

AMED Project to Build Evidence for Social Implementation of Long-Term Care Technology Symposium on Research and Development of Long-Term Care Technology for Overseas Expansion

Trends in Healthcare DX in Other Countries and Implications for the Development of Long-Term Care Technology in Japan

March 12, 2026

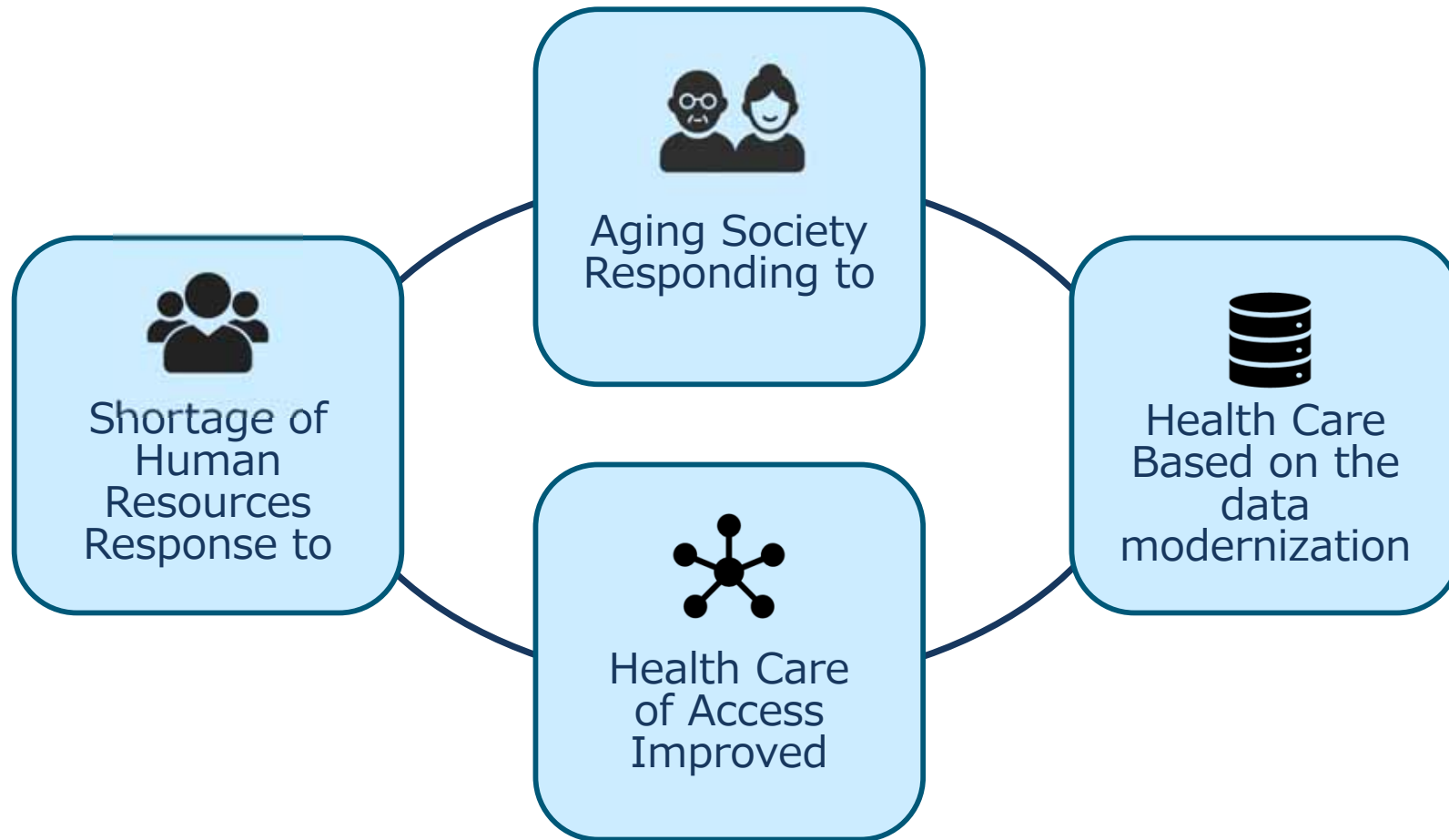


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Section 1. Trends in Healthcare Transformation

Global Issues in Healthcare Systems



Health care system transition and transformation

World Economic Forum (Davos)

- Report on Digital Health at the World Economic Forum Annual Meeting in January 2023

Report: Why aging physical healthcare infrastructure needs to be improved for the digital age

OECD findings at the Forum on the Future of Digital Healthcare

=>Healthcare infrastructure designed to support traditional operations and care models cannot be grafted onto **new digital platform-based**

You can't transplant a healthcare system.

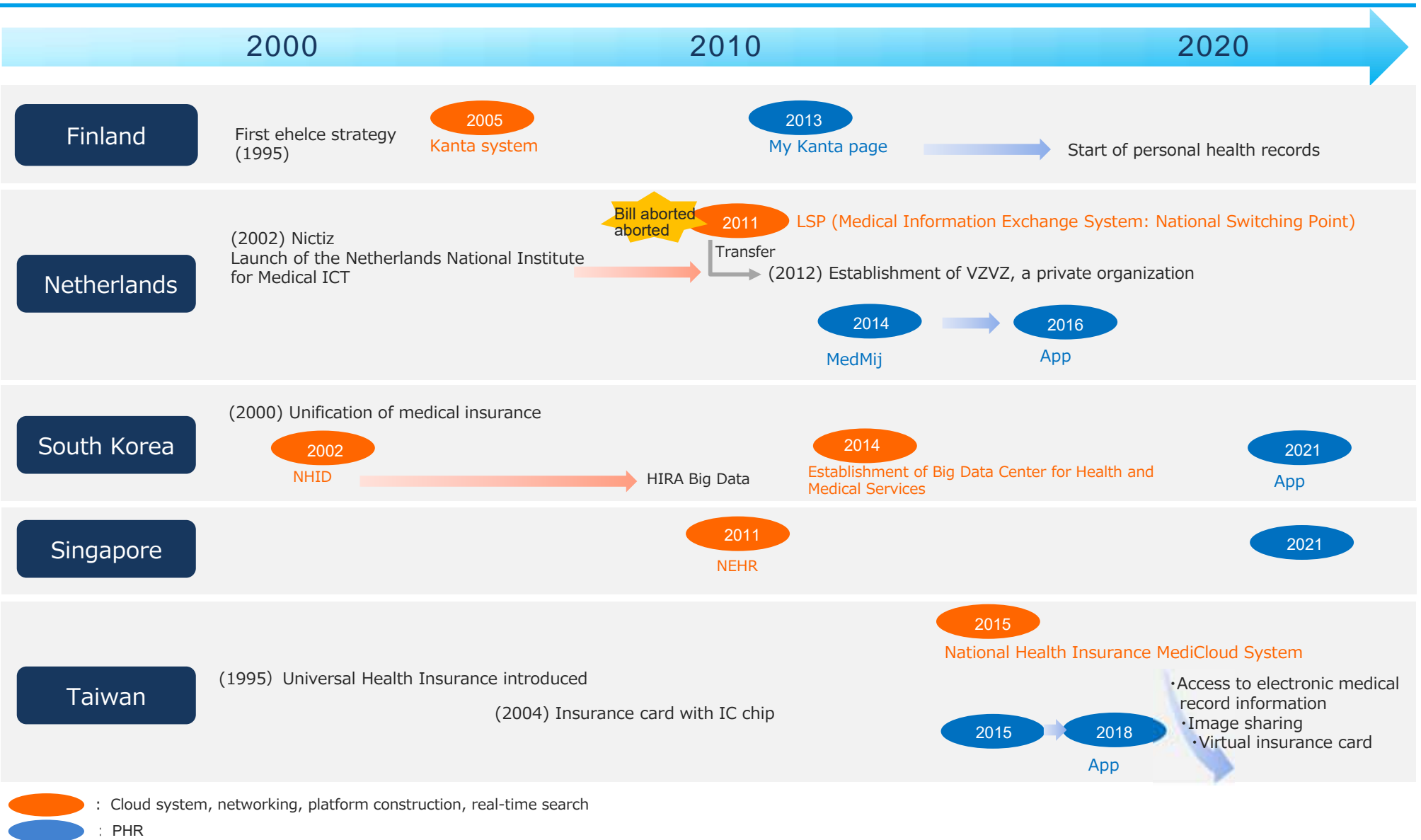
Investment in digital transformation of healthcare (OECD report)

Overall	Expected to expand from 3% of total healthcare in 2018 to 8% in 2030
Australia	<ul style="list-style-type: none">• Expected to invest A \$537 billion in healthcare over 4 years• Focus on digital health infrastructure
EU	<ul style="list-style-type: none">• EU4Health Program (2021-2027) with an investment of €5.3 billion• Targeted to digitize healthcare by strengthening health data, digital tools and services
UK	<ul style="list-style-type: none">• £2 billion for digital transformation of NHS• Comments from medical supervisors "We're running 21 century healthcare in 19 century buildings, and it's becoming increasingly unsustainable."



Healthcare needs transformation. You need to build **physical** and **digital frameworks** at the same time.

Health care system transition

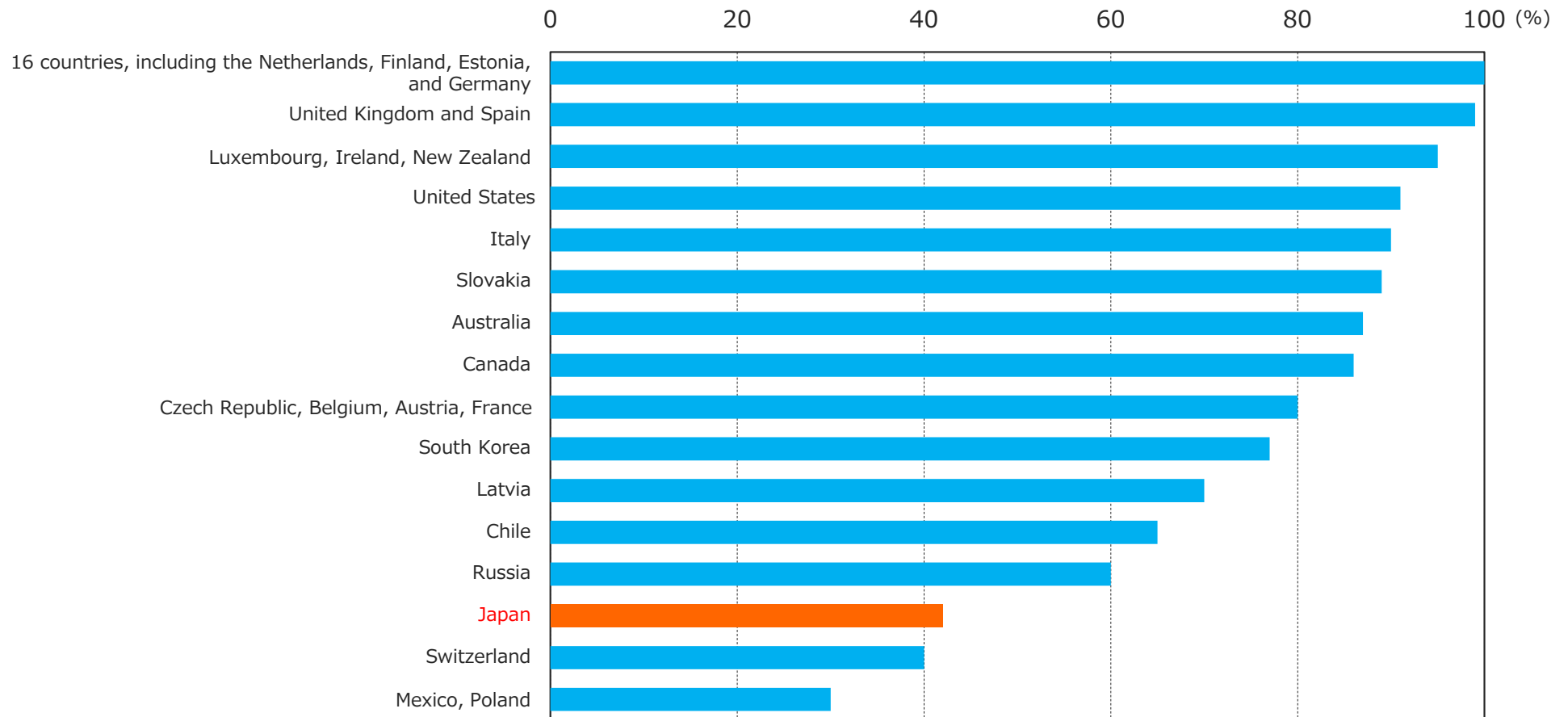


Note: Developed by Development Bank of Japan.

OECD adoption rate of electronic medical records

- At around 40%, Japan has adopted electronic medical records (EMRs) in clinics, which is low among OECD countries.

Introduction of Electronic Medical Records in Clinics (OECD, 2021)

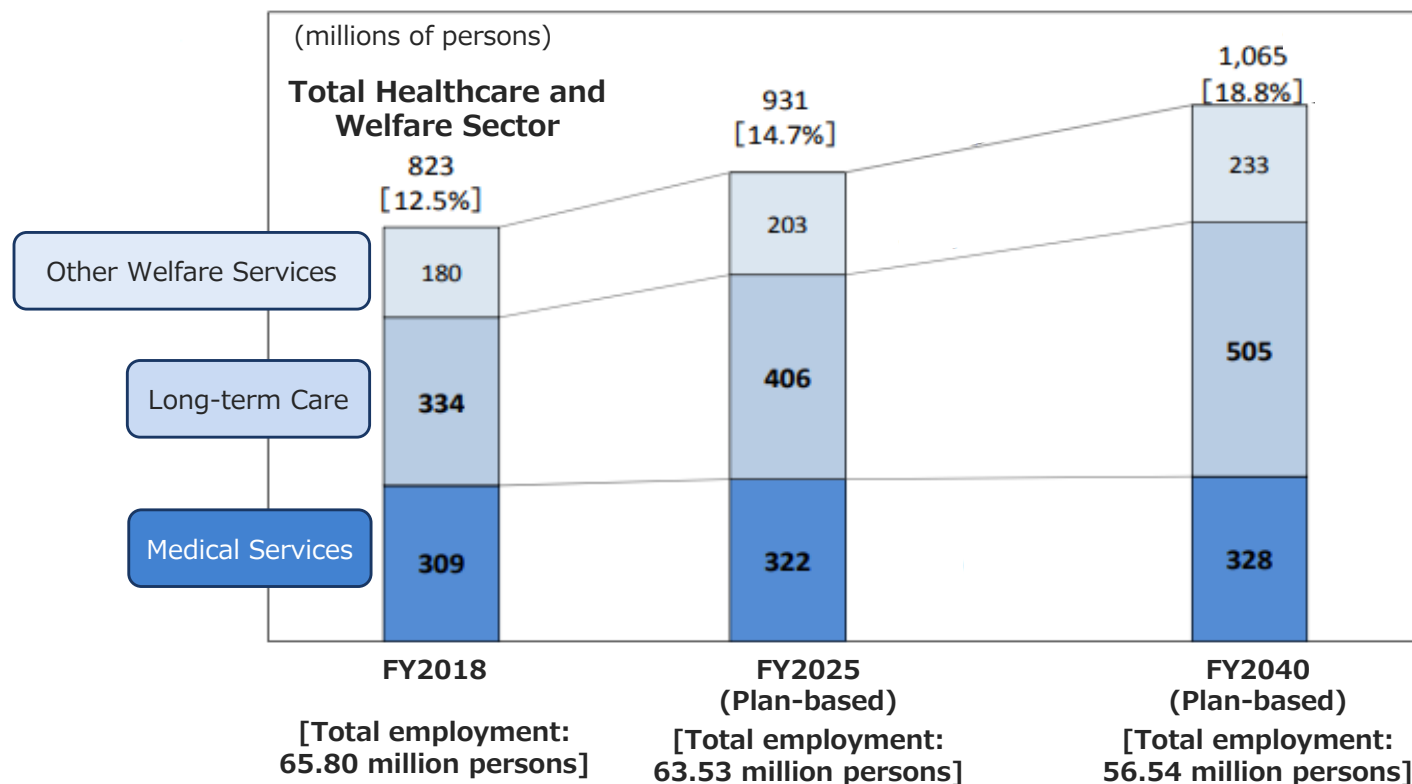


Note: OECD (2021), "Proportion of primary care physician offices using electronic medical records".

Prospects for Employees in the Medical and Nursing Care Sector in 2040

- Challenges include rising medical and nursing care costs, a shortage of workers, changes in the disease structure, and an increase in dementia patients.
- The elderly population is expected to peak around 2040, and 1 in 5 working people will need to work in the medical and nursing care sector.

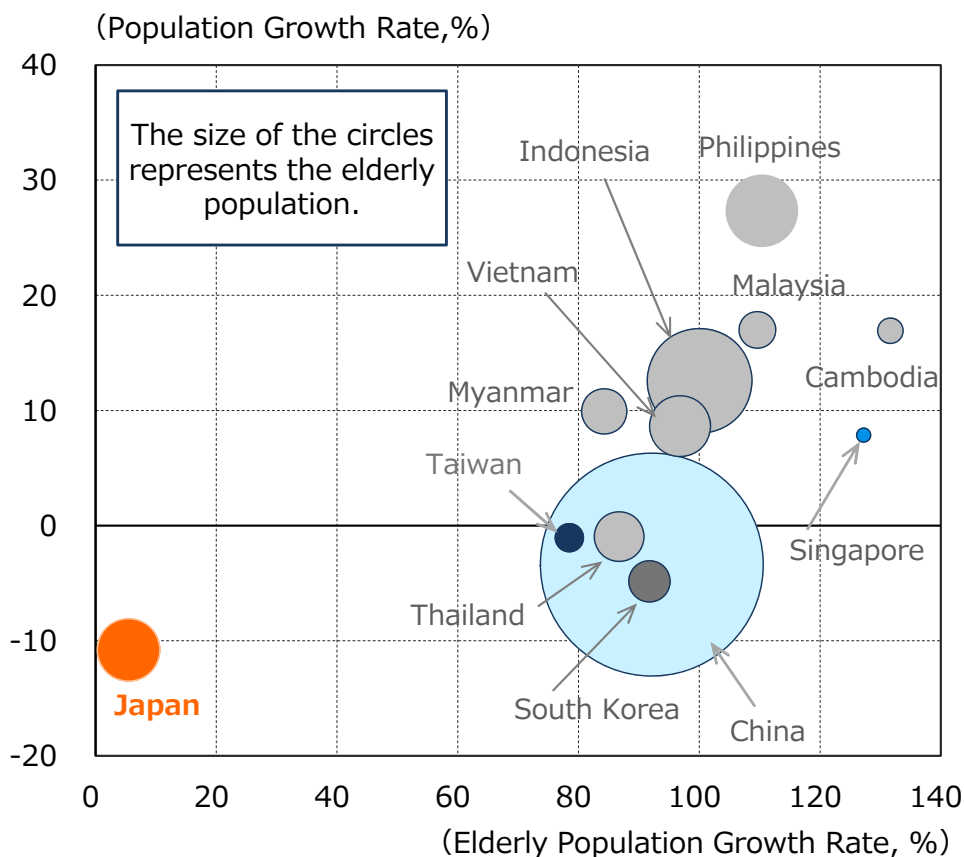
Prospects for Employees in the Medical and Welfare Sector



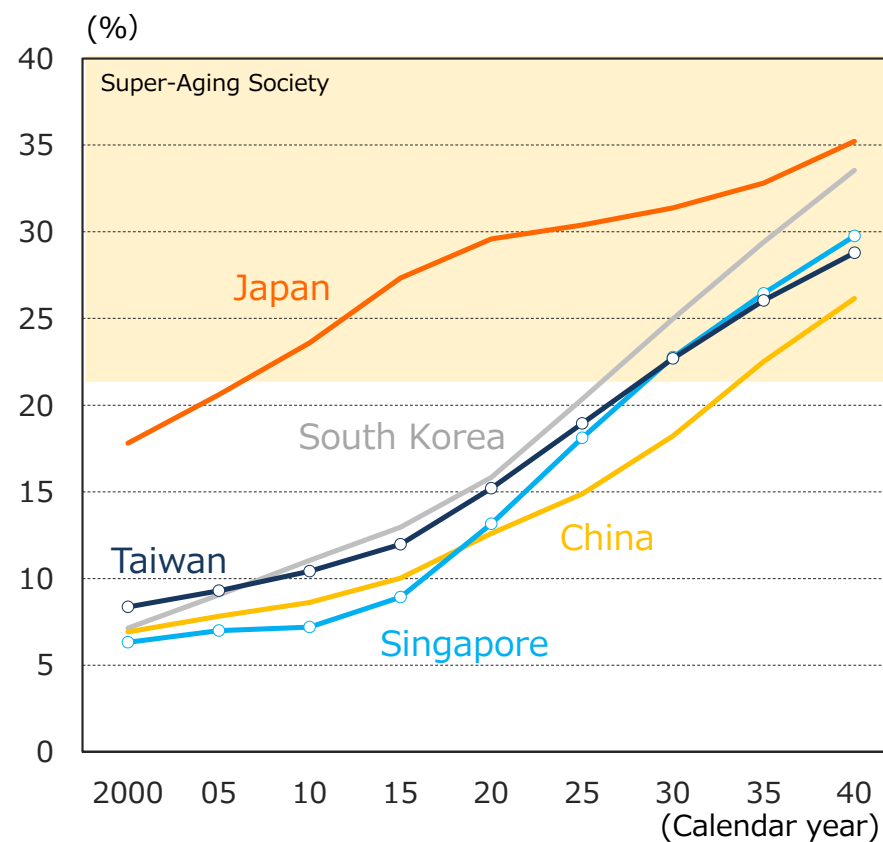
Section 2. Trends in Asia

Rapidly Increasing Elderly Population in Asia

Rate of Change in Population and Elderly Population (2040/2021)

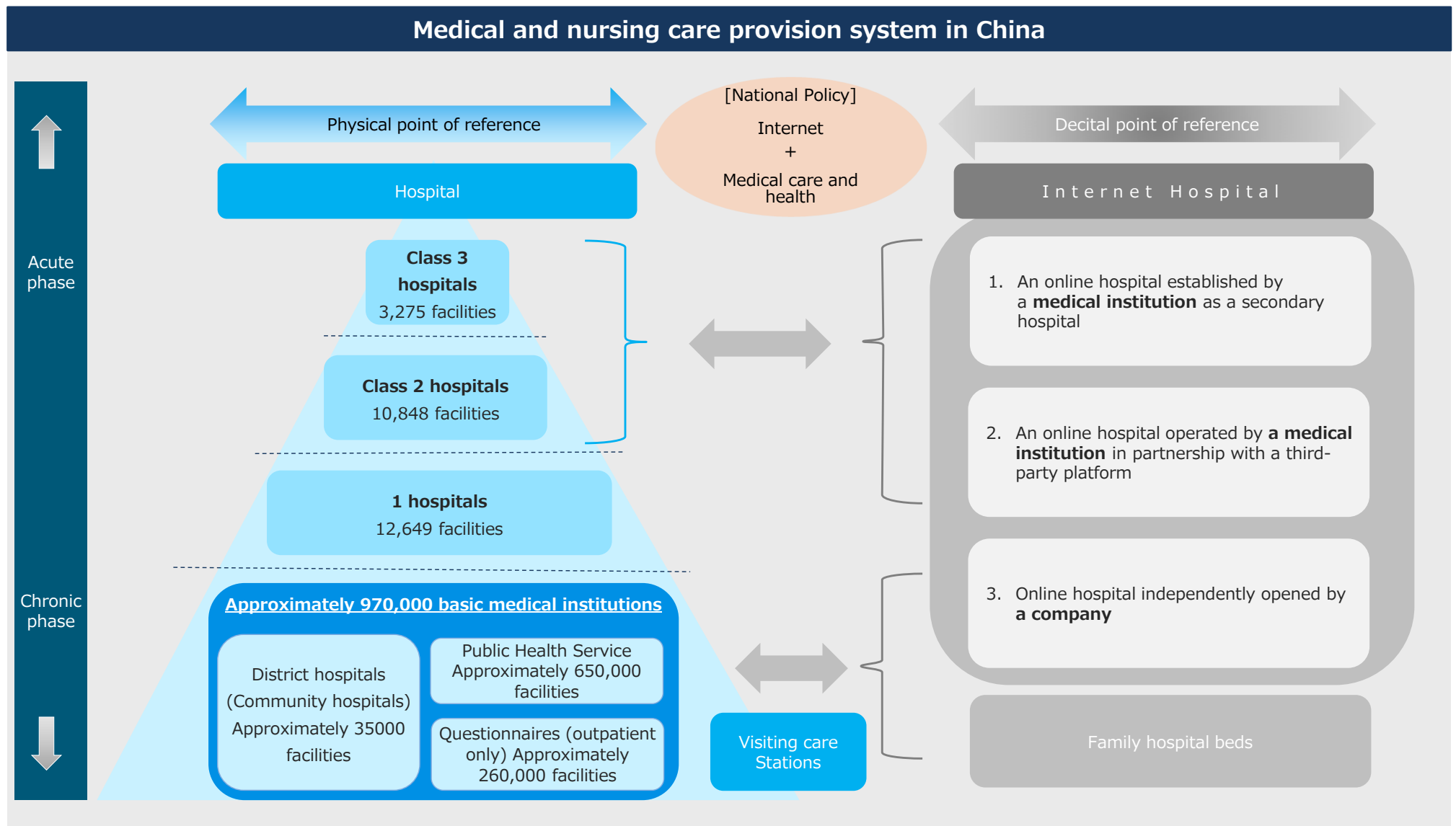


Trends in Aging Rate



Notes : 1. Developed by Development Bank of Japan based on United Nations (2022), "Department of Economic and Social Affairs, Population Division".
 2. Elderly: 65 years or older.
 3. Super-aging society: Society in which the elderly account for more than 21% of the total population.

China: System for providing medical care and nursing care



Note: Developed by the Development Bank of Japan based on statistics on the development of medical care in our country in 2021, published by the Central People's Government of the People's Republic of China.

Singapore: System for providing medical care and nursing care

System for providing medical care in Singapore

Group name	Characteristics	() : Number of institutions [including under construction]	New hospitals and investments
Public institutions			
Sing Health (Singapore Health Services)	<ul style="list-style-type: none"> Largest public healthcare cluster in Singapore 	Tertiary Care and Acute Care Hospital (5) National Specialized Centers (5) General Community Hospital (3) Clinics (10)	<ul style="list-style-type: none"> ■ Singapore General Hospital <ul style="list-style-type: none"> • [Ward] Elective Care Center (ECC) Scheduled to open around 2026. Approximately 500 beds (25 ~50 operating rooms) • Patient location information via RFID, blood pressure, body temperature, and oxygen levels are constantly monitored and managed via the web ■ [New Hospital] Bedok General Hospital (Scheduled to open around 2030)
NUHS (National University Health System)	<ul style="list-style-type: none"> Collaboration between university and community hospitals 	Tertiary care, acute care hospitals, and community diseases (3) National specialized centers (3) Clinics and medical centers (3) Academic health institutions (3)	<ul style="list-style-type: none"> ■ NewNational Skin Centre ■ Jurong General Infirmary <ul style="list-style-type: none"> • Scheduled to open in 2027 • Combining a polyclinic and a 700 bed nursing home • Second facility with a nursing home and polyclinic
NHG (National Healthcare Group)	<ul style="list-style-type: none"> Singapore's leader in public healthcare 	Tertiary Care, Acute Care, and Community Diseases (5) Centers and Research Institutes (4) Clinics and Pharmacies Academies, etc.	<ul style="list-style-type: none"> ■ Integrated Care Hub (ICH) <ul style="list-style-type: none"> • Opened in 2022. 500 Approx. Provided smart rehabilitation. ■ Woodlands Health Campus <ul style="list-style-type: none"> • Opened in 2023. 1 , 800 beds • Provides seamless healthcare access for acute care, community care, and geriatric care. Using AI
Private sector			
IHH Healthcare Others	<ul style="list-style-type: none"> Singapore's largest private healthcare provider 	Tertiary care and acute care hospitals (4) Primary care clinics (> 30) Labs (6)	<ul style="list-style-type: none"> • Collaborating with Doctor Anywhere, a telemedicine venture

Note: Developed by Development Bank of Japan based on various materials and interviews.

Section 3. Trends in Europe

Section 4. Toward the Development of Nursing Care Technology

Focused areas of nursing care technology

■ Care technology implementation is advancing globally, with distinct regional characteristics. In Europe, technology specialized for monitoring, transfer support, medication management, and remote care is integrated with policy and operations to address home-based independence and workforce shortages. Especially in Northern Europe and Germany, solutions emphasize privacy and social acceptance, such as sensor-based abnormality detection without cameras.

■ In Asia, rapid aging and urban constraints are driving the adoption of ICT and AI-based home and community care technologies. In Singapore, AI monitoring is progressing; in China, smart communities are built on PHR; and in Taiwan, telehealth is linked to the insurance system. These countries commonly connect medical, nursing, and daily living support through data integration.

Care technology being implemented overseas

Field	Countries and regions	Technology content	Main entities and circumstances of implementation	Background of implementation
Home-based remote care	Finland	Remote visits, medication management, vital measurements	Provided as a public service by the municipality of Helsinki	<ul style="list-style-type: none"> • Policy focusing on home care • Response to human resource shortage
Watchkeeping at home and facilities (AAL)	Germany	Behavior, fall, and abnormality detection and remote monitoring using indoor sensors	Local governments, housing providers, and nursing care providers (developed through EU/country projects)	<ul style="list-style-type: none"> • Shortage of nursing care personnel • Support for self-reliance at home
Transfer and reduction of physical load	Denmark Netherlands	Ceiling lift, electric bed	Equipped as standard in facilities and homes	<ul style="list-style-type: none"> • "People don't lift people" institutional philosophy
Home x AI monitoring	Singapore	Vital and behavioral monitoring and medication support using AI	Public medical and long-term care institutions + private sector (home/facility)	<ul style="list-style-type: none"> • Preparedness for a super-aging population • Limited human resources and land constraints
Comprehensive community care	China	PHR infrastructure, smart company blocks, monitoring and life support	Local government initiative, mainly in urban areas	<ul style="list-style-type: none"> • Rapid aging • Declining family care capacity
Telemedicine and home care	Taiwan	Telehealth, home vital monitoring, acute home care	Trial and deployment under national health insurance	<ul style="list-style-type: none"> • Support for mountainous areas and remote islands • Aging population and shortage of care workers

Note : Ministry of Health, Labour and Welfare et al., "Future Outlook for Social Security Looking to 2040," May 2018.

Japan: Priority areas for the use of nursing care technology (9 areas and 16 items)

Areas	Penetration rate (%)	Item	Notes
Transfer support	9.7	Mounted type	-
		Non-Wearing Type	-
Excretion Support	0.5	Excretion Disposal	-
		Motion Support	-
		Excretion Prediction and Detection	-
Nursing care work support	10.2	Nursing care work support	-
Mobility support	1.2	Outdoor	-
		Indoor	-
		Mounting	-
Bathing support	11.2	Bathing support	-
Watching Communication	30.0	Facilities	-
		Home	-
		Communication	-
Functional Training Support	-	Functional Training Support	New
Dietary and Nutritional Management Support	-	Support for dietary and nutritional management	New
Support for living with dementia and dementia care	-	Support for living with dementia and dementia care	New

Note: Revision of Ministry of Health, Labour and Welfare's "Priority Areas for the Use of Robotic Technology in Nursing Care" June 2024.

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