kong.

It will be harder to manage the quality of services to meet senior residents' expectations when outsourcing, as compared to the in-house and hybrid operating models, which give the owner of the senior housing more control over the operation. In addition, sourcing high-quality service providers in Hong Kong appears to be a challenge because of the lack of labour in the elder care services field.

Hybrid. The hybrid operating mode is one in which senior housing providers partner with third-party services providers on certain management aspects. According to the results of a U.S. survey, rehabilitation and therapy services and dining/food services are the most common services outsourced by senior housing providers.³⁰

In terms of medical services, this may imply partnership with professional medical service providers in the market and contracting with physicians and specialists based on the needs of the senior residents.

Outsourcing certain aspects allows the core operating staff to focus their time and resources on their core competency while using vendors' expertise and resources. However, the owner of the senior housing may need to spend more time on communication and coordination to make sure the in-house and outsourced teams are well-aligned to maintain the quality of services and manage reputational risks.

Resourcing of Professionals

Hong Kong's health care ecosystem faces a continuous shortage of health care manpower, and as society ages, demand for health care services will only increase. According to the *Report of the Strategic Review on Healthcare Manpower Planning and Professional Development*³¹ published by the Health Bureau in 2017, despite what the government has implemented to boost the supply of health care professionals, such as substantially increasing local health care training places and hiring retired and overseas health care professionals, the forecast manpower situation remains challenging for the coming decades. The study projected a widening manpower gap from 2016 to 2030 for health care professional categories contributing to the provision of medical services for seniors, namely doctors, general nurses, and physiotherapists.

Apart from health care professionals subject to statutory regulation, health and care workers working in RCHes in

Hong Kong are also experiencing a shortage. As of Q1 2022, there is a 9.9 percent vacancy rate for RCHE posts.³²

In early 2022, the Hong Kong government temporarily relaxed rules on care worker importation to combat the pandemic. A thousand temporary contract care workers from Mainland China were recruited to fill the shortage of labour. As it takes time for long-term government initiatives to be developed to address the shortage of health care professionals, senior housing owners could investigate the following two strategic directions for talent and resourcing under existing constraints:

Offer Senior Care Training for Domestic Helpers. Engaging domestic helpers for caregiving help is a common practice in Hong Kong. These domestic helpers have been playing a key role in caring for seniors in a significant number of families.

Offering senior care training for domestic helpers to meet senior residents' non-medical personal care and assistance needs in independent living and assisted living care levels is a potential solution to the shortage of local health care manpower.

The Social Welfare Department and the Department of Health implemented the Pilot Scheme on Training for Foreign Domestic Helpers in Elderly Care,³³ which consists of eight core modules and four elective modules in senior care and care skills. The core modules are (1) assisting seniors with feeding and taking medicines, (2) fall prevention, (3) first aid, (4) food hygiene and healthy meal arrangement, (5) mental health of seniors and detection of warning signs, (6) bathing and oral care for seniors, (7) vital signs observation and health monitoring skills, and (8) assisting seniors with mild mobility impairment in transferring positions. The four elective modules

include (1) meal arrangement for seniors with dementia, (2) communicating with seniors with dementia, (3) managing behavioural and psychological symptoms of dementia, and (4) caring for seniors with stroke. Since the launch of the pilot scheme in 2018, it has provided training for over 1,200 domestic helpers. The pilot scheme is currently in phase two, where a training institute is commissioned to provide about 1,350 training places through September 2023.³⁴ Referencing the pilot scheme, senior housing providers could explore the feasibility of partnering with the government departments to offer subsidized and structured training to equip domestic helpers with basic knowledge and skills for providing care for senior residents, enhancing their quality of life and supporting ageing in place within the same community.

Using Technology. Technology could ease expensive operational costs and health care manpower shortages while keeping residents and staff safe during the pandemic. The rollout of disinfection robots and increasing telehealth services to triage less acute cases reduced workload of the operator and freed up medical staff to focus on residents with acute medical needs.³⁵

IoT technology and connected devices are revolutionary for independent living senior residents with deteriorating physical abilities. With IoT, connected sensors and devices are installed to monitor senior residents' daily patterns and habits, recognize abnormalities, and alert emergency services. This centralized and holistic approach ensures senior residents' safety while lessening the strain on the demand for health care services in senior housing facilities.



Chapter 5: Financing for Senior Housing

Although limited public information is available on the cost and revenue of senior housing properties, insights may be gained from the development of RCHE facilities in Hong Kong. Traditionally, monthly fees for traditional RCHE range from HK\$8,000 to HK\$14,000 per resident, excluding additional services. By contrast, high-end service providers can charge as much as HK\$22,000 to HK\$50,000 per month.

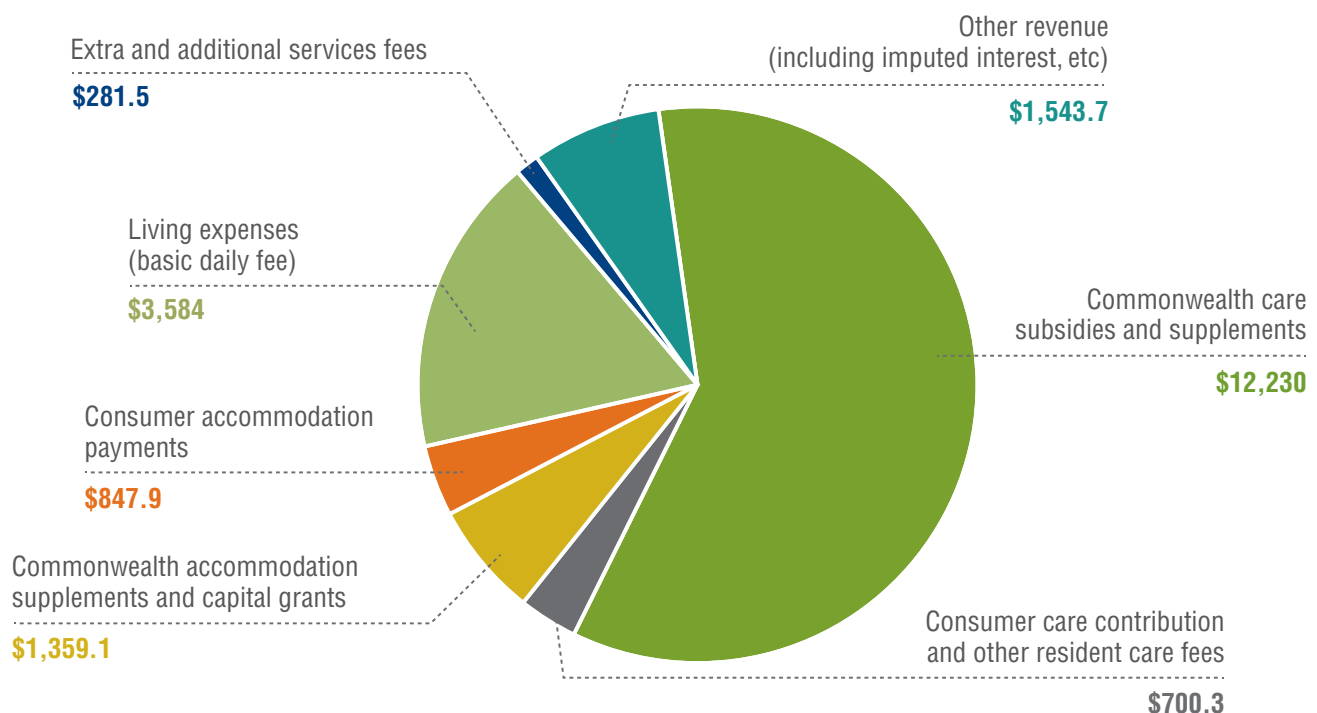
Developing a new RCHE facility requires sizeable floor space with at least 5,000 to 6,000 square feet of GFA, with larger developments extending up to 30,000 square feet. Faced with high rental costs, specialist operators are now cooperating with property investors to either acquire buildings and convert them into comprehensive senior home centres or purchase land for development. While the planning applications and lease modifications may be a headache, developing a new facility can allow for more flexible building design to cater to different operational requirements. Most important, costs can be easily controlled.

The acquisition cost for a property suitable for senior home is about HK\$8,500 to HK\$12,000 per square foot GFA, whereas the potential rental rate spans from about HK\$25 to HK\$38 per square foot depending on location, building age, and quality. This means that the yield can be as high as 3.5 to 3.8 percent.³⁶

In addition, the U.S. and European markets provide insights into the yield on senior housing investment. Depending on the location and asset quality, the U.S.'s and Europe's prime senior housing yields range from 5.9 to 7.0 percent and 3.5 to 5.0 percent, respectively. Due to the further growth of Hong Kong's ageing population, the lack of retirement living, and the cost of new buildings, the senior housing market is expected to be a profitable opportunity for operators, developers, and investors. Given the infancy of this market in Hong Kong, the growing number of wealthy retirees is a great incentive for investors to get involved early. The private senior living market has the potential to offer better yields than conventional investments because it is less affected by sudden market movements.

The Australian senior housing industry had 845 residential care providers operating 217,145 residential senior care facilities in Australia in fiscal year 2019/2020. The Aged Care Financing Authority found that there is an average EBITDA of A\$6,445 per resident per annum for all residential care providers. A majority of the revenue comes from care subsidies and supplements from the commonwealth government, with the breakdown shown in figure 5:

FIGURE 5 Proportion of Australian residential care provider's total revenue in FY 2019-2020 (million A\$)

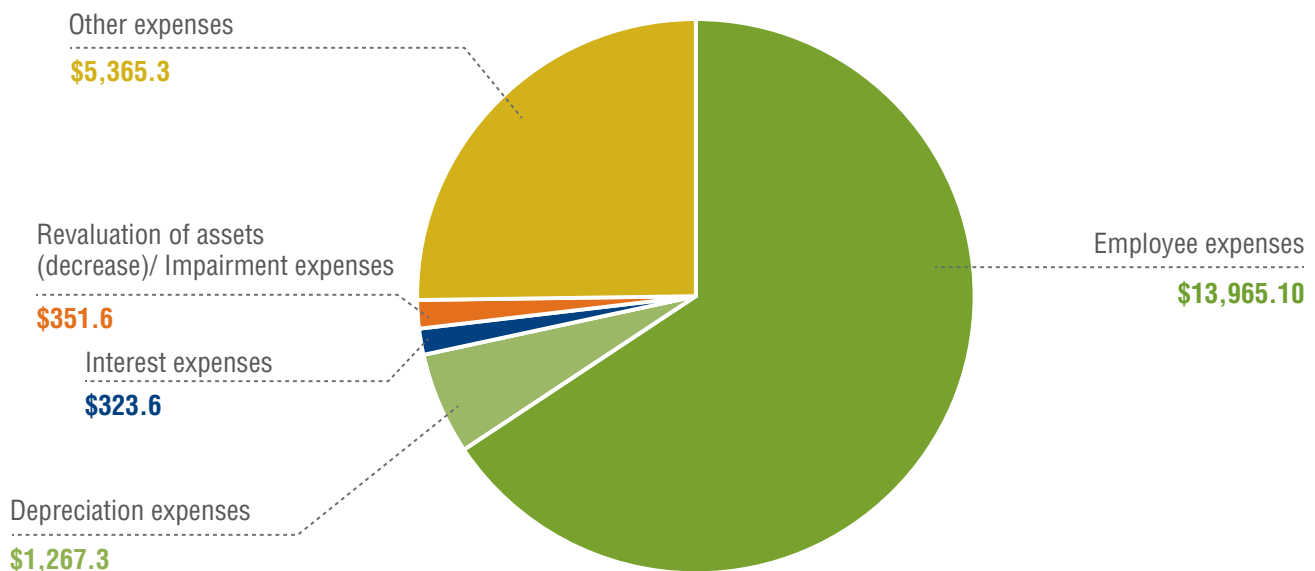


Source: Aged Care Financing Authority. (2021). Ninth Report on the Funding and Financing of the Aged Care Industry – July 2021.

In terms of expenses, these residential care providers have a total expense of A\$21,272 million during the year. Employee expenses take up a major portion of the aged care provider's total expenses, representing 66 percent of total expenses, followed by other expenses including building repairs and maintenance expenses, rent, utilities, and cost associated with employment support activities, cleaning, and administration, which represented 25 percent of total expenses. The breakdown of a provider's expenditure is presented in figure 6.¹³

Due to senior housing having a higher cost of operations and targeted customer group, the traditional sales model may not be suitable. In traditional sales models, owners may resell the property to individuals without restrictions. If senior housing directly adopts sales models from commercial housing, the unit may be resold to individuals who are not eligible to live in the unit. Therefore, sector players are adopting sales models that can maximize the value of senior housing.

FIGURE 6 Proportion of Australian residential care provider's total expenses in FY 2019-2020 (million A\$)



Source: Aged Care Financing Authority. (2021). Ninth Report on the Funding and Financing of the Aged Care Industry – July 2021.

Sales Model

Typically, the sales models of senior housing give residents the right to live in a senior housing unit and the right to use its facilities. When the residents move out of the units, they lose their right to enjoy the senior housing facilities. Deferred management fees, debenture, and strata are common sales models for senior housing. Each model has its strengths and weaknesses, and the developer may consider offering a mix of sales models to provide greater flexibility for seniors. The benefits of the sales model will allow a more flexible cash flow for developers, and seniors can secure units and services with a fixed entry deposit. However, there is usually a long return on investment period, and the developer will have to bear the risk of increased operating costs.

Deferred Management Fee

A deferred management fee (DMF) is a common sales model for senior housing. Instead of renting out apartments, some senior housing facilities offer the option to purchase the space. Buying property under a DMF contract means that upon leaving, the operator will keep a percentage of the entry contribution to pay for the continued maintenance and management of the facility. This percentage depends on how long a resident stays in the senior housing facility. Typically, the longer a resident stays, the lower the percentage per year becomes. Most senior living facilities cap the percentage at about 25 to 30 percent.³⁶ Operators of private housing with care report that DMF accounts for roughly 20 to 40 percent of income; the remainder of the income usually comes from food and beverage facilities and care and wellness services.³⁷

Using a retirement village in the UK as an example, a DMF model is usually composed of two fee components, namely the monthly fee and deferred community fee. A retirement village can offer different options with various combinations of monthly fee and DMF. With a higher monthly fee, the resident will pay a lower DMF percentage of the unit value at resale. Conversely, the resident would pay a higher DMF percentage with a lower monthly fee.

The DMF model is popular because it may provide capital gain for the resident. Residents may make a profit upon selling their apartment, if the property value appreciates. DMF may attract seniors who are incentivized by the possible capital gain they could make when leaving senior housing, while it may not attract seniors who are preparing for death, who may rather allocate those funds elsewhere.

TABLE 6 Example of deferred management fee model (for illustrative purpose only)

Number of years after purchase	Option 1		Option 2		Option 3	
	Monthly fee	DMF	Monthly fee	DMF	Monthly fee	DMF
Year 1		2%		4%		4%
Year 3		6%		12%		12%
Year 5	100% of service fee	10%	50% of service fee	20%	25% of service fee	20%
Year 7		14%		24%		28%
Year 10		15%		24%		30%
Year 15		15%		24%		30%



Case Study



Stockland Retirement Living

Stockland owned and maintained 59 retirement villages in Australia with over 10,000 residents under its Retirement Living Business Segment. Similar to many retirement villages in Australia, Stockland adopted the DMF model with two types of sales contract options for the retirement village residents.

The first option does not give the village residents any share of capital gain/loss while the second option gives a 50 percent share of capital gain/loss. Each option would result in different exit repayment amounts upon reselling the village home, depending on the changes in the local property market.

Three types of costs and fees are included, regardless of the contract types:

- Upfront costs – the initial price the resident pays for the village home, which can include third-party payments such as legal fees and removals' costs.
- Ongoing costs – residents are charged a monthly ongoing amount associated with the running costs of the village. The ongoing costs include the operation, maintenance, and management costs of the village, as well as the cost associated with the use of electricity, gas, telephone, and internet.
- DMF – a departure fee that is 25 to 35 percent of the entry price accrued over the first five to seven years of occupancy. The DMF is deducted from the exit repayments the residents would get from the resale of the village home when they leave. At Stockland, some of the DMF is reinvested back into the retirement villages to cover essential operating costs.

This sales model allows residents to enjoy a lower purchase price when they move in and offers flexibility to residents to select a contract option based on their appetite for risk. At the same time, Stockland could retain differences between the capital gain when the unit is resold and the exit repayments to the outgoing residents.

Strata

In a strata-sale model, the right to use spaces is sold to individuals. This is a model commonly used for office and retail spaces but could apply to residential buildings. In this case, investors can purchase apartments within the senior facility that can then be rented out to residents. The strata model is seen as a win-win for investors and the developer. It helps maintain cash flow, while the investors can get higher returns on property.

However, the ease and success in implementing the strata-sales model depend on how an operator manages its rentals. If the operator prefers to have more say in rental costs and management in leasing, having investors purchasing spaces may not be the best strategy. The strata-sales model takes away that kind of control from operators and puts it in the hands of the investor. In addition, this model causes inconveniences for residents if rental payments are handled separately from service and management fees. This can lead to confusion and lack of transparency if residents are not aware of the different prices.

Debenture

Debenture usually works in a form of membership. It is an instrument that allows members to secure units before moving in so that seniors can purchase a membership which gives them the right to move into a senior housing unit. A monthly subscription fee during their stay in senior housing is usually required for this model. When the senior moves out of the unit, they may sell their membership to others with a possible capital gain. Debenture is usually adopted by higher-end senior housing to create a more exclusive market.

Rental Model

Rental models usually provide greater flexibility for operators to continuously improve on services with reasonable cost control. Operators may offer two types of rental contracts for senior residents, namely the long lease and monthly payment.

Long Lease

Long lease contracts are long-term lease agreements that allow seniors to gain the right to live in the senior housing units for a long period. Typically, the senior housing will allow lifetime residency of seniors, where the lease amount could be adjusted according to the resident's age at the time of entry. The expense during the stay is steady and predictable for the tenants.

Monthly Payment

Monthly payment allows greater flexibility for seniors with a shorter living period or seniors who would like to experience the benefits of senior housing before moving in for the long term. As the monthly payment may be adjusted periodically, the overall cost may be higher than a long lease or other sales models.

Case Study



Yee Hong

The Yee Hong Centre began operations in 1994 and remains the largest non-profit nursing home for Chinese and residents of other Asian backgrounds in Canada.

Today, Yee Hong serves over 15,000 individuals across the Greater Toronto area annually. Yee Hong provides a range of services, from long-term care and assisted living to hospice care. The majority of the housing services offered by Yee Hong are funded by the Ontario government, donations, and fundraising:

- Long-term care homes – all personal and nursing care provided by the four long-term care homes with a total of 805 beds are funded by the government. Residents are responsible for accommodation and meal charges. This co-payment fee is standardized across all long-term care homes in Ontario as set out by the Ministry of Long-Term Care. The maximum monthly co-payment fee ranges from C\$1,938 to C\$2,769, based on the type of accommodation.
- Assisted living – services such as personal care, homemaking, security checks, and care coordination provided at five service sites are funded by the Local Health Integration Networks. Yee Hong also provides these support services for a private condominium project under a monthly service fee mechanism. Residents are allowed to request additional services on a fee-for-service basis.

Services Packages

No matter whether the residents opt for a long lease or monthly payment option, operators may offer packages that include various services that are usually categorized into the all-inclusive rental options or the pick-and-choose options for residents. The all-inclusive rental option bundles all or

large amounts of services provided by the housing facility. This means that residents pay a fixed fee for access to all services. This causes a much higher price for rentals but has its benefits.

The pick-and-choose option may be more desirable for residents as they will only pay for what they need, the charging system for the pick-and-choose option is usually more transparent for seniors to understand their expenses. Offering care packages in various bundles caters to the ranging necessities of residents. Support and care services are not one size fit all; people seek senior housing for different reasons. Some will need more intensive care in daily activities than others. Those seeking a more independent lifestyle may not want to pay for a personal care helper or medication collection. A model where residents can pick and choose rental bundles is flexible and efficient.

Moreover, the efficiency of a pick-and-choose option also depends on the operation model. If services and maintenance are maintained by an in-house team, it would be easier for residents to manage separate payments. If operations are done in a hybrid model, it would be harder to track finances.

Case Study



Bankhouse

Bankhouse is a UK senior housing project that positions itself as luxurious living along with excellent facilities and professional services. It offers different bundles that residents can choose from upon entering, namely the “core care charge” and “menu care charge”. Their core care charge includes basic management and care needs, where additional care packages fall under the menu care charge.

- Core care charges include an on-site management team, coordinating assistive technology, family liaison, emergency response, and reactive care, health and safety checks, social activities, etc.
- Menu care charges include services that assist seniors on (1) personal care, such as dressing, supervision, and assistance with bathing and personal hygiene; (2) practical support, such as medication ordering and collection, bill paying and shopping; (3) companionship and social support, such as maintaining social contacts.

In addition, residents may also purchase catering services that provide light lunch and hot meals every evening.

TABLE 7 Comparing all-inclusive and “à la carte” rental options

	All-inclusive option	Pick-and-choose option
Pros	<ul style="list-style-type: none"> • When utilities, entertainment, and meals are covered in a single monthly payment, understanding personal finances is clearer. • Residents do not have to worry about unexpected financial surprises concerning the maintenance of their apartment. • Depending on the services required, all-inclusive may be more cost-efficient. • Decreases the chances of missed or late payments. 	<ul style="list-style-type: none"> • Can be more cost-efficient. • Makes an independent lifestyle more attainable while still being able to enjoy retirement. • Allows more transparency of finances for those who like to be hands-on regarding their spending. • If a resident is living off a strict budget, pick and choose allows better financial management.
Cons	<ul style="list-style-type: none"> • Low transparency on service fees. Residents may find themselves overpaying for utilities, services, or perks provided by the facility. 	<ul style="list-style-type: none"> • Unexpected expenses may occur for services that the residents do not subscribe

Other Income Source

Due to the high operating cost of senior housing, sales or rental of senior housing cannot be the sole source of income. Offering non-residents access to certain amenity features can allow seniors to benefit from engagement with non-residents as well as provide additional income. It enables them to be a part of a community. Some senior housing may choose to open part of the facilities, such as a clubhouse or gym, to non-residents to increase income. Many may want to enjoy the facilities of a gym, spa, or pool but have no interest in residing in a senior facility. Similarly, some seniors may reside in the facility, but are not capable of or do not have any

interest in using the clubhouse. If space allows, non-resident memberships may be a tool for revenue. However, there are advantages and disadvantages to an external membership program.

There are solutions to combat these disadvantages. Residents and non-residents can be given different access cards or keys to prevent people from entering restricted areas. Moreover, an increase in security level may make the residents feel safer. In addition, special hours could be put in place to prevent overcrowding and ensure residents have enough time and space to enjoy the facilities.

TABLE 8 Pros and cons of opening senior housing facilities to the public

Pros	<ul style="list-style-type: none"> • Increase in revenue • Some seniors may enjoy the diversity of age groups • Allows for different social interactions between residents and non-residents • Could attract future residents if they are able to access a part of what the facility has to offer
Cons	<ul style="list-style-type: none"> • Security risk • Non-residents having access to the building may be of concern for residents • Residents may be frustrated if non-residents are crowding clubhouse facilities

Chapter 6: Conclusion and Actions

As baby boomers retire with improved health, seniors are going to make up a significant group of the population in the future. By 2038, nearly one-third of the population in Hong Kong will be considered seniors. These healthy seniors want to live a purposeful and healthy life after retirement and are looking for a better-quality living style compared to the living style before retirement. At the same time they are wealthier than the previous generations, given the growing number of affluent individuals in Hong Kong. It opens a new market sector of senior housing for investment in Hong Kong. However, the supply of senior housing is currently limited, with fewer than 1,000 private senior housing spaces available in the market.³⁸

Due to the limited land supply in Hong Kong, senior housing development faces challenges even though the demand is growing. The high cost of land and operation are the major challenges for senior housing development. By looking into other markets in the Asia Pacific region, it can be seen that policy support and public/private collaboration are essential for the senior housing market to emerge in Hong Kong.

Lessons from Japan, Singapore, and Australia brought insights into the role of policy support as the facilitator of senior housing market development. Currently, limited incentives are provided by the Hong Kong government to the private sector in developing senior housing projects. Referring to the successful cases overseas, it is believed that the following support from the government would help the growth of a local senior housing market:

1. Land use policies

- Assign a designated land use category for senior housing with restrictions on sales or reselling of units. It can attract developers who are interested in developing senior housing properties at a lower cost without narrowing their target customers to commercial projects on residential land.
- A preferential land premium for senior housing on residential land may also facilitate developers in entering the senior housing market with a lower development cost.

2. Incentive for senior housing development

- Incentives such as a GFA concession mechanism for senior-friendly design features encourage developers to incorporate such design features in their development projects. It also promotes the general acceptance of senior housing and awareness of the needs of affluent seniors.

3. Improved health care subsidy scheme

- A health care subsidy scheme that covers a larger scope of senior health care services incentivizes seniors to seek private health care operators. It can relieve the pressure on the public health care system while encouraging more private health care operators, including senior housing operators, to provide a wider variety of senior health care services.

4. Expansion of health care services incentives

- Expansion of health care services funding to private operators encourages them to establish health care services for the community rather than targeting the higher-end market only. It also allows private operators to enter the market and provide a wider variety of senior health care services to the mass public.

Policy supports alone cannot build a robust senior housing market: the public acceptance of senior housing and the added value of professional services by the private sector together shape the senior housing market in Hong Kong. The private sector may consider the following when planning for senior housing properties:

1. Develop an intergenerational community

- An intergenerational community that accommodates citizens of all ages fits the desire of seniors for being engaged in the community. It is also a model that is being considered in the Asia Pacific region that could lower the cost of building separate senior housing while respecting the Asian culture of strong family bonding.

2. Provide add-on services for seniors for a smooth transition to ageing in place

- Quality add-on services such as providing training programs for domestic helpers on senior care and retrofitting of housing for ageing in place promote the smooth transition to ageing in place for seniors.

3. Greater use of technology in senior housing

- Adequate use of technology in senior housing designs and management can increase the cost-effectiveness of operations and relieve the pressure on labour resourcing, given the shortage of caretakers in Hong Kong.

As more developers may consider the development of senior housing properties, there is an opportunity to close the gap between demand and supply of senior housing in Hong Kong. Seniors may also live out their aspirations in their retirement living in a liveable and healthy environment.

Appendix: Examples of Senior Housing

Case study	City/country	Description	Type of senior housing
The Tanner Hill	Hong Kong	Positions itself as quality housing that provides both independent living and assisted living for senior citizens age 60 or older in Hong Kong. It offers options for lease and not for sale, long lease with entry contribution, reverse mortgage financing option, incentive program or short lease.	Independent living, assisted living
Ventria Residence	Hong Kong	Premium retirement community operated by Roseville Senior Living, a premier retirement facility developer and management company in Asia. Main services include independent living, assisted living, memory care, rehabilitation and wellness.	Independent living, assisted living
HKHS — Jolly Place and Cheerful Court	Hong Kong	The facilities were designed to foster strong links to the community, with a focus on the integration of day services. These innovative pilot projects for the Hong Kong government were part of the first major initiative to refocus government housing attention to the elderly. RCHE land category.	Independent living
Forward Living	Hong Kong	A Nordic-inspired senior housing community for those age 60 or older.	Assisted living
HDB — Kampung Admiralty	Singapore	11-storey modern kampong (“village”) is an integrated housing for the elderly with a wide range of social, health care, communal, commercial, and retail facilities. Featuring 100 flats for the elderly, a two-storey medical centre, an Active Ageing Hub co-located with a child care centre, dining and retail outlets, and a 900-seat hawker centre.	Independent living, assisted living
Health District @Queenstown pilot	Singapore	A first-of-its-kind collaboration between the public and private sector. Envisions seniors in an inclusive community, leading healthy, active, and productive lives across their life course in a quality living environment, which sustainably addresses the determinants of health (social, economic, behavioural, and structural) and enables ageing-in-place.	Independent living
HDB — Community Care Apartments @ Bukit Batok	Singapore	Senior-friendly housing integrated with care services that can be scaled according to care needs and social activities. Pilot project at Bukit Batok is well connected to recreational facilities, eateries, public transportation, health care, and other amenities. Each apartment unit comes with pre-installed fittings and senior-friendly design features (e.g., wheelchair-friendly main door and bathroom, slip-resistant flooring and grab bars in bathroom etc.).	Independent living

Case study	City/country	Description	Type of senior housing
Red Crown Senior Living	Singapore	Care provider that offers assisted living, independent living, and memory care in over 20 locations in Singapore.	Assisted living
Yuimarl Fuku	Japan	A facility in Japan that provides assisted living for seniors in the community. The facility is surrounded by two hospitals, grocery stores, public transport, an elementary school, dentist, and a park. Before establishment of the facility, the facility management engaged in multiple discussions with seniors to gain a better understanding of their needs and what they seek in assisted living.	Assisted living
Stockland Retirement Living	Australia	The retirement village offers flexible buying options where free trials and refunds are available for seniors who wish to exit the village within a short period of time.	CCRC
Martson Living	Australia	Marston Living is an operator of luxury retirement villages who joined with Australian Retirement Partners to assist with day-to-day management of its villages. If residents are capable of independent living, the village manager will help put them in touch with outside service providers to help ensure seniors are able to enjoy an independent lifestyle for as long as possible. These service providers include meal providers, home cleaning services, and visiting medical practitioners.	CCRC
Central and Cecil (senior living facility)	United Kingdom	Central and Cecil has a strong connection to the London art community and involves seniors with various creative projects (dance, music, painting, sewing). It also relies on the community for cultural activities.	Assisted living
Whitely Village	United Kingdom	Whitely Village combines housing and community involvement where it sees volunteerism can be an effective operation tool to engage seniors and maintain staff, resident, and community relations. It offers many opportunities to volunteer within the residency and outside. Residents are volunteers and report that it gives them a sense of purpose.	CCRC
Bankhouse	United Kingdom	Bankhouse is designed to be luxurious living with main services including personal care, practical support, companionship and social support. It gives residents flexibility to choose the services to be included in core care and additional services depending on health care attention needed.	Independent living, assisted living
Audley Villages	United Kingdom	The Audley Villages operates 20 luxury retirement villages for those aged above 55. It offers independent living and assisted living for seniors who are looking for downsizing.	CCRC

Case study	City/country	Description	Type of senior housing
Acacia Creek	United States	A not-for-profit continuing care retirement community (CCRC) with four levels of care available for seniors ages 60 years or older. Acacia Creek offers basic health care services and assistance, and has a full-time, licensed nurse who acts as a health and wellness manager, overseeing all aspects of care, including assessments, medication assistance, and communication with family and physicians. Skilled nursing and memory care programs are offered on campus, and medical centres and hospitals are easily accessible.	CCRC
The Residences at Plainview	United States	A luxury and resort-styled independent senior living facility, where nursing care and assistance with daily activities are outsourced to professional service providers. It does not offer buy-ins for apartments and all apartments are paid on a month-to-month basis.	Independent living
Spring Harbor Senior Living	United States	A CCRC which offers life care and a full continuum of care, including independent living in apartment style or garden villa homes, personal care, memory support, and licensed skilled nursing all on one campus provided by on-site physician, nursing team, dietician, and physical, occupational and speech therapists.	CCRC
Yee Hong	Canada	Yee Hong is one of the largest not-for-profit senior care organizations in Canada, serving over 15,000 individuals across the Greater Toronto area annually. Yee Hong provides a range of services, from long-term care services, to assisted living, to hospice care. In 2020, Yee Hong launched a new subsidiary to develop independent living communities for seniors and has several projects in pre-development stages.	Assisted living

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