

Healthy ageing and adult vaccination in Japan

The state of vaccination in older Japanese adults and what happens next



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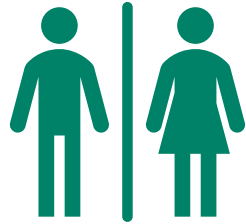
Overview of Japan

Country profile

Population and economy

Japan is the 11th largest country in the world by population size¹ and has the 3rd largest economy in the world.² With an ageing population, Japan's population is declining.

1. Worldometer (2022) [Countries in the world by population \(2022\)](#)
2. International Monetary Fund (2021) [World Economic Outlook Database](#)
3. World Bank (2020) [GDP per capita \(current US\\$\) - Japan](#)



125 million people

-0.37% pop. growth



GDP per capita (2020): \$40,193³

Geography

Japan has a land surface area of 365,000 sq km and is divided into 47 “prefectures”. The country varies in climate and terrain, with tropical islands in the south to cool temperatures in the north.¹

1. CIA one-page country summaries (2022) [Japan](#)



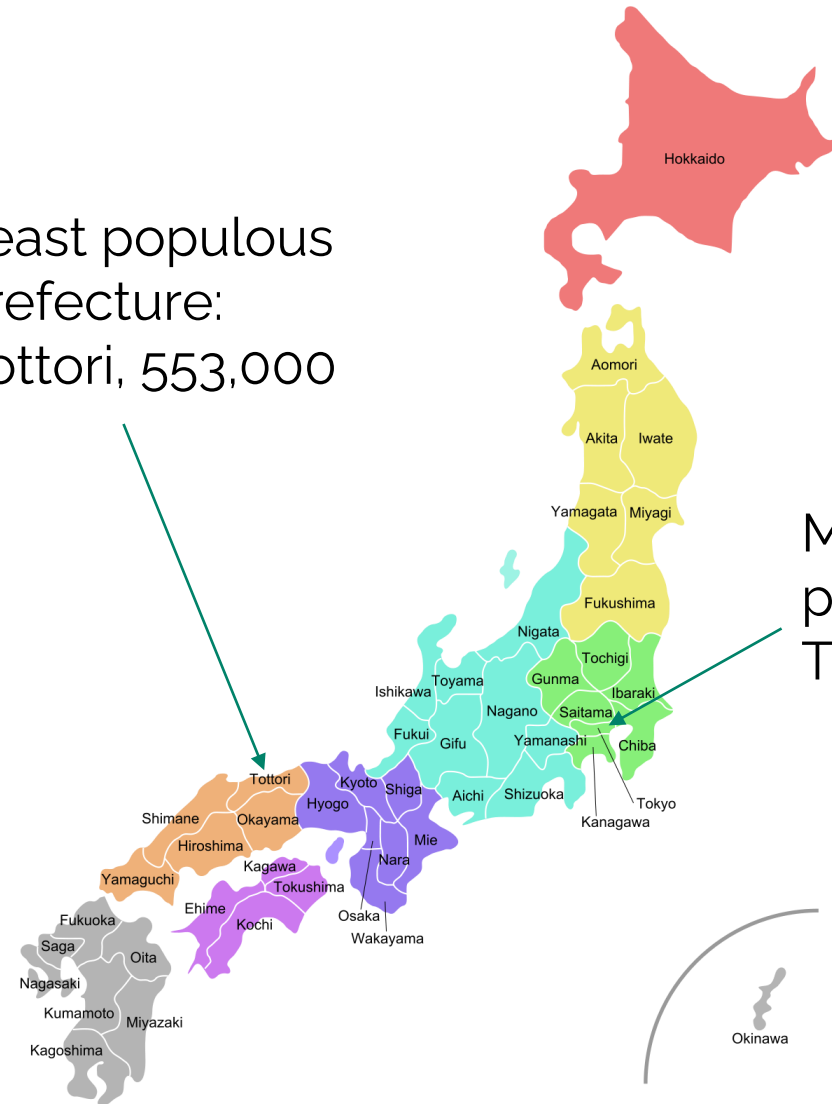
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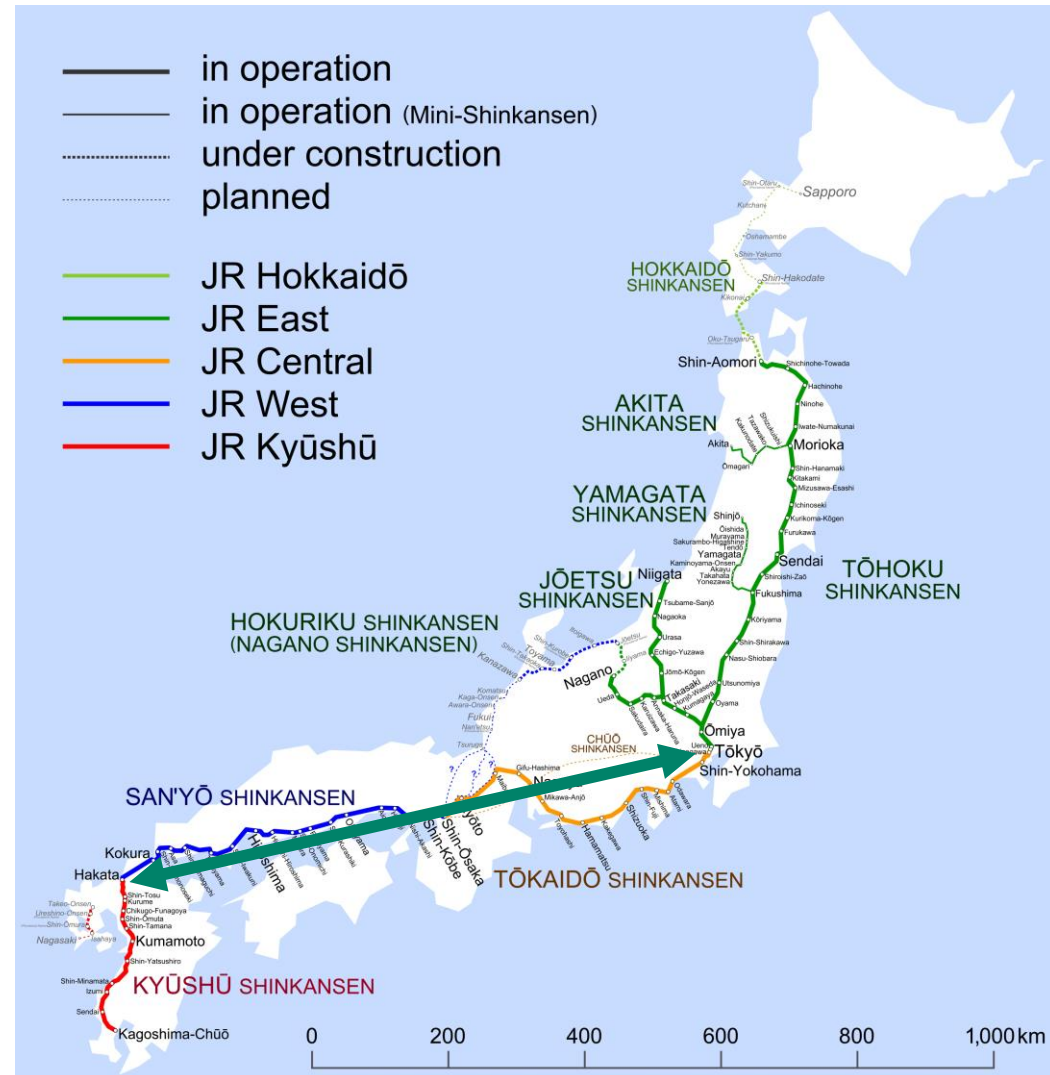
Least populous
prefecture:
Tottori, 553,000

Most populous
prefecture:
Tokyo, 14 million



Transport and connectivity

Japan is well-connected. The *Shinkansen* high-speed railway line running since 1964 helps to link cities across Japan. A journey from Hakata to Tokyo is over 500 miles and takes five hours.



A similar journey from Cornwall to Scotland would take twice as long and cost around 80% more.

Cost of living

Japan has high living costs, especially in central Tokyo where rent costs are high. Outside of Tokyo, housing costs are distinctly lower, especially in the suburbs, surrounding prefectures and in other regions and cities.¹

1. japan-guide.com (no date) [Living Costs](#)



Central Tokyo
monthly rent:
¥100,000+ (£650+)



Nationwide
monthly rent:
~¥60,000 (~£390)

Average monthly utilities costs:

Electricity – ~¥4,000 (~£26)

Gas – ~¥3,000 (~£20)

Water – ~¥2,000 (~£13)

Longevity in Japan

What does ageing look like?

Healthy ageing in Japan

Life expectancy and healthy life years in Japan are among the highest in the world, with the over-65 population set to increase by 10% by 2065.¹

1. Statistics Bureau of Japan (2020) Population Census
2. OECD (2021) Life expectancy at birth (indicator)
3. Ministry of Health, Labour and Welfare (2021) Health Japan 21
4. Statistics Bureau of Japan (2020) Population Census

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**Life expectancy
at birth²**

85 years

**Healthy life
expectancy³**

72 years (male)

75 years (female)

**28.5% of Japanese
people are over 65⁴**

13.8% are 65-74

14.7% are 75+

What is life for older people in Japan like?

With over a quarter of the population in Japan over the age of 65, life satisfaction for this age cohort is important – 81.5% of people over 60 say they are satisfied with daily life.¹

1. Cabinet Office of Japan (2021) [Annual Report on the Ageing Society](#)

2. Ibid.

However, 16.2% of over-60s expressed dissatisfaction with daily life in 2020 – a 4.5% increase since 2015 and much higher than other countries such as the US, Germany and Sweden.²

Economics of healthy ageing in Japan

Japan has one of the largest ageing workforces in the world with very low unemployment levels in people over the age of 50. Between 2001 and 2020, over-65 employment increased by 6%.¹

13% of the Japanese labour force were over 65 in 2020

39% decrease in over-50 unemployment between 2001 and 2020

1. OECD (2020) [Labour Force Survey](#)

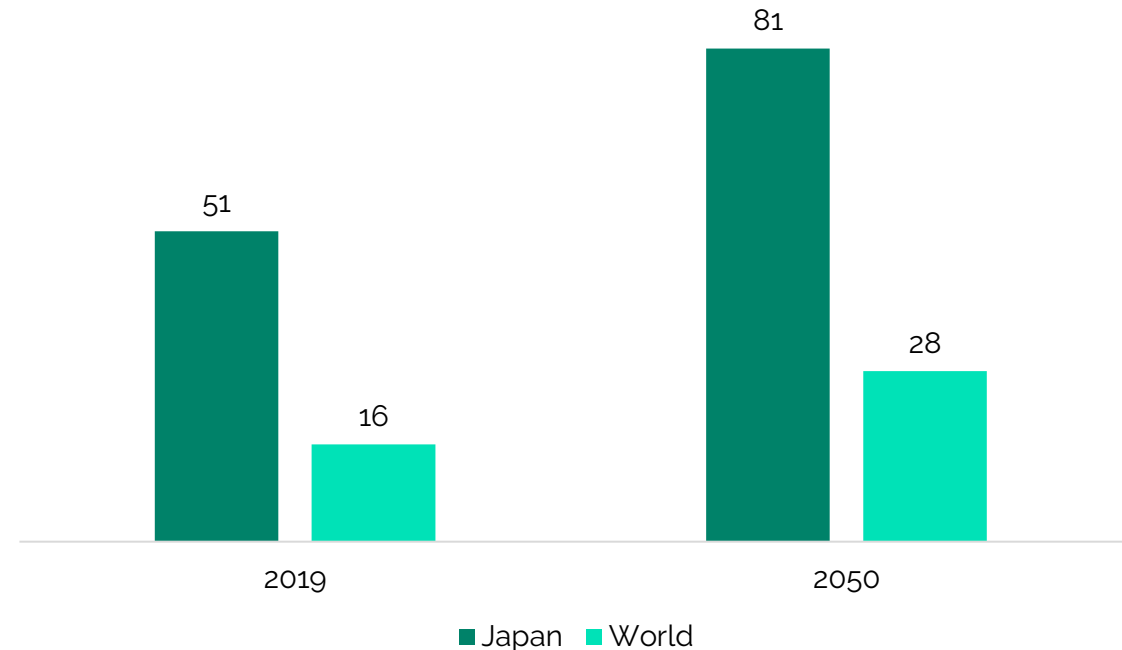
Old-age dependency ratio in Japan

According to UN estimates, Japan has the highest old-age dependency ratio (OADR)* in the world, and this is set to rise by 30 points by 2050.¹

1. United Nations (2019) [World Population Ageing 2019 Highlights](#)

2. Ibid.

Old-age dependency ratio, 2019 vs 2050

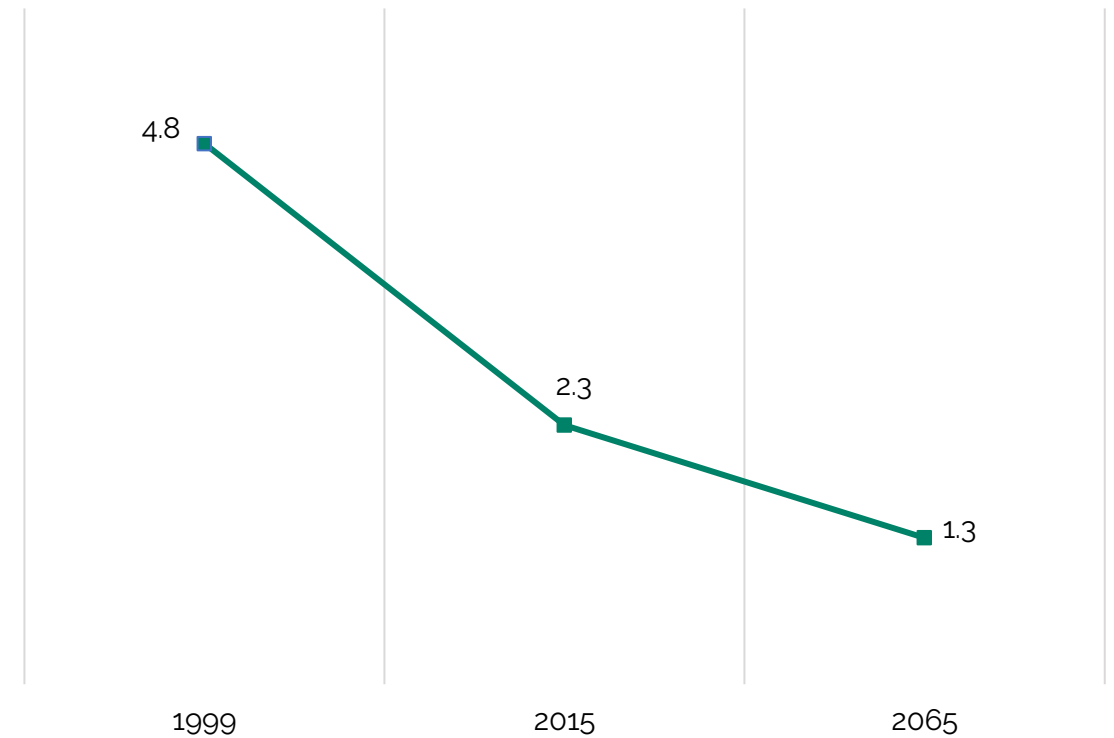


*The OADR is defined as the number of old-age dependents (persons aged 65 years or over) per 100 persons of working age (aged 20 to 64 years). This metric approximates the implied economic dependency associated with a growing share of the population at older ages.²

Working-age population challenges

As a result of increased old-age dependency and life expectancy, the number of working-age people for each dependent older person is projected to fall significantly by 2065.¹

Number of working-age people for each dependent older person



1. OECD (2019) OECD Reviews of Public Health: Japan

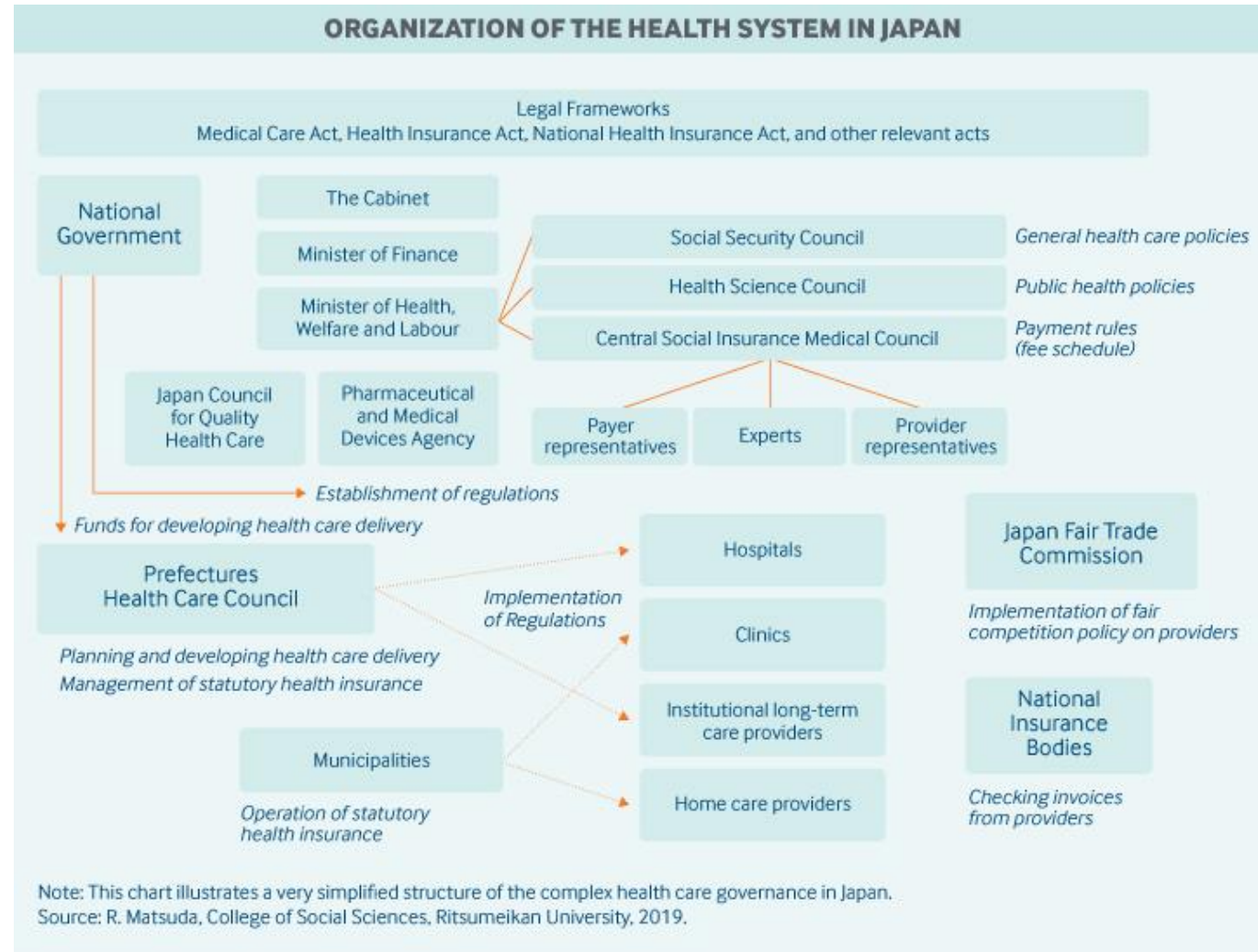
State of health in Japan

What does healthcare look like?

How the Japanese health system works

Japan has a decentralised public health system split between central and local government, different Ministries, and between providers within the health system (i.e. Public Health Centres) and private actors (i.e. the workplace).¹

1. OECD (2019) OECD Reviews of Public Health: Japan



Universal health coverage in Japan

Japan's statutory health insurance system (SHIS) covers 98.3% of the population, while the separate Public Social Assistance Program, for impoverished people, covers the remaining 1.7%.¹

1. The Commonwealth Fund (2020) [Japan](#)

2. Ibid.

How does SHIS work?

SHIS consists of two types of mandatory insurance:

1. Employment-based plans – covers ~59% of the population
2. Residence-based insurance plans:
 - a. Citizen Health Insurance plans for non-employed individuals aged 74 and under (27% of the population)
 - b. Health Insurance for the Elderly plans for all adults 75+ (12.7% of the population)

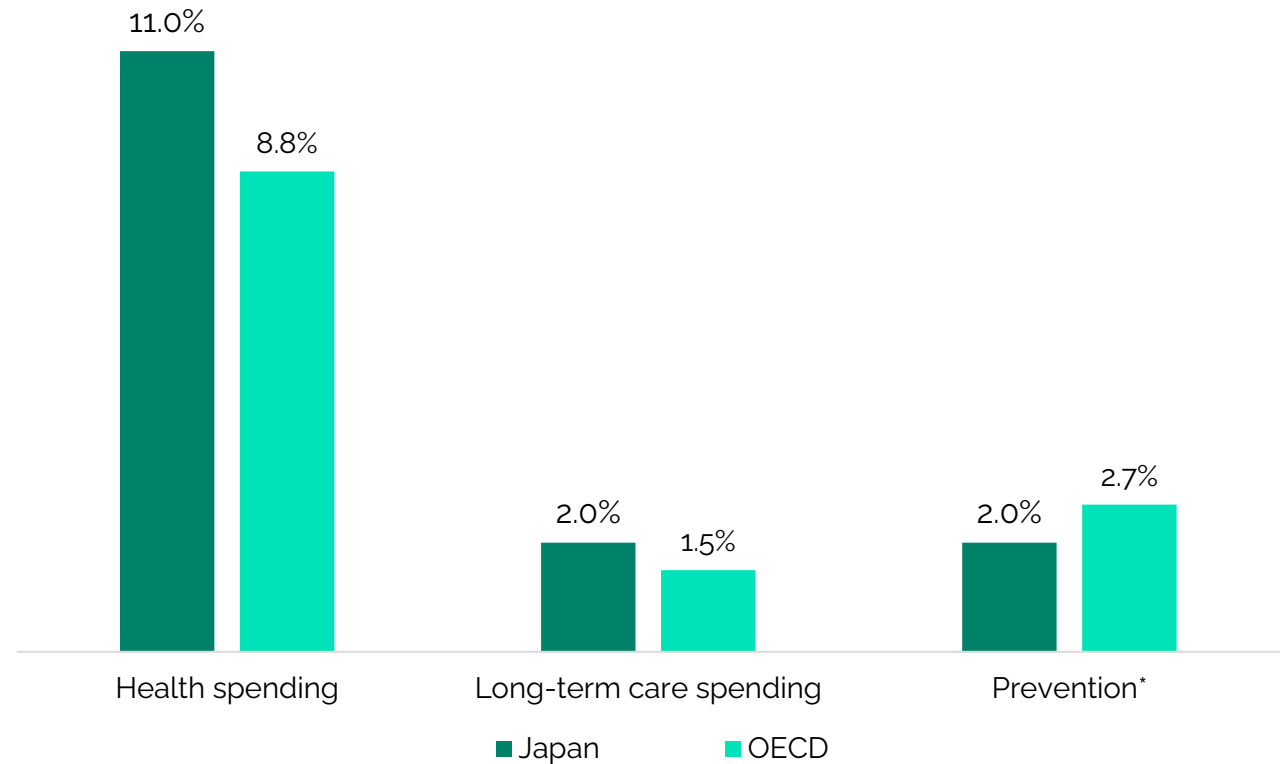
Each of Japan's 47 prefectures has its own residence-based insurance plan, and there are more than 1,400 employment-based plans.²

Healthcare spending in Japan

Japan has a strong healthcare budget (11% of GDP).¹ Compared to the rest of the OECD, Japan spends more on long-term care but less on prevention.

1. OECD (2021) [Health at a Glance 2021: Japan](#)

Healthcare spending as a % of GDP, 2019



*Japan prevention spending figure is from 2018 ([see more](#))

Healthcare infrastructure

Good healthcare infrastructure is reflected in Japan's strong health budget – it has the highest number of hospital beds per 1,000 people across the OECD (~13 beds).¹



12.8 hospital beds per 1,000 population (OECD = 4.4)



2.5 doctors and 11.8 nurses per 1,000 population (OECD = 3.6 and 8.8)

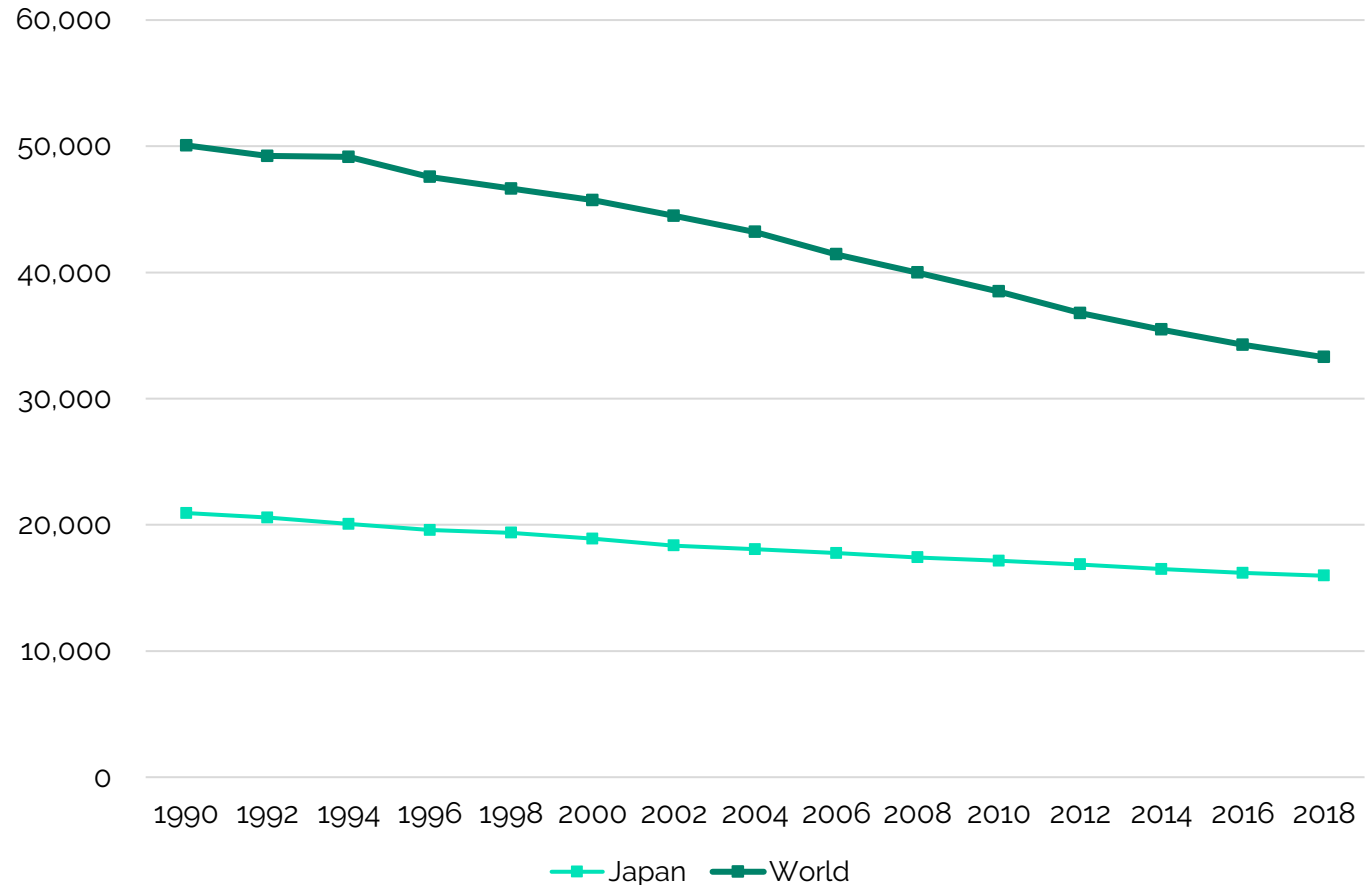
1. OECD (2021) [Health at a Glance 2021: Japan](#)

Burden of disease in Japan

Along with the rest of the world, the total burden of disease has fallen in Japan over the past 30 years. The number of DALYs* lost in Japan has fallen by around 5,000 per 100,000 people.¹

1. Our World In Data (2016) [Burden of Disease](#)

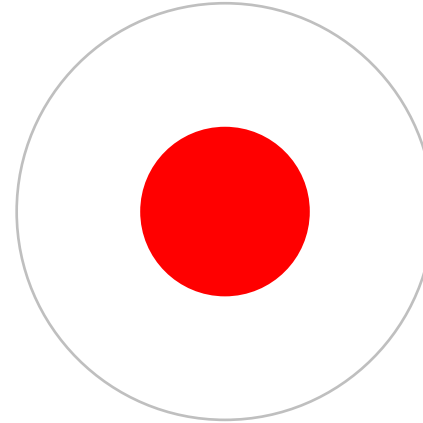
Burden of disease, 1990 to 2019
DALYs per 100,000 individuals from all causes



*Disability-Adjusted Life Years (DALYs) measure the total burden of disease – both from years of life lost due to premature death and years lived with a disability. One DALY equals one lost year of healthy life.

Burden of disease in older adults

However, as life expectancy has risen, the burden of disease has grown in older adults more than any other cohort as a proportion of DALYs lost (contrary to the rest of the world).¹



1990
7.87m
DALYs lost
in over-70s
(31% of
total)



2019
16.88m
DALYs lost
in over-70s
(54% of
total)



1990
228m
DALYs lost
in over-70s
(20% of
total)



2019
426m
DALYs lost
in over-70s
(26% of
total)

1. Our World In Data (2016) [Burden of Disease](#)

Immunisation in Japan

What does vaccination look like?

Immunisation policy in Japan

Vaccinations for influenza (flu) and pneumococcal disease are recommended for older Japanese adults and are managed by the local government.

Routine vaccination is recommended for:

- **Over-65s**
- **60- to 64-year-olds with underlying medical conditions**

Local municipalities are responsible for vaccination, while the national government subsidises 30% of the cost. Vaccination is free for households receiving welfare.

Vaccination must be carried out under the direction of a medical doctor. It cannot be given in pharmacies or other places where there is no medical doctor present.

Routine vs voluntary vaccination

Japanese immunisation law covers two categories: routine recommended and voluntary vaccination. The difference between them is the cost; routine recommended vaccines are principally covered by the regional government.

Source: Nakayama, T. (2013) Vaccine chronicle in Japan

Routine Vaccinations	Objective to Protect Public Health (Category I)	Hib Vaccine	Hib (Bacterial meningitis, epiglottitis)
		Pediatric Pneumococcal Vaccine	Pediatric Pneumococcal (Bacterial Meningitis, Sepsis, Pneumonia)
		Hepatitis B Vaccine	Hepatitis B
		Rotavirus Vaccine	Infectious Gastroenteritis (Rotavirus)
		DPT/IPV	Diphtheria, Pertussis, Tetanus, Polio
		BCG	Tuberculosis
		MR (Measles, Rubella) Vaccine	Measles, Rubella
		Chicken Pox Vaccine	Chicken Pox
		Japanese Encephalitis Vaccine	Japanese Encephalitis
		HPV (Human Papillomavirus) Vaccine	Human Papillomavirus (Cervical Cancer)
Routine Vaccinations	Objective to Protect Individual's Health (Category II)	Influenza Vaccine (For the Elderly)	Influenza
		Adult Pneumococcal Vaccine (For the Elderly)	Adult Pneumococcal Disease
Voluntary Vaccinations		Mumps Vaccine	Mumps (Epidemic Parotitis)
		DPT	Diphtheria, Pertussis, Tetanus
		Influenza Vaccine	Influenza
		Hepatitis A Vaccine	Hepatitis A
		Meningococcus Vaccine	Meningococcus

Table source: [Japan Health Policy NOW](#)

Immunisation spending in Japan

While Japan spends around 2% on prevention, spending on immunisation accounts for around 0.1% of its prevention budget.¹

1. Nishizawa, K. (2020) Current status and issues of vaccination cost estimation

Japanese health expenditure, 2011 to 2016 (one million yen)

	2011	2012	2013	2014	2015	2016
Preventive care	1,367,774	1,379,207	1,368,218	1,563,478	1,591,904	1,656,758
Immunisation programmes	1,353	1,350	1,367	1,367	1,365	1,363

21% ↑

increase in
preventive care
spending from
2011 to 2016

compared to

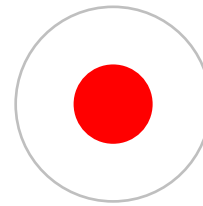
0.74% ↑

increase in
immunisation
programmes spending
from 2011 to 2016

How does Japan compare?

These figures suggest Japan spends a lot less on immunisation programmes compared to the rest of the world – WHO estimates suggest 2% of current global health expenditure is spent on immunisation.¹

1. WHO (2020) [Situation Analysis of Immunization Expenditure](#)
2. Faivre, P. et al (2021) [Immunization funding across 28 European countries](#)



Japan – 0.1%



EU+UK – 0.4%²



World – 2%

However, the flu vaccine probably costs much more

Flu vaccination expenditure estimates are much higher – 17.25m older adults received the flu jab in 2017, at a cost of around 4,000 yen per person, thus costing about 70 billion yen (~£433m).¹

1. Nishizawa, K. (2020) Current status and issues of vaccination cost estimation



Flu vaccine per older adult in Japan = ~¥4,000 (~£25 per person)



Flu vaccine per older adult in England = £9.80 per person² (~£86m in 2021/22)³

2. NICE (2018) [Flu vaccination: increasing uptake](#)

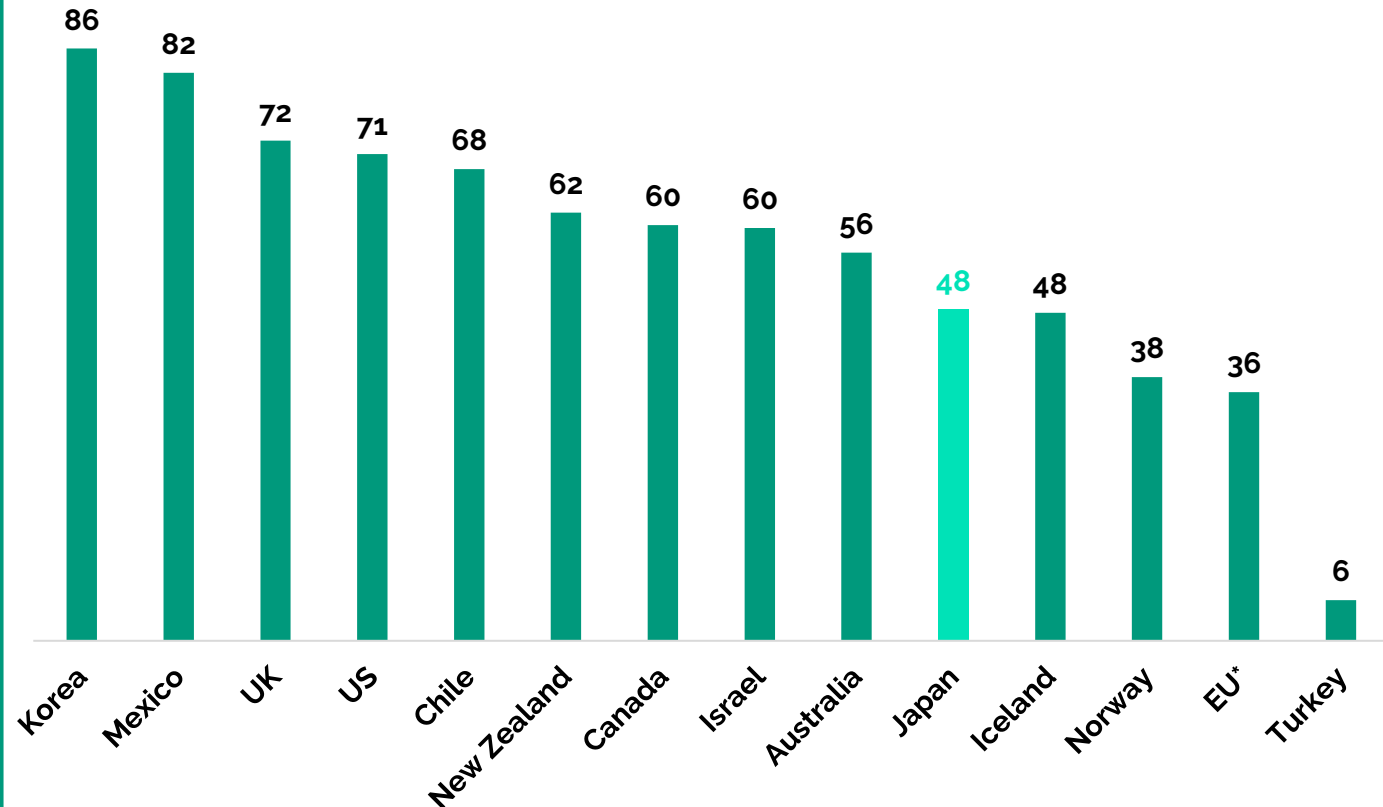
3. £86m figure = £9.80 x 8.77m over-65s vaccinated in 2021/22 ([see UKSHA data](#))

Flu vaccination uptake among over-65s in Japan is low

According to OECD data, less than half (48%) of older Japanese adults receive the flu vaccine – just above the OECD average (46%).

Source: OECD (2021) Health at a Glance 2021

Percentage of population aged 65 and over vaccinated for influenza, 2019



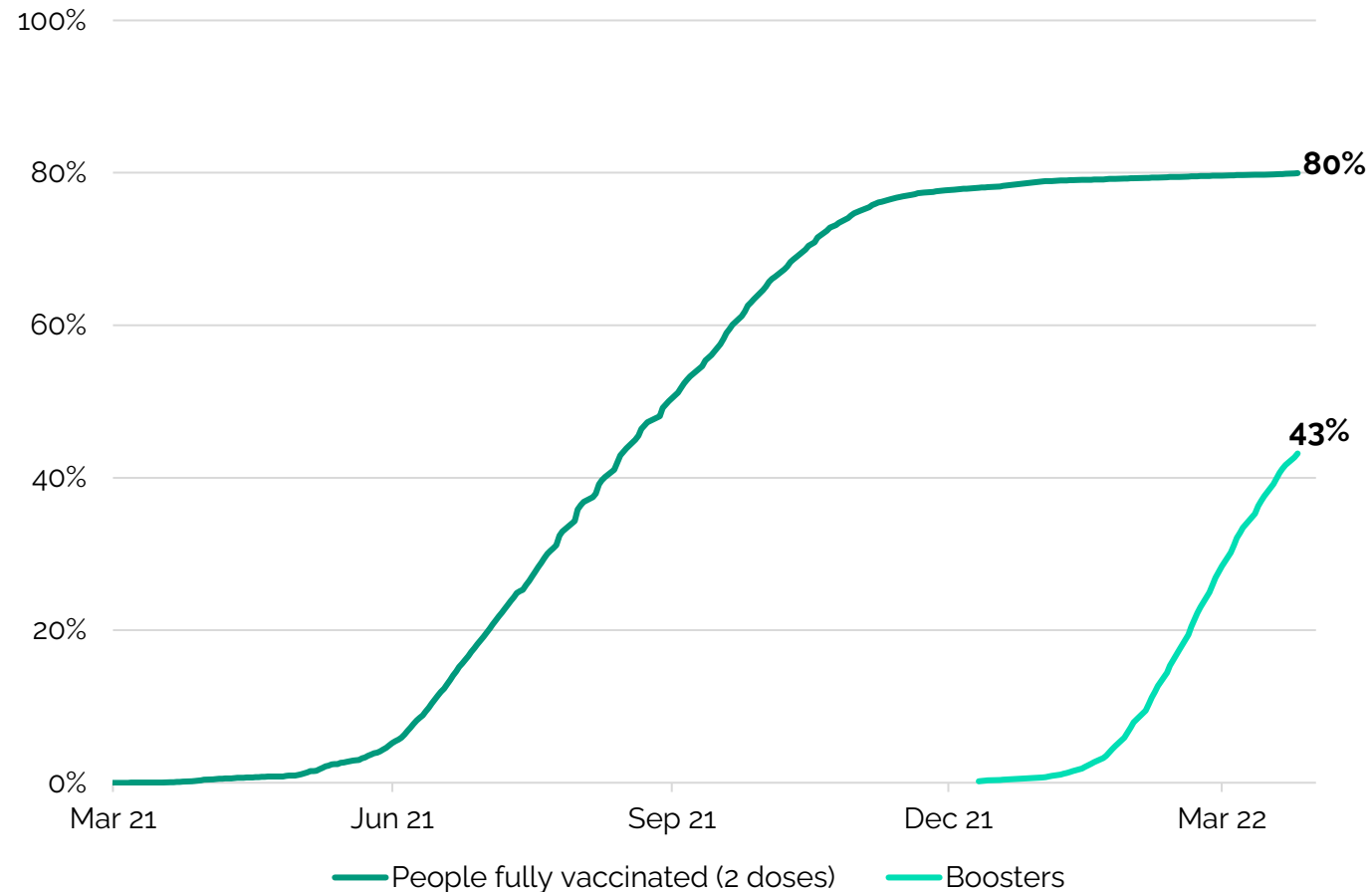
*Excludes Bulgaria, Croatia, Cyprus, Malta & Romania

However, has COVID-19 shifted attitudes?

Despite low flu vaccine uptake, COVID-19 vaccine uptake stands at 80%,¹ with over 90% of over-65s fully vaccinated.² However, the number of people boosted is still below 50%.

1. Mathieu, E. et al (2021) A global database of COVID-19 vaccinations
2. Japan Times (2021) With over 70% fully vaccinated, Japan ranks in top three among G7

Share of the Japanese population fully vaccinated against COVID-19 (4 April 2022)



What do older people in Japan think?

Accounts from older Japanese adults suggest mixed views on COVID-19 and the vaccination programme, but many have regarded vaccines as necessary.

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"I'm going to ask for vaccination when it starts. I don't go out now, but I'll feel safer when I get a vaccine."

Female, early 70s, rural

"Well, I'll have the vaccine. Positively. I'm not proud of it, I've never had a flu shot."

Male, early 70s, rural

"There is no need to make such a big issue about [COVID-19]...I'm not a worrier at all. I'm going to have the vaccine, yes. My wife says so too."

Male, late 60s, urban

"I'm not sure [about the vaccine]. I don't even know if I can get it. I have shingles. I'll ask my doctor, and if he says it's OK, I'll have it."

Female, late 80s, urban

**What
happens
next**

**What do we
recommend?**

The lessons from COVID-19 and what should happen next

Reducing costs, expanding access and raising awareness are vital to help improve uptake for future routine vaccinations.

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COVID-19 vaccines in Japan are free, while other vaccines are not. Making flu and pneumococcal vaccines free could encourage people to take them.

Providing COVID-19 vaccines in different places has made access much easier. Widening access to other locations, like pharmacies, may increase coverage.

COVID-19 has raised awareness about immunisation. Continuing the debate on vaccines and making them an essential part of the healthy ageing agenda is crucial.

Want to find out more?

For more information about the Moving the needle project, [visit our programme page](#).

To speak to ILC about the project, please email Patrick Swain:
patrickswain@ilcuk.org.uk