

IC The World

Silver economy and Smart elderly care



Major Regions of Population Aging Scale and Elderly Care Services Across the World

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Aging is an inevitable societal issue globally. Particularly in recent years, amidst economic stagnation and the rat race in the job market, most countries have seen a gradual decline in birth rates, leading to a more pronounced trend of population aging. Consequently, demands for elderly care services, medical insurance, and long-term care are steadily increasing. The lives of elderly individuals are also becoming more convenient with advancements in technology. An increasing number of seniors are no longer in need of assistance in caring for grandchildren but are beginning to enjoy retirement life. The "silver economy" is also on the verge of growing a mainstream economic market.

The future elderly population is poised to become a vast consumer demand market. In these articles, we will conduct a detailed analysis of the aging scale, retirement situations, and related economic market conditions in major countries to explore the opportunities this vast segment will bring.

The Aging Size of China, Japan, Korea, Europe, and America

Regions		Population aged 65 and more (million)	the proportion of people aged 65 and more	per capita disposable income
China	2023	216.76	15.4%	\$5447
Japan	by Sep. 2023	36.23	29.1%	\$10652
South Korea	2023	9.73	19%	/
EU	2019	90.50	20.3%	/
Italy	2023	14.50	24.7%	/
Germany	2022	18.78	22%	\$29305
UK	2022	12.84	19%	/
U.S.	2022	57.09	17%	\$50,353

Last year, news of China's delayed retirement sparked conversations on social media, aging growing the most talk-about topic. According to the National Bureau of Statistics, China had 296.97 million people aged 60 and above in 2023, accounting for 21.1% of the total population, among which 216.76 million were at the age of 65 and above, a 15.4% rate of the total population. Relevant departments predict that the total elderly population in the country will hit 400 million by 2035 and 487 million by 2050, a 34.9% rate of the total population.

Aging is a global challenge, with Japan facing the most severe aging issue. There were 36.23 million people aged 65 and above in Japan as of September 15, holding 29.1% of the total population, breaking historical records again and ranking first in the world, in terms of the Ministry of Internal Affairs and Communications of Japan. The Ministry stated in a press that Japan saw the highest proportion of the elderly population in the world, reaching 29.1%, followed by Italy at 24.1%.

In light of age groups, 20.05 million people aged 75 and above in Japan, surpassing 20 million for the first time, taking 16.1% of the total population; 12.59 million people aged 80 and above, occupying 10.1%, meaning one out of every ten people is over 80 years old.

In recent years, South Korea's birth rate has constantly fallen, hitting historic lows repeatedly, changing its population and family structures, and aggravating aging. In 2023, the population aged 65 and above in South Korea racked up 9.73 million people, up over 460,000 compared to the previous year, a proportion of 19% of the country's population. The figure is expected to beat the super-aged society standard line set by the United Nations, which is 20%, by 2025.

South Korea

South Korea's birth rate is astonishingly in rapid decline as well. In 2023, the number of newborns registered based on resident registration was 235,000, an all-time low, which dwindled by 11% and 8% compared to 263,000 newborns in 2021 and 255,000 in 2022.

European Union saw 21% elderly people aged 65 and above as of 2021, growing 5 percentage points compared to 2001. Under these circumstances, a prominent characteristic is the sharp growth in the number of the elderly group (aged 80 and above) whose rate to the total European population doubled from 3% to 6% within 20 years.

By 2050, seniors at the age of 65 and above will notch 129.8 million, accounting for 29.4% of the total population. Italy currently has the highest proportion of the aging population in Europe, exceeding 24%, followed by Finland, Greece, Portugal, and Germany, all around 22%, while the UK's aging population level is below the European average at 18.9%.

In 2022, 17% was the percentage of old people aged 65 and above in the United States, totaling 57.086 million. Thanks to the application of vaccines and antibiotics, improvements in surgical procedures, and advancements in disease treatment, the lifespan of the baby boomer generation significantly climbed.

And they are more willing to spend their wealth on longevity. MedicalStartups website reported, 28 of the top 38 anti-aging research institutes globally were located in the United States.

Facing such a vast market, the elderly care service industries in various countries are rapidly emerging.

The Elderly Care Services of Different Countries

China's elderly care services


In China, elderly care services primarily include home-based care, community nursing services, nursing homes, Integrated Eldercare Services with Medical Care, and smart elderly care.

Home-based care: Elderly individuals reside in their own homes or with blood relatives, with other family members providing care services.

According to a report by a Chinese analysis institution Qianzhan Economist, there are mainly two types of enterprises participating in the home-based care market: door-to-door care service and remote monitoring. Home service refers to professional service agencies sending personnel to provide services to the elderly at home. Caregivers also can detect the health and living conditions of the elderly and address problems promptly through remote monitoring.

In the home service market, the overall competitive landscape is relatively scattered, with mostly startup companies. Additionally, the market is largely concentrated in developed cities such as Shanghai, Beijing, and Hangzhou. Representative companies in China include IzhaoHu, 2MAO Care, AnkangTong Homecare&Healthcare, Fortune Care, LimeFamily, and Shanghai Care Link.

Door-to-Door Care Service Market Landscape					
Company	Patterns	Service items and charge	Other services	Covering Regions	Major Region
izhaoHu	Rehabilitation-centered care with remote monitoring system	remote monitoring, post-operation care, memory care, day-care with rehabilitation training	Community-based	14 cities in China, such as Shanghai, Hangzhou, and Ningbo	Shanghai
2MAO Care	Daily care	Dementia and Daily care are charged on a monthly, daily, or hourly basis; care	/	Beijing	Beijing
AnkangTong Homecare&Healthcare	Combination of online and offline services. Online establishment of elderly health records and door-to-door care as offline services.	/	Community-based care, and nursing home care	20 cities in China, like Shanghai, Beijing, and Chongqing	/
Fortune Care	Daily care, Rehabilitation care, and Nursing	Perinatal care, home nursing, private nursing, rehabilitation guidance, and dementia care are charged based on elderly health assessments.	Community-based care, and medical nursing stations	18 cities in China, like Shanghai, Beijing, and Guangzhou	Shanghai
LimeFamily	Personalized customized services	Personalized customized services are available, charged according to service items	Custodial and mutual elderly care services	6 provinces in China such as Beijing, Shandong, and Guangdong	Beijing
Shanghai Care Link	Daily care, Rehabilitation care, and Nursing	daily care, rehabilitation, and nursing, charged based on the frequency of door-to-door care services	Community elderly care and medical nursing stations	Shanghai	Shanghai



The remote monitoring market involves numerous companies without a leading giant as the market situation is decentralized. Typical firms in the market cover 100ecare Technology, izhaohu, and Maimai100.

100ecare Technology offers comprehensive terminal wearable products, platforms, and applications, while izhaohu and Maimai100 mainly provide remote care systems. The difference lies in izhaohu dispatching a self-built professional care team according to customer needs, while Maimai100 cooperates with multiple elderly care institutions, only providing reservation services without the team.

Community nursing services: It revolves around families as the core, supported by communities, basically providing elderly day care, life assistance, household services, and spiritual consolation. It takes the form of door-to-door services and community daycare, introducing institutional professional services and integrating home-based care service systems. Community nursing services involve establishments of welfare agencies for elderly nursing, elderly shopping and service centers, dining halls, healthcare institutions, senior citizens activity centers, elderly marriage agencies, elderly schools, human resource markets, and legal aid and shelter services, etc.

Nursing home-based care: It is dedicated to providing integration of accommodation, dining, medical care, and entertainment, which is suitable for the elderly with better economic conditions, special needs, or whose children could not care for. This way is high-end and professional.

China owned a total of 425,605 elderly care enterprises, as of April 2023, with more than 30,000 firms in Jiangsu, Guangdong, and Shandong. Jiangsu's related companies hit 39,918, followed by Guangdong with 38,794 and Shandong with 36,874.

Rest home is divided into government-run, government-supported, and private elderly care institutions.

Government-run nursing homes are generally operated by the government or jointly with collectives, dominated by non-profit organizations such as old people's homes and welfare. The government-run is mostly located in towns, suburbs, and rural areas. Government-supported elderly care institutions which are profit or non-profit are funded by the government and run by service operators. Private institutions are managed by social capital, with higher charges. Currently, elderly care institutions in China are largely concentrated in four major economic circles: Beijing-Tianjin-Hebei regions, Yangtze River Delta, Pearl River Delta, and Sichuan-Chongqing regions.

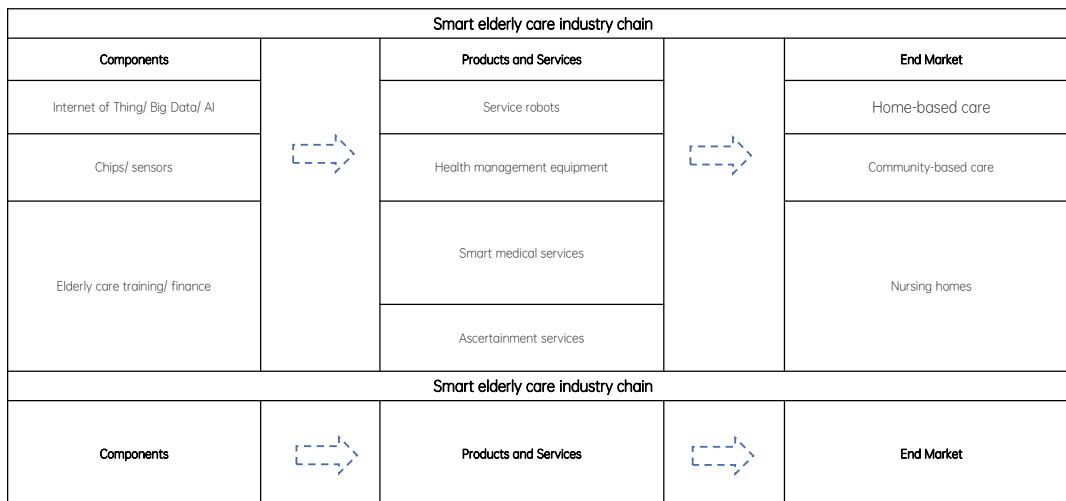
Integrated Eldercare Services with Medical Care offers comprehensive medical-care services. The services map onto elderly individuals who are physically weak, suffering from chronic diseases, or disabled, offering a humane and well-rounded way of elderly care.

China saw about 280 million aged 60 and above seniors with 44 million disabled elderly people at the end of 2022. Disabled people occupy 40% of the population at the age of 80 and above, as reported by the National Health Commission of the PRC. A Peking University's research demonstrated that China's old people with disabilities would overwhelm 77 million by 2030.

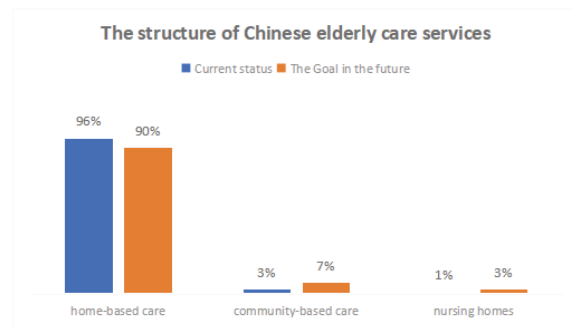
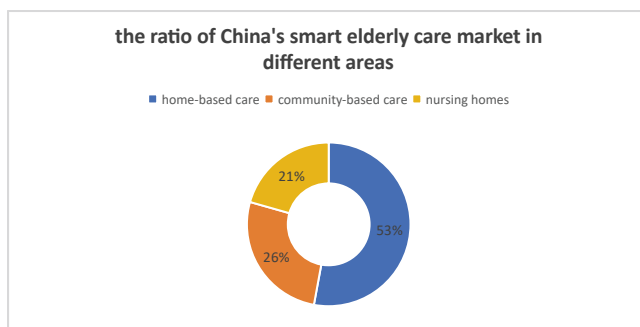
As of the first half of 2023, there were nearly 7,000 medical-care integration institutions nationwide.

Smart elderly care affords intelligent, informatization, and convenient services to the elderly through new technologies such as the Internet, the Internet of Things, big data, and artificial intelligence to provide. For example, smart mattresses can monitor the heart rate and breathing of disabled elderly people in real time. Smart water meters sound alarms when a solitary old person goes 24 hours without using water, and smartwatches can prevent seniors from getting lost.

China's smart care market notched 18.28 billion RMB (\$2.5 billion) in 2020, a year-on-year increase of 29.7%, in terms of China's data analysis research iiMedia.



Nowadays, home-based care in China holds 96% of the whole elderly care services, community care for 3%, and nursing home for 1%. China is primarily promoting the "9073" eldercare model structure, which entails 90% for home-based care, 7% for community care, and 3% for institutional care, the policy direction disclosed at the National Health Commission's press conference.



Overview of Elderly Assets in China

In 2023, the median disposable income per capita nationwide was 33,036 RMB, a growth of 5.3% from a year earlier. Specifically, the median disposable income per capita for urban residents hit 47,122 RMB, a rise of 4.4%; for rural residents, that was 18,748 RMB, an increase of 5.7%.

1.03 billion Chinese were covered by endowment insurance and 1.36 billion people by basic medical insurance, a coverage rate of over 95%. 145 million people bought long-term care insurance that had been used in 49 domestic cities.

Japanese elderly care services

Eldercare services in Japan include three types: (1) Nursing homes (2) Home-based care (3) Community mutual assistance.

Different Nursing homes		Numbers
Private nursing facilities	Charging nursing homes	13727
	Other facilities(community-based care)	21057
Government-support nursing facilities	Long-term care insurance facilities	15540
	Welfare facilities	3091

Note: statistics as of June, 2019

Home-based care

Nearly 88.2% of the population aged 60 and above owns housing (including detached houses and condominiums), while only 11.3% rent housing, according to the "Survey on Living and Living Environment of the Elderly (2018)" by the Japanese Cabinet Office.

Over 90% (93.1%) of them plan to continue living in their existing communities. People increasingly tend to live in the same place as aging. In other words, 95.5% of those owning housing plan to continue living out in their own housing, while 75.4% of those renting housing also have the same idea.

Under the circumstances, the Japanese government did not actively encourage the construction of large-scale nursing homes. Instead, it advocates for small-scale, multifunctional community-based nursing homes that achieved long-term development since the implementation of the "Long-Term Care Insurance Law" in particular. The community-based nursing facilities are distributed in various communities, providing services such as daycare, short-term stays, group care, and door-to-door care services.

Community Mutual Assistance

Almost all relevant facilities are established with the support of residents. For instance, in 1995, a community mutual assistance organization called "Mutual Aid Izumi" in Yokohama, Japan, found that most elderly and people with disabilities faced great difficulties in eating. Therefore, this organization started providing meal delivery services, setting up a cooking site to sell inexpensive boxed meals for them. By March 2004, the organization delivered over 30,000 bentos annually.

At the same time, the group also introduced "shuttle services", helping seniors and people with disabilities go outdoors in their own vehicles. "Mutual Aid Izumi" was recognized broadly by local residents.

Another similar organization is the "Rei no Kai" in Kawasaki City, which is a non-profit organization composed of housewives. It arranged activities such as singing, games, handicrafts, and health lectures for the old people, and connected volunteers and the elderly from different communities through an activity called "Diamond Club," aiming to understand their needs and convey them to relevant departments.

Many grassroots organizations assisting vulnerable groups such as the elderly were born after the Japanese government issued the "Act on Promotion of Specific Nonprofit Activities" in 1988.



Other New Elderly Care Services in Japan

Remote Care

The service targets elderly people whose children work in other places. Matters such as accompanying medical visits, shopping, and caregiving, which should have been undertaken by children, are now handled by professionals in the elderly's local areas.

Elderly Caring for the Elderly

the total number of people in Japan requiring care was about 6.699 million by December 2019, and the figure is estimated to reach 9.88 million by 2040, "Report on the Status of Care Insurance Business" by the Japanese Ministry of Health, Labor and Welfare wrote.

However, Japan had a shortage of about 260,000 caregivers, and this number is expected to mount to 550,000 by 2025 as per the Japanese Ministry of Health, Labor and Welfare.

Accordingly, many elderly care institutions are actively employing elderly workers in addition to professional caregivers. It was reported that a nursing home employed around 30 caregivers, in which about 10 people are aged between 55 and 65, aged 65 and above at 8 people, and aged 70 and above at 4 people, with the oldest being 84 years old.

Daycare for the Elderly

Elderly care institutions added daycare services. In the morning, old people were picked up to nursing homes for daycare. During the daycare, seniors will enjoy services like bathing, dining, and rehabilitation training. In the evening, they were sent back home.

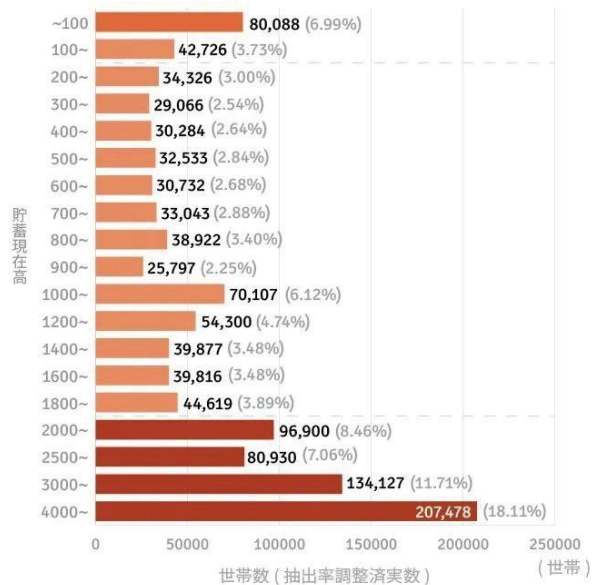
Statistics unveiled that there were already 43,000 daycare institutions in Japan by 2019, the fastest-growing among all types of elderly care institutions.



The Asset Situation of Elderly in Japan

60代世帯の現在貯蓄高分布

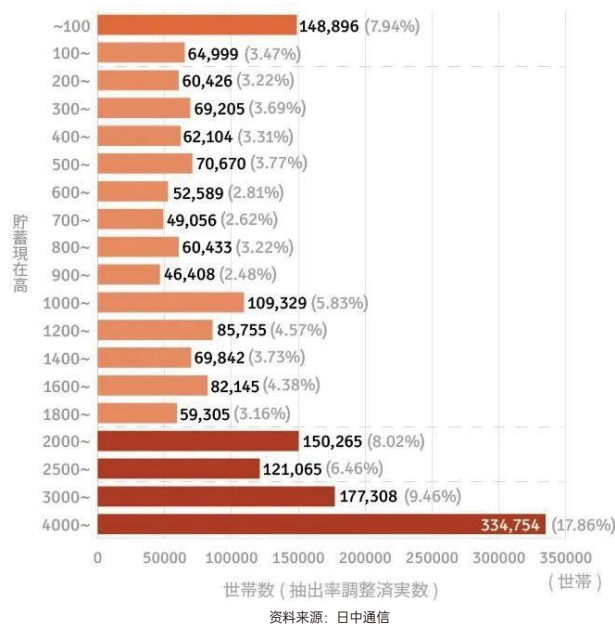
総世帯数：114万 5671世帯



The chart reveals that 18% of households with individuals aged 60 or above and 17.86% of ones aged 70 and above saved over 40 million yen (equivalent to \$266,000 US).

70代以上世帯の現在貯蓄高分布

総世帯数：187万 4554世帯



In households with seniors at the age of between 60 and 70, roughly 7-8% have savings below 1 million yen (\$6651); about 3% between 1-2 million yen (\$6651-\$13302);

approximately 3% between 2-3 million yen (\$13302-\$19956); and collectively, households with savings below 3 million yen account for 15%.

Apart from limited savings, many households rely on pensions, welfare benefits, and salaries to sustain their livelihoods.

South Korea



Rise in Elderly Living Alone and Expansion of Elderly Facilities

The number of older people living alone in South Korea has reached 1.973 million, holding 21.8% of the population aged 65 and above, record highs in both quantity and proportion.

The South Korean Ministry of Health and Welfare reported that the number of relevant facilities surged from 76,000 in 2017 to 89,643 in 2022, containing various centers, hospitals, and welfare facilities aimed at providing social services or protection for the elderly in the face of the population in South Korea rapidly aging.

Given the diverse characteristics of South Korea's elderly population, which involves both low-income groups requiring government subsidies and high-income groups with strong consumption demands, the country's elderly care institutions encompass social welfare-oriented and profit-oriented nursing homes, both of which are thriving. "Shared Living for Seniors" and "Elderly Welfare Housing" belong to government-supported nursing homes. Additionally, the country also boasts numerous premium and profit-oriented elderly care institutions, characterized by high fees yet maintaining full occupancy rates, similar to those in Western countries such as the United States.

South Korea's Community Home Care Services

As seniors with disabilities or dementia exceptionally depend on external assistance, services like home care, day/night care, short-term care, and home bathing assistance are arising sequentially, provided by designated long-term care agencies under the long-term care insurance system.

"Home Elderly Support Services" comprise direct, indirect, and emergency services. To effectively implement these services, the government established "Home Elderly Support Centers."

Direct services cover daily living assistance beyond home care, such as free meals and vehicle pick-up.



Indirect services involve safety confirmation, life skills training, and basic and comprehensive elderly care services. In addition, some training services are also included, like end-of-life care, emergency response, dementia prevention, and community association organizations. Emergency services include crisis support and emergency call services.

South Korea's Pension System Faces Shortfalls

The relative poverty rate among South Koreans aged 66 and above is as high as 40.4%. Many elderly Koreans leave rare savings to help their children in purchasing expensive properties. As a result, only 14.2% of elderly people still possess adequate savings.

The amount of pensions in South Korea is quite low, with the average monthly retirement pension of 200,000 South Korean won, approximately \$145. However, one kilogram of beef is priced at 24,000 won (\$18) in this region. The meager pension hardly affords the daily expenses of elderly Koreans.

The official pension fund, the National Pension Fund (NPS), is projected to run deficits starting from 2041 and be depleted by 2055.

United States: Diverse Elderly Care Services

Elderly care scenarios in the United States include home care, professional nursing homes, and community-based care. In terms of service items, they can be broadly classified into six types: life assistance, companionship, caregiving services, professional medical care, memory care, and hospice care.

Services such as professional medical care, memory care, and palliative care require healthcare professionals. Whether services can be reimbursed by health insurance depends on the degree of medical professionalism and caregiving. Some expenses for the latter three categories can be offset by reimbursement from Medicare and commercial health insurance, while life assistance and caregiving services are at the patients' expense.

	Seniors are capable of managing daily activities		Seniors are unable to perform abilities of daily life	Old people need medical care services		Relieve the pain of antemortem elderlies
	Living assistance	Accompany in the life	Nursing services	Medical care	Memory care	hospice care
Service content	Elderlies capable of managing daily activities receive aids from caregivers in household chores, accompanying them on outings, and handling various errands.	Elderly individuals capable of dealing with daily activities receive emotional support and company from caretakers..	Caregivers will offer Older people assistance with daily living activities such as meals and personal care and escort outings.	Professional medical personnel like nurses take care of elderly individuals in need of specialized medical care.	Specialized medical care services are provided for seniors suffering from conditions such as Alzheimer's disease and dementia.	Alleviating the physiological and psychological distress of terminally ill elderly individuals.
caregivers	Non-medical nurses					
			Medical nurses			
				professional doctors		
Home-based care	△	△	△	△	▲	△
Skilled nursing facilities	×	×	×	△	△	▲
Community-based care	△	△	△	△	▲	▲
	× :not support	▲ : support with fair quality	△support with high quality			

Sources: seniorliving.org

Over 1.8 million people in the United States reside in skilled nursing facilities to promote daily activities, quality of life, and independent living. Surveys showed that over 12 million people require daily living assistance or other long-term care services through community-based, home-based, and facilities services.

Elderly Care Patterns: home-based care, nursing facilities, community-based care

In the home care pattern, the elderly group receives various door-to-door services. Professional nursing homes furnish medical-focused care services. The community-based care offers accommodation and diverse care services.

In the United States, the cost of elderly care services can be reimbursed by insurance. The six elderly care service types determined reimbursement eligibility and insurance. Therefore, the payment source is based on service types rather than patterns.

In home-based care, seniors receive life assistance, companionship, caregiving, and medical services at home, with partial expenses covered by Medicare and commercial insurance. Medicare reimburses approved medical service expenses. Commercial health insurance supplements Medicare beyond deductibles, reimbursement caps, and specific prescription drugs. Long-term care insurance (or life insurance with long-term care clauses) can be used to pay for daily caregiving services.

Nursing homes like Skilled nursing facilities (SNF) provide care services focused on medical and rehabilitation, with partial expenses reimbursed by Medicare and commercial insurance. SNF arranged accommodation, caregiving, medical, memory care, and hospice care. In terms of reimbursement, medical expenses can be paid by Medicare, while long-term care insurance reimburses non-medical caregiving expenses.

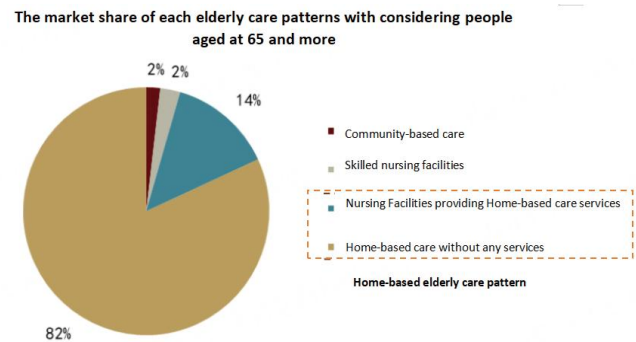
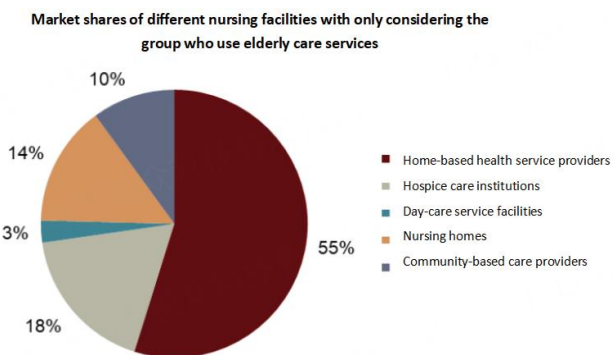
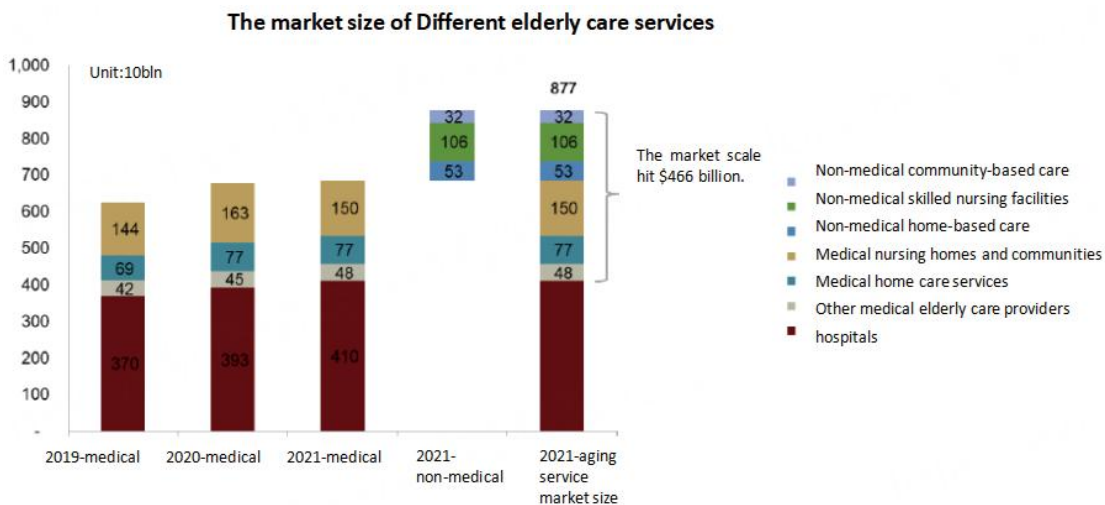
Retirement communities set varieties of care services and retirement homes. The accommodation-related fee is an out-of-pocket expense. Communities are divided into vibrant, independent, assisted living, medical care, and continuing care retirement communities (CCRC). The main expenses include accommodation-related expenses (property purchases, community entry fees, monthly rents) and monthly service fees (property management fees, service fees). Social insurance and commercial insurance only give partial reimbursement for some medical services.

	Vibrant community	Independent community	assisted living community	medical care community
customers	Elderly retirees in well physical and mental health	Old people who are capable of independent living but can not (or disincline) often participate in social and entertainment activities.	Elderly individuals who cannot handle daily living independently but do not yet require medical care.	Elderlies in need of professional medical care (usually suffering from dementia, Alzheimer's, or other serious illnesses).
Service content	Entertainment and recreational services such as golf, card games, and fitness centers.	Small medical facilities, catering, housekeeping, transportation, etc.	Assistance with daily living, housekeeping, catering, and accompanying older people on outings.	Specialized medical services tailored to the elder's medical conditions.
CCRC(Continuing Care Retirement Community)	CCRC offers comprehensive and uninterrupted services including above four communities' services. The community is classified by the services. And seniors can choose different residential areas and corresponding services based on their needs.			

Market Scale of Elderly Care Services in the U.S.

The market scale of elderly care services in the United States achieved \$877 billion in 2021 (it was \$466 billion, excluding hospital services), equivalent to 3.8% of the country's GDP of 2021.

In terms of demand and supply, home-based care including home health services and hospice care services is the primary pattern. From 2017 to 2018, an average of about 6.5 million older people in the United States chose home-based care services, 4.9 million for home health services and 1.6 million for hospice care.



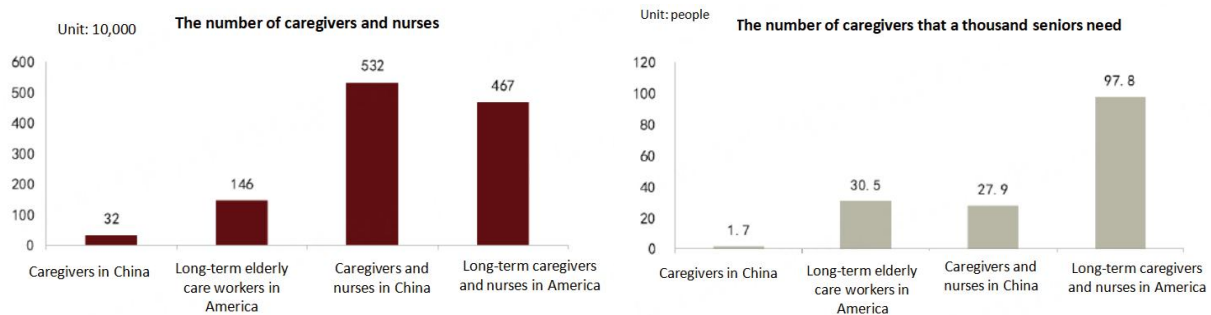
Note: Elderly individuals who do not utilize formal elderly care services also fall into the category of home-based care. Either they are healthy enough not to require external institutional services, or their cohabitants can fulfill their elderly care needs independently.

The Outline of the Elderly Care Industry in China and Japan

China

China's rest homes largely consist of non-profit nursing facilities without professionalism, hospitals that rarely focus on care services, and non-specialized nursing facilities. Moreover, both the total amount of nursing personnel (nurses and caregivers) and the number of caregivers per thousand elderly individuals are insufficient, marking a shortage of service supply.

Reports showed that China witnessed the absence of at least 2 million caretakers based on the national standard ratio of 1:4 between care nurses and old individuals. However, as of the end of 2022, the domestic aging industry merely owned 322,000 caregivers, devoid of 170,000.



Low salaries and perks are one of the reasons for the large scarcity of elderly care nurses in China. Their wages rely on the quantity of care provided, consequently challenging to attract and retain high-quality talent. Hence, it is difficult to guarantee the quality of care services. Additionally, caretakers in China are little educated, with the majority graduating from junior, high, or primary school, and they are mostly seniors.

A special survey conducted by the Shanghai Elderly Services Industry Association in 2020 revealed that the after-tax salary of elderly care nurses was as follows: 7,735RMB(\$1074) monthly as maximum, 4,846RMB(\$673) as median, 2,854RMB(\$396) as minimum, and 4,985RMB(\$692) as average.

Young people are discouraged by tough work environments, heavy workloads, vulnerability to mistreatment, and a lack of promotion in the industry.

To address the shortage of elderly care nurses in China, apart from raising salaries in the industry, more intelligent technological devices are necessary to improve the medical environment in nursing homes, such as relevant smart home products and intelligent medical examination equipment. Especially in the care of disabled seniors in nursing homes, intelligent technology not only provides elderly individuals with a dignified life but also unties caregivers' hands. Examples include massage beds, transfer machines, and other entertainment electronic products.

Japan

As of 2019, there were 1.62 million registered caregivers in Japan. According to surveys, the average age of caregivers is 45.5 years old, with an average monthly pre-tax salary of 309,700 yen(\$2044) in 2019.

According to the "Japan Care Association Survey and Research Report (2013)," elderly care nurses in Japan generally were highly educated, with over 90% having a senior high school diploma or higher education. The age distribution of caregivers is relatively even.

However, many young workers are unwilling to enter this field, resulting in a shortage of elderly care professionals in Japan due to the accelerated aging rate and the influence of traditional culture. The Japanese Ministry of Health, Labor, and Welfare expected that the vacancy of caretakers could notch 300,000, and some industry associations even predict a shortfall of 1 million.

As a result, the Japanese government changed its policies on accepting international students and its employment system for foreigners to increase the number of elderly care professionals.

The Investments in the Aging Market Abroad and Home

Shortages of caregivers and inadequate facilities in the aging market are becoming prominent as the proportion of older people increasingly expands, especially in Asian regions. A vast and emerging silver hair market captivated investors' attention.

The analytical organization AgeClub posed 25 domestic financing events in the elderly industry in recent years, looking into the latest market opportunities in chronic disease management, intelligent rehabilitation aids, and smart elderly care.

Financing events in China during Jan. And Jun. In 2023							
Types	Company	Founded date	Financing date	Major products	Investment Fund	Financing round	Venture capital firm
	Junde health care	2021	May	Chronic Disease Comprehensive Therapy	Hundreds of thousands of RMB	Pre-A+	Yingke PE, Xiamen Hi-tech Innovation Center
	E-Health Now	2017	May	Integrated Health Management Service Provider	Hundreds of thousands of RMB	Series B	China Orient Asset Management Co., Ltd., Ventech China, GSR Venture, Xizang Langrun Capital
	Hasten Biopharmaceutical Co., Ltd.	2020	Apr.	Chronic Disease Management Ecosystem	\$315 million	B	C-Bridge Capital, Abu Dhabi Investment Authority
Medical and health management	NeuExcell Therapeutics	2021	May	Neurodegenerative Diseases and Nerve Injury	Over \$100 million	Pre-A+	Jemicar, Fujian Haixi Pharmaceutical Co., Ltd., Suzhou International Development Group Co.,Ltd., Guangzhou Finance Holdings Group Co., Ltd., COTRUN NEW ENERGY
	Cowin Health	2020	Apr.	Healthcare Big Data	Hundreds of thousands of RMB	A	/

	Kangjia Yi	2014	Apr.	AI Wearables and Health Services	Hundreds of thousands of RMB	Strategic Investment	/
	MIZECOME	2021	March	Chronic Disease Digital Health Management	Hundreds of thousands of RMB	Angel round	/
	BRAINGINE	2022	Jan.	Digital Therapies for Brain Health	Hundreds of thousands of RMB	Angel round	Noyu Capital
	Wuyixin Health	2018	Feb.	Health Management Service Providers	undisclosed	Strategic Investment	Sichuan Provincial Investment Group Company Limited
	Puyuan care	2017	Mar.	Home Care Services	Hundreds of thousands of RMB	A	Long Hill Capital
Elderly Care Services	Prosper	2020	Jun.	Family Health Care Platform, Elderly Chronic Disease Care Services	Nearly \$10 million	A	/
	Jinxin Fuxing Eldercare	2014	Jun.	Comprehensive Elderly Care Service Operators	\$80 million	A	Primavera Capital Group, Orbimed
	Single	2009	Mar.	Care-Oriented Medical and Nursing Institutions	Hundreds of millions of RMB	A	China General Technology (Group) Holding Co Ltd
	369kangyang	2015	Feb.	Urban Elderly Care Service Providers	undisclosed	A	/
Rehabilitation Nursing and Assistive Devices	Jingcai Tech	2020	Jun.	Smart Rehabilitation Training Services and Product Development	Hundreds of thousands of RMB	Pre-A	Golden Seal Capital Holding Group Co., Limited
	ZD MEDTECH	2015	Feb.	Intelligent Rehabilitation Robots and Rehabilitation Solutions	Over 100 million RMB	B	Red Hill Capital, HENGXU Capital, Shunwei Capital Partners GP Limited
	Siyi Intelligence	2017	Mar.	Soft Rehabilitation Robots, Integrated Rehabilitation Solutions	Nearly 100 million RMB	A	Chengdu Tianfu International Bio-Town Development Group, Tao Capital
	JIU YEE	2020	Feb.	Smart Hearing Aid Development	30 million RMB	Angel round	Shunwei Capital Partners GP Limited, YM Capital, Focus Capital
	Huaquejing	2019	Jan.	Smart Rehabilitation Robots, Intelligent Rehabilitation Medical Solutions	Hundreds of thousands of RMB	A	Shenzhen Capital Group
	Shanghai Infinite Wellness	2019	Jul.	Smart Elderly Care Platform	Hundreds of thousands of dollars	Strategic Investment	Long Hill Capital
Smart elderly care	MyCoolTv	2016	Jun.	Digital Traffic Platform for Health Elderly Care Enterprises	210 million RMB	A	Coccaa Network Technology Co.,Ltd
	ALIN-TECHNOLOGY-GR OUP	2018	Jun.	Smart Elderly Care Platform	10 million RMB	Pre-A	undisclosed
Food for the elderly	DANCING LION Health Science	2019	May	Functional Food	One million RMB	Angel round	/

In recent years, boosting industry upgrades through digitalization and intelligent innovations has been a common fashion worldwide in the elderly care industry.

In China, the prosperity of investments in digital chronic disease management, intelligent rehabilitation robots, and smart elderly care reflects the capital market's attention and recognition of the digitalization and intelligent transformation of elderly products and services.

Internationally, hot investment areas include digital platforms for home care services, digital pension management platforms, and digital marketing targeting the elderly.

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International investments in the aging market

Types	Company	Founded date	Financing date	Major products	Investment Fund	Financing round	Venture capital firm
LetsGetChecked	2015	Sep.	Diagnostic Testing, Virtual Nursing, Medication Delivery	\$20 million	Venture Capital	U.S.	摩根大通
Tcare	2017	Sep.	Nursing Staff Support System	\$17 million	Series A funding	U.S.	American Family Ventures
MedMinder	2007	Aug.	ETE Pharmacy, Medication Adherence and Connected Care Solutions	\$35 million	Venture Capital	U.S.	SWK Holdings Corporation, AccelMed Partners
Marta	2020	Aug.	Home Caregiver Scheduling, AI-driven	6.6 million EUR	Seed funding	Germany	Capnomic, GMPVC, Ithaca, SumUp Impact Fund, Verve Ventures
Fair Square Medicare	2019	Aug.	Insurance Search engine and Consultation	\$15 million	A	U.S.	Define Ventures, Slow Ventures, YC, Amllo
Naborforce	2018	Aug.	Home Elderly Daily Assistance, Technology-Driven	\$9 million	A	U.S.	Translink Capital, Claritas Capital, Artemis Fund, TechStars
Carefeed	2020	Aug.	Nursing Home Digital Communication	\$3 million	Seed funding	U.S.	Reformation Partner AI Ios Ventures, M25
Cera Care	2016	Aug.	Disease Prediction, Home Care Remote Medical Care, Prescriptions, AI-Driven	\$320 million	Equity debt	UK	Kairo HQ, the Vanderbilt University Endowment, Evolve Healthcare Partners,
Sage	2020	Mar.	Nursing Operation System, Disease Prediction, Alarm System, Data Insights	\$9 million	Seed funding	U.S.	Goldcrest Capital, ANIMO Ventures Distributed Ventures, Merus Capital
CareConnecMD	1996	Jul.	Routine Visits, Supportive Care Health Services, 24/7 Medical Staff, Palliative Care, Remote Medical Care	\$25 million	Venture Capital	U.S.	TT Capital Partners
Nobilis	2008	Jul.	Short-Term Care, Professional Home Care, Hourly Workers, Home Smart Devices	3.5 million Pound	undisclosed	UK	BOOST&Co
Lottie	2021	Jul.	Elderly Care Search	7 million EUR	Seed funding	UK	General Catalyst, Kindred
Hank	2020	Jun.	Online to Offline Social Activities	\$7 million	Seed funding	U.S.	General Catalyst, resolute venture Cannon partners, The fund, Tau ventures, Full Circle

Voyyar	2011	Jun.	Radiofrequency Imaging Solutions, Behavior Prediction, Fall Alarm	\$108 million	E	Israel	Koch Disruptive technologies, Gly Capital Management, Atreides Management, Bessemer Venture, More VC, Regal Four, CluTech
Birdie Care	2017	Jun.	Home Elderly Care Digital Tools	\$30 million	B	UK	Sofina, Omers Ventures, Index Ventures
Darvie	2022	Jun.	Home Elderly Door-to-Door Services	\$2.6 million	Seed funding	U.S.	Quantified Ventures Solution Studio
Florence	2017	Jun.	Caregiver Allocation Learning System	\$35 million	B	UK	Insight Partners, Fulcrum Equity Partners, Bee Partners, Flashpoint
Swing Therapeutics	2019	Jun.	Caregiver Allocation Learning System	\$103million	A	U.S.	JAZZ Venture Partners, Alumni Ventures, AME Cloud Ventures, Asahi Kasei Corporate Ventures, Gaingels, Kicker Ventures, Mana Ventures, Metrodora Ventures

Reference: "Lessons from the U.S. insurers' involvement in the senior care industry" wrote by China International Capital Corporation Limited, "Lessons from Community-Based Long-Term Care in Korea" wrote by Development Research Center of the State Council, World Bank, National Bureau of Statistics, ceicdata.com, Ageclub, Japan China Communication.

Economic Development of Aging Population in China and Japan

Booming Silver Economy Market in China

The General Office of the State Council issued the "Opinions on Developing the Silver Economy to Enhance the Well-being of the Elderly," which provides a clear definition of the silver economy: it is the sum of economic activities that provide products or services to the elderly, as well as preparations for the aging stage, involving a wide range of sectors, long industrial chains, diverse formats, and enormous potential.

According to CCTV News, the scale of China's silver economy is approximately around 7 trillion yuan, accounting for about 6% of the GDP. By 2035, the scale of the silver economy is expected to reach around 30 trillion yuan, accounting for approximately 10% of the GDP. In China, the silver economy market, which has reached a scale of billions, is still in a period of continuous development. China is the market with the greatest potential in the aging industry worldwide, presenting new opportunities, new fields, and new tracks.

The silver economy can be subdivided into six major industries: elderly care services, senior consumption, health care, culture and entertainment, tourism, intelligent technology, and pension, with significant commercial opportunities behind favorable national policies.

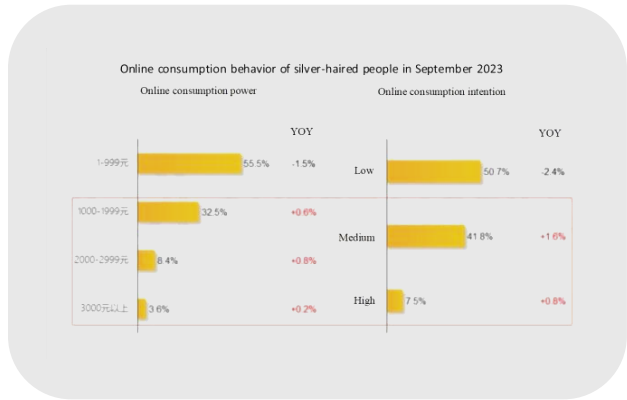
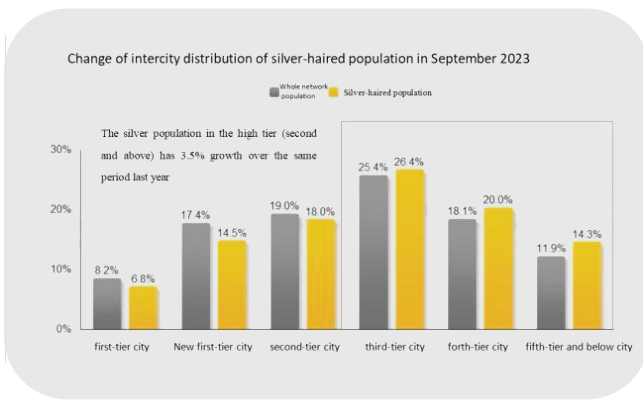
Composition of the Silver Economy

existing and incremental content of the silver economy				
	Commodity	Service	Property	
Public Silver economy:				Increment:
Pensions, medical insurance, health services, nursing insurance, extension services for the aged	Food, health care products, medicine, rehabilitation, medical equipment supplies, daily necessities, household supplies, cosmetics, clothes	Commerce, information and communication, medical and health care, elderly care, tourism, education, culture and entertainment, sports and fitness, media, finance, transportation	Construction, real estate, aging home construction and environmental construction	Smart home, Online health consulting, service robots, automated transportation

Consumption capacity matches demand, leading to a shift in the consumption behavior of the elderly

Currently, the majority of China's elderly people is distributed in third-tier and below cities, accounting for over 60%, with a clear trend of migration towards first-tier, new first-tier, and second-tier cities, increasing by 3.5% compared to the same period last year.

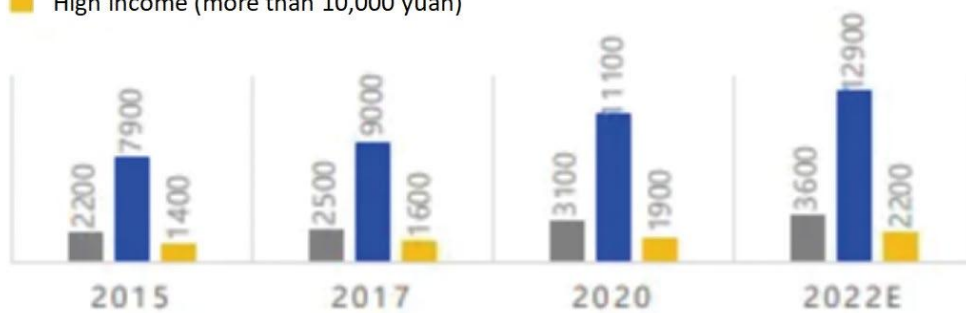
The main sources of their income are pensions, bank savings, and financial management; about 88% of the elderly have pension insurance, hence most of them have stable and overall rising incomes, with high consumption capacity. In September 2023, the proportion of silver-haired individuals with a consumption capacity of over a thousand yuan increased by 1.6% compared to the same period last year, and the proportion of high-end consumption intentions increased by 2.4% compared to the same period last year.



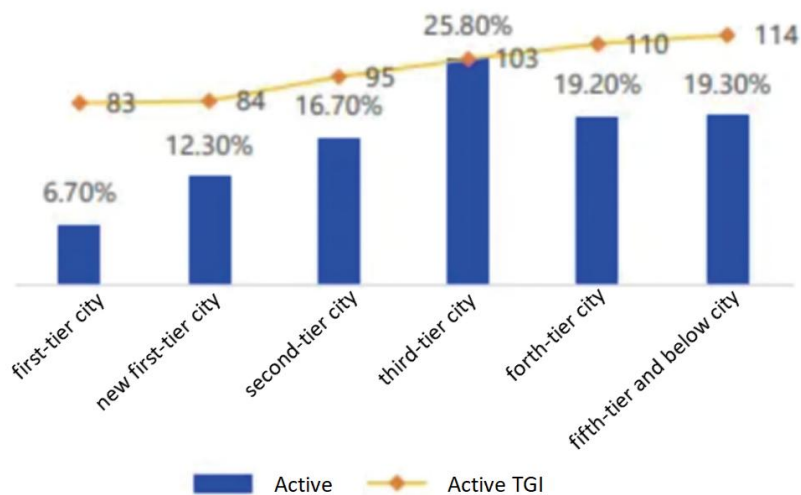
In terms of consumption willingness, their consumption demands correspond to 'Maslow's Hierarchy Of Needs, gradually shifting from product consumption-oriented to spiritual consumption-oriented. "enjoyable" "convenient," "product intelligent," and "deep internet penetration" are becoming new trends for the silver-haired group.

Monthly income of elderly people in China (unit: 10,000)

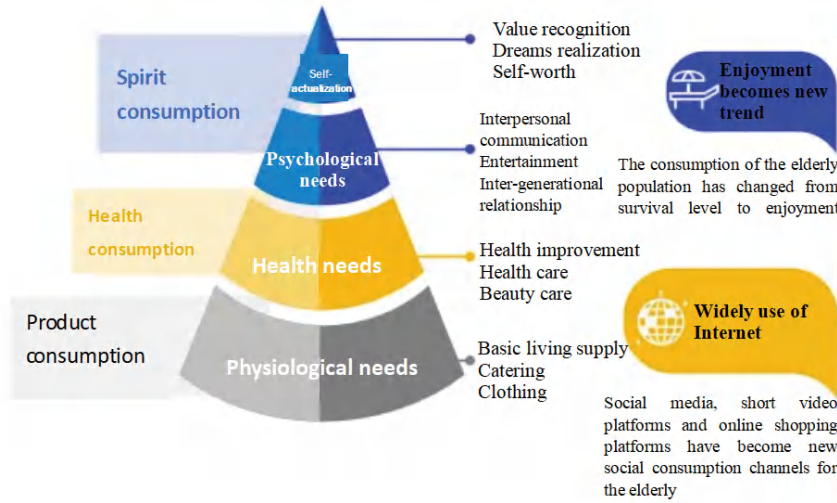
- Low income (less than 4000 yuan)
- Middle and high income (4000-10,000 yuan)
- High income (more than 10,000 yuan)



China urban distribution of the elderly population in August 2022



Surging consumption demand of China's elderly population



Consumption trend of Chinese seniors

Focus on convenience and functionality

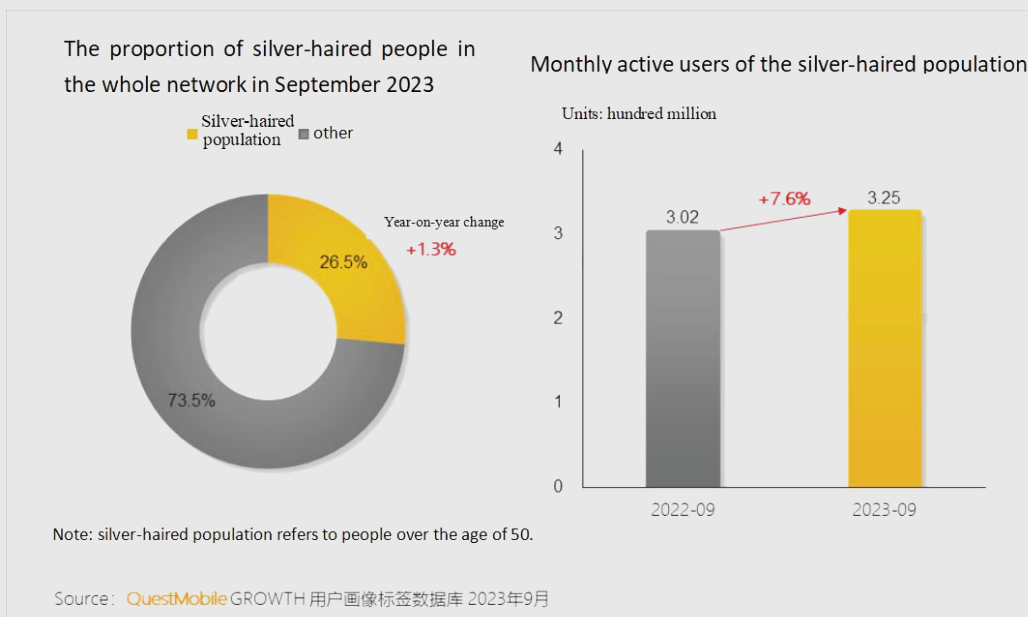
As energy, physical strength and memory decline, the elderly prefer convenient and functional products with age-appropriate properties

Intelligent products are favored

With the weakening living ability of the silver-haired population, the demand for products such as intelligent security monitoring and intelligent remote calling is rising

Deepening internet participation enhances online consumption

After retirement, a large number of households will transition pension from savings to consumption, leading to explosive growth in demand for services such as transportation, health management, medical care, and nursing. As one of the key groups driving the growth of internet traffic, the user base of silver-haired individuals has reached 325 million, an increase of over 23 million, with a 1.3% increase in the overall network share. Silver-haired individuals are deepening their use of platforms in various fields, diversifying their online behaviors, and stimulating corresponding consumption expenditures among the old.

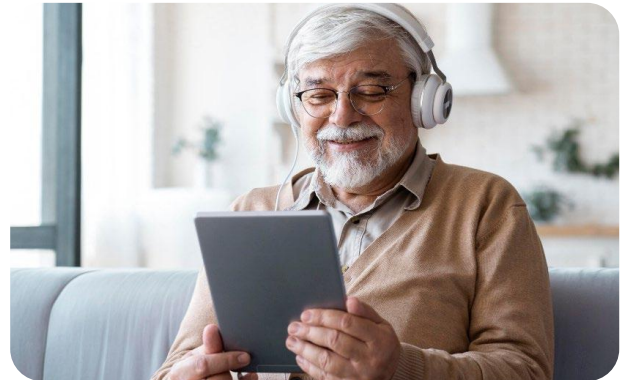


In the incremental flow of tourism among the silver-haired population, 60% of users come from economically developed second-tier cities and above; leading OTA platforms such as Ctrip and Qunar Travel gain the main incremental flow. Self-driving tours have become a new choice for silver-haired travelers, driving car rental apps to grow. Meanwhile, the silver-haired population is increasing their use of map navigation applications, bringing increments to the industry.

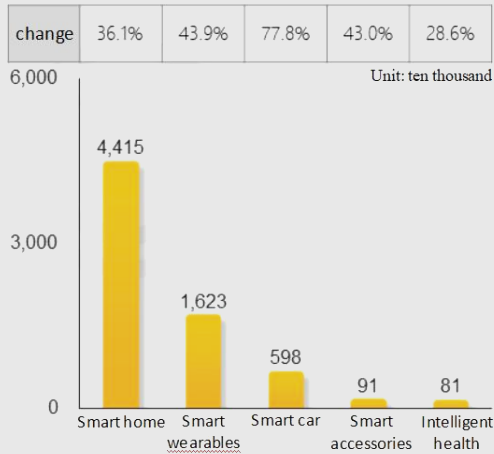
Short video platforms have become a new tool for the silver-haired generation to connect with society and an important medium for self-expression on the internet. Among them, interactive live streaming has gained the most streaming traffic. The "silver content" on graphic platforms is also becoming more diverse, covering various areas such as food, clothing, fitness, and beauty, further stimulating the use and consumption of typical content platforms.

In the silver economy, medical health has always been a core issue. Online medical platforms continuously improve their service and medical resources are distributed more efficiently and reasonably, providing convenient and comprehensive medical services for the silver-haired generation. In the deepening of digital life, they can obtain extensive specialized medical and healthcare content through KOLs on social media.

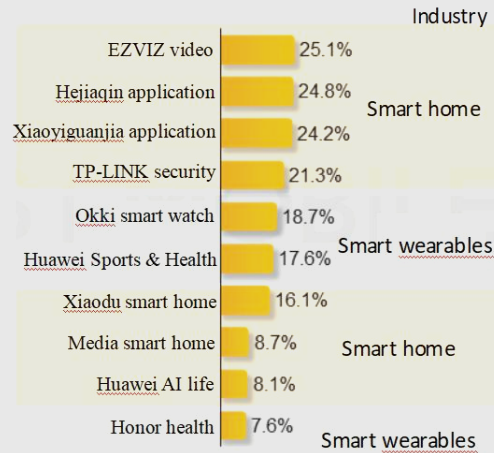
With the development of artificial intelligence and the Internet of Things, silver-haired individuals are crossing the "digital divide" to intelligent life. This is mainly reflected in the field of smart homes, with over 40 million users using smart home apps, driving the rapid spread of applications such as smart wearables and smart cars.



Active user scale of silver population in smart device industry in September 2023



The proportion of silver population in smart device industry in September 2023



For major home appliances, stimulated by the content supply such as 4K ultra-high-definition TV series and variety shows, the silver-haired generation has a higher focus on television products.

Personal care small home appliances follow behind, particularly massage chairs. According to the "2023 Silver-haired Consumer Trends Insight Report - Home Appliances" released by iResearch, from the perspective of the Tmall supply and demand index, the increase in demand for "elderly-friendly" home appliances far exceeds the supply.

The search volume increased by 200% year-on-year, with demand mainly concentrated in integrated appliances, refrigerators, washing and care categories, as well as environmental health, home life, and personal care.



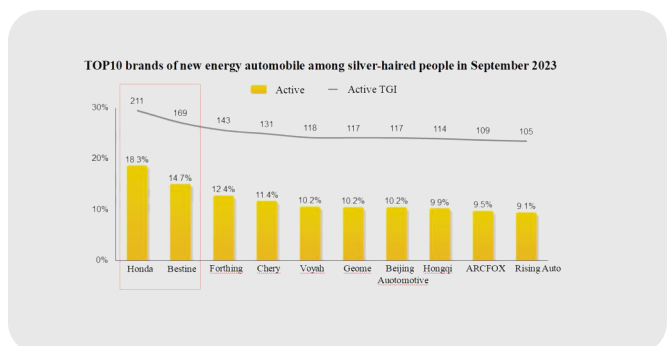
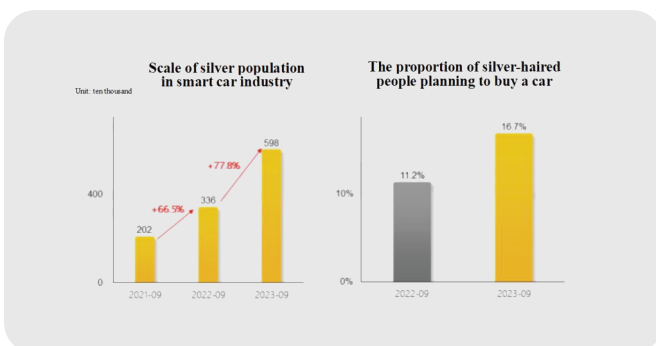
The cumulative growth of retail sales of major categories in the first three quarters of 2023



At present, consumer spending on related goods in daily life continues to show signs of sustained consumption recovery, such as eating, dressing, using, and traveling. In the past two years, the scale of the silver-haired individuals in the smart car industry has grown by nearly 4 million.

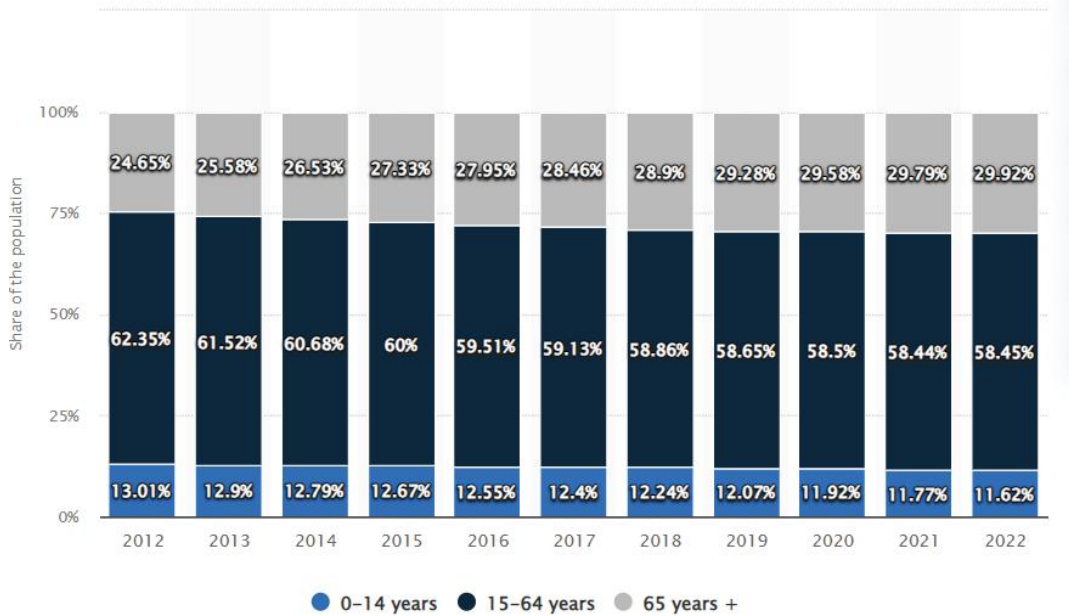
They become an important part of potential car buyers. It is likely to be a constant growth factor in the future automotive market.

Brands such as Honda and Bestune's new energy vehicles are favored by the silver-haired generation; new energy vehicle companies can pay close attention to the needs of the silver-haired group, expand the target user base, and enrich the sources of market increment.



Silver Economy Market in Japan

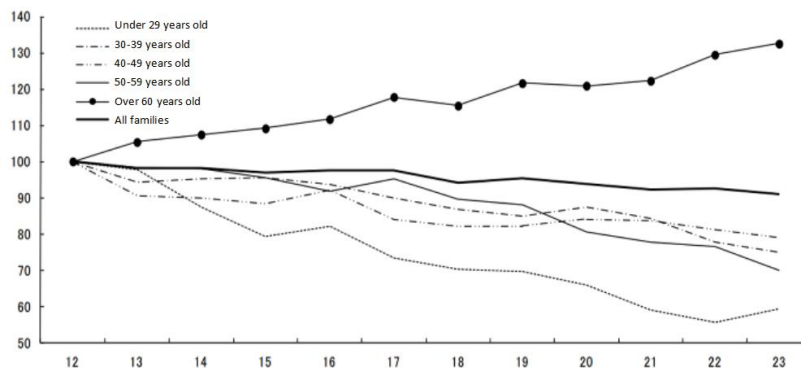
Japan is a super-aged society. As of September 2023, people aged 65 and over exceed 29% of the total Japanese population, ranking first in the world. This has led to the flourishing development of the silver economy in Japan. According to data from the Japan Statistics Bureau, approximately 90% of the income of elderly people in Japan comes from social security payments, covering about 90% of their daily expenses, indicating relatively high overall social welfare for the elderly.



Source: Statista

Research has found that the per capita consumption expenditure of elderly people (aged 65 and over) in Japan ranks second globally. According to the Japanese Ministry of Internal Affairs and Communications, the total consumption expenditure of households aged 60 and over in Japan has been continuously rising since 2007. However, other age groups have shown a declining trend, indicating a significant scale of the "silver economy" in Japan.

Household Consumption Trends by Age Group

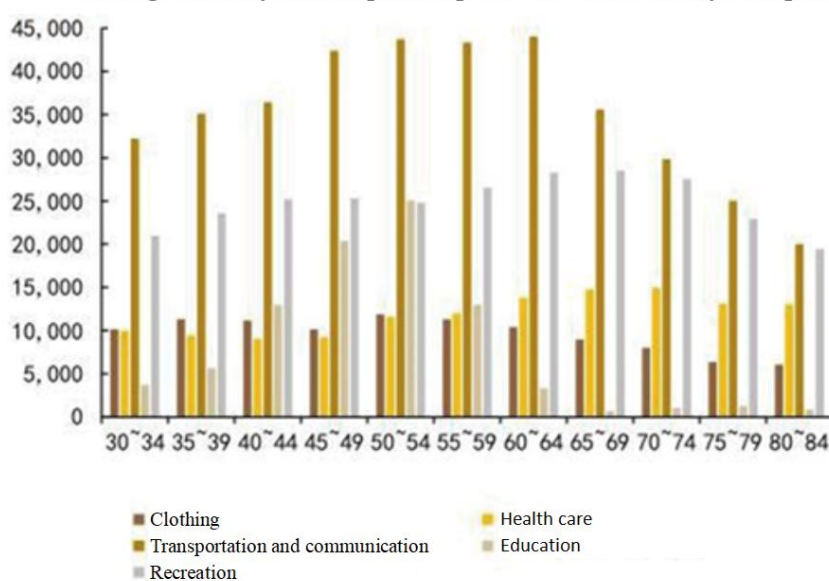


Note: The index is based on total consumption of 100 in 2000

Source: Ministry of Economy

In terms of consumption, compared to typical two-person households, elderly people aged 65 and over spend more on food, utilities, and health care, but less on clothing, transportation, communication, and education. Additionally, both elderly people and general household have similar proportions of cultural and entertainment needs (with relatively higher entertainment needs among single elderly people). According to data from the Japan Statistics Bureau, households heads aged 60-74 in Japan have a strong demand for health care services, with medical service expenditures being the highest, followed by medication expenditures. The peak demand for medical devices occurs between the ages of 50 and 59, while consumption remains stable after the age of 60.

Average monthly consumption expenditure of the elderly in Japan



Source: Japan Statistics Bureau

Toy market for elderly people in Japan

The toy market in Japan has exceeded 800 billion yen and aging products targeting elderly people have become an important focus for Japanese toy manufacturers. For example, Bandai, a Japanese toy company, has elderly toys accounting for 20% of its business share. Toy company Wiz and medical companies have jointly developed "Smile-Inducing Robots" dolls, while Vstone has developed a mini robot "Dorero" capable of doing gymnastics. Currently, Japan's toys for the old can mainly be divided into three categories: cognitive training, emotional companionship, and social entertainment, covering various applications such as nursing homes, hospitals, homes, and outdoors. High technology would be the main direction of Japanese toys targeted for people at an advanced age.

Japan's elderly toy product		
Items	Products	Remarks
Cognitive training	Cognitive recall: puzzles, sudoku, memory cards, etc. Finger training: toy bricks, balance toys (balance monkey, balance cactus, etc.) Brain training: cognitive training board games, etc.	Toys are suitable for all ages to eliminate the "toys for the young" bias. Some toys will be noted as both elderly people and children can use them. Improvement can be shown in specifications, patterns, packaging for the needs of the elderly (such as: increasing the size of the puzzle, etc.),
Emotional companionship	Communication robots: dog and cat companion robots and the Hello Baby series produced by Trend Master, etc.	Mostare warm images like cats, dogs, and babies featured on high interaction and growth.
Social entertainment	Board and card games: mahjong, chess, poker; except for traditional games, new games are favored by seniors such as the competitive battle board game Super Carram. Game consoles for the elderly: torepach table, a pachinko machine launched by Tomaru Industry for the elderly (the game content can help carry out cognitive rehabilitation training). A simplified version of Musical Instruments: sword jade (similar to diabolo), etc.	Based on traditional games, new improvements and innovations are introduced.

Source: AgeClub

Elderly daily living aids market in Japan

Japan attaches great importance to the development of the smart elderly care industry. With the foundation of the precision manufacturing industry, Japan's intelligent elderly care equipment has become one of Japan's advantageous industries. These products are generally used for living assistance for the elderly (especially for disabled and semi-disabled elderly people), particularly for assistance in standing up, toileting, bathing, mobility assistance, health monitoring, etc., commonly used in homes, hospitals, and elderly care institutions. Japan's elderly-friendly products are usually designed from the perspective of user experience and can help them achieve independence, thereby realizing a more convenient life with greater happiness and dignity.

Daily living aids for the elderly in Japan	
Items	Products
Mobility	Smart crutches, smart wheelchairs, wheelchair lifts, walking cart/shopping cart (easy to implement when walking, in which items can be placed and can sit and rest at any time), shifting board, etc.
Cleaning	Smart bathtub, bath chair, bathroom non-slip safety chair, smart toilet, urination predictor, toilet auxiliary safety handle, electric nursing bed (can automatically lift, adjust, bathtub + bed integration), electric lift basin, etc.
Living assistance	Smart furniture, buffet set for the elderly (for the elderly who eat with one hand), electric bed, shoe/sock wearing aids, communication aids, audio-visual aids, etc.
Home safety	Emergency warning paging system, home alarm, home anti-theft system, etc.
Health	Nursing robots, blood pressure meters, blood glucose meters, and other health detection devices.

Tourism market for elderly people in Japan

Japan National Association of Hotel Living Hygiene Associations has launched the "Silver Star System" for tourism facilities, greatly promoting the development of the elderly tourism industry. (The "Silver Star" system: Hotels and restaurants that apply for certification must meet certain standards in terms of facilities, services, and catering to provide high-quality and convenient services for the elderly, creating convenient conditions for elderly people to travel.)

Club Tourism, Japan's largest elderly tourism service company, has an annual operating income of approximately 160 billion yen and a net profit of 1.6 to 3 billion yen. About 4.2 million middle-aged and elderly people travel through Club Tourism each year. Its travel products mainly focus on long-duration and slow schedules, creating themed travel methods covering various aspects such as hiking, climbing, temples, flowers, photography, pilgrimage, cuisine, history, hot springs, sketches, marathons, and disabled travel. Themed travels can greatly satisfy various needs of the elderly and enable them to find like-minded partners through Club Tourism, thereby increasing user stickiness. In addition, Club Tourism has also launched a series of services for the elderly, including end-of-life courses, life journey services, funeral services, end-of-life care services including personal biographies, providing household services such as cleaning, accompanying travel, moving, and repairs for elderly people with mobility issues, providing day care nursing services from the perspective of travel companies (sometimes taking elderly people on trips), and health tourism services guided by sports experts.

The related potential market in Japan

In the past three years, internet users aged 60 and over in Japan has increased from 20% to 72% and they are very active in online shopping with an average total annual consumption of 231,800 yen. It can be seen that this demographic has strong consumption power. On the Amazon Japan site, some opportunity categories and products for the elderly population are as follows.

Opportunity categories	Home convenience products	Cart, walker; power pull belt; heating knee pads; walking stick
	Sports	Fitness kit; baseball gear; fishing and hiking gear; outdoor equipment; swimming suit
	Cultural consumption	Stationery consumption; musical instruments, painting, flower arrangement, tea ceremony, photography, and other art consumption
	Clothing	Casual clothes at home; Accessory

Additionally, the "Silver Beauty" category has been heating up in recent years. In terms of products catering to their care needs globally, functional care products focusing on essential skin issues for the elderly may become popular products in the "Silver Beauty" market.

Reference: QuestMobile2023 Silver Economic Insight Report; 2023 Silver population Consumption Trend Insight Report; Changyang Fund Pension Research Report;



Observation of the development status of the old-age care industry in various countries from the perspective of nursing home

Aging Population: An Opportunity

China

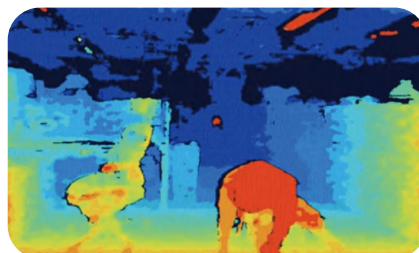
China has an accelerated aging society. According to data from the Chinese Ministry of Civil Affairs, by the end of 2021, the proportion of people aged 60 and above accounted for 18.9% of the total population. It is projected that by 2025 and 2035, this figure will surpass 20% and 30% respectively. With the change in the population structure, elderly care issues become more prominent and urgent.

Currently, China's elderly care service market is challenged by supply and demand issues in caregivers and care facilities. Against the backdrop of the current situation, governments have successively introduced a series of policies such as 9073 and 9064 to guide the development of the elderly care industry. These policies encourage home-based care as the primary mode (90%), supplemented by community daycare (7%/6%), and institutional care as a supplementary service (3%/4%). However, due to the gradual size reduction in domestic family units in recent years, it has become difficult to effectively guarantee the manpower needed for home-based care. Therefore, alternative solutions are still needed to address the imbalance between supply and demand in elderly care.

Artificial intelligence technology can improve the lives of the elderly

Since 2019, Chinese tech giant, Tencent has been collaborating with nursing homes in Shenzhen, China to apply artificial intelligence technology to improve care services.

For example, nursing homes are using the "Invisible Caregiver" monitoring system, which utilizes over 100 sensors. Once a fall is detected, it would immediately call for an ambulance. When elderly individuals approach the boundaries of the nursing home, the system also alerts the staff to prevent them from losing.



The chronic shortage of caregivers is a common challenge faced by the entire elderly care industry. Caregivers often need to attend to multiple elderly individuals simultaneously, making it difficult to constantly monitor their conditions and respond when needed.

For privacy protection, engineers have come up with a new method—using heat sensing technology instead of cameras. Currently, the monitoring system is installed both indoors and outdoors, enabling staff to better track the whereabouts of the elderly.



Furthermore, Tencent has developed a health monitoring system that displays the physical condition of each elderly individual. A tablet connected to medical sensors is placed beside each bed. The elderly can use this device to watch videos, play games, and order meals. The device can show caregivers the physical condition of the elderly and issue alerts for any abnormal situations. The research team has also developed an application that allows doctors and family members to remotely access real-time data.

Tencent's eye-tracking technology is another advanced feature of this system, which allows elderly individuals to express their needs and feelings even if they cannot speak or move.

Eye-tracking technology is also applied in the rehabilitation center of nursing homes. Tencent has developed an eye-tracking rehabilitation training game to help patients with cognitive disorders through sensory stimulation. These patients often experience physical decline due to a lack of adequate external stimuli, and may even experience hallucinations. Through this training game, which includes visual, auditory, olfactory, and tactile stimulation, the patient's conditions would be improved.

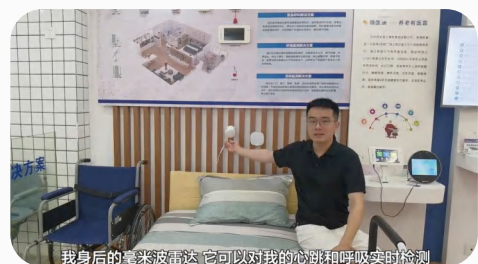
With the assistance of advanced technology, nursing homes can efficiently provide high-quality services and cope with the severe shortage of caregivers. Tencent's research and technology teams are continuously developing new methods to improve elderly care services, as this will benefit everyone around us. Assisting people in achieving a healthy lifestyle through technology is their goal.



An elderly patient uses a rehabilitation training machine under the guidance of a therapist

IoT Smart Elderly Care Platform

The China IoT International Innovation Park is China's first national-level IoT pilot unit, focusing on the IoT industry with sensors and intelligent hardware systems as its core. IoT technology makes "serving the elderly" tangible and accessible.



The Wuxi Municipal Civil Affairs Department in Jiangsu Province of China has led the construction of the Wuxi Smart Elderly Care Management Service Cloud Platform, which provides real-time information on elderly care services from 172 nursing institutions and 1384 community home service centers. In recent years, it has served over 370,000 people and handled over 7.5 million service orders.



物联网智慧养老平台

Innovative applications of hardware facilities provide more intelligent support for caring for the elderly. IoT technology can help China's "silver-haired" population explore a freer and younger style of "aging gracefully". A shared platform allows them to feel free, and secure, maintain a healthy and youthful mindset, connect with the information society, and narrow or even eliminate the digital divide among the old.



In Fujian Province of China, as digital technology is increasingly applied in the elderly care service industry, more and more elderly people are enjoying the convenience of smart elderly care.



Fuzhou City has developed a smart elderly care service platform, allowing elderly individuals and their families to enjoy "online ordering, service provider acceptance, and caregiver home visits" without leaving their homes, through websites, mini programs, and more.

By the end of 2022, Fuzhou City had 55,000 nursing beds, about 40.85 beds per thousand elderly residents. Fuzhou City has formed an elderly care service system that coordinates home-based, community-based, and institutional care. The Fujian Provincial Department of Civil Affairs proposed to strive to build no less than 30 smart elderly care homes each year within three years, with over 100 smart elderly care homes built across the province.

At the Shanghai Street Community Home Care Center in Taijiang District, Fuzhou, the provincial capital of Fujian 92-year-old Zhang Xia communicates with doctors through the "Health Butler" system with the assistance of medical staff. This service is provided by a provincial-level government hospital in Fujian as part of its home bed service. For elderly people with mobility difficulties, the attending physician conducts routine check-ups weekly through home visits or video calls.

In streets with a dense population of elderly residents, the living information of elderly residents living alone is collected and integrated with the help of 5G, cloud computing, and big data.

United States

Allowing elderly individuals to communicate with family and friends through large screens and optimized audio systems. Brian Geysler, Deputy General Manager of Maplewood Nursing Home, said, "New technologies like VR can truly expand the world of the elderly. We even used VR to 'take' an elderly person back to their hometown in Maine, to see how fresh blueberries make their way from the farm to the table. We are honored to do these things for them." It can also reduce stress and educate the elderly. VR technology can not only improve memory, enhance social skills, and improve hearing for the elderly; Maplewood Nursing Home plans to create Skype lounges and introduce fall prevention systems, creating a vibrant environment for elderly care. As part of this, using Eversound wireless noise-canceling headphones, Maplewood Nursing Home aims to provide high-standard care, quality facilities, and cutting-edge technology. The nursing home has tailored a VR entertainment system for the elderly.

Japan

Economic Chain of Nursing Home Industry

The Japanese government categorizes nursing facilities into various types, including short-term and long-term residential, recuperation, and health recovery. The government has constructed approximately 3,100 health recovery facilities and around 3,700 elderly recuperation medical facilities. Due to the higher quality of life expectations among middle-income elderly individuals and the unique needs of certain groups, many companies have established personalized commercial nursing homes. For instance, care-based nursing homes primarily accommodate physically challenged and sick elderly individuals; residential nursing homes cater to elderly individuals with normal physical conditions, providing temporary care services when needed; and health-oriented nursing homes resemble hotels, where the management solely handles the elderly residents' daily household chores.

In Japan, nursing homes exceed 2,000, with an average of over 50 rooms per facility, and the average living space per person is generally not less than 18 square meters. The cost of living in these facilities is usually not higher than renting a medium-range apartment locally when no special care is needed.

When constructing nursing facilities, the Japanese government and companies pay meticulous attention to professional details, including residential room design, household item design, dining facilities, and training of nursing and service personnel.

As specialized fields are involved, the organizers of nursing homes often outsource these details to specialized enterprises. Consequently, the social construction and operation of nursing facilities have led to the development of a significant "nursing home economy" industry chain, including industries such as "specialized elderly products retailing," "elderly catering services," "elderly home management consultancy," and "nursing service personnel training."

Large Home Appliance Manufacturers Also Establish Nursing Homes

Panasonic, a renowned electronics manufacturer in Japan, also operates multiple nursing homes in cities like Tokyo and Osaka. In December 2001, Panasonic founded its first fee-based nursing home, "Kourien," in Osaka. Despite the relatively high cost, 106 residents are accommodated within six months.

This nursing home resembles a luxury apartment building, but what sets it apart from regular nursing homes is its extensive use of digital technology to ensure the well-being of its residents.

For instance, each resident wears a "positioning device" resembling a thumb-sized bracelet, allowing the control center to locate them wherever they go. In case of danger, pressing a button alerts the nursing staff immediately.

Inside the rooms, sensors are placed at the foot of the bed to automatically alert the control center if a resident falls out of bed at night. Additionally, sensors in the bed sheet detect if a resident experiences urinary or fecal incontinence. Even the toilet seat and lid are painted in different colors to prevent confusion, and sensors in the bathroom monitor usage, in case of any prolonged or abnormal behavior. Moreover, within reach of the residents, there's a pull ring for direct assistance if needed.

On the desk in each room, there's a fax machine-sized LCD with a camera in the top right corner, serving as a remote medical terminal. With a simple touch on the screen, residents can conduct self-tests, such as measuring blood pressure and pulse. The measured data is automatically recorded in the machine, and with a press of a button, the data is sent to a medical center where doctors can review it and conduct visual teleconferences with the residents.

The cost of living in this nursing home is not cheap. Standard fees require an initial payment of 18 million yen and subsequent monthly payments of 250,000 yen, with additional expenses for medical fees, personal consumption, and hairdressing, the demand for beds remains high.

"Small-Scale, Multi-Functional" Community Elderly Care

Compared to large-scale, expensive commercial nursing homes, Japan also has many small-scale community nursing homes. Currently, Japan doesn't advocate for large-scale nursing homes but emphasizes elderly people have their time in their own homes and communities, fostering interaction within the community.

Presently, elderly care services in Japan are primarily promoting "small-scale, multi-functional community elderly care." These community nursing homes typically have 20-30 beds and offer "multi-functional" services: either 24-hour residential care, daytime daycare services, or home visiting services.

The trend towards "Multi-fictionalization" has become prominent. Across Japan, there are over 37,000 "elderly daycare" facilities, with over 28,000 in the Tokyo metropolitan area alone. Many daycare facilities are expanding through direct operations and franchising.

DHC, a famous cosmetics company in Japan, is also in the field of community daycare facilities. While providing care services for the elderly, they also attract customers with free cosmetic services.

Many daycare centers provide specialized services tailored to the needs of the elderly. For example, one daycare center emphasizes training in practical skills for elderly men, while another focuses on providing unique experiences for dementia patients. There is also a daycare center that also operates a soup restaurant, providing nutritious soup for the elderly.

Recently, the Japanese convenience store chain "Lawson" announced that it would provide elderly care services, with a "care manager" stationed in the store to provide consultations. This project is a collaboration between Lawson and the care company Wis-net, which mainly operates care services in the Greater Tokyo area of Japan. Wis-net will provide care support services to Lawson's franchise stores, with the first store expected to open in Kawaguchi City, Saitama Prefecture in February next year. Lawson hopes to attract more customers through this new service project.

South Korea

South Korea, deeply influenced by Confucianism, values family concepts and mostly relies on family care. However, with the gradual opening of people's minds and the continuous upgrading of elderly care facilities, elderly apartments have been accepted by people. The Daesung Elderly Apartment emerged, and according to a Korean survey, currently, more than half of Korean elderly people are willing to retire in the main urban areas.

Similar to the current situation in China, South Korea mainly relies on family care. However, with the continuous growth of the elderly population, the demand for elderly care services is also increasing. According to its national conditions, high-end elderly apartments and CCRC elderly communities have become the main symbols of the Korean elderly care industry.



The Cassic500 project consists of a six-story underground and two above-ground towers including 50 floors (Tower A) in the west tower and 40 floors (Tower B) in the east tower. The elderly apartments are located on floors 21-50 of Tower A and floors 5-40 of Tower B, totaling 380 units, each with 184 square meters. The entry criteria for an elderly apartment require that one of the couples be over 60 years old, and if living alone, the age must be over 60.

The interior decoration of the elderly apartments is mainly in warm colors, with smooth floors convenient for wheelchair use and equipped with emergency call buttons. Cultural facilities include libraries, audiovisual rooms, etc., and interest groups are regularly organized for activities such as painting, calligraphy, and chorus. The Cassic 50 elderly apartments can share the restaurants of hotels and the nearby university, and also have a dedicated cafeteria for the elderly, which can both provide self-service and order food.

In terms of medical support, in addition to being able to seek treatment directly at the nearby Konkuk University Hospital, the project has a well-equipped one-stop medical care center, which can provide emergency care and have nursing staff on duty 24 hours a day. The environment is pleasant, the service is attentive, and there are corresponding wards available for short-term hospitalization.

Europe

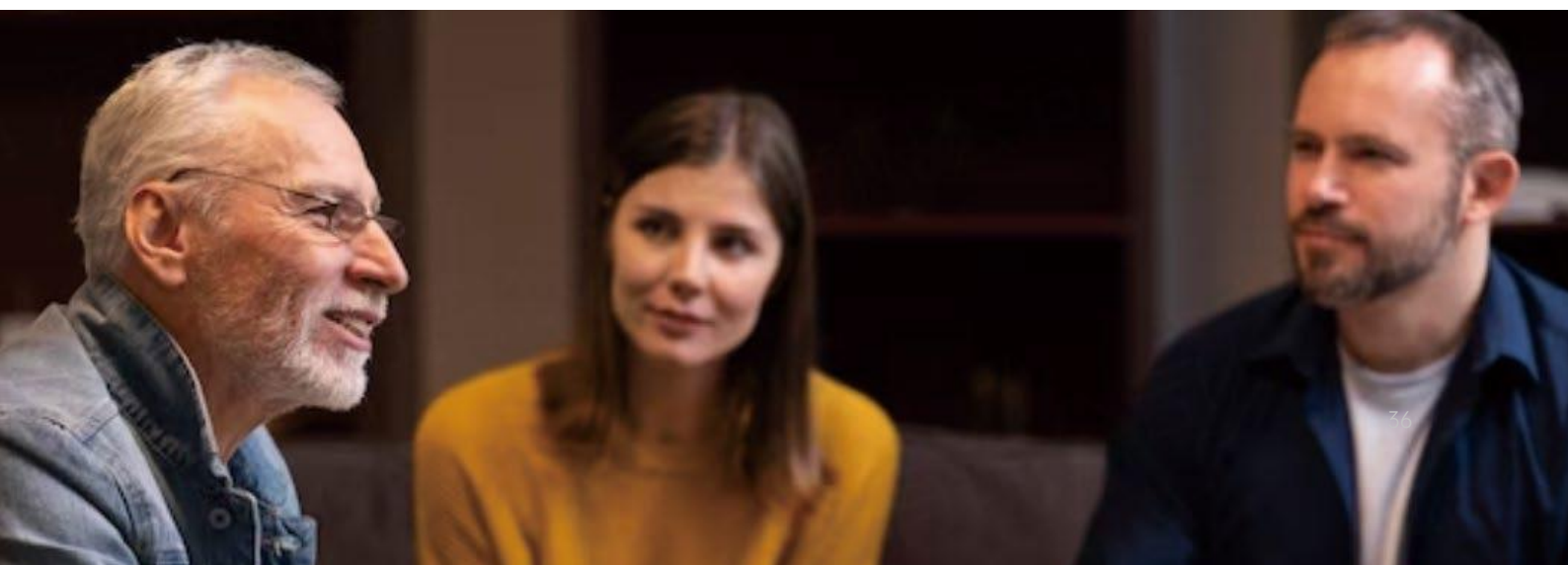
With the resurgence of home-based elderly care, the shortage of home care personnel in Finland has become apparent, and the use of cutting-edge technology to provide remote care services is seen as an auxiliary means of home care.

The "Family Care Project" led by the Helsinki City Government in Finland has equipped about 4,000 home-bound elderly people with safety devices: GPS wristbands, fall detectors, alarm buttons, and dedicated phone lines for caregivers. Caregivers can monitor these devices remotely. When sensors detect movement, an alert is sent to the caregiver team. Whether relying on caregivers or electronic devices, early detection of problems is essential for elderly health and well-being.

In some towns in Finland, technologies that can track the daily activities of elderly people in real time are being tested. Technology companies such as MariCare Oy and Benet have developed network systems that collect data using motion sensors, showing the elder's activity trajectory at home, as well as the frequency of activities such as going to the toilet and opening the refrigerator. Caregivers use this data to determine priorities for home visits and issues that need to be checked. For example, a significant increase in toilet visits may indicate a urinary tract infection, while a decrease in refrigerator openings may indicate worsening memory problems.

In addition to health issues, "loneliness" is also a reality that elderly people living alone cannot avoid. The Helsinki City Government holds virtual gatherings for elderly people who are unable to go out, including puzzle quizzes, chair exercise classes, singing activities, book clubs, and religious discussions led by pastors. Viarama's VR products help elderly people recall past happy times by providing virtual world travel. More and more elderly people can interact with friends and family through social media.

Whether it's a change in the mode of elderly care or the introduction of technology, the various Finnish elderly care initiatives mentioned above are still in the stage of exploration and improvement. Moreover, affluent welfare states have inherent advantages in solving elderly care problems through social efforts in terms of national economic strength, social systems, and public awareness. However, each country has its unique national conditions, and the experiences therein cannot be entirely replicated. Nonetheless, the pioneering and effective attempts of welfare states have at least proven to us that aging issues can be addressed, and "raising children to support oneself in old age" may not be a necessary option among them; coordinating individual elderly care arrangements at the societal level to provide everyone with more diverse and freer life paths is possible.



Germany

The "German Elderly Survival Status Record" shows that a high proportion of elderly people in Germany live independently, with only 8% choosing to live with their children; even if their spouses die or couples separate, 33.6% of the elderly choose to live alone. Most German elderly people prefer to age in their own homes, and only when they are unable to live independently do they consider living in nursing homes.

To actively respond to the elderly care needs brought about by population aging, Germany has established a relatively complete elderly care service system, especially in comprehensive strategies for home-based care.

Diverse forms of elderly care

In Germany, there are various forms of elderly care, including home-based care, community-based care, institutional care, and "multi-generational house" care, allowing the elderly to flexibly choose how to spend their later years based on their physical condition, lifestyle, and financial reserves.

Home-based care is the mainstream form of elderly care in Germany, also known as "mobile care." Elderly people still live in their own homes, with family members or caregivers regularly visiting to provide care. Families using this form of care usually rely on relatives for primary care tasks, while caregivers often play a complementary role. If the elderly person lives alone, caregivers usually have spare keys to enter the room when the elderly person is unable to move.

Choosing home-based care means that the elderly can maintain their original routines and continue living in familiar environments. There is a German saying, "Old trees should not be transplanted," reflecting the Germans' tendency not to like moving as they age. In addition, for most elderly people, the cost of care is also an important consideration. According to mid-year statistics from the German financial investment website Finanztip, the average monthly fee for nursing homes in Germany is around 3000 euros, while the average pension for the elderly is only about 1500 euros.

Therefore, the advantages of home-based care are very evident. Data also strongly support this: in 2021, 63% of elderly people in Germany were cared for by relatives, 21% received home-based care services from caregivers, and only 16% lived in nursing homes.





In summary, as the global aging population intensifies, countries are exploring and implementing various elderly care models. Family care has always been mainstream, but with urbanization and social changes, institutionalized elderly care methods such as nursing homes and elderly apartments are gradually gaining acceptance. Governments around the world are promoting the development of elderly care services by formulating policies and investing funds, including providing economic support, constructing elderly care facilities, and promoting technological innovation. At the same time, society is gradually changing its attitudes towards the elderly, placing more emphasis on their health and happiness. The global elderly care service sector is evolving towards diversification, intelligence, and humanization.



Providing for the old with technology

Current Status and Future Prospects of the Global Elderly Care Technology Market

With the ongoing trend of global aging, the elderly care technology market has attracted significant attention. Different countries and regions have distinctive development status and prospects in the field of smart senior care.

United States: Commercialization of Smart Elderly Care with Highlights in Health Management and Learning Entertainment

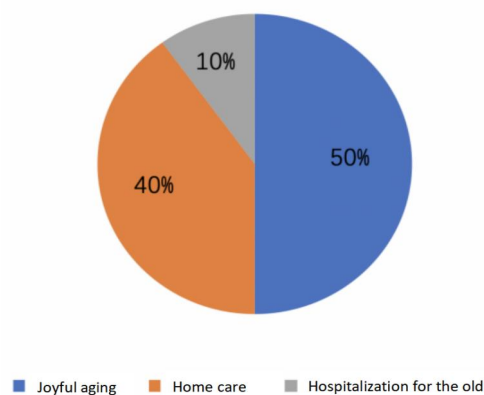
As a highly aged population with strong economic prowess, the United States has a well-established social security system, advanced market operation and abundant social resources, contributing to its comparatively advanced practical experience in smart elderly care. The United States adopts a market-oriented operation model for smart elderly care services, incorporating market competition mechanisms. Currently, high-tech companies in the US (such as Apple) actively develop elderly electronic products, laying foundation for the development of smart elderly care. The emerging smart elderly care startups in the US can be classified into five major categories: nursing, health, access, furniture and interaction, which can be considered as hot investment for future elderly care technology.

Nursing	Health	Access	Furniture	Interaction
Monitoring solutions	Monitoring solutions	Sensory enhancement	Elderly care facilities services	Social gaming
Care and co-care solutions	Management tools	programs	Home care facility maintenance	
	Diagnostic solutions	Access solutions	Home renovation service	
	Predictive class solutions	Transmission solutions		

In terms of service, the US mainly focus on health management and learning entertainment, with the overall operational model being home-based care combined with elderly information platforms, medical institutions and insurance companies. Health management involves remote medical services enable elderly people to receive treatment at home.

The demand for remote medical services varies in services including chronic disease management (such as diabetes), remote treatments (emergencies, strokes, etc.), post-discharge health management at home or in the community, transmission and storage of elderly medical data as well as dissemination of elderly care. Currently, the market covers over 50 states and 1,000 cities.

Learning entertainment is another highlight in smart elderly care in the US. In the US government's social elderly budget, 50% of the budget is allocated for joyful aging, also known as preventive care, while 40% is allocated for home care. The remaining 10% is dedicated to hospitalization and treatment costs. Thus, platforms providing information for elderly learning entertainment, consumer electronics and related smart homes (such as the "Plug-n-Play" device that can serve as a remote medical terminal directly connected to the home TV) have significant market potential in the US.





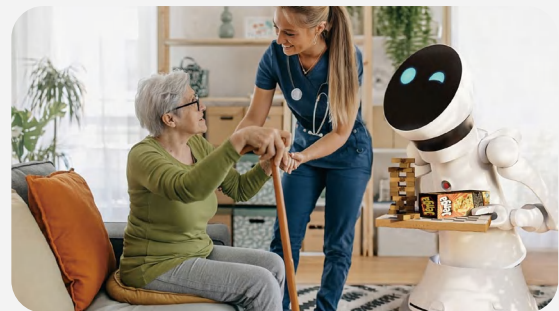
Europe: Home-Based Elderly Care with Advanced Technology Support

Currently, Europe's elderly care is gradually back to home-based care. Smart elderly care mainly takes place within communities, including the development of smart designs in smart apartments for the elderly and medical care communities.

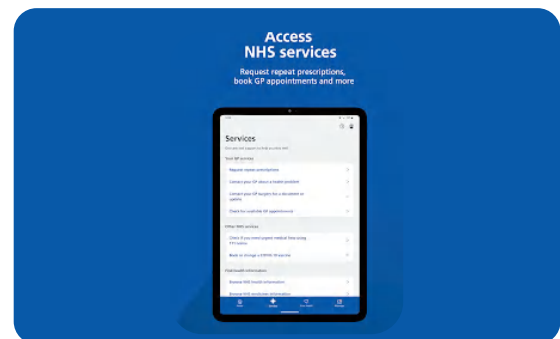
Finland is dedicated to establishing a nationwide home-based elderly care service network and the government provides financial support for the adaptation of smart homes and the utilization of technology to provide remote care services. The government-led "Home Care Project" has equipped approximately 4,000 home-bound elderly people with safety devices such as GPS bracelets, fall detectors, alarm buttons, and motion sensors in Helsinki city. Technology companies like MariCare Oy and Benet have developed network systems that use motion sensors to collect data, displaying the activities of the elderly at home. These health and safety monitoring devices suitable for elderly living alone have market potential and will continue to thrive in the future. Another highlight of elderly care technology in Finland is VR products. Viarama's VR products help the elderly reminisce about past memories by providing them with virtual world travels.

The UK government promotes smart senior apartments and encourages the research and application of robots, playing a leading role in smart elderly care services. In terms of service, they mainly focus on lifestyle support, health management and humane care.

Lifestyle support involves the development of home care robots, such as the Care-O-bot 3 robot developed by the University of South Hertfordshire. It assists the elderly in household chores and provides smart home services, helping with tasks such as fetching items from heights and opening doors to welcome guests.



Health management includes digital healthcare, remote healthcare and mobile healthcare. For example, NHS has released a digital mental health service application, providing access for privacy-conscious patients to seek medical advice and services online.



Humane care: The UK government has initiated a technology research project for "virtual companions," which are humanoid intelligent computers capable of analyzing the needs of the elderly and detecting their health data.



Japan: Development of Smart Elderly Care Devices and Multifunctional Robots

Among East Asian countries, Japan has a very high degree of aging. In elderly care technology, Japan's smart elderly care service follows a "government + enterprise + information platform" model. The government formulates relevant policies and provides subsidies encouraging enterprises to develop smart elderly care devices and multifunctional robots. Information platform provides technical support and data management to address aging population challenges.

In terms of service types, Japan's elderly care industry is broadly divided into lifestyle support, health management and humane care.



Life support: The Japanese government strongly supports the development of care robots, such as Panasonic's "Hair Washing Robot," the first feeding robot "My Spoon," the telepresence robot Telenoid and the care robot Robear.



Health management: Smart living products (such as the Hamon smart clothing brand, which incorporates IoT sensors into fabric for the elderly), smart home devices (smart air conditioners, sensors, video cameras, fall detectors, etc.) and smart transportation systems (installing sensors in vehicles to ensure safe travel for the elderly).

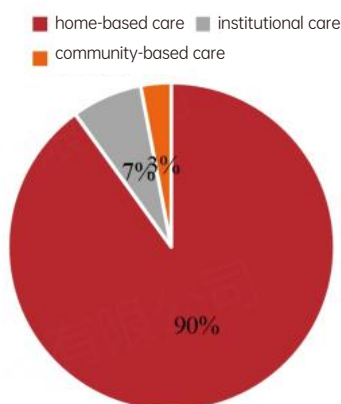
Humane care: Japan has introduced interactive therapy robots like Paro and "Baby Lloyd," which can alleviate loneliness and depression among the old.

In the future, Japan's smart elderly care industry will continue to develop towards intelligence, personalization, and humanization. With the continuous progress and application of technology, smart devices and robots will remain the focal points of elderly care technology, providing more convenient, comfortable and secure elderly care services.

China

Home-based Elderly Care = Smart Home + Adaptation for Aging, attracting attention to Sub-sectors of smart elderly care

According to direction disclosed by the National Health Commission and the gradual improvement of elderly care facilities and services, home-based elderly care has become the primary mode of elderly care in China. Currently, China mainly promotes the "9073" structure of providing for the aged, which means 90% home-based care, 7% community-based care and 3% institutional care.



Affected by the trend of home-based elderly care, Chinese government starts from smart home scenarios to analyze the adaptation needs for aging, identifying 12 main scenarios and corresponding products for smart home care.

Note: Ideal model of providing for the aged under current policy and planSource: National Health and Health Commission

	Smart home scenarios	Smart home care product
Physiological needs	Diet assistance	Anti-shake spoon, smart eating aids, feeding robots, etc.
	Smart bathing	Excretion assistance robot, intelligent excretion wheelchair, intelligent bath machine, bath assistance robot, etc
	Smart sleep	Smart mattress, smart bed, smart pillow, sleep robot, temperature control quilt, sleep monitor, etc
	Aids in dressing/moving	Dressing assistance robot, intelligent wheelchair, intelligent crutch, walking robot, intelligent bed, etc
Safety needs	Security monitoring	Fall down alarm, anti-lost positioning, intelligent camera, call, millimeter wave radar, infrared thermal imager, etc
	Health management	Smart bracelet, clothing, smart blood pressure monitor, smart blood glucose meter, smart medicine box, millimeter wave radar equipment
	Health monitoring	Intelligent nursing bed, nursing robot, etc
	Rehabilitation	Intelligent massager, intelligent rehabilitation training instrument, rehabilitation robot, etc
	Intelligent control/lighting/HVAC system	Intelligent lighting, intelligent panel, central control screen, intelligent temperature controller, intelligent fresh air system, intelligent heating, etc
	Cleaning	Smart cleaning appliances, smart kitchen appliances, etc
Spiritual needs	Entertainment	Smart TV, smart phone, smart speaker, etc
	Emotional companion	Companion robots, pet robots, etc

From the above products, several sub-sector markets can be summarized as follows: smart security, smart appliances, smart wearables, smart bathrooms, whole-house intelligence, elderly care robots and smart beds.

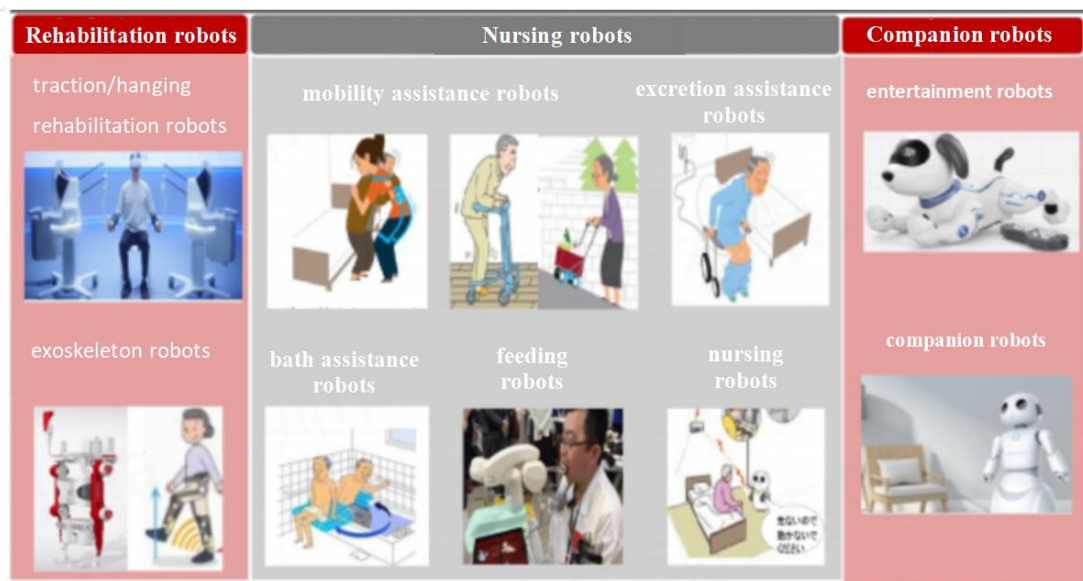
Smart security includes smart cameras, motion sensors, emergency call devices, smart door locks, alarms, etc. Currently, smart cameras and smart door locks have relatively high application rates in the overall smart home market, while sensors and emergency call devices have lower penetration rates. However, products such as security monitoring, facial recognition and vein locks are expected to experience rapid penetration rate growth driven by the increasing demand for elderly care.

Smart Appliances: There is a significant penetration space for smart small appliances in cleaning, healthcare and entertainment scenes. Among them, the demand for smart cleaning appliances is growing rapidly. Sub-markets such as smart speakers and smart massagers are also expected to expand in scale.

Smart Wearables: Mainly including smart bracelets and smart clothing, with significant growth potential for smart watches and penetration among the elderly population.

Smart Bathrooms: Inconvenience in toilets and bathrooms is main trigger in the current adaptation of living spaces for aging. For China, where aging is accelerating, there is considerable potential for increasing the penetration of smart toilets. Smart toilets ranked first and second respectively among users aged 45-55 and over 56 in the top five sales growth categories in China. This is expected to drive the rapid expansion of the smart bathroom market.

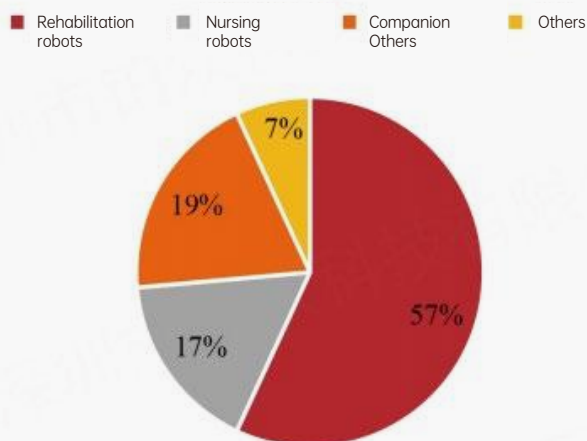
Elderly Care Robots: Elderly care robots are subdivided into rehabilitation robots, nursing robots, and companion robots, with significant potential for increasing penetration rates.



Source: Japan Ministry of Economy, Trade, Health, Labor and Welfare, Ageclub, Daij Robot, Boriye Intelligence, East Asia Qianhai Securities Research Institute

Currently, rehabilitation robot companies have the highest market share in China. It is anticipated that mobility assistance robots, bathing assistance robots, and caregiving assistance robots will lead the way in increasing penetration rates.

The proportion of three types of robots in China in 2019



Source: AgeClub, East Asia Qianhai Securities Research Institute

Smart Beds: There is significant room for increasing the penetration of smart beds in China. According to data from Qisheng Technology, in 2021, the penetration rate of China's smart electric bed industry was only 0.05%, compared to 13.7% in the United States. Therefore, there is considerable room for growth in the Chinese smart bed market. In the future, smart beds can cover two major elderly home scenarios: smart sleep and health monitoring. Globally, the development of elderly care technology has become a hot topic, with governments, businesses, and research institutions actively exploring and innovating. With the continuous progress and application of technology, future elderly life will become more intelligent, convenient, and comfortable, providing better quality of life and care services for the elderly.

Reference: White Paper on smart elderly care industry; East Asia Qianhai Securities Research Report; Smart medical care research dynamic network; 2023 Silver Economic Insight Report

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