Health at a Glance: Asia/Pacific 2024

OECD

World Health Organization

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Foreword

The publication of *Health at a Glance: Asia/Pacific 2024* comes at a pivotal moment in our region's health journey. As we emerge from the shadow of the COVID-19 pandemic, we find ourselves in a landscape forever altered, yet filled with opportunities for transformative change.

On 5 May 2023, upon the recommendations of the International Health Regulations (2005) (IHR) Emergency Committee regarding the coronavirus 2019 disease (COVID-19), the Director-General of World Health Organization (WHO) determined that COVID-19 is now an established and ongoing health issue which no longer constitutes a public health emergency of international concern (PHEIC). By then, countries in Asia/Pacific had endured millions of cases and deaths attributed to COVID-19 and administered billions of vaccine doses. By the close of 2022, many countries in the region, based on the fourth round of the Pulse survey on continuity of essential health services during the COVID-19 pandemic (November 2022 – January 2023), were showing partial signs of health service recovery. However, the path to full recovery remains uncertain, requiring us to carefully examine the latest data to identify and address key health-related priorities in need of policy actions to curtail a prolonged impact of the pandemic.

The uneven recovery post pandemic

The 2024 edition of *Health at a Glance: Asia/Pacific* presents over 50 indicators linked to the Sustainable Development Goals (SDGs), highlighting that recovery from COVID-19 and progress remains uneven. While we celebrate the overall increase in life expectancy across the region since 2010, we must also confront the persistent disparities between countries as well as within countries. A gap of over 10 years in life expectancy at birth between the best and worst performing countries is not just a statistic – it represents millions of lives cut short and opportunities lost. This disparity, along with the inequalities in child mortality rates within countries, calls for renewed commitment to addressing social determinants of health and ensuring equitable access to quality healthcare.

We are encouraged by the reduction in out-of-pocket health expenditures in many countries in the region, particularly in low- and lower-middle-income nations. However, the fact that in some countries, individuals still bear more than half of their health costs out-of-pocket is a reminder of the work that remains to be done to achieve true financial protection in healthcare.

Our examination of cancer prevention and early diagnosis efforts reveals both progress and persistent challenges. The higher mortality rates for breast and cervical cancers in our region, despite lower incidence rates in many cases, highlight the critical need for improved screening programmes and early intervention strategies.

Addressing the burden of mental health conditions in the Asia-Pacific region

Good mental health is fundamental to individuals' health and well-being through the life course and a basic human right. This year's report shed new light on mental health, a crucial yet often overlooked issue. The

pandemic has worsened mental health conditions across the region, amplified by socio-economic stresses, public health emergencies, humanitarian challenges including forced displacements, and the growing climate crisis. Alarmingly, mental, neurological, and substance use disorders, alongside self-harm, account for a quarter of the years lived with disability in our region. This serves as a stark reminder of the urgent need to prioritise mental health services and support.

Building equitable resilient health systems for an accelerated and consistent recovery towards UHC and health-related SDGs

As we look to the future, we see both opportunities and challenges. The lessons learned from the pandemic – in telemedicine, home-based care, health worker support, supply chain management, community engagement, and public-private partnerships – provide a foundation for innovation and improvement in our health systems. By focusing on these areas, and by placing a particular emphasis on mental health and equitable access to care, we can accelerate progress towards long-term system recovery, resilience, and preparedness. To seize those opportunities, the path forward requires sustained commitment, appropriate funding, and evidence-informed policies.

This report serves not just as a snapshot of our current health landscape, but as a call to action. It challenges us to build on our successes, learn from our setbacks, and work collaboratively towards a healthier, more equitable future for all in the Asia-Pacific region.

As we move forward, let us carry with us the lessons of resilience and solidarity learned during the pandemic. Together, we can build health systems that not only withstand future crises but actively promote the well-being of every individual in our diverse and dynamic region.

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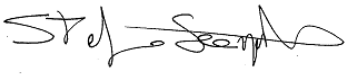
Regional Director,

WHO Regional Office for South-East Asia

Saia Ma'u Piukala,

Regional Director,

WHO Regional Office for the Western Pacific



Stefano Scarpetta,

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Reader's guide

Health at a Glance: Asia/Pacific presents a set of key indicators on health and health systems for 27 Asia-Pacific countries and territories. It builds on the format used in previous editions of *Health at a Glance* to present comparable data on health status and its determinants, healthcare resources and utilisation, healthcare expenditure and financing and healthcare quality.

This publication was prepared jointly by the WHO Western Pacific Regional Office, the WHO Office for South-East Asia, the OECD Health Division and the OECD/Korea Policy Centre, under the co-ordination of Luca Lorenzoni from the OECD Health Division.

Chapter 1 was prepared by Luca Lorenzoni from the OECD Health Division, with support from Mina Kashiwabara, Alia Cynthia Luz and Benjamin Bayutas (WHO/WPRO). Chapter 2 was written by Andrea Bruni, Sajeeva Ranaweera and Amani Siyam (WHO/SEARO), with support from Ruchita Rajbhandary (WHO/SEARO), Ana Mendez Lopez, Jasmine Vergara and Rolando Enrique Domingo (WHO/WPRO). Chapter 3 was prepared by Diana Castelblanco and Caroline Penn from the OECD Health Division and Fukushi Morishita, Kiyohiko Izumi, James Kelley, Dilip Hensman and Shanlong Ding (WHO/WPRO). Chapter 4 was prepared by Pauline Fron from the OECD Health Division, with support from Mina Kashiwabara, Xi Yin and Robert Ryan Arciaga (WHO/WPRO). Chapter 5 was written by Jose Manuel Jerez Pombo (OECD Health Division), and Chelsea Maria Taylor and Shanlong Ding (WHO/WPRO). Chapter 6 was prepared by Jose Manuel Jerez Pombo and Luca Lorenzoni from the OECD Health Division, with support from Alia Cynthia Luz and Ana Mendez-Lopez (WHO/WPRO). Chapter 7 was prepared by Rie Fujisawa (OECD Health Division), with support from Benjamin Bayutas, Elick Narayan and Ronald Anthony Yacat (WHO/WPRO).

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This publication benefited from the comments and suggestions of Kidong Park (Director, Health Systems, WHO/WPRO), Manoj Jhalani (Director, Department of Universal Health Coverage/Health Systems, WHO/SEARO), Daesik Lim (Director General of the OECD/Korea Policy Centre) and Francesca Colombo (Head of OECD Health Division).

Thanks go to Lucy Hulett (OECD) for editorial assistance.

Structure of the publication

Health at a Glance: Asia/Pacific 2024 is divided into seven chapters:

Chapter 1 *Dashboards* shows a set of key indicators to compare performance across countries in each of the following dimensions: health status, risk factors, quality of care and healthcare resources. For each dimension, a set of indicators is presented in the form of country dashboards. The indicators are selected based on their policy relevance, but also on data availability and interpretability.

Chapter 2 on *Mental health and neurological conditions in the Asia-Pacific region* provides an overview of the burden of mental, neurological, substance use disorders, and self-harm, including a specific analysis of the burden of these conditions among children.

Chapter 3 on *Health status* highlights the variations across countries and territories in life expectancy, neonatal, infant and childhood mortality and major causes of mortality and morbidity, including both communicable and non-communicable diseases.

Chapter 4 on *Determinants of health* focuses on non-medical determinants of health. It features the health of mothers and babies, through family planning issues, low birthweight and breastfeeding. It also includes lifestyle and behavioural indicators such as smoking and underweight and overweight, as well as water and sanitation.

Chapter 5 on *Health care resources, utilisation and access* reviews some of the inputs, outputs and outcomes of healthcare systems. This includes the supply of doctors and nurses and hospital beds, as well as the provision of primary and secondary healthcare services, such as doctor consultations and hospital discharges, as well as a range of services surrounding pregnancy, childbirth and infancy.

Chapter 6 on *Health care expenditure and financing* examines trends in health spending across Asia-Pacific countries. It looks at how health services and goods are paid for, and the different mix between public funding, private health insurance, direct out-of-pocket payments by households and external resources.

Chapter 7 on *Health care quality* builds on the indicators used in the OECD's Health Care Quality Indicator programme to examine trends in healthcare quality improvement across Asia-Pacific countries and territories.

Annex A provides the list of national data sources used for this publication.

Annex B provides some additional tables on the demographic context within which different health systems operate.

Asia-Pacific countries and territories

For this eighth edition of *Health at a Glance: Asia/Pacific*, 27 countries and territories were compared: 22 in Asia (Bangladesh, Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Hong Kong (China), India, Indonesia, Japan, Korea[1], Lao People's Democratic Republic, Macau (China), Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand and Viet Nam) and five in the Pacific region (Australia, Fiji, New Zealand, Papua New Guinea and Solomon Islands).

For the special thematic chapter, to capture trends in the countries of the two WHO Regions in Asia-Pacific, 38 countries were compared: Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Cook Islands, Democratic People's Republic of Korea, Fiji, India Indonesia Japan, Kiribati, Korea, Lao People's Democratic Republic, Malaysia, Marshall Islands, Myanmar, Nauru, Nepal, Niue, Palau, Papua New Guinea, Micronesia (Federated States of), Maldives, Mongolia, New Zealand, Philippines, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, Viet Nam.

[1] For WHO, "Korea" refers to the "Republic of Korea".

Selection and presentation of indicators

The indicators have been selected on the basis of being relevant to monitoring health systems performance, taking into account the availability and comparability of existing data in the Asia/Pacific region. The publication takes advantage of the routine administrative and programme data collected by the World Health Organization, especially the Regional Offices for the Western Pacific and South-East Asia, as well as special country population surveys collecting demographic and health information.

The indicators are presented in the form of easy-to-read figures and explanatory text. Each of the topics covered in this publication is presented over two or three pages. The first page (s) defines the indicator and notes any significant variations which might affect data comparability. It also provides brief commentary highlighting the key findings conveyed by the data. On the facing page is a set of figures. These typically show current levels of the indicator and, where possible, trends over time. In some cases, an additional figure relating the indicator to another variable is included.

The cut-off date for all the data reported in this publication is Friday 11 October 2024.

Averages

Countries and territories are classified into four income groups – high, upper-middle, lower-middle, and low – based on their Gross National Income (GNI) per capita (current USD) calculated using the Atlas method (World Bank). The classification reported in the table below and used in this publication is the one updated for the current fiscal year 2024.

In text and figures, *Asia Pacific-H* refers to the unweighted average for high-income reporting Asia-Pacific countries and territories, *Asia Pacific-UM* refers to the unweighted average for upper-middle-income reporting Asia Pacific countries and territories, and *Asia Pacific-LM/L* refers to the unweighted average for lower-middle- and low-income reporting countries and territories.

“OECD” refers to the unweighted average for the 38 OECD member countries. It includes Australia, Japan, New Zealand and Korea. Data for OECD countries are generally extracted from OECD sources, unless stated otherwise.

Even if from a statistical viewpoint the use of a population-weighted average is sound, the unweighted average used in this report allows for a better representation of levels and trends observed in countries and territories with small population numbers.

Country and territory ISO codes, GNI per capita and classification by income level

Country/territory name	Country/territory short name (used hereafter)	ISO code	World Bank classification by income level	Classification used in this report
Australia	Australia	AUS	High	H
Bangladesh	Bangladesh	BGD	Lower-middle	LM/L
Brunei Darussalam	Brunei Darussalam	BRN	High	H
Cambodia	Cambodia	KHM	Lower-middle	LM/L
China	China	CHN	Upper-middle	UM
Democratic People's Republic of Korea	DPRK	PRK	Low	LM/L
Fiji	Fiji	FJI	Upper-middle	UM
Hong Kong (China)	Hong Kong (China)	HKG	High	H
India	India	IND	Lower-middle	LM/L
Indonesia	Indonesia	IDN	Lower-middle	UM
Japan	Japan	JPN	High	H
Korea	Korea	KOR	High	H
Lao People's Democratic Republic	Lao PDR	LAO	Lower-middle	LM/L
Macau (China)	Macau (China)	MAC	High	H
Malaysia	Malaysia	MYS	Upper-middle	UM
Mongolia	Mongolia	MNG	Lower-middle	LM/L
Myanmar	Myanmar	MMR	Lower-middle	LM/L
Nepal	Nepal	NPL	Lower-middle	LM/L
New Zealand	New Zealand	NZL	High	H
Pakistan	Pakistan	PAK	Lower-middle	LM/L
Papua New Guinea	Papua New Guinea	PNG	Lower-middle	LM/L
Philippines	Philippines	PHL	Lower-middle	LM/L
Singapore	Singapore	SGP	High	H
Solomon Islands	Solomon Islands	SLB	Lower-middle	LM/L
Sri Lanka	Sri Lanka	LKA	Lower-middle	LM/L
Thailand	Thailand	THA	Upper-middle	UM
Viet Nam	Viet Nam	VNM	Lower-middle	LM/L

Acronyms and abbreviations

AIDS	Acquired immunodeficiency syndrome
ALOS	Average length of stay
ART	Antiretroviral treatment
BMI	Body mass index
DALYs	Disability-adjusted life years
DHS	Demographic and Health Surveys
DTP	Diphtheria-tetanus-pertussis
FAO	Food and Agriculture Organization of the United Nations
GBD	Global burden of disease
GDP	Gross domestic product
GHE	Global health estimate
HIV	Human immunodeficiency virus
IARC	International Agency for Research on Cancer
ICD	International classification of diseases
IDF	International Diabetes Federation
IHD	Ischemic heart disease
IHME	Institute for Health Metrics and Evaluation
MDG	Millennium Development Goals
MMR	Maternal mortality ratio
MNSS	Mental, neurological, substance use disorders and self-harm
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parities
SEARO	WHO Regional Office for South-East Asia
SHA	System of Health Accounts
TB	Tuberculosis
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDESA	United Nations, Department of Economic and Social Affairs, Population Division
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific
YLDs	Years of healthy life lost due to disability
YLLs	Years of life lost from mortality

Executive summary

Health at a Glance: Asia/Pacific 2024 presents key indicators on health status, determinants of health, healthcare resources and utilisation, health expenditure and financing, and quality of care for 27 Asia-Pacific countries and territories. Countries and territories in the Asia-Pacific region are diverse, and their health issues and health systems often differ. However, these indicators provide a concise overview of the progress of countries towards achieving universal health coverage for their population.

Mental, neurological, and substance use disorders and self-harm (MNSS) place a significant burden on the population in the Asia-Pacific region

In 2021, these conditions accounted for a quarter of the non-fatal disease burden (as measured by years lived with disability (YLDs)), exceeding the impact of communicable diseases and maternal health issues. In 2021, depressive disorders posed the largest burden of all MNSS conditions, followed by migraine, anxiety disorders, and schizophrenia, which together made up over two-thirds of the years lived with disability in the region.

Since 2010, life expectancy at birth has increased by about three years in low- and lower-middle-income countries and by two years in upper-middle- and high-income countries

Yet, a very large regional divide persists as, on average in 2023, a newborn in high-income countries is expected to live over 10 years more than a newborn in low- and lower-middle-income countries. This can be linked to important disparities observed within countries in neonatal, infant, and under age 5 mortality, with households in the highest income quintile and mothers with higher education generally having lower child mortality rates than those in the lowest income quintile and mothers with no education, respectively.

Many countries experienced a decrease in household out-of-pocket spending as a share of health expenditure

The largest decreases in out-of-pocket spending took place in low- and lower-middle-income countries. However, in some of these countries, OOP spending still accounts for more than half of what is being spent on health.

Countries and territories could do more to promote prevention and early diagnosis of cancer

With regards to breast cancer, incidence rates are still lower in most countries and territories in Asia-Pacific than the OECD average, but mortality rates are higher in countries and territories in Asia-Pacific than the OECD average. This is at least partly related to low mammography screening uptake in Asia-Pacific, leading to delayed diagnosis and treatment among high-risk women. Concerning cervical cancer, although an increasing number of countries and territories in Asia-Pacific have introduced an HPV vaccination programme, incidence rates are still high in most countries and territories in Asia-Pacific and mortality rates are high in low-, lower-middle- and upper-middle-income countries and territories in the region. To reduce the burden of cervical cancer, beside HPV vaccination programmes, countries and territories in Asia Pacific could introduce or strengthen cervical cancer screening programmes.

1 Country and territory dashboards

The aim of this chapter is to show a set of key indicators to compare performance across countries and territories in each of the following dimensions:

- Health status
- Risk factors for health
- Quality of care
- Health care resources

For each dimension, a set of five indicators (four for the quality of care dimension) is presented in the form of country and territories dashboards. The indicators are selected based on their policy relevance, but also on data availability and interpretability. Indicators where coverage is highest are therefore prioritised.

Country and territories dashboards do not acknowledge the different health outcomes experienced by specific population groups. For example, while Australia is considered a high-income country, First Nations people (and other specific population groups) don't experience the same health outcomes as the general population.

In order to assess comparative performance across countries and territory, each country/territory is classified for every indicator based on how they compare against the income group-specific median. Therefore, countries and territories significantly above/below their respective group median will be classified as better/worse than median (▲/▼), with the remaining countries and territories classified as close to the median (◉).

Methodology

In order to allow for cross-country comparisons of performance, countries and territories are split according to their income group (high income, upper-middle income, lower-middle and low income). The central tendency measures presented, for all indicators and income groups, are medians.

In order to classify countries and territories as "better than", "close to", or "worse than" the central tendency of any indicator, a measure of statistical dispersion is needed to compute the reasonable range for values close to the central tendency value, with anything above or below classified accordingly. The preferred measure is the Median Absolute Deviation (MAD), since it is a robust measure that is both more efficient and less biased than a simple standard deviation when outliers are present.

Countries and territories are classified as "better than median" if they lie above the median + 1 MAD, "worse than median" if they lie below the median – 1 MAD, and "close to the median" if they lie within ± 1 MAD from the median. Given the nature of the indicators presented, for "under age 5 mortality rate" and "tobacco use", "children under age 5 overweight", "breast cancer mortality" and "cervical cancer mortality", countries and territories are classified as "better than median" if they lie below the median - 1 MAD, "worse than median" if they lie above the median + 1 MAD, and "close to the median" if they lie within ± 1 MAD from the median.

Health status

The five indicators used to compare health status are healthy life expectancy at birth for females (2021), healthy life expectancy at birth for males (2021), survival to age 65 for females (2023), survival to age 65 for males (2023), and under age 5 mortality rate per 1 000 live births (2022).

Table 1.1. Dashboard on health status

▲ Better than ◉ Close to ▼ Worse than group-specific central tendency

Country	Healthy LE (F) at birth		Healthy LE (M) at birth		Survival to age 65 (F)		Survival to age 65 (M)		Under age 5 mortality rate	
	In years		In years		% of cohort		% of cohort		Per 1 000 live births	
High income	70.7		69.9		94.1		89.2		3.8	
Australia	71.1	◉	70.1	◉	93.6	◉	89.1	◉	3.8	◉
Brunei Darussalam	67.9	◉	66.3	◉	85.0	▼	78.1	▼	9.7	▼
Hong Kong (China)	58.7	▼	56.7	▼	94.6	◉	90.1	◉	28.2	▼
Japan	74.8	◉	71.9	◉	94.7	◉	90.0	◉	2.3	◉
Korea	74.1	◉	70.7	◉	96.4	▲	92.0	▲	2.8	◉
Macau (China)	61.6	▼	59.3	▼	94.4	◉	89.4	◉	4.6	◉
New Zealand	70.3	◉	69.6	◉	92.1	▼	88.2	◉	2.2	◉
Singapore	75.0	◉	72.4	◉	93.8	◉	87.9	◉	3.8	◉
Upper-middle income	**65.1**		**63.0**		**86.3**		**70.8**		**8.1**	
China	70.1	▲	67.2	▲	90.4	◉	82.0	▲	6.6	◉
Fiji	58.7	▼	56.7	▼	69.3	▼	60.2	▼	28.2	▼
Indonesia	61.5	◉	59.9	▼	78.5	▼	70.2	◉	21.3	▼
Malaysia	65.1	◉	63.0	◉	86.6	◉	77.5	▲	7.8	◉
Thailand	68.1	◉	63.5	◉	86.3	◉	70.8	◉	8.1	◉
Lower-middle and low income	**61.6**		**59.0**		**78.6**		**70.0**		**27.4**	
Bangladesh	63.0	◉	63.1	▲	82.3	◉	76.9	▲	28.8	◉
Cambodia	62.0	◉	59.3	◉	79.1	◉	69.2	◉	23.7	◉
DPRK	66.4	▲	63.2	▲	83.7	▲	76.4	▲	17.0	▲
India	58.3	▼	58.0	◉	78.6	◉	71.7	◉	29.1	◉
Lao PDR	61.6	◉	59.3	◉	76.9	◉	67.4	◉	40.4	▼
Mongolia	63.9	◉	58.8	◉	83.3	▲	62.3	▼	13.4	▲
Myanmar	61.7	◉	57.9	◉	74.7	▼	60.8	▼	40.1	▼
Nepal	60.7	◉	59.8	◉	77.4	◉	70.8	◉	27.3	◉
Pakistan	56.7	▼	57.1	◉	76.1	◉	65.9	◉	61.0	▼
Papua New Guinea	58.1	▼	57.0	◉	72.0	▼	59.6	▼	41.4	▼
Philippines	60.8	◉	57.1	◉	78.6	◉	65.6	◉	27.5	◉
Solomon Islands	58.5	▼	56.3	▼	77.1	◉	70.9	◉	18.3	◉
Sri Lanka	68.3	▲	65.1	▲	90.6	▲	79.3	▲	6.5	▲
Viet Nam	68.0	▲	62.8	▲	87.6	▲	72.7	◉	20.3	◉

Note: F: females; M: males. LE: Life Expectancy.
Source: Healthy life expectancy at birth by sex, see Figure 3.3. Survival to age 65, see Figure 3.2. Under age 5 mortality, see Figure 3.8.

Risk factors

The five indicators used to compare risk factors are the age-standardised prevalence estimates for current tobacco use among persons aged 15 and above for females (2022), the age-standardised prevalence estimates for current tobacco use among persons aged 15 and above for males (2022), the share of population living in rural areas with access to basic sanitation (2022), the share of population living in rural areas with access to basic drinking water (2022) and the prevalence of overweight among children and adolescent (aged 5-19 years) (2022).

Table 1.2. Dashboard on risk factors for health

▲ Better than ◉ Close to ▼ Worse than group-specific central tendency

Country	Tobacco use (F)		Tobacco use (M)		Access to basic sanitation (rural areas)		Access to basic drinking water (rural areas)		Children and adolescent (aged 5-19 years) overweight	
	% of current tobacco users		% of current tobacco users		% population		% population		% population aged 5-19 years	
High income	**9.3**		**29.7**		**100.0**		**100.0**		**36.1**	
Australia	10.9	◉	15.2	▲					36.4	◉
Brunei Darussalam	2.2	▲	30.7	◉					41.7	▼
Hong Kong (China)	13.2	▼	42.0	▼						
Japan	9.6	◉	28.7	◉					16.3	▲
Korea	5.8	▲	34.1	◉					33.9	◉
Macau (China)	9.0	▲	45.4	▼						
New Zealand	11.1	◉	13.4	▲					39.9	◉
Singapore	4.9	▲	27.9	◉					35.8	◉
Upper-middle income	**1.6**		**43.3**		**93.0**		**91.1**		**25.7**	
China	1.6	◉	45.1	◉	92.9	◉	96.4	▲	22.8	◉
Fiji	13.2	▼	42	◉	93.0	◉	91.1	◉	30.7	▼
Indonesia	3.3	◉	73.1	▼	83.6	▼	88.3	◉	23.6	◉
Malaysia	0.7	◉	43.3	◉	95.8	◉	90.1	◉	32.6	▼
Thailand	1.5	◉	36.9	◉	98.4	▲	100.0	▲	25.7	◉
Lower-middle and low income	**8.1**		**45.3**		**71.5**		**88.0**		**17.0**	
Bangladesh	15.4	▼	50.5	◉	61.9	◉	98.3	◉	8.3	▲
Cambodia	5.7	◉	28.7	▲	71.2	◉	72.8	▼	14.6	◉
DPRK	0	▲	45.1	◉	73.1	◉	88.8	◉	21.0	◉
India	10.8	◉	37.8	◉	74.9	◉	91.9	◉	10.3	▲
Lao PDR	9.0	◉	45.4	◉	68.6	◉	78.5	◉	16.8	◉
Mongolia	7.2	◉	51.7	◉	57.0	◉	59.7	▼	18.5	◉
Myanmar	19.3	▼	69.5	▼	71.7	◉	77.1	◉	16.6	◉
Nepal	10.9	◉	45.7	◉	80.8	◉	91.6	◉	8.8	▲
Pakistan	7.0	◉	30.8	▲	63.4	◉	89.3	◉	18.9	◉
Papua New Guinea	24.9	▼	54.3	▼	14.7	▼	44.5	▼	36.4	▼
Philippines	4.5	◉	36.2	▲	85.8	◉	92.2	◉	15.0	◉
Solomon Islands	19.4	▼	54.4	▼	20.6	▼	59.4	▼	22.5	▼
Sri Lanka	2.2	▲	36.8	▲	95.0	▲	87.2	◉	17.2	◉
Viet Nam	2.0	▲	43	◉	88.4	▲	97.2	◉	18.3	◉

Note: F: females; M: males.
Source: Tobacco use, see Figure 4.15. Access to basic sanitation, see Figure 4.13. Access to drinking water, see Figure 4.14. Children and adolescent (5-19 years) overweight, see Figure 4.11.

Quality of care

The four indicators used to compare quality of care are the age-standardised breast cancer mortality rate (2022), the age-standardised cervical cancer mortality rate (2022), and vaccination coverage among children for diphtheria tetanus toxoid and pertussis containing vaccine, third dose (DTP3) and for measles containing vaccine, second dose (MCV2) (2023).

Table 1.3. Dashboard on quality of care

▲ Better than ◉ Close to ▼ Worse than group-specific central tendency

Country	Breast cancer mortality		Cervical cancer mortality		Vaccination for DTP3		Vaccination for measles	
	Age-standardised rates per 100 000 women		Age-standardised rates per 100 000 women		Coverage (%), children		Coverage (%), children	
High income	13.3		2.3		97.8		94.7	
Australia	12.3	◉	1.4	◉	94.0	▼	93.0	◉
Brunei Darussalam	14.3	◉	6.6	▼	99.0	◉	99.0	▲
Hong Kong (China)					95.0	▼	95.4	◉
Japan	9.7	▲	2.6	◉	98.0	◉	94.0	◉
Korea	5.8	▲	2.0	◉	98.0	◉	96.0	◉
Macau (China)					97.6	◉	96.3	◉
New Zealand	15.5	◉	1.5	◉	88.0	▼	84.0	▼
Singapore	17.8	▼	2.8	◉	98.0	◉	92.0	◉
Upper-middle income	14.4		6.9		97.0		87.0	
China	6.1	▲	4.5	◉	97.0	◉	95.0	◉
Fiji	38.9	▼	22.5	▼	99.0	◉	83.0	◉
Indonesia	14.4	◉	13.2	▼	83.0	▼	62.0	▼
Malaysia	19.3	◉	5.5	◉	97.0	◉	96.0	◉
Thailand	11.8	◉	6.9	◉	92.0	▼	87.0	◉
Lower-middle and low income	11.9		8.1		85.5		74.5	
Bangladesh	7.6	◉	7.0	◉	98.0	◉	93.0	◉
Cambodia	11.2	◉	8.1	◉	85.0	◉	64.0	◉
DPRK	9.8	◉	6.8	◉	16.0	▼	16.0	▼
India	13.7	◉	11.2	◉	91.0	◉	90.0	◉
Lao PDR	12.6	◉	6.5	◉	84.0	◉	68.0	◉
Mongolia	3.2	▲	9.6	◉	96.0	◉	96.0	▲
Myanmar	10.1	◉	13.4	▼	76.0	◉	65.0	◉
Nepal	7.6	◉	8.7	◉	94.0	◉	89.0	◉
Pakistan	18.6	▼	3.6	▲	86.0	◉	80.0	◉
Papua New Guinea	26.7	▼	19.9	▼	35.0	▼	41.0	▼
Philippines	21.5	▼	8.0	◉	89.0	◉	69.0	◉
Solomon Islands	20.4	▼	17.9	▼	84.0	◉	48.0	▼
Sri Lanka	11.2	◉	5.3	◉	99.0	◉	99.0	▲
Viet Nam	14.7	◉	3.8	▲	65.0	▼	86.0	◉

Source: Breast cancer mortality, see Figure 7.9. Cervical cancer mortality, see Figure 7.12. Vaccination for DTP3, see Figure 7.1. Vaccination for measles, see Figure 7.2.

Health care resources

The five indicators used to compare healthcare resources are health expenditure per capita in USD international (2021), the share of out-of-pocket (OOP) spending in total current health spending (2021), the number of doctors per 1 000 population (latest year available), the number of nurses per 1 000 population (latest year available), and the number of hospital beds per 1 000 population (latest year available). Given the nature of the indicators presented, where a higher or lower value may not be indicative of better or worse performance, the arrows simply imply that the values are significantly higher or lower than the median using the same methodology.

Table 1.4. Dashboard on healthcare resources

▲ Higher than ◉ Close to ▼ Lower than central tendency

Country	Health spending		OOP spending		Doctors per 1 000 population		Nurses per 1 000 population		Hospital beds per 1 000 population	
	USD international per capita		Share of health spending		Number		Number		Number	
High income	**4 714.6**		**12.9**		**2.6**		**9.0**		**3.9**	
Australia	6 488	▲	13.8	◉	4.1	▲	12.8	▲	3.8	◉
Brunei Darussalam	1 456	▼	6.7	▼	1.9	▼	5.8	▼	3.9	◉
Hong Kong (China)					2.1	▼	8.9	◉	4.3	◉
Japan	4 676	◉	12.0	◉	2.7	◉	12.2	▲	12.6	▲
Korea	4 367	◉	29.1	▲	2.6	◉	9.1	◉	12.7	▲
Macau (China)					2.9	◉	4.4	▼	2.4	◉
New Zealand	4 754	◉	11.7	◉	3.7	▲	11.8	▲	2.5	◉
Singapore	5 754	◉	22.5	▲	2.6	◉	6.4	▼	2.1	◉
Upper-middle income	**948**		**27.2**		**0.9**		**3.3**		**2.0**	
China	1 033	◉	34.4	◉	2.5	▲	3.5	◉	5.0	▲
Fiji	527	▼	17.9	▼	0.8	◉	3.6	◉	1.9	◉
Indonesia	483	▼	27.2	◉	0.7	◉	2.5	▼	1.4	◉
Malaysia	1 268	▲	32.1	◉	2.3	▲	3.3	◉	2.0	◉
Thailand	948	◉	9.0	▼	0.9	◉	3.1	◉	2.3	◉
Lower-middle and low income	**254**		**43.6**		**0.8**		**1.4**		**1.3**	
Bangladesh	147	◉	73.0	▲	0.7	◉	0.5	◉	0.9	◉
Cambodia	360	◉	54.9	◉	0.2	◉	0.6	◉	0.7	◉
DPRK					3.7	▲	4.1	▲	13.2	▲
India	236	◉	49.8	◉	0.7	◉	1.7	◉	1.6	◉
Lao PDR	161	◉	30.7	◉	0.3	◉	1.0	◉	1.3	◉
Mongolia	886	▲	33.5	◉	3.9	▲	3.9	▲	10.6	▲
Myanmar	254	◉	70.3	▲	0.8	◉	0.8	◉	1.1	◉
Nepal	323	◉	51.3	◉	0.9	◉	2.3	◉	0.4	◉
Pakistan	167	◉	57.3	◉	1.1	◉	0.4	◉	0.5	◉
Papua New Guinea	93	◉	10.4	▼	0.1	▼	0.5	◉		
Philippines	522	▲	41.9	◉	0.8	◉	4.2	▲	1.0	◉
Solomon Islands	111	◉	3.6	▼	0.2	◉	2.0	◉	1.4	◉
Sri Lanka	609	▲	43.6	◉	1.2	◉	1.9	◉	4.0	▲
Viet Nam	536	▲	40.0	◉	0.8	◉	1.1	◉	2.5	◉

Source: Health spending, see Figure 6.1. Out-of-pocket spending, see Figure 6.6. Doctors per 1 000 population, see Figure 5.1. Nurses per 1 000 population, see Figure 5.1. Hospital beds per 1 000 population, see Figure 5.7.

2 Mental health and neurological conditions in the Asia-Pacific region

In Asia-Pacific countries, understanding the burden of mental disorders is limited due to a lack of comprehensive data. This chapter utilises the latest WHO Global Health Estimates (2021) data to highlight key findings through the prevalence of years of healthy life lost to disability (YLDs). The focus of the chapter is the burden of mental, neurological, substance use disorders, and self-harm (MNSS), including a specific analysis of the burden of these conditions among children. The analysis finds that MNSS conditions account for a significant percentage of the total non-fatal burden of disease, greater than communicable diseases and maternal, perinatal, and nutritional conditions – a situation that has hardly improved between 2000 and 2021. Strikingly, over 60% of the burden of MNSS was due to depressive disorders, migraine, anxiety disorders and schizophrenia. Addressing the high burden of mental health and neurological conditions in Asia-Pacific countries requires strong promotion and prevention strategies as well as strengthening accessible and wide-ranging services for diverse mental health conditions. There is an urgent need to re-orient mental health care to compassionate, person-centred, timely, accessible, and affordable forms of care.

In Brief

- Mental, neurological and substance use disorders and self-harm (MNSS) conditions account for a significant percentage of the total burden of disease in Asia-Pacific countries. The overall prevalence of years lived with disability (YLDs) in 2021 ranged from 21.5% to 30% across the 38 Asia-Pacific countries analysed – a situation that hardly changed in the years 2000-21.
- In 2021, depressive disorders constituted the biggest burden of MNSS, followed by migraine, anxiety disorders and schizophrenia. Together, these four conditions account for over 60% of YLDs in Asia-Pacific countries.
- In 2021, depressive and anxiety disorders accounted for approximately 60% of the burden of mental health conditions alone (i.e. without neurological conditions, self-harm and drug use).
- Migraine, Alzheimer's disease and other dementias and epilepsy were the top three causes of disability due to neurological conditions, accounting for almost 90% of the burden as measured by YLDs in 2021.
- Opioid use disorders, cannabis use disorders and amphetamine use disorders are the cause of over 90% of YLDs attributed to substance use in Asia-Pacific countries.
- The number of suicides has reduced significantly between 2000 and 2021 in Asia-Pacific countries. Among countries in SEAR, this can be considered a major public health achievement driven by the drop in estimated suicides in the below 30 age group. However, when the estimated number of suicides at age-groups 30 and above is examined, a notable increase is observed between 2000 and 2021. Among countries in WPR, there has also been a notable drop in suicides in the below 45 age group, even more among females than males. However, of key concern is the unchanging if not increasing estimated suicides among those aged above 70 years of age.
- Childhood behaviour disorders, migraine, anxiety disorders, autism and Aspergers syndrome accounted for more than 70% of the burden (as measured by YLDs) of MNSS conditions in children of the 5-14-year age group.

Background

In Asia-Pacific countries, mental health conditions represent a significant public health challenge, affecting approximately 475 million people, or about one in seven individuals in the region. Despite this high prevalence, there are substantial treatment gaps, with some countries reporting that up to 90% of those in need do not receive appropriate care. In response to these challenges, the WHO and OECD (OECD, 2021[1]) have taken many steps to enhance mental health services. WHO and OECD continue to advocate for a shift from institutional care to community-based mental health services (WHO, 2023[2]; OECD, 2021[3]), which are more accessible and respectful of human rights, and for an integrated whole-of-government approach to tackle the poor social, education and employment outcomes of individuals with mental health conditions (OECD, 2021[4]). This approach aims to reduce stigma, improve treatment outcomes, and ensure that care is integrated into primary health services.

Methods and regional/country estimates

The regional and country estimates used in this chapter are those of the WHO Global Health Estimates (GHE), which follow the ICD-11 classification. Building on the global burden of disease (GBD) estimates (Institute of Health Metrics and Evaluation, 2021[5]), the GHE (WHO, 2024[6]) presents comprehensive and comparable time series data from 2000 onwards for the health-related indicators, including life expectancy, healthy life expectancy, mortality and morbidity, as well as the burden of diseases at global, regional and country levels, disaggregated by age, sex and individual causes. These are produced using data from multiple consolidated sources, including national vital registration data, the latest estimates from WHO technical programmes, interagency estimates for all-cause mortality and priority diseases and injuries, and other scientific studies.

The comparative analyses presented in this chapter utilise the metric years lived with disability (YLD) to represent the equivalent of one full year of healthy life lost due to disability or ill health. YLDs are calculated as the prevalence of each non-fatal condition multiplied by its disability weight (WHO, 2024[7]). Disability weights represent the magnitude of the health loss associated with a specific health outcome in each population. The weights are measured on a scale from 0 to 1, where 0 equals a state of full health and 1 equals death. It is worth noting that the GHE estimates of YLDs draw on the GBD analyses, with selected revisions to disability weights and prevalence estimates, as noted below.

This chapter presents a comparative analysis of the burden of MNSS in Asia-Pacific countries, using estimates and prevalence of the YLDs from WHO GHE (2021) and, where possible, disaggregation by sex and age. A broad spectrum of robust and well-established scientific methods was applied for the processing, synthesis and analysis of the data (WHO, 2021[8]). Estimates are provided for 183 WHO Member States with populations greater than 90 000 in 2021. Estimates for 11 Member States that are excluded and for the largest non-Member States territories and areas are not released at the country level. Still, those member states are included in the relevant regional and global totals.

Table 2.2 presents the MNSS conditions analysed in this chapter. Overall, the chapter presents comparative analyses of the GHE (2021) YLDs for all 11 countries of the WHO South-East Asia Region (SEAR) and 27 countries in the WHO Western Pacific Region (WPR) listed in Table 2.1.

Table 2.1. Asia-Pacific countries included in the analyses by WHO region

Countries in SEAR	Countries in WPR
Bangladesh	Australia
Bhutan	Brunei Darussalam
DPRK	Cambodia
India	China
Indonesia	Cook Islands*
Maldives	Fiji
Myanmar	Japan
Nepal	Kiribati
Sri Lanka	Korea
Thailand	Lao PDR
Timor-Leste	Marshall Islands*
	Malaysia
	Micronesia (Federated States of)
	Mongolia
	Nauru*
	New Zealand
	Niue*
	Palau*
	Papua New Guinea
	Philippines
	Samoa
	Singapore
	Solomon Islands
	Tonga
	Tuvalu*
	Vanuatu
	Viet Nam

Note: * Country level estimates are not provided because the populations are smaller than 90 000.

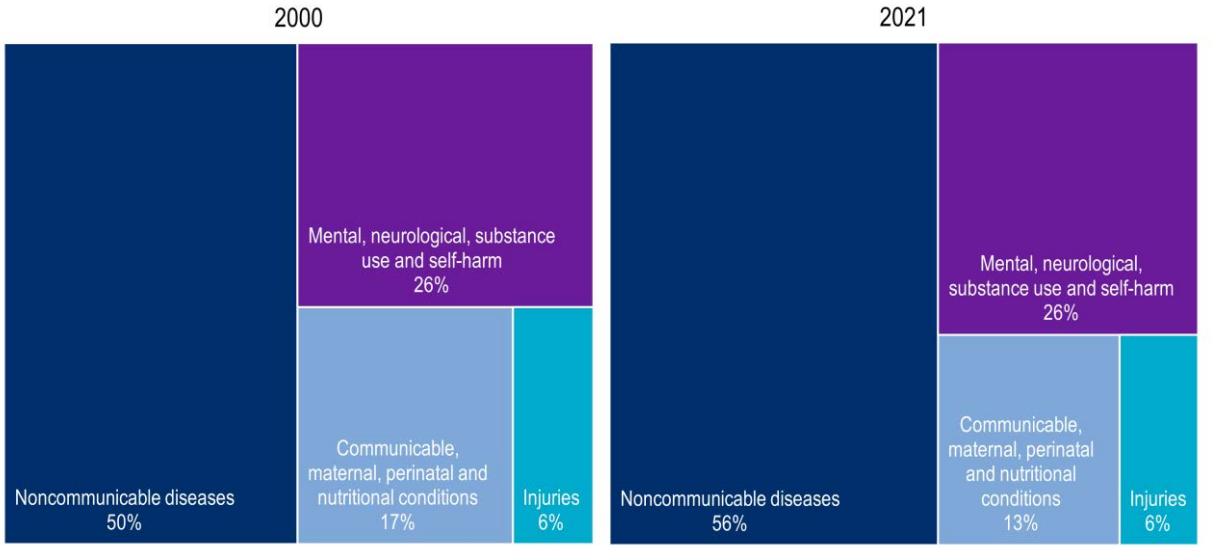
Table 2.2. Mental, neurological, substance use disorders and self-harm (MNSS)

	Mental disorders		Neurological conditions
1	Depressive disorders	1	Alzheimer's disease and other dementias
2	Bipolar disorder	2	Parkinson disease
3	Schizophrenia	3	Epilepsy
4	Anxiety disorders	4	Multiple sclerosis
5	Eating disorders	5	Migraine
6	Autism and Asperger Syndrome	6	Nonmigraine headache
7	Childhood behavioural disorders	7	Other neurological conditions
8	Idiopathic intellectual disability		**Intentional Injuries**
9	Other mental and behavioural disorders	1	Self-harm (suicide and self-harm behaviour)
	Substance use disorders		
1	Alcohol use disorders		
2	Drug use disorders		

An overview of the mental, neurological, substance use disorders and self-harm (MNSS) disease burden in the Asia-Pacific region

Among Asia-Pacific countries, mental, neurological and substance use disorders and self-harm (MNSS) conditions are responsible for a quarter of the overall YLDs attributable to the total non-fatal burden of disease (Figure 2.1), greater than that attributable to communicable diseases and maternal, perinatal and nutritional conditions – a situation that has hardly improved between 2000 and 2021 and appears to have worsened in recent years (OECD, 2023[9]).

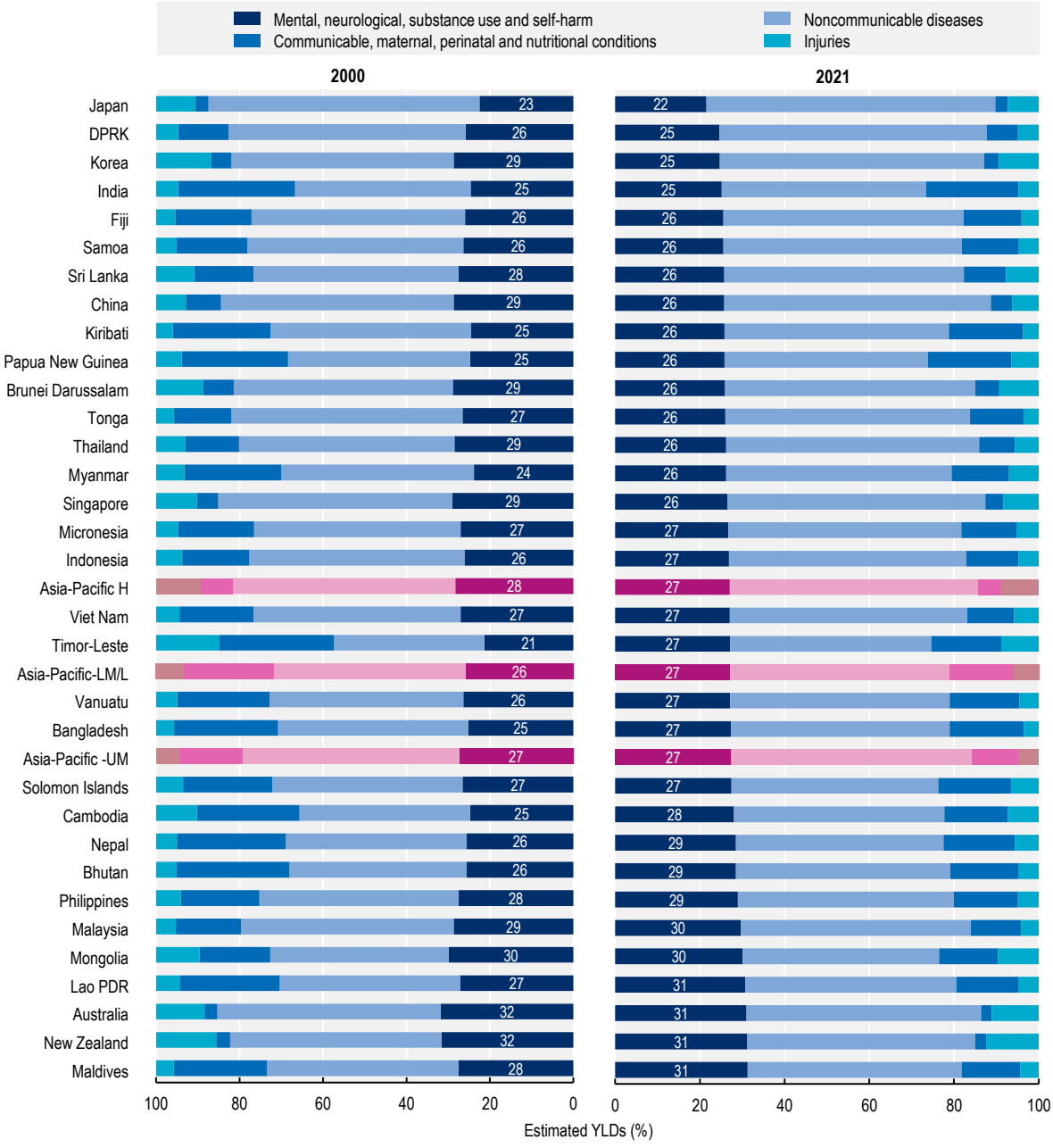
Figure 2.1. The distribution (%) of YLDs by major disease categories in Asia-Pacific countries, 2000 and 2021



Note: The figure above represents the combined analysis of 38 Asia-Pacific countries of which 27 countries belong to WHO Western Pacific Region (WPR) and 11 countries to WHO South-East Asia Region (SEAR). SEAR countries are: Bangladesh, Bhutan, DPRK, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. WPR countries are: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Korea, Lao People's Democratic Republic, Marshall Islands, Malaysia, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu and Viet Nam.
Source: WHO Global Health Estimates (GHE), 2021.

Taking a closer look at country-specific estimates, Figure 2.2 shows that MNSS conditions account for a significant percentage of the total non-fatal burden of disease in all Asia-Pacific countries. The 2021 estimates show that the overall percentage of YLDs attributed to MNSS conditions ranged from 21.5% to 31.3% across countries. The average non-fatal burden of MNSS conditions did not vary significantly between income groups, averaging 27% across all income groups in 2021. However, while the average burden of MNSS decreased in high-income countries in the Asia-Pacific between 2000 and 2021, the burden increased for lower-middle- and low-income Asia-Pacific countries (Figure 2.3).

Figure 2.2. YLDs due to major disease categories as a percentage of total YLDs, by country, 2000 and 2021



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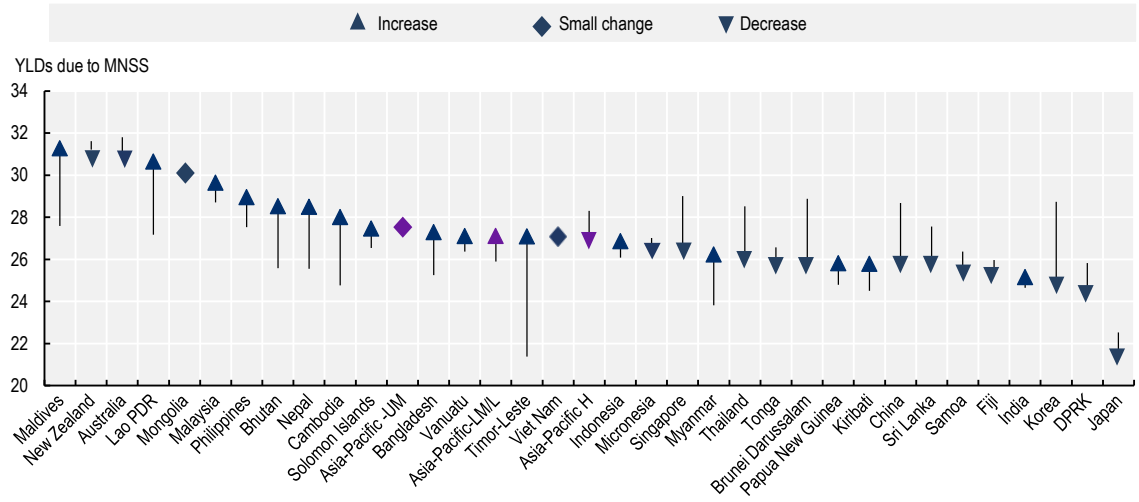
Source: WHO Global Health Estimates (GHE), 2021.

Figure 2.3. The magnitude and direction of change in the percentage of YLDs attributed to MNSS conditions, by country, 2000 and 2021



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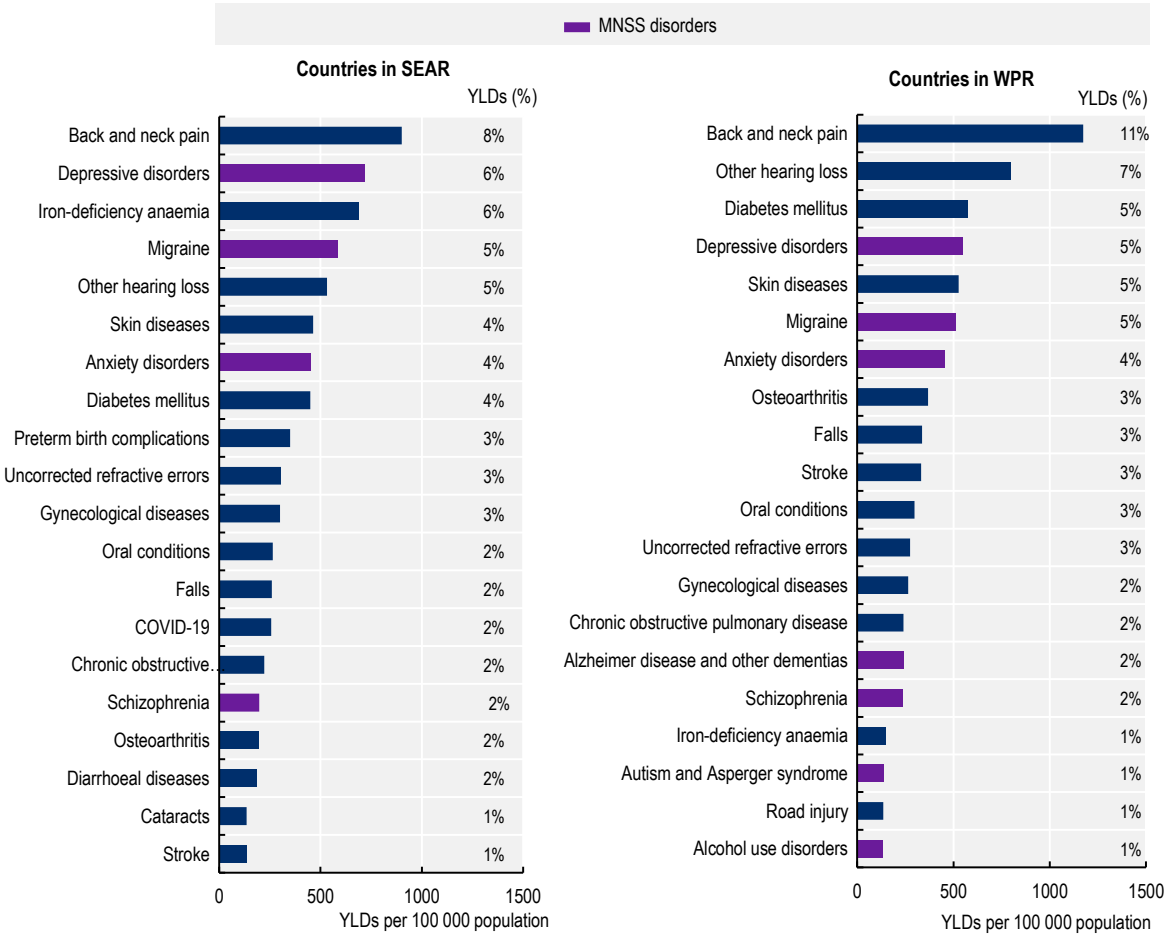
Source: WHO Global Health Estimates (GHE), 2021.

The top causes of disability attributed to MNSS in the Asia-Pacific region

With respect to the distribution of the top causes of disability, the analysis reveals subtle differences between Asia-Pacific countries. In countries of the SEAR, Figure 2.4 shows that there are 4 MNSS-related disabilities that are ranked among the top 20 causes of YLDs: depressive disorders (2nd rank), migraine (4th rank), anxiety disorders (7th rank) and Schizophrenia (16th rank). In the case of WPR countries, there are 6 MNSS-related disabilities that are ranked among the top 20 causes of YLDs: depressive disorders (4th rank), migraine (6th rank), anxiety disorders (7th rank), Alzheimer disease and other dementias (8th rank), Schizophrenia (9th rank), Autism and Asperger syndrome (11th rank) and Alcohol use disorders (13th rank).

Figure 2.4. Top 20 causes of YLDs, 2021



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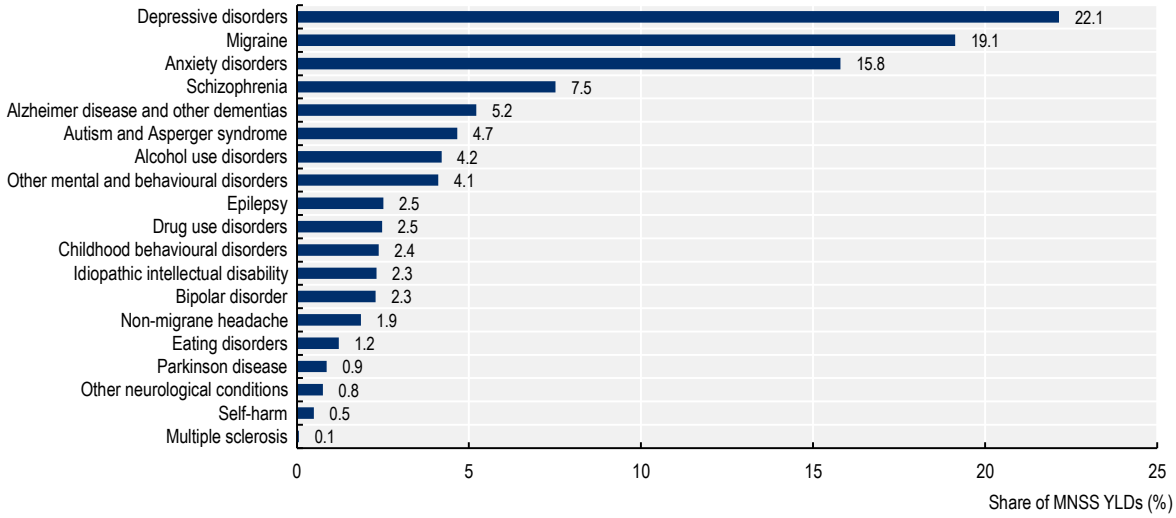
Source: WHO Global Health Estimates (GHE), 2021.

Unravelling the burden of MNSS

This section examines the distribution of individual causes of MNSS conditions in Asia-Pacific countries using the latest GHE (2021). Figure 2.5 shows that depressive disorders account for almost a quarter of the years lived with disability (YLDs) due to MNSS in Asia-Pacific countries. This is a significant disease burden because of the impact this condition has on individuals, families, communities, and workplaces. As there are also correlations between depression and other medical conditions this is a major concern. Among the severe mental disorders, depression causes the highest burden. Migraine, anxiety disorders and schizophrenia are the other conditions leading to significant morbidity.

Figure 2.5. Ranking of individual causes of MNSS YLDs as percentage of total MNSS YLDs, 2021



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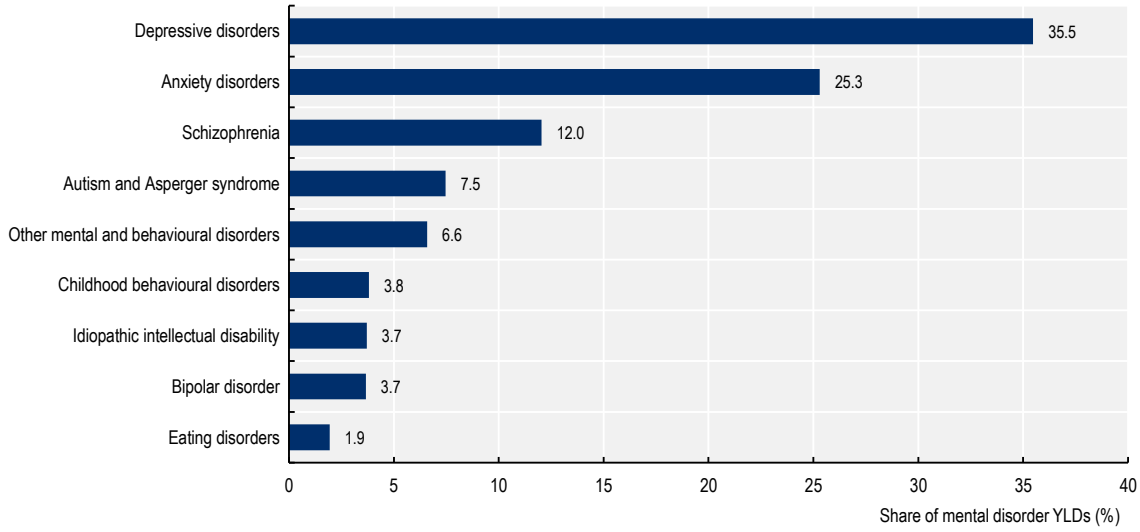
Source: WHO Global Health Estimates (GHE), 2021.

Mental disorders

Mental disorders consist of 9 key conditions: depressive disorders, bipolar disorder, Schizophrenia, anxiety disorders, eating disorders, autism and Asperger Syndrome, childhood behavioural disorders, idiopathic intellectual disability, and other mental and behavioural disorders (Table 2.2). Depressive and anxiety disorders account for approximately 60% of the burden of mental health conditions alone (i.e. without neurological conditions, self-harm, and drug use) (Figure 2.6).

Figure 2.6. Ranking of individual causes of mental disorder YLDs as percentage of total mental disorder YLDs, 2021



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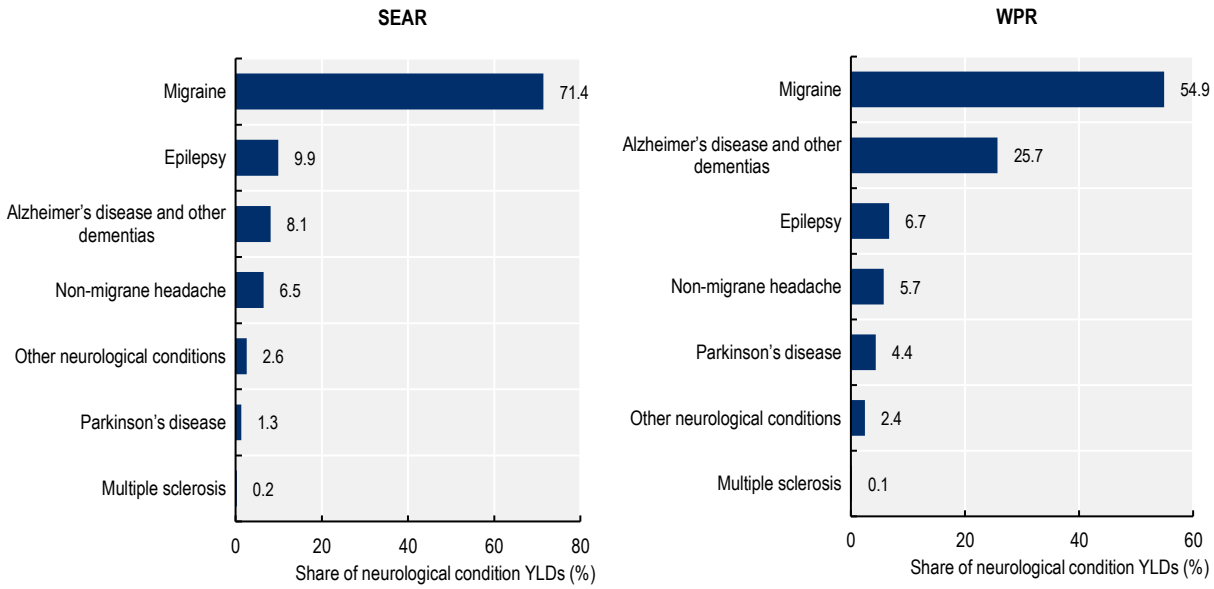
Source: WHO Global Health Estimates (GHE), 2021.

Neurological disorders

Neurological disorders consist of 7 main conditions: Alzheimer disease and other dementias, Parkinson disease, Epilepsy, Multiple sclerosis, Migraine, nonmigraine headache, and other neurological conditions. Among Asia-Pacific countries, migraine was by far the most disabling neurological disorder measured in terms of YLDs due to neurological disorders. With respect to other neurological conditions, the distribution was different between WHO SEAR and WPR countries as shown in Figure 2.7. Overall, Migraine, Alzheimer's disease and other dementias and epilepsy were the top three causes of disability accounting for almost 90% of the burden as measured by YLDs.

Figure 2.7. Ranking of individual causes of neurological disorder YLDs as a percentage of neurological disorder YLDs, 2021



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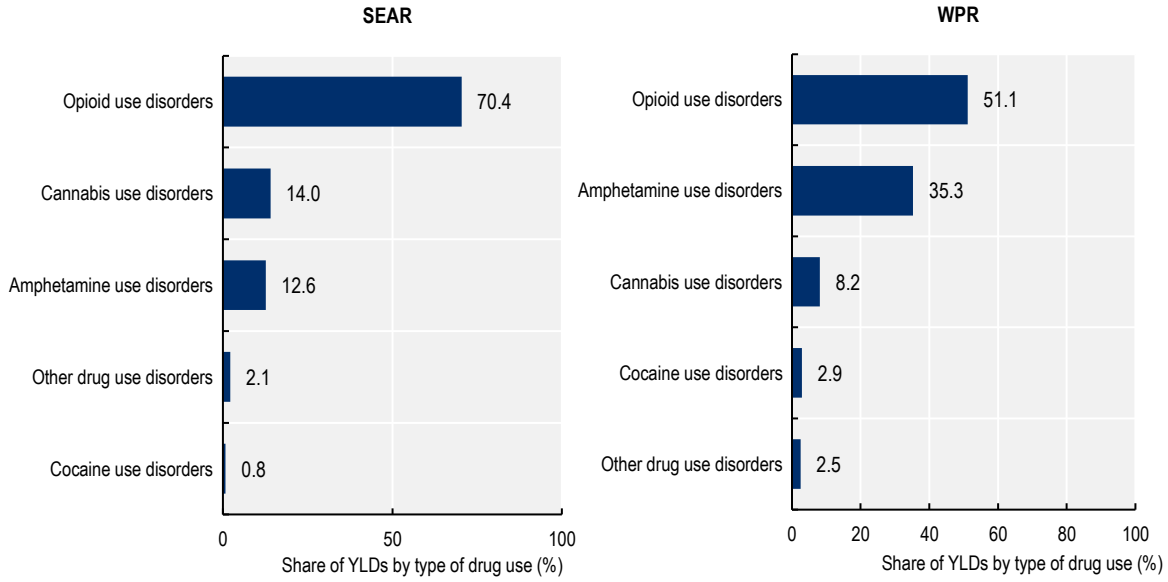
Source: WHO Global Health Estimates (GHE), 2021.

Substance use

Substance use include two main conditions: alcohol use disorder and drug use disorder. Opioid use was the leading cause of YLDs attributable to substance use among countries in Asia-Pacific countries. With respect to other neurological conditions, the distribution was different between WHO SEAR and WPR countries as shown in Figure 2.8. Opioid use disorders, cannabis use disorders and amphetamine use disorders are the cause of over 90% of YLD in Asia-Pacific countries. Disability from amphetamine use disorders was higher among countries in WPR while cannabis use disorders were higher among countries in SEAR.

Figure 2.8. Ranking of individual types of drug use disorder YLDs as a percentage of total drug use YLDs, 2021

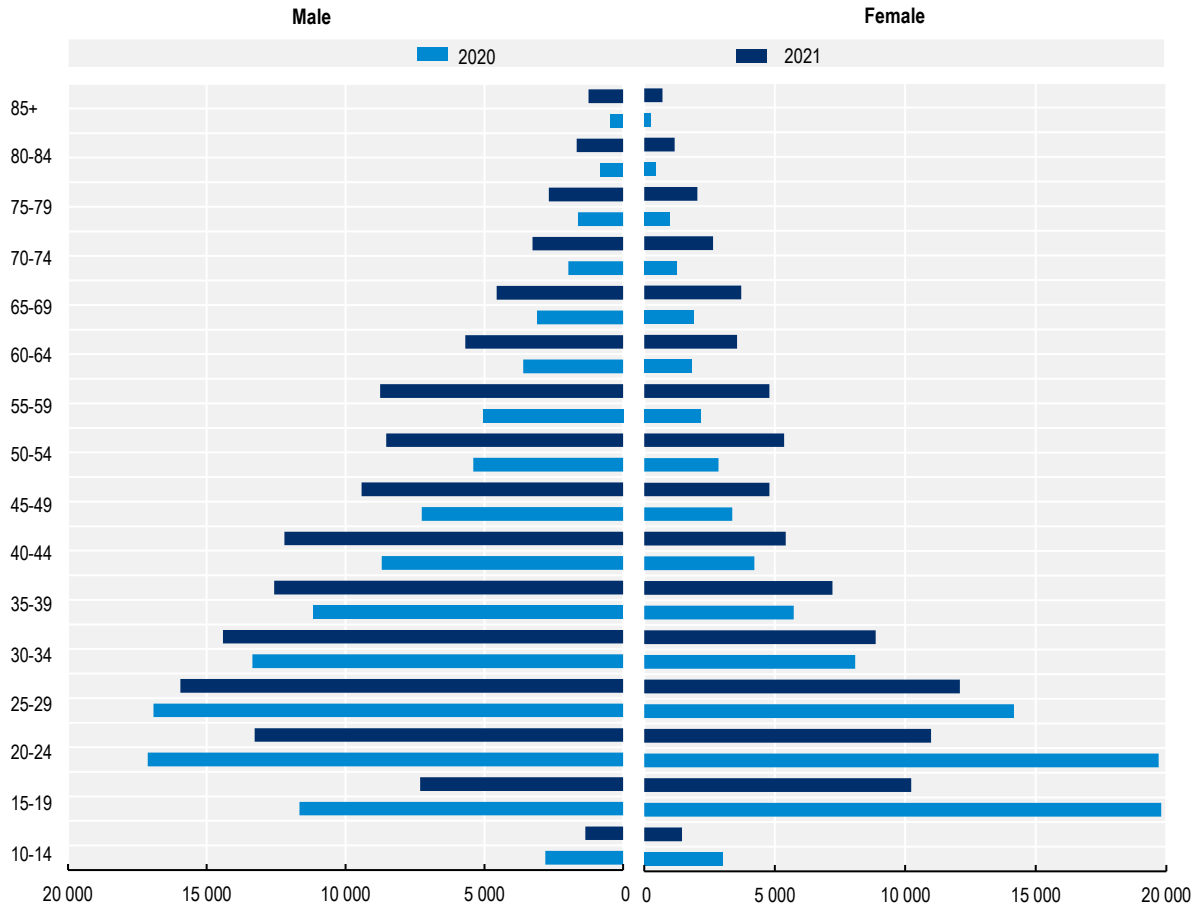


Note: SEAR countries are: Bangladesh, Bhutan, DPRK, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. WPR countries are: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Korea, Lao People's Democratic Republic, Marshall Islands, Malaysia, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu and Viet Nam.
Source: WHO Global Health Estimates (GHE), 2021.

Self-harm (suicide and self-harm behaviour)

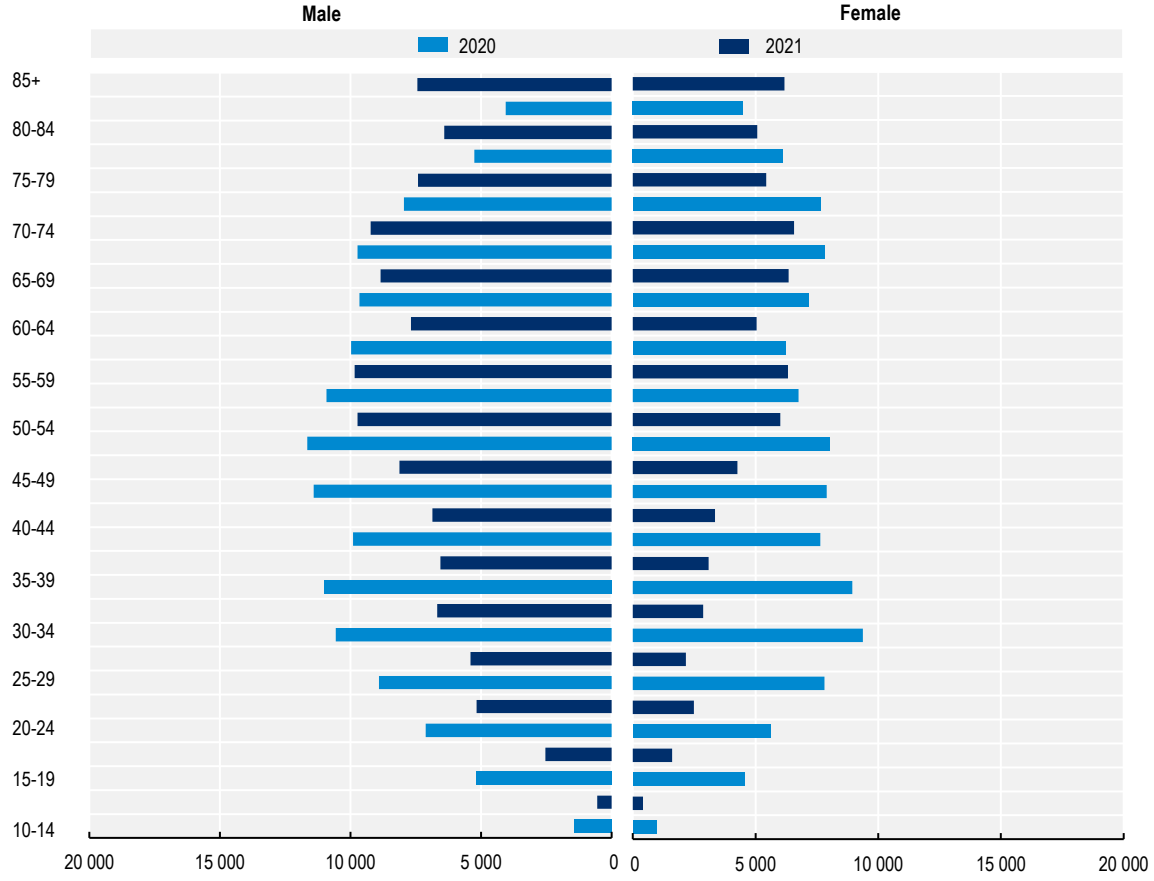
A proxy measure for this burden is the estimated number of suicides by sex and age group with different patterns and interpretations for countries in the WHO South-East Asia region (Figure 2.9). Among countries in SEAR, there has been a significant reduction in deaths from suicide between 2000 and 2021, a major public health achievement driven by the drop in estimated suicides in the below 30 age group. However, when the estimated number of suicides at age-groups 30 and above is examined, a notable increase is observed between 2000 and 2021. Among countries in WPR (Figure 2.10), there has also been a notable drop in suicides in the below 45 age group, even more among females than males. However, of more concern is the unchanging if not increasing estimated suicides in the above 70 age group.

Figure 2.9. Estimated number of suicides, 2000 and 2021, SEAR



Note: The figure above represents the 11 countries to WHO South-East Asia Region (SEAR).
Source: WHO 2021 Global Health Estimates.

Figure 2.10. Estimated number of suicides, 2000 and 2021, WPR



Note: The figure above represents the 27 countries in the WHO Western Pacific Region (WPR).
Source: WHO 2021 Global Health Estimates.

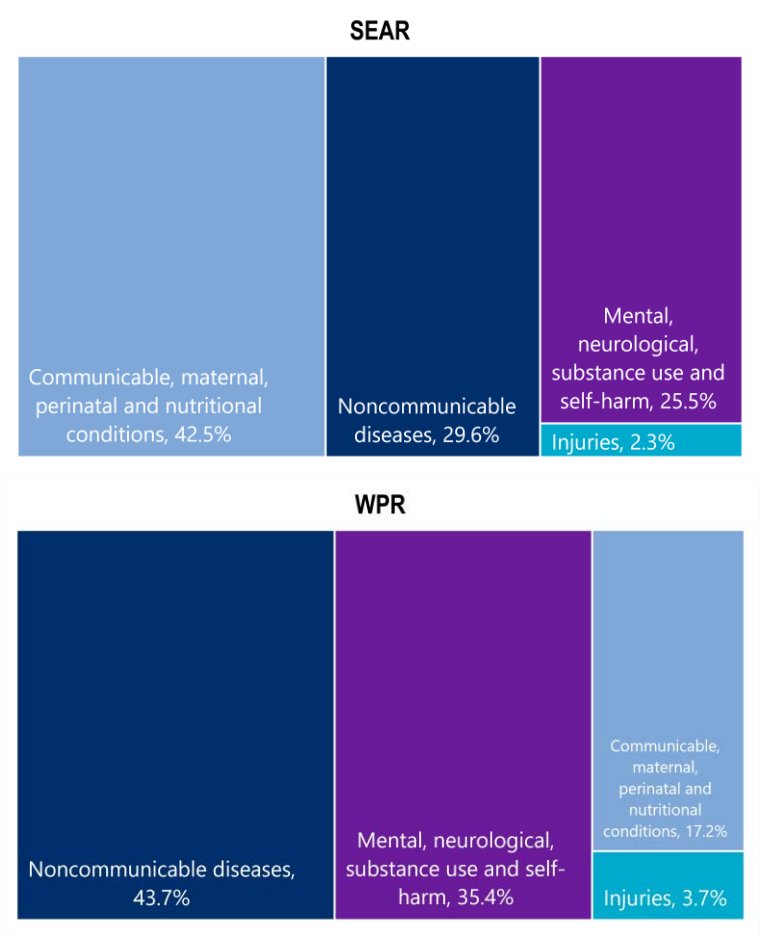
The burden of mental health conditions among children in the Asia-Pacific region

Globally, half of all mental health disorders manifesting in adulthood start by the age of 14, but most cases remain undetected and untreated. Early onset of substance use disorder is associated with higher risks of developing dependence and other problems during adult life; younger ages are disproportionately affected by substance use disorder, compared with people belonging to older age groups. Depression is one of the leading causes of illness and disability among adolescents while self-harm is the second leading cause of death among people aged 15-19 years. Mental health conditions account for 16% of the global burden of disease and injury among people aged 10-19 years.

Across the world, more than a quarter of all people, aged 15-19 years, are current drinkers, adding up to 155 million adolescents. The prevalence of heavy episodic drinking among adolescents, aged 15-19 years, was 13.6% in 2016, with males most at risk. Cannabis is the most widely used psychoactive drug among young people, with about 4.7% of people, aged 15-16 years, using it at least once in 2018.

Figure 2.12 shows that the burden of MNSS among 5-14 year-old children is variable among Asia-Pacific countries. In SEAR, MNSS account for 25.5% of burden of YLDs, while it is 35.4% for children living in WPR countries.

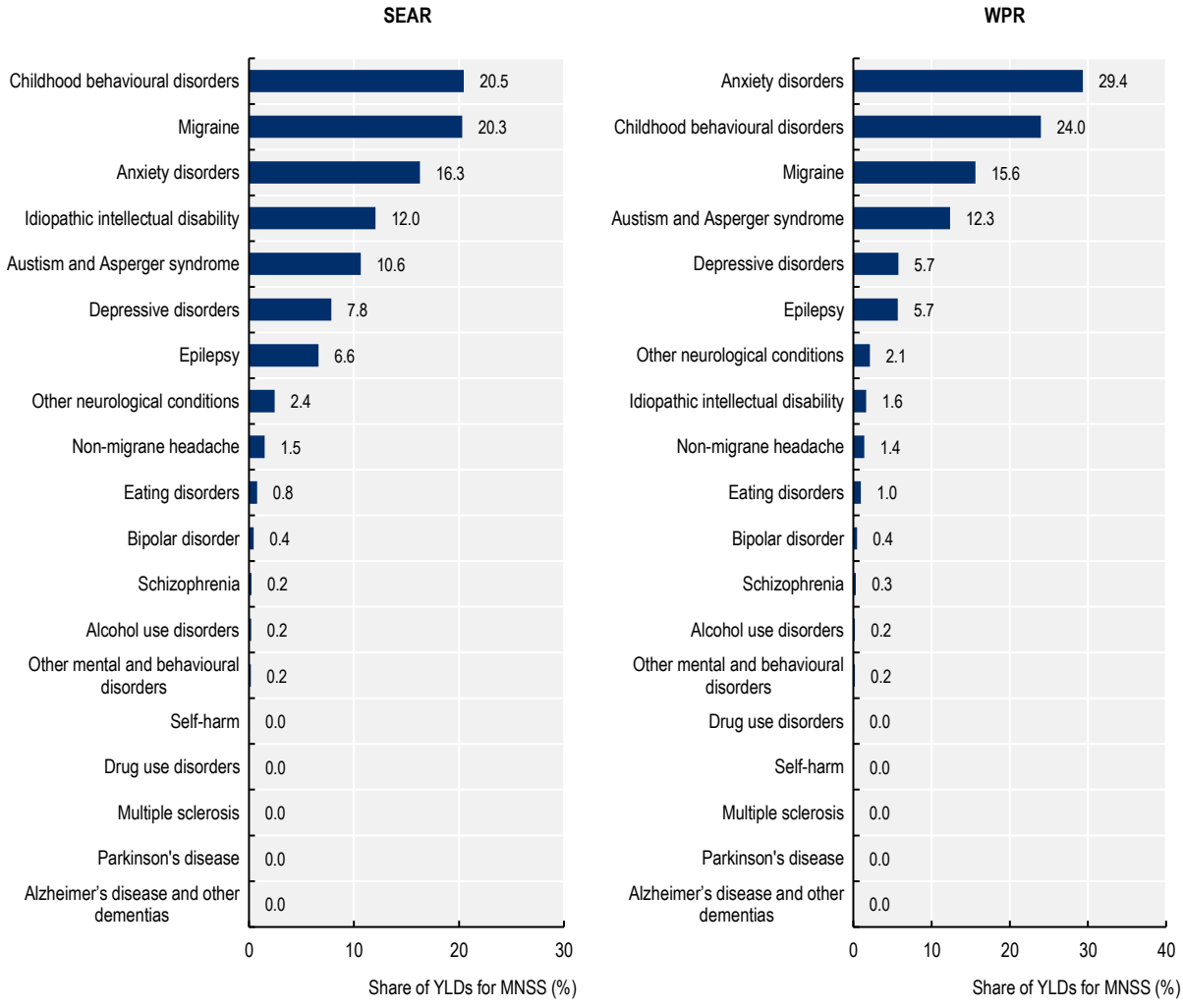
Figure 2.11. The distribution (%) of YLDs by major disease categories among children aged 5-14 years, 2021



Note: The figure above represents the combined analysis of 38 Asia-Pacific countries of which 27 countries belong to WHO Western Pacific Region (WPR) and 11 countries to WHO South-East Asia Region (SEAR). SEAR countries are: Bangladesh, Bhutan, DPRK, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. WPR countries are: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Korea, Lao People's Democratic Republic, Marshall Islands, Malaysia, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu and Viet Nam.
Source: WHO Global Health Estimates (GHE), 2021.

With respect to the burden of specific MNSS conditions among 5-14 year-old children, childhood behaviour disorders, anxiety disorders, migraine and autism and Aspergers syndrome for more than 70% of the burden attributed to MNSS conditions (Figure 2.12). This pattern of the MNSS burden underscores the need for different types and different ranges of services that are accessible and acceptable to this age group.

Figure 2.12. Distribution of YLDs for MNSS among children aged 5-14 years, 2021



Note: SEAR countries are: Bangladesh, Bhutan, DPRK, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste. WPR countries are: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Korea, Lao People's Democratic Republic, Marshall Islands, Malaysia, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu and Viet Nam.
Source: WHO Global Health Estimates (GHE), 2021.

Discussion

Mental health conditions constitute a significant disease burden in Asia-Pacific countries compared with other health conditions. Key policy recommendations (Table 2.3) can be considered that can strengthen countries health systems response and can provide guidance on where countries can prioritise strategic actions for tackling mental health disease and lifelong related disabilities (WHO, 2023[2]; OECD, 2021[3]). An integrated whole-of-government approach to the challenges posed by mental health conditions not only requires cross-sectoral action, but also changes in delivery of policies and services (OECD, 2021[4]) and more, better, internationally comparable mental health data.

Table 2.3. Policy options to strengthen mental health

Domain	Policy options
Governance	Accelerate the development and implementation of national policies and legislation for Mental, Neurological, and Substance Use (MNSS) conditions in line with international human rights instruments.
Financing and Services	Increase government expenditure for MNSS conditions while enabling a gradual shift of financial resources and staff toward community-based care that includes mental health within general healthcare (as opposed to specialised institutions). This should encompass community mental health services and mental health services beyond the health sector, such as those provided by the social sector. Interdisciplinary community-based mental health services should be offered across the life course, including through schools, outreach services, home care and support, primary healthcare, emergency care, community-based rehabilitation, and supported housing. Implement plans to reduce institutional care while simultaneously strengthening community care. Strengthen secondary care MNSS services to ensure the effectiveness of community and primary care service delivery and develop a comprehensive referral and back-referral system. Prioritise the inclusion of mental health as an integral component of public health insurance schemes to enable access to such services. Integrate MNSS into other health policies and programmes, including maternal and child health, non-communicable diseases (NCD), tuberculosis (TB), and HIV. Gradually include responses to MNSS in different operational plans of the ministry of health and other relevant bodies. Ensure active and meaningful participation of individuals with lived experience of MNSS and their families in policy development, implementation, evaluation, and capacity-building for policy makers, healthcare providers, and other relevant professionals within and beyond the health sector.
Human resources	Develop and implement plans for building capacity and retaining human resources to deliver MNSS care and social care services. This can be achieved by including the subject in pre-service and in-service training, ensuring supportive supervision, mentoring, competency assessment, and follow-up to maintain motivation and improve the quality of care. Cultural adaptation of technical tools to enhance cultural sensitivity and understanding should be ensured.
Stigma and Discrimination	Combat stigma and discrimination against individuals with MNSS conditions, their family members, and caregivers through advocacy, community empowerment, and active engagement of those with lived experience.
Children and Young People	Prioritise young people's mental health in promotion and prevention efforts, as well as in early detection of those needing care. This includes implementing early childhood programmes that address cognitive, sensory-motor, and psychosocial development and relationships. Such interventions should also encompass school-based promotion and prevention strategies, including programmes to counter bullying, violence, and stigmatisation. Establish context specific and culturally appropriate services for children and adolescents with emotional or behavioural problems or neurodevelopmental disorders.
Other priority populations	Take steps to understand the disparities in mental health outcomes across other population groups, for example, LGBTIQA+ populations, and prioritise in mental health promotion and prevention efforts.
Self-Harm and Suicide	Address suicide through the decriminalisation of self-harm and the development, implementation, and evaluation of national suicide prevention strategies. These strategies should include banning highly hazardous pesticides, restricting access to other means of self-harm and suicide, building resilience in youth, and promoting responsible media reporting related to suicide cases. Strengthen responses within the health system and other sectors such as social services to self-harm and suicide, including training staff of such sectors in the assessment, management, and follow-up of self-harm and suicide cases.
Substance use	Strengthen current policies and strategies to address the public health aspects of substance use, prioritising prevention and destigmatisation. Enhance community-based responses through the health and social sectors to provide accessible services and follow-up for substance use disorders.
Data and Research	Establish a core set of mental health indicators for routine reporting through Health Management Information Systems (HMIS) to ensure effective monitoring and data for policy planning and implementation. Develop research plans to conduct context-sensitive research on MNSS conditions in Member States.

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3 Health status

Life expectancy at birth and survival rate to age 65

Life expectancy at birth had continued to increase remarkably in Asia-Pacific over the past two decades, reflecting sharp reductions in mortality rates at all ages, particularly amongst infants and children (see indicators “Infant mortality” and “Under age 5 mortality” in Chapter 3). These gains in longevity can be attributed to several factors, including rising living standards, better nutrition and improved drinking water and sanitation facilities (see indicator “Water and sanitation” in Chapter 4). Improved lifestyles, better education, and enhanced access to healthcare also play an important role (NIA/NIH/WHO, 2011[1]). The large decline in under age 5 mortality, which reflects important commitment and investment at local, national, and global levels over several decades, is another major drive of the increase of life expectancy (Dicker et al., 2018[2]).

Life expectancy at birth across low- and lower-middle-income Asia-Pacific countries reached 71 years on average in 2023, a gain of 3 years since 2010, whereas it reached 74 years in upper-middle-income Asia-Pacific countries and territories, a gain of almost 2 years since 2010, similar to the trend observed across OECD countries (Figure 3.1). Nonetheless, a very large regional divide persists as, on average, a newborn in Hong Kong (China) is expected to live over 20 years more than a newborn in Papua New Guinea. The countries or economies that surpass a life expectancy of 80 years in 2023 tend to be in the high-income group (e.g. New Zealand, Macao (China), Singapore, Australia, Korea, Japan and Hong Kong (China)). In contrast, Papua New Guinea, Myanmar, Fiji, Pakistan and Lao PDR had an estimated life expectancy at birth of less than 70 years.

Although during the COVID-19 pandemic, from 2019 to 2021 life expectancy had decreased in most upper-middle, lower-middle- and low-income Asia-Pacific countries, recent years have shown only slight changes for most countries. Countries, such as, Bangladesh, India, Mongolia, Indonesia, Solomon Islands and Pakistan experienced an increase of more than 1 year in life-expectancy between 2020 and 2023.

Consistently, across upper-middle-income countries, women have greater percentage of cohort surviving to age 65 (Figure 3.2). On average, 69% and 88% of a cohort of female newborns would survive to age 65 in low- and lower-middle-, and upper-middle-income Asia-Pacific countries and territories, respectively, while only 69% and 72% of male newborns will survive to age 65 in low- and lower-middle-, and upper-middle-income Asia-Pacific countries and territories, respectively. In Korea, Japan, and Hong Kong (China) more than 94% of female newborns will survive to age 65, whereas in Myanmar, Papua New Guinea, and Fiji, less than 65% of male newborns will survive to age 65. Many reasons contribute to this gender difference, such as biological differences resulting in slower ageing of immune systems and the later onset of cardiovascular diseases such as heart attacks and strokes amongst females (UNESCAP, 2017[3]).

Besides life expectancy, another indicator of the population health status is the healthy life expectancy. Higher healthy life expectancy is generally associated with higher life expectancy, and therefore it is longer – on average – for females. On one side, females born in 2021 in Japan and Singapore are expected to live around 75 years of good health, whereas on the other side, males from the same cohort in Fiji, Solomon Islands, India, Papua New Guinea and Pakistan have a healthy life expectancy of less than 60 years (Figure 3.3).

The difference of healthy life years for females born in 2021 between low- and lower-middle-, and upper-middle-income countries and territories across Asia-Pacific is three years, with 62 and 65 healthy life years, respectively. This difference increased to seven years when comparing upper-middle-income to high-income countries and territories, which exhibit an average of 72 healthy life years for females. Gender gaps amount to 2, 3, and 2 healthy life years for low- and lower-middle-, upper-middle-, and high-income

countries and territories across Asia-Pacific, respectively. Men born in 2021 in high-income countries and territories across Asia-Pacific are expected to have 10 more years of healthy life than those born in low- and lower-middle-income countries and territories, with an average of 70 and 60 healthy life years, respectively.

Definition and comparability

Life expectancy at a specific age is the number of additional years that a person of that age can expect to live if current mortality levels observed for higher ages continue for the rest of that person's life. Thus, life expectancy at birth is the number of years that today's newborns would live on average if current age-specific mortality rates were to continue throughout the lifespan of the newborn cohort.

Age-specific mortality rates are used to construct life tables from which life expectancies are derived. Some countries and territories base their life expectancies on estimates derived from censuses and surveys and not on accurate registration of deaths.

Survival to age 65 refers to the percentage of a cohort of newborns that would survive to age 65, if subject to current age-specific mortality rates.

Healthy life expectancy at birth measures the number of years in full health that a newborn can expect.

The methodologies that countries and territories use to calculate life expectancy, survival at age 65 and healthy life expectancy at birth can vary and these can lead to slight differences when comparing national-reported estimates to those herein reported.

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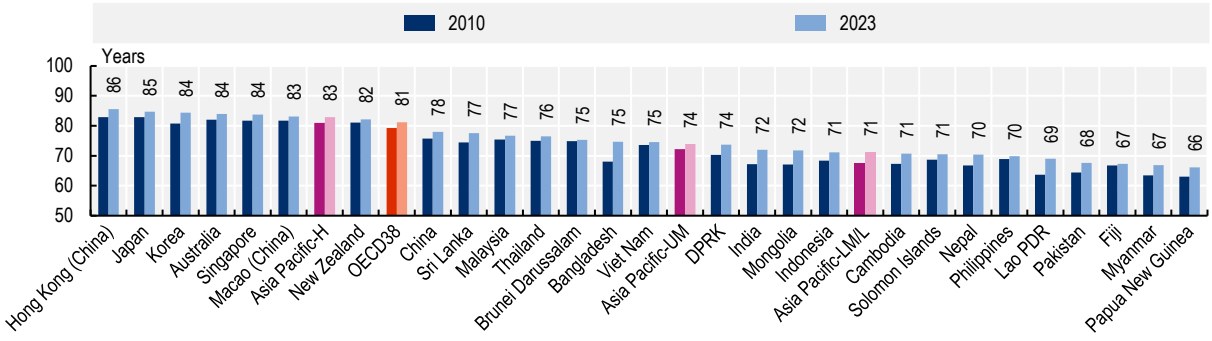
Figure 3.1. Life expectancy at birth, 2010 and 2023



Source: United Nations World Population Prospects 2024.

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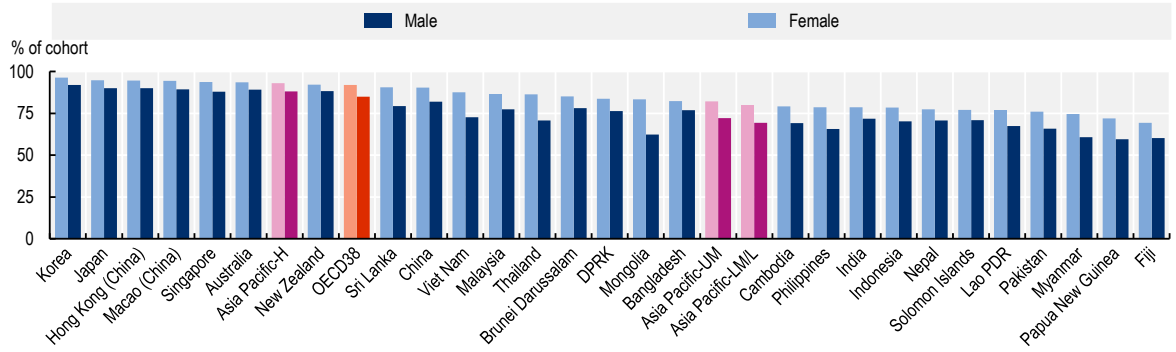
Figure 3.2. Survival to age 65, by sex, 2023



Source: United Nations World Population Prospects 2024.

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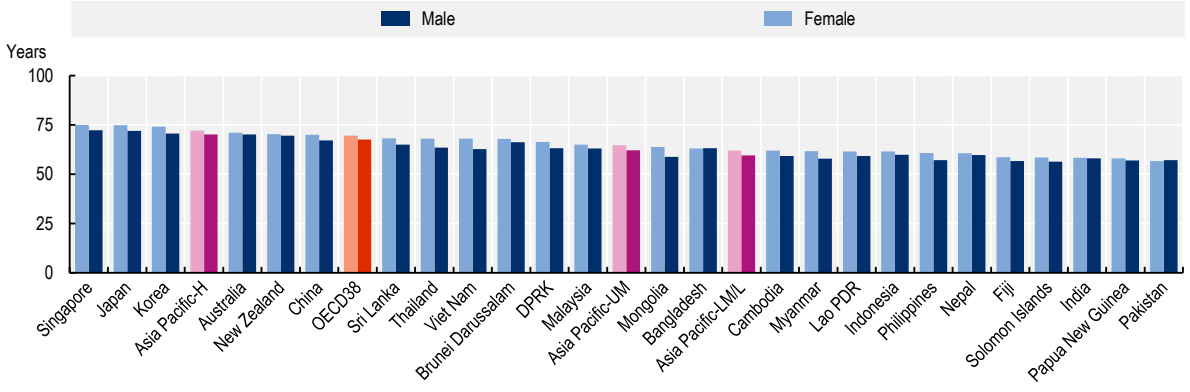
Figure 3.3. Healthy life expectancy at birth by sex, 2021



Source: WHO Global Health Observatory (GHO) 2024; WHO Global Health Estimates (GHE) 2021.

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Neonatal mortality

Neonatal mortality refers to deaths in children within 28 days of birth; it encompasses the effect of socio-economic and environmental factors on newborns and mothers, and the capacities and responsiveness of national health systems. The neonatal period accounts for 47% of all under-five deaths in 2020 (UN IGME, 2022[1]).

Indicators such as the level of education of the mother, quality of antenatal and childbirth care, preterm birth and birthweight, Early Essential Newborn Care (EENC), and feeding practices are important determinants of neonatal mortality. EENC is evidence-based, cost-effective, and comprises feasible interventions provided during childbirth and in the postnatal period. The First Embrace is the core of EENC, defined as a life-saving practice that promotes skin-to-skin contact immediately after birth between mother and child for no less than 90 minutes. Other EENC interventions include: (1) ensuring the presence of a birth companion; (2) adopting a position of choice; (3) providing adequate food and fluids; (4) using evidence-based criteria for episiotomy, and other procedures; (5) eliminating harmful or unnecessary practices such as fundal pressure, forced pushing, and enema; (6) administering oxytocin within one minute of birth. EENC has been introduced and scaled up across countries and territories in Asia-Pacific (WHO WPRO, 2022[2]).

The leading causes of neonatal mortality are premature birth, birth complications such as asphyxia or trauma, neonatal infections, and congenital anomalies (WHO, 2024[3]). Undernutrition continues to be amongst the leading causes of death in both mothers and newborns [see section “Child malnutrition (including undernutrition and overweight)” in Chapter 4]. The leading causes of neonatal mortality can differ in high-income countries, such as Australia with 2.3 deaths per 1 000 live births, where causes such as preterm birth and congenital anomalies account for more than 60% of neonatal mortality, and perinatal infection accounts for only 4% of neonatal deaths (Australian Institute of Health and Welfare, 2024[4]). In the Asia-Pacific region, 72% of the deaths in the first year of life occurred during the neonatal period in 2020 (UN IGME, 2022[1]).

Sustainable Developing Goals set a target of reducing neonatal mortality to 12 deaths or less per 1 000 live births by 2030. In 2022, the average amongst lower-middle- and low-income countries and territories in Asia-Pacific was 15.6 deaths per 1 000 live births, decreasing by almost a third the rate observed in 2010, but still above the SDG target (Figure 3.4). Upper-middle-income Asia-Pacific countries have maintained the SDG target reporting a rate – on average – of 9.4 deaths per 1 000 live births in 2010, which then decreased to 7.3 in 2022. High-income Asia-Pacific countries and territories reported neonatal mortality rates similar to those of the OECD, with an average of 1.9 deaths per 1 000 live births in 2022.

In general, high-income countries and territories in Asia-Pacific experienced lower neonatal mortality rates than lower-middle- and low-income countries and territories in the region. Japan, Macao (China), Singapore and Korea reported less than two deaths per 1 000 live births in 2022, whereas neonatal mortality rates were higher than 20 per 1 000 live births in Lao PDR, Papua New Guinea, Myanmar and Pakistan; the latter with 38.8 deaths per 1 000 live births.

In 2022, most Asia Pacific countries and territories evidenced a decrease in neonatal mortality rates compared to 2010, the exception was Fiji reporting an increase from 9.3 in 2010 to 13.9 deaths per 1 000 live births in 2022. (Figure 3.4). Since 2010 the rate in China and Macao (China) more than halved by 2023.

Amongst the main determinants of neonatal mortality rates across countries and territories, we find income status, geographical location, and mother education. In most Asia Pacific countries herein reported, neonatal mortality is higher in households with the lowest income quintile (Figure 3.5). The greatest absolute gap between income groups is seen in India, Nepal, Bangladesh, Indonesia and Philippines where neonatal mortality is more than 10 deaths per 1 000 live births higher in the lowest income quintile compared to the highest. The difference in neonatal mortality between income groups is smaller for DPRK,

Fiji and Mongolia. As in wealth quintiles, differences in neonatal mortality are found based on mother's education, with higher mortality rates seen when mothers' report no education. The smaller absolute gaps in this social determinant are found in Lao PDR, Mongolia and Bangladesh, and the wider gaps are evidenced in India and Pakistan, where neonatal mortality is more than 15 deaths per 1 000 live births in the group reporting no education compared to the group reporting secondary education or higher. Geographical location is another determinant of differences reported in neonatal mortality in the region, though relatively less impactful in comparison to households' income and mother's education. For example, neonatal mortality rate in rural areas of the Lao PDR, Nepal, Myanmar, India and Pakistan were more than 5 deaths per 1 000 live births higher than the rate reported for urban areas.

Neonatal mortality rates recede through cost-effective and appropriate interventions. These include neonatal resuscitation training, prevention, and management of neonatal sepsis, reducing mortality from prematurity, and prioritising the roles of breastfeeding and antenatal corticosteroids (Conroy, Morrissey and Wolman, 2014[5]). Reductions in neonatal mortality will require not only the aforementioned strategies, but also ensuring that all segments of the population benefit from these (Gordillo-Tobar, Quinlan-Davidson and Lantei Mills, 2017[6]).

Definition and comparability

Neonatal mortality rate is defined as the number of children who die during their first 28 days of life, expressed per 1 000 live births.

Mortality data are estimated using the UN IGME model, except for Hong Kong (China) and Macao (China), for which data are gathered from local sources.

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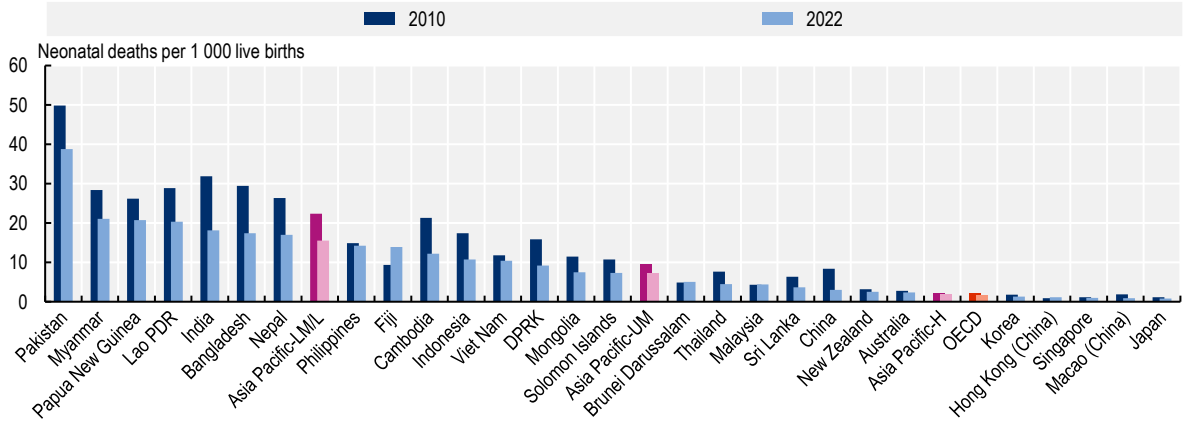
Figure 3.4. Neonatal mortality rates, 2010 and 2022 (or nearest year)



Source: UNICEF Global Databases 2023; Hong Kong annual digest of statistics 2023; Macao yearbook of Statistics, 2022.

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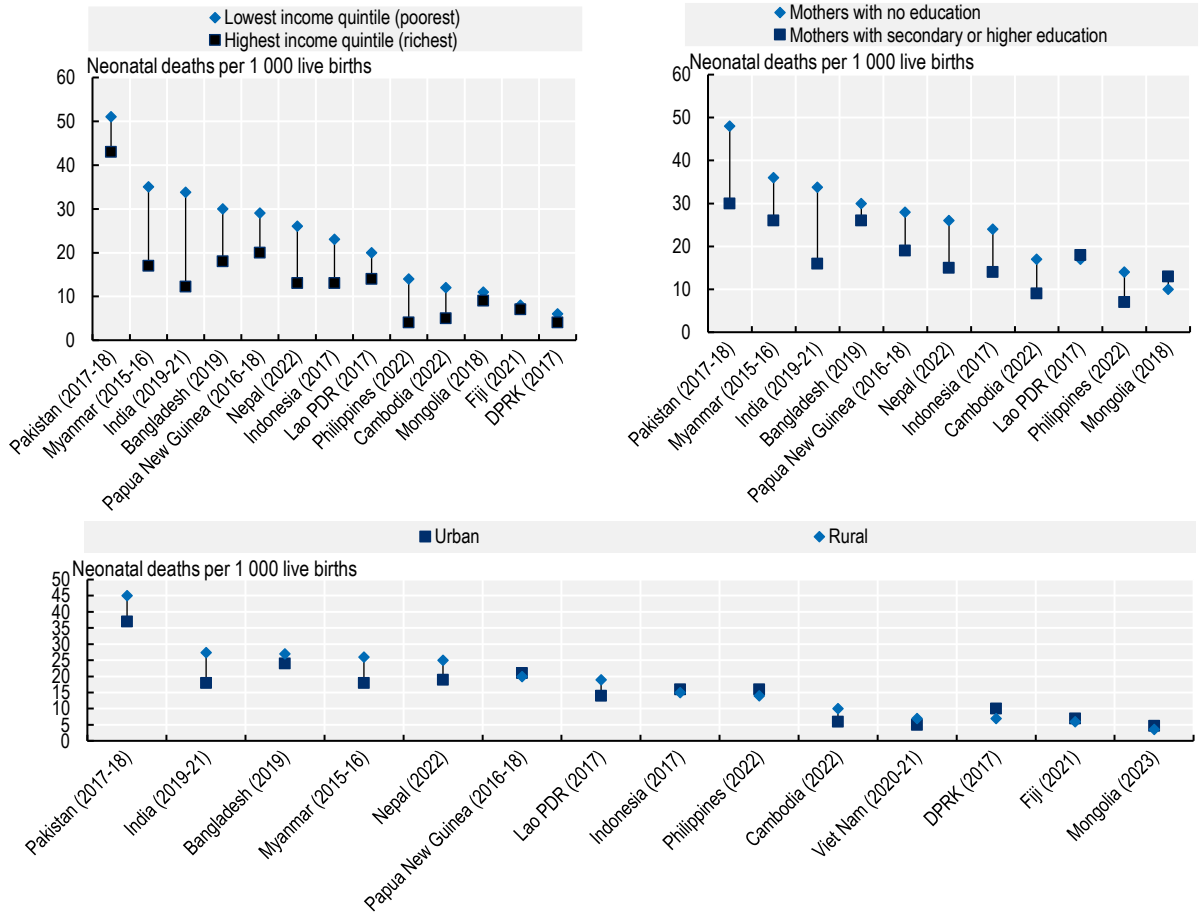
Figure 3.5. Neonatal mortality rates by socio-economic characteristic, selected countries



Source: DHS and MICS surveys, various years.

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Infant mortality

Infant mortality reflects the effect of social, economic, and environmental factors on infants and mothers, as well as the effectiveness of national health systems. Pneumonia and diarrhoea continue to be amongst the leading causes of death in infants. Cost-effective and simple interventions as those comprised in the Early Essential Newborn Care (EENC) are key to reduce infant mortality (see section "Neonatal mortality"). Factors such as the health of the mother, quality of antenatal and childbirth care, preterm birth and birth weight, immediate newborn care and infant feeding practices are important determinants of infant mortality.

Infant mortality can be reduced through cost-effective and appropriate interventions -akin to the EENC interventions for newborns-. These interventions include proper infant nutrition; provision of supportive health services such as home visits and health check-ups; immunisation and controlling the influence of environmental factors such as air pollution; and access to safely managed water and sanitation services. Management and treatment of neonatal infections, pneumonia, diarrhoea, and malaria is also critical (UNICEF, 2013[1]).

In 2022, amongst lower-middle- and low-income Asia-Pacific countries and territories, the infant mortality rate was 23.3 deaths per 1 000 live births, a reduction of about 12 deaths compared to the rate observed in 2010 (35.4 deaths per 1 000 live births) (Figure 3.6). Upper-middle-income Asia-Pacific countries and territories reported a rate of 12.0 deaths per 1 000 live births, down from 15.4 in 2010. Geographically, infant mortality was lower in eastern Asian countries and territories, and higher in South and Southeast Asia. Korea, Hong Kong (China), Singapore, Japan and Macao (China) had less than 3 deaths per 1 000 live births in 2022, whereas in Pakistan more than 50 children per 1 000 live births die before reaching their first birthday.

Infant mortality rates have fallen dramatically in the Asia-Pacific since 2010, with many countries and territories experiencing significant declines (Figure 3.6). In India, Cambodia, Mongolia, China and Macao (China), rates have declined in 2020 to almost half or less of the value reported in 2010, whereas rates in Fiji have increased in recent years.

Across countries and territories, important inequities persist in infant mortality rates (Figure 3.7). In general, most Asia Pacific countries report having higher infant mortality rates in the lowest income quintile compared to the highest income quintile. DPRK, Fiji and Mongolia have the smallest gap between these groups. In the other hand, the countries with the highest absolute gap are India, Lao PDR and Myanmar, with more than 30 infant deaths per 1 000 live births higher mortality in the lowest-income group compared to the highest-income group. Similarly, mothers' lower education (i.e. no education) is associated with higher infant mortality rates compared to higher education; the wider absolute gap is reported for Lao PDR and Myanmar with more than 40 deaths per 1 000 live births in mothers with no education than the highest education group. Geographical location (urban or rural) is another determinant of infant mortality in the region, though relatively less important in comparison to wealth quintiles or mother's education level – except for the Lao PDR, where infant mortality in rural areas is more than twice as high as in urban settings (Figure 3.7). Reductions in infant mortality will require not only improving quality of care, but also ensuring that all segments of the population benefit from better access to care.

Definition and comparability

The infant mortality rate is defined as the number of children who die before reaching their first birthday each year, expressed per 1 000 live births.

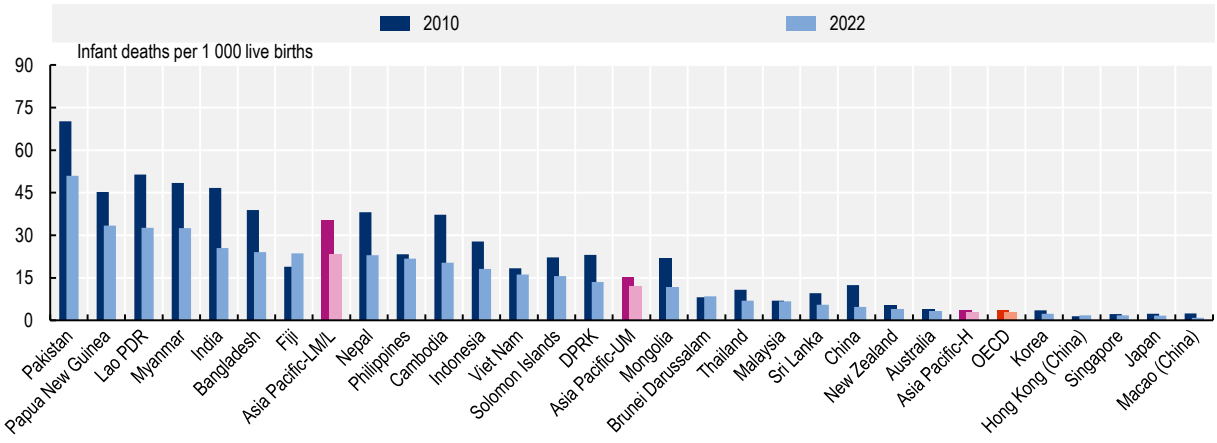
Some countries and territories base their infant mortality rates on estimates derived from censuses, surveys, and sample registration systems, and not on accurate and complete registration of births and deaths. Differences amongst countries and territories in registering practices for premature infants may also add slightly to international variations in rates. Infant mortality rates are generated by either applying a statistical model or transforming under age 5 mortality rates based on model life tables.

Mortality data are estimated using the UN IGME model, except for Hong Kong (China) and Macao (China), for which data are gathered from local sources.

References

UNICEF (2013), *Sustainable development starts with safe, healthy and well-educated children*, http://www.unicef.org/parmo/files/Post_2015_UNICEF_Key_Messages.pdf. [1]

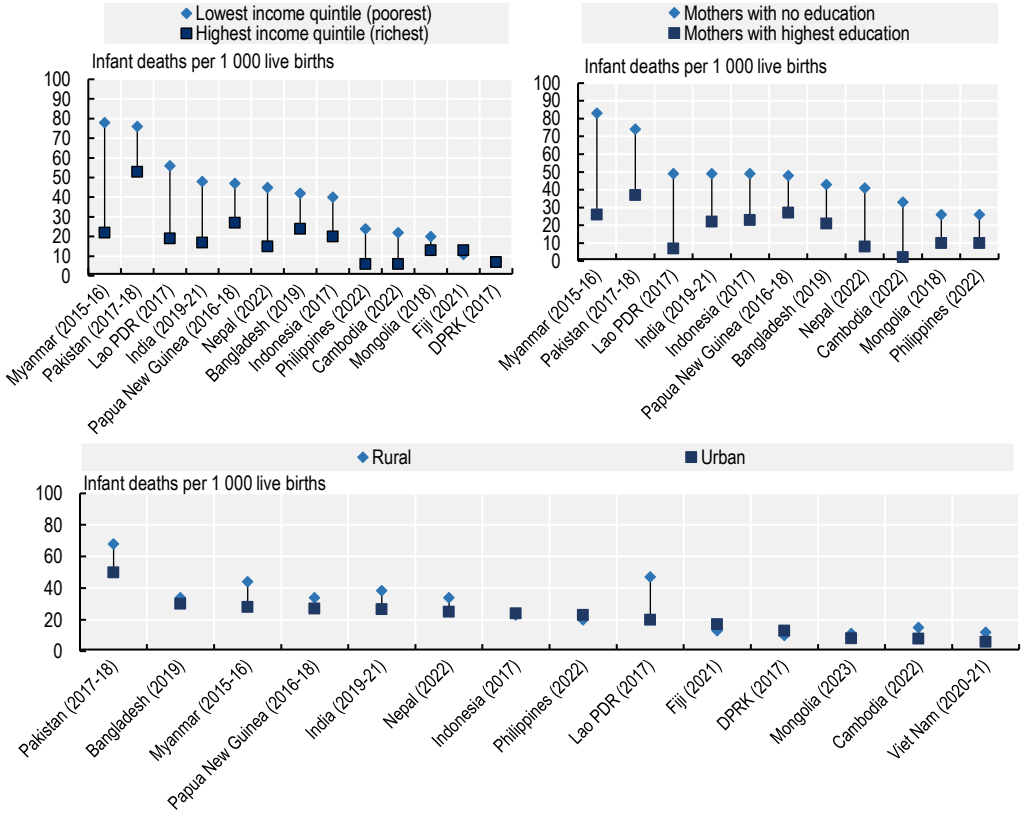
Figure 3.6. Infant mortality rates, 2010 and 2022



Source: UN Inter-agency group for Child Mortality Estimation (IGME) 2023.

StatLink https://stat.link/zp7ia8

Figure 3.7. Infant mortality rates by socio-economic characteristic, selected countries and years



Source: DHS and MICS surveys, various years.

StatLink https://stat.link/zqsyuk

Under age 5 mortality

The under age 5 mortality rate is an indicator of child health as well as the overall development and well-being of a population. As part of their Sustainable Development Goals, the United Nations has set a target of reducing under age 5 mortality to at least as low as 25 per 1 000 live births by 2030 (UN, 2015[1]).

The main causes of death amongst children under age 5 are those occurring in the newborn period (31.6%), lower respiratory infections (13.9%), and diarrhoea (9.1%). Communicable and infectious diseases are continuously some of the leading causes of under age 5 mortality, contribute to about 49% of deaths in children belonging to this age group (Perin et al., 2022[2]; UN IGME, 2022[3]). Malnutrition, as the underlying cause of some of these childhood diseases, is an impediment to the progress towards achieving the SDGs. In view of the importance of improving nutrition to promote heath and development, in 2012 the World Health Assembly endorsed a "Comprehensive implementation plan on maternal, infant and young child nutrition", which specified a set of six global nutrition targets. The UN General Assembly has also proclaimed the UN Decade of Action on Nutrition (2016-25). Oral rehydration therapy is an affordable and effective means to offset the debilitating effects of diarrhoea (WHO/UNICEF, 2006[4]).Countries and territories can also implement relatively inexpensive public health interventions including immunisation, and provide clean water and sanitation to reduce mortality due to communicable conditions (see indicator "Water and sanitation" in Chapter 4 and "Childhood vaccination" in Chapter 7).

In 2022, 4.9 million children died worldwide before their fifth birthday; although there has been a reduction in under-five mortality, the rate of reduction has decreased going from 3.8% in 2000-15 to 2.1% in 2015-22 (UN IGME, 2022[3]; UNICEF, 2024[5]). The average under age 5 mortality rate across lower-middle- and low- and upper middle-income Asia-Pacific countries and territories was 28.2 and 14.4 deaths per 1 000 live births respectively (Figure 3.8). Singapore, Japan, Korea and Australia achieved rates of less than four deaths per 1 000 live births, similar to the average across OECD countries (3.4 deaths per 1 000 live births). Mortality rates in Pakistan, Papua New Guinea, Lao PDR and Myanmar were high at more than 40 deaths per 1 000 live births.

Whilst under age 5 mortality has significantly declined in lower-middle- and low-income Asia-Pacific countries and territories, progress varies amongst countries and territories. In China, Cambodia and Mongolia, mortality rate in 2022 was nearly less than half of the rate reported in 2010 (Figure 3.8). Evidence (WHO, 2015[6]) suggests that reductions in Cambodia are associated with better coverage of effective preventive and curative interventions such as essential immunisations, malaria prevention and treatment, vitamin A supplementation, birth spacing, early and exclusive breastfeeding and improvements in socio-economic conditions. In order to achieve the SDG target, countries and territories need to accelerate their efforts, for example by scaling effective preventive and curative interventions, targeting the main causes of post-neonatal deaths, namely pneumonia, diarrhoea, malaria and undernutrition, and reaching the most vulnerable newborn babies and children (UNICEF, 2013[7]). In addition, focused efforts need to be undertaken to improve neonatal survival as nearly half of under age 5 deaths occur in the neonatal period (UN IGME, 2022[3]).

As is the case for infant mortality (see indicator "Infant mortality" in Chapter 3), inequalities in under age 5 mortality rates are widely prevalent (Figure 3.9). Across countries and territories, under age 5 mortality rates consistently vary based on household income and mother's education level, and to a certain extent by geographical location. For example, Myanmar reported almost 80 more deaths in children under 5 per 1 000 live births for mothers with no education than those whose mothers had more than secondary education. Likewise, Myanmar reported 73 more deaths per 1 000 live births of children under 5 in the lowest income quintile than the highest-income group. Asia Pacific countries such as, DPRK and Fiji have similar under age 5 mortality rates for both income groups. Inequalities in mortality rates based on

geographic locations (rural or urban) are not as evident in most Asia Pacific countries as in the income and education disaggregation, but there is considerable absolute gap in the Lao PDR, Myanmar and Pakistan. (Figure 3.9). Accelerating reductions in under age 5 mortality will require identifying these populations and tailoring health interventions to effectively address their needs.

Definition and comparability

Under age 5 mortality is defined as the probability of a child born in a given year dying before reaching their fifth birthday and is expressed per 1 000 live births.

Age-specific mortality rates are used to construct life tables from which under age 5 mortality is derived. Some countries and territories base their estimates on censuses, surveys, and sample registration systems, and not on accurate and complete registration of deaths.

Mortality data are estimated using the UN IGME model.

References

Perin, J. et al. (2022), "Global, regional, and national causes of under-5 mortality in 2000–19: an updated systematic analysis with implications for the Sustainable Development Goals", *The Lancet Child & Adolescent Health*, Vol. 6/2, pp. 106-115, https://doi.org/10.1016/s2352-4642(21)00311-4. [2]

UN (2015), *Transforming our world: The 2030 agenda for sustainable development*, United Nations, https://sdgs.un.org/2030agenda. [1]

UN IGME (2022), *Levels and trends in child mortality*, United Nations Inter-agency Group for Child Mortality Estimation, https://cdn.who.int/media/docs/default-source/mca-documents/rmncah/unicef-2022-child-mortality-report.pdf. [3]

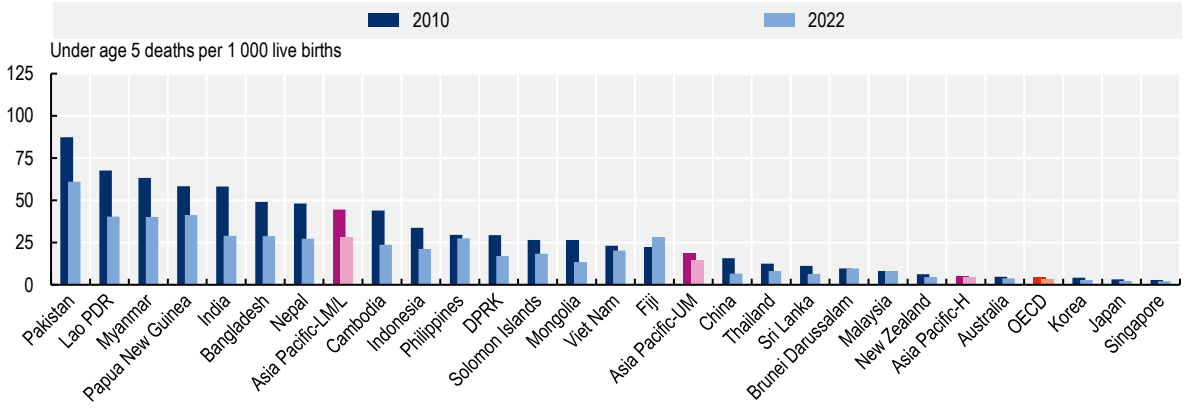
UNICEF (2024), *Under-five mortality*, https://data.unicef.org/topic/child-survival/under-five-mortality/. [5]

UNICEF (2013), *Sustainable development starts with safe, healthy and well-educated children*, http://www.unicef.org/parmo/files/Post_2015_UNICEF_Key_Messages.pdf. [7]

WHO (2015), *Success Factors for Women's and Children's Health: Cambodia*, World Health Organization, https://iris.who.int/handle/10665/178625. [6]

WHO/UNICEF (2006), *Oral rehydration salts Production of the new ORS*, World Health Organization, https://iris.who.int/handle/10665/69227. [4]

Figure 3.8. Under age 5 mortality rates, 2010 and 2022



Source: UN Inter-agency Group for Child Mortality Estimation (IGME) 2023.

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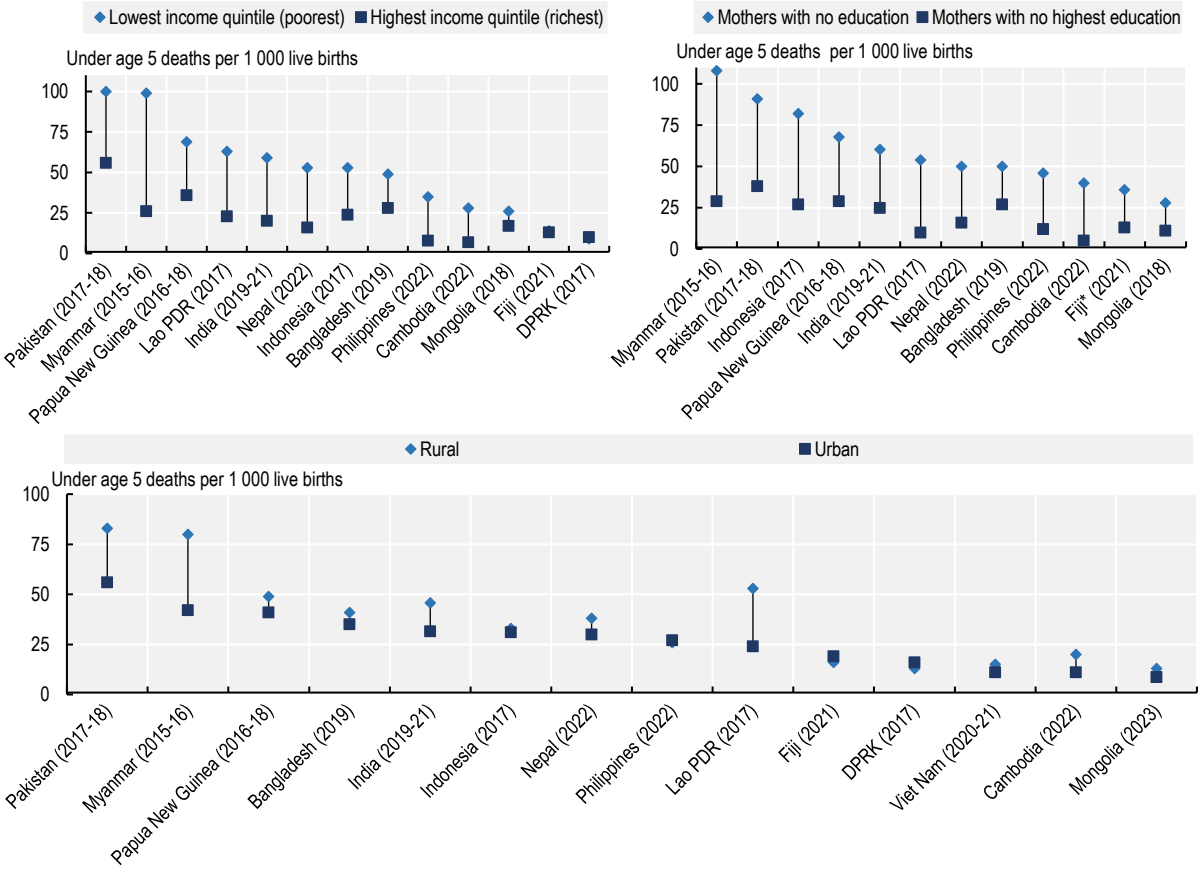
Figure 3.9. Under age 5 mortality rates by socio-economic and geographic factor, selected countries and years



Note: *Value reported for mother's reporting having primary education instead of no education.
Source: DHS and MICS surveys, various years.

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Mortality and morbidity from all causes

The burden of disease is an important measure of the health status of a population. Mortality does not give a complete picture of the burden of disease borne by individuals in different populations. Therefore, the overall burden of disease is assessed using the disability-adjusted life year (DALY), a time-based measure that combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (YLDs) (WHO, 2024[1]).

There are wide disparities in the years of life lost due to premature death and years lived with a disability in the region, as measured by the rate of DALYs per 100 000 people (Figure 3.10). In 2021, the rate of disability-adjusted life years (DALYs) in upper-middle- and low- and middle-income countries was nearly 50% higher than in high-income countries in the Asia Pacific region. Singapore had the lowest DALY rate at under 20 000 per 100 000 population across all ages, followed by Korea and Brunei Darussalam at under 25 000. In contrast, the burden of disease was highest in Fiji, Pakistan, India and Myanmar, with DALY rates exceeding 40 000 per 100 000 people across all ages in 2021. Low-income countries often face a high burden of disease due to limited access to healthcare, poor infrastructure, and high rates of poverty and malnutrition, which contribute to the spread of infectious diseases and inadequate management of non-communicable diseases.

Years lived with disability (YLDs) specifically measure the burden of living with disability or morbidity, without accounting for premature death. In 2021, high-income countries in the region had a YLD rate of 12 000 per 100 000 population across all ages, compared to 10 000 per 100 000 in upper-middle- and low- and middle-income countries (Figure 3.11). Notably, Japan, Australia and New Zealand had a YLD rate of approximately 14 000 per 100 000 population. High-income countries tend to exhibit higher YLDs due to several factors, particularly an ageing population. Older populations are more susceptible to chronic diseases such as arthritis, dementia, and cardiovascular conditions, which contribute significantly to higher disability.

Non-communicable diseases (NCDs), such as cardiovascular diseases and cancers, are the most common causes of death in the Asia-Pacific, responsible for 23 million deaths in 2021. The burden of NCDs is driven by factors that includes rapid unplanned urbanisation, unhealthy lifestyles, and population ageing. The probability of death between the ages of 30 and 70 from NCDs – including cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases – was 20% for females and 30% for males in lower-middle- and low-income countries and territories in the Asia-Pacific in 2021(Figure 3.12). The burden of NCDs was particularly high in the Solomon Islands and Fiji, where males faced a probability of over 40% of dying from these diseases in 2021. In contrast, premature mortality due to NCDs poses a significantly lower burden in high-income countries in the Asia-Pacific, where the probability of death for both females and males was less than half that in lower-middle- and low-income countries at 7.5% and 12.5% respectively.

Definition and comparability

WHO's Global Health Estimates (GHE) provide the latest available data on death and disability globally, by region and country, and by age, sex and cause. The Global Health Estimates present data for mortality and morbidity assessed using the disability-adjusted life year (DALY) and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (YLDs).

The DALY is a summary measure which combines time lost through premature death and time lived in states of less-than-optimal health, loosely referred to as "disability". The DALY is a generalisation of the well-known Potential Years of Life Lost measure (PYLLs) to include lost good health. One DALY can be thought of as one lost year of "healthy" life and the measured disease burden is the gap between a population's health status and that of a normative reference population. DALYs for a specific cause are calculated as the sum of the YLLs from that cause and the YLDs for people living in states of less than good health resulting from the specific cause (WHO, 2024[2]).

The YLLs for a cause are essentially calculated as the number of cause-specific deaths multiplied by a loss function specifying the years lost for deaths as a function of the age at which death occurs (WHO, 2024[2]).

The rate of DALYs and YLDs per 100 000 population per country is calculated using the 2024 revision of the World Population Prospects.

Premature mortality from noncommunicable disease is defined as the unconditional probability of death between ages 30 and 70 years from cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases.

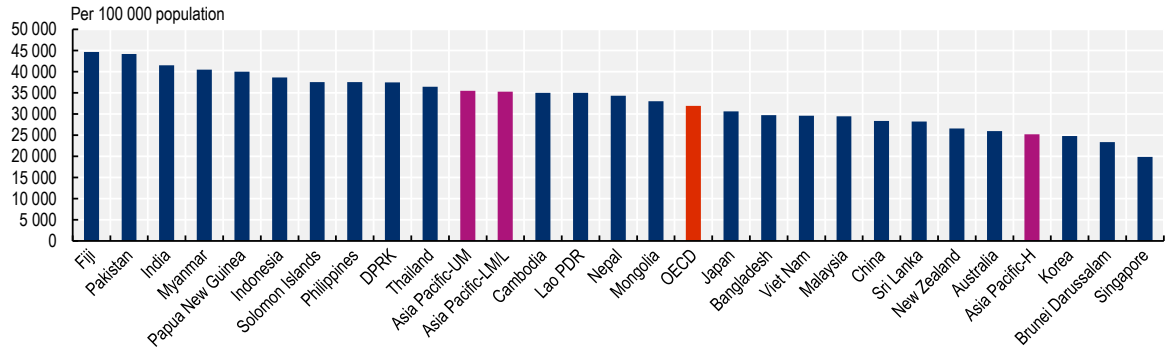
The methodologies that countries and territories use to calculate DALYs and YLDs can vary, and these can lead to differences when comparing national-reported estimates to those herein reported.

References

WHO (2024), *Global health estimates*, World Health Organization, https://www.who.int/data/global-health-estimates. [1]

WHO (2024), *WHO methods and data sources for global burden of disease estimates 2000 - 2021*, https://cdn.who.int/media/docs/default-source/gho-documents/global-health-estimates/ghe2021_daly_methods.pdf?sfvrsn=690b16c3_1. [2]

Figure 3.10. Disability-Adjusted Life Years (DALYs) from all causes, all ages, 2021



Source: WHO Global Health Estimates (2021).

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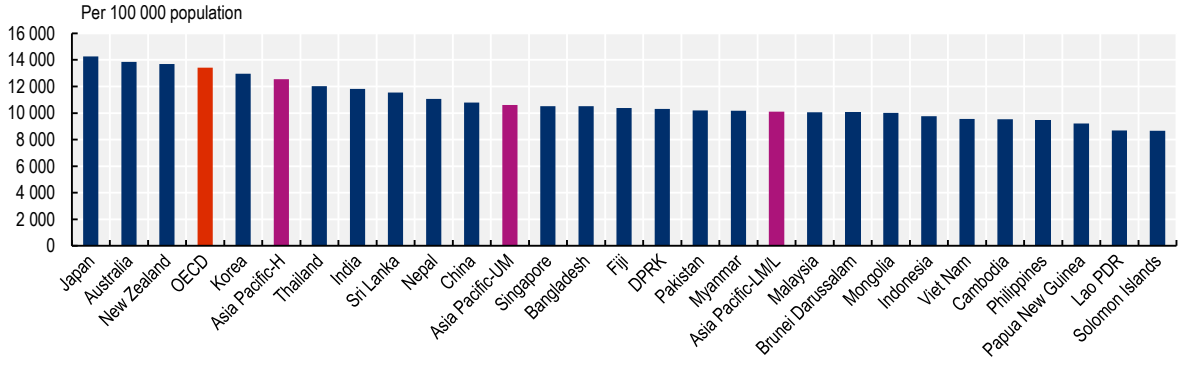
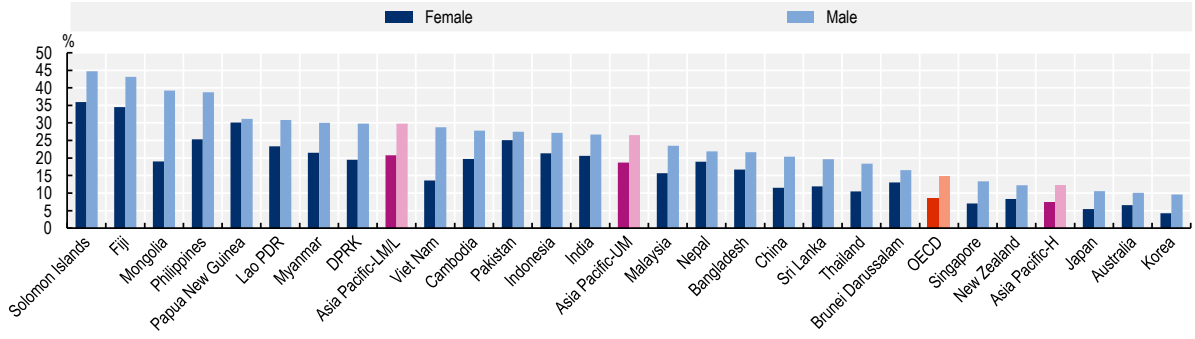
Figure 3.11. Years Lived with Disability (YLDs) from all causes, all ages, 2021



Source: WHO 2021 Global Health Estimates.

StatLink https://stat.link/r81ely

Figure 3.12. Premature mortality from noncommunicable diseases, 2021 or nearest year



Source: WHO 2021 Global Health Estimates.

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Mortality and morbidity from cardiovascular disease

Despite being preventable, cardiovascular diseases (CVD) are the leading cause of death in the Asia-Pacific, and the burden is rising. CVDs accounted for 40% of all deaths in the Western Pacific Region and nearly a quarter of deaths in the South-East Asia Region in 2021.

CVD covers a range of diseases related to the circulatory system, including ischaemic heart disease (IHD) and cerebrovascular disease (or stroke). Ischemic heart disease is caused by the accumulation of an atherosclerotic plaque in the inner wall of a coronary artery, restricting blood flow to the heart. Cerebrovascular diseases refer to a group of diseases that relate to problems with the blood vessels that supply the brain. Common types of cerebrovascular disease include ischemic stroke, which develops when the brain's blood supply is blocked or interrupted, and haemorrhagic stroke, which occurs when blood leaks from blood vessels onto the subarachnoid space or the surface of the brain. The majority of CVD is caused by risk factors that can be controlled, treated, or modified, such as high blood pressure, high blood glucose, high blood cholesterol, obesity, lack of physical activity, tobacco use (see indicator "Tobacco" in Chapter 4) and excessive alcohol consumption.

In 2021, cardiovascular diseases were responsible for over 6 000 DALYs per 100 000 population in upper-middle-, and lower-middle- and low-income countries and territories (Figure 3.13). Notably, the rate of DALYs for CVD in DPRK, the Solomon Islands, Fiji and the Philippines was over 8 000 per 100 000 population across all ages in 2021. This contrasted with Singapore, New Zealand, Australia and Korea where DALYs were below 3 500 per 100 000 population. The large variation in mortality may be due to differences in the prevalence of risk factors for CVD and access to high quality acute care (see indicator "In-hospital mortality following acute myocardial infarction and stroke" in Chapter 7) across countries and territories.

Cardiovascular disease can cause disability by leading to severe impairments in the body's vital functions, Events such as heart attacks and strokes can result in chronic issues such as reduced mobility, paralysis, cognitive impairments, and persistent pain. In 2021, cardiovascular diseases accounted for over 400 years lived with disability (YLDs) per 100 000 population across all ages in upper-middle-income countries and territories in the Asia-Pacific, and over 500 YLDs in high-income countries Figure 3.14). Japan experienced more than 800 YLDs per 100 000 population from cardiovascular diseases in 2021. In contrast, YLDs in lower-middle- and low-income countries were significantly lower, approximately two-thirds the level of high-income countries in the region and half the level of OECD countries.

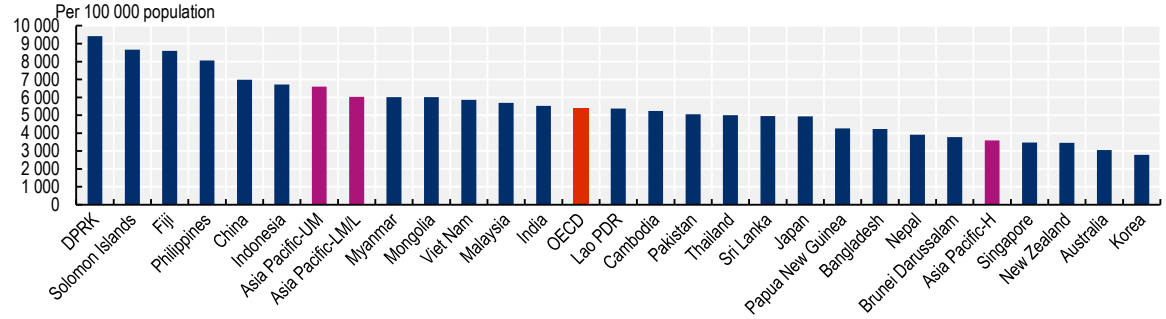
In high-income countries in the Asia-Pacific, ischemic heart disease was the leading cause of death and disability from cardiovascular disease, accounting for 44% of all DALYs from CVD in 2021 (Figure 3.15). In upper-middle- and lower-middle- and low-income countries and territories, both ischemic heart disease and strokes impose a similarly high burden, both accounting for roughly 40% of all DALYs each. Hypertensive heart disease accounted for an average of 4% to 6% of DALYs from CVD in the region, while cardiomyopathy, myocarditis, endocarditis, and rheumatic heart disease accounted for 4% or less of DALYs on average.

Given the already high incidence of CVDs in Asia, and the ageing and growing population, this raises the need for targeted and effective interventions within the region. One such intervention is the South-East Asia-HEARTS or SEAHEARTS initiative being rolled out by countries to reduce the burden of cardiovascular diseases. This initiative brings together efforts made for risk factor reduction (tobacco control, salt reduction and eliminating industrially produced trans-fatty acids) and improving hypertension and diabetes treatment cascade in the broader context of NCD prevention and control.

Definition and comparability

See indicator “Mortality and morbidity from all causes” in Chapter 3 for definition, source, and methodology.

Figure 3.13. Disability-Adjusted Life Years (DALYs) from cardiovascular diseases, 2021



Source: WHO 2021 Global Health Estimates.

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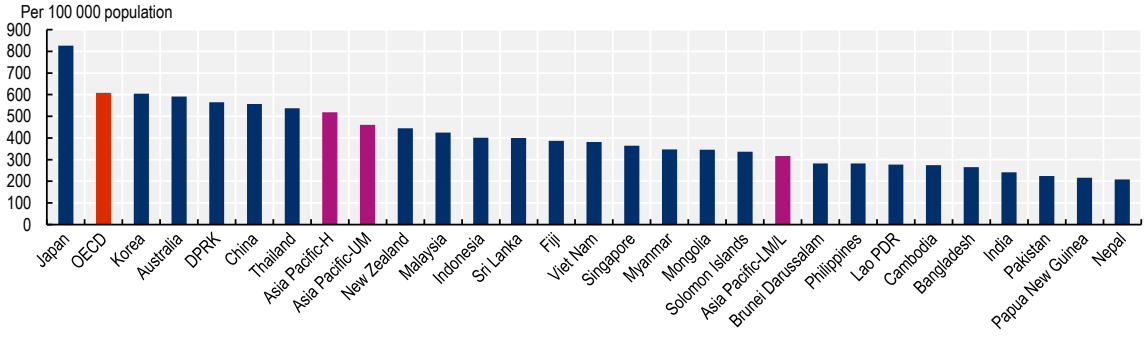
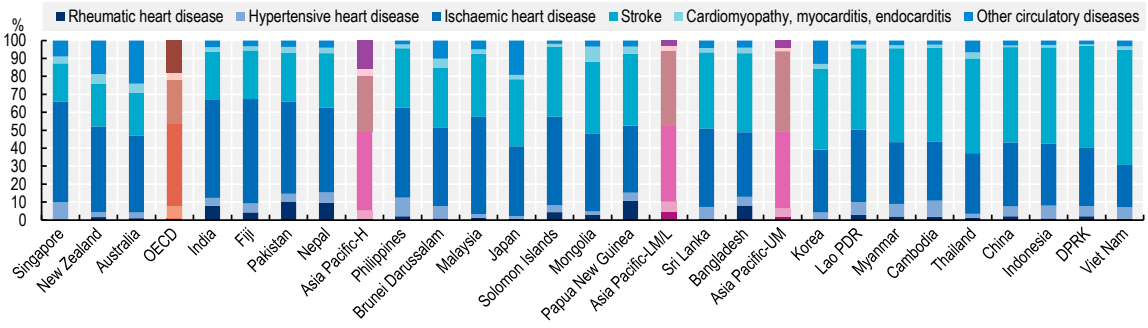
Figure 3.14. Years Lived with Disability (YLDs) from cardiovascular diseases, 2021



Source: WHO 2021 Global Health Estimates.

StatLink https://stat.link/xrezdf

Figure 3.15. Disability-Adjusted Life Years (DALYs) from cardiovascular diseases, by cause, 2021



Source: WHO 2021 Global Health Estimates.

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Mortality and morbidity from cancer

Cancer is the second leading cause of death in the Asia-Pacific region, responsible for an estimated 5 million deaths in 2021.

There are more than 100 different types of cancers, with most named after the organ in which they start. Cancer occurs when abnormal cells divide without control and are able to invade other tissues. While genetics are a risk factor, tobacco use, alcohol consumption, unhealthy diet, physical inactivity and air pollution are much greater risk factors for cancer. Currently, between 30% and 50% of cancers can be prevented by avoiding risk factors and implementing evidence-based prevention strategies. The cancer burden can also be lessened through early detection, as well as the appropriate treatment and care of patients who develop cancer. Many cancers have a high likelihood of being cured if they are diagnosed early and treated properly (WHO, 2022[1]).

In 2021, cancer accounted for over 4 000 disability-adjusted life years (DALYs) per 100 000 population in high-income countries in the Asia-Pacific region (Figure 3.16). Notably, China and DPRK recorded over 5 000 DALYs per 100 000 population across all ages from cancer. In contrast, the burden of cancer was significantly less in lower-middle- and low-income countries, with an average rate of 2 800 DALYs per 100 000 population – approximately two-thirds the level of high-income countries and just over half the level seen in OECD countries. For instance, in the Solomon Islands, Pakistan and Nepal, DALYs were under 1900 per 100 000 population in 2021. The burden of cancer is generally less in low-income countries due to several factors, including lower life expectancy, underdiagnosis, and the dominance of infectious diseases.

Cancer also accounted for over 200 years lived with disability (YLDs) per 100 000 population across all ages in high-income countries and territories in the Asia-Pacific in 2021 (Figure 3.17). Japan, New Zealand and Australia experienced more than 280 YLDs per 100 000 population due to cancer in 2021. In comparison, YLDs in upper-middle-, and lower-middle- and low-income countries were significantly lower, at 81 and 42 per 100 000 population, respectively.

Cancer is a generic term for a large group of diseases that can affect any part of the body. Trachea, bronchus, and lung cancer were the leading types of cancer across Asia-Pacific countries and territories (Figure 3.18), accounting for an average of 14% to 18% of all DALYs from cancer in high, upper-middle-, and lower-middle- and low-income countries and territories in 2021. Liver cancer mortality and morbidity was also high in lower-middle- and low-income countries and territories in the region, representing 13% of all cancer-related DALYs on average in 2021. The burden of liver cancer was exceptionally high in Mongolia, where it accounted for 44% of all cancer-related DALYs. Mongolia aims to reduce liver cancer incidence in the coming decades through increased hepatitis immunisation.

Other leading causes of cancer death and disability included stomach, colorectal, and breast cancer. Mortality and morbidity from stomach cancer accounted for 5% to 7% of cancer-related DALYs on average in 2021, largely due to helicobacter pylori infection. The burden of stomach cancer was greatest in China and Mongolia. Japan, New Zealand and Singapore had the highest proportion of DALYs attributable to colorectal cancer when compared to other countries. Breast cancer, the most common cause of cancer death among women, was responsible for over 20% of all cancer-related DALYs in Fiji and 15% or more in the Philippines and the Solomon Islands.

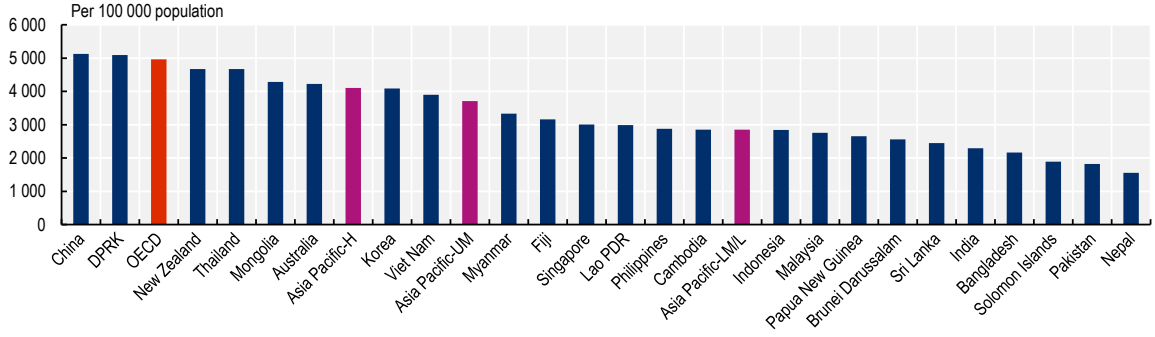
Definition and comparability

See indicator “Mortality and morbidity from all causes” in Chapter 3 for definition, source, and methodology.

References

WHO (2022), *Cancer*, World Health Organization, https://www.who.int/news-room/fact-sheets/detail/cancer. [1]

Figure 3.16. Disability-Adjusted Life Years (DALYs) from cancer, 2021



Source: WHO 2021 Global Health Estimates.

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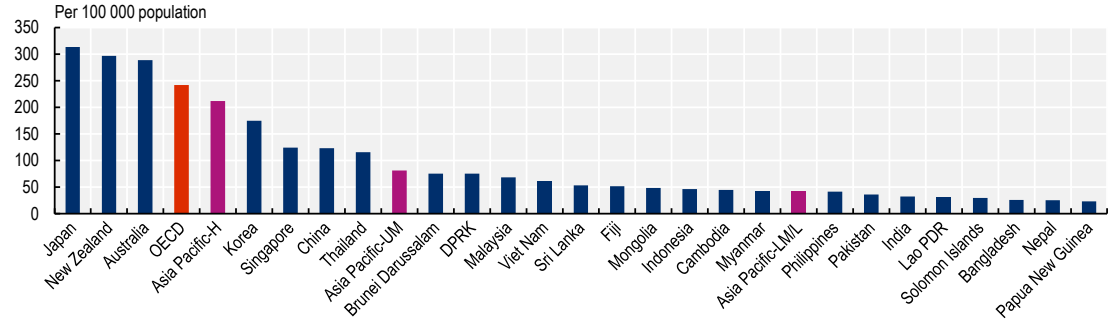
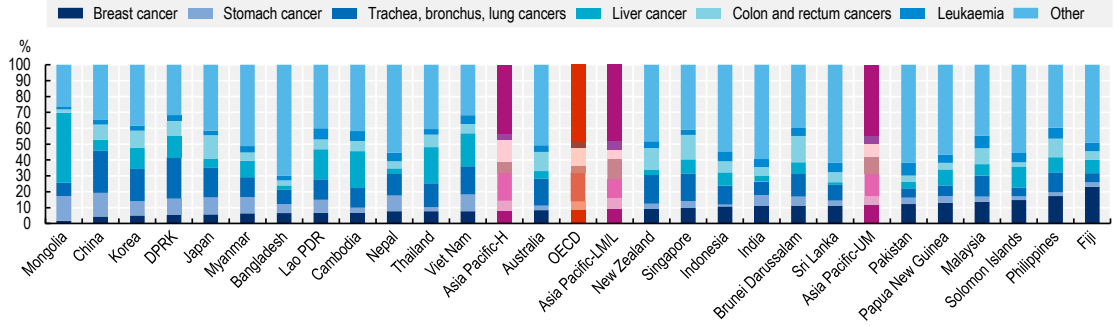
Figure 3.17. Years Lived with Disability (YLDs) from cancer, 2021



Source: WHO 2021 Global Health Estimates.

StatLink https://stat.link/jmt47h

Figure 3.18. Disability-Adjusted Life Years (DALYs) from cancer, by cause, 2021



Source: WHO 2021 Global Health Estimates.

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Mortality and morbidity from injuries

Injuries took 2.1 million lives in the Western Pacific Region and the South-East Asia Region in 2021. Injuries can result from traffic collisions, drowning, poisoning, falls or burns, and violence from assault, self-inflicted or acts or war. The magnitude of the problem varies considerably across countries and territories by cause, age, sex, and income group. However, injury deaths and disability, both intentional and unintentional, are largely preventable events.

In 2021, injuries accounted for over 3 500 disability-adjusted life years (DALYs) per 100 000 population across all ages in low-middle- and low-income countries in the Asia-Pacific region (Figure 3.19). Notably, Mongolia and Thailand recorded over 4 500 DALYs per 100 000 population from injuries in the same year. In contrast, the burden of injuries was significantly less upper-middle- and high-income countries in the region, with an average rate of 2 700 and 2 400 DALYs per 100 000 population.

Injuries can cause severe disability by damaging the body's tissues, organs, or systems in ways that result in long-term or permanent impairments. For example, traumatic injuries to the spine or brain can lead to paralysis, cognitive deficits, or loss of motor function, while injuries to limbs might result in amputation or chronic pain, all of which limit a person's ability to perform daily activities, work, or engage in social interactions. Injuries accounted for over 1 200 years lived with disability (YLDs) per 100 000 population across all ages in high-income countries and territories in the Asia-Pacific in 2021 (Figure 3.20). New Zealand and Australia experienced more than 1 500 YLDs per 100 000 population due to injury in 2021. In comparison, YLDs in upper-middle-, and lower-middle- and low-income countries were significantly lower, at 540 and 596 per 100 000 population, respectively.

Road traffic crashes represented the highest burden on death and disability of all injuries in upper-middle- and lower-middle- and low-income Asia-Pacific countries and territories in 2021, responsible for approximately a third of DALYs from injuries (Figure 3.21). In DPRK, Bangladesh, China and Nepal, 35% or more of all injury DALYs were due to road traffic crashes.

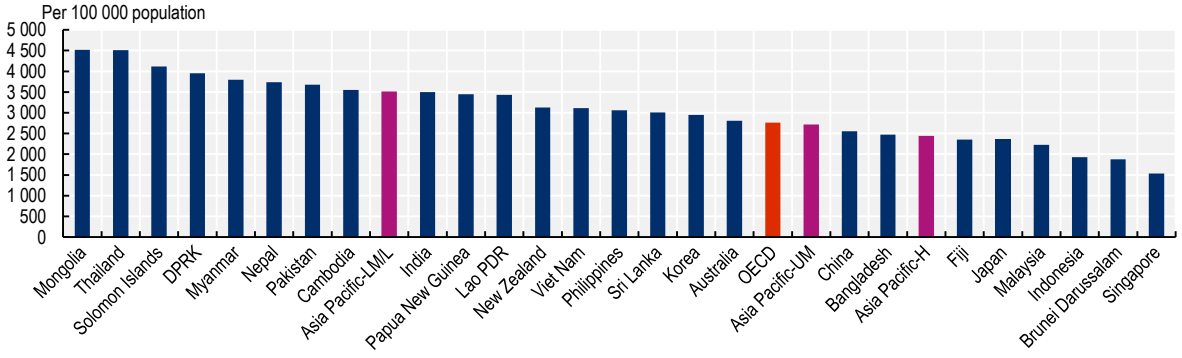
In high-income countries, falls were the leading cause of death and disability of all injuries in 2021 (Figure 3.21). As the burden is often concentrated in older adults, population ageing can cause more incident cases and deaths from falls as people live longer. In Australia and Singapore, falls contributed to over 30% of all DALYs from injury in 2021. In upper-middle- and lower-middle- and low-income Asia-Pacific countries and territories, the share of DALYs from falls was half the rate of that in high-income and OECD countries.

Intentional injuries accounted for approximately a quarter of DALYs from falls in 2021. This share was 40% in Korea, and over 30% in Mongolia, the Solomon Islands and the Philippines. Interpersonal violence was the main cause of intentional injuries in the Philippines, while in Mongolia and the Solomon Islands this can be attributed to self-harm.

Definition and comparability

See indicator "Mortality and morbidity from all causes" in Chapter 3 for definition, source, and methodology.

Figure 3.19. Disability-Adjusted Life Years (DALYs) from injury, 2021



Source: WHO 2021 Global Health Estimates.

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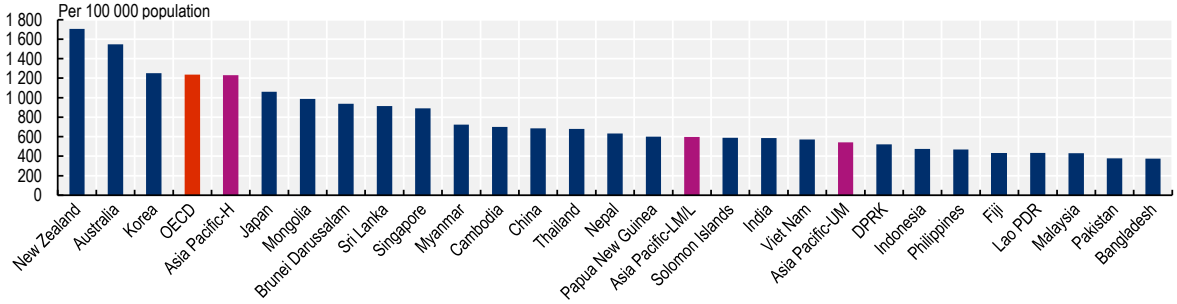
Figure 3.20. Years Lived with Disability (YLDs) from injury, 2021



Source: WHO 2021 Global Health Estimates.

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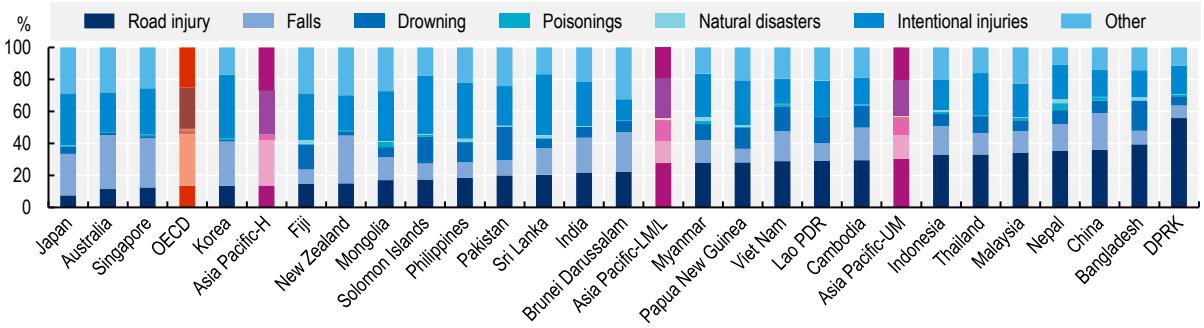
Figure 3.21. Disability-Adjusted Life Years (DALYs) from injury, by cause, 2021



Source: WHO 2021 Global Health Estimates.

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Maternal mortality

Every day in 2020, almost 800 women died from preventable causes related to pregnancy and childbirth. Most of these complications develop during pregnancy and are preventable or treatable (WHO, 2024[1]). Some countries in the Asia Pacific region face challenges such as limited access to affordable, high-quality public healthcare, gender norms that restrict women's movements, and sociodemographic factors impeding the delivery of maternal health services. Additionally, the region is significantly affected by high fertility rates, early marriage, and teenage pregnancies (ADB, 2024[2]).

Maternal mortality ratio (MMR) averaged around 121 deaths per 100 000 live births in lower-middle- and low-income Asia-Pacific countries and territories in 2020. This is almost double the rate in upper-middle-income countries and territories in the region (57) and more than ten times that of high-income countries and territories (12) (Figure 3.22, left panel). Estimates for 2020 show a small group of countries – Korea, Singapore, Australia, Japan and New Zealand – with very low ratios (less than 10 per 100 000 live births). In contrast, the MMR was over 200 deaths per 100 000 live births in Cambodia, and over 150 in Papua New Guinea, Myanmar, Nepal, Indonesia and Pakistan. This is substantially above the target set by the Sustainable Development Goals of reducing the maternal mortality ratio to less than 70 deaths per 100 000 live births by 2030.

Despite high rates in certain countries, substantial progress in reducing maternal mortality has been achieved in the Asia-Pacific over the last 20 years (Figure 3.22, right panel). The MMR declined by over 50% between 2000 and 2020 across lower-middle- and low-income Asia-Pacific countries and territories. In particular, Lao PDR, Mongolia, India and Bangladesh achieved reductions in the maternal mortality rate of over 70%. In Lao PDR, the significant improvement in maternal health is the result of decades of investment in a national maternal health action plan. Key actions included strengthening antenatal care, leading to a 40% increase in the number of women giving birth in health facilities with skilled birth attendants. The plan also included increased routine monitoring and early detection, reducing the number of women needing referral to higher-level care.

Care by skilled health professionals during childbirth can save the lives of women and newborns (Figure 3.23). Nepal and Bangladesh report that less than 60% of live births are attended by skilled health professionals (see indicator "Pregnancy and birth" in Chapter 5) and present relatively high MMRs – above 120 deaths per 100 000 live births. While Cambodia has successfully expanded maternal care such that nearly all births are attended by a skilled health professional, the MMR rate remains highest in the region.

Antenatal care coverage is an indicator of access of healthcare during pregnancy. Evidence suggests that receiving antenatal care at least four times increases the likelihood of receiving effective maternal health interventions during the antenatal period. Coverage was nearly 100% in Brunei Darussalam, Korea, Malaysia and Singapore (Figure 3.23). Meanwhile, in Bangladesh – which has an MMR well above the regional average – only 40% of women received antenatal care four or more times. Evidence from Bangladesh suggests women from the poorest group, those in rural areas, with no education, a high birth order and no media exposure were less likely to receive high-quality antenatal care (Akter et al., 2023[3]).

Definition and comparability

Maternal mortality is defined as the death of a woman while pregnant or during childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from unintentional or incidental causes (WHO, 2019[4]).

This includes direct deaths from obstetric complications of pregnancy, interventions, omissions, or incorrect treatment. It also includes indirect deaths due to previously existing diseases, or diseases that developed during pregnancy, where these were aggravated by the effects of pregnancy.

Maternal mortality is here measured using the maternal mortality ratio (MMR). It is the number of maternal deaths during a given period per 100 000 live births during the same period.

There are difficulties in identifying maternal deaths precisely. Many countries and territories in the region do not have accurate or complete vital registration systems, and so the MMR is derived from other sources including censuses, household surveys, sibling histories, verbal autopsies, and statistical studies. Because of this, estimates should be treated cautiously.

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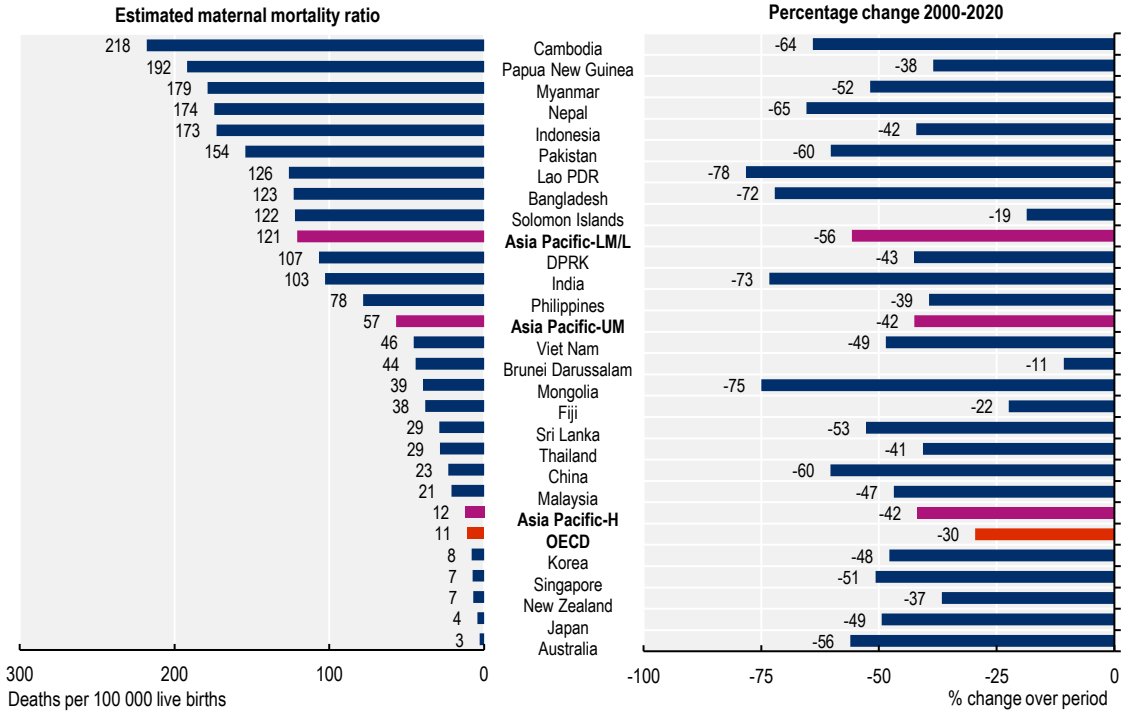
Figure 3.22. Estimated maternal mortality ratio, 2020 and percentage change since 2000



Source: WHO GHO (2024).

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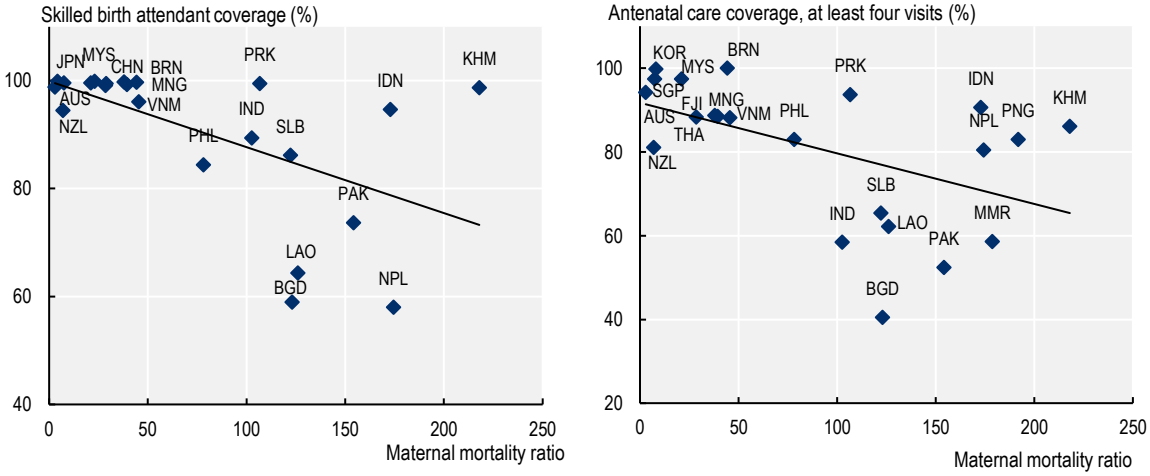
Figure 3.23. Skilled birth attendant and antenatal care coverage versus estimated maternal mortality ratios, latest year available



Source: WHO GHO (2024).

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Tuberculosis

After two years of COVID-19 related-disruptions, there was a major recovery in the number of people diagnosed with Tuberculosis (TB) and treated in 2022, however TB remained the second leading cause of death from a single infectious agent in 2022, after COVID-19 in Asia-Pacific. In 2022, there were 7.5 million incident (new and relapsed) TB cases worldwide – the highest number since WHO began global TB monitoring in 1995, which probably includes a sizeable backlog of people who developed TB in previous years, but whose diagnosis and treatment was delayed by COVID-related disruptions, leading to an estimated 1.3 million deaths globally (WHO, 2023[1]). In 2022, 55% of people who developed TB were men, 33% were women and 12% were children (aged 0-14 years). Most cases of TB are curable if diagnosed early and the appropriate treatment is provided, therefore curtailing onward transmission of infection.

TB was declared a global health emergency by the WHO in 1993, and the WHO-co-ordinated Stop TB Partnership set targets of halving TB prevalence and deaths by 2015 compared with a baseline of 1990. The WHO's End TB Strategy (post-2015) which followed the Stop TB Strategy aims at ending the global TB epidemic by 2035, in line with the Sustainable Development Goals (Sharma, 2017[2]).

A high-level meeting was held in September 2023, alongside high-level meetings about universal coverage and pandemic prevention, preparedness and response (PPPR). The political declaration includes new commitments and targets for the period 2023-27 to accelerate progress to end TB. The new targets include reaching 90% of people in need with TB prevention and care services; using a WHO-recommended rapid test as the first method of diagnosing TB; providing a health and social benefit package to all people with TB; ensuring the availability of at least one new TB vaccine that is safe and effective; and closing funding gaps for TB implementation and research by 2027. (WHO, 2024[3])

In Asia-Pacific, TB mortality rates were high in Myanmar, Nepal and Indonesia with 50 deaths or over of people without HIV per 100 000 populations. TB mortality rates among people with HIV is highest in Myanmar at about 11 per 100 000 populations, (Figure 3.24, left panel).

South-East Asia accounted for 46% of the estimated TB cases globally in 2022, more than any other WHO region. India (27.0% of TB cases globally), Indonesia (10%), China (7.1%), the Philippines (7.0%), Pakistan (5.7%), and Bangladesh (3.6%) were amongst the most affected countries and territories in 2022 (WHO, 2023[1]).An incidence rate higher than 500 cases per 100 000 population was estimated for the Philippines and DPRK, while for Australia and New Zealand less than 10 incident cases per 100 000 population were estimated (Figure 3.24, right panel).

High-quality TB services have expanded, and many cases are treated, reaching the treatment success rate for new TB cases of more than 85% in many Asia-Pacific countries and territories in 2021 (Figure 3.25, left panel). Nevertheless, Fiji reports a low treatment success rate at 56%. In countries and territories where TB predominantly affects older people -such as Japan and Hong Kong (China), treatment success rate was lower than 75% (Teo et al., 2023[4]). Globally the treatment success rate was 86% for those enrolled in 2020 (the same level as in 2019) and 88% for those enrolled in 2021. This shows that, despite the many disruptions caused by the COVID-19 pandemic, the quality of treatment for those diagnosed with TB was maintained in 2020 and 2021 (WHO, 2024[3]; Oh et al., 2024[5]).

The Asia-Pacific region is rising to the challenges presented by TB. In a large part of the countries and territories, case notification rates have declined from 2015 to 2022 (Figure 3.25, right panel). However, countries and territories like Indonesia, Lao PDR, Fiji, Philippines, India, Singapore, Pakistan, Bangladesh, Thailand, Papua New Guinea are showing upward trends. Some countries in the Asia-Pacific region still face important challenges in TB control, including providing services to those in greatest need, especially the poor and vulnerable and there are still major economic and financial barriers to accessing and completing TB treatment, which need to be addressed through faster progress towards UHC and better

levels of social protection. TB-HIV co-infection, the spread of drug-resistant strains, a sizeable proportion of TB-affected population facing catastrophic costs due to TB, funding gaps and the need for greater technical expertise all remain threats to progress (WHO, 2016[6]; WHO, 2019[7]). Concerning drug-resistant TB (MDR/RR-TB), Despite increased testing coverage and an increase in the absolute number of people tested, the number of people detected with MDR/RR-TB was lower in 2022 (i.e. 4.4% of those tested) than in 2019 (5.6% of those tested) (WHO, 2023[1]).

Definition and comparability

Tuberculosis (TB) is a contagious disease, caused by the Mycobacterium tuberculosis bacteria. Tuberculosis usually attacks the lungs but can also affect other parts of the body. It is spread through the air, when people who have the disease cough, sneeze, talk or spit. Most infections in humans are latent and without symptoms, with about one in ten latent infections eventually progressing to active disease. If left untreated, active TB kills between 20% and 70% of its victims within ten years depending on severity.

The TB incidence rate is the number of new and relapse cases (newly occurring) of the disease estimated to occur in a year, per 100 000 population. Mortality of TB cases can be reported among HIV-negative people and for people with HIV. Case notification rate is the total of new and relapse cases and cases with unknown previous TB treatment history notified to the national programmes per 100 000 population.

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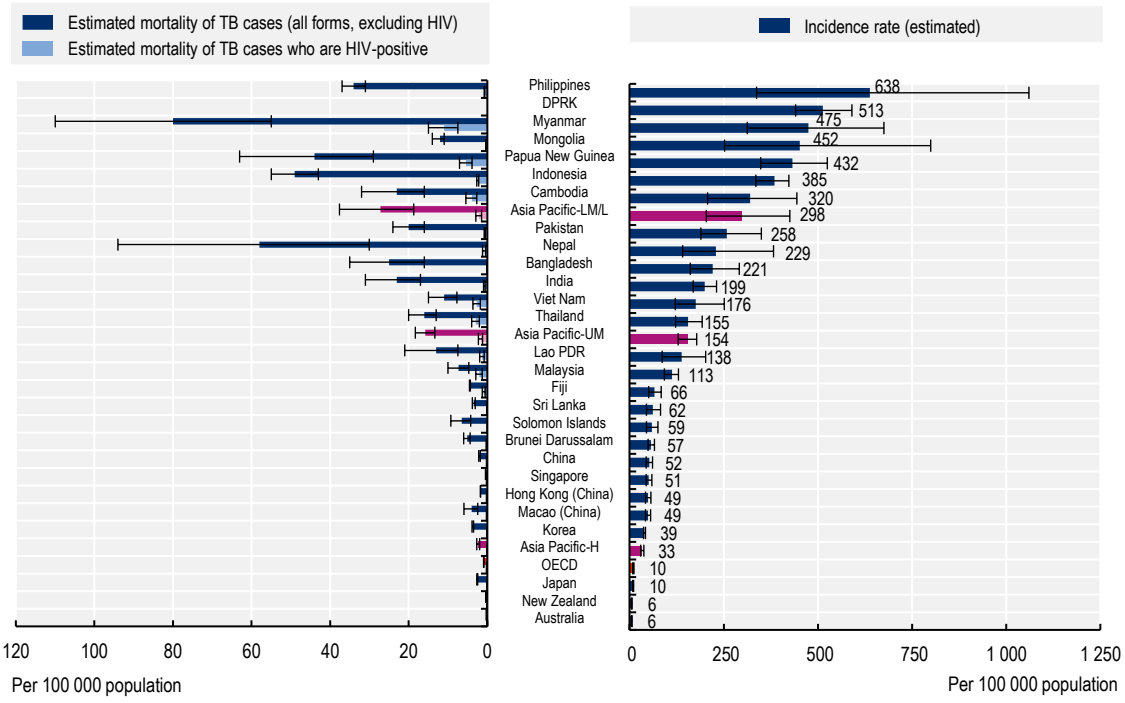
Figure 3.24. Estimate of the burden of disease caused by tuberculosis, 2022



Source: Global Tuberculosis Report 2023.

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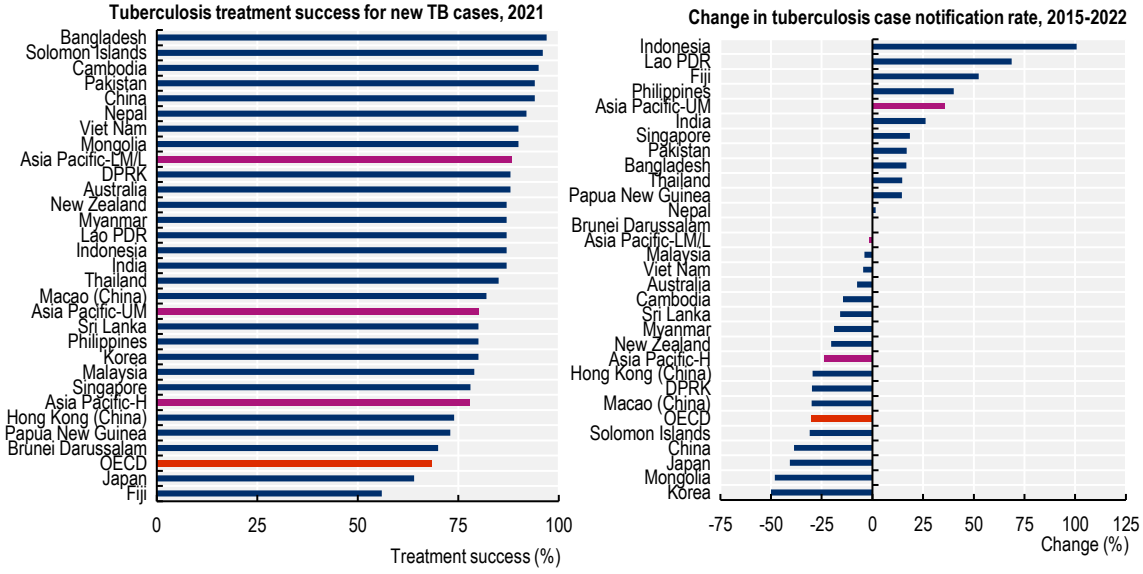
Figure 3.25. Tuberculosis treatment success for new TB cases and change in tuberculosis case notification rate



Source: Global Tuberculosis Report 2023.

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HIV/AIDS

Human immunodeficiency virus (HIV) is a retrovirus that destroys or impairs the cells of the immune system. As HIV infection progresses, a person becomes more susceptible to infections. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take 10-15 years for an HIV-infected person, without treatment, to develop AIDS. HIV and AIDS is an important public health problem that requires monitoring the trend of the epidemic and the impact of intervention, therefore a sustainable development goal is to reduce new infections of HIV and mortality due to HIV (WHO, 2024[1]). In 2023, 39.9 million people are living with HIV, of which almost 25% (9.3 million) are not receiving treatment (UNAIDS, 2024[2]). Although in 2023 there were about 39% fewer cases of acquired HIV compared to 2010, an estimated 1.3 million people acquired HIV in 2023; Central Asia being one of the regions with increased new HIV infections (UNAIDS, 2024[2]). Although the first cases of AIDS in Asia were reported mid-1980s, the more extensive spread of HIV began late compared with the rest of the world, occurring in Cambodia, India, Myanmar and Thailand in the early 1990s (Ruxrungtham, Brown and Phanuphak, 2004[3]; UNAIDS, 2013[4]).

In Asia-Pacific, the prevalence of HIV infection varied importantly, ranging from one in 1 000 adults aged 15 to 49 in Nepal, Australia, Bangladesh, Sri Lanka, New Zealand and Mongolia to 10 out of 1 000 adults aged 15 to 49 in Papua New Guinea in 2023 (Figure 3.26, left panel). Although HIV prevalence was relatively low in India (0.2%) for 2021, the absolute number of people living with HIV was high at more than 2.5 million in 2023 (Figure 3.26, right panel).

Although access to antiretroviral therapy (ART) has increased the survival rates of people living with HIV, about a quarter of the people eligible for HIV treatment do not receive it worldwide (WHO, 2024[1]). The estimated ART coverage amongst persons living with HIV in 2023 was less than 40% in Pakistan, Fiji, Indonesia and Mongolia, whereas more than 80% had access to ART in Nepal, Thailand, Cambodia and New Zealand (Figure 3.27, left panel). Comparing lower-middle- and low-income countries with high-income countries, on average, there is a gap of 29% in favour of the higher-income countries, showing the greater need for funding ART in lower-income countries.

Over past years, many countries in Asia-Pacific responded to HIV/AIDS successfully and incidence rates have declined. New Zealand, Sri Lanka and Bangladesh had one new case of HIV infection per 100 000 population in 2023. However, Philippines, Fiji and Papua New Guinea increased in incidence in 2023 compared to 2021, with Papua New Guinea having almost seven new cases of HIV infections per 100 000 uninfected population in 2023 (Figure 3.27, right panel).

Advances in HIV prevention and treatment could end AIDS as a public health threat in the region. The ART does not only improve health and prolong the lives of people living with HIV, but also prevents HIV transmission. The rapid scale up of ART, along with efforts of making it more affordable for low- and middle-income countries, is an opportunity for Asia Pacific countries to successfully implement antiretroviral-based interventions for prevention (WHO, 2024[1]). The benefits of ART can be fully realised only if people living with HIV are diagnosed and successfully linked to care. This will require targeted efforts and removing barriers especially amongst key affected populations, as most of Asia's epidemics occur amongst sex workers and their clients, men who have sex with men, transgender persons, and injection drug users.

Definition and comparability

Estimated number of people living with HIV is the number of people with HIV infection, whether or not they have developed symptoms of AIDS, estimated to be alive at the end of a specific year. The method of measurement is direct estimates from HIV case surveillance systems and modelled estimates (WHO, 2024[1]).

The HIV prevalence amongst adults aged 15 to 49 is the number of persons aged 15 to 49 estimated to be living with HIV divided by the total number of persons in that age group at a particular time (WHO, 2024[1]).

The estimated ART coverage among people living with HIV is the percentage of people with HIV infection receiving ART in accordance with treatment protocols (or WHO/UNAIDS standards) among the estimated number of people with HIV infection (WHO, 2024[1]).

New HIV infections are the estimated number of new HIV infections per 1 000 uninfected population (WHO, 2024[1]).

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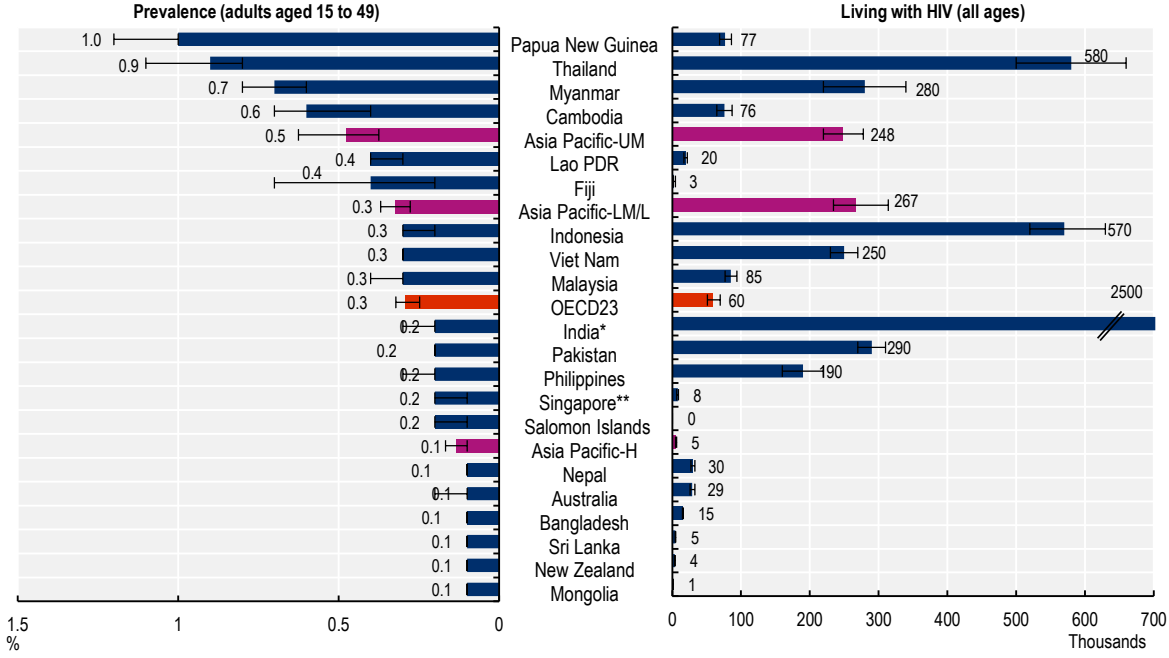
Figure 3.26. Estimated number of people living with HIV, 2023 (or nearest year)



Source: WHO GHO 2024.

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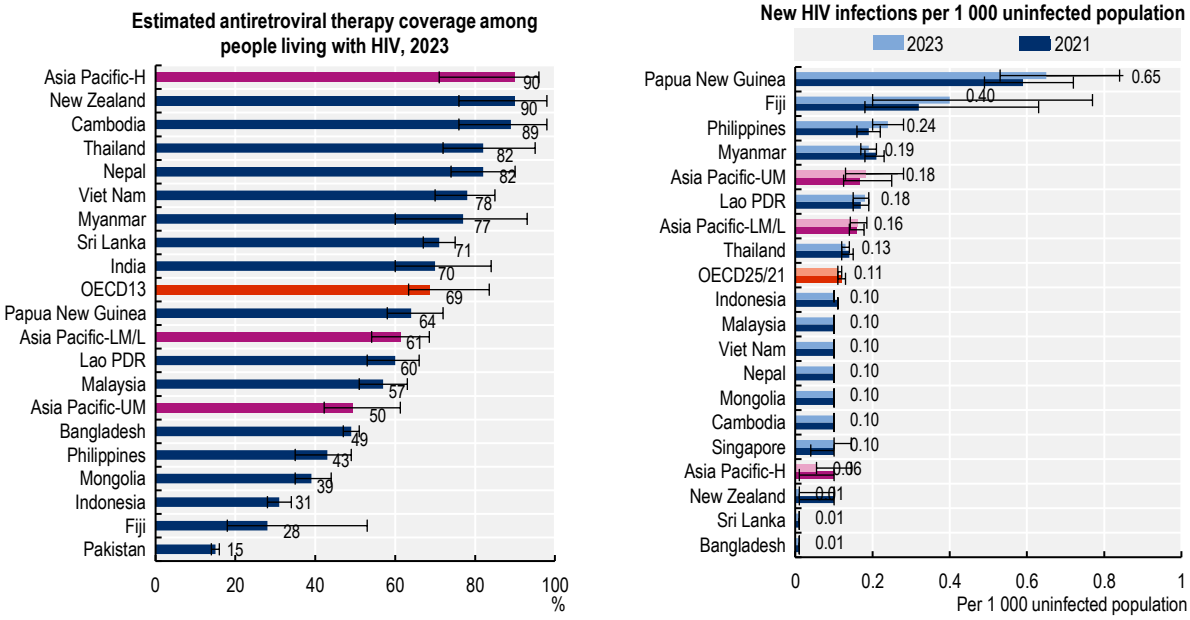
Figure 3.27. Estimated antiretroviral therapy coverage and new HIV infections



Source: WHO GHO 2024.

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Malaria

Malaria is a tropical disease caused by a parasite transmitted by the bites of infected female Anopheles mosquitoes. After a period spent in the liver, malaria parasites multiply within red blood cells, causing symptoms such as fever, headache, and vomiting. Malaria is preventable and curable and recently WHO recommended the use of two effective malaria vaccines (RTS,S or R21) for children at risk (WHO, 2023[1]). Still, if left untreated, malaria can become life-threatening by disrupting the blood supply to vital organs.

As part of the SDG targets, the UN set a goal to end the epidemic of malaria by 2030. After nearly four years of maintaining zero indigenous cases, and after intensive external evaluations including field assessments, Sri Lanka was certified by WHO as malaria-free in September 2016. In 2021, China was certified by WHO as malaria free. To provide technical support to countries aiming to eliminate malaria, WHO developed the Global Technical Strategy for Malaria 2016-2030 which focuses on: standards, innovation, strategic leadership, and a cross-cutting objective of context-based country support (WHO, 2023[1]).

In 2022, South-East Asia alone accounted for 2% (5.2 million) of the estimated 249 million malaria cases globally, with 8 000 estimated deaths (WHO, 2023[1]). Although, overall, since 2010 the number of confirmed cases in the countries of the Asia Pacific region herein reported decreased from 3.1 to 1.7 million in 2021, there was an increase in cases in 2022, reporting more than 3.6 million confirmed cases. As seen in Figure 3.28 (left panel), the increase in confirmed cases in 2022 was concentrated in Pakistan, Papua New Guinea, Indonesia and Myanmar. The drastic increase in cases in Pakistan was associated to catastrophic flooding which affected more than 30 million people and more than 1 000 healthcare facilities, which also relates to the increase estimated mortality rate (Figure 3.28, right panel). In Papua New Guinea, most of the increased cases and mortality rates are a result of challenges in the health system and unstable funding (WHO, 2023[1]). The highest mortality rates were seen in Papua New Guinea and the Solomon Islands (Figure 3.28, right panel).

For a balanced understanding, changes in the number of malaria cases should be viewed in parallel with changes in malaria incidence. The number of estimated cases per 1 000 population at risk showed stability in most reporting Asia-Pacific countries and territories from 2020 to 2022, but there was an increase in incidence in Solomon Islands, Myanmar and Pakistan (Figure 3.29, left panel). Although in Myanmar the incidence rate was decreasing from 67.0 per 1 000 population at risk in 2010 to 2.6 in 2020, there was a dramatic increase in the incidence rate to 12.4 in 2022. The increase in Malaria cases in Myanmar was associated to political and social instability in the country, which also impacted in the increase in cases in Thailand, a bordering country.

The number of malaria cases not treated increased to around three out of ten in Papua New Guinea and the Philippines, whereas it decreased significantly to less than one out of ten in Cambodia and Pakistan from 2000 to 2020 (Figure 3.29, right panel). During the same period, the estimated number of malaria cases not treated doubled to one in five in Myanmar, while they remained the same (less than one in ten) in Solomon Islands.

Definition and comparability

Underreporting of malaria cases and deaths remain a major challenge in countries and territories with inadequate and limited access to health services and weak surveillance systems. The number of **confirmed malaria cases**, as reported by each country, are the cases confirmed by microscopy or by rapid diagnostic tests. The **mortality rate** is estimated by adjusting the number of reported malaria cases for completeness of reporting, the likelihood that cases are parasite positive, and the extent of health service use. The **incidence rate** is calculated by the number of estimated cases divided by the population at risk, which is defined as population living in areas where malaria transmission occurs.

The **proportion of malaria cases not treated** is estimated using the cases reported by the national malaria control program, adjusted for diagnosis and reporting completeness, and for care seeking behaviour. It is the estimated proportion of cases among those who did not seek care over all the cases estimated for the country.

References

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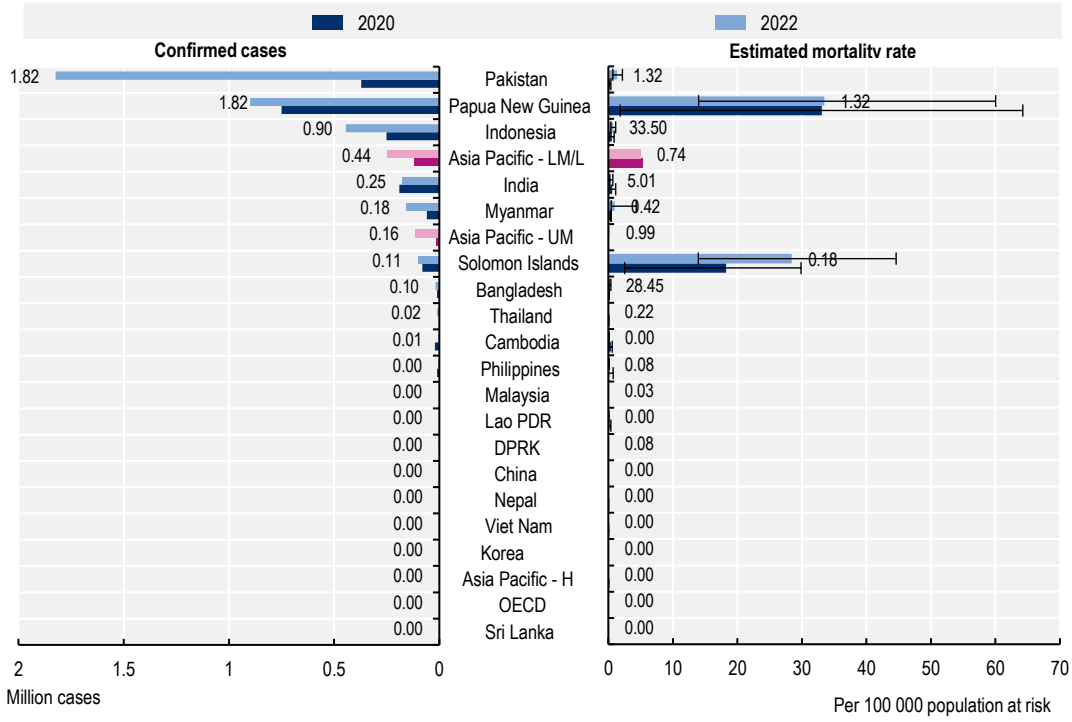
Figure 3.28. Confirmed malaria cases and estimated mortality rates, 2020 and 2022



Source: WHO World Malaria Report 2023.

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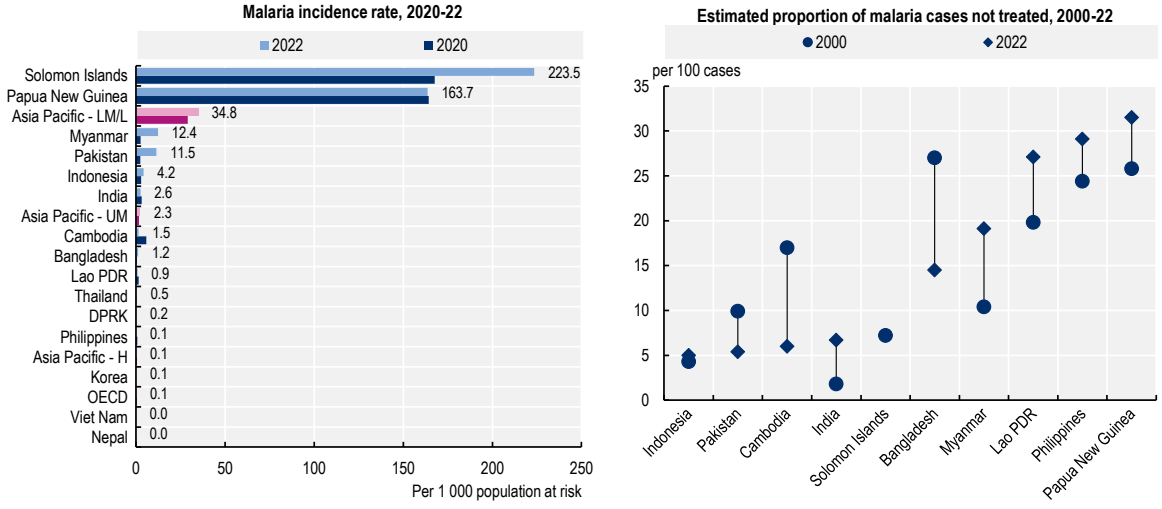
Figure 3.29. Malaria incidence rate and estimated proportion of malaria cases not treated



Source: WHO World Malaria Report 2023.

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Diabetes

Diabetes is a chronic metabolic disease, characterised by high levels of glucose in the blood. It occurs either because the pancreas stops producing the hormone insulin (type 1 diabetes, insulin-dependent diabetes, genetic predisposition), which regulates blood sugar, or it reduces its ability to produce insulin (type 2 diabetes, non-insulin dependent, can be lifestyle related), or the body reduces its ability to respond to insulin (i.e. insulin resistance). People with diabetes are at a greater risk of developing cardiovascular diseases such as heart attack and stroke. They also have elevated risks for vision loss, foot, and leg amputation due to damage to nerves and blood vessels, and renal failure requiring dialysis or transplantation.

Diabetes is one of the most common non-communicable diseases globally, affecting more than 520 million people in 2021, with an age-standardised total prevalence of 6.1% (Ong et al., 2023[1]; IDF, 2022[2]). In Asia-Pacific, about 227 million people live with type 2 diabetes and about half of them are undiagnosed and unaware of developing long-term complications. In 2019, diabetes caused 1.5 million deaths worldwide and an additional 460 000 kidney disease deaths due to diabetes (WHO, 2023[3]). Between 2000 and 2019, mortality due to diabetes has increased by 3% (WHO, 2023[3]).

Type 2 diabetes comprises 90% of people with diabetes around the world, and until recently, this type of diabetes was seen only in adults, but it is now also occurring in children. For many people, the onset of type 2 diabetes can be prevented or delayed through regular physical exercise and maintaining a healthy weight (see indicators on “Child malnutrition (including undernutrition and overweight)” in Chapter 4) and a healthy diet. Although the cause of type 1 diabetes is not fully understood, it is known that genetic predisposition and environmental factors contribute to its development (WHO, 2023[3]).

Amongst all the 25 Asia-Pacific countries and territories in this report, the years lived with disability (YLDs) from diabetes per 100 000 population increased between 2010 and 2021, with increases of more than 200 YLDs per 100 000 population in high- and upper-middle-income countries (Figure 3.30). In Brunei Darussalam and Korea, this same indicator almost doubled between 2010 and 2021. In 2021, the OECD average had an absolute increase of 189 years of healthy life lost due to disability (YLDs) from diabetes mellitus per 100 000 population compared to 2010 (488 per 100 000) (Figure 3.30).

In general, both in men and women age-standardised mortality due to diabetes has increase between 2010 and 2021 in most Asia Pacific countries, except for Korea (Figure 3.31). In 2021, amongst lower-middle- and low-income Asia-Pacific countries and territories, deaths attributable to diabetes has increased to 24 per 100 000 in men and to 32 per 100 000 in women (Figure 3.31). The country with the greatest number of deaths due to diabetes, and likewise, the greatest gap between men and women is Fiji, with an age-standardise mortality of 168 per 100 000 in men and 202 per 100 000 in women (Figure 3.31).

Definition and comparability

Years lived with a disability or years of healthy life lost due to disability (YLDs) from the WHO's Global Health Estimates (GHE) are calculated as the prevalence of each non-fatal condition multiplied by its disability weight. The rate of YLDs per 100 000 population per country is calculated using the 2024 revision of the World Population Prospects. For more information on this indicator See indicator "Mortality and morbidity from all causes" in Chapter 3 for definition, source, and methodology. WHO's Global Health Estimates (GHE) are produced using data from multiple sources, including national vital registration data, latest estimates from WHO technical programmes, United Nations partners and inter-agency groups, as well as the Global Burden of Disease and other scientific studies.

OECD averages are calculated as simple averages using WHO data for all 38 member countries, to improve comparability with Asia-Pacific countries and territories by using the same standardisation process.

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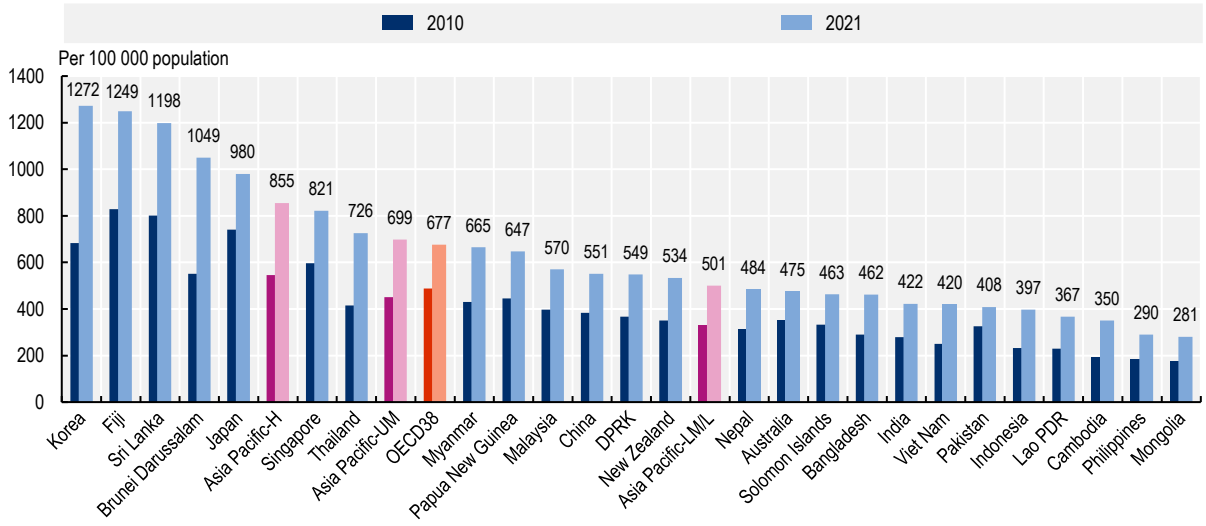
WHO (2023), *Diabetes*, World Health Organisation, https://www.who.int/news-room/fact-sheets/detail/diabetes. [3]

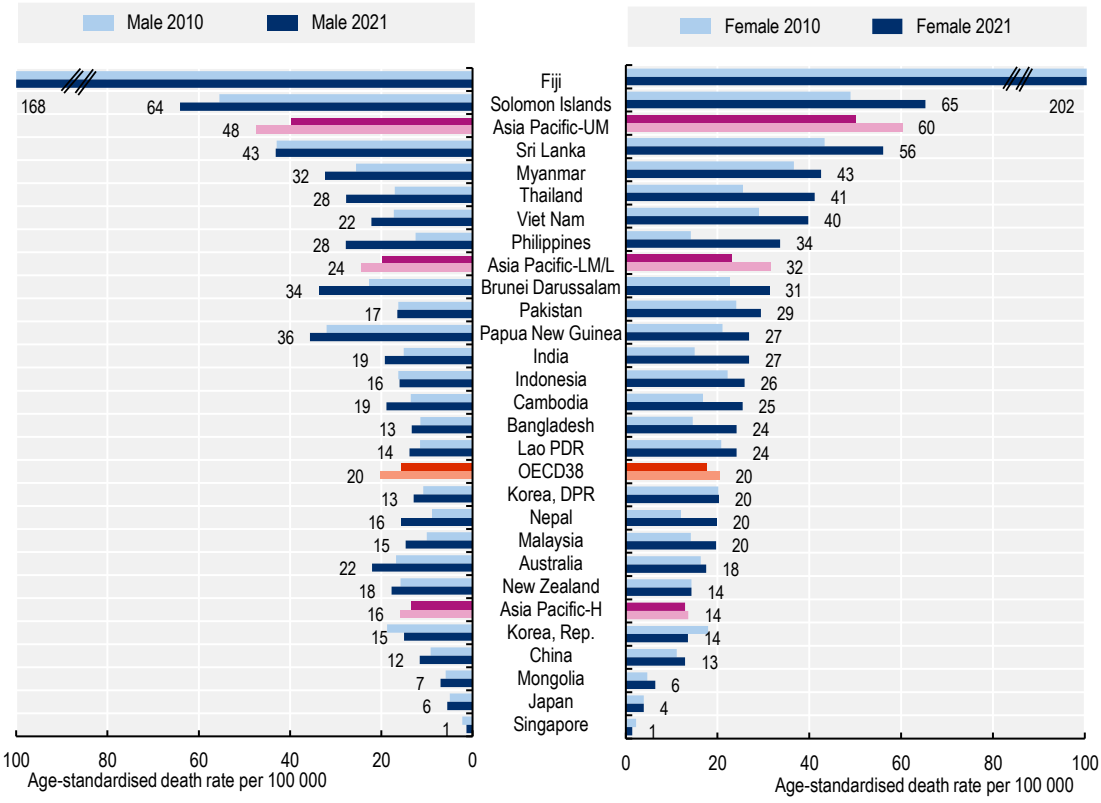
Figure 3.30. Years Lived with Disability (YLDs) from diabetes mellitus, 2010 and 2021



Source: WHO 2021 Global Health Estimates.

StatLink https://stat.link/lachdv

Figure 3.31. Mortality attributable to diabetes mellitus, 2010 and 2021



Source: WHO Global Health Observatory 2021.

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Ageing

Population ageing is characterised by a rise in the share of the older people resulting from longer life expectancy (see indicator "Life expectancy at birth and survival rate to age 65" in Chapter 3) and declining fertility rates. In Asia-Pacific countries and territories, since 2010, life expectancy has increased by about three years in low- and lower-middle-income countries and territories and by two years in upper-middle- and high-income counties. During the same period, fertility has decreased from 2.9 children per woman of reproductive age, to 2.4. This has been mainly due to better access to reproductive healthcare, primarily a wider use of contraceptives (see indicator "Family planning" in Chapter 4). Population ageing reflects the success of health and development policies over the last few decades.

The share of the population aged 65 years and over is expected to increase approximately two times in lower-middle- and low-income Asia-Pacific countries and territories in the next decades to reach 13% in 2050, from 6% in 2023 (Figure 3.32). This is still lower than the high-income- and upper-middle-income countries and territories average in 2050 of 31% and 21%, respectively (Figure 3.32, right panel). The share of older people will be particularly large in Korea, Hong Kong (China) and Japan where more than 35% of the population will be aged 65 and over in 2050.

Globally, the speed of ageing in the region will be unprecedented. In 2050, ten Asia-Pacific countries and territories will be qualified as "ageing society" (as compared to 11 countries and territories in 2023), six as "aged society" (four countries and territories in 2023) and ten as "super-aged society" (only two countries and territories in 2023, that is Japan and Hong Kong (China)). Only Pakistan is expected to show a share of population over age 65 lower that 7%, while 10 countries and territories fulfil this criterion in 2023. The speed of ageing is particularly fast in Brunei Darussalam, where the share of the population over 65 is expected to increase by close to three times between 2023 and 2050. Many low- and middle-income countries and territories are faced with much shorter timeframes to prepare for the challenges posed by the ageing of their populations.

The growth in the share of the population aged 80 years and over will be even more dramatic (Figure 3.32, right panel). On average across lower-middle- and low-income Asia-Pacific countries and territories, the share of the population aged 80 years and over is expected to almost triple between 2023 and 2050, to reach 3%. This proportion is also expected to triple in high-income and upper-middle-income countries and territories for the same period to 12% and 6%, respectively. The proportion of the population aged 80 years and over is expected to grow by over six times in Macao (China), and by over five times in China over the next decades.

The pressure of population ageing will depend on the health status of people as they become older, highlighting that the health and well-being of older people are strongly related to circumstances across their life course. Given overall numbers of older people in the population, there is likely to be a greater demand for healthcare that meets the need of older people in the Asia-Pacific region in coming decades. All countries and territories in the region will urgently need to address drastic changes in demographic structures and subsequent changes in healthcare needs, especially shifting disease burden to NDCs. Health promotion and disease prevention activities will increasingly need to address cognitive and functional decline, including frailty and falls. The health and well-being of older adults are determined by a complex interplay of factors that accumulate across a person's lifetime including political, social, economic, and environmental conditions that are largely outside the health sector. Therefore, WHO advocates that the health sector champions whole-of-government and whole-of-society approaches to health, addressing the individual's life-long needs. Health systems will need to be reoriented to become more responsive to older people's changing needs, including by investing in integrated and person-centred service delivery, supported by health financing arrangements and a health workforce with the right skills and ways of

working, and integrated health and non-health services (e.g. welfare, social, education). The development of long-term care systems as seen in OECD countries may also be worth noting. Increasingly, there is a need to foster innovative home- and community-based long-term care pathways tailored to older people's specific and diverse needs.

Over the next few decades, the increase in the population aged 65 years or more will outpace the increase in the economically active population aged 15-64 across countries and territories in Asia-Pacific (Figure 3.33). In 2050, the ratio of people aged 15-64 to people aged over 65 years will be around one-third of the 2023 value in upper-middle-income Asia-Pacific countries and territories (2.6 in 2050 vs. 7.8 in 2023), whereas it will be around three-quarters the 2023 value in high- (3.6 vs. 4.8) and lower-middle- and low-income (5.2 vs. 11.3) Asia-Pacific countries and territories. In Macao (China), Japan, India, Singapore; Thailand and China, there will be two or less persons aged 15-64 for each person aged over 65 years in 2050. This underscores the importance of the society reform to encourage social participation of older people. Older adults contribute to society in a variety of ways including through paid and unpaid work, caregiver for family members, passing down knowledge and traditions to the younger generations.

These dramatic demographic changes will affect the financing of not only health systems but also social protection systems, and the economy. Moreover, older age often exacerbates pre-existing inequities based on income, education, gender, and urban/rural residence, highlighting the importance of equity-focused policy making in future. Population ageing does not only call for equity-focused, gender-responsive and human rights-based action within the health sector but also require collaboration across sectors to address the underlying determinants of health of older people, including housing, transport, and the built environment.

Definition and comparability

Share of population aged over 65 and over 80 years of age by sex are estimates from the UN World Population Prospects. Population projections for 2050 are based on the most recent "medium-variant" projections from the United Nations (UN, 2024[1]).

In this report, we qualify a country as "ageing society" if the share of people aged 65 years or more is between 7% and 14% of the total population, as "aged society" if this share is between 15% and 20% and as "super-aged society" if this share is 21% or higher.

References

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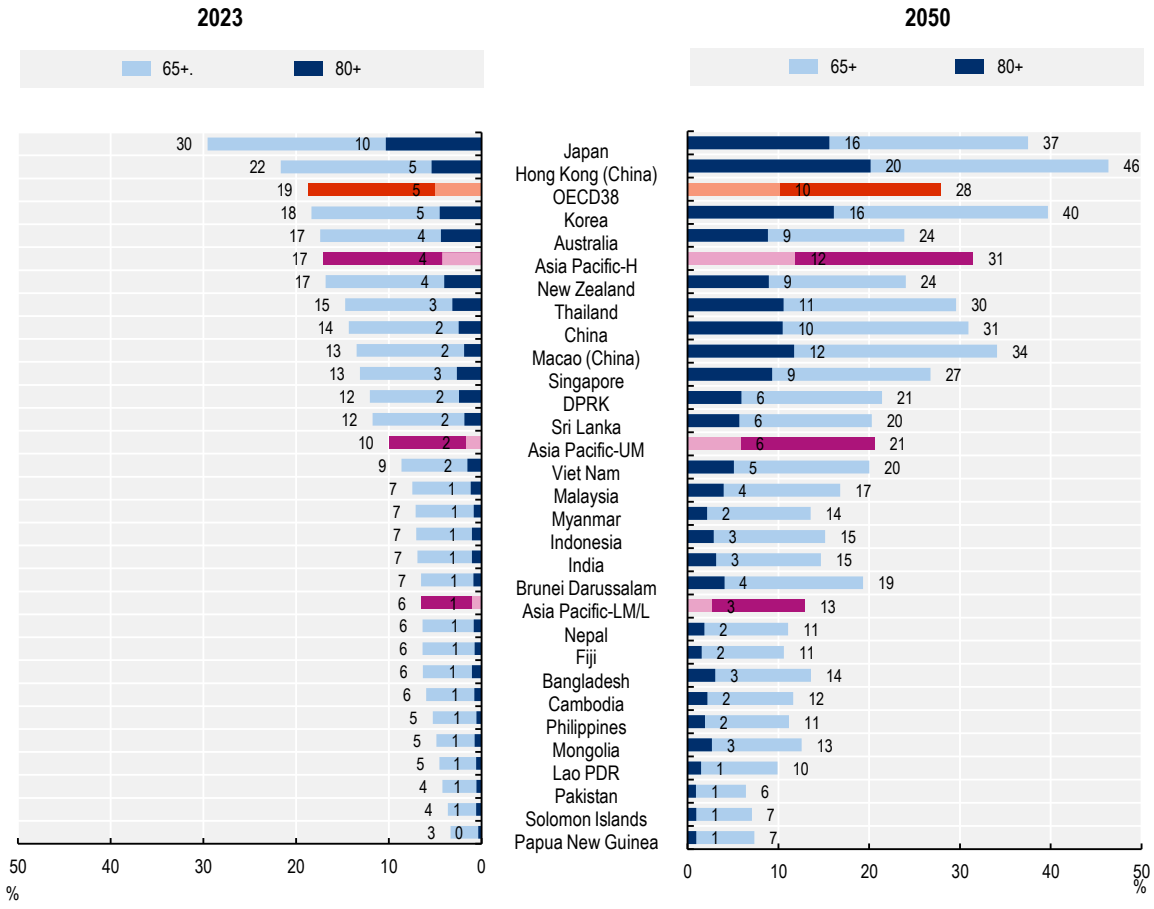
Figure 3.32. Share of the population aged over 65 and 80 years by sex, 2023 and 2050



Source: UN World Population Prospects, 2024.

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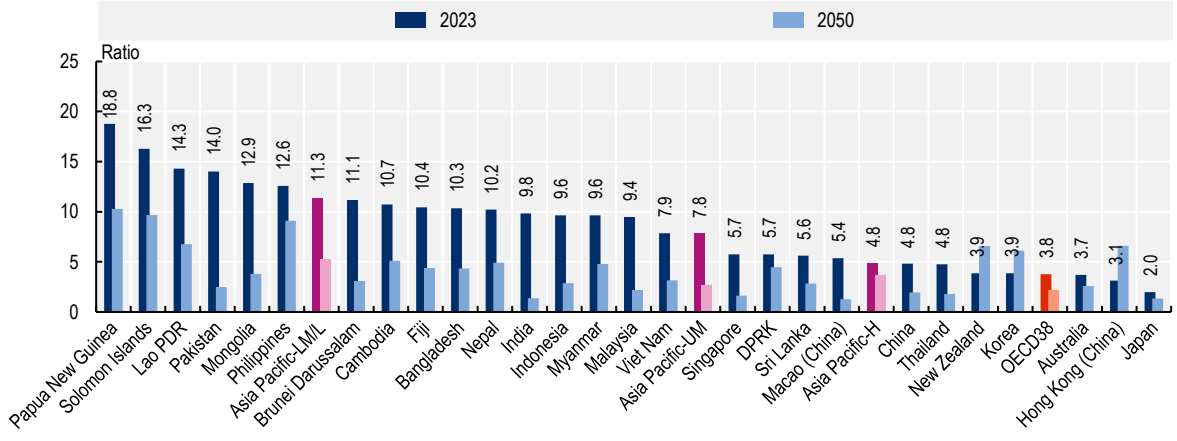
Figure 3.33. Ratio of people aged 15-64 to people aged over 65 years, 2023 and 2050



Source: UN World Population Prospects, 2024.

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4 Determinants of health

Family planning

The UN Sustainable Development Goals set a target of ensuring universal access to reproductive healthcare services by 2030, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes. Providing family planning services is one of the most cost-effective public health interventions, contributing to significant reductions in maternal mortality and morbidity as well as overall socio-economic development (UNFPA, 2019[1]).

Reproductive health requires having access to effective methods of contraception and appropriate healthcare through pregnancy and childbirth, to allow women and their partners to make decisions on fertility and provide parents with the best chance of having a healthy baby.

Women who have access to contraception can protect themselves from unwanted pregnancy. Spacing births can also have positive benefits on both the reproductive health of the mother and the overall health and well-being of the child.

Modern contraceptive methods are more effective than traditional ones (WHO/Johns Hopkins Bloomberg School of Public Health, 2018[2]). The prevalence of modern methods use varies across countries and territories in Asia-Pacific. It was high on average across high-income and upper-middle-income countries and territories (65% and 59.4%, respectively). In a few of these countries and territories including China (80.5%), New Zealand (74.8%), Thailand (70.8%), DPRK (68.8%) and Korea (67.6%), at least two-thirds of married or in union women of reproductive age reported using modern contraceptive methods (Figure 4.1).The average prevalence was low in lower-middle- and low-income countries and territories (45.3%). In Pakistan, the Solomon Islands, Papua New Guinea and Nepal, less than one out of three married or in union women reported using any modern method.

Based on population sizes, fertility rates, social welfare policies and regulations and service availability, differences in demand for family planning satisfied with modern methods exist in all reporting Asia-Pacific countries. In Nepal, demand satisfied is about 30 percentage points higher amongst women with lowest education than amongst women with highest education, with a similar pattern observed in other reporting countries except in the Philippines. (Figure 4.2). In Mongolia, demand satisfied is 13 percentage points higher amongst women living in rural areas than amongst those living in urban areas (72% vs. 59%), while the proportion of women living in urban areas reporting demand for family planning satisfied is slightly higher than the proportion of women living in rural areas in Bangladesh (79% vs. 77%), Pakistan (59% vs. 56%) and India (75% vs. 74%). Based on income levels, the demand satisfied is 15 percentage points higher amongst women from households in the lowest income quintile than amongst women in the highest quintile in Mongolia (75% vs. 60%), while the proportion of women in the highest income quintile reporting demand for family planning satisfied is higher than the proportion of women in the lowest income quintile in Pakistan (59% vs. 54%) and India (75% vs. 69%) (Figure 4.2). Adolescents and young women generally have the lowest proportion of modern contraceptive use. In all regions, less than 30% of adolescents and young women aged 15-19 years use contraception and less than 5% in Western Asia and in Central and Southern Asia. In Central and Southern Asia, unmet need for family planning is highest among women aged 20 to 29, indicating a large gap between fertility intentions and use of modern methods of contraception among young women (UN, 2022[3]).

Definition and comparability

Contraceptive prevalence is the percentage of women who are currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method used. It is usually reported as a percentage of married or in union women aged 15-49.

Women with a demand for family planning satisfied are those who are fecund and sexually active, are using a method of contraception, and report wanting more children. It is reported as a percentage of married or in union women aged 15-49.

Information on contraceptive use and demand satisfied for family planning is generally collected through nationally representative household surveys.

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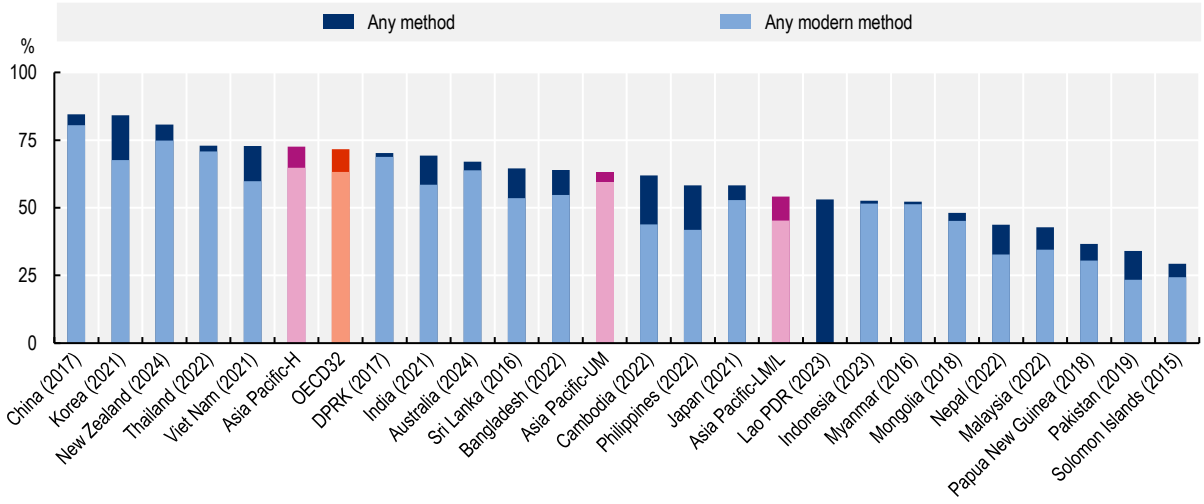
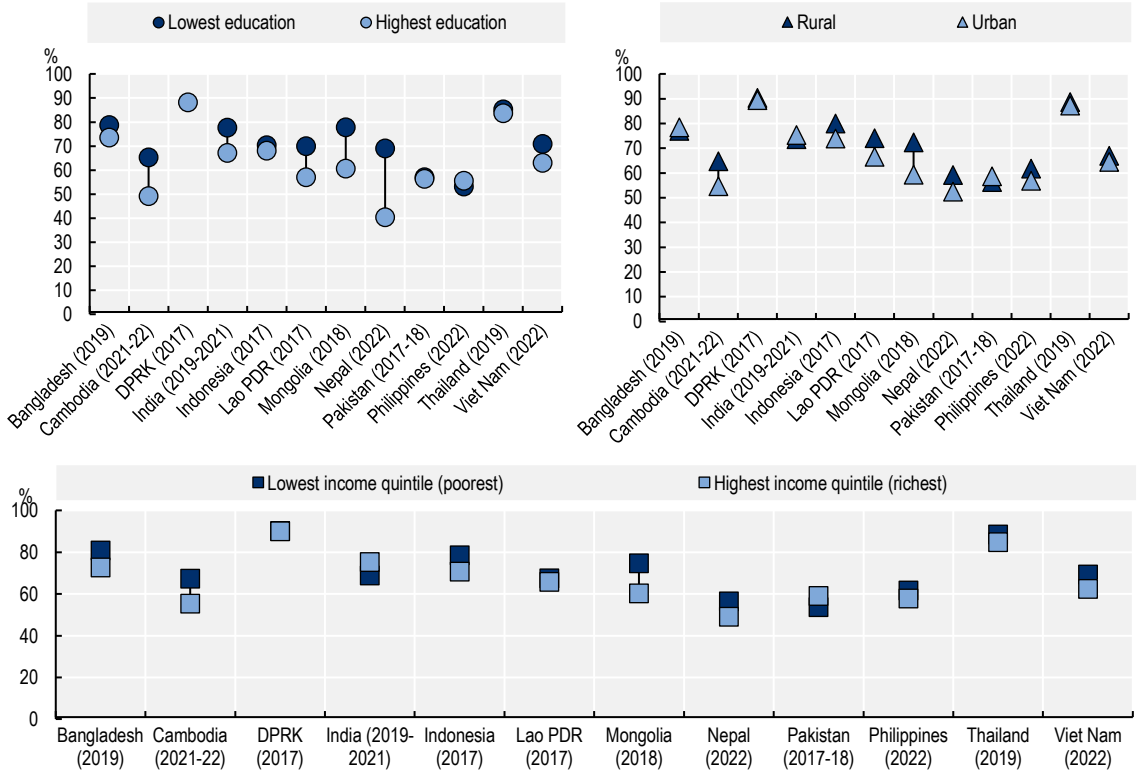
Figure 4.1. Contraceptive prevalence, married or in-union women, latest available estimate



Source: UN World Contraceptive Use 2024 (DHS & MICS surveys, various years), except for Australia and New Zealand where data refer to UNDESA (2024), Model-based Estimates and Projections of Family Planning Indicators 2024.

StatLink https://stat.link/574hik

Figure 4.2. Demand for family planning satisfied by modern methods by socio-economic characteristics, selected countries, latest available year



Note: Lowest education may refer to no education.
Source: DHS & MICS surveys, various years.

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Preterm birth and low birth weight

Preterm birth (i.e. birth before 37 completed weeks of gestation) is the leading cause of both neonatal death during the first four weeks of life (days 0-28), and death of children under 5 (see indicator "Under age 5 mortality" in Chapter 3). Survivors of preterm births may also face a lifetime of disability, including learning disabilities and visual and hearing as well as other long-term developmental problems. However, preterm birth can be largely prevented. Three-quarters of deaths associated with preterm birth can be saved even without intensive care facilities. Current cost-effective interventions include antenatal corticosteroids injections for pregnant women at risk of preterm delivery, kangaroo mother care (continuous skin to skin contact), early initiation (initiated within the first hour of birth) and exclusive breastfeeding (initiated within the first hour of birth) and basic care for infections and breathing difficulties (WHO, 2023[1]); see indicator "Infant mortality rate" in Chapter 3). New evidence that simple interventions such as use of continuous positive airway pressure (CPAP) and medicines such as caffeine for breathing problems can substantially reduce mortality in preterm and low birthweight babies (Ledinger, Nußbaumer-Streit and Gartlehner, 2024[2]). Preterm birth rates can be also reduced if women, particularly adolescents, had better access to family planning services and increased empowerment, as well as improved care and nutrition during pregnancy (see indicator "Family planning" in Chapter 4).

An estimated 13.4 million babies are born preterm worldwide every year representing a global preterm prevalence of 9·9%, and around 900 000 babies died from preterm birth complications in 2019. Across countries, the rate of preterm birth ranges from 4-16% of babies born in 2020 (Ohuma et al., 2023[3]). In the Asia-Pacific region, India, Bangladesh and Pakistan reported a particularly large number of preterm births (Ohuma et al., 2023[3]). Across lower-middle- and low-income Asia-Pacific countries and territories, almost 10 babies out of 100 were born preterm on average in 2020 while the rate was lower on average in high-income and upper-middle-income countries and territories (7.2 and 6.7 babies per 100 live births, respectively). The preterm birth rate was particularly high in Bangladesh at 16.2 per 100 live births, followed by Pakistan and India at over 13 per 100 live births (Figure 4.3, left panel). Since 2010, preterm birth rate increased by almost one-third in Korea, reaching 8.4 per 100 live births in 2020.

Overall, it is estimated that about 14.7% of all births worldwide are low birth weight (<2500g), representing around 19.8 million births in 2020; and nearly half of them happened in South Asia. In 2000, the rate was about 16.6% representing an absolute reduction of 1·9 percentage points between 2000 and 2020. (Okwaraji et al., 2024[4]). Preterm birth stands as one of the main driver for low birth weight. Beside preterm birth, low birth weight is also an important determinant of child health as it is associated with greater risk of death, poor health, and disabilities. Low birth weight infants are about 20 times more likely to die than heavier infants. (WHO, 2024[5]). Low birth weight is the result of many factors but largely preventable. Mothers' risk factors include poor nutritional status such as low body-mass index (BMI), being a young mother, smoking or exposure to second hand smoke, excessive alcohol consumption, and history of unnecessary c-section deliveries (UNICEF and WHO, 2019[6]; Blencowe et al., 2019[7]).

On average, about 13% of newborn had low weight at birth across Asia-Pacific countries and territories (Figure 4.3, right panel). There was a significant regional divide between countries and territories in eastern Asia (such as China and Mongolia) and southern Asia (such as Bangladesh, India and the Philippines). Mongolia and China had the lowest birth weight rates at 5% or less, while India reported the highest rate of 27.4%.

Since 2010, Cambodia, Mongolia and Viet Nam made the most progress in reducing low birth weight rates, and lower-middle- and low-income Asia-Pacific countries and territories achieved a larger decrease compared to upper-middle- and high-income countries and territories in the region (Figure 4.4, left panel). Recently, the reduction is slower in China but it achieved one of the lowest birth weight rates in the Asia-

Pacific region through rapid and sustained economic growth and improved access to food in many provinces. Despite some relatively low levels, some high-income Asia Pacific countries and territories such as Korea and Hong Kong (China) have experienced increase in low-birth-weight rates since 2010 by 25% and almost 40% respectively. Globally insufficient progress has been made in LBW reduction in the past two decades and, if current trends continue, the Global Nutrition Target of a 30% reduction in LBW prevalence between 2012 and 2030 will not be achieved. (Okwaraji et al., 2024[4])

Antenatal care can also help women prepare for delivery and understand warning signs during pregnancy and childbirth to avoid low birth weight. Higher coverage of antenatal care was associated with lower share of infants with low birth weight (Figure 4.4, right panel), suggesting the significance of antenatal care over infant health status across Asia-Pacific countries and territories. For instance, Korea with one of the highest antenatal care coverage (97%) had less than 8 low birthweight infants per 100 live births while Bangladesh with one of the lowest antenatal care coverage (37%) had almost 23 low birthweight infants per 100 live births.

Definition and comparability

Preterm birth is defined as babies born alive before 37 weeks of pregnancy are completed. There are sub-categories of preterm birth based on gestational age: extremely preterm (less than 28 weeks); very preterm (28-32 weeks); moderate to late preterm (32-37 weeks).

Low birth weight is defined by the World Health Organization as the weight of an infant at birth of less than 2 500 grammes (5.5 pounds) irrespective of the gestational age of the infant. This figure is based on epidemiological observations regarding the increased risk of death to the infant and serves for international comparative health statistics.

In developed countries, the main information sources for low birth weight are national birth registers. For developing countries, estimates are primarily derived from mothers participating in national household surveys, as well as routine reporting systems (UNICEF and WHO, 2019[6]; Blencowe et al., 2019[7])

The scope that countries and territories use to measure preterm birth and low birth weight may differ by excluding live births occurring before 20 weeks' gestation and weighing less than 400 grammes, this can lead to slight differences when comparing national-reported estimates to those herein reported.

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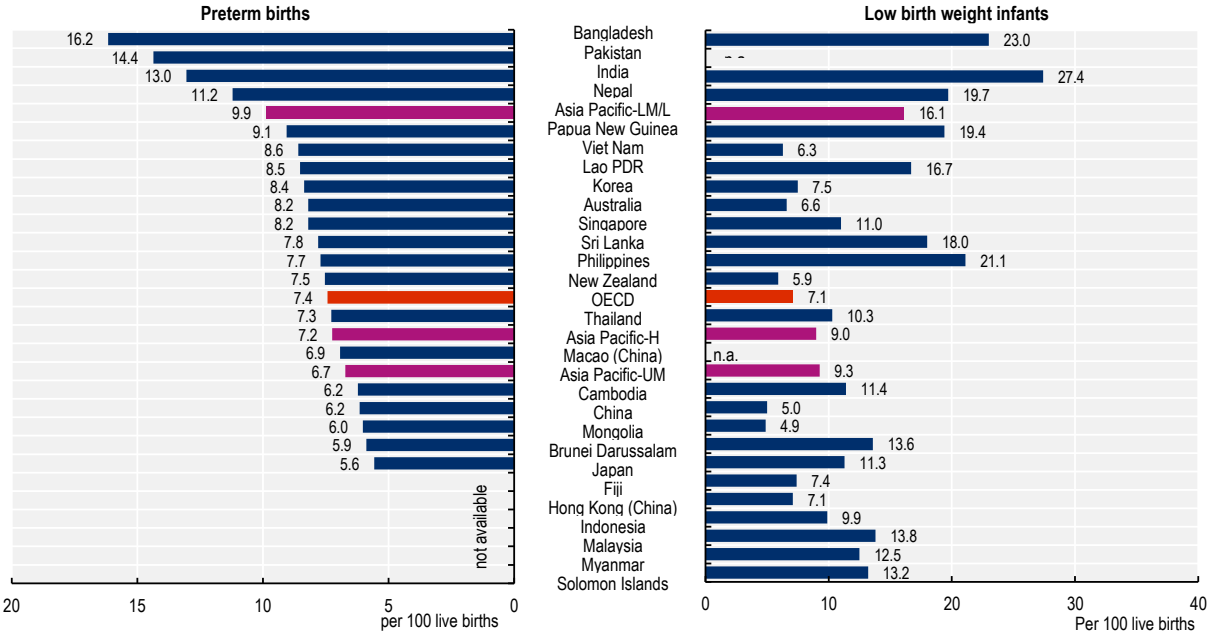
Figure 4.3. Preterm birth rate and percentage of low birth weight infants, 2020



Source: World Health Organization (Global Health Observatory); Hong King (China), Department of Health, 2021, Macao (China): Statistics and Census Service 2022.

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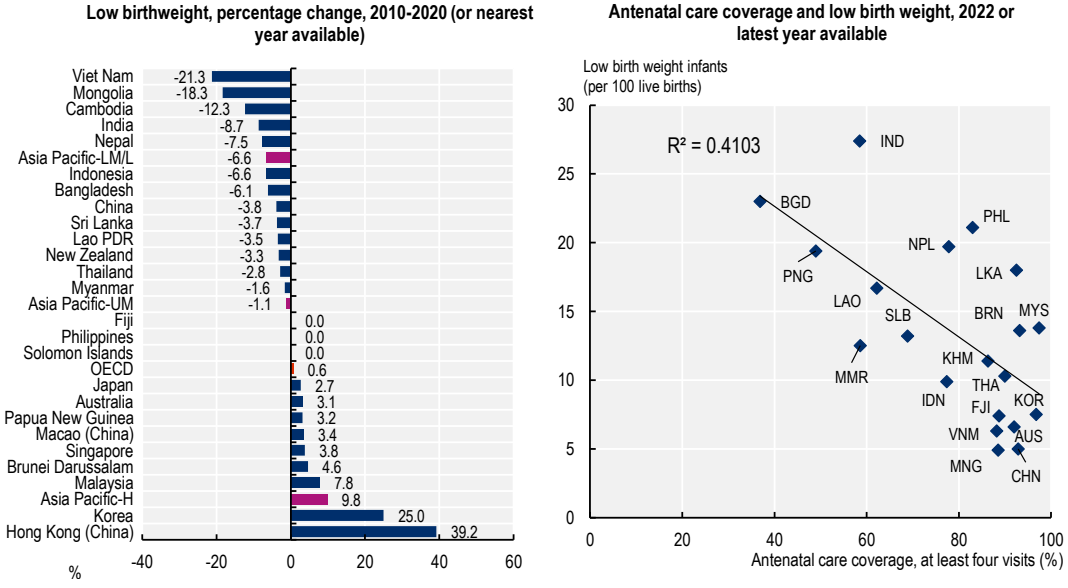
Figure 4.4. Low birthweight percentage change and antenatal care coverage



Source: World Health Organization (Global Health Observatory); Hong King, China, Department of Health, 2021, Macao, China: Statistics and Census Service 2022; UNICEF, Maternal and Newborn Health Coverage Database.

StatLink https://stat.link/80el6t

Infant and young child feeding

Optimal feeding practices of infants can increase their chances of survival. They play an important role for healthy growth and development, decrease rates of stunting and obesity and stimulate intellectual development (UNICEF, 2019[1]).

Breastfeeding is an unequalled way of providing nutrition for infants. Breast milk gives infants the nutrients they need for healthy development, including the antibodies that help protect them from common childhood illnesses such as diarrhoea and pneumonia, the two primary causes of under-five child mortality worldwide. Breastfeeding is also linked with better health outcomes later in life. Adults who were breastfed as babies often have lower blood pressure and lower cholesterol, as well as lower rates of overweight, obesity and type 2 diabetes (Horta, Victora and WHO, 2013[2]; Horta, Loret de Mola and Victora, 2015[3]; Victora et al., 2016[4]). Breastfeeding among other factors can be associated with higher school attendance and higher income in adult life. More than 800 000 deaths amongst children under five could be saved every year globally if all children 0-23 months were optimally breastfed. Breastfeeding also benefits mothers through assisting in fertility control, reducing the risk of breast and ovarian cancer later in life and lowering rates of obesity (UNICEF, 2019[1])

The WHO Baby-Friendly Hospital Initiative outlines detailed recommendations on protecting, promoting, and supporting breastfeeding in facilities providing maternal and newborn services (WHO, 2017[5]). WHO and UNICEF recommend early initiation of breastfeeding within 1 hour of birth**,** exclusive breastfeeding for the first 6 months of life, and introduction of nutritionally adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond.

Globally rates of exclusive breastfeeding in the first six months of life have increased by 10 percentage points over the past decade and are at 48% for 2023, close to the World Health Assembly target of 50% by 2025 (WHO/UNICEF, 2023[6]). In the Asia-Pacific region, Sri Lanka, the Solomon Islands, DPRK, India, Papua New Guinea, Mongolia, Nepal, Bangladesh, Myanmar, Indonesia and Cambodia have already achieved this target). The proportion of infants exclusively breastfed for the first six months of life in lower-middle- and low-income Asia-Pacific countries was 1.5 times the proportion reported in upper-middle-income countries. Policies and regulations on marketing of breast-milk substitutes and workplace support to breastfeeding as well as breastfeeding counselling in health facilities and societal beliefs favouring mixed feeding contribute to variations in exclusive breastfeeding rates across countries (Local Burden of Disease Exclusive Breastfeeding Collaborators, 2021[7]).

However, several Asia-Pacific countries and territories are lagging as less than 40% infants was exclusively breastfed in China and Thailand). Key factors contributing to inadequate breastfeeding rates include unsupportive hospital and healthcare practices and policies; lack of adequate skilled support for breastfeeding, specifically in health facilities and the community; aggressive marketing of breast milk substitutes and inadequate maternity and paternity leave legislation and unsupportive workplace policies (UNICEF, 2019[1]). Several countries and territories which increased exclusive breastfeeding practice have implemented these policies. In 2012, Viet Nam's National Assembly amended its Labour Code to extend paid maternity leave from four to six months. It decided that public funds would be allocated to cover the cost to reduce the possibility that women would face discrimination in recruitment because of the longer paid leave period. Viet Nam's exclusive breastfeeding rates increased from 24% in 2014 to 45% in 2020 (WHO/UNICEF, 2023[6]). In Pakistan, Infant and Young Child Feeding (IYCF) counselling services rebounded, following significant disruptions in 2020 due to the COVID-19 pandemic. In 2021, 7.8 million mothers and caregivers received IYCF counselling through health facilities and in communities – a more than five-fold increase from 1.4 million in 2020. More than 10 700 healthcare providers built their capacity to provide IYCF counselling via the UNICEF comprehensive training package. Community-led peer support

groups were established as well. Pakistan has seen an increase in exclusive breastfeeding rates from 38% in 2013 to 48% in 2018 (WHO/UNICEF, 2023[6]). However it remains difficult to achieve sustained improvements in exclusive breastfeeding practice even if countries see improvement – therefore sustained and broad-based support is essential.

After the first six months of life, an infant needs additional nutritionally adequate and safe complementary foods, while continuing breastfeeding. Appropriate complementary foods were introduced to around half of the children between 6-8 months in India, whereas complementary foods were introduced to more than nine out of ten infants in Fiji and Sri Lanka (Figure 4.5).

In Cambodia, Mongolia, Lao PDR, Nepal, Philippines, India, Bangladesh and Indonesia, the rate of exclusive breastfeeding was relatively higher amongst women living in households in the poorest income quintile as compared to women living in the richest households (Figure 4.6). Across countries and territories in Asia-Pacific, a higher level of education was not always associated with a higher rate of exclusive breastfeeding. While in Myanmar, Papua New Guinea Bangladesh and Mongolia women with the highest education level were much more likely to follow exclusive breastfeeding recommendations than those with the lowest education, the opposite trend was observed in countries and territories such Cambodia and Viet Nam. In Thailand, women living in rural areas are almost 2 times more likely to breastfeed as compared to women living in urban areas.

Considering persisting high levels of childhood malnutrition (see indicator “Child malnutrition and overweight” in Chapter 4), infant feeding practices must be further improved (UNICEF, 2019[1]).

Definition and comparability

Exclusive breastfeeding is defined as no other food or drink, not even water, other than breast milk (including milk expressed or from a wet nurse) for the first six months of life, with the exception of oral rehydration salts, drops and syrups (vitamins, minerals and medicines) (UNICEF, 2019[1]). Thereafter, to meet their evolving nutritional requirements, infants should receive adequate and safe complementary foods (complementary feeding) while continued breastfeeding up to two years of age or beyond.

The usual sources of information on the infant feeding practices are household surveys. They also measure other indicators of infant feeding practices such as minimal meal frequency, minimal diet diversity and minimum acceptable diet.

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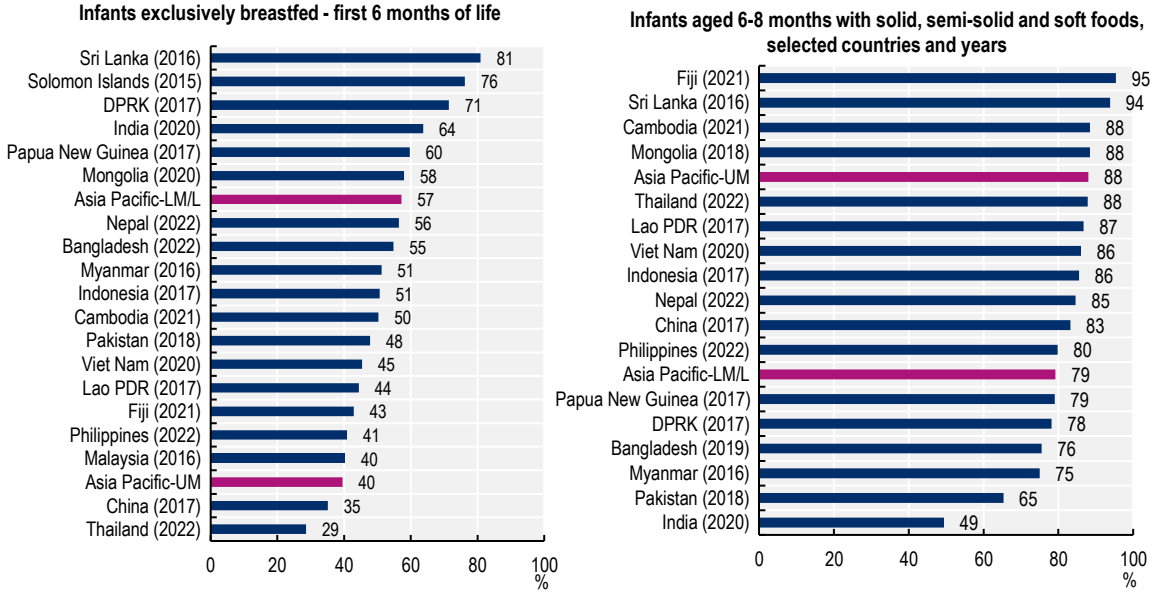
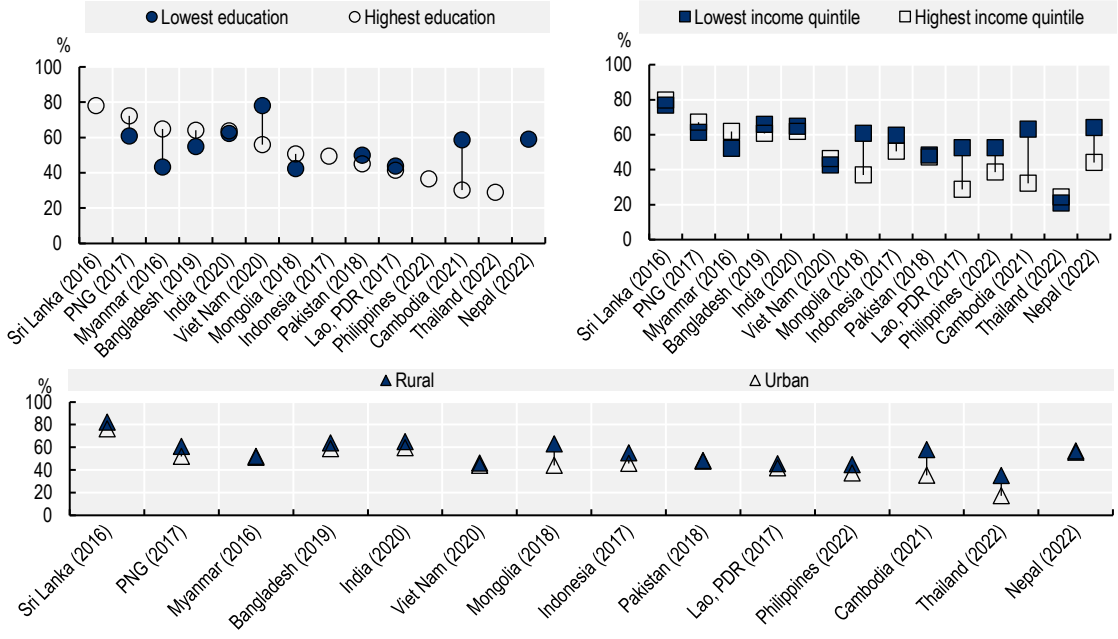
Figure 4.5. Infants exclusively breastfed and with solid, semi-solid and soft foods



Source: UNICEF 2024, DHS and MICS surveys, various years.

StatLink https://stat.link/djmapt

Figure 4.6. Infants exclusively breastfed in the first 6 months of life, by select socio-economic and geographic factors



Sources: UNICEF 2024, DHS and MICS surveys, various years.

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Child malnutrition (including undernutrition and overweight)

National development is largely dependent on healthy and well-nourished people, but many children are not always able to access sufficient, safe and nutritious food and a balanced diet that meets their needs for optimal growth and development for an active and healthy life (UNICEF, 2019[1]). Malnutrition amongst children in low- and middle-income countries and territories encompass undernutrition, a growing problem with overweight and obesity, along with micronutrient deficiency. Many countries and territories are facing a triple burden of malnutrition – characterised by the coexistence of undernutrition along with overweight, obesity or diet-related non-communicable diseases (NCDs) and micronutrient deficiency defined as a lack of essential vitamins and minerals that are required in small amounts by the body for proper growth and development. – which poses a real and growing health challenge. A triple burden of malnutrition exists at the population, household and individual levels in all countries (Nature Food, 2023[2]). This includes overweight mothers and stunted children and children who are both stunted and overweight. For example, one in two overweight children are stunted in Bangladesh, and 6% of stunted children have overweight mothers in Myanmar (WHO, 2020[3]). In order to simultaneously and synergistically address these challenges, the United Nations declared the Decade of Action on Nutrition in 2016 until 2025 and proposed actions such as strengthening sustainable, resilient food systems for healthy diets, assuring safe and supportive environments for nutrition at all ages, promoting nutrition-related education, and strengthening nutrition governance and promoting accountability (WHO, 2017[4]). This will contribute to achieving target 2.2 of the Sustainable Development Goals: “By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age”. However more intensive efforts are required if the world is to achieve the global target of reducing the number of children with stunting to 89 million by 2030. With current progress, the 2030 target will be missed by 39.6 million children (UNICEF/WHO/World Bank Group, 2023[5]).

Undernutrition is an important determinant of poor health amongst young children and is estimated to explain around 45% of all under 5 child deaths worldwide (Development Initiatives, 2018[6]). To reduce under age 5 mortality, countries and territories need to not only implement effective preventive and curative interventions for newborns, children, and their mothers during and after pregnancy (see indicator “Infant and child health” in Chapter 5) but also to promote optimal feeding practice (see indicator “Infant feeding” in Chapter 4).

Child undernutrition is also associated with poorer cognitive and educational outcomes in later childhood and adolescence and has important education and economic consequences at the individual, household, and community levels. Overweight in childhood is related to early cardiovascular, gastrointestinal, musculoskeletal, and orthopaedic problems. It is also a major predictor of obesity in adulthood, which is a risk factor for the leading causes of poor health and early death. Hence, preventing overweight has direct benefits for children’s health and well-being, in childhood and continuing into adulthood (UNICEF, 2019[1]).

In 2012, the World Health Assembly endorsed a Comprehensive implementation plan on maternal, infant and young child nutrition, which specified a set of six Global Nutrition Targets by 2025 and they include targets in stunting, wasting and overweight (WHO, 2014[7]). In 2015, the UN SDG also set target referring to stunting, wasting and overweight amongst children.

High levels of stunting in a country are associated with poor socio-economic conditions and increased risk of frequent and early exposure to adverse conditions such as illness and/or inappropriate feeding practices. Wasting may also be the result of a chronic unfavourable condition, like unsafe water and poor or lacking

sanitary facilities. Recurrent events of wasting can increase the risk of stunting, and stunting increases the risk of overweight and obesity later in life (UNICEF, 2019[1]).

In Asia-Pacific, many countries and territories had a high prevalence of stunting amongst children under age 5. Stunting prevalence was high at around 50% in Papua New Guinea, and more than one in three children were stunted in Pakistan. On the other hand, stunting prevalence was below 5% in Australia, Japan, Korea, Singapore and China (Figure 4.7). Stunting has been declining steadily over the last decade, with 148.1 million, or 22.3% of children under age 5 worldwide affected in 2022. In the past few years, Mongolia had made a substantial progress and became the first country in the Asia-Pacific region to have achieved the Global Nutrition Target to reduce by 40% the number of children under 5 years who are stunted. China, DPRK, Brunei Darussalam and Cambodia also achieved this target. However, most South-East Asia countries are unlikely to achieve the global target or national targets set for stunting and wasting (WHO, 2020[3]).

Countries and territories with high stunting prevalence had a high under age 5 mortality rate (Figure 4.8, left panel), also reflecting the fact that about 45% of under age 5 deaths were attributable to undernutrition (Development Initiatives, 2018[6]).

Over 45.4 million infants and children under 5 years of age experience wasting each year. The risk of wasting and nutritional oedema in infants and children, particularly in high-risk contexts where health and socio-economic indicators are at their poorest, is heightened by ongoing crises including climate change, pandemic, and conflict. In 2023, WHO has published new guideline including recommendations and good practice statements informed by the best available evidence for the prevention and management of wasting and nutritional oedema (WHO, 2023[8]). If there is no severe food shortage or an infectious disease (such as diarrhoea) that has caused children to lose weight, the prevalence is usually below 5% even in low-income countries and territories but it was higher than 10% in India, Sri Lanka, Papua New Guinea, and Bangladesh. So far, however, Australia, Mongolia, Korea, China, Japan, DPRK, Brunei Darussalam, Singapore, Fiji and Viet Nam have attained the Global Nutrition Target of reducing and maintaining childhood wasting to less than 5% (Figure 4.7).

There are now 37 million children under 5 living with overweight globally, an increase of nearly 4 million since 2000. In 2022, almost 18 million overweight or obese children under age 5 lived in Asia (UNICEF/WHO/World Bank Group, 2023[5]).However, the prevalence of childhood overweight varied across Asia-Pacific countries and territories. More than two children out of ten were overweight in Australia, more than one in ten in Papua New Guinea, Mongolia and Indonesia, whereas less than 2% of children under age 5 were overweight in Nepal, Sri Lanka and Myanmar (Figure 4.8, right panel). Myanmar, Pakistan, Korea, Malaysia and Thailand reduced under 5 overweight rates since 2010, so they meet the Global Nutrition Target 2025 of no increase in childhood overweight prevalence while most of other Asia Pacific countries observed an increase in children overweight (UNICEF/WHO/World Bank Group, 2023[5]). On average since 2010 childhood overweight prevalence increased by 40% in Asia-Pacific lower-middle- and low-income countries and by 30% in Asia-Pacific high-income countries). A low prevalence of overweight, however, did not always mean a proper nutrition intake amongst children. For instance, a study in Nepal showed that children under age 2 were getting a quarter of their energy intake from non-nutritive snacks and beverages such as biscuits or instant noodles (UNICEF, 2019[1]).

Definition and comparability

Stunting (low height-for-age) reflects failure to reach linear growth potential as a result of long-term suboptimal health and/or nutritional conditions.

Stunting height-for-age <-2SD

Wasting (low weight-for-height) usually indicates recent and severe weight loss, because a person has not had enough food to eat and/or has had an infectious disease, such as diarrhoea, which has caused them to lose weight.

Wasting weight-for-height <-2SD

According to the WHO definition, child overweight is weight-for-height greater than 2 standard deviations above WHO Child Growth Standards median, and child obesity is weight-for-height greater than 3 standard deviations above the WHO Child Growth Standards median.

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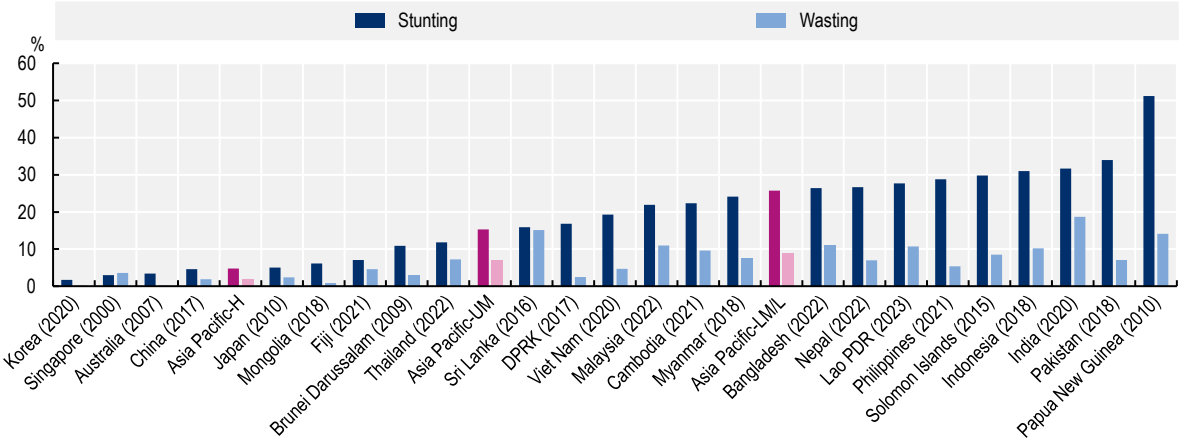
Figure 4.7. Prevalence of stunting and wasting amongst children under age 5, latest year available



Note: Data for wasting refer to the years mentioned in bracket while data for stunting refer to 2022.
Source: WHO GHO 2024; DHS & MICS surveys, various years.

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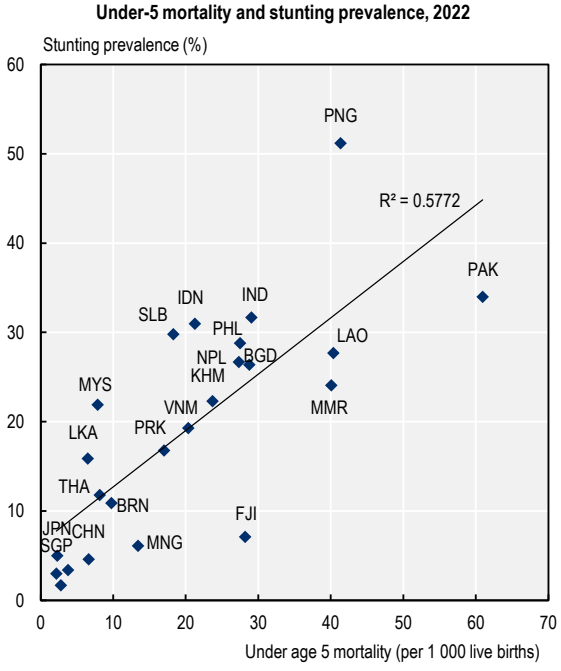
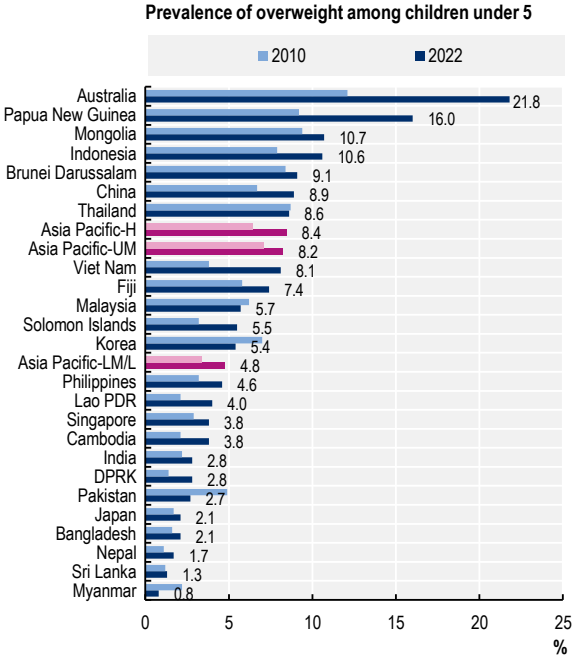
Figure 4.8. Under-5 mortality and stunting prevalence and prevalence of overweight amongst children





Source: WHO GHO 2024.

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Adolescent health

Adolescence is a vulnerable phase in human development as it represents a transition from childhood to physical, psychological and social maturity. During this period, adolescents learn and develop knowledge and skills to deal with critical aspects of their health and development while their bodies mature. Adolescent girls, especially younger girls, are particularly vulnerable because they face the risks of premature pregnancy and childbirth. Since the beginning of 2000s, however, there has been an increase in adolescent births in East Asia and the Pacific regions (UNICEF, 2019[1]). The *Global Strategy for Women's, Children's and Adolescent's Health 2016-30* was launched to foster a world in which "every woman, child and adolescent in every setting realises their rights to physical and mental health and well-being, has social and economic opportunities, and is able to participate fully in shaping prosperous and sustainable societies" (WHO, 2015[2]).

The 1.3 billion adolescents (10-19 years) in the world today represent 16% of the global population, and the regions of South Asia, East Asia and the Pacific have the largest number of adolescents in the world with more than 660 million (UNICEF, 2024[3]). In 2022, more than 910 300 adolescents died (WHO, 2024[4]). Injuries (including road traffic injuries and drowning), family, domestic and sexual violence, self-harm and maternal conditions are the leading causes of death among adolescents and young adults. Half of all mental health disorders in adulthood start by age 14, but most cases are undetected and untreated (WHO, 2023[5]).

Thinness in adolescents is associated with adverse health consequences throughout their life course. While the prevalence of overweight and obese children and adolescent in high-income countries and territories was two times the prevalence reported for lower-middle- and low-income Asia-Pacific countries and territories (see indicator "Overweight and obesity" in Chapter 4), the prevalence of thinness was high in lower-middle- and low-income countries in the region. It was high among male adolescents compared to female adolescents in all Asia-Pacific countries and territories. In India, where the prevalence was the highest, almost one in four male adolescents and almost one in five female adolescents were thin (Figure 4.9).

Risk factors for non-communicable disease (NCD), the leading cause of premature adult deaths, are often acquired in adolescence. They include alcohol or tobacco use, and lack of physical activity. While alcohol use or lack of physical activity lead to an increased risk of overweight, obesity and diabetes and tobacco use to an increased risk of diabetes, they ultimately lead to a higher risk of NCDs across the life course (see indicator "Tobacco" in Chapter 4. WHO recommends at least 60 minutes of moderate- to vigorous-intensity physical activity accumulated every day (WHO, 2020[6]). However, the majority of adolescents in Asia-Pacific countries and territories do not carry out sufficient amount of physical activities every day, and the prevalence of inactivity in the region is the highest in the world (Guthold et al., 2020[7]). Globally 31% of adults and 80% of adolescents do not meet the recommended levels of physical activity (WHO, 2024[8]). In Korea and the Philippines more than nine out of ten adolescents were inactive, while in Bangladesh about three out of ten adolescents did the recommended physical activity daily. In most of the countries and territories in the region, inactivity was more prevalent among female adolescents than male adolescents (Figure 4.10, left panel).

Adolescent pregnancies are a global problem that occurs in high-, middle-, and low-income countries and territories. Around the world, adolescent pregnancies are more likely to occur in marginalised communities, commonly driven by poverty and lack of education and employment opportunities. For some adolescents, pregnancy and childbirth are planned and wanted. However, for many adolescents, pregnancy and childbirth are neither planned nor wanted. Adolescents face barriers to accessing contraception including restrictive laws and policies regarding provision of contraceptive based on age or marital status, health

worker bias and/or lack of willingness to acknowledge adolescents' sexual health needs. Adolescents face also difficulties in accessing contraceptive methods because of lack of adequate knowledge of these methods, and transportation and financial constraints. Adolescent pregnancy remains a major contributor to maternal and child morbidity and mortality, increased preterm births and low birthweight and to intergenerational cycles of ill-health and poverty. Adolescent pregnancy can also have negative social and economic effects on girls, their families and communities. Around 3.9 million unsafe abortions among girls aged 15-19 years occur each year, contributing to maternal mortality and lasting health problems (Darroch et al., 2016[9]). Unmarried pregnant adolescents may face stigma or rejection by parents and peers and threats of violence. Similarly, girls who become pregnant before age 18 are more likely to experience violence within marriage or a partnership. With regards to education, school-leaving is often the consequence when adolescent girls become pregnant, and this hinders their likelihood of returning into education and future employment opportunities (WHO, 2020[10]).

Adolescent birth rates vary widely across Asia-Pacific countries and territories. In Lao PDR and Bangladesh, more than 70 out of 1 000 adolescents gave birth, whereas in Hong Kong (China), DPRK, Korea and Macao (China), the birth rate was as low as 1 out of 1 000 adolescents. On average across lower-middle- and low-income Asia-Pacific countries and territories, about 1 out of 20 women aged 15-19 gave birth, over twice the average rate reported for upper-middle-income countries and territories and 10 times the average rate reported for high-income countries and territories (Figure 4.10, left panel).

Definition and comparability

Thin adolescents are individuals aged 10-19 whose body mass index (BMI) is less than 2 standard deviations below the median, according to the WHO references for school-age children and adolescents.

The prevalence of insufficient physical activity refers to a proportion of school going adolescents not doing more than 60 minutes of moderate- to vigorous-intensity physical activity daily.

Adolescent birth rate is defined as the annual number of births to women aged 15-19 years per 1 000 women in that age group. It is also referred to as the age-specific fertility rate for women aged 15-19 years.

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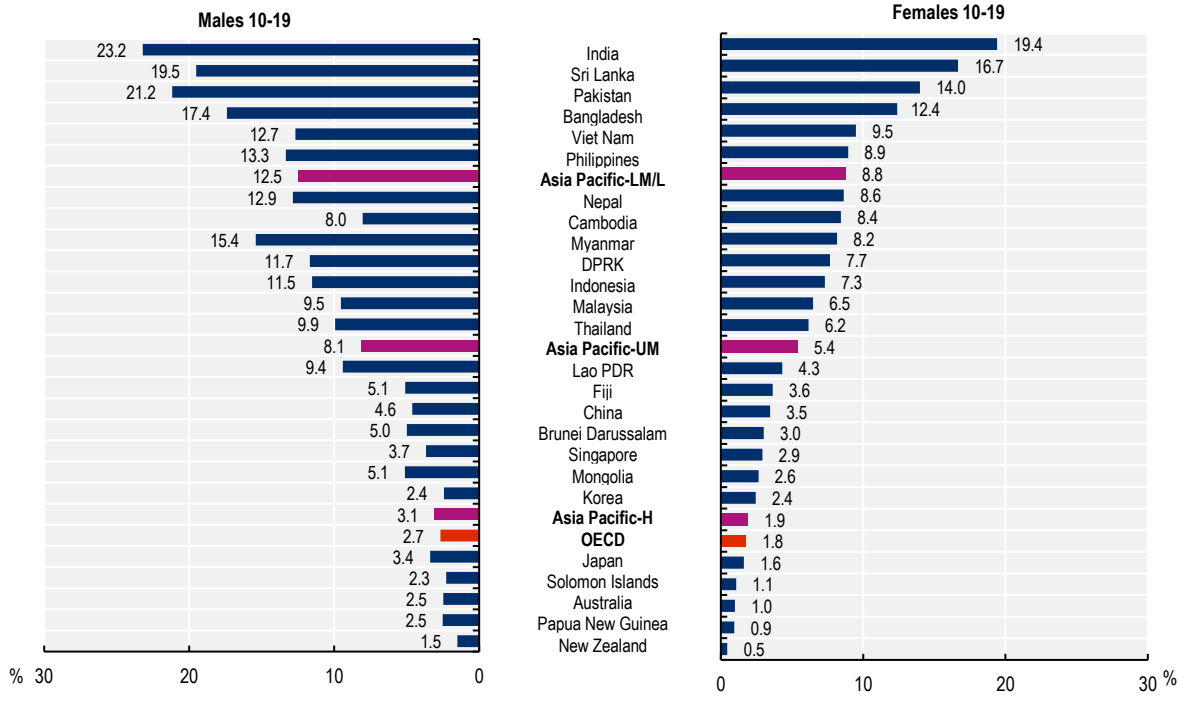
Figure 4.9. Adolescents aged 10-19 years who are thin, 2022



Source WHO GHO 2024.

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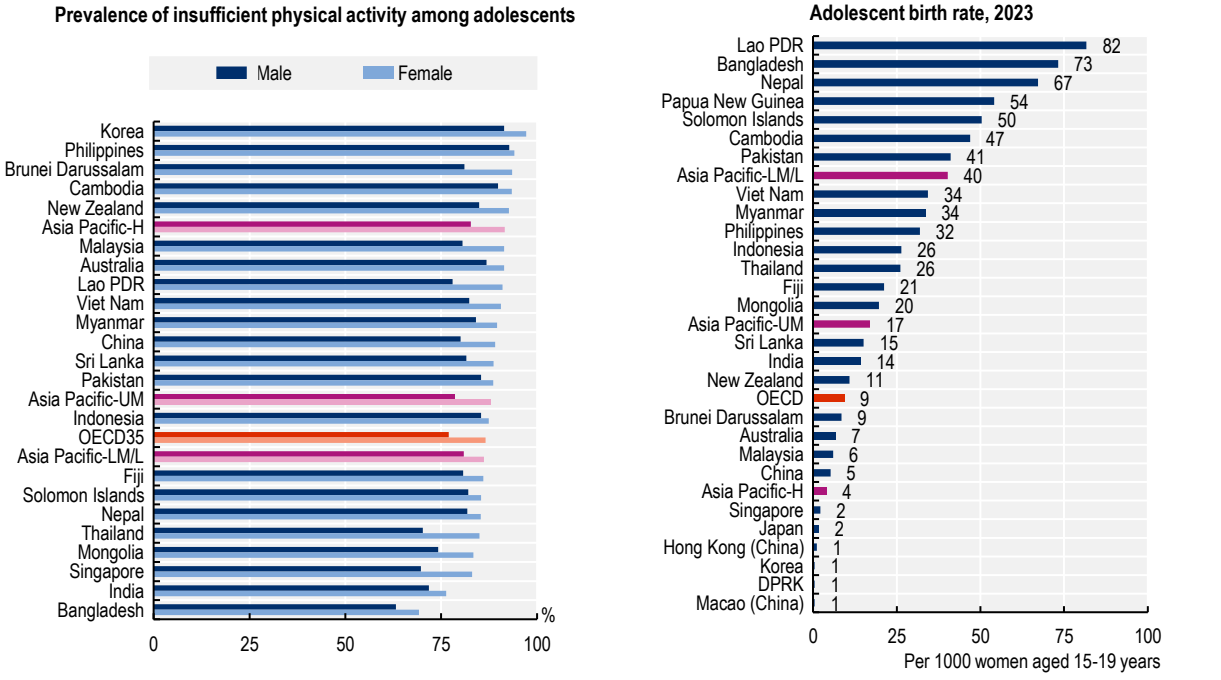
Figure 4.10. Prevalence of insufficient physical activity among adolescents aged 11-17 years, and adolescent aged 15-19 years birth rate



Source: WHO GHO 2024.

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Obese and overweight

Globally, overweight and obesity is a major public health concern, and there are more overweight or obese than underweight adults. In 2022, 43% men and 44% of women aged 18 and over, accounting for nearly 2.5 billion adults, were overweight, and about 16% of adult population, over 890 million adults, were obese worldwide. Both overweight and obesity have shown a marked increase over the past four decades. Once considered a high-income country problem, overweight is also on the rise in low- and middle-income countries (WHO, 2024[1]).

Obesity is a known risk factor for numerous health problems, including hypertension, high cholesterol, diabetes, cardiovascular diseases, respiratory problems (asthma), musculoskeletal diseases (arthritis) and some forms of cancer, and mortality also increases progressively once the overweight threshold is crossed (OECD, 2019[2]; WHO, 2020[3]). In addition, childhood and adolescent obesity harms immediate health, is associated with higher risk of early-onset non-communicable diseases (NCDs) like type 2 diabetes and heart disease, It also can lead to mental health issues, compounded stigma, and bullying reducing quality of life and affecting school performance. Obese children are also more likely to become obese adults with a higher risk of NCDs (WHO, 2024[1]). The economic impacts of the obesity epidemic are also important. If nothing is done, the global costs of overweight and obesity are predicted to reach USD 3 trillion per year by 2030 and more than USD 18 trillion by 2060 (Okunogbe et al., 2022[4]).

A key driver of the increasing obesity epidemic is a changing food environment, in which nutrient poor and energy dense processed foods are aggressively marketed, readily available and often cheaper than healthier alternatives. The economic priorities and policies that promote consumption-based growth, and the regulatory policies that promote market and trade liberalisation are increasingly regarded as contributing to the global rise of obesity too (OECD, 2019[2]; UNICEF, 2019[5]). At the same time, it is common to find undernutrition and obesity co-existing within the same country.

At the 75th World Health Assembly in 2022, Member States adopted new recommendations for the prevention and management of obesity and endorsed the WHO Acceleration Plan to Stop Obesity. The plan is designed to stimulate and support multi-sector country level action across the globe (WHO, 2023[6]).

In Asia-Pacific, the obesity rate among children and adolescents varied widely between the high of 22.1% in Brunei Darussalam, followed by 17.8% in New Zealand, and the low of 1.9% in Bangladesh and Nepal, where the prevalence of thinness was high among adolescents (see indicator “Adolescent health” in Chapter 4). On average across high- and upper-middle-income Asia-Pacific countries and territories, about 14% of children and adolescents were obese in 2022, twice the prevalence observed across lower-middle- and low-income Asia-Pacific countries and territories. In Brunei Darussalam the prevalence of overweight was the highest in the region at more than 40%, whereas in India with one of the lowest obesity rates, the prevalence of overweight was lowest at less than 7% (Figure 4.11, right panel).

Among adults, obesity prevalence was high in Australia, Brunei Darussalam, Fiji and New Zealand in 2022 where more than 30% of adults were obese. In these countries and territories, the prevalence of overweight adults was also high at more than 60%. On the other hand, obesity rate was low in Bangladesh, Cambodia and Viet Nam at 5% or less, and in Japan and Viet Nam, overweight prevalence among adults was also the lowest in Asia-Pacific, at less than 25%. In high- and upper-middle-income countries and territories, 19% of adults were obese and 49% of adults were overweight, whereas the average prevalence for lower-middle- and low-income countries and territories was lower at 12% and 37%, respectively (Figure 4.11, left panel). Across countries and territories, the prevalence of obesity and overweight among children and adolescents was positively associated with the prevalence among adults.

Between 2010 and 2022, the increase in the prevalence of obesity was fast particularly in lower-middle- and low-income countries and territories in Asia-Pacific. This increase was higher among children and

adolescents in most countries and territories. In lower-middle- and low-income countries and territories, the prevalence of obesity increased more than doubled (+120%)among children and adolescents (from 3.1% to 6.8%) and by 63% among adults (from 7.1% to 11.6%). The average increase was lower in higher-income countries and territories – by 42% among children and adolescents (from 10.5% to 15%) and by 36% among adults (from 15% to 20%). The increase was particularly high in Pakistan, by 4 times among children and adolescents (from 2.1% to 8.5%) and by 2 times among adults (from 11.2% to 23%). The obesity prevalence also tripled in Viet Nam among children and adolescents (from 2.0% to 6.3%) and among adults (from 0.7% to 2.0%) (Figure 4.12, left panel).

Since 2010, the prevalence of overweight has increased in almost all Asia-Pacific countries and territories. The increase was again faster in lower-middle- and low-income countries and territories – 68% for children and adolescents (from 10.3% to 17.4%) and 42% for adults (from 26.3% to 37.2%) – than in high-income countries and territories – 21% (from 28.2% to 34%) and 15% (from 43.8% to 50.3%), respectively. Between 2010 and 2022, the prevalence of overweight grew rapidly in Viet Nam among children, adolescents and adults. The prevalence also grew fast by 2.5 times among children and adolescents in Pakistan (from 7.5% to 18.9%) and Indonesia (from 10.4% to 23.6%), and a large increase was also observed among adults in Bangladesh (97%, from 13.7% to 27%), Cambodia (78%, from 14.2% to 25.1%) and Nepal (73%, from 17.9% to 30.9%) in the same period (Figure 4.12, right panel). In developing countries obesity is more common among people with a higher socio-economic status, those living in urban regions and middle-aged women. In developed countries, obesity is associated with lower socio-economic status, especially among women (OECD, 2010[7]).

Definition and comparability

The most frequently used measure of overweight and obesity is the Body Mass Index (BMI). This is a single number that evaluates an individual's weight in relation to height and is defined as weight in kilograms divided by the square of height in metres (kg/m2).

The WHO definition of child and adolescent overweight is a BMI greater than 1 standard deviation above the median, and the definition of child and adolescent obesity is a BMI greater than 2 standard deviations above the median.

Based on the WHO classification, adults with a BMI 25 or over are overweight and adults who have a BMI of 30 or over are defined as obese.

In many countries, self-reported estimates of height and weight are collected through population-based health surveys while in Australia, Japan, Korea and New Zealand, health examinations measure actual height and weight. These differences limit data comparability. BMI estimates from health examinations are more reliable, and generally result in higher values than from self-report surveys.

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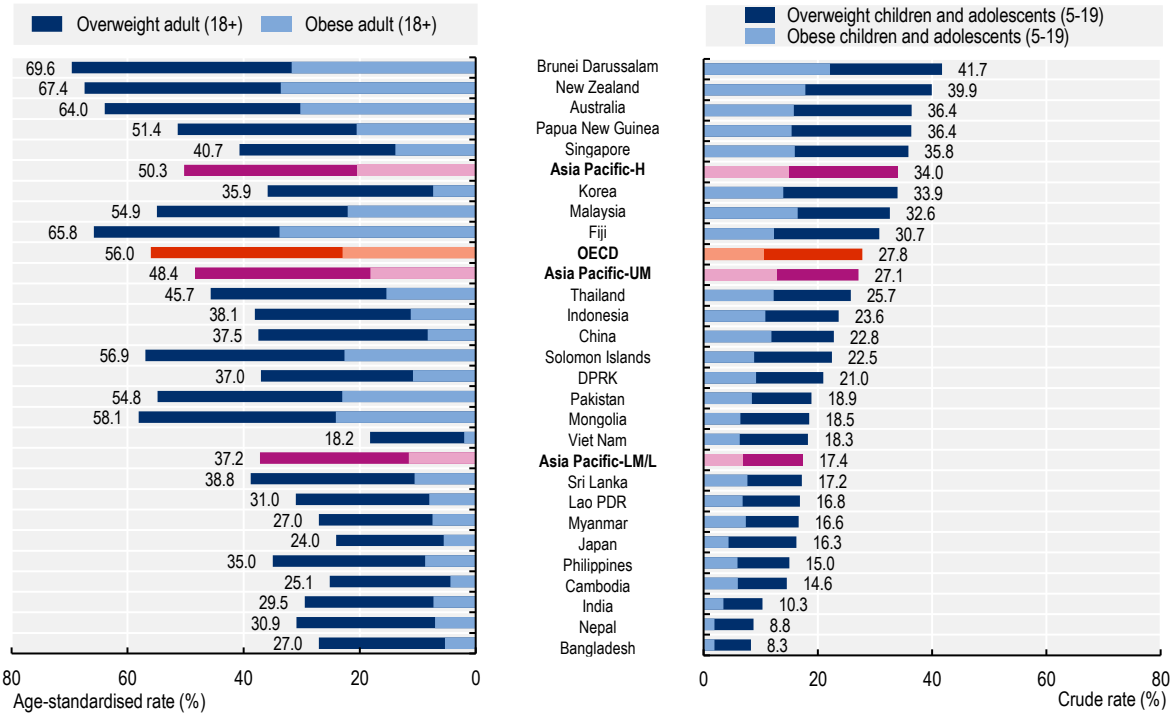
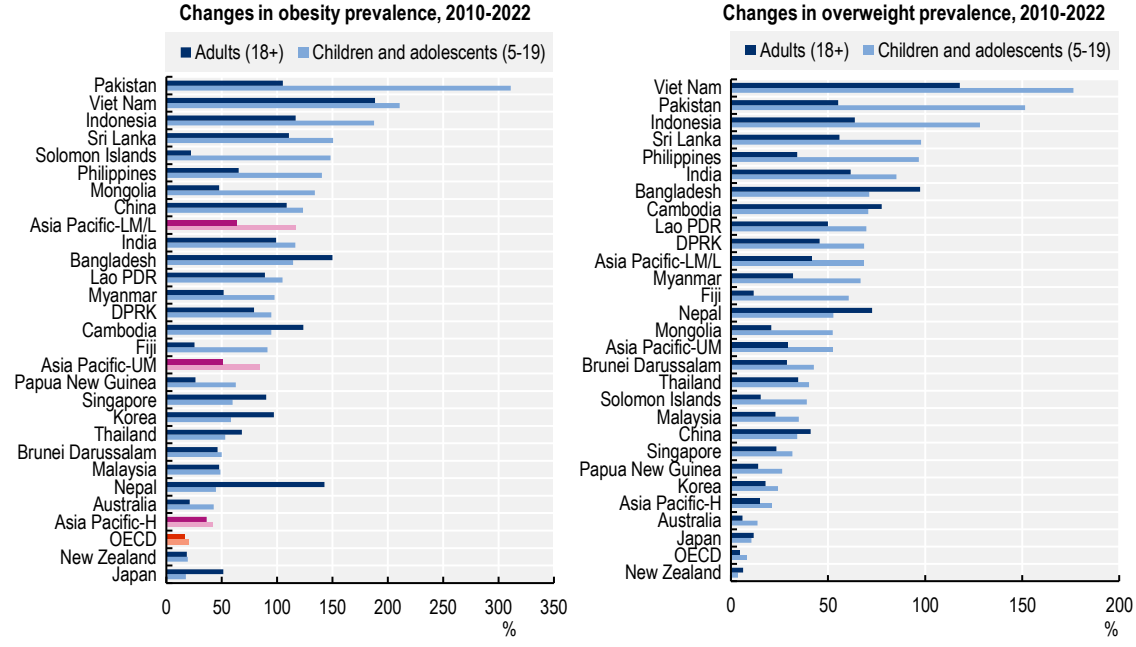
Figure 4.11. People who are overweight or obese, 2022



Note: The age-standardised rate is a weighted average of the age-specific rates, where the weights are the proportions of persons in the corresponding age groups of the WHO standard population.
Source: WHO GHO 2024.

StatLink https://stat.link/6kzqgx

Figure 4.12. Change in obesity and overweight prevalence, 2010-22



Source: WHO GHO 2024.

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Water and sanitation

Safe water and adequate sanitation are vital to individual health, livelihood, and well-being. Yet, more than one out of four people in the world, around 2 billion people, do not have access to basic sanitation services. A lack of access to basic sanitation can lead to transmission of different diseases such as diarrhoea, cholera, and hepatitis A -, and adds to the burden of malnutrition. Better access to water and sanitation could prevent the deaths of 395 000 children under age 5 annually. Poor sanitation reduces human well-being, social and economic development due to impacts such as anxiety, risk of sexual assault, and lost opportunities for education and work. (WHO, 2024[1]). Improving access to water and sanitation contributes not only to better health but also leads to great social and economic benefits, whether through higher educational participation, improved living standards, lower healthcare costs or a more productive labour force. Globally 1.4 million people die each year as a result of inadequate drinking-water, sanitation and hygiene. The vast majority of these deaths are in low- and middle-income countries (WHO, 2023[2]). The United Nations has set a target of achieving universal and equitable access to safe and affordable drinking water for all, as well as achieving access to adequate and equitable sanitation and hygiene for all and end open defecation by 2030. Furthermore, UNICEF's strategy for Water, Sanitation and Hygiene (WASH) 2016-30 seeks to ensure that every child lives in a clean and safe environment, gains access to basic sanitation and safe drinking water in early childhood development centres, school, health centres and in humanitarian situations (UNICEF, 2018[3]).

In 2022, while more than nine in ten people in Asia-Pacific high-income countries and territories had access to basic sanitation, in lower-middle- and low-income countries and territories only two out of three people living in rural areas and about four in five people living in urban areas had access to basic sanitation for adequate excreta disposal (Figure 4.13, left panel). Access was low in rural areas at around 15% in Papua New Guinea and 20% in the Solomon Islands, where open defecation was still common amongst most of the population. In urban areas, only about half of the population had access to basic sanitation in Papua New Guinea and 55% in Bangladesh in 2022.

Over recent years, the proportion of the population using basic sanitary facilities has grown in most Asia-Pacific countries and territories, and faster improvement was observed in rural areas (Figure 4.13, right panel). The progress was particularly rapid in rural areas in Cambodia, India, Nepal and Indonesia, where the proportion of population with access to basic sanitation increased by more than 20 percentage points between 2015 and 2022. In urban areas, Nepal reported a significant increase of 15 percentage points in the proportion of population with access to basic sanitation during the same period. On the contrary, Papua New Guinea and Fiji reported a decrease in the percentage of the population having access to basic sanitation in urban areas from 2015 to 2022.

In almost all Asia-Pacific countries and territories in 2022, more than nine out of ten people had access to basic drinking water in urban areas, while access was limited in rural areas in some countries and territories. In Papua New Guinea, slightly more than 40% of the population had access to basic drinking water in rural areas. Access to basic drinking water was also low in rural areas in the Solomon Islands (59%) and Mongolia (60%) (Figure 4.14, left panel).

During the period of 2015-22, access to basic drinking water improved in most Asia-Pacific countries and territories. In urban areas, access to basic drinking water increased by more than 5 percentage points in Myanmar and Lao PDR, while decreased by more than 1 percentage point in Pakistan, Nepal and DPRK. In rural areas, Myanmar, China, and Mongolia reported an increase in the population living in rural areas having access to basic drinking water of more than 10 percentage points, whereas Solomon Islands reported the largest decrease of almost 4 percentage points from 2015 to 2022 (Figure 4.14, right panel). In recent years, many countries and territories in the region, including Bangladesh, Mongolia, the Philippines, and Viet Nam established water safety plans, allowing millions to access safer drinking water. Tax-based public subsidies,

well-designed water tariffs and strategic use of aid flows to the water sector can assist in ensuring that poor and vulnerable groups have access to sustainable and affordable water services (WHO, 2018[4]).

Poor access to water and sanitation often disproportionately affect women as the burden of water carriage remains significantly heavier for women and girls than for men and boys since they are primarily responsible for childcare and domestic chores in many countries around the world. In addition, over half a billion people share sanitation facilities with other households and emerging data show that among these, women are more likely than men to feel unsafe walking alone after dark. Inadequate WASH services also limit the ability of adolescent girls and women, and other persons who menstruate, to safely and privately manage their periods (UNICEF/WHO, 2023[5]).

Definition and comparability

People that use improved sources of drinking water that required no more than 30 minutes per trip to collect water are classified as having at least basic drinking water services. An improved drinking-water source is constructed so that it is protected from outside contact, especially from faecal matter. Improved sources include piped water, public taps, boreholes, and protected dug wells or springs (UNICEF/WHO, 2019[6]).

People that use an improved sanitation facility that was not shared with other households are classified as having at least basic sanitation services. Improved sanitation facilities hygienically separate excreta from human contact, using flushing to piped sewer systems, septic tanks, or pit latrines, along with improved pit latrines or composting toilets (UNICEF/WHO, 2019[6]).

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) database includes nationally representative household surveys and censuses that ask questions on water and sanitation, mostly conducted in developing countries. Generally, developed countries supply administrative data.

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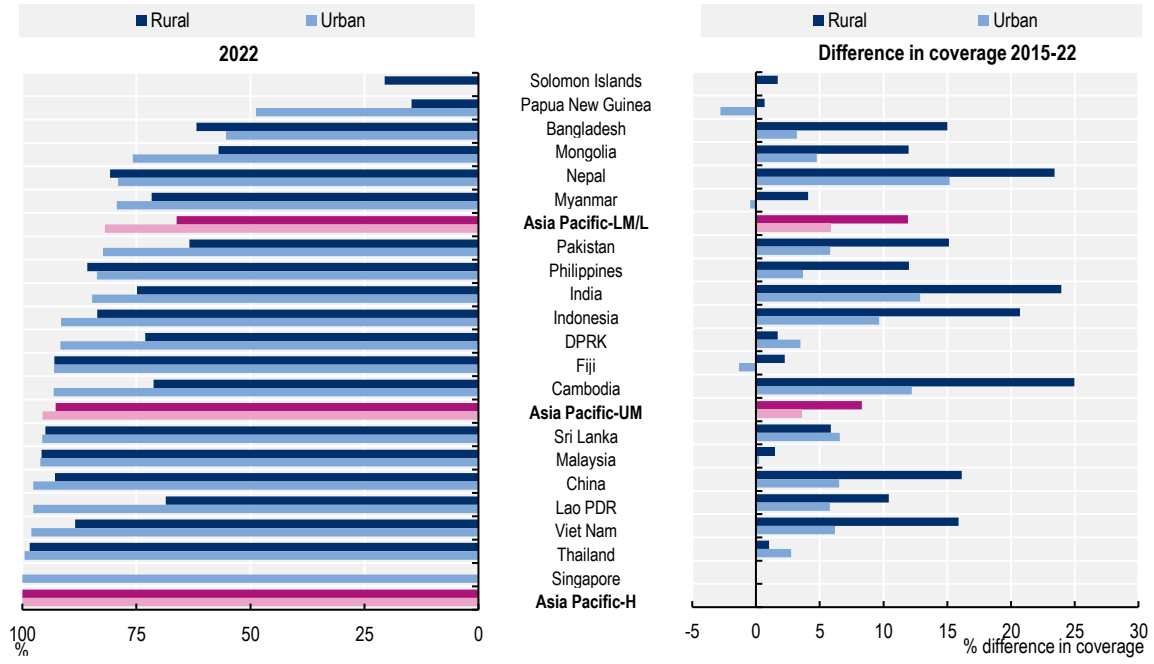
Figure 4.13. Access to basic sanitation, 2022 and change between 2015-22



Source: WHO GHO 2024.

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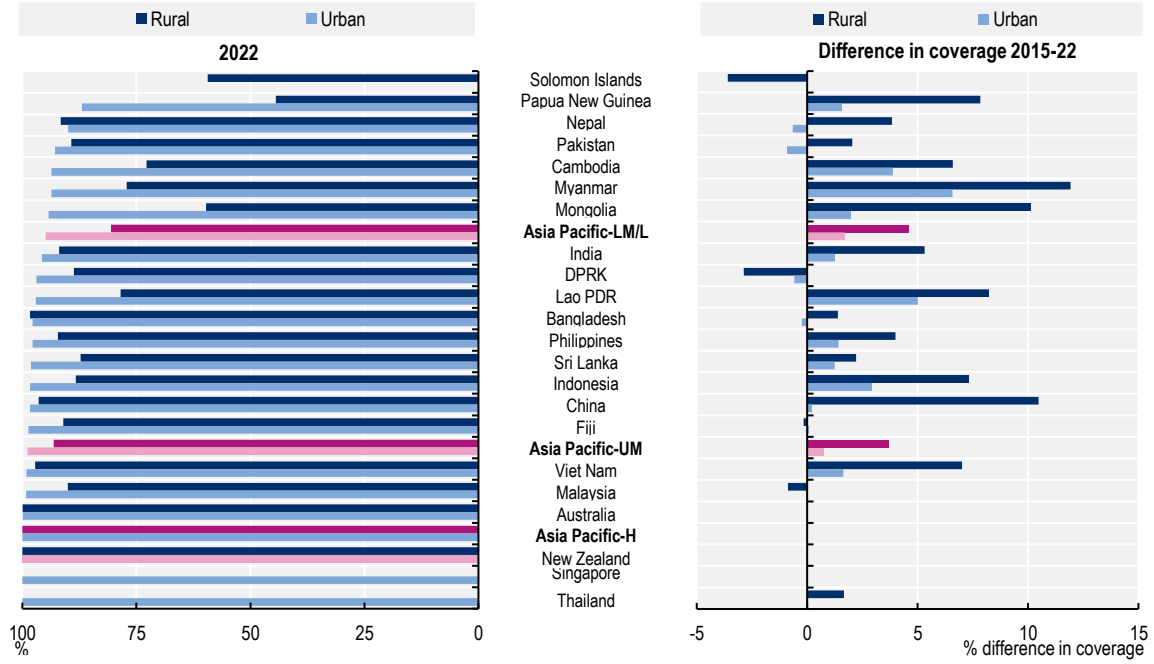
Figure 4.14. Access to basic drinking water, 2022 and change between 2015-22



Source: WHO GHO 2024.

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Tobacco

Tobacco use is the leading global cause of preventable deaths and kills more than 8 million people each year, of whom more than 7 million are from direct tobacco use and around 1.3 million are non-smokers exposed to second-hand smoke (WHO, 2023[1]). It is estimated that there were almost 1.25 billion current tobacco users aged 15 years and above in 2022, 1 billion of which were men. Amongst adolescents aged between 13 and 15, around 37 million (25 million boys and 12 million girls) are current tobacco users and an estimated 19 million (13 million boys and 6 million girls) are current cigarette smokers (WHO, 2024[2]). Although global tobacco use has fallen in all income groups of countries over the past two decades, the progress is still off track for achieving the WHO's target of cutting tobacco use by 30% between 2010 and 2025 as part of the global efforts to reduce mortality from the four main non-communicable diseases (cardiovascular diseases, cancer, chronic lung diseases and diabetes) (WHO, 2021[3]). Over this period, the relative reduction of global average tobacco use prevalence would account for 25% (21% reduction among males and 40% reduction among females) (WHO, 2023[1]). Among Asia Pacific countries, Australia, Cambodia, India, Japan, Korea, New Zealand, Nepal and Pakistan would be on track to achieve a 30% relative reduction by 2025. The UN SDGs call for strengthening the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries and territories, as appropriate.

Tobacco use is a major risk factor for six of the eight leading causes of premature mortality – ischemic heart disease, cerebrovascular disease, lower respiratory infections, chronic obstructive pulmonary disease, tuberculosis and cancer of the trachea, bronchus, and lung. Moreover, smoking in pregnancy can lead to low birthweight and illness amongst infants (NCD Alliance, 2010[4]). Children who establish smoking habits in early adolescence also increase their risk of cardiovascular diseases, respiratory illnesses, and cancer, and they are more likely to experiment with alcohol and other drugs (CDC, 2021[5]). Smoking is also a risk factor for dementia. Studies have shown that 14% of Alzheimer's cases worldwide may be attributed to smoking (WHO, 2014[6]; Livingston et al., 2017[7]). Tobacco smoking is also found to be associated with higher risks of developing severe symptoms and mortality amongst COVID-19 patients (WHO, 2020[8]; Vardavas and Nikitara, 2020[9]). Smoking is harmful not only for smokers but also surrounding people such as families, colleagues, and bystanders. Protecting people from second-hand smoke, has become a public health priority and globally the number of countries with smoke-free laws has increased largely over the past years (WHO, 2023[1]).

In 2008, only 5% of the world's population was covered by comprehensive smoke-free laws, but today over one-quarter of the world's population is covered. In Asia-Pacific, Australia, Brunei Darussalam, Cambodia, Hong Kong (China), Lao PDR, Nepal, New Zealand, Pakistan, Papua New Guinea and Thailand have complete smoke-free policies. Evidence shows that countries and territories with smoke-free policies have decreased the number of smokers and reduced mortality from smoking-related illnesses (WHO, 2021[3]).

The economic and social costs of tobacco use are also high, with families deprived of breadwinners, large public health costs for treatment of tobacco-related diseases, and lower workforce productivity (WHO, 2019[10]). Smoking rates in low-income countries are about half the rate in high-income countries (WHO, 2024[2])

Almost one in two men aged 15 and above in middle- and low-income Asia-Pacific countries and territories reported using tobacco currently in 2022, as compared to one in four in high-income countries and territories (Figure 4.15, left panel). The proportion of current tobacco users varied greatly across countries and territories. This proportion amongst men was highest in Indonesia and Myanmar at more than 70%, while the Solomon Islands, Papua New Guinea, Mongolia and Bangladesh, had over half of the adult males using tobacco currently. New Zealand and Australia, however, reported the lowest prevalence, with around 15% of adult males using tobacco currently. India has reduced smoking rates recently partly through an

innovative smoking cessation programme developed in 2015 that sends personalised encouraging text messages to quit smoking to registered smokers' cell phones (WHO, 2019[10]). However, India has a high prevalence of daily smokeless tobacco use amongst adults at 18.2% in 2018, and one in four adult men use smokeless tobacco daily.

There are large male-female disparities and 7%, 4% and 10% of women aged 15 and above report using tobacco currently in high, upper-middle, and lower-middle- and low-income Asia-Pacific countries and territories respectively (Figure 4.15, right panel). The rates were highest amongst female tobacco users in Papua New Guinea (25%), Myanmar (19%) and the Solomon Islands (19%).

Although regular smoking in adolescence has both immediate and long-term health consequences, amongst youth aged 13 to 15 years, two in five males used tobacco in Papua New Guinea, and around one in four females used tobacco in Papua New Guinea and Solomon Islands (Figure 4.16, left panel). Moreover, Electronic nicotine delivery systems (ENDS) are targeted specifically at children and young adults and marketed in thousands of flavours and the use of ENDS has increased over the past years among the young generation. Findings show that non-smoking young people who use ENDS are more likely to become cigarette smokers, exposing them to the harmful effects of smoking, including addiction to tobacco (WHO, 2023[1]).

Increasing tobacco prices through higher taxes is an effective intervention to reduce tobacco use, by discouraging youth from beginning tobacco use and encouraging tobacco users to reduce their consumption or quit (WHO, 2019[10]). Higher taxes also assist in generating additional government revenue. However, only Australia, New Zealand, and Thailand have total taxes that account for over 75% of the tobacco retail price in 2022 (WHO, 2024[11]). In Thailand, increased tax revenue has been used to support smoking cessation programmes (WHO, 2019[10]). As a measure of affordability of cigarettes, in Nepal, around one fifth of the GDP per capita is required to purchase 2000 cigarettes of the most sold brand, while this figure is of less than 2% of the GDP per capita in China, Mongolia, Japan, Korea and Singapore.

In Asia-Pacific, health warnings against tobacco use, including labels on tobacco product packaging and anti-tobacco mass media campaigns to build public awareness, could be used more to reduce tobacco use. Australia, Pakistan, Singapore and Thailand report that graphic pictorial warning labels have effectively impacted smoking-related behaviour. To increase the effectiveness of health warnings, Australia, Lao PDR, Myanmar, New Zealand, Singapore and Thailand have also mandated plain packaging of tobacco products. One area of innovation is the application of health warnings on individual cigarettes as in Canada (WHO, 2023[1]).

Definition and comparability

Current tobacco use prevalence is defined as the percentage of the population aged 15 years and over who reported consuming one or more tobacco products, smoked or smokeless, on a daily or non-daily basis. Data presented in Figure 4.15 refer to age-standardised rate.

Current tobacco use amongst youth is defined as the percentage of young people aged 13 to 15 years who consumed any tobacco product at least once during the last 30 days prior to the survey.

Electronic nicotine delivery systems (ENDS and ENNDS for non-nicotine) also commonly known as "e-cigarettes" or "vapes" heat a liquid to create aerosols that are inhaled by the user. These "e-liquids" contain nicotine (but not tobacco) and other additives, flavours and chemicals.

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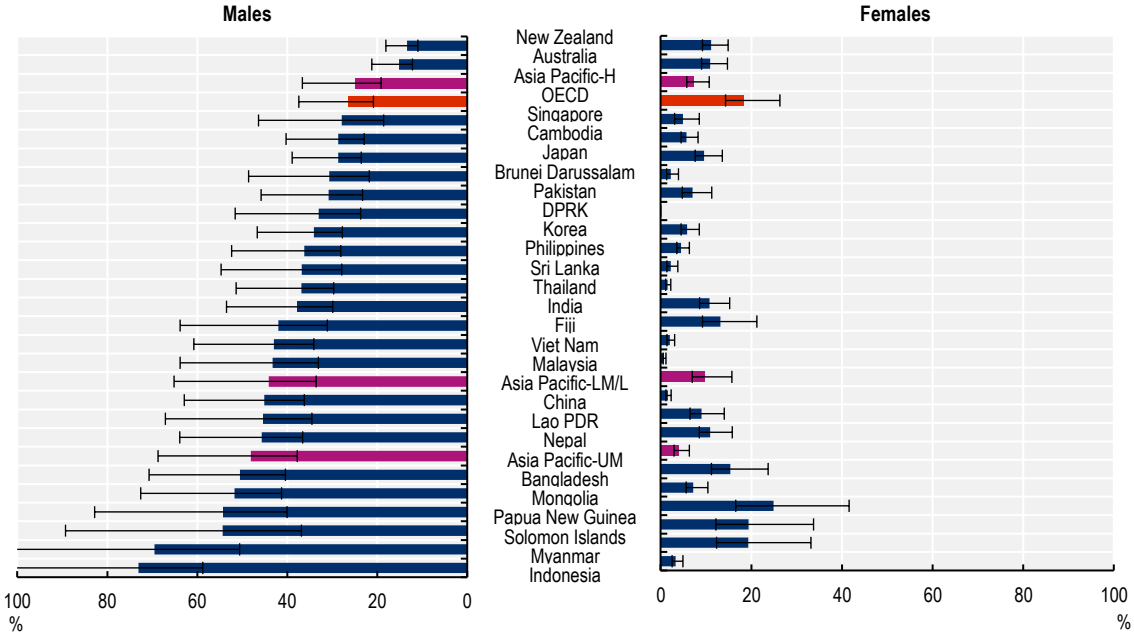
Figure 4.15. Age-standardised prevalence estimates for current tobacco use amongst persons aged 15 and above, by sex, 2022



Source: WHO Global Health Observatory 2024.

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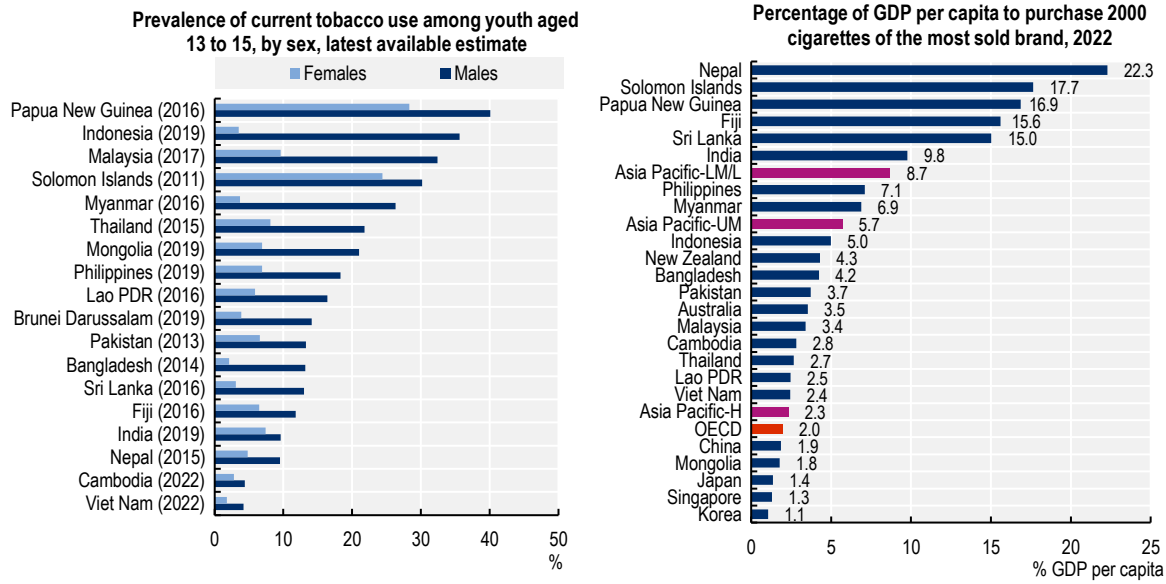
Figure 4.16. Prevalence of current tobacco use among youth and percentage of GDP per capita to purchase cigarettes



Source: WHO Global Health Observatory 2024.

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Alcohol

The health burden related to harmful alcohol consumption, both in terms of morbidity and mortality, is considerable in most parts of the world (WHO, 2018[1]; Sassi, 2015[2]). Alcohol use is associated with numerous harmful health and social consequences, including an increased risk of mouth and throat, larynx, oesophagus, colon and rectal, liver and breast cancers, stroke, and liver cirrhosis, among others. Foetal exposure to alcohol increases the risk of birth defects and intellectual impairment. Alcohol misuse is also associated with a range of mental health problems, including depressive and anxiety disorders, obesity and unintentional injuries (WHO, 2024[3]). In 2019, 2.6 million deaths per year were attributable to alcohol consumption, accounting for 4.7% of all deaths. Notably, 2 million of alcohol-attributable deaths were among men (WHO, 2024[3]). However there has been some progress; from 2010 to 2019, the number of alcohol-attributable deaths per 100 000 people decreased by 20.2% globally (WHO, 2024[3]). While many countries set age limits for purchasing or drinking alcohol, lack of enforcement and no age limits in some countries allow young people to access alcohol easily, increasing their consumption and risk of harmful consequences. People of younger age (20-39 years) are disproportionately affected by alcohol consumption with the highest proportion (13%) of alcohol-attributable deaths occurring within this age group in 2019 (WHO, 2024[3]).

Alcohol accounts for more deaths than TB, HIV/AIDS, hypertension, diabetes, digestive diseases, road injuries and violence (WHO, 2018[1]). The direct and indirect economic costs of alcohol (which include lost productivity, healthcare costs, and road traffic crashes and crime-related costs) are substantial – in Thailand and Korea these are about 2% of GDP (WHO, 2018[1]; Rhem et al., 2009[4]; Thavorncharoensap et al., 2010[5]).

In Asia-Pacific, alcohol consumption is highest among more developed countries and territories (Figure 4.17, left panel). Adults aged 15 years and over in Australia, New Zealand and Korea consumed over seven litres of alcohol per capita in 2020. In Japan, Lao PDR, Mongolia and Thailand, alcohol consumption was between six and seven litres (WHO, 2024[6]). Because cultural and religious traditions in a number of the remaining countries and territories prohibit drinking alcohol, consumption figures in these are minimal. In some countries and territories, only certain groups of people consume alcohol. In Thailand, for example, only about one-third of adults drinks alcohol, but still they have the highest per capita alcohol consumption in South-East Asia. (WHO, 2018[1]).

Average consumption increased very slightly by 0.1-0.2 litres per capita in upper middle- and lower-middle-income Asia-Pacific countries and territories since 2010 (Figure 4.17, right panel), although variations exist across countries and territories. Alcohol consumption declined by more than 0.5 litres per capita in Australia, China, DPRK and Korea. In Cambodia, Fiji, Lao PDR and Myanmar the increase in alcohol consumption per capita was at more than 0.5 litres per capita.

In many Asia-Pacific countries and territories, the proportion of people with binging and heavy drinking has increased in recent years, and on average across countries and territories in the region, one man in two and almost one woman in three reported heavy episodic drinking during the last 30 days in 2020 (Figure 4.18, left panel) (WHO, 2024[6]). In Korea and Lao PDR, more than 65% of males and over 40% of women reported heavy episodic drinking during the past 30 days.

More than 1 in five road traffic deaths were attributable to alcohol in Asia-Pacific in 2019. New Zealand has the highest proportion of road traffic deaths associated with alcohol in the region, followed by Australia and Lao PDR. In all countries and territories in Asia-Pacific, the proportion of road traffic deaths attributable to alcohol was higher, for males than for females. The difference is particularly large in Thailand where the proportion for male (37%) is nearly than twice the proportion for female (20%) (Figure 4.18, right panel). Based on the blood alcohol concentration (BAC) at which crash risk begins to increase exponentially, WHO

recommends drink-driving prevention legislation set maximum legal thresholds at 0.05g/dl (WHO, 2019[7]). For novice and probationary drivers, WHO recommendations go further to specify no higher than 0.02 g/dl due to the interaction of alcohol and inexperience. Setting and enforcing legislation on BAC limits of 0.05 g/dl can lead to significant reductions in alcohol-related crashes. Japan sets the limit of 0.03 g/d; and some countries and territories – such as Australia, Fiji, New Zealand and Viet Nam – have limited BAC level to 0g/dl for novice drivers.

Definition and comparability

Alcohol intake is measured in terms of annual consumption of litres of pure alcohol per person aged 15 years and over.

The methodology to convert alcoholic drinks to pure alcohol may differ across countries. Data are for recorded alcohol, and exclude homemade sources, cross-border shopping and other unrecorded sources. Information on drinking patterns is derived from surveys and academic studies (WHO, 2024[3]).

Heavy episodic drinking (HED) is defined as the consumption of at least 60 grammes of pure alcohol on one occasion, or more often, in the last month. Age-standardised HED indicates an age-adjusted proportion of the population that had at least one occasion of consumption of at least 60 grammes of alcohol in the last month. Sixty grammes of pure alcohol is contained in approximately six standard alcoholic drinks (WHO, 2024[3]).

The methodologies that countries and territories use to measure alcohol consumption can vary, and these can lead to differences when comparing national-reported data to those herein reported.

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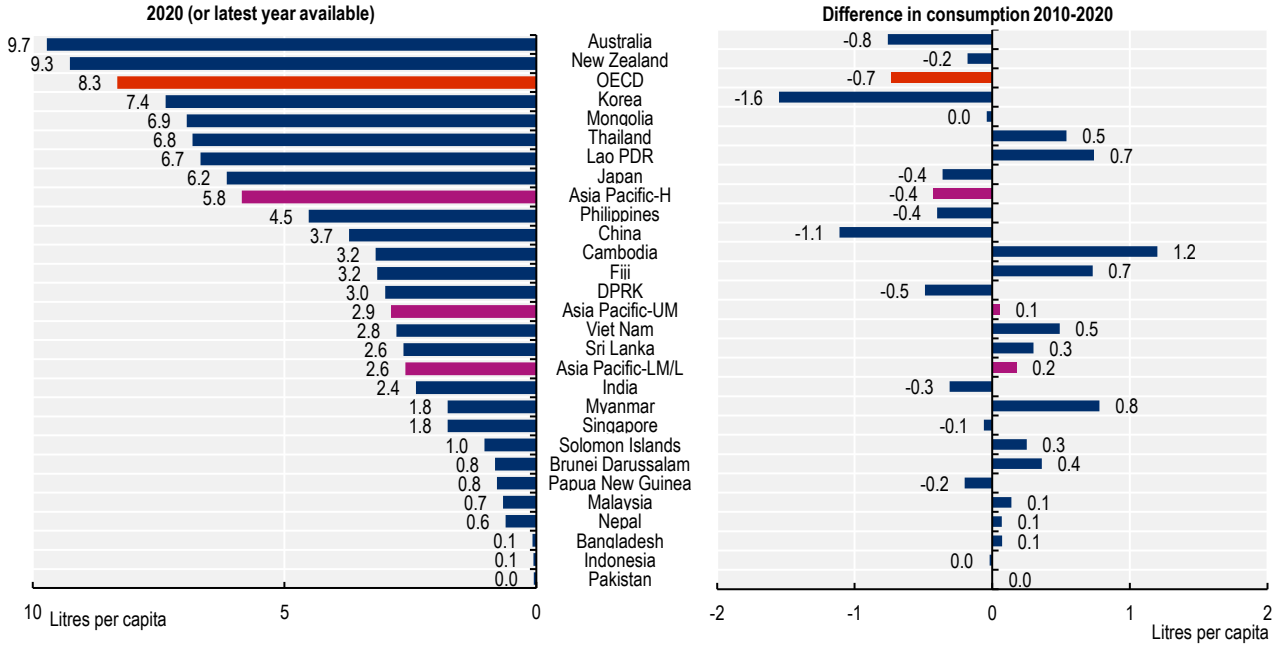
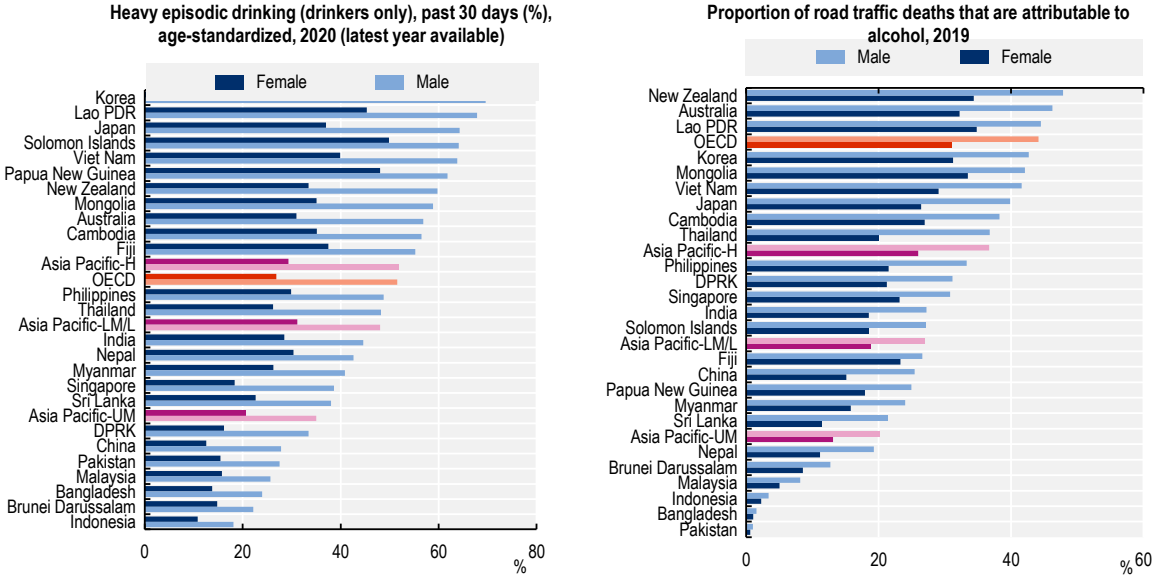
Figure 4.17. Recorded alcohol consumption, population aged 15 years and over, 2020 or latest year available



Source: WHO GISAH 2024.

StatLink https://stat.link/krpsci

Figure 4.18. Heavy episodic drinking and road traffic deaths attributable to alcohol



Source: WHO GISAH 2024.

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Road safety

Road traffic accidents are the main cause of death for people between 5 and 29 years of age worldwide. Globally, road traffic accounts for approximately 1.19 million deaths in 2021, a reduction of 5% compared to 2010 (1.25 million road traffic deaths) (WHO, 2023[1]) The global rate for road traffic deaths is 15 per 100 000 population, with a 1 to 3, female-to-male ratio (WHO, 2023[1]). South-East Asia is one of the most affected regions, with 16 road traffic deaths per 100 000 population. Western Pacific countries, have a slightly lower rate with 15 road traffic deaths per 100 000 people equal to the global average. Globally, more than 70% of road traffic deaths occur in lower-middle (44%) and upper-middle (35%) countries combined. The burden of road traffic deaths falls disproportionately on vulnerable road users as 38% and 27% of deaths are among pedestrians and cyclists in Western Pacific Region and South-East Asia Region respectively. The proportion of deaths among these vulnerable road users is higher in emerging economies where urbanisation and motorisation accompany rapid economic growth. In many of these countries, necessary infrastructural developments, policy changes and levels of policy enforcement have not kept pace with vehicle use (WHO, 2018[2]). The UN SDGs includes a target aiming to halve the number of global deaths and injuries from road traffic crashes by 2030 (SDG 3.6). Road traffic injuries are estimated to have a global cost of USD 1.8 trillion (Chen et al., 2019[3]).

In 2021, Asia-Pacific countries and territories reported between 15 and 16 deaths per 100 000 population due to road traffic accidents, three times the rate observed across OECD countries in the region (WHO, 2023[1]). In Asia-Pacific, the average proportion of deaths due to road traffic accidents in lower-middle- and low-income countries and territories is more than four times higher than the average rate in high-income countries. Improvements have been made in several countries in Asia-Pacific. In general, from 2010 to 2021 there has been a reduction in road traffic deaths of 2% and 16% in the South-East Asia and Western Pacific regions, respectively. From the Asia Pacific Region, two countries reached the target of at least 50% reduction in their fatality numbers, Brunei Darussalam and Japan (WHO, 2023[1]).

Road user behaviours are important risk factors for road traffic deaths; drink-driving alone account for 10% of road traffic deaths (WHO, 2023[1]). Legislation governing road user behaviours are key to reduce road traffic fatalities. For example, legislations on drink-driving, seat-belt use, child restraint, speed limit, helmet use, and mobile phone use (Table 4.1). Distracted driving – such as using mobile phones and other in-vehicle technologies while driving – is a growing threat to road safety; although most countries have implemented a national law to govern mobile use, there are still 4 countries in the latest report that do not have such law, Bangladesh, Indonesia, Myanmar and Nepal (Table 4.1).

Drinking and driving, especially with a blood alcohol concentration (BAC) level of over 0.05g/dl (grammes per decilitre), greatly increases the risk of a crash and the likelihood of death or serious injury (see indicator “Alcohol” in Chapter 4). Therefore, the WHO Best Practice Criteria includes national laws setting a BAC limit of 0.05/dl for the general driving population and a lower BAC limit (0.02 g/dl) for novice drivers (WHO, 2023[1]). All Asia Pacific countries, here presented, have reported presence of a national law prohibiting drink-driving (Table 4.1). Law enforcement through random breath testing checkpoints is considered highly cost effective (WHO, 2018[2]).

Speed limits are enforced by a national law in all Asia-Pacific countries here reported (Table 4.1). However, in several countries speed limits are above the WHO Best Practice Criteria recommended urban limit of 50km/h (Table 4.1). A number of initiatives aimed to reduce speeding are being implemented across the Asia-Pacific to decrease the risk of injuries and fatalities due to road traffic. For example, from 2019 to 2021, Indonesia implemented the Safe School Zone project which included installation of speed limit and safe school zone signs within 100-metre radius from the schools (WHO, 2023[1]).

Wearing a motorcycle helmet correctly can reduce the risk of death by more than 40% and the risk of severe injuries by almost 70%. When motorcycle helmet laws are enforced, helmet-wearing rates can increase to over 90%. Although all Asia Pacific countries reported having a national law to enforce the use of motorcycle helmets, the wearing rate is relatively low in countries such as Thailand (52%) and China (62%), compared to Sri Lanka (96%) and Nepal (98%) (Table 4.1).

Wearing a seat-belt can reduce fatalities among front-seat passengers by up to 50% and among rear-seat car passengers by up to 25%. Compared to the 2022 report, a national law on wearing seat belts has now been adopted in all Asia Pacific countries reported (Table 4.1). Likewise, child restraint systems, such as child seats for infants and booster seats for older children, decrease their risk of death in a crash by at least 60%. However, mandatory child restraint national laws has not been adopted in Bangladesh, Indonesia, Korea, Nepal, Pakistan and Viet Nam (Table 4.1) (WHO, 2023[1]).

Definition and comparability

The road traffic death rate per 100 000 population is an estimation based on classification of countries based on the existence and the completeness of their death registration data and population size. For countries with death registration data completeness less than 80% or with other sources for reporting, regression methods were used for the projection of the death rate. For countries with less than 150 000 and without eligible death registration data, survey data was used (WHO GHO, 2024[4]).

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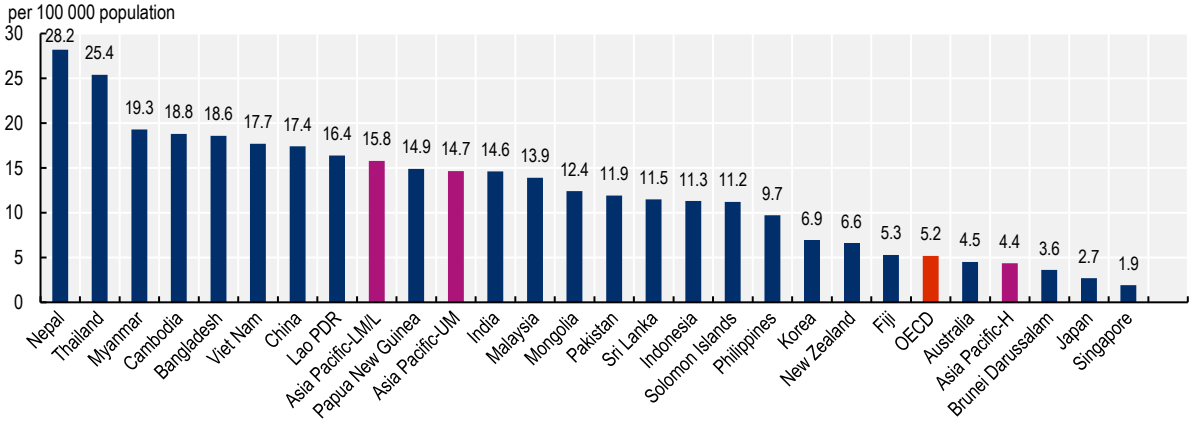
Figure 4.19. Estimated road traffic death rate, 2021



Source: WHO GHO 2024.

StatLink https://stat.link/gcv1bi

Table 4.1. Road safety measures, 2023 (or latest year available)

Existence of a national legislation on six main risk factors of road traffic deaths

Country	Existence of a national law on:											
	Drink-driving		Seat-belt			Child-restraint	Speed limit			Motorcycle helmet		Mobile phone use
	National law	Road traffic deaths to alcohol (%)	National law	Applicability to all occupants (Drivers)	Seat-belt (driver) wearing rate (%)	National law	National or local law	Rural (km/h)	Urban (km/h)	National law	Motorcycle helmet wearing rate (%)	National law
Australia	Yes	19	Yes	Yes	99	Yes	Yes	130	50	Yes	98	Yes
Bangladesh	Yes	-	Yes	Yes	-	No	Yes	No	No	Yes	-	No
Brunei Darussalam	Yes	-	-	-	-	-	-	-	-	-	-	-
Cambodia	Yes	5	Yes	No	-	Yes	Yes	90	40	Yes		Yes
China	Yes	7	Yes	Yes	95	Yes	Yes	70	50	Yes	62	Yes
Fiji	Yes	-	-	-	-	-	-	-	-	-	-	-
India	Yes	2	Yes	Yes	-	Yes	Yes	70	70	Yes	-	Yes
Indonesia	Yes	-	Yes	No	-	No	Yes	80	50	Yes	-	No
Japan	Yes	5	Yes	Yes	99	Yes	Yes	60	60	Yes	-	Yes
Korea	Yes	7	Yes	Yes	88	No	Yes	90	90	Yes	93	Yes
Lao PDR	Yes	-	Yes	No	-	Yes	Yes	90	40	Yes	-	Yes
Malaysia	Yes	0	Yes	No	-	Yes	Yes	90	90	Yes	-	Yes
Mongolia	Yes	-	Yes	Yes	30	Yes	Yes	80	60	Yes	-	Yes
Myanmar	Yes	-	Yes	Yes	-	Yes	Yes	80	48	Yes	-	No
Nepal	Yes	-	Yes	No	-	No	Yes	80	40	Yes	98	No
New Zealand	Yes	23	Yes	Yes	97	Yes	Yes	110	50	Yes	-	Yes
Pakistan	Yes	-	Yes	No	-	No	Yes	110	90	Yes	-	Yes
Papua New Guinea	Yes	-	-	-	-	-	-	-	-	-	-	-
Philippines	Yes	-	Yes	Yes	-	Yes	Yes	80	40	Yes	-	Yes
Singapore	Yes	-	Yes	Yes	100	Yes	Yes	-	70	Yes	100	Yes
Solomon Islands	Yes	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	Yes	4	Yes	No	75	Yes	Yes	70	50	Yes	96	Yes
Thailand	Yes	21	Yes	Yes	36	Yes	Yes	90	80	Yes	52	Yes
Viet Nam	Yes	-	Yes	No	-	No	Yes	90	60	Yes	90	Yes

Source: Global Status Report on Road Safety 2023, WHO.

5 Health care resources and utilisation

Doctors and nurses

Access to high-quality health services critically depends on the size, skill-mix, competency, geographic distribution and productivity of the health workforce. Health workers are the cornerstone of healthcare systems as demonstrated by the immense strain put on them by the COVID-19 pandemic, which also highlighted the importance of building an adequate, well-prepared health workforce for fostering the resilience of health systems against acute shocks and crises (OECD, 2023[1]).

The number of doctors per 1 000 population varies widely across Asia-Pacific countries and territories, but it is generally lower than the OECD average (Figure 5.1, left panel). Across lower-middle- and low-income Asia-Pacific countries and territories, there are 1.1 doctors 1 000 population, whereas a higher number of doctors – 1.6 per 1 000 population – is reported in upper-middle-income countries and territories. Australia, Mongolia and New Zealand have the highest number of doctors per capita, with 4.1, 3.9, and 3.7 doctors per 1 000 population, respectively; similar to the OECD average of 3.8. In contrast, Papua New Guinea, Cambodia and the Solomon Islands, have the lowest number of physicians at or below 1 per 5 000 population.

The foundation for a strong and effective health workforce, able to respond to the 21st century priorities, requires matching effectively the supply and skills of health workers to population needs, now and in the future (WHO, 2016[2]). To this aim, the specialisation-mix and distribution of doctors may be improved in Asia-Pacific. In Japan, for example, the number of medical facilities with surgical and paediatric departments is on decline, while shortages of doctors in emergency departments, obstetrics and gynaecology, internal medicine and anaesthesia have been identified (Sakamoto, Rahman and Nomura, 2018[3]). Furthermore, an uneven geographical distribution of health workers is a serious concern. The majority of health workers tend to be concentrated in urban areas, leaving a shortage of health workers in remote and rural areas that results in poor availability of health services particularly for vulnerable populations (Liu and Zhu, 2018[4]). A recent concern in Thailand is the high resignation rates among nurses and newly graduated doctors, which may be linked to the heavier workload resulting from increasing demand in healthcare (WHO, 2024[5]).

There is a large variation also in the number of nurses across countries and territories in Asia-Pacific (Figure 5.1, right panel). The number of nurses is highest in high-income countries such as Australia, Japan and New Zealand, with more than 10 nurses per 1 000 population. The supply is much lower in several lower-middle-income countries, including Papua New Guinea, Bangladesh and Pakistan, where there is 0.5 nurse or less per 1 000 population. On average, less than two nurses per 1 000 population work in lower-middle- and low-income Asia-Pacific countries. Furthermore, nurses are not well distributed geographically within countries and territories such as Indonesia and the Philippines (Dayrit et al., 2018[6]; Mahendradhata et al., 2017[7]), and several other countries and territories in the region face the same issue (WHO, 2020[8]).

In some countries and territories, national human resources for health planning needs to take account of migration trends in order to secure the necessary number of health professionals domestically. For example, around 69 000 Indian-trained physicians worked in the United States, the United Kingdom, Canada and Australia in 2017, and nearly 56 000 Indian-trained nurses work in the same four countries (Walton-Roberts and Rajan, 2020[9]), despite a domestic density of both doctors and nurses of less than half of the Asia-Pacific average. On the other hand, the Philippines is also the biggest supplier of nurses and a major exporter of doctors (Dayrit et al., 2018[6]), but the density of these health professionals is at about the Asia-Pacific average.

As seen in OECD countries, nurses outnumber doctors, and there are 1.6 and 2.2 nurses per doctor in lower-middle- and low-income, and upper-middle-income Asia-Pacific countries, respectively (Figure 5.2).

However, there are some exceptions. Due to having very few doctors, the Solomon Islands have 10.4 nurses per doctor. On the other hand, doctors outnumber nurses in Pakistan and Bangladesh, whereas the same number of nurses and doctors is reported in Myanmar and Mongolia.

Countries and territories in Asia-Pacific need to respond to the changing demand for health services and hence the health professional skill-mix in the context of rapidly ageing populations (see indicator "Ageing" in Chapter 3). The WHO global strategic directions (WHO, 2016[2]) provide the framework for strengthening health workforce services to help countries and territories achieve universal health coverage. In addition, target 3.C of the Sustainable Development Goals calls for "substantially increase the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States".

OECD countries, already experiencing population ageing, have developed formal systems to care for people with limitations on activities of daily living, and long-term care workers, typically nurses and personal carers, provide care and/or assistance to these people at home or in institutions through the provision of LTC services and support, to help them maintain their safety, independence and quality of life (Muir, 2017[10]).

Definition and comparability

Doctors include generalist medical doctors (including family and primary care doctors) and specialist medical doctors.

For Asia-Pacific non-OECD countries and territories, "Nurses" refers to the number of nursing personnel, including professional nurses, auxiliary nurses, enrolled nurses and related occupations such as dental nurses and primary care nurses. For OECD countries, "Nurses" refers to practising nurses that provide services directly to patients. This number includes professional nurses, associate professional nurses and foreign nurses licensed to practice and actively practising in the country.

Data are based on head counts.

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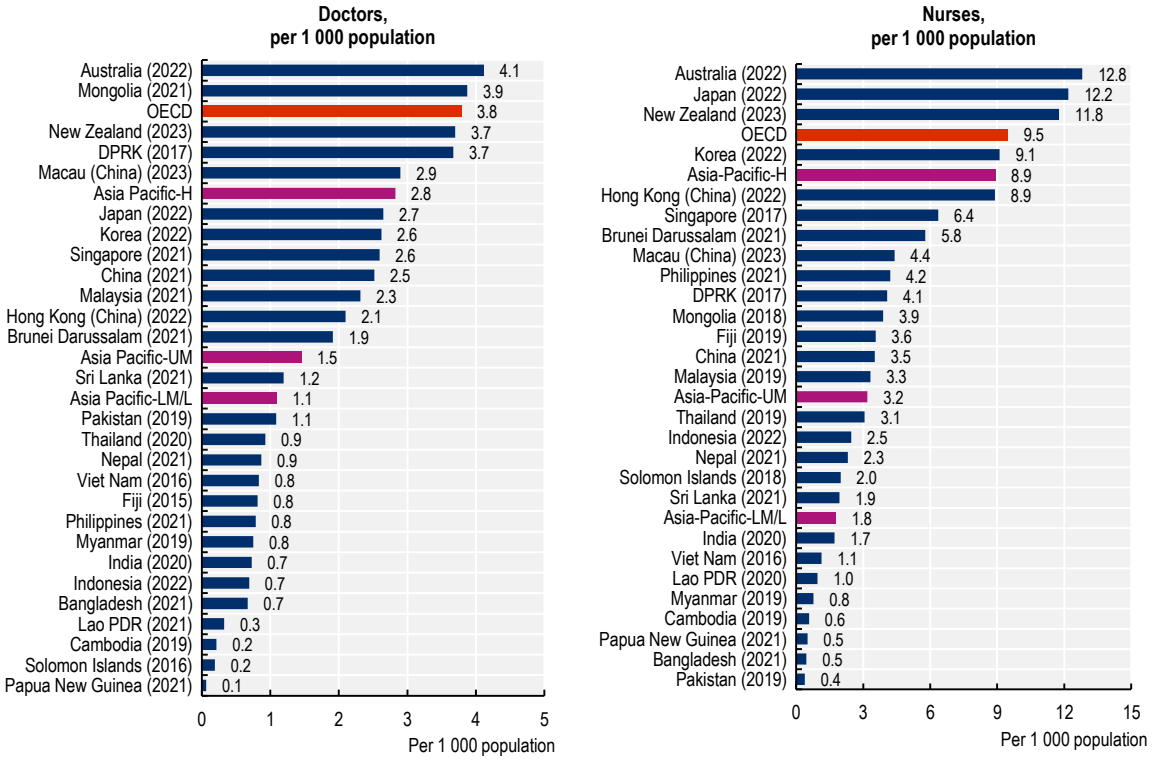
Figure 5.1. Doctors and nurses per 1 000 population, latest year available



Source: OECD Health Statistics 2024; WHO GHO, 2024; National Data Sources (Macao (China), Hong Kong (China)).

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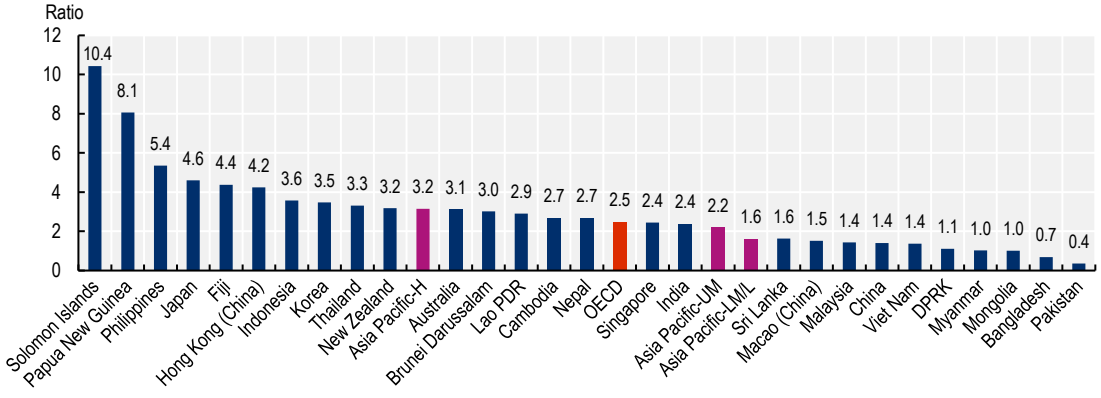
Figure 5.2. Ratio of nurses to doctors, latest year available



Source: OECD Health Statistics 2024; WHO GHO, 2024; National Data Sources (Macao (China), Hong Kong (China)).

StatLink https://stat.link/vu7ip9

Consultations with doctors

Consultations with doctors are an important measure of overall access to health services, since most diseases can be managed effectively in primary care without hospitalisation, and a doctor consultation often precedes a hospital admission. The COVID-19 pandemic significantly impacted the number of consultations, with major consequences for disease prevention and management.

Generally, the annual number of doctor consultations per person in Asia-Pacific is lower than the OECD average of 6.3, but there are some cross-country variations (Figure 5.3, left panel). The doctor consultation rate ranges from above 17 per person in Korea and Japan to less than one per person in Bangladesh and Cambodia. In general, consultation rates tend to be highest in the high-income countries and territories in the region (except Singapore) and significantly lower in low-income countries and territories, suggesting that income levels have some impact on populations' healthcare-seeking behaviours. It should be noted that in low- and lower-middle-income countries and territories most primary contacts are with medical assistants, clinical officers, or nurses, and not with doctors. Those primary contacts are not included in the figures above.

Mainly reflecting the limited supply of doctors (see indicator "Doctors and nurses" in Chapter 5), the number of consultations per doctor is – in many Asia-Pacific countries and territories – higher that the OECD average at 1 788 per year (Figure 5.3, right panel). Doctors had more than 5 000 consultations on average in the Sri Lanka, Thailand and Korea in a year, while a doctor in Brunei Darussalam, Malaysia, New Zealand and Bangladesh, generally delivers less than 1 300 consultations per year.

The number of consultations per doctor should not be taken as a measure of productivity as consultations can vary in length and effectiveness, and doctors also undertake work devoted to inpatients, administration, and research. This measure is also subject to comparability limitations such as the exclusion of doctors working in the private sector or the inclusion of other health professionals providing primary care in some countries and territories (see box below on "Definition and comparability").

There is a close relationship between doctor consultation rates – a proxy for access to services – and healthy life expectancy at birth, with consultation rates being highest in countries and territories reporting the highest healthy life expectancy (Figure 5.4). This simple correlation, however, does not necessarily imply causality since overall living standards may influence both consultation rates and life expectancy. There are also country examples such as Mongolia and Singapore, where healthy life expectancy is either much lower (Mongolia) or higher (Singapore) than expected based on consultation rates, indicating that other factors, such as geographical accessibility and income level, affect life expectancy.

Definition and comparability

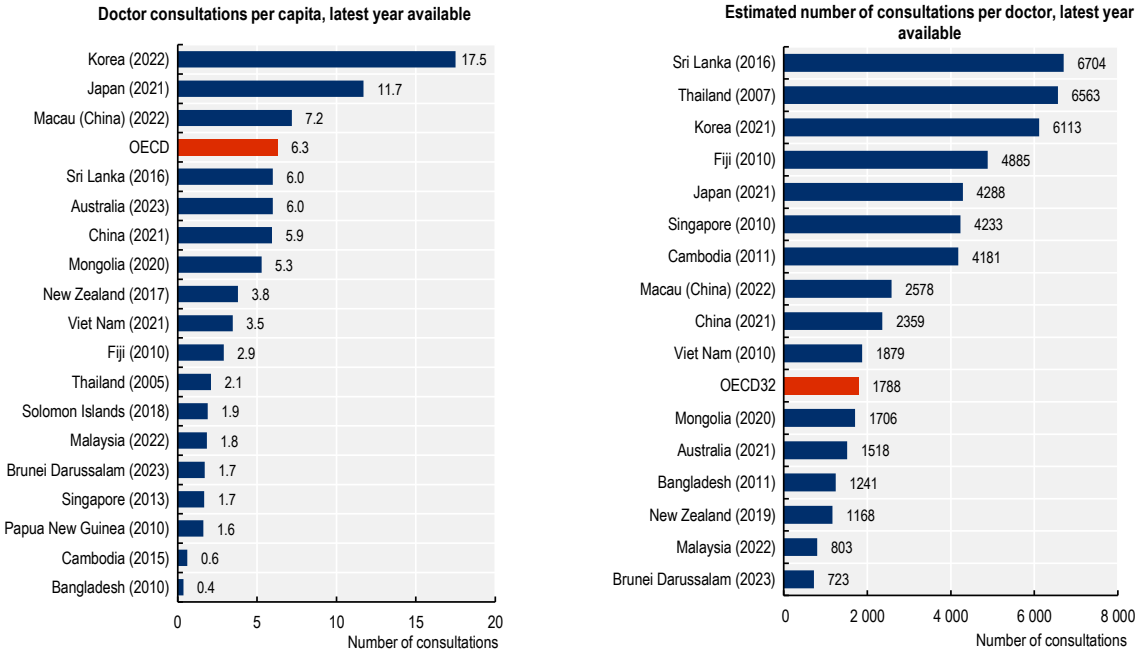
Consultations with doctors are defined as contacts with physicians (both generalists and specialists, for more details see indicator “Doctors and nurses” in Chapter 5). These may take place in doctors’ offices or clinics, in hospital outpatient departments and at home.

Two main data sources are used to estimate consultation rates: administrative data and household health surveys. In general, administrative data sources in non-OECD countries and territories of the Asia-Pacific region only cover public sector physicians or physicians remunerated by the public sector, although physicians in the private sector provide a large share of overall consultations in most of these countries and territories. Moreover, outpatient visits recorded in administrative data can be also with non-physicians. The alternative data source is household health surveys, but these tend to produce lower estimates owing to incorrect recall and non-response rates. Administrative data have been used where available, but survey data are used for Hong Kong (China), Singapore, Solomon Islands and Sri Lanka. Caution must be applied in interpreting the data from different sources.

The annual number of consultations per doctor is estimated by dividing the number of total consultations in a year by the number of doctors.

Consultations with doctors are a proxy measure of access to services given that there is no globally agreed upon benchmark of what constitutes a reasonable average of consultations per capita to indicate good access.

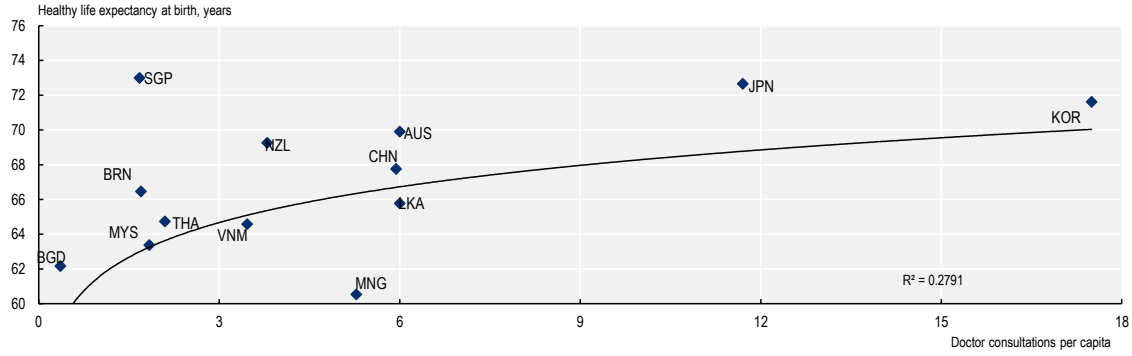
Figure 5.3. Doctor consultations per capita and estimated number of consultations per doctor



Note: In order to avoid disturbances caused by COVID-19, the OECD average was calculated with 2019 or latest data from countries.
Source: OECD Health Statistics 2024; National Data Sources (non-OECD countries).

StatLink https://stat.link/nm46sy

Figure 5.4. Doctor consultations per capita and healthy life expectancy at birth, latest year available



Source: OECD Health Statistics 2024; WHO GHO 2024.

StatLink https://stat.link/c56ub2

Medical technologies

The need to prevent diseases, diagnose early and treat effectively under the Universal Health Coverage mandate of the Sustainable Development Goals 3 calls for safe, effective, and appropriate medical care.

Medical technologies are crucial in the prevention, diagnosis and treatment of illness and diseases as well as patient rehabilitation, but they also contribute to increases in health spending on devices (WHO, 2017e). Computed tomography (CT) scanners and magnetic resonance imaging (MRI) units help doctors diagnose a range of conditions by producing images of internal organs and structures of the body. MRI exams do not expose patients to ionising radiation, unlike conventional radiography and CT scanning. Mammography is used to diagnose breast cancer, and radiation therapy units are used for cancer treatment. However, such equipment is expensive.

Data indicate that there are huge differences in availability of technologies across countries and territories, and that the higher the country income level the higher the availability of medical equipment per million population for all four selected medical equipment types.

Japan has by far the highest number of CT scanners per million population. More than 115 CT scanners are available per million population in Japan, as opposed to less than one per million population in Bangladesh, Pakistan, Papua New Guinea, Lao PDR and Myanmar (Figure 5.5, left panel). Also for MRI units, Japan reports 57 units per million population, whereas Cambodia, Pakistan, Myanmar, the Philippines, Sri Lanka and Bangladesh report less than one unit per million population (Figure 5.5, right panel). Korea has the highest number of mammographs at 421.9 per million females aged 50-69, as opposed to Bangladesh, Pakistan, Myanmar, Sri Lanka and Papua New Guinea, where less than 10 mammographs are available per million females aged 50-69 (Figure 5.6, left panel).

There is no general guideline or benchmark regarding the ideal number of CT scanners or MRI units per population. However, if there are too few units, this may lead to access problems in terms of geographic proximity or waiting times. If there are too many, this may result in an overuse of these costly diagnostic procedures, with little if any benefits for patients. Although there is limited evidence on the use of medical technologies in the Asia-Pacific region, data from OECD countries show that several countries with a high number of CT scanners and MRIs, such the United States, also have a higher number of diagnostic exams per population, suggesting some degree of overuse (OECD, 2017[1]).

The availability of treatment equipment is also much higher in high-income countries. Australia and Japan have over 10 radiation therapy units per million population, whereas there is less than one unit per 10 million people in Papua New Guinea, Cambodia, Bangladesh, Lao PDR, Indonesia, Pakistan, Nepal, Viet Nam, Myanmar, the Philippines, Korea DPR and India (Figure 5.6, left panel).

Clinical guidelines have been developed in some OECD countries to promote more rational use of diagnostic technologies (OECD, 2017[1]). In the United Kingdom, the National Institute for Health and Clinical Excellence (NICE) has issued a number of guidelines on the appropriate use of MRI and CT exams (NICE, 2020[2]). In Australia, a “Choosing Wisely” campaign has developed clear guidelines for doctors and patients to reduce the use of unnecessary diagnostic tests and procedures. The guidelines include, for instance, avoiding imaging studies such as MRI, CT or X-rays for acute low back pain without specific indications (Choosing Wisely Australia, 2020[3]). In Australia, clinicians may use Diagnostic Imaging Pathways (DIP), an evidence-based clinical decision support tool and educational resource for diagnostic imaging. DIP guides the choice of the most appropriate diagnostic examinations in the correct sequence in a wide range of clinical scenarios. The broad objective is to reduce the number of unnecessary examinations that may expose patients to risk without benefits, and increase the number of appropriate examinations resulting in cost-effective diagnosis (Government of Western Australia, 2020[4]).

Definition and comparability

The data cover equipment installed both in hospitals and the ambulatory sector and public and private sectors in most countries and territories. However, there is only partial coverage for some countries and territories. In Myanmar, data refer to equipment in the public sector. MRIs in Brunei Darussalam refer to those in the private sector, and in Mongolia, radiation therapy units refer to those in the public sector. For Australia, the number of medical technology equipment includes only those eligible for public reimbursement (about 60% of total MRI units are eligible for reimbursement under Medicare, the universal public health system).

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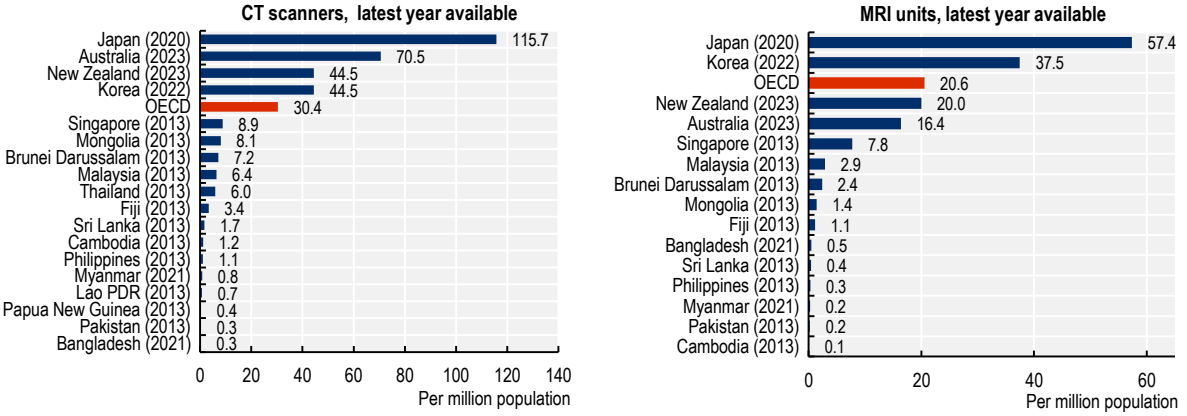
Figure 5.5. CT Scanners and MRI Units



Source: OECD Health Statistics 2024; WHO Global atlas of medical devices 2022.

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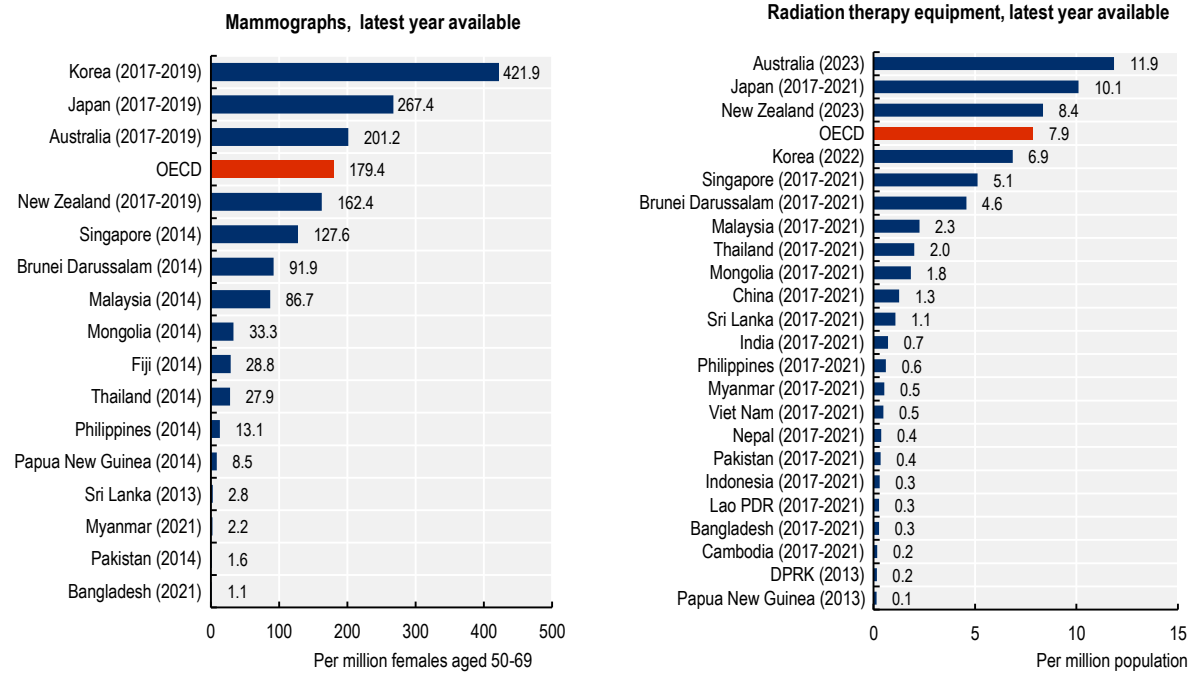
Figure 5.6. Mammographs and radiation therapy equipment



Source: OECD Health Statistics 2024; WHO Global atlas of medical devices 2022.

StatLink https://stat.link/nbf0xw

Hospital care

Hospitals in most countries and territories account for the largest part of healthcare expenditure. Capacity of the hospital sector and access to hospital care are assessed in this report by the number of hospital beds and hospital discharge rates. However, increasing the numbers of beds and overnight stays in hospitals does not always bring positive outcomes as resources need to be used efficiently. Hence, the average length of stay (ALOS) is also used to assess appropriate access to and use of hospital care, but caution is needed in its interpretation. Although, all other things being equal, a shorter stay will reduce the cost per discharge and provide care more efficiently by possibly shifting care from inpatient to less expensive post-acute settings, too short a length of stay may reduce the comfort and hamper the recovery of the patient or increase hospital readmissions.

The number of hospital beds is 2.5 and 2.8 per 1 000 population on average across upper-middle and lower-middle- and low-income Asia-Pacific countries and territories, respectively; lower than the OECD average of 4.3 and the high-income Asia-Pacific countries and territories average of 5.5 (Figure 5.7, left panel). Lower-middle-income countries like Sri Lanka and upper-middle-income like China stand out as being close to the OECD average of 4.3 beds per 1 000 population. More than one bed per 100 population is available in DPRK, Korea, Japan and Mongolia, whereas the stock of beds is less than one per 1 000 population in Papua New Guinea, Nepal, Pakistan, Cambodia and Bangladesh. These large disparities reflect substantial differences in the resources invested in hospital care across countries and territories.

Hospital discharge is at 116.3 and 108.7 per 1 000 population on average in upper-middle- and lower-middle- and low-income Asia-Pacific countries and territories, respectively; below the OECD average of 130.6 (Figure 5.7, right panel). The highest rates are in Hong Kong (China), Sri Lanka and Mongolia, with over 200 discharges per 1 000 population in a year, while in Bangladesh, Cambodia and Nepal, discharge rates are less than 50 per 1 000 population, suggesting deferrals in accessing hospital services.

In general, countries and territories with more hospital beds tend to have higher discharge rates, and vice versa (Figure 5.8, left panel). However, there are some notable exceptions. Korea and Japan, with the second and third highest number of hospital beds per population, respectively, have relatively low discharge rates; while Hong Kong (China), with a close-to-average hospital beds availability for the region, has the highest discharge rate.

In Asia-Pacific, the variation across countries and territories in the number of days spent – on average – in hospital per visit is large (Figure 5.8, right panel). Lower-middle- and low-income countries and territories report the lowest ALOS in Asia-Pacific at 5 days. The longest average length of stay is of more than 16 days in Japan, while the shortest length of stay is 2.5 days in Lao PDR and Bangladesh. In Japan, “social admission”, in that some “acute care” beds are devoted to long-term care for the elderly, partly explains the large number of beds and long ALOS (Sakamoto, Rahman and Nomura, 2018[1]). A short ALOS, coupled with the high admission rates in Sri Lanka, suggests that inpatient services may be partly substituting for outpatient and primary care.

Definition and comparability

All hospital beds include those for acute care and chronic/long-term care, in both the public and private sectors. A discharge is defined as the release of a patient who has stayed at least one night in hospital. It includes deaths in hospital following inpatient care but usually excludes same-day separations. The discharge rates presented are not age-standardised, not considering differences in the age structure of the population across countries and territories.

The figures reported for ALOS refer to the number of days that patients spend overnight in an acute-care inpatient institution. ALOS is generally measured by dividing the total number of days stayed by all patients in acute-care inpatient institutions during a year by the number of admissions or discharges. There are considerable variations in how countries and territories define acute care, and what they include or exclude in reported statistics. For the most part, reported ALOS data in the developing countries and territories of the Asia-Pacific region cover only public sector institutions.

References

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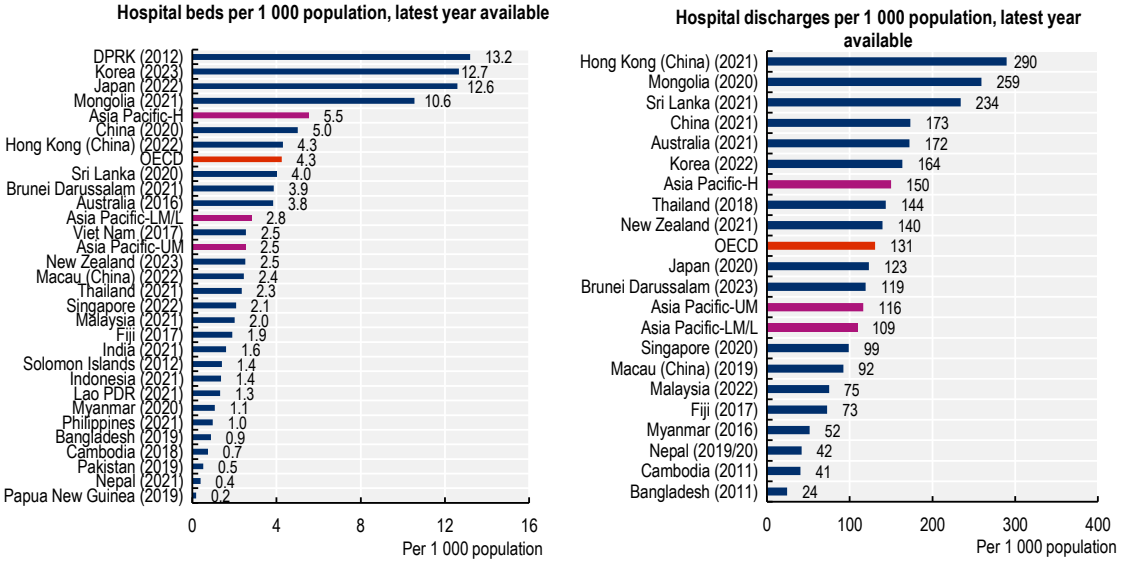
Figure 5.7. Hospital beds and discharges



Source: OECD Health Statistics 2024; WHO GHO 2024, National sources (Brunei Darussalam, China, Hong Kong (China), Macao (China), Malaysia, Singapore, Sri Lanka).

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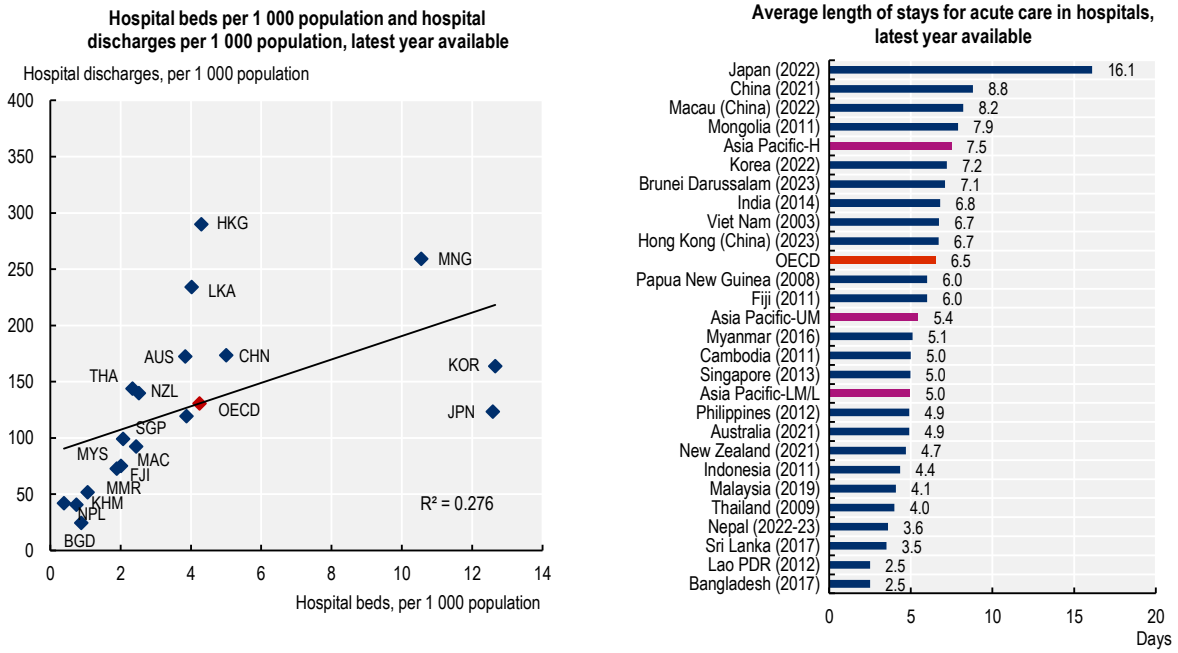
Figure 5.8. Hospital beds and hospital discharges, and average length of stays



Source: OECD Health Statistics 2024; WHO GHO 2024, National sources (Brunei Darussalam, China, Hong Kong (China), Macao (China), Nepal).

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Pregnancy and birth

Antenatal care, delivery attended by skilled health professionals and access to health facilities for delivery are important for the health of both mothers and their babies as they reduce the risk of birth complications and infections (see indicators on "Infant feeding" in Chapter 4). WHO currently recommends a minimum of eight antenatal contacts (WHO, 2016[1]), and antenatal care coverage has been monitored to ensure universal access to sexual and reproductive healthcare services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes by 2030 (Sustainable Development Goal 3.7).

In Asia-Pacific, seven in ten pregnant women – on average – received the recommended four visits in lower-middle- and low-income countries and territories, but access to antenatal care varies across countries and territories (Figure 5.9, left panel). Brunei Darussalam, Malaysia and Korea have nearly complete coverage of four antenatal visits. At the other end, in Bangladesh and Papua New Guinea the coverage of four antenatal care visits is less than 50%.

Only four women in five had births attended by a skilled health professional – a doctor, nurse or midwife – in lower-middle- and low-income Asia-Pacific countries and territories, whereas almost all births were attended by a skilled health professional in high- and upper-middle-income countries and territories (Figure 5.9, right panel). Most deliveries in Papua New Guinea, Myanmar and Lao PDR were attended by a skilled health professional, with one birth in three assisted by *dais* or untrained birth attendants. Traditional birth attendants are important in several other countries and territories including Cambodia, India, Indonesia, Myanmar, Pakistan and the Philippines, especially in rural settings.

In Asia-Pacific, delivery in health facilities varies across countries and territories (Figure 5.10, left panel). In Thailand, Mongolia, Viet Nam and DPRK, almost all deliveries take place at a health facility. On the other hand, in Bangladesh, less than 55% of births takes place in a health facility. Across countries and territories, deliveries in health facilities are more common among mothers giving birth for the first time, or those who have had at least four antenatal visits, as well as among mothers living in urban regions and those with higher education and wealth.

Access to skilled birth attendants varies by socio-economic factors (Figure 5.10, right panel). Mongolia, Thailand and DPRK have a high coverage of births attended by skilled health professionals among mothers with different education and income levels, as well as living in different geographical locations. However, in other countries and territories, the coverage of births attended by skilled health professionals is highly unequal among women of different income and education levels. For example, in Lao PDR and Bangladesh, access differs almost three-fold between mothers of the lowest education level and mothers of the highest education levels. Disparity by household income is largest in Lao PDR and Bangladesh, again with almost three-fold difference between mothers living in household at the highest and at the lowest income quintiles. Differences in access to skilled care at birth between urban and rural areas are relatively smaller across countries and territories, though they remain significant in Lao PDR and Myanmar.

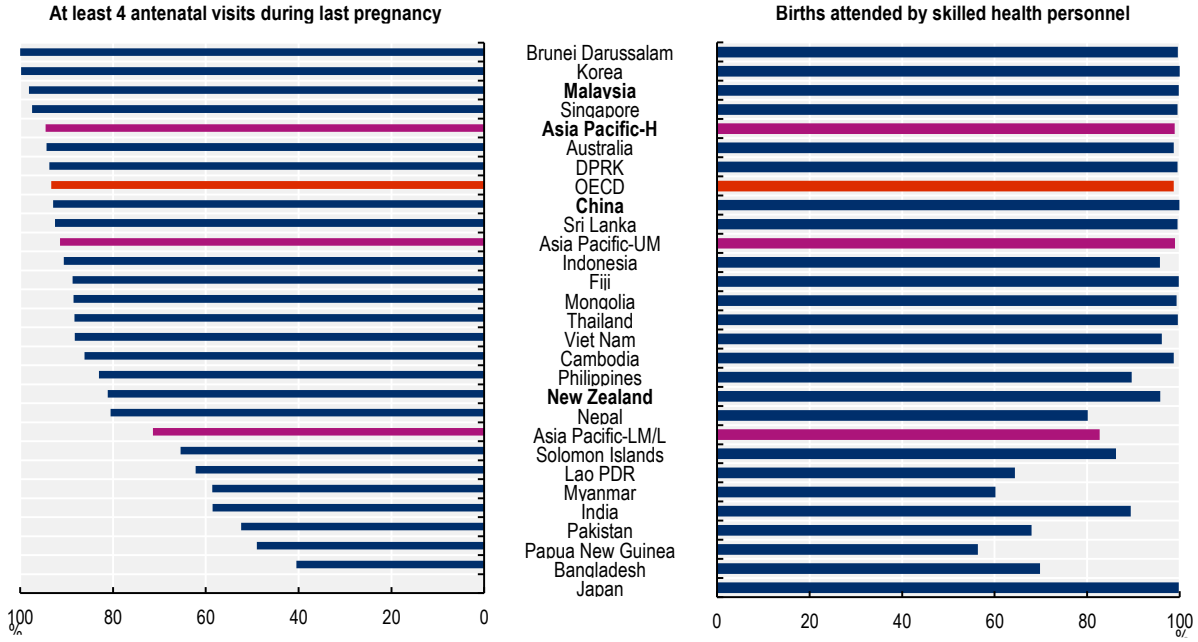
Definition and comparability

The major source of information on care during pregnancy and birth are health interview surveys. Demographic and Health Surveys (DHS), for example, are nationally representative household surveys that provide data for a wide range of indicators in the areas of population, health, and nutrition. Standard DHS Surveys have large sample sizes (usually between 5 000 and 30 000 households) and typically are conducted every five years, to allow comparisons over time. Women who had a live birth in the five years preceding the survey are asked questions about the birth, including how many antenatal care visits they had, who provided assistance during delivery, and where the delivery took place.

References

WHO (2016), *WHO recommendations on antenatal care for a positive pregnancy experience*, World Health Organization, https://iris.who.int/handle/10665/250796. [1]

Figure 5.9. Provision of care during pregnancy and birth, 2023 or latest year available



Note: Women included are aged 15-49.
Source: UNICEF 2024.

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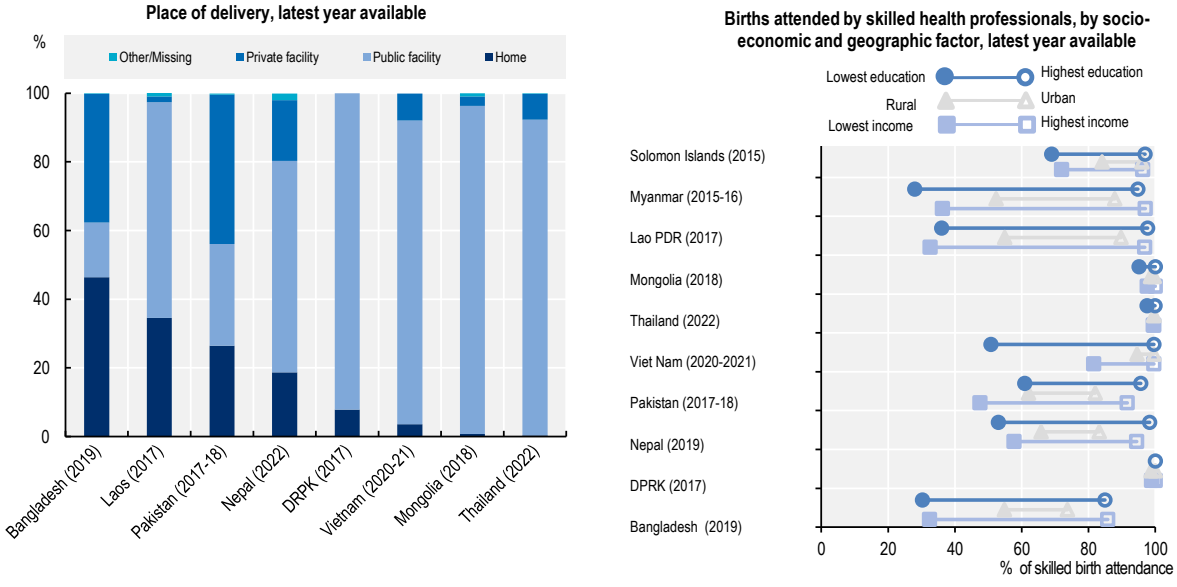
Figure 5.10. Place of delivery and births attended by skilled health professionals



Source: DHS and MICS surveys, various years.

StatLink https://stat.link/ivjrmh

Infant and child health

Basic care for infants and children includes promoting and supporting early and exclusive breastfeeding (see indicators on “Infant feeding” in Chapter 4) and identifying conditions requiring additional care and counselling on when to take an infant and young child to a health facility. There are several cost-effective preventive and curative services for leading causes of childhood morbidity and mortality. These comprise vitamin A supplementation, measles vaccination, oral rehydration therapy (ORT) and zinc supplementation for severe diarrhoea, and antibiotic treatment for acute respiratory infection (ARI) (Bhutta et al., 2013[1]).

As a safe and effective vaccine is available for measles, its coverage has been used to monitor the progress towards achieving the SDG target 3.2 to end preventable deaths of newborns and children under 5 years of age by 2030. This vaccine is also considered a marker of access of children to health services.

Access to preventive care varies across Asia-Pacific as shown by children receiving two annual high-dose vitamin A supplementations (Figure 5.11, left panel) and vaccination coverage (see indicator “Childhood vaccination” in Chapter 7). Access to vitamin A supplementation is markedly low in the Papua New Guinea, Philippines, Lao PDR and Solomon Islands with less than 40%, whereas Bangladesh, Nepal, Myanmar and DPRK have nearly complete coverage.

Less than one child in four with diarrhoea in the Philippines, Viet Nam, Mongolia, Indonesia and Lao PDR, and less than one child in ten with diarrhoea in Pakistan, Cambodia, Papua New Guinea and Myanmar, received oral rehydration solution and zinc supplement (Figure 5.11, right panel). Furthermore, less than half of children with diarrhoea received continued feeding and ORT in Pakistan, the Philippines, India, Papua New Guinea and Cambodia. The coverage was as high as 71% in Mongolia, DPRK and Thailand (Figure 5.12, left panel).

Access to appropriate medical care for children with ARI can also be improved in many countries and territories in the region. Although at least three-quarters of children with symptoms are taken to a health facility in most countries, in many less than half of them receive antibiotic treatment (Figure 5.12, right panel). There is a correlation between treatment coverage for diarrhoea and ARI. Antibiotic treatment for ARI is particularly low in Myanmar, the Philippines and Pakistan, where the treatment for diarrhoea is also low. This suggests a need to expand access to care to treat leading causes of child mortality in these countries and territories.

Definition and comparability

Prevention and treatment coverage data are usually collected through household surveys. Accuracy of survey reporting varies and is likely to be subject to recall bias. Seasonal influences related to the prevalence of diarrhoeal disease and acute respiratory infection may also affect cross-national data comparisons.

Children aged 6-59 months who received vitamin A supplementation refers to full dose.

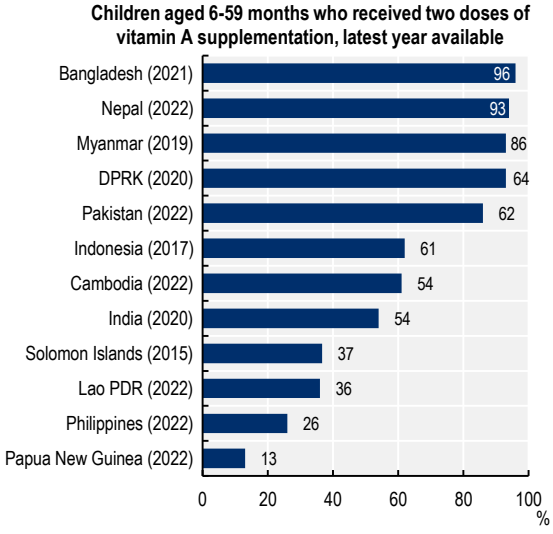
Children aged under 5 years with diarrhoea receiving continued feeding and ORT refers to those receiving continued feeding and oral rehydration solution, gruel or increased fluids.

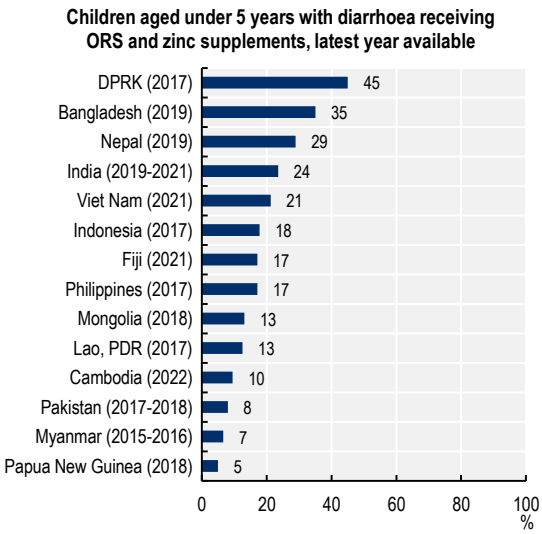
The prevalence of acute respiratory infection is estimated by asking mothers whether their children under 5 had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding a survey, as these symptoms are compatible with ARI.

References

Bhutta, Z. et al. (2013), "Interventions to address deaths from childhood pneumonia and diarrhoea equitably: What works and at what cost?", *The Lancet*, Vol. 381/9875, pp. 1417-1429, https://doi.org/10.1016/S0140-6736(13)60648-0. [1]

Figure 5.11. Access to preventive care





Source: UNICEF 2024. DHS and MICS surveys, various years.

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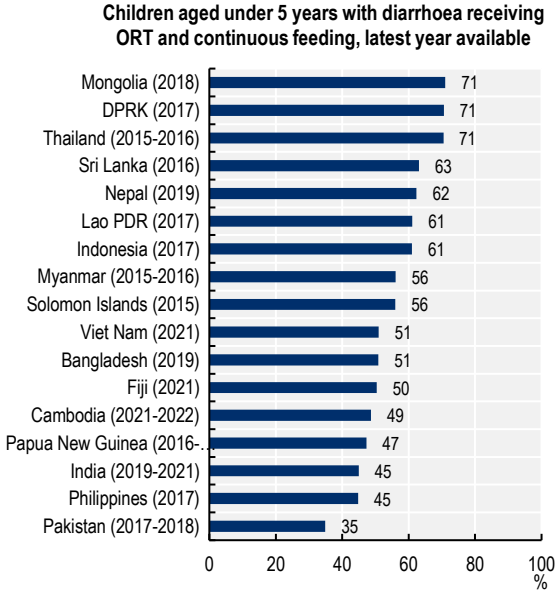
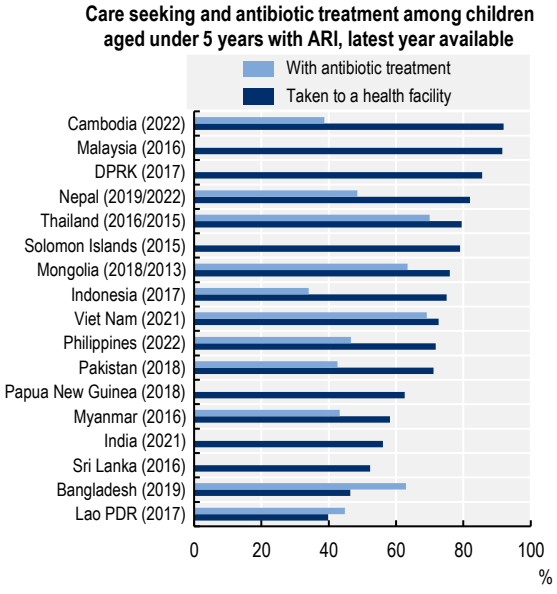
Figure 5.12. Access to appropriate medical care





Source: UNICEF 2024; NHFS, DHS and MICS surveys, various years.

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Mental health care

For the first time, world leaders have recognised the promotion of mental health and well-being, and the prevention and treatment of substance abuse, as health priorities within the global development agenda (see Chapter 2). The inclusion of mental health and substance abuse in the Sustainable Development Agenda, which was adopted at the United Nations General Assembly in September 2015, is likely to have a positive impact on communities and countries and territories where millions of people will receive much needed help. A particular prevention priority in the area of mental health concerns suicide, which accounted for an estimated 703 000 deaths in 2019 (WHO, 2021[1]). Target 3.2 of the Mental Health Action Plan 2013-20, calls for a 10% reduction in the rate of suicide in countries by 2020. The UN Sustainable Development Goals include target 3.4 to address non-communicable diseases and mental health with an indicator to reduce suicide mortality by a third by 2030.

In many parts of the Asia-Pacific region, appropriate care may not be available and access to mental health care may be limited for people with mental health problems. Access to mental health care can be assessed by the supply of professionals and the availability of psychiatric beds in different settings such as general hospitals, mental health hospitals and community facilities.

Psychiatrists are generally responsible for the prevention, diagnosis and treatment of a variety of mental health problems, including schizophrenia, depression, learning disabilities, alcoholism and drug addiction, eating disorders and personality disorders. The number of psychiatrists is lower in all countries and territories in Asia-Pacific, except New Zealand and Australia, than the OECD average of 17.5 per 100 000 population (Figure 5.13, left panel). Developed OECD countries in the region such as New Zealand, Australia, Japan and Korea, report the highest number of psychiatrists, whereas in middle- and low-income Asia-Pacific countries and territories there is fewer than one psychiatrist on average per 100 000 population. This suggests that many countries and territories in the region may underinvest in mental health care. As is the case for many other medical specialties (see indicator “Doctors and nurses” in Chapter 5), psychiatrists are not distributed evenly across jurisdictions within each country and territory. For example, in Australia, when considering time spent as a clinician, there were 15.7 clinical full-time equivalent psychiatrists per 100 000 population, with rates ranging from 12.4 in the Northern Territory to 17.7 in South Australia (Australian Institute of Health and Welfare, 2024[2]). In Thailand, mental health workers are concentrated in the main cities, limiting the access of rural users to these services (WHO, 2024[3]).

Mental health nurses play an important and increasing role in the delivery of mental health services in hospital, primary care, or other settings, but in many Asia-Pacific countries and territories, their number is still very low (Figure 5.13, right panel). Australia has the highest rate with 91 mental health nurses per 100 000 population, followed by New Zealand with more than 70 nurses per 100 000 population. However, there are fewer than five mental health nurses – on average – per 100 000 population in middle- and low-income Asia-Pacific countries and territories, and less than one nurse per 100 000 population in Pakistan, Cambodia, Bangladesh, Nepal, Myanmar and the Philippines, suggesting again the need for an appropriate supply of mental health care workforce to guarantee access.

Some countries, such as Australia, have introduced programmes to improve access to mental health care by extending the role of mental health nurses in primary care. Under the Mental Health Nurse Incentive Program launched in 2007, mental health nurses in Australia work with general practitioners, psychiatrists and other mental health professionals to treat people suffering from different mental health conditions. An evaluation of this programme found that mental health nurses have the potential to make a significant contribution to enhance access and quality of mental health care through flexible and innovative approaches (Australian Department of Health and Ageing, 2012[4]).

For the last decade, WHO flagship programme for mental health is the "mental health Gap Action programme (mhGAP)" (WHO, 2016[5]). The programme includes the scaling up of care for priority mental, neurological and substance use conditions in non-specialised care settings, such as PHC. The programme has produced WHO-Guidelines Review Committee (GRC) approved recommendations for the management of above mentioned priority conditions. The programme also produced the mhGAP Intervention Guide, which is a practical tool for non-specialist clinicians, and which comes with a relevant set of implementation tools as well as a further simplified version for humanitarian and health emergency settings. Currently, mhGAP is implemented in 90 countries.

There are 7.5 and 19.9 mental health beds per 100 000 population on average in lower-middle- and low-income, and upper-middle-income Asia-Pacific countries and territories, respectively, with Bangladesh, Papua New Guinea and Nepal reporting less than two psychiatric beds per 100 000 population (Figure 5.14). The large majority of beds in middle- and low-income countries and territories are available in mental health hospitals.

Definition and comparability

Psychiatrists have post-graduate training in psychiatry and may also have additional training in a psychiatric specialty, such as neuropsychiatry or child psychiatry. Psychiatrists can prescribe medication, which psychologists cannot do in most countries and territories. Data include psychiatrists, neuropsychiatrists and child psychiatrists, but psychologists are excluded. Mental health nurses usually have formal training in nursing at a university level.

Data are based on head counts.

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WHO (2021), *Mental Health Atlas 2020*, World Health Organization, https://iris.who.int/handle/10665/345946. [1]

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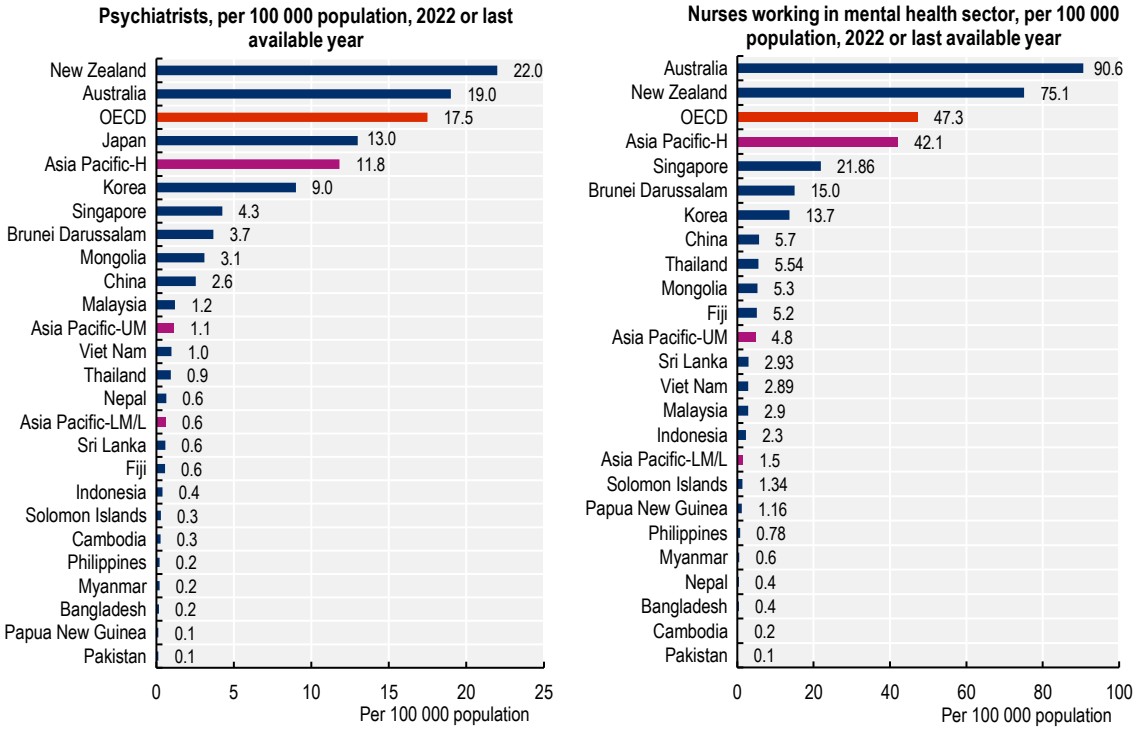
Figure 5.13 Psychiatrists and nurses working in mental health



Source: OECD Health Statistics 2024; WHO Mental Health Atlas 2020.

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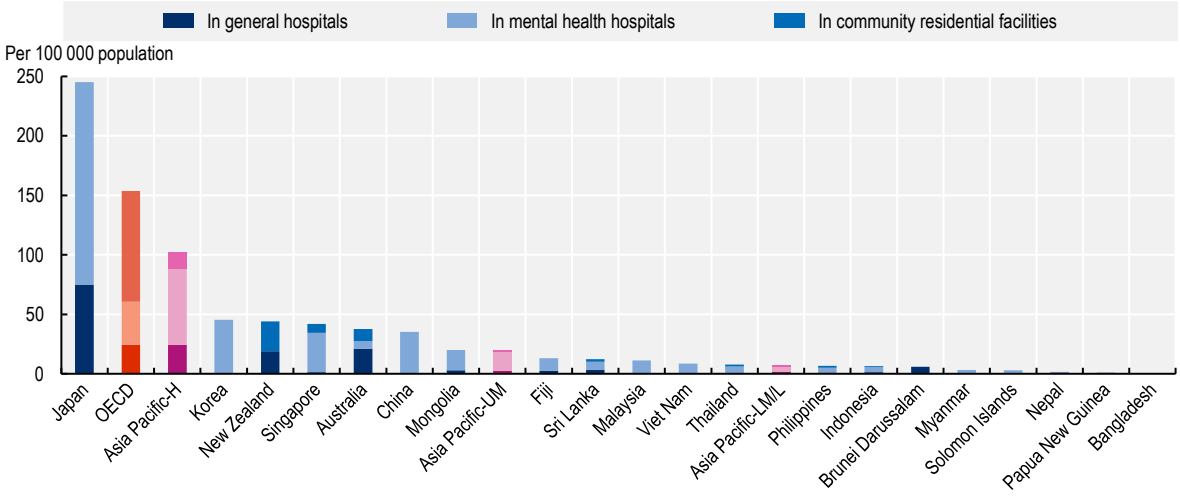
Figure 5.14. Mental health beds, per 100 000 population, 2022 or latest year available



Source: OECD Health Statistics 2024; WHO Mental Health Atlas 2020.

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Access to healthcare

People should be able to access health services when they need to, irrespective of their gender, economic status, education, and place of residence. The United Nations 2030 Agenda for Sustainable Development aims to leave no one behind, and it is said explicitly in SDG 10 “to reduce inequality within and among countries”. SDG 3 is a call to ensure healthy lives and promote well-being for all at all ages, which implies tackling inequalities in health. However, problems in access to healthcare for women aged 15-49 either due to financial issues or distance to health facility are commonplace across countries in Asia-Pacific. Additionally, an extra layer of restrictions on access to healthcare for indigenous women in Asia-Pacific seems to exist as well, with indigenous women experiencing more health vulnerabilities when compared to non-Indigenous women, including continuous challenges and barriers to access quality and equitable healthcare services (Thummapol, Park and Barton, 2018[1]).

Women aged 15-49 report problems in access to care due to financial reasons, and the proportion of women with no education reporting problems in accessing care due to financial reasons is consistently higher than the proportion of women with secondary or higher education. Problems in access to care for financial reasons are also reported for women living in rural areas vis-à-vis urban areas, and for women from households in the lowest income quintile compared to women from households in the highest income quintile. Differences in access to care by social determinant are larger in countries such as Papua New Guinea and Cambodia, while differences are narrower in Indonesia and India. In India, women aged 15-49 from households in the lowest income quintile have 4.6 times more difficulties in access to care due to financial reasons when compared to those from households in the highest income quintile (see Figure 5.15).

Distance to providers represent another barrier in access to healthcare for women aged 15-49 in Asia-Pacific countries. Women either with higher education levels, from households in the higher income quintile, or living in urban areas report less problems in access care than those with lower education, from households in the lower income quintile, or living in rural areas. Differences are larger for countries such as Papua New Guinea, Nepal and Pakistan, while for Indonesia, India and Bangladesh, differences in access to care due to distance to providers by social determinant are comparatively narrower. In Myanmar, women aged 15-49 from households in the lowest income quintile have 4.9 times more difficulties in access to care due to distance to providers compared to those from households in the highest income quintile, while difficulties in access to care for those with lower education are 4.8 times higher than for those with the highest education (see Figure 5.16).

Inequalities in access to healthcare are also reported in OECD countries. A quarter of individuals aged 18 or older report unmet need (defined as forgoing or delaying care) because limited availability or affordability of services compromise access. People may also forgo care because of fear or mistrust of health service providers. Strategies to reduce unmet need, particularly for the less well-off, need to tackle both financial and non-financial barriers to access (OECD, 2019[2]).

Definition and comparability

Indicators consider women aged 15-49. By accessing healthcare, the indicators refer to any type of healthcare when the respondent is sick, and these are not limited to reproductive healthcare.

In the DHS survey, problems in accessing care due to financial reasons consider respondents who indicated that the issue was "getting money needed for treatment", while for distance the indicated issue was related to "distance to health facility". When referring to "lowest education", this could also mean "no formal education".

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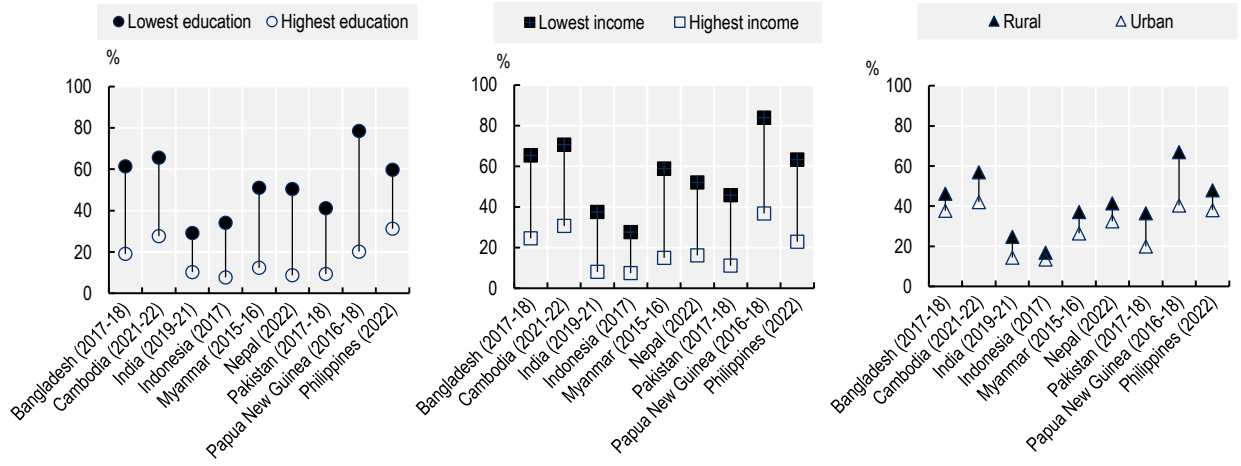
OECD (2019), *Health for Everyone?: Social Inequalities in Health and Health Systems*, OECD Health Policy Studies, OECD Publishing, Paris, https://doi.org/10.1787/3c8385d0-en. [2]

Thummapol, O., T. Park and S. Barton (2018), "Exploring health services accessibility by indigenous women in Asia and identifying actions to improve it: a scoping review", *Ethnicity & Health*, Vol. 25/7, pp. 940-959, https://doi.org/10.1080/13557858.2018.1470607. [1]

Figure 5.15. Women aged 15-49 who reported problems in accessing care due to financial reasons, by socio-economic characteristics



Source: DHS surveys, various years.

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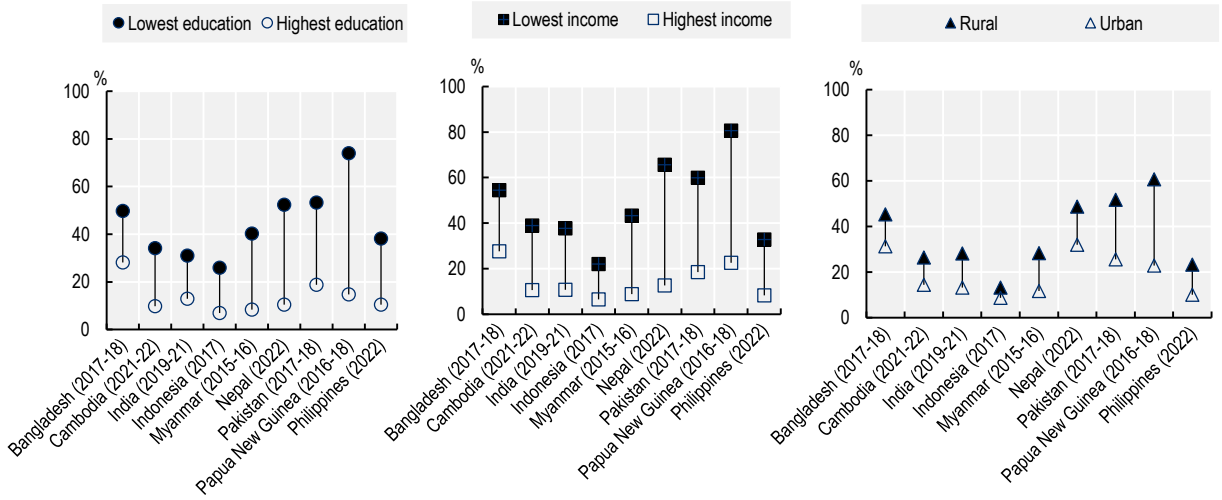
Figure 5.16. Women aged 15-49 who reported problems in accessing care due to distance, by socio-economic characteristics



Source: DHS surveys, various years.

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6 Health expenditure and financing

Health expenditure per capita and in relation to GDP

Across nearly all Asia-Pacific countries, per capita health spending has risen faster than GDP in recent years. On average, per capita health spending in real terms in low- and lower-middle-income Asia-Pacific countries increased by 4.6% per year between 2015 and 2021, while in upper-middle-income countries it grew by 6% during the same period; spending in high-income countries in the region also grew, but more modestly at 3.5% per year. Despite this, huge differences in per capita healthcare spending remained in Asia-Pacific countries in 2021 (Figure 6.1, left panel), ranging from only 93 international dollars (USD PPPs) in Papua New Guinea to 6 488 international dollars (USD PPPs) in Australia. For comparison, average OECD current health spending per capita in 2021 was almost 14 times that of the low-income countries in Asia-Pacific (4 708 versus 339 USD PPPs).

How much countries spend on healthcare as a share of GDP over time may be driven by various factors, though the COVID-19 pandemic is likely to have significantly impacted health spending patterns in the recent years. Consequently, the healthcare sector continued to expand faster than the overall economy in Asia-Pacific, resulting in an increasing share of the economy devoted to health. On average, between 2015 and 2021, the growth rate in per capita health spending in real terms was 4.6% per year; higher than the 2.4% observed for gross domestic product (GDP) (Figure 6.2, left panel). All countries above the diagonal line reported that health expenditure has grown faster than the economy. This means that the share of healthcare expenditure in all GDP expenditure has continued to increase. For both health spending and overall economic activity, growth in Mongolia was the strongest in the region – more than twice and more than three times the average rate, respectively. By contrast, Brunei Darussalam was the only country to report a decrease in both per capita health spending and GDP in real terms between 2015 and 2021, while Fiji saw an increase in per capita health spending despite showing a slight decrease in GDP.

Current health expenditure accounted for 4.5% of GDP in low- and lower-middle-income countries in 2021, significantly higher than in 2015 (3.9%). Health expenditure accounted for 4.8% and 8.1% of GDP in upper-middle-income and high-income Asia-Pacific countries respectively in 2021, an increase of 1 and 0.9 percentage points compared to 2015. In 2021, the share of GDP varied from a low of 2.2% in Brunei Darussalam up to 10.8% in Japan (Figure 6.2, right panel). Generally, the richer a country is, the greater the share of their income devoted to healthcare. The percentage of GDP spent on health across OECD countries is – on average – more than twice that of the Asia-Pacific low- and middle-income countries (9.7% versus 4.5%) and 1 percentage point higher than that in the high-income countries of the region. Between 2015 and 2021, the share of health in relation to GDP declined by 0.3 percentage points in India, whereas it increased in Mongolia, Korea, Fiji and Philippines by more than two percentage points.

Although health systems remain a highly labour-intensive sector, capital has become an increasingly important factor of production of health services over recent decades, as reflected, for example, by the growing importance of diagnostic and therapeutic equipment or the expansion of information and communications technology (ICT) in healthcare. However, capital investments in health tend to be more susceptible to economic cycles than current spending on healthcare. As a proportion of GDP, Philippines, China and Nepal were the highest spenders on capital investment in 2021 with more than 0.4% of their GDP going on construction, equipment and technology in the health sector (Figure 6.2, right panel), whereas less than 0.1% of GDP was spent in capital investment in health in Cambodia in 2021.

Definition and comparability

Current health expenditure is defined by the sum of expenditure for all the core healthcare functions – that is total healthcare services, medical goods dispensed to outpatients, prevention and public health services, and health administration and health financing. Expenditure on these functions is included as long as it is final consumption for residents in the country or abroad. For this reason, imports for final use are included and exports for final use are excluded.

Economy-wide Purchasing Power Parities (PPPs) are used as the most available conversion rates. These are based on a broad basket of goods and services, chosen to be representative of all economic activity. The use of economy-wide PPPs means that the resulting variations in health expenditure across countries reported in international dollars (USD PPPs) reflect not only variations in the volume of health services, but also any variations in the prices of health goods and services relative to prices in the rest of the economy.

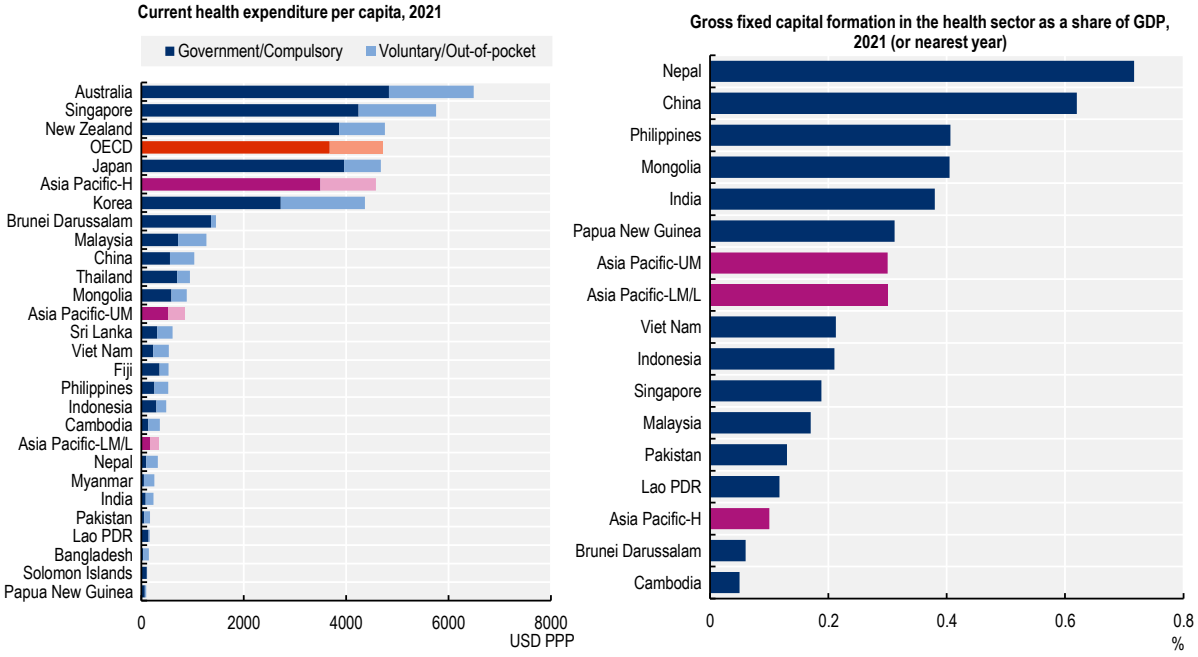
To make useful comparisons of real growth rates over time, it is necessary to deflate (i.e. remove inflation from) nominal health expenditure using a suitable price index, and also to divide by the population, to derive real spending per capita. Due to the limited availability of reliable health price indices, an economy-wide (GDP) price index is used in this publication.

The annual average growth rate was computed using a geometric growth rate formula:

$((\sqrt[6]{\text{2021 value}/\text{2015 value}})-1)*100$

Gross fixed capital formation in the health sector is measured by the total value of the fixed assets that health providers have acquired during the accounting period (less the value of the disposals of assets) and that are used repeatedly or continuously for more than one year in the production of health services. The breakdown by assets includes infrastructure (e.g. hospitals, clinics), machinery and equipment (including diagnostic and surgical machinery, ambulances, and ICT equipment), as well as software and databases. Gross fixed capital formation is reported by many countries under the System of Health Accounts.

Figure 6.1. Current health expenditure per capita, and gross capital formation in the health sector



Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

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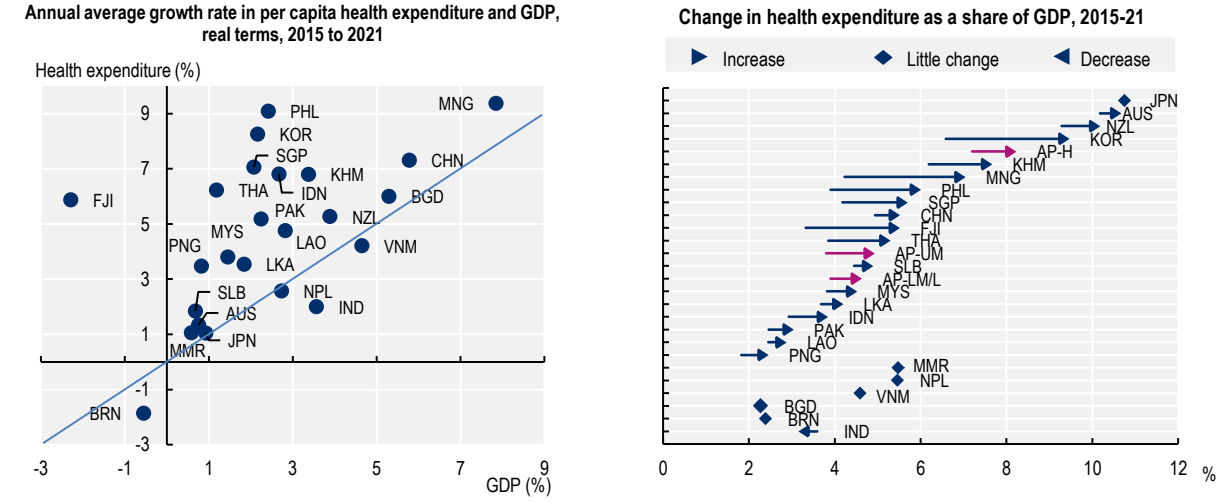
Figure 6.2. Annual average growth rate in per capita health expenditure and GDP, and change in health expenditure as a share of GDP



Source: WHO Global Health Expenditure Database.

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Financing of healthcare from government and compulsory health insurance schemes

Healthcare can be paid for through a variety of financing arrangements. In some countries, healthcare might be predominantly financed through government schemes by which individuals are automatically entitled to healthcare based on their residency. In other cases, compulsory health insurance schemes (through either public or private entities) linked to the payment of social contributions or health insurance premiums finance the bulk of health spending. In addition to these, a varying proportion of healthcare spending consists of households' out-of-pocket payments – either as standalone payments or as part of co-payment arrangements – as well as various forms of voluntary payment schemes such as voluntary health insurance.

Generally, the higher the income level of a country, the higher the share of healthcare spending financed through government and compulsory health insurance schemes. This global pattern of healthcare financing can be seen across Asia-Pacific countries: 77.1% in high-income countries versus 47% in low- and lower-middle-income countries (Figure 6.3). In New Zealand, Japan and Brunei Darussalam more than 75% of all health expenditure was paid for through government schemes and compulsory health insurance in 2021. A similar proportion was observed in only two low-income countries, Solomon Islands and Papua New Guinea. By contrast, in Myanmar and Bangladesh less than 25% of health spending was covered by such schemes. Between 2015 and 2021, the share of health expenditure financed by government and compulsory health insurance schemes increased by more than 10 percentage points in Nepal, Indonesia, Singapore and Cambodia, whereas it decreased by 5 percentage points in Fiji and by more than 2 percentage points in Viet Nam and Myanmar. Government efforts to tackle the COVID-19 pandemic are likely to have contributed to a large extent to increases in public health spending.

Figure 6.4 highlights the change in government and compulsory health insurance schemes spending as a share of GDP between 2015 and 2021. On average, there was an increase in the share in upper-middle- and high-income countries in Asia-Pacific from 2.2% to 2.9% and 5.3% to 6.1% of GDP respectively; the share for low- and lower-middle-income countries also increased from 1.6% to 2.1% of GDP over the same period. No countries reported a decrease during this period, with many countries such as Singapore, Mongolia and Korea experiencing increases of over 1.5 percentage points.

Governments provide a multitude of goods and services out of their overall budgets. Hence, setting priorities for health in budget allocations is a choice by governments and society as healthcare is competing with many other sectors such as education, defence and poverty alleviation programmes. A number of factors including, among others, general government revenues, nondiscretionary obligations such as debt servicing, and the capacity of health ministers to influence the overall budgetary allocation to the health sector determines the size of public funds allocated to health. Public budgets in health were also significantly conditioned by the COVID-19 crisis. In 2021, health spending by government schemes and compulsory insurance stood at around 7.9% of total government expenditure across low- and lower-middle-income countries, whereas it represented 10.8% of total government expenditure in upper-middle-income countries in Asia-Pacific (Figure 6.5). In Japan, Australia, New Zealand, Korea and Singapore more than 15% of public spending was dedicated to healthcare. On the other hand, less than 5% of government expenditure was allocated to healthcare in India, Papua New Guinea, Myanmar and Bangladesh. The level of public spending on healthcare is also linked to the capacity of spending by government as measured by the share of government spending in GDP. Government spending accounted for 24.4% of GDP in low- and lower-middle-income countries, whereas it represented 27.6% of GDP in middle-income and 35.1% of GDP in high-income Asia-Pacific countries in 2021.

Definition and comparability

Healthcare financing can be analysed from the point of view of financing schemes (financing arrangements through which health services are paid for and obtained by people, e.g. social health insurance), financing agents (organisations managing the financing schemes, e.g. social insurance agency), and types of revenues (e.g. social insurance contributions). Here "financing" is used in the sense of financing schemes as defined in the System of Health Accounts (OECD/WHO/Eurostat, 2011[1]) and includes government schemes, compulsory health insurance as well as voluntary health insurance and private funds such as households' out-of-pocket payments, NGOs and private corporations. Out-of-pocket payments are expenditures borne directly by patients and include cost-sharing arrangements and any informal payments to healthcare providers, but excludes prepayment to any insurance schemes.

Relating spending from government and compulsory insurance schemes to total government expenditure can lead to an overestimation of the share of government and compulsory insurance schemes spending in total government spending in countries where private insurers provide compulsory insurance.

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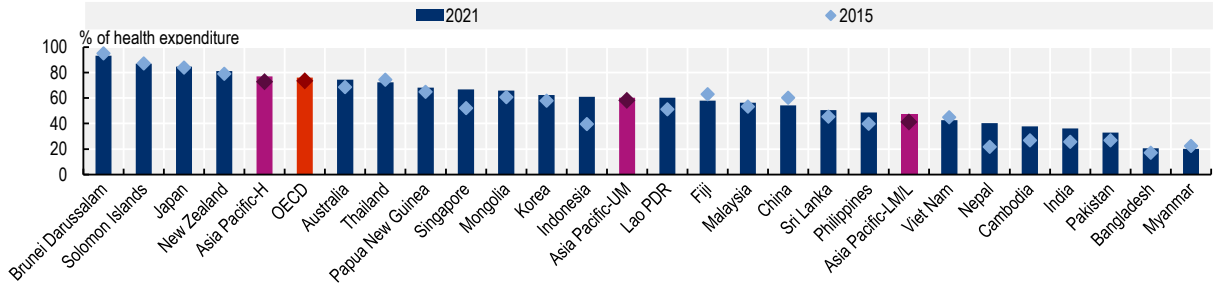
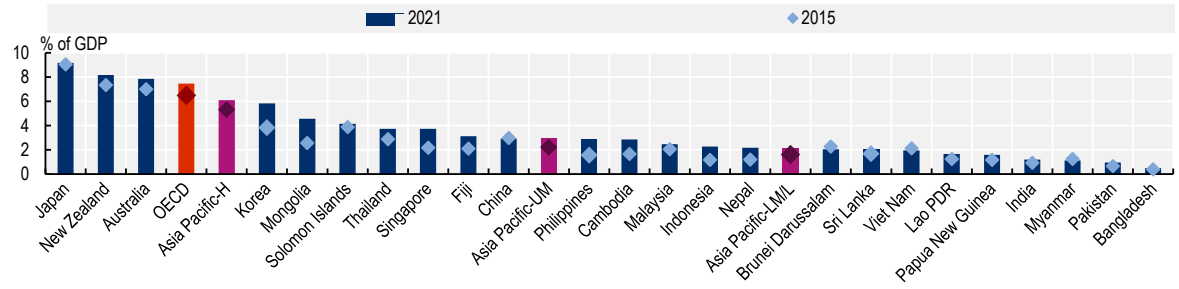
Figure 6.3. Health expenditure by government and compulsory insurance schemes as a share of health expenditure, 2015 and 2021



Source: WHO Global Health Expenditure Database; OECD Health Statistics.

StatLink https://stat.link/kqev59

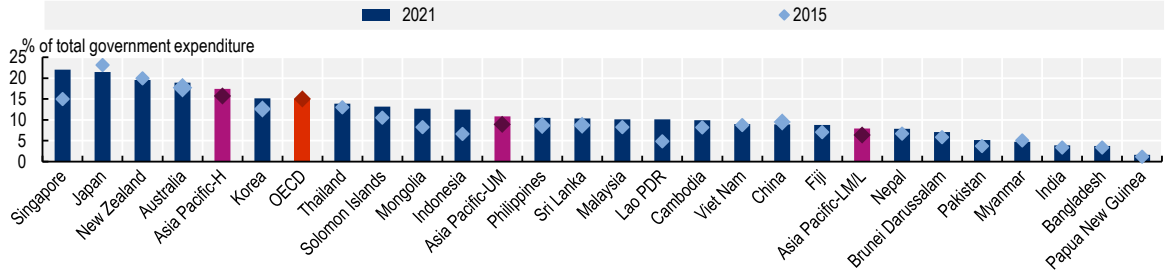
Figure 6.4. Health expenditure by government scheme and compulsory insurance scheme as a share of GDP, 2015-21



Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

StatLink https://stat.link/avzlhu

Figure 6.5. Health expenditure by government and compulsory health insurance schemes as a share of total government expenditure, 2015-21



Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

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Financing of healthcare from households' out-of-pocket payments, voluntary payment schemes

On average, the share of health spending paid out-of-pocket has fallen in countries of all income groups in Asia-Pacific between 2015 and 2021: by around 5 percentage points to 43.1% in low- and lower-middle-income countries, by 4 percentage points to 24.1% in upper-middle-income countries and by around 3 percentage points to 16% in high-income countries (Figure 6.6). The pattern is quite diverse across the countries in the region, and could also be attributed to increasing unmet needs because of access barriers and/or financial constraints, as well as the aforementioned financial impact of the COVID-19 pandemic on health budgets. Almost half of the Asia-Pacific reporting countries showed a decrease in the share of out-of-pocket spending, including more than 10 percentage points for Lao PDR, India, Singapore and Indonesia, and no countries reported an increase over the same period. However, for each dollar spent on health, more than 70 cents continued to be financed "out-of-pocket" in Bangladesh and Myanmar in 2021.

Research (Wang, Torres and Travis, 2018[1]) suggest that the main driver of households' out-of-pocket expenditure is medicines, composing more than 60% of total out-of-pocket spending in countries of the WHO South-East Asia Region. In Bangladesh and India, this percentage could be as high as 68% and 42%, respectively (Ambade et al., 2022[2]; WHO, 2024[3]) Furthermore, the share of OOP spending on medicines was even higher among the poorer population, suggesting a disproportionally higher financial burden. In line with these findings, WHO and The World Bank has reported that the WHO South-East Asia and Western Pacific regions had the highest percentage of the population in the world facing catastrophic health spending – defined as out of pocket health spending exceeding the 10% of total income or expenditure[1] – in 2019, pushing more people below the relative poverty line (WHO; World Bank, 2023[4]). Figure 6.7 shows that health expenditure by other voluntary payment schemes (e.g. PHI, spending by NGOs) represented – on average – around 10% of current expenditure on health in countries of all income groups in Asia-Pacific. This share increased by less than half a percentage point to 12.7% in upper-middle-income countries, whereas it decreased by 1 percentage point to 6.9% in high-income countries, and slightly increased to 9.1% in low- and lower-middle-income Asia-Pacific countries from 2015 to 2021. Less than 5% of current health expenditure was from voluntary payment schemes in Mongolia, Japan, Bangladesh and Brunei in 2021, while it represented 15% or more in Thailand, Viet Nam and Papua New Guinea in the same year. China reported an increase of 6.7 percentage points between 2015 and 2021, whereas Indonesia and Cambodia reported a decrease of more than 6 percentage points during the same period.

Definition and comparability

Health care financing can be analysed from the point of view of financing schemes (financing arrangements through which health services are paid for and obtained by people, e.g. social health insurance), financing agents (organisations managing the financing schemes, e.g. social insurance agency), and types of revenues (e.g. social insurance contributions). Here "financing" is used in the sense of financing schemes as defined in the System of Health Accounts (OECD/WHO/Eurostat, 2011[5]) and includes government schemes, compulsory health insurance as well as voluntary health insurance and private funds such as households' out-of-pocket payments, NGOs and private corporations. Out-of-pocket payments are expenditures borne directly by patients and include cost-sharing arrangements and any informal payments to healthcare providers, but excludes prepayment to any insurance schemes.

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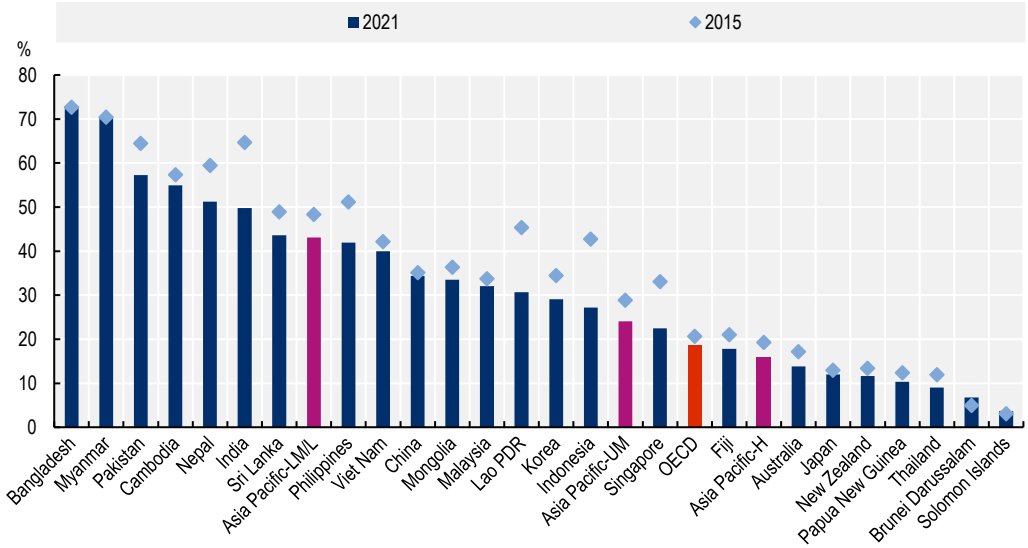
Notes

[1] www.who.int/data/gho/data/themes/topics/financial-protection.

Figure 6.6. Health expenditure by households' out-of-pocket as a share of health expenditure, 2015 and 2021



Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

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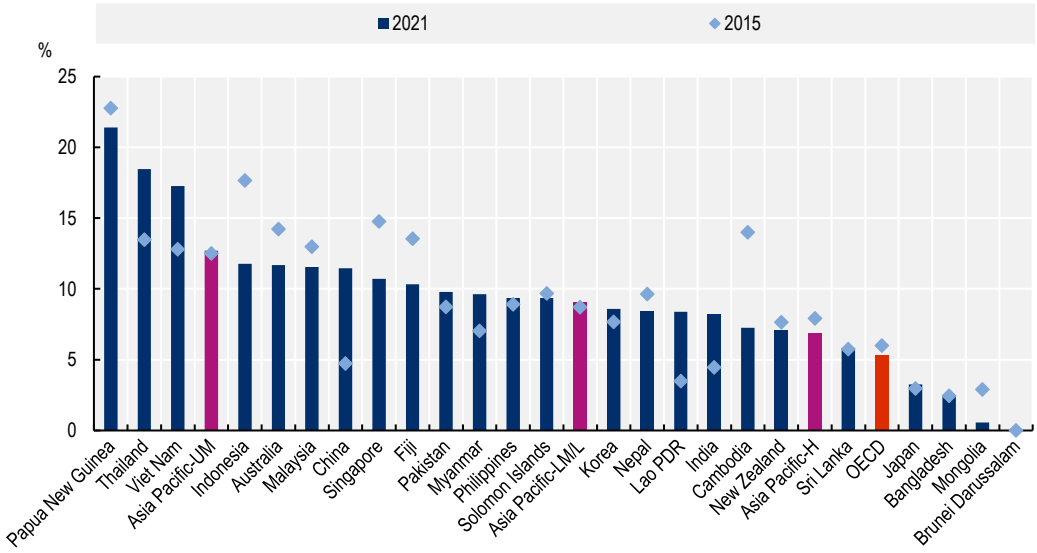
Figure 6.7. Health expenditure by voluntary healthcare payment schemes as a share of health expenditure, 2015 and 2021



Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

StatLink https://stat.link/kaz54h

Health expenditure by type of service and provider

Factors such as how care is organised and prioritised across providers, what the population needs are, and the various input costs, all affect how health spending is distributed across different services. Curative and rehabilitative care services comprise the greatest share – typically accounting for almost 60% of all health spending across Asia-Pacific reporting countries (Figure 6.8). Medical goods (mostly retail pharmaceuticals) take up a further 16.3%, followed by a growing share on preventive care, which in 2021 averaged around 9.7% of health spending. Administration and overall governance of the health system, together with ancillary services and long-term care covered the remainder. Across OECD countries, long-term care and pharmaceuticals accounted for a higher share of healthcare spending as compared to Asia-Pacific reporting countries.

The structure of spending across the various types of care can vary considerably by country. Around three-quarters of health spending in China, Cambodia and Sri Lanka can be accounted for by curative and rehabilitative care services. At the other end of the scale, Mongolia, Philippines and Nepal saw curative and rehabilitative services account for less than half of all spending.

Spending on medical goods comprises the second largest category. As such, medical goods accounted for more than a quarter of all health spending in Nepal, Mongolia and the Philippines. Of note that spending on pharmaceuticals consumed in the hospital settings is not included in these figures.

Around one-quarter of the total spending can be attributed to preventive care in Indonesia, whereas preventive care accounts for only 3.1% of spending in Sri Lanka, and around this level in Australia, Japan and Korea.

When looking at the distribution of health spending by type of provider (Figure 6.9), hospitals take up the highest share; 44.4% on average across the Asia-Pacific region. Following this are retailers and other providers of medical goods with 19.3%, followed by providers of ambulatory care at 15.6% and finally health system administration with 11.9% of health spending. The rest is made up of providers of preventive care providers, ancillary service providers, and long-term care facilities.

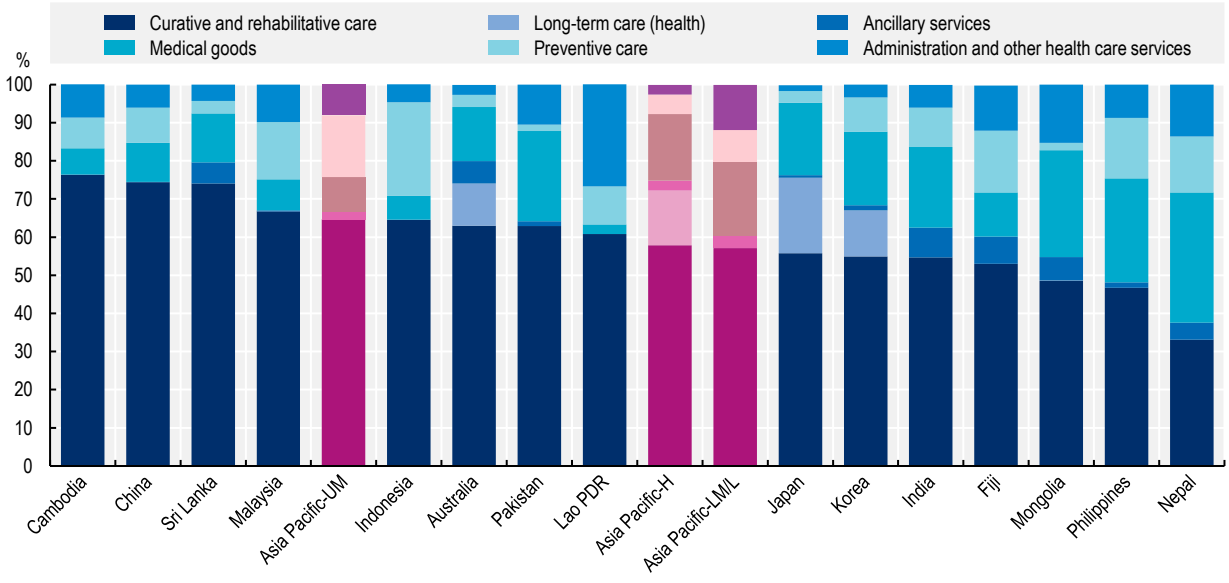
While China spends almost three-quarters in hospitals, this value does not reach even 40% in the case of Nepal, Philippines and Mongolia. Conversely, more than a quarter of all health spending results from retailers in Nepal, Philippines and Mongolia, while these account for 10% or less in China and Malaysia. Finally, spending related to providers of ambulatory care varies from almost one-third of spending in Korea down to Mongolia, China and Philippines which spend less than 4%.

Definition and comparability

The System of Health Accounts defines the boundaries of the healthcare system from a functional perspective, with healthcare functions referring to the different types of healthcare services and goods. Current health expenditure comprises personal healthcare (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (prevention and public health services as well as administration – referring to governance and administration of the overall health system rather than at the health provider level).

The category of “medical goods” refers to retail pharmaceuticals, delivered to patients via pharmacies and other retail outlets. Pharmaceuticals are also consumed in other care settings – primarily the hospital inpatient sector – where by convention the pharmaceuticals used are considered as an input to the overall service treatment and not separately accounted.

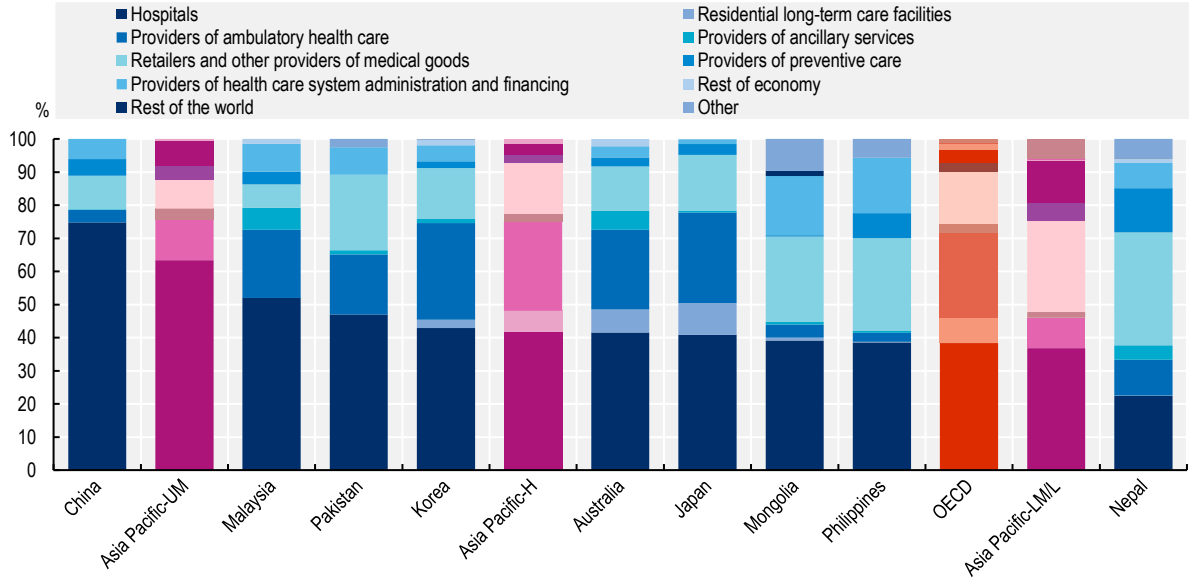
Figure 6.8. Health expenditure by type of service, 2021



Note: Only countries with available data shown.
Source: WHO Global Health Expenditure Database; OECD Health Statistics 2024.

StatLink https://stat.link/mgwsnl

Figure 6.9. Total health spending as percentage share of healthcare provider, 2021



Note: Only countries with available data shown.
Source: WHO Global Health Expenditure Database, OECD Health Statistics 2024.

StatLink https://stat.link/xbzkwp

7 Quality of care

Childhood vaccination

Childhood vaccination is one of the most cost-effective and safe health policy interventions to reduce disease burden of the population, preventing around 4.4 million deaths every year worldwide (Carter et al., 2023[1]). However, in 2023 there were 14.5 million children missing out on any vaccination globally (WHO, 2024[2]).

All countries and territories in Asia-Pacific have established vaccination programmes including a minimum number of routine vaccines (i.e. against polio, diphtheria, tetanus, pertussis, measles); additional vaccines (i.e. against pneumococcus, rotavirus, Japanese encephalitis and human papilloma virus) are included at national or subnational level based on local morbidity, mortality and cost-effectiveness analysis.

Diphtheria, tetanus toxoid and pertussis, measles and hepatitis B vaccines are taken as example here as they represent, in timing and frequency of vaccination, the full spectrum of organisational challenges related to routine vaccination for children.

Pertussis, known as whooping cough, is a respiratory infection caused by bacteria. Three doses of pertussis vaccine, together with diphtheria and tetanus toxoid reduces the risk of their infections and severe symptoms among infants. WHO recommends the first dose at 6 weeks of age, subsequent doses at age 10-14 weeks and age 14-18 weeks, as well as a booster dose, preferably at age 2 years (WHO, 2024[3]).

Measles is a highly contagious viral disease. The measles vaccine is not only safe and effective, but also inexpensive. Although vaccination prevented about 57 million deaths between 2000 and 2022 globally, measles is still common (WHO, 2024[4]). In the WHO Western Pacific Region, measles incidence increased by more than 2.5-fold between 2022 and 2023 (WHO, 2024[5]). This is likely be due to the decline in measles vaccination coverage during the COVID-19 pandemic, as well as the increased population movements and improved disease surveillance after the pandemic (WHO, 2024[5]), pointing to the importance of vaccination against measles outbreaks. WHO recommends two doses of measles vaccine, alone or in combined with in rubella, mumps, and/or varicella in national childhood immunisation programmes (WHO, 2024[6]).

With regards to hepatitis B, vaccination is considered effective in preventing infection and its chronic consequences, such as cirrhosis and liver cancer. Yet, in 2022, hepatitis B resulted in approximately 1.1 million deaths. Globally, WHO Western Pacific Region is the region with the most infections in the world, with 97 million people chronically infected, and in WHO South-East Asia Region, 61 million people were infected. Recommended hepatitis B vaccination is first dose as soon as possible after birth, ideally within 24 hours, followed by two or three doses at least four weeks apart (WHO, 2024[7]).

In 2023, the overall vaccination of children against pertussis (provided through combined vaccines containing diphtheria and tetanus), measles and hepatitis B was high in most Asia-Pacific countries. In most high- and upper-middle-income Asia-Pacific countries, almost all children received the recommended DTP3, measles and Hepatitis B vaccination, and most high-income countries met the WHO's minimum threshold of 95% to avoid vaccine-preventable diseases outbreaks. On the contrary, the average vaccination rate for these diseases was around 75% in lower-middle- and low-income Asia-Pacific countries, which is insufficient to ensure interruption of disease transmission and protection of the whole population (Figure 7.1, Figure 7.2 and Figure 7.3).

Vaccination coverage rates for DTP3, measles and hepatitis B were mostly similar for each Asia-Pacific country. Brunei Darussalam and Sri Lanka had the highest rate in Asia-Pacific at 99% against all of them. However, in DPRK and Papua New Guinea, less than one in two children were vaccinated with all three (Figure 7.1, Figure 7.2 and Figure 7.3). While many countries and territories in Asia-Pacific have

maintained high vaccination rates during the pandemic, some lower-middle- and low-income countries have seen a decline in childhood vaccination rates in recent years. In DPRK, the vaccination rates for DTP3, measles and Hepatitis B have declined substantially since 2019, from over 97% to 16% in 2023. In Myanmar, these rates decreased sharply from 80-94% in 2020 to 37-42% in 2021, due to the political situation, although it has increased again since 2021 (Poe et al., 2024[8]; WHO, 2024[9]).

Definition and comparability

Childhood vaccination policies differ slightly across countries. Thus, these indicators are based on the actual policy in a given country. Some countries administer combination vaccines (e.g. MR for measles and rubella) while others administer the vaccinations separately.

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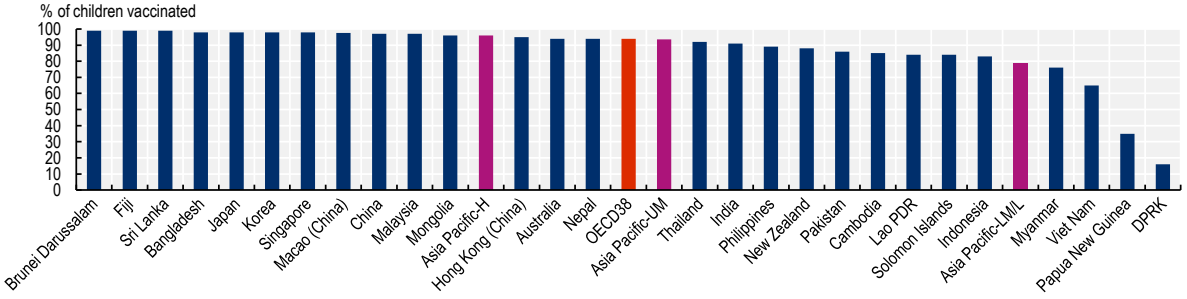
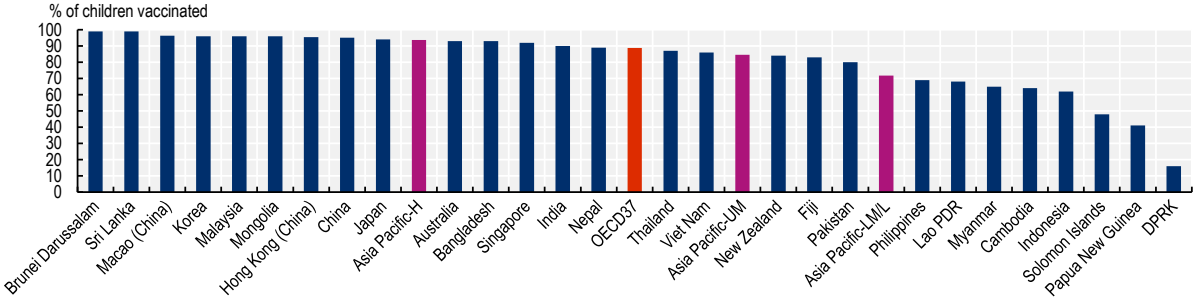
Figure 7.1. Vaccination coverage for diphtheria, tetanus toxoid and pertussis-containing vaccine, third dose (DTP3) 2023



Source: WHO/UNICEF estimates of national immunisation coverage, 2023 revision; official country estimates for Hong Kong (China) and Macao (China) from WHO/UNICEF Electronic Joint Reporting Form on Immunisation.

StatLink https://stat.link/bhjviz

Figure 7.2. Vaccination coverage for measles-containing vaccine, second dose (MCV2), 2023



Source: WHO/UNICEF estimates of national immunisation coverage, 2023 revision; administrative coverage for Hong Kong (China) and Macao (China).

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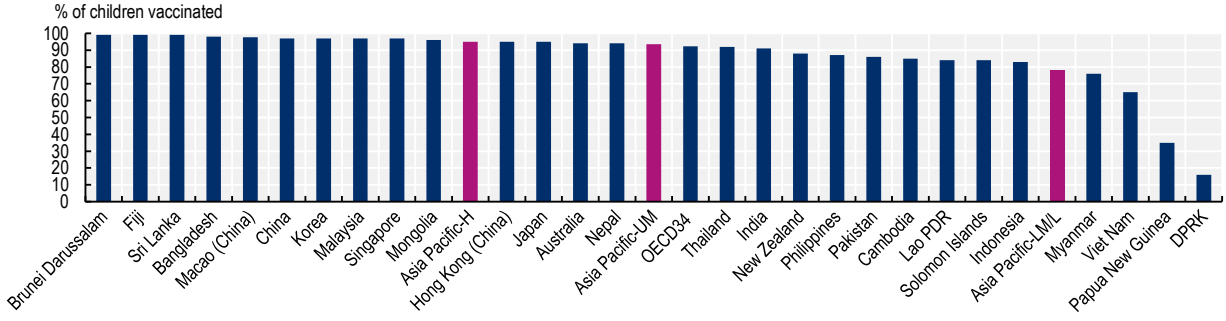
Figure 7.3. Vaccination coverage for hepatitis B-containing vaccine, third dose (HepB3), 2023



Source: WHO/UNICEF estimates of national immunisation coverage, 2023 revision; official country estimates for Hong Kong (China) and Macao (China) from WHO/UNICEF Electronic Joint Reporting Form on Immunisation.

StatLink https://stat.link/lztc52

In-hospital mortality following acute myocardial infarction and stroke

Cardiovascular disease is the major cause of death in Asia-Pacific, accounting for 35% of the total deaths in the region in 2019 (Zhao, 2021[1]). Ischaemic heart diseases and stroke were the two major causes of death in Asia-Pacific, accounting for 22.8% of total deaths in the WHO South-East Asia Region and 35.1% of all deaths in the WHO Western Pacific Region in 2021 (Institute for Health Metrics and Evaluation, 2024; indicator "Mortality and morbidity from cardiovascular disease" in Chapter 3). Additionally, both are associated with significant health, social and other non-financial costs, because of the persistent disabilities suffered by many survivors.

Quality, notably effectiveness of treatment following acute myocardial infarction (AMI) and stroke has improved significantly over the past decades. For AMI, in the last decade, novel diagnostic methods such as high-sensitivity cardiac troponin assays, as well as advanced imaging techniques, including cardiac MRI and CT angiography, have been introduced in high-income countries, contributing to improved patient outcomes through early diagnosis and timely treatment (Sachdeva et al., 2023[2]). Effectiveness of treatment for ischaemic stroke has also improved dramatically over the last decade, through early identification of suspected ischaemic stroke patients and timely acute reperfusion therapy. Countries can further improve quality of stroke care through timely transportation of patients, evidence-based medical interventions and access to high-quality specialised facilities such as stroke units (OECD, 2015[3]).

For both AMI and stroke, the case-fatality rate is a useful measure of acute care quality, reflecting notably the effectiveness of medical interventions, including early diagnosis, timely thrombolysis or treatment with aspirin when appropriate, and catherterisation, as well as co-ordinated and timely transport of patients. For AMI, age-standardised in-hospital case-fatality rates within 30 days of admission were low in Australia (3.3%) and New Zealand (4.1%) and high in Singapore (9.9%) in 2021 (Figure 7.4). Beyond the quality of care provided in hospitals, differences in hospital transfers, average length of stay, emergency retrieval times and average severity of AMI and stroke may influence cross-country differences in 30-day case-fatality.

For ischemic stroke, the lowest case-fatality rates were reported in Japan (2.9%) and Korea (3.3%), while New Zealand reported the highest rate of 5.9% (Figure 7.5). Fatality rates for haemorrhagic stroke are significantly higher than for ischemic stroke for all countries, and countries that achieve better survival for one type of stroke also tend to do well for the other. The lowest case-fatality rates for haemorrhagic stroke were reported in Japan (11.4%), with Singapore reporting the highest rate of 19.1% (Figure 7.6). Given the initial steps of care for stroke patients are similar, this suggests that system-based factors play a role in explaining the differences across countries.

In Asia-Pacific countries, the case-fatality rate and the cross-country differences in case-fatality rates have decreased over the past decade. Thirty-day mortality rates were about the same before and during the pandemic, suggesting that the pandemic did not necessarily have negative impact on the quality of acute care, although reduced number of hospital admissions following acute cardiovascular events were reported in the initial phase of the pandemic in some countries and territories in the region (Tam et al., 2020[4]).

In view of improving quality of acute care, other countries in Asia-Pacific analyse and evaluate case-fatality rates following acute cardiovascular events in recent years. These countries include China, Indonesia, Malaysia and Thailand (Long et al., 2022[5]; Limwattananon et al., 2020[6]; Kamarulariffin Kamarudin et al., 2022[7]; Juzar, Dafsah Arifa et al., 2022[8]). Case-fatality rates for AMI and stroke could be monitored at the national level to regularly evaluate acute care quality, its difference across hospitals and changes over time.

Definition and comparability

The in-hospital case-fatality rate following AMI, ischemic and haemorrhagic stroke is defined as the number of people who die within 30 days of being admitted to hospital. Ideally, rates would be based on individual patients, however not all countries have the ability to track patients in and out of hospital, across hospitals or even within the same hospital because they do not currently use a unique patient identifier. Therefore, this indicator is based on unique hospital admissions and restricted to mortality within the same hospital, and hence, differences in practices in discharging and transferring patients may influence the findings.

Standardised rates adjust for differences in age (45+ years) of the OECD population with AMI or stroke.

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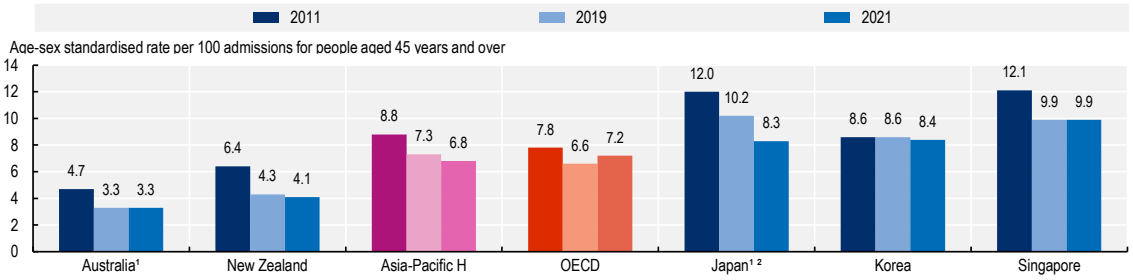
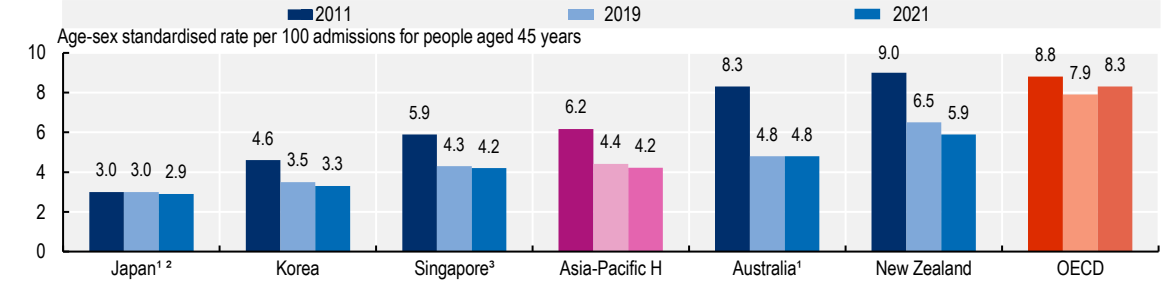
Figure 7.4. In-hospital case-fatality rates within 30 days after admission for acute myocardial infarction, patients 45 years old and over, 2011, 2019 and 2021



1. 2021 data refer to 2020. 2. 2019 data refer to 2017.
Source: OECD Health Statistics 2024.

StatLink https://stat.link/d3ke4f

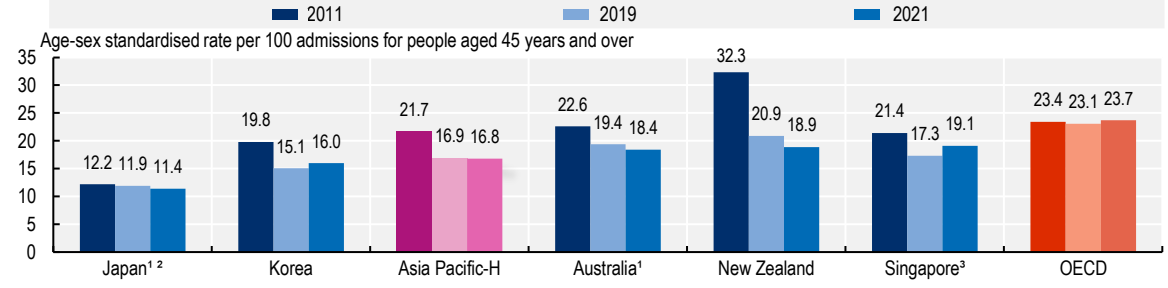
Figure 7.5. In-hospital case-fatality rates within 30 days after admission for ischemic stroke, patients 45 years old and over, 2011, 2019 and 2021



1. 2021 data refer to 2020. 2. 2019 data refer to 2017. 3. 2011 data refer to 2012.
Source: OECD Health Statistics 2024.

StatLink https://stat.link/wx2a0f

Figure 7.6. In-hospital case-fatality rates within 30 days after admission for haemorrhagic stroke, patients 45 years old and over, 2011, 2019 and 2021



1. 2021 data refer to 2020. 2. 2019 data refer to 2017. 3. 2011 data refer to 2012.
Source: OECD Health Statistics 2024.

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Incidence, screening and mortality for breast cancer

The burden of breast cancer among women is significant in Asia-Pacific, where it is the cancer with the highest incidence and mortality rates in the WHO South-East Asia Region and the highest incidence and second highest mortality rates in WHO Western Pacific Region. In 2022, approximately 575 000 women in Western-Pacific Region and 314 000 women in South-East Asia Region were expected to be newly diagnosed with breast cancer and over 129 000 women in Western Pacific Region and approximately 143 000 women in South-East Region died of the disease (Bray et al., 2024[1]). Several factors are known to increase the risk of breast cancer, such as increasing age, obesity, harmful use of alcohol, family history of breast cancer, history of radiation exposure, reproductive history, tobacco use and postmenopausal hormone therapy (WHO, 2024[2]).

Age-standardised breast cancer incidence rate varied by over 8-fold across countries in Asia-Pacific in 2022. The rate was below 20 new cases per 100 000 women in Mongolia, Nepal and Bangladesh while it was 94 new cases per 100 000 women in New Zealand and over 100 new cases per 100 000 in Australia. The average rate was low for lower-middle countries in the region (31 per 100 000) and upper-middle-income countries (44 per 100 000). However, the average rate for high-income countries in Asia-Pacific was high at 76 per 100 000, although this was slightly lower than the OECD average of 78 per 100 000 (Figure 7.7).

Over the recent decades, age-standardised incidence rates have risen quickly in China, India, Thailand, Japan and Korea. On the other hand, in Australia and New Zealand, with highest incidence rates, incidence rates have increased more slowly in recent years (IARC, 2024[3]).

Early diagnosis is a key to tackling breast cancer. The WHO recommends organising population-based mammography screening programmes (WHO, 2014[4]). Mammography screening rate is relatively high in countries in which national screening programme was introduced a few decades ago such as New Zealand and Korea at over 60% (Figure 7.8). Japan introduced national breast cancer screening programme in 1987, and Australia and New Zealand introduced it in the 1990s (OECD, 2013[5]; IARC, 2016[6]) and Korea and Singapore around 2000.

By contrast, less than one in four women in target age underwent mammography screening in Brunei Darussalam, China and Macau (China) (Figure 7.8). Countries and territories with low mammography screening rates either introduced national breast cancer screening programme only recently such as China in 2010 (Zhang et al., 2021[7]) and Malaysia in 2012 (Mohd Said and Sutan, 2021[8]), is rolling out the screening programme as done in Brunei Darussalam (Ministry of Health Brunei Darussalam, 2020[9]), or piloting a screening programme like in Hong Kong (China) (The Goverment of the Hong Kong Special Administrative Region, 2021[10]). Few other countries in Asia-Pacific also rolled out (in Indonesia in 2015) or are rolling out national programme (in Viet Nam) (Wahidin, 2018[11]; Pham et al., 2019[12])

Countries which monitor uptake of breast cancer screening programme observed a decline in the uptake of mammography screening in 2020 as they stopped cancer screening programmes in the beginning of the COVID-19 pandemic. In most countries, mammography screening rates are still low compared to those before the pandemic, and the decline still remained large at around 7 percentage points in Australia, New Zealand and Korea (Figure 7.8).

In 2020, mortality rates from breast cancer, reflecting effectiveness in early detection and treatment, and underlying trends in incidence, prevalence and survival, varied over 12-fold between countries and territories in the Asia-Pacific region. The rate was lowest in Mongolia at 3 deaths per 100 000 women and

the highest in Fiji at 39 per 100 000 women. While average age-standardised incidence rate was lower, the average age-standardised mortality rate was higher for upper-middle-, lower-middle- and low-income countries than in high income countries in the region (Figure 7.9). While mortality rates are decreasing in some high-income countries such as Australia, New Zealand and Singapore, they are increasing in other countries including the Philippines, Malaysia, Japan and Korea, suggesting needs to further improve early detection and treatment of breast cancer in these countries.

Definition and comparability

Incidence rates are estimated by IARC based on national data or data from neighbouring countries in the same region. Most countries in the Asia-Pacific region do not have up-to-date incidence data at the national level. Mortality rates are estimated by IARC based on national data, or modelling using national data. Both incidence and mortality rates are age-standardised to the world population.

With regards to mammography rate, target population and frequency of screening differ across countries, so data need to be interpreted with care.

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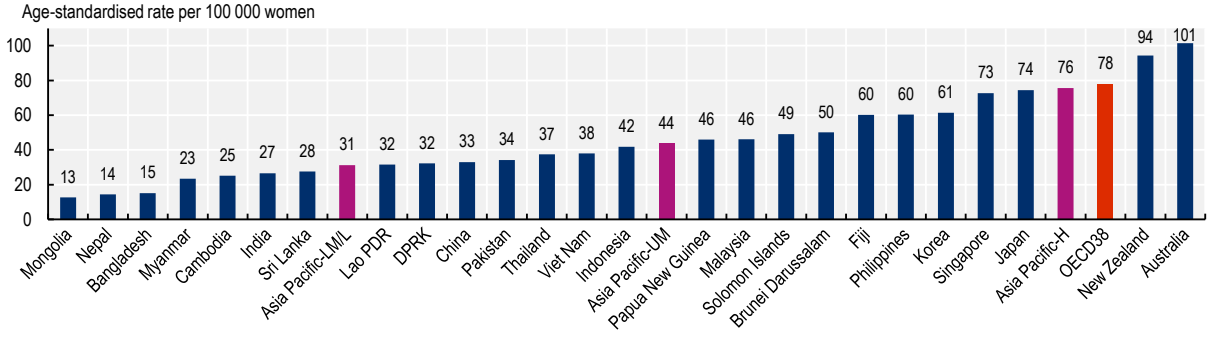
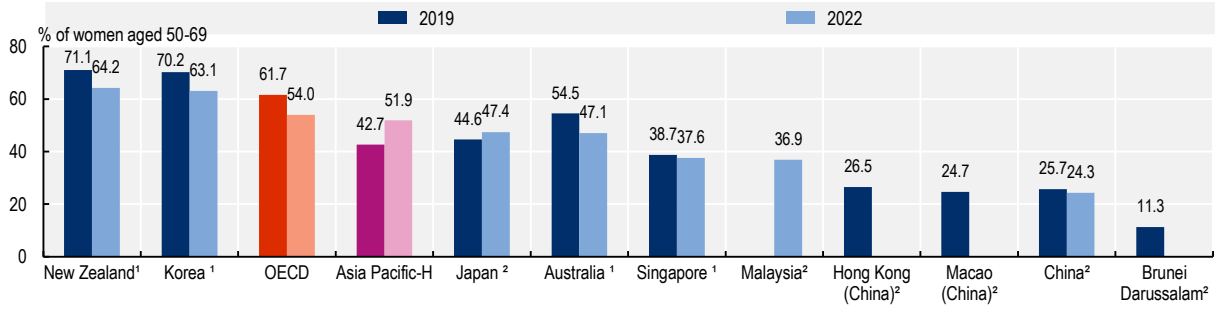
Figure 7.7. Breast cancer incidence, 2022



Source: IARC Global Cancer Observatory 2024.

StatLink https://stat.link/cpy0dw

Figure 7.8. Mammography screening in women aged 50-69 within the past two years, 2019 and 2022 (or nearest year)

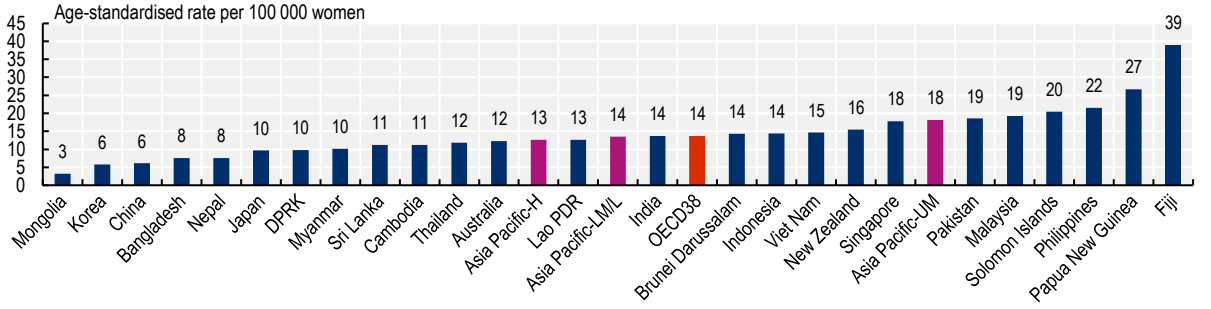


1. Programme data. 2. Survey data.

Source: OECD Health Statistics 2024; OECD Health Statistics 2022, Zhang, M. et al. (2021[7]), "Breast Cancer Screening Rates Among Women Aged 20 Years and Above — China, 2015", https://doi.org/10.46234/ccdcw2021.078; Yeung, M. et al. (2019[13]), "Hong Kong female's breast cancer awareness measure: Cross-sectional survey", https://doi.org/10.5306/wjco.v10.i2.98; Pg Suhaimi, A. et al. (2020[14]), "Predictors of non-communicable diseases screening behaviours among adult population in Brunei Darussalam: a retrospective study", https://doi.org/10.1007/s10389-020-01240-z and Gan, Y., C. Lao and A. Chan (2018[15]), "Breast cancer screening behavior, attitude, barriers among middle-aged Chinese women in Macao, China", https://doi.org/10.1093/pubmed/fdy077.

StatLink https://stat.link/v9ruw6

Figure 7.9. Breast cancer mortality, 2022



Source: IARC Global Cancer Observatory 2024.

StatLink https://stat.link/rhm5xs

Incidence, vaccination and mortality for cervical cancer

Human papilloma virus (HPV) vaccination effectively reduces cervical cancer incidence, and invasive cervical cancer is preventable if pre-cancerous or pre-invasive changes are detected and treated before progression occurs. However, about 196 000 women in the WHO South-East Asia Region and 185 000 women in the WHO Western Pacific Region were expected to be newly diagnosed with cervical cancer, and almost 120 000 women in the South-East Asia Region and over 70 000 women in the Western Pacific Region were estimated to have died of cervical cancer in 2022 (IARC, 2024[1]).

Cervical cancer incidence rate varies by over 7-fold across countries in Asia-Pacific in 2022. The age-standardised rate was around 5 per 100 000 women in New Zealand, Australia and Pakistan while it was over 25 per 100 000 in Fiji, Papua New Guinea and Solomon Islands. The average incidence rate was low for high-income countries in the region (10 per 100 000), although above the OECD average of 5 per 100 000. But the average rate was high for lower-middle countries (15 per 100 000) and upper-middle-income countries (20 per 100 000) (Figure 7.10).

WHO recommends one or two doses of HPV vaccination for the primary target population of girls aged 9-14 years, and one or two doses for girls aged 15-20 years and two doses with a 6-month interval for women older than 21 years if affordable and feasible (WHO, 2024[2]). An increasing number of countries and territories in Asia-Pacific have national HPV vaccination programmes, although the target populations vary, based on epidemiological and other evidence such as cost-effectiveness that is specific to each country.

In 2022, HPV vaccination coverage ranges widely between 3% of girls in the target age group in the Philippines and more than 90% in Sri Lanka (Figure 7.11). The vaccination coverage increased substantially in Singapore which introduced school-based screening programme in 2019 (Goei and Vijayalakshmi, 2023[3]). However, Malaysia, which introduced school-based vaccination programme in 2010, reduced vaccination coverage substantially in recent years, because it was affected by global vaccine shortage caused by the pandemic. It aims to resolve vaccine backlog by the end of 2024 and in the meantime, catch-up vaccination for girls who missed vaccination due to shortage are being carried out (Malay Mail, 2024[4])

To prevent cervical cancer and promote early detection, a growing number of countries and territories in the region have also started implementing population-based cervical cancer screening programmes. HPV test, recommended for women starting at age 30 years every 5-10 years by WHO (WHO, 2021[5]), is provided through cervical cancer screening programme every 5 years, starting at age 25 in Australia and New Zealand and every 5 years, starting at age 30 in Singapore, while most other countries in the region including Brunei Darussalam, China, Fiji, Japan, Korea, Malaysia, Mongolia, Sri Lanka, Thailand and Viet Nam use Pap smear in the screening programme. A few other countries, mostly low and lower-middle countries in the region such as Bangladesh, Cambodia, India, Indonesia, DPRK, Myanmar, Nepal and the Philippines provide visual inspection of the cervix with acetic acid (VIA) test instead (WHO, 2021[6]).

Following preventive vaccination and screening programmes, cervical cancer incidence has decreased in countries such as Australia, New Zealand, Korea, Singapore and Thailand in recent years. On the contrary, it increased significantly in Japan and China (IARC, 2024[7]). A rapid increase in Japan is likely to be related to an eight-year pause of HPV vaccination programme, which resumed in 2022.

Cervical cancer mortality rates vary over 16-fold across countries in Asia-Pacific in 2022 (Figure 7.12). High-income Asia-Pacific countries had low mortality rates, but the rates were high at around 20 deaths or

more per 100 000 women in Fiji, Papua New Guinea and Solomon Islands where incidence rates for cervical cancer are also high.

Reflecting prevention through of HPV vaccination and screening, and effective early detection and treatment, the mortality rates for cervical cancer have decreased in Australia, New Zealand and Korea. Australia now aims to eliminate cervical cancer by 2035 as per its *National Strategy for the Elimination of Cervical Cancer in Australia*. However, the mortality rate slowly increased in Japan (IARC, 2024[7]) where HPV vaccination uptake was very low between 2013 and 2021 (Ministry of Health, Labour and Welfare, 2022[8])

Definition and comparability

See the indicator "Incidence, screening, and mortality for breast cancer" for the definition of cancer incidence and mortality rates.

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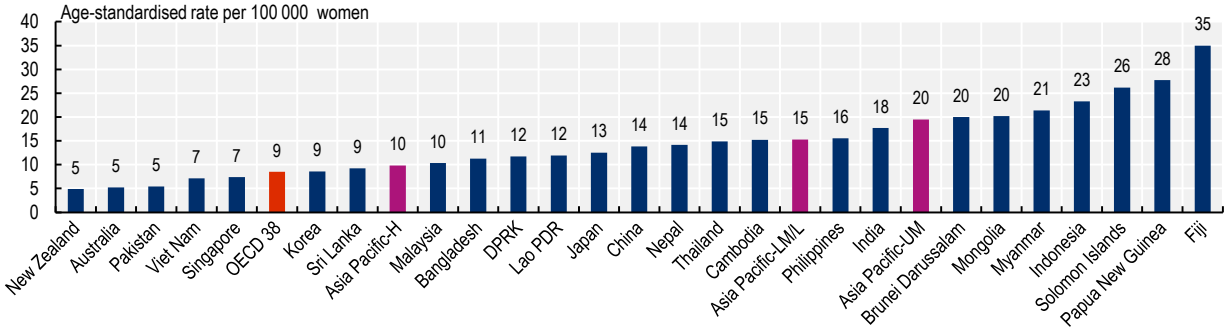
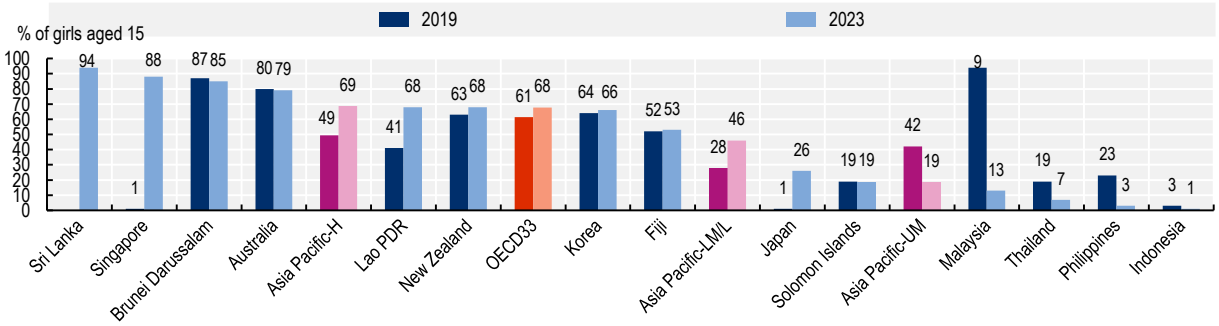
Figure 7.10. Cervical cancer incidence in females, 2022



Source: IARC Global Cancer Observatory 2024.

StatLink https://stat.link/k2yejs

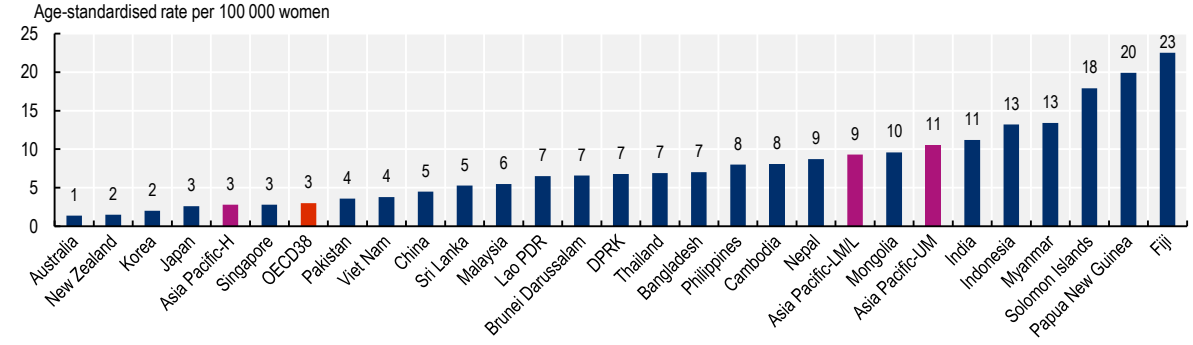
Figure 7.11. Vaccination coverage for human papillomavirus vaccine, complete schedule, females by age 15 (15HPVc), 2019, 2020 and 2023



Note: WHO estimates of Human papillomavirus immunisation coverage 2010-23.
Source: WHO/UNICEF Joint Reporting Form on Immunisation 2024.

StatLink https://stat.link/hf12gn

Figure 7.12. Cervical cancer mortality, 2022



Source: IARC Global Cancer Observatory 2024.

StatLink https://stat.link/6di8v9

People's perception on quality of healthcare

Given the importance of incorporating people's voices for developing health systems and improving quality of care, national efforts to develop and monitor patient-reported measures have been intensified in recent years. In OECD countries, specific organisations have been established, or existing institutions identified, and made responsible for measuring, monitoring and reporting patient experiences of healthcare.

A growing number of countries use patient-reported data to drive quality improvements in health systems. To promote quality of healthcare through increased provider accountability and transparency, more and more countries report patient experience data in periodic national health system reports and/or on public websites, showing differences across providers and regions, and over time. OECD countries use patient experience measures to inform healthcare regulators for inspection, regulation and/or accreditation. Patient-reported measures are also used to provide specific feedback for providers to support quality improvement (Fujisawa and Klazinga, 2017[1]).

Systematic monitoring of patient-reported experiences has not been regularly conducted at the national level in non-OECD countries in Asia-Pacific. But international survey could shed light on differences in patient-reported quality of healthcare across countries in the region.

Across countries in Asia-Pacific, the majority of people are satisfied with the quality of healthcare provided in the country. The proportion of people who were satisfied with the availability of quality healthcare was higher in upper-middle-income countries than in other countries in the Asia-Pacific region. On average, 86% of people in the upper-middle-income countries were satisfied, while the proportion was lower at 70% on average in lower-middle-income countries in the region. The proportion was particularly low in Mongolia and Pakistan at around 50% or lower. The average rate for high-income countries in the region (68%) was lower than that for other countries in the region, but it was still higher than the OECD average of 66% (Figure 7.13).

Between 2013 and 2023, in most countries, the proportion of people who are satisfied with the availability of quality healthcare increased. The average proportion of people who are satisfied with quality of healthcare provided increased in countries in lower-middle and upper-middle countries in Asia-Pacific but the average rate decreased for high-income countries as seen across OECD countries (Figure 7.13). In New Zealand and Australia, the proportion declined from 2020 and reached low in 2022 and 2023 (Gallup, 2024[2]) when both countries were affected by the pandemic. This suggests that the COVID-19 pandemic had negative impact in the availability of high-quality healthcare in these countries.

People's satisfaction on the availability of quality healthcare is similar between men and women across countries in Asia-Pacific. The average rate was slightly higher among women than among men for lower-middle- and upper-middle-income countries in the region. However, the average rate is higher among women in high-income countries in the region and also in OECD countries (Figure 7.14). The difference was relatively large in countries including Sri Lanka and Nepal in which the rate was over 10 percentage points higher among women than among men, although barriers in access to healthcare among women are reported in these countries (Gender Equity Unit, 2023[3]; Harvard University, 2024[4]).

People's perception on the availability of quality healthcare is higher among people with lower education attainment than those with higher education attainment in most countries and territories in Asia-Pacific. The difference is large at around 20 percentage points and over in including Mongolia, Hong Kong (China) and Nepal. However, the rate is higher among people with higher education attainment in countries including Pakistan, Japan and China (Figure 7.15).

Definition and comparability

Gallup conducts World Poll surveys annually and data are collected from at least 1 000 individuals in most countries and from at least 2000 individuals in some larger countries such as China. International variations in people's satisfaction on the availability of quality healthcare may be influenced by various factors, such as survey coverage, response rates and cultural differences in survey response patterns. In order to improve international comparability of people's perception, patient-reported experiences (PREMs) and patient-reported outcomes (PROMs) could be monitored in Asia Pacific.

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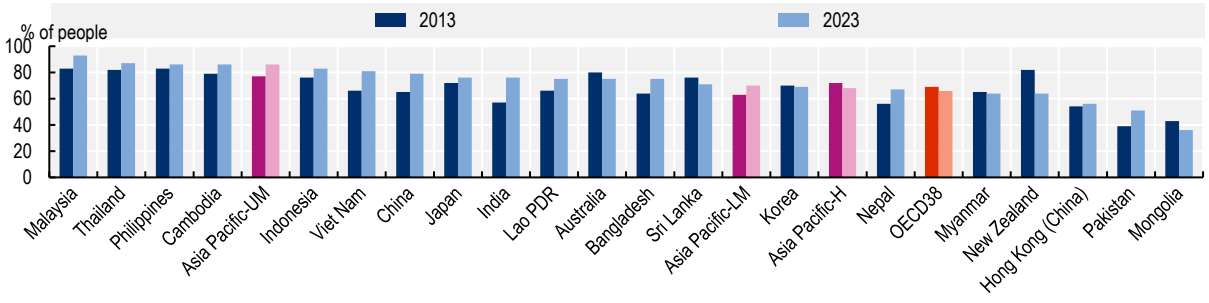
Harvard University (2024), *Women's Health in Nepal*, https://genderhealthdata.org/wp-content/uploads/2024/04/Sri-Lanka-Gender-Report-website.pdf. [4]

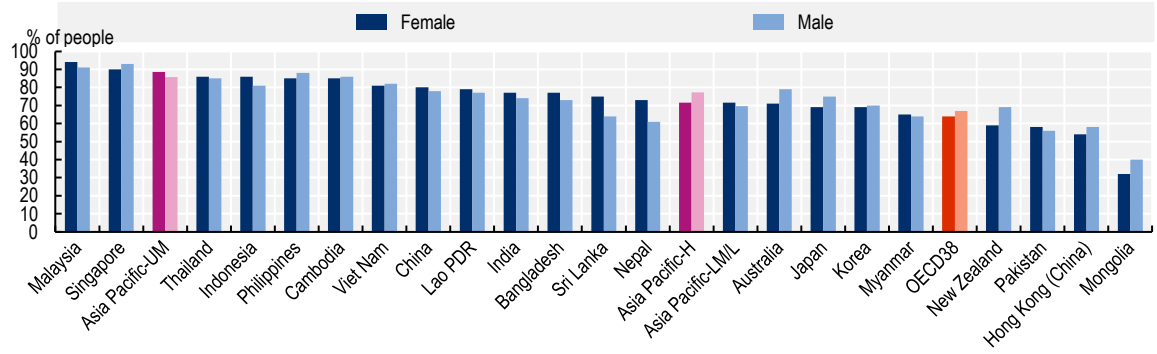
Figure 7.13. People's satisfaction on the availability of quality healthcare, 2013 and 2023 (or nearest year)



Note: Data for the latest year refer 2022 or 2023 except China referring to 2021.
Source: World Gallup Poll 2024.

StatLink https://stat.link/48bfv5

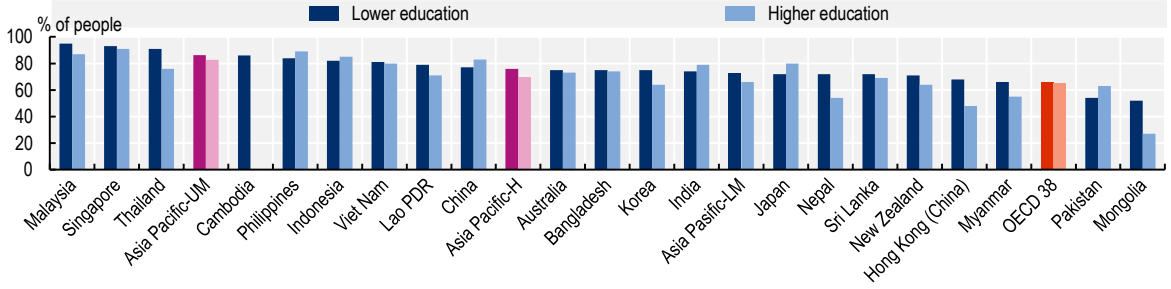
Figure 7.14. People's satisfaction on the availability of quality healthcare by gender, 2023 (or nearest year)



Note: Data for the latest year refer 2022 or 2023 except China referring to 2020.
Source: World Gallup Poll 2024.

StatLink https://stat.link/bn54je

Figure 7.15. People's perception on quality of healthcare by education attainment, 2023 (or nearest year)



Note: Data for the latest year refer 2022 or 2023 except China referring to 2021.
Source: World Gallup Poll 2024.

StatLink https://stat.link/tm5plc

Annex A. National data sources

Bangladesh

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Brunei Darussalam

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http://www.moh.gov.bn/Downloadables/Health%20Information%20Bookler%202017%20(revised%20as%20of%20January%202019).pdf

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Sri Lanka

Ministry of Health, Annual Health Bulletin, 2021

https://www.health.gov.lk/wp-content/uploads/2024/04/Annual-Health-Bulletin-2021.pdf

Annex B. Additional information on demographic and economic context

Table B.1. Total mid-year population, thousands, 2005 to 2023

	2005	2010	2015	2020	2023
Australia	20 295	22 142	23 948	25 744	26 451
Bangladesh	144 716	152 202	159 383	166 298	171 467
Brunei Darussalam	359	392	422	447	459
Cambodia	13 439	14 501	15 623	16 726	17 424
China	1 310 027	1 351 562	1 396 134	1 426 106	1 422 585
Democratic People's Republic of Korea	24 396	24 987	25 575	26 136	26 418
Fiji	882	910	919	915	924
Hong Kong (China)	6 909	7 102	7 366	7 490	7 443
India	1 154 676	1 243 482	1 328 025	1 402 618	1 438 070
Indonesia	230 872	246 305	261 799	274 815	281 190
Japan	127 913	128 185	127 276	126 305	124 371
Korea	47 852	48 769	50 984	51 859	51 749
Lao People's Democratic Republic	5 870	6 334	6 802	7 347	7 665
Macau (China)	495	563	622	683	714
Malaysia	25 836	28 656	31 233	33 890	35 126
Mongolia	2 564	2 702	2 977	3 291	3 432
Myanmar	47 438	49 024	51 089	53 017	54 134
Nepal	26 310	27 342	27 824	28 967	29 695
New Zealand	4 135	4 348	4 614	5 070	5 173
Pakistan	175 453	199 239	217 291	235 002	247 505
Papua New Guinea	6 536	7 634	8 743	9 816	10 390
Philippines	88 016	96 337	105 313	112 081	114 891
Singapore	4 268	5 077	5 525	5 620	5 789
Solomon Islands	483	533	639	745	800
Sri Lanka	20 217	20 879	21 730	22 562	22 972
Thailand	66 017	68 579	70 541	71 642	71 702
Viet Nam	81 088	87 455	92 823	98 079	100 352

Source: UNDESA, World Population Prospects: The 2024 Revision.

Table B.2. Average of mid-year median age, 2005 to 2023

	2005	2010	2015	2020	2023
Australia	35.5	36.0	36.3	36.9	37.8
Bangladesh	20.7	21.9	23.5	24.6	25.3
Brunei Darussalam	26.5	27.0	28.5	30.3	31.8
Cambodia	19.1	21.3	23.2	25.1	25.8
China	31.8	34.1	35.7	37.5	39.1
Democratic People's Republic of Korea	31.4	33.0	34.2	35.3	36.0
Fiji	22.9	24.3	25.6	27.1	27.7
Hong Kong (China)	37.7	39.9	41.7	44.4	46.2
India	22.2	23.6	25.3	27.0	28.1
Indonesia	25.2	26.6	27.9	29.1	29.8
Japan	42.6	44.2	45.8	47.7	49.0
Korea	33.6	36.6	39.9	42.8	44.5
Lao People's Democratic Republic	17.8	19.9	22.0	23.4	24.3
Macau (China)	33.0	35.3	36.0	37.0	38.3
Malaysia	23.2	25.0	26.8	28.6	30.1
Mongolia	22.7	24.4	25.7	26.4	26.8
Myanmar	24.2	25.8	27.4	28.7	29.5
Nepal	19.0	20.2	21.2	23.5	24.7
New Zealand	34.5	35.9	36.4	36.5	37.3
Pakistan	17.8	18.8	19.2	19.8	20.3
Papua New Guinea	19.3	20.0	20.8	21.7	22.3
Philippines	19.9	20.9	22.2	24.1	25.3
Singapore	32.4	32.7	33.3	34.5	35.1
Solomon Islands	18.1	18.5	18.9	19.6	20.3
Sri Lanka	27.7	29.2	30.7	32.1	32.8
Thailand	31.2	33.5	35.8	38.2	39.7
Viet Nam	24.8	27.2	29.2	31.0	32.4

Source: UNDESA, World Population Prospects: The 2024 Revision.

Table B.3. Crude birth rate, per 1 000 population, 2005 to 2023

	2005	2010	2015	2020	2023
Australia	13.1	13.6	12.8	11.5	11.5
Bangladesh	26.1	21.9	20.3	20.3	20.4
Brunei Darussalam	16.7	16.6	16.2	14.3	13.6
Cambodia	26.1	25.0	24.2	22.4	20.8
China	12.7	13.3	12.5	8.3	6.3
Democratic People's Republic of Korea	13.9	13.3	13.4	13.4	12.9
Fiji	24.0	22.3	21.0	18.8	18.0
Hong Kong (China)	8.4	9.8	10.8	7.4	5.5
India	24.3	21.6	18.9	16.7	16.1
Indonesia	21.0	20.4	18.6	16.7	15.9
Japan	8.4	8.4	7.8	6.7	6.0
Korea	9.0	9.2	8.3	5.2	4.6
Lao People's Democratic Republic	28.8	27.2	25.0	22.6	21.3
Macau (China)	7.6	9.7	11.3	8.4	6.3
Malaysia	17.9	16.9	16.3	13.4	12.4
Mongolia	18.6	23.7	26.5	22.3	18.9
Myanmar	21.0	19.4	18.6	17.5	16.7
Nepal	25.8	22.9	22.1	20.2	19.3
New Zealand	13.8	14.6	13.0	11.3	11.5
Pakistan	32.9	33.5	30.7	28.6	27.8
Papua New Guinea	32.8	30.7	28.4	26.1	24.6
Philippines	27.2	26.6	22.9	17.0	16.0
Singapore	9.7	8.4	8.6	8.4	8.2
Solomon Islands	34.0	33.2	31.9	28.0	26.9
Sri Lanka	18.7	17.1	16.0	14.7	14.1
Thailand	13.5	12.0	10.6	8.8	8.2
Viet Nam	17.4	17.4	18.5	15.2	13.8

Source: UNDESA, World Population Prospects: The 2024 Revision.

Table B.4. Total fertility rate, live births per woman, 2005 to 2023

	2005	2010	2015	2020	2023
Australia	1.8	1.9	1.8	1.6	1.6
Bangladesh	2.8	2.4	2.2	2.2	2.2
Brunei Darussalam	2.0	1.9	1.9	1.8	1.7
Cambodia	3.2	2.9	2.7	2.7	2.6
China	1.6	1.7	1.7	1.2	1.0
Democratic People's Republic of Korea	1.9	1.9	1.9	1.8	1.8
Fiji	2.9	2.7	2.6	2.4	2.3
Hong Kong (China)	1.0	1.1	1.2	0.9	0.7
India	3.0	2.6	2.3	2.0	2.0
Indonesia	2.5	2.5	2.3	2.2	2.1
Japan	1.2	1.4	1.4	1.3	1.2
Korea, Republic	1.1	1.2	1.2	0.8	0.7
Lao People's Democratic Republic	3.7	3.1	2.8	2.5	2.4
Macau (China)	0.9	1.1	1.1	0.9	0.7
Malaysia	2.4	2.1	2.0	1.7	1.6
Mongolia	2.0	2.5	3.0	2.9	2.7
Myanmar	2.5	2.3	2.3	2.2	2.1
Nepal	3.1	2.5	2.3	2.1	2.0
New Zealand	2.0	2.2	2.0	1.6	1.7
Pakistan	4.6	4.4	4.0	3.8	3.6
Papua New Guinea	4.2	3.9	3.6	3.3	3.1
Philippines	3.4	3.3	2.8	2.1	1.9
Singapore	1.1	0.9	1.0	0.9	0.9
Solomon Islands	4.4	4.3	4.3	3.7	3.6
Sri Lanka	2.3	2.1	2.1	2.0	2.0
Thailand	1.6	1.6	1.5	1.3	1.2
Viet Nam	1.9	1.9	2.1	2.0	1.9

Source: UNDESA, World Population Prospects: The 2024 Revision.

Health at a Glance: Asia/Pacific 2024

This eighth edition of *Health at a Glance Asia/Pacific* presents a set of key indicators of health status, the determinants of health, health care resources and utilisation, health care expenditure and financing and quality of care across 27 Asia-Pacific countries and territories. It also provides a series of dashboards to compare performance across countries and territories, and a thematic analysis on the burden of mental health and neurological conditions in the Asia-Pacific region. Drawing on a wide range of data sources, it gives readers a clear understanding of the factors that affect the health of populations and the performance of health systems in these countries and territories. Each of the indicators is presented in a user-friendly format, consisting of charts illustrating variations across countries and territories and over time, brief descriptive analyses highlighting the major findings conveyed by the data, and a methodological box on the definition of the indicators and any limitations in data comparability. An annex provides additional information on the demographic and economic context in which health systems operate.

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