# World health statistics 2025

Monitoring health for the SDGs, Sustainable Development Goals

2025

World Health Organization

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# Contents

# Foreword

To make progress, we must be able to measure progress. Data about the health of populations are foundational to understanding trends, making policies and directing resources to where they will have the greatest benefit. Without timely, trusted and actionable data, threats remain invisible, systems underperform and opportunities to save lives are lost.

*World health statistics* is the world's annual health report card. It shows where progress has been made – and where it has stalled. This year's edition highlights the impacts of the COVID-19 pandemic, which reversed many of the gains made in the previous two decades. Between 2000 and 2019, healthy life expectancy rose by more than five years, maternal mortality fell by one third, child mortality more than halved and premature deaths fell – driven by political commitment, investment, innovation and stronger health systems. In 2020 and 2021, COVID-19 killed millions of people, put health systems under severe strain and wiped 1.8 years off healthy life expectancy.

This report also shows that at the current pace, the world will miss the target in the Sustainable Development Goals (SDGs) to reduce premature deaths from noncommunicable diseases (NCDs) by one third. While mortality rates have declined, the number of premature NCD deaths continues to rise, due to population growth and ageing. Tobacco use is declining but not fast enough, while alcohol consumption has decreased in some regions but stagnated in others. Hypertension and diabetes remain inadequately controlled, and air pollution continues to claim millions of lives globally.

Likewise, progress on maternal and child mortality has slowed considerably, and many countries are off- course for the 2030 targets, due to underfunding of primary health care and huge gaps in access to essential services, such as skilled care at birth, immunization and access to health workers. Domestic investment must increase, particularly because where the need is greatest, resources are most limited.

WHO's Thirteenth General Programme of Work translated the health-related targets in the SDGs into the "triple billion" targets for 2018–2025: one billion more people living healthier lives; one billion more people covered by universal health coverage without financial hardship; and one billion more people better protected from health emergencies. By the end of 2024, we estimate that the first target was already exceeded, but the second two are likely to be missed: about 1.4 billion more people were living healthier lives, but only 431 million more people were enjoying access to universal health coverage, and 637 million more people were better protected from health emergencies – encouraging progress, but less than is needed to reach the SDGs.

Nevertheless, it's not 2030 yet. With stronger leadership and scaled-up delivery, the gap can still be closed. Accordingly, the Fourteenth General Programme of Work sets ambitious new targets: to keep 6 billion people healthier, expand access to affordable health services for 5 billion people, and to see 7 billion people better protected from health emergencies between 2025 and 2028.

Health data are central to achieving these targets, which is why WHO is working with countries and partners to modernize information systems and link data to delivery, through the World Health Data Hub, the SCORE package of health data tools, and the Delivery for Impact approach.

Because every life counts.

Dr Tedros Adhanom Ghebreyesus

Director-General
World Health Organization

# Acknowledgements

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# Abbreviations

| | |
|---|---|
| ABR | adolescent birth rate |
| AMR | antimicrobial resistance |
| APC | alcohol per capita consumption |
| ARIs | acute respiratory infections |
| ARR | annual rate of reduction |
| ART | antiretroviral therapy |
| ASR | age-standardized death rate |
| CDR | crude death rate |
| COVID-19 | coronavirus disease |
| DHS | Demographic and Health Survey(s) |
| DTP3 | diphtheria–tetanus–pertussis vaccine third dose |
| GLASS | Global Antimicrobial Resistance and Use Surveillance System |
| GPW13 | Thirteenth General Programme of Work |
| GPW14 | Fourteenth General Programme of Work |
| GTS | Global technical strategy for malaria 2016–2030 |
| HALE | healthy life expectancy |
| HIC | high-income country |
| IA2030 | Immunization Agenda 2030 |
| IHRs | international health regulations |
| IQR | interquartile range |
| LIC | low-income country |
| LMIC | lower-middle-income country |
| MCV2 | measles-containing vaccine second dose |
| MIC | middle-income country |
| MICS | Multiple Indicator Cluster Survey(s) |
| MMR | maternal mortality ratio |
| MNT | maternal and neonatal tetanus |
| MRSA | methicillin-resistant *Staphylococcus aureus* |
| NCDs | noncommunicable diseases |
| NMR | neonatal mortality rate |
| NTDs | neglected tropical diseases |
| ODA | official development assistance |
| OOP | out-of-pocket (health spending) |
| PAB | protection at birth |
| PCV3 | pneumococcal-conjugate vaccine third dose |
| PM2.5 | fine particulate matter less than 2.5 µm in diameter |
| RMNCH | reproductive, maternal, newborn and child health |
| SDG | Sustainable Development Goal |
| SPAR | States Parties Self-Assessment Annual Reporting Tool |
| SPL | societal poverty line |
| TB | tuberculosis |
| U5MR | under-five mortality rate |
| UHC | universal health coverage |
| UI | uncertainty interval |
| UMIC | upper-middle-income country |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| USAID | United States Agency for International Development |
| WASH | water, sanitation and hygiene |
| WHA | World Health Assembly |
| WHO | World Health Organization |

# Introduction

The *World health statistics* report is the annual compilation of health and health-related indicators, which has been published by the World Health Organization (WHO) since 2005.

The 2025 edition consists of four chapters and the accompanying annexes. Chapter 1 presents an in-depth analysis of global and regional estimates of life expectancy, healthy life expectancy and progress in the reduction of premature mortality. Chapter 2 reviews the status of the health-related Sustainable Development Goal (SDG) indicators, covering age- and cause-specific mortality, infectious diseases, risk factors for health, and universal health coverage (UHC) and health systems. A summary of global and regional trends towards the achievement of selected health-related SDG indicators is further presented in Annex 1. Chapter 3 presents updated projections on WHO's Triple Billion targets, based on the most recent available data. It also describes WHO's transition from its thirteenth general programme of work (GPW13) to the fourteenth general programme of work (GPW14), aligning with emerging global health challenges and priorities. Chapter 4 looks at inequalities in immunization as an important global health issue.

The information presented in *World health statistics 2025* is based on data available from global monitoring as of April 2025. These data have been compiled primarily from publications and databases produced and maintained by WHO, other United Nations entities (such as UNICEF, UNAIDS, and the Population Division in the Department of Economic and Social Affairs of the United Nations), United Nations Inter-Agency bodies of which WHO is a member, and other international organizations. A summary of the methodology for each chapter is described in Annex 2. Tables of health statistics by country and area, WHO region and globally can be accessed via https://www.who.int/data/gho/publications/world-health-statistics.

# Key messages

The major contributors to the 5.4-year pre-pandemic increase in global healthy life expectancy (HALE) at birth between 2000 (58.1 years) and 2019 (63.5 years) were mortality reduction from communicable and perinatal conditions among ages under 5 years, and from noncommunicable diseases (NCDs) among those 30 years and older. However, worsening morbidity due to diabetes among ages 30 years and older has led to a 0.14-year loss in HALE. Each WHO region exhibits distinctive patterns given their unique compositions of mortality and morbidity.

Between 2019 and 2021, the HALE loss can be almost entirely explained by mortality both directly and indirectly attributable to coronavirus disease (COVID-19) among those aged 30 years and older, both globally and in most WHO regions. The pandemic also caused increased morbidity from anxiety disorders and depressive disorders, each responsible for a 0.06-year (or 3-week) loss in global HALE in 2019–2021, and together effectively wiped out 80% of the positive contribution to HALE (0.15 years, or 8 weeks) by mortality decline from all NCDs combined in that two-year period.

The contributors to the HALE difference between males and females show a mixed pattern. While lower female mortality from injuries among 5–69-year-olds and from NCDs including ischaemic heart disease and stroke among females of 30 years and older gives a lead in HALE compared with males, mortality in maternal conditions and breast cancers, and higher female morbidity from conditions including back and neck pain, gynaecological diseases, migraine, depressive disorders and anxiety disorders have effectively eliminated a considerable share of the female HALE lead.

While lower mortality from communicable and perinatal causes explains a significant amount of the HALE lead that populations in high-income countries (HICs) had against those in low-income countries (LICs) and lower-middle-income countries (LMICs), higher mortality from tracheal, bronchus and lung cancers and drug use disorders, and higher morbidity from falls and back and neck pain has cost HICs some loss in HALE compared with other income groups.

Premature mortality was in decline globally and in all WHO regions from 2000 to the onset of the COVID-19 pandemic. Despite the overall progress prior to the pandemic, stagnation was seen after 2015. Globally, the pace of decline is projected to slow between now and 2050, compared with the rates observed in 2000–2019. Only about one third of countries are projected to have accelerated progress in 2019–2050 compared with 2000–2019, mostly located in the Region of the Americas and the Western Pacific Region.

As the world moves closer to 2030, overall progress is insufficient to meet the health-related SDG and other global targets. Declines were observed in mortality from causes addressed by the SDG indicators, including maternal mortality, child and neonatal mortality, premature NCD mortality, injury mortality, and mortality attributed to unsafe water, sanitation and hygiene (WASH) and air pollution. However, the progress for all these indicators is either insufficient or stalled, and is currently off-track for achieving their respective global targets.

There has been mixed progress in the global fight against infectious diseases, with declines in HIV and tuberculosis (TB) incidence rates, as well as in the number of people requiring interventions against neglected tropical diseases (NTDs), while malaria incidence rates have increased since 2015 and hepatitis B and antimicrobial resistance (AMR) continue to pose challenges.

Similarly, the world is off-track for meeting most of the global targets in reducing the prevalence or exposure to health risk factors such as malnutrition, tobacco use, unsafe WASH, air pollution and violence against women and girls, despite improvement in some of these areas.

However, the world is on-track to reach the 20% reduction in total per-capita alcohol consumption by 2030, although progress differs by region.

While gains in UHC service coverage index (SDG indicator 3.8.1) were observed globally over the past two decades, progress has slowed in recent years. In 2019, some 344 million people were pushed or further pushed into extreme poverty by out-of-pocket (OOP) health spending, while 13.5% of the global population spent more than 10% of their household budget on OOP payments for health.

The estimated global shortage of health workers of 15.4 million in 2020 decreased to 14.7 million in 2023. The projected 2030 shortage of 11.1 million shows slow progress in closing the gap, with the WHO African and Eastern Mediterranean regions projected to bear nearly 70% of the shortage.

Progress towards achieving the Triple Billion targets remains uneven. The expansion of UHC is insufficient, with only about 431 million additional people gaining access to essential health services without incurring

financial hardship by 2024 compared with the 2018 baseline set in the WHO Thirteenth General Programme of Work, and only a projected 500 million by 2025 – just half of the targeted one billion. Meanwhile, close to 637 million additional individuals are expected to be better protected from health emergencies by 2024. This is expected to increase to only 697 million in 2025 – a substantial gain that nonetheless remains a little over 30% short of the one-billion target. On the plus side, an estimated 1.35 billion more people will experience healthier lives by 2024, rising to 1.5 billion by 2025, thus exceeding the original target of one billion. However, this progress remains insufficient to put the world on track to achieve the health-related SDGs by 2030. Moreover, recent interruptions in international aid threaten to disrupt health services and systems, disproportionately impacting countries and communities with the greatest health-care needs. Safeguarding the gains made towards the Triple Billion targets remains of paramount importance for the global community in the years ahead.

Within-country inequalities in childhood immunization related to economic status and education level of the mother persist. Positively, inequalities in the last decade have diminished, compared with those in the previous decade, in LICs and LMICs. For instance, economic-related inequality in DTP3 coverage and zero-dose prevalence have reduced by more than half across LICs. Eliminating economic-related inequality across 88 LICs and middle-income countries is associated with improving the national average DTP3 coverage across these countries by 10 percentage points and halving zero-dose prevalence. Achieving equity in immunization coverage requires focused attention on urban poor areas, remote/rural areas, conflict areas, and gender-related inequities and barriers.

# 1. Change and inequality in healthy longevity, and the contributing causes

Steady increases in life expectancy and healthy life expectancy (HALE) at birth were observed globally in 2000–2019, followed by rapid declines between 2019 and 2021 due to the COVID-19 pandemic. Various factors exhibit diverse epidemiological patterns across different stages in an individual's life course and in different populations, contributing in various degrees to the change in life expectancy and HALE over time or the inequality therein between populations. This chapter reviews the contribution of different causes to the change in HALE before and during the COVID-19 pandemic, and to the inequality in HALE between males and females and between income groups as defined by the World Bank.

*Unless otherwise stated, the principal source of data for this chapter is the World Health Organization (WHO) Global health estimates 2021 (1).*

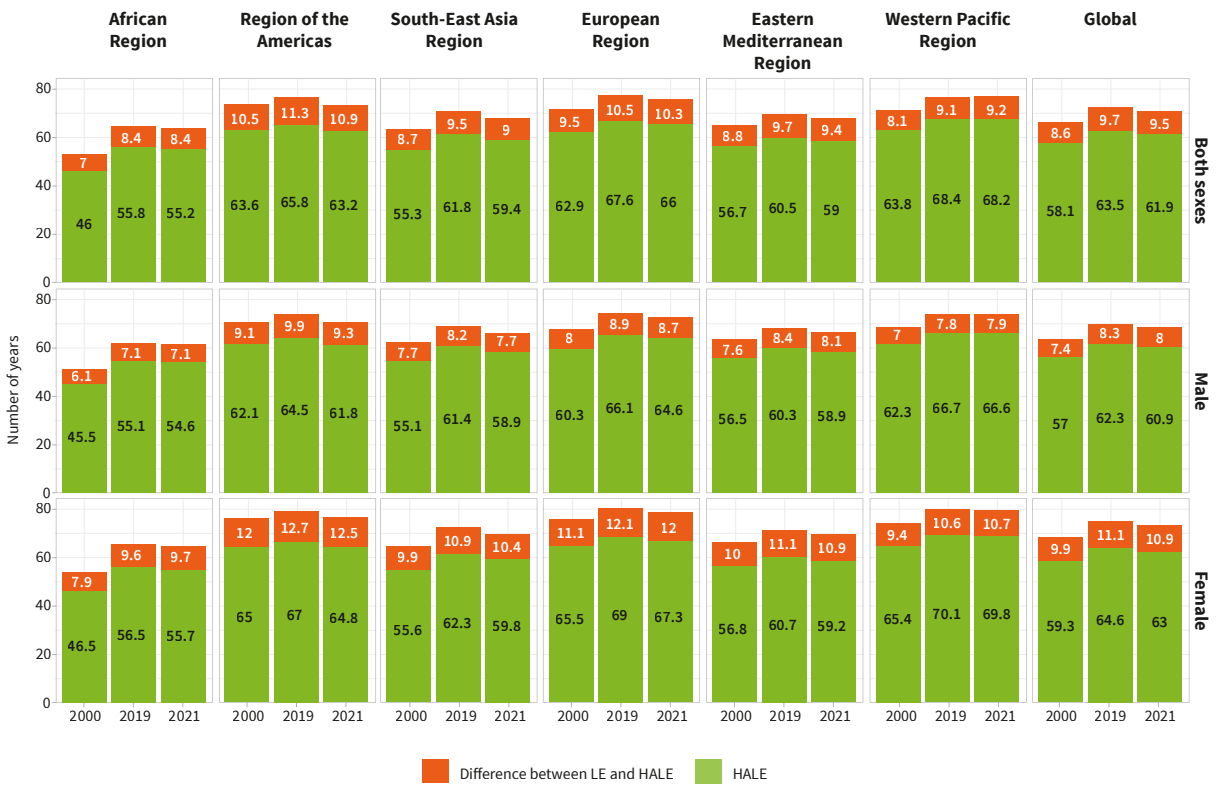
The global community enjoyed steady improvements in many aspects of population health between the turn of the century until the onset of the pandemic, from increasing access to clean water and sanitation to declining prevalence of tobacco smoking, from rising proportion of births attended by skilled health personnel *(2)* to doubling effective coverage for hypertension treatment *(3)*, and from dropping mortality due to HIV/AIDS to improving child survival *(4,5)*. These improvements led to a decline in mortality from a broad spectrum of causes of death throughout the human lifespan.

Both life expectancy and HALE increased between 2000 and 2019. Global life expectancy at birth increased by 6.3 years in this period, from 66.8 years in 2000 to 73.1 years in 2019, with males gaining 6.2 years (from 64.4 to 70.6 years) and females gaining 6.5 years (from 69.2 to 75.7 years) during this period. Simultaneously, global HALE at birth increased by 5.4 years, from 58.1 years in 2000 to 63.5 years in 2019 (from 57.0 to 62.3 years for males and from 59.3 years to 64.6 years females) (Fig. 1.1).

However, this progress faced a major setback as the COVID-19 pandemic wreaked havoc across the globe. With COVID-19 becoming one of the leading causes of deaths globally and in many of the WHO regions in 2020 and 2021 and claiming an excess toll of lives indirectly through other causes, both life expectancy and HALE rolled back by nearly a decade within just two years. Global life expectancy at birth dropped by 0.7 years to 72.5 years in 2020 (back to the level of 2016), and by a further 1.1 years to 71.4 years in 2021 (back to the level of 2012). Similarly, global HALE at birth dropped to 62.8 years in 2020 (back to the level of 2016) and 61.9 years in 2021 (back to the level of 2012) (Fig. 1.1).

This chapter reviews the contribution of different causes to the change in HALE before and during the COVID-19 pandemic, and to the inequality in HALE between males and females and between income groups *(6,7)* as defined by the World Bank.

**Figure 1.1 Life expectancy (LE) and healthy life expectancy at birth (HALE), by WHO region, 2000, 2019 and 2021**




*Source*: WHO *(1)*.

# 1.1 Change in HALE between 2000 and 2019

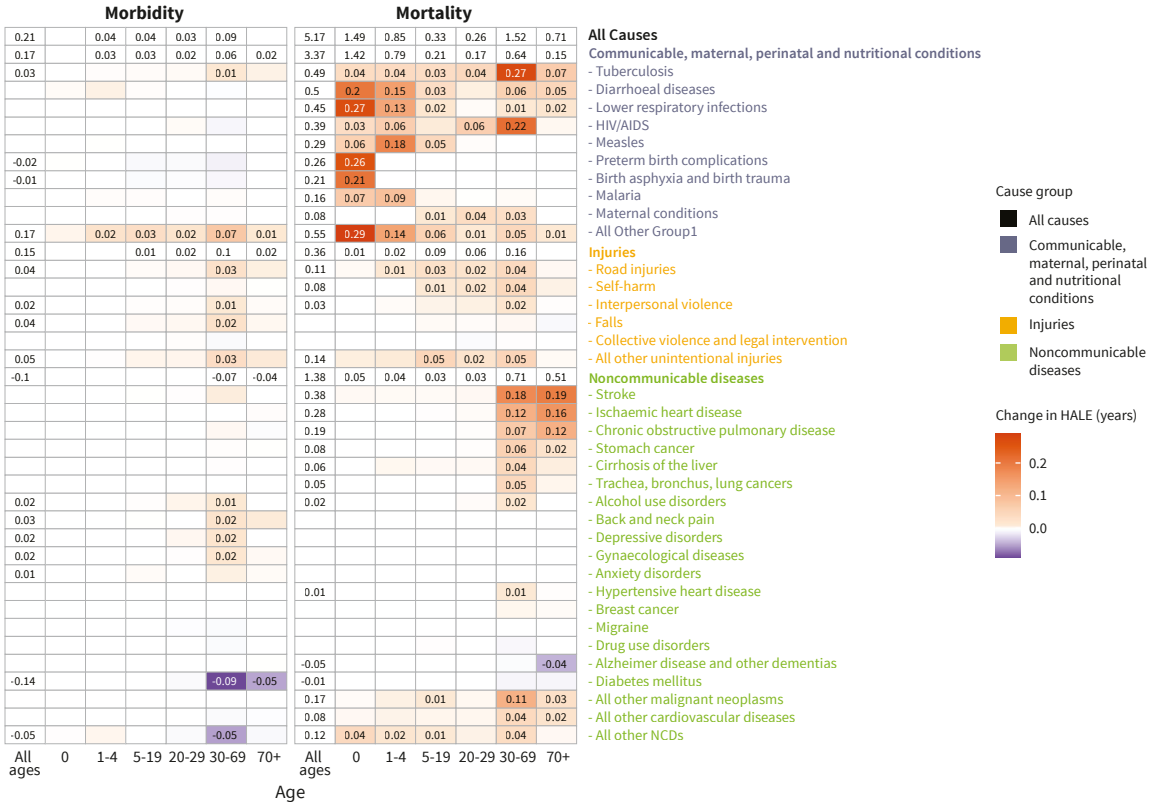
## 1.1.1 Global

Globally, the 5.4-year increase in HALE at birth between 2000 (58.1 years) and 2019 (63.5 years) was a result of declining mortality and morbidity over time, contributing 5.2 years (96.0%) and 0.2 years (4%), respectively. Reduction in mortality from communicable, maternal, perinatal and nutritional conditions (referred to as communicable diseases) represents the greatest source of gain, contributing a total of 3.4 years to the HALE gain, while mortality reduction from NCDs contributed 1.4 years, and injuries 0.4 years (Fig. 1.2).

By individual cause and broad age groups, the largest gains were made by mortality reduction in preterm birth complications (0.26 years) and birth asphyxia and birth trauma (0.21 years) among infants aged 0–1 years, lower respiratory infections (0.40 years), diarrhoeal diseases (0.35 years) and measles (0.24 years) among children aged 0–4 years, and tuberculosis (0.27 years) and HIV/AIDS (0.22 years) among adults aged 30–69 years. The gain attributed to NCD mortality reduction was concentrated in the adult age groups, with stroke contributing 0.37 years, ischaemic heart disease 0.28 years and chronic obstructive pulmonary disease 0.19 years among adults 30 years and older. While the majority of causes contributed to the HALE gain positively, increasing mortality linked to Alzheimer disease and other dementias among adults aged 70 years and older resulted in a slight two-week (0.04-year) HALE loss in 2000–2019 (Fig. 1.2).

While the overall contribution to the HALE gain from changing morbidity in 2000–2019 was relatively minor and, for the majority of causes, the contribution was positive, it is worth noting that morbidity from diabetes among adults 30 years and older increased and was responsible for a 0.14-year HALE loss in 2000–2019 (Fig. 1.2).

**Figure 1.2 Decomposition of the change in healthy life expectancy (HALE) between 2000 and 2019 globally, by cause and age group, for both sexes combined**



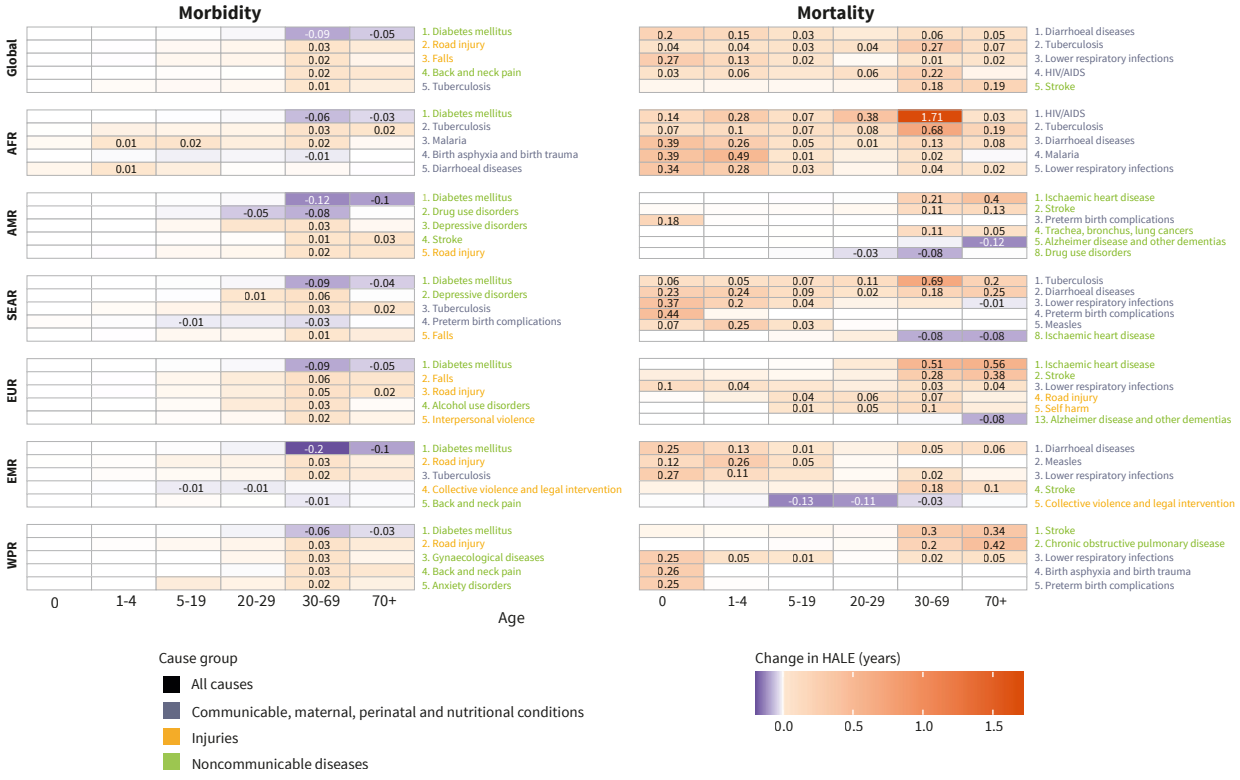

*Source*: WHO *(1)*.

## 1.1.2 WHO regions

As the cause and the age profile of mortality and morbidity vary across geographical locations, the contributions to HALE by cause and age also exhibit diverse patterns.

In the WHO African Region, the most remarkable contributor to the HALE gain in 2000–2019 was from reduction in HIV/AIDS mortality, resulting in a total of a 2.61-year gain in HALE, within which a reduction among adults aged 30–69 years was the major source (1.71 years). Decline in mortality from tuberculosis in the same age group also contributed to a large share (0.68 years or 57.6%) of the 1.18-year HALE gain accumulated throughout the entire life course. Mortality decline among children aged under 5 years from malaria, diarrhoeal diseases and lower respiratory infections also contributed considerably to the HALE gain in 2000–2019, at 0.88, 0.65 and 0.62 years, respectively (Fig. 1.3).

**Figure 1.3 Leading contributing causes for change in healthy life expectancy (HALE) between 2000 and 2019, by cause, age group and WHO region, for both sexes combined**




AFR: African Region; AMR; Region of the Americas; SEAR: South-East Asia Region; EUR: European Region; EMR: Eastern Mediterranean Region; WPR: Western Pacific Region.

*Source*: WHO *(1)*.

Similarly, in the Eastern Mediterranean Region and the South-East Asia Region, reduction in mortality from communicable diseases was the primary driver of the HALE gain in 2000–2019. Diarrhoeal diseases contributed a total of 1.01 years (0.47 years among those aged under 5 years) in HALE gain in the South-East Asia Region and 0.51 years (0.38 years among those aged under 5 years) in the Eastern Mediterranean Region. A mortality decline in lower respiratory infections among children aged under 5 years led to HALE gains of 0.57 years in the South-East Asia Region and 0.38 years in the Eastern Mediterranean Region. While the Eastern Mediterranean Region enjoyed a 0.26-year gain in HALE due to declining mortality from ischaemic heart disease among adults aged 30 years and older, the South-East Asia Region saw an opposite trend, with rising mortality from the diseases causing 0.16-year HALE loss among the same age groups. Also worth noting is the 0.3-year loss attributed to increasing diabetes morbidity among those aged 30 years and older in the Eastern Mediterranean Region, constituting the largest loss among all WHO regions. The Eastern Mediterranean Region is also the only region where a sizable HALE loss was attributed to mortality increase in collective violence and legal intervention, at 0.28 years, of which 0.24 years was due to rising mortality among those aged 5–29 years (Fig. 1.3).

In contrast, in the Region of the Americas the contribution to the gain in HALE was more heavily concentrated in NCDs, with declining mortality among adults aged 30 years and older from ischaemic heart disease (0.61 years), stroke (0.24 years), and trachea, bronchus and lung cancers (0.16 years) driving the gain (Fig. 1.3).

However, some negative patterns were also observed. Rising mortality due to Alzheimer disease and other dementias among adults aged 70 years and older was responsible for a 0.12-year HALE loss. While improvement in mortality from diabetes contributed to a minor increase (0.03 years) in HALE in 2000–2019, worsening morbidity from the disease caused a 0.22-year loss. Additionally, drug use disorder in the Region of the Americas contributed negatively through increasing both mortality and morbidity, causing 0.11-year and 0.13-year losses, respectively, a unique phenomenon compared with all other WHO regions (Fig. 1.3).

In the European Region, there was a 4.69-year gain in HALE between 2000 and 2019, with 93.5% (or 4.39 years) of this gain attributed to declining mortality. By far, the leading driver in HALE gain was the decline in mortality from ischaemic heart disease among adults aged 30 years and older, accounting for a 1.07-year HALE gain, or over one fifth of the total gain. This is followed by mortality reduction from stroke among the same age groups, contributing to a further 0.66-year increase in HALE. The European Region also benefitted from reduced mortality from lower respiratory infections, road injuries and suicide across many age groups over the life course, achieving a HALE gain of about 0.2 years for each cause (0.6 years in total). However, increasing mortality from Alzheimer disease and other dementias among adults aged 70 years and older and increasing morbidity from diabetes led to a loss in HALE, at 0.08 and 0.14 years respectively (Fig. 1.3).

In the Western Pacific region, HALE increased by 4.53 years between 2000 and 2019, about 97% (or 4.43 years) of which was achieved by reducing mortality. The most prominent HALE gain was achieved through reducing mortality from stroke and chronic obstructive pulmonary disease among adults aged 30 years and older, accounting for an increase of 0.64 and 0.62 years, respectively. Declining mortality from birth asphyxia and birth trauma, preterm birth complications and lower respiratory infections among children aged under 1 year led to an increase in HALE of around 0.25 years for each of the three diseases (0.76 years in total). As in other regions, diabetes-related morbidity increased among adults aged 30 years and older and caused a 0.1-year loss in HALE (Fig. 1.3).

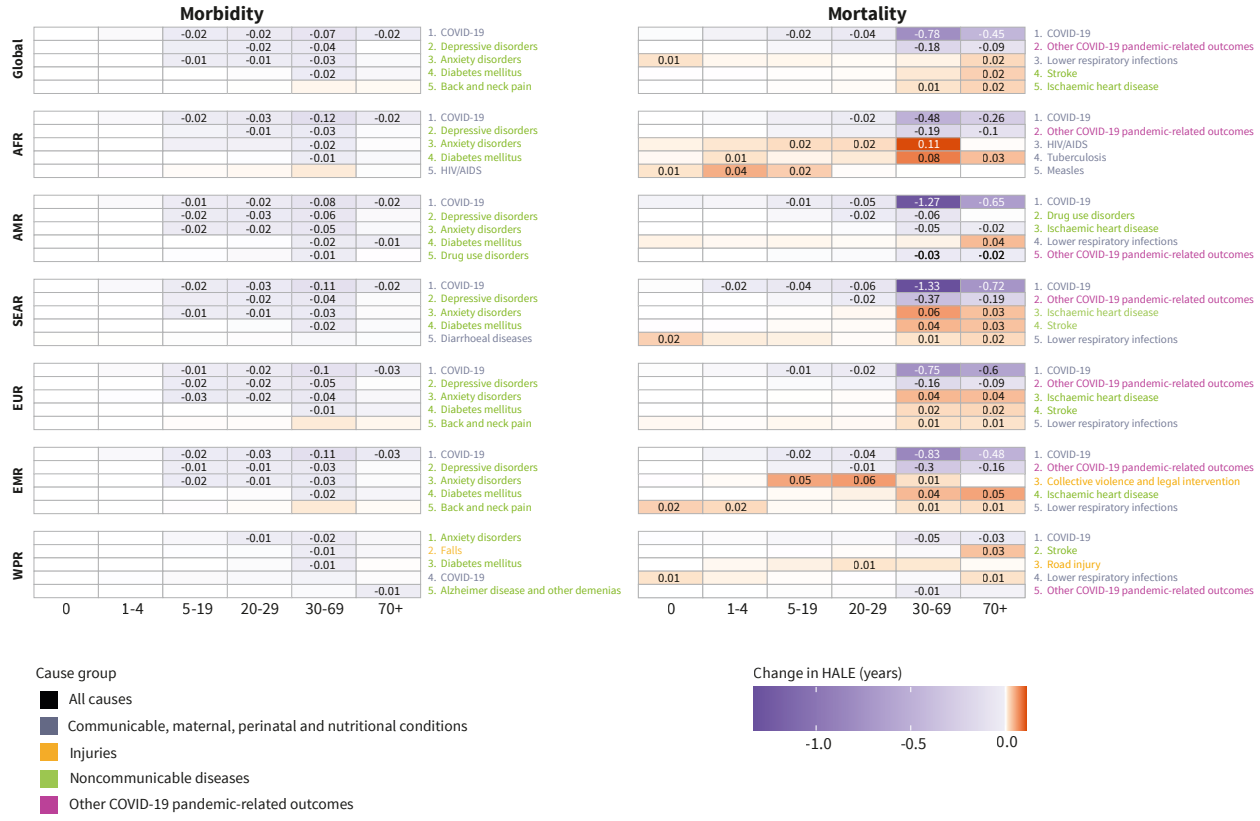
# 1.2 Change in HALE during the COVID-19 pandemic in 2019–2021

## 1.2.1 Change attributed to mortality

The Global HALE dropped by 1.54 years between 2019 and 2021. Mortality from the emerging COVID-19 and other outcomes related to the COVID-19 pandemic led to 1.29-year and 0.28-year losses, respectively, in HALE, totalling a staggering 1.57-year loss within just two years and exceeding the total gains in reduced mortality and morbidity from other causes. The majority of the loss was concentrated among those aged 30 years and older, at 1.23 years and 0.27 years, respectively, attributed to the two causes (Fig. 1.4).

While gain due to continued decline in mortality from causes including HIV/AIDS and tuberculosis was observed in 2019–2021 in the African Region, the region suffered from a net loss of 0.66 years in HALE. The loss is predominantly driven by mortality from COVID-19 (0.74 years) and other COVID−19 pandemic-related outcomes (0.29 years) among adults aged 30 years and older (Fig. 1.4).

**Figure 1.4 Leading contributing causes for change in healthy life expectancy (HALE) between 2019 and 2021, by cause, age group and WHO region, for both sexes combined**




AFR: African Region; AMR; Region of the Americas; SEAR: South-East Asia Region; EUR: European Region; EMR: Eastern Mediterranean Region; WPR: Western Pacific Region.

*Source*: WHO *(1)*.

Much of the 2.72-year HALE loss in the Region of the Americas can be attributed to COVID-19 mortality among adults aged 30 years and older (1.92 years) and morbidity for all ages (0.15 years). Loss in HALE can also be explained by causes for which the previous pre-pandemic progress in mortality reduction was completely reversed or halted, including ischaemic heart disease, which contributed negatively to the HALE change between 2019 and 2021 (–0.07 years in 2019–2021 vs 0.61 years in 2000–2019) and stroke, which contributed almost no gain between 2019 and 2021 (compared with a 0.24-year gain in 2000–2019) (Fig. 1.4).

Mortality from COVID-19 and other COVID-19 pandemic-related outcomes among adults aged 30 years and older contributed 2.05 and 0.56 years, respectively, to the total 2.5-year HALE loss in the South-East Asia Region between 2019 and 2021. This outweighed HALE gains achieved through mortality reductions from causes including ischaemic heart disease (0.09 years) and stroke (0.08 years) among those aged 30 years and older during this two-year period (Fig. 1.4).

The overall HALE dropped by 1.5 years in 2019–2021 in both the European Region (66.1 to 64.6 years) and the Eastern Mediterranean Region (60.4 to 58.9 years), and mortality from COVID-19 and other COVID-19 pandemic-related outcomes among adults aged 30 years and older accounted for 1.35 and 0.25 years, respectively, of the loss in the European Region and 1.31 and 0.46 years, respectively, in the Eastern Mediterranean Region (Fig. 1.4).

The COVID-19 pandemic had a very limited impact on HALE in the Western Pacific region in 2020 and 2021, resulting in virtually no change in HALE (68.4 years in 2019 and 68.2 years in 2021). Mortality from COVID-19 and other COVID-19 pandemic-related outcomes only accounted for 0.09 and 0.02 years of loss, respectively, in HALE, which were compensated for by minor gains from mortality decline from other causes, including stroke and road injuries (Fig. 1.4).

### 1.2.2 Change attributed to morbidity

The decline in HALE between 2019 and 2021 at global and regional levels can be partly attributed to increasing morbidity. A shared pattern at both global and regional levels is that the HALE loss in 2019–2021 associated with morbidity increase can largely be attributed to three causes: COVID-19, anxiety disorders and depressive disorders. It is also worth noting that the pre-pandemic HALE gains in 2000–2019 attributable to declining morbidity from anxiety disorders and depressive disorders were completely cancelled out by the subsequent loss associated with these two causes during the first two years of the COVID-19 pandemic (Fig. 1.4).

Globally, morbidity due to COVID-19 led to a 0.13-year HALE loss in 2019–2021. The pandemic also caused increasing morbidity due to anxiety disorders and depressive disorders, each responsible for a 0.06-year (or 3-week) loss in HALE in 2019–2021. This loss (0.12 years, or 6 weeks) effectively wiped out 80% of the positive contribution to HALE (0.15 years, or approximately 8 weeks) by mortality decline from all NCDs combined in that two-year period. By WHO regions, morbidity due to COVID-19 led to HALE loss in 2019–2021 ranging from 0.01 years in the Western Pacific region to 0.18–0.20 years in the South-East Asia Region, the Eastern Mediterranean Region and the African Region. Increasing morbidity due to anxiety disorders was responsible for losses ranging from 0.03 years in the African Region to 0.10 years in the Region of the Americas. Similarly, the contribution to overall HALE loss in 2019–2021 from increasing morbidity due to depressive disorders ranged from 0.01 years in the Western Pacific region to 0.11 years in the Region of the Americas (Fig. 1.4).

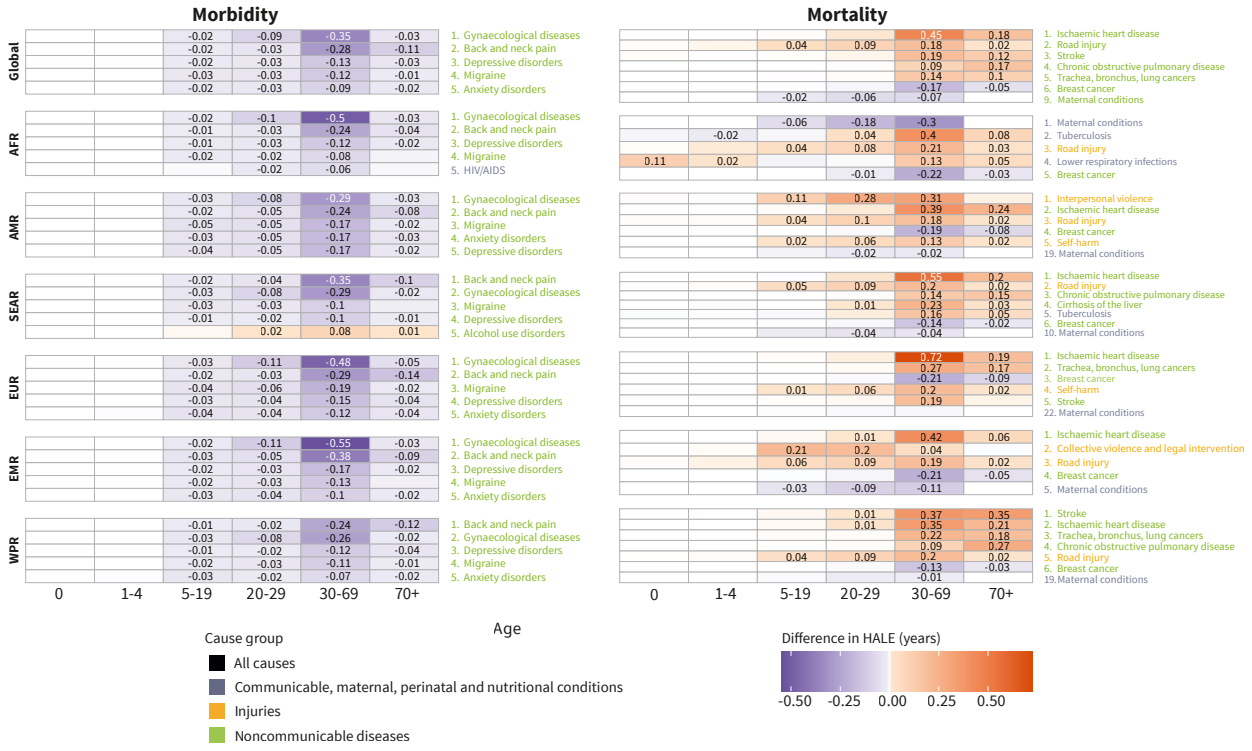
# 1.3 Gap in HALE between males and females in 2019 and 2021

## 1.3.1 Global

On average, women live longer than men, as they benefit from lower mortality, especially from causes that are affected by behavioural or genetic factors *(8,9,10,11)*. In 2019, just before the COVID-19 pandemic, the global female life expectancy was about 5.1 years longer than that of males (75.70 versus 70.61 years). However, with higher overall risk of morbidity among females, when disability is accounted for, the gap between the global male and female HALE in 2019 reduced to about 2.3 years *(8,10)*. The lower level of mortality among females would have rendered them a 3.85-year advantage in HALE, yet they also faced higher levels of morbidity than males, offsetting the HALE advantage associated with mortality by 1.56 years (Fig. 1.5).

Lower female mortality from NCDs among adults aged 30 years and older from ischaemic heart disease (accounting for 0.63 years), stroke (0.31 years), chronic obstructive pulmonary disease (0.26 years), and trachea, bronchus and lung cancers (0.24 years) are major contributors to the female advantage in HALE. In addition, lower mortality among those aged 5–69 years old from injuries including road injury (0.32 years), interpersonal violence (0.17 years) and suicide (0.12 years) constitute an important source of the female HALE advantage. However, mortality from sex-specific causes, such as breast cancer and maternal conditions, reduced the HALE advantage for females, at 0.22 and 0.15 years, respectively (Fig. 1.5).

**Figure 1.5 Leading contributing causes for the difference in healthy life expectancy (HALE) in 2019 between males and females, by cause and age group**



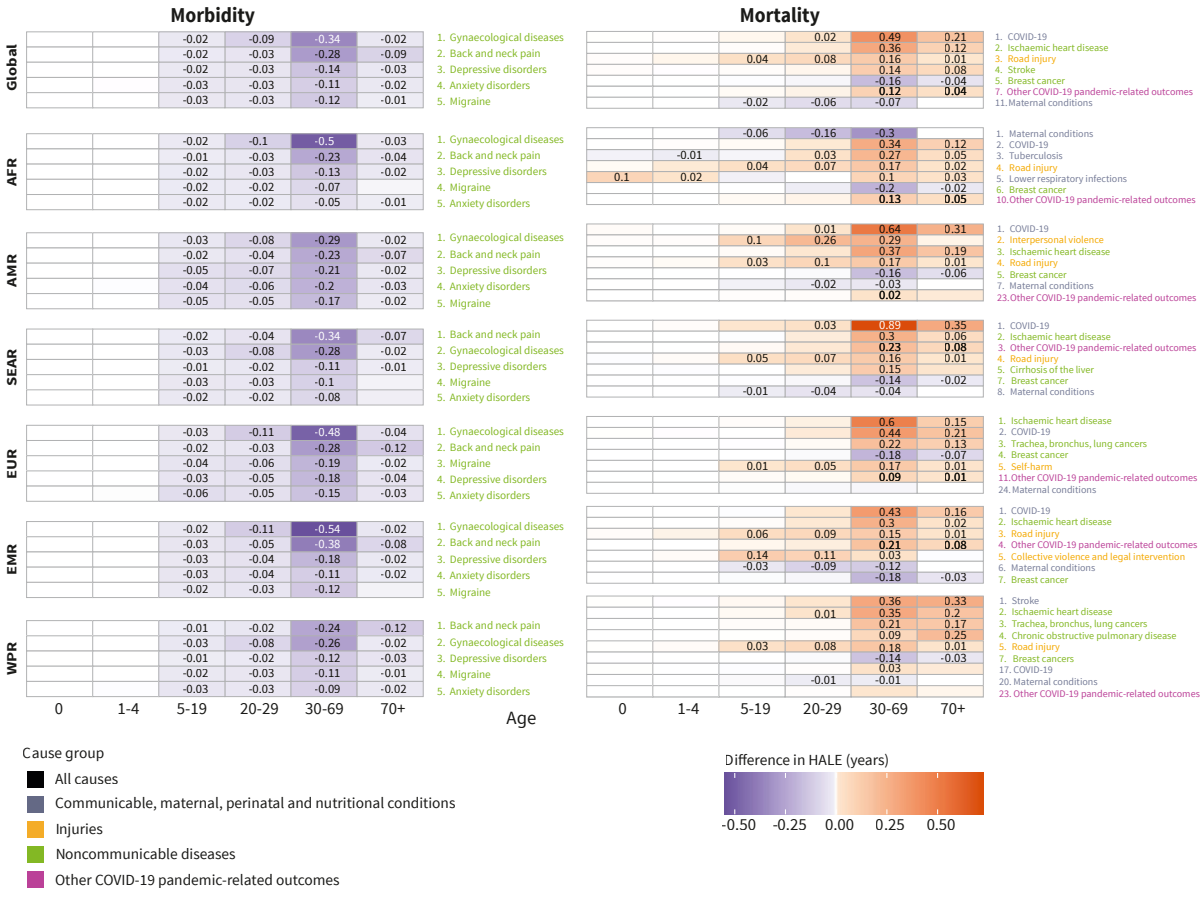

AFR: African Region; AMR; Region of the Americas; SEAR: South-East Asia Region; EUR: European Region; EMR: Eastern Mediterranean Region; WPR: Western Pacific Region.

*Source*: WHO *(1)*.

In addition, a higher rate of morbidity from many conditions has cost more healthy life-years among females. Back and neck pain, gynaecological diseases and migraine among females aged 30 years and older reduced female HALE by 0.39 years, 0.38 years and 0.13 years, respectively, compared with males, and thus effectively eliminated the HALE advantage associated with mortality due to ischaemic heart disease and chronic obstructive pulmonary disease. Furthermore, depressive disorders and anxiety disorders reduced the overall additional HALE for females by 0.20 and 0.16 years, respectively (Fig. 1.5).

In 2021, HALE for females was about 2.2 years higher than for males, representing the net of a 3.8-year advantage associated with mortality and a 1.7-year disadvantage associated with morbidity. In general, the mortality and morbidity contributors to the female–male gap in HALE remained largely the same, although the size of each contribution diminished to different degrees. What is most noteworthy is that lower female mortality from COVID-19 (0.72 years) and other COVID-19 pandemic-related outcomes (0.17 years) have contributed to a 0.89-year HALE advantage over males globally. This contribution is dominated by those aged 30 years and older (0.70 and 0.16 years, respectively, for COVID-19 and other COVID-19 pandemic-related outcomes), a pattern that also holds true at regional and country levels (Fig. 1.6).

**Figure 1.6 Leading contributing causes for the difference in healthy life expectancy (HALE) in 2021 between males and females, by cause and age group**




AFR: African Region; AMR; Region of the Americas; SEAR: South-East Asia Region; EUR: European Region; EMR: Eastern Mediterranean Region; WPR: Western Pacific Region.

*Source*: WHO *(1)*.

## 1.3.2 WHO regions

Similar patterns were observed across WHO regions, yet given each region's unique epidemiological profile, there are distinctive characteristics in the health inequality between male and females in each region. In the African Region, sex-difference in mortality from communicable diseases was the primary source of the HALE gap (1.35 years) between sexes in 2019. Lower tuberculosis mortality among adults aged 30 years and older brought a 0.48-year HALE advantage to females. Lower mortality from lower respiratory infections among children aged under 5 years and adults aged 30 years and older contributed a further 0.30 years. However, these gains were partially offset by mortality from maternal conditions in reproductive ages, which cost females 0.54 years in HALE (Fig. 1.5). In 2021, lower female mortality from COVID-19 and other COVID-19 pandemic-related outcomes accounted for an additional 0.47 and 0.18 years, respectively, in female HALE over male. This is predominantly contributed by females aged 30 years and older, accounting for 0.46 and 0.18 years, respectively, for the two causes (Fig. 1.6).

A unique contributor to the female HALE lead (2.49 years) in 2019 in the Region of the Americas was mortality due to interpersonal violence, accounting for 0.71 years of the HALE gap and predominantly concentrated in those aged 5–69 years (Fig. 1.5). In 2021, lower female mortality from COVID-19 and other COVID-19 pandemic-related outcomes explained 0.96 and 0.03 years, respectively, of the lead in female HALE (2.96 years in total) (Fig. 1.6).

Stroke is the most significant cause of death that contributed to the female HALE lead (3.43 years in total) in the Western Pacific region in 2019, accounting for 0.73 years (Fig. 1.5). In 2021, mortality from COVID-19 and other COVID-19 pandemic-related outcomes had very limited impact on the HALE gap between males and females, accounting for only 0.03 and 0.01 years, respectively (Fig. 1.6).

The Eastern Mediterranean Region had the narrowest male–female gap in HALE in 2019, at 0.35 years. Mortality from collective violence and legal intervention stands out as a prominent driver for the HALE gap compared with other regions, contributing 0.45 years to the female HALE lead, with fatality among those aged 5–29 years accounting for over 90% of it (0.41 years). The relatively narrow overall HALE gap can be partially explained by large contributions from some conditions for which females faced higher mortality or morbidity, particularly morbidity from gynaecological diseases (–0.71 years) with women aged 20–69 years accounting for –0.66 years of this (Fig. 1.5). In 2021, the female lead in HALE declined slightly to 0.33 years, despite the addition of major contributions associated with mortality from COVID-19 (0.61 years) and other COVID-19 pandemic-related outcomes (0.3 years). This was due to declining contributions from mortality from causes including collective violence and legal intervention (down from 0.45 years in 2019 to 0.28 years in 2021) and ischaemic heart disease (down from 0.49 years in 2019 to 0.34 years in 2021) (Fig. 1.6).

The South-East Asia Region had the second lowest male–female gap in HALE in 2019 after the Eastern Mediterranean Region, at 0.90 years. Females benefitted from lower mortality from ischaemic heart disease, which accounted for 0.76 years of the female HALE advantage, primarily concentrated in those aged 30 years and older (0.75 years) (Fig. 1.5). The overall HALE gap remained relatively constant in 2021, at 0.91 years. Lower female mortality from COVID-19 and other COVID-19 pandemic-related outcomes accounted for 1.28 and 0.33 years, respectively, of the lead in female HALE. It is worth noting that the contribution associated with ischaemic heart disease halved, to 0.37 years, compared with 2019, indicating that as a competing risk the emerging deaths attributed to the COVID-19 pandemic have narrowed the male–female mortality gap associated with ischaemic heart disease (Fig. 1.6).

Females in the European Region enjoyed a 2.98-year HALE lead in 2019 compared with males. Lower female mortality from ischaemic heart disease among adults aged 30 years and older represents the greatest contributor, accounting for a total of 0.91 years. Lower female mortality from trachea, bronchus and lung cancers in the same age group adds another 0.44 years to the female HALE lead (Fig. 1.5). In 2021, the male–female HALE gap dropped to 2.76 years, with lower female mortality from COVID-19 and other COVID-19 pandemic-related outcomes accounting for 0.65 and 0.11 years, respectively, and the contribution associated with mortality from ischaemic heart disease (down to 0.75 years) and trachea, bronchus and lung cancers declining from the 2019 levels (down to 0.36 years). Contributions from all four causes to the female HALE lead were concentrated in those aged 30 years and older (Fig. 1.6).

# 1.4 Gap in HALE between high-income and other income groups in 2019 and 2021

Populations living in lower-resourced settings face many socioeconomic challenges and higher health risks than those living in higher-resourced settings *(12)*, resulting in disproportionately higher morbidity and mortality from many causes and poorer overall health outcome as measured by life expectancy and HALE *(1)*.

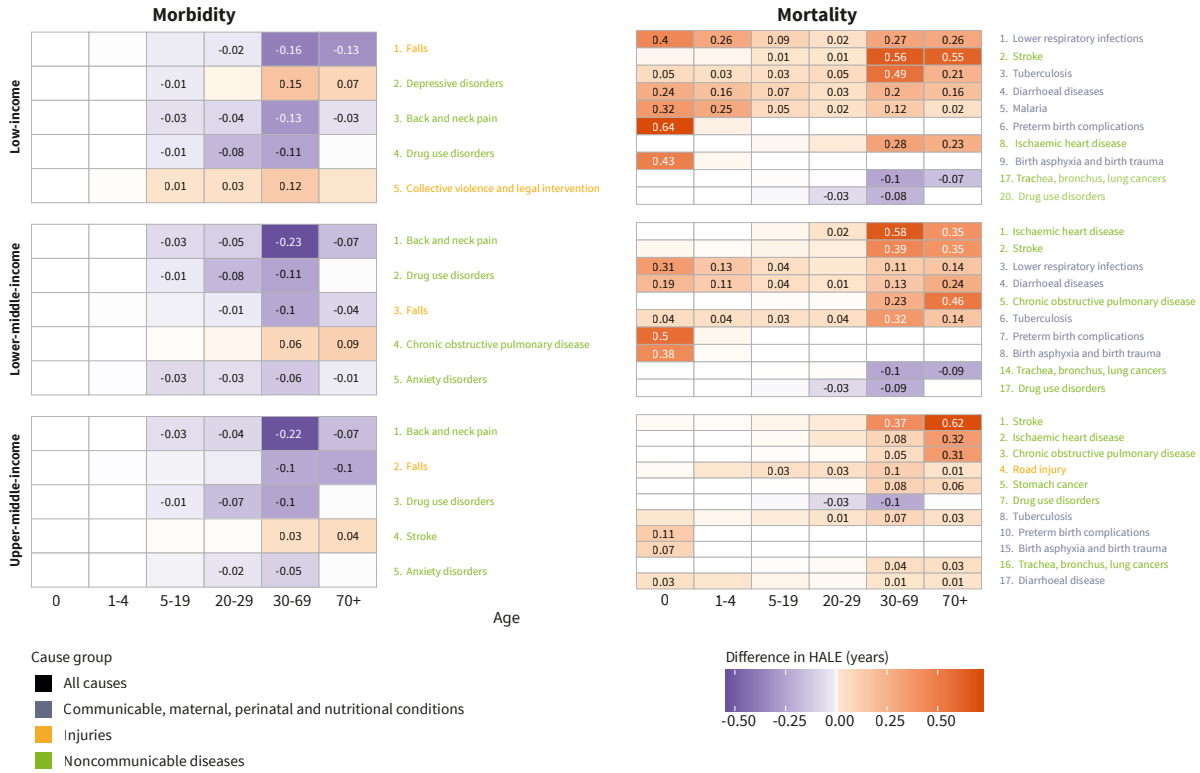
When looking at HALE in high-income countries compared with other income groups (as classified by the World Bank), the main health issues that explain the differences – and how much they contribute – vary depending on which groups are being compared.

In 2019, people in high-income countries lived longer healthy lives partly because they had lower death rates from certain diseases and conditions, including birth asphyxia and birth trauma, preterm birth complications, lower respiratory infections, diarrhoeal diseases and tuberculosis. These factors explained 4.08 years of the 12.62-year HALE gap between high- and low-income countries, and 3.08 years of the 8.61-year gap between high- and lower-middle-income countries.

However, these same health issues only explained a small part – about 0.38 years – of the 2.08-year HALE difference between high- and upper-middle-income countries.

Other major health conditions that contributed to the HALE gap were ischaemic heart disease and stroke. Lower death rates from these conditions in high-income countries accounted for: 0.52, 0.95 and 0.4 years of the HALE gap due to ischaemic heart disease, and 1.14, 0.76 and 1.01 years due to stroke, in comparisons with low-, lower-middle- and upper-middle-income countries, respectively (Fig. 1.7).

**Figure 1.7 Leading contributing causes for the difference in healthy life expectancy (HALE) in 2019 between high-income and other income groups, by cause and age group**



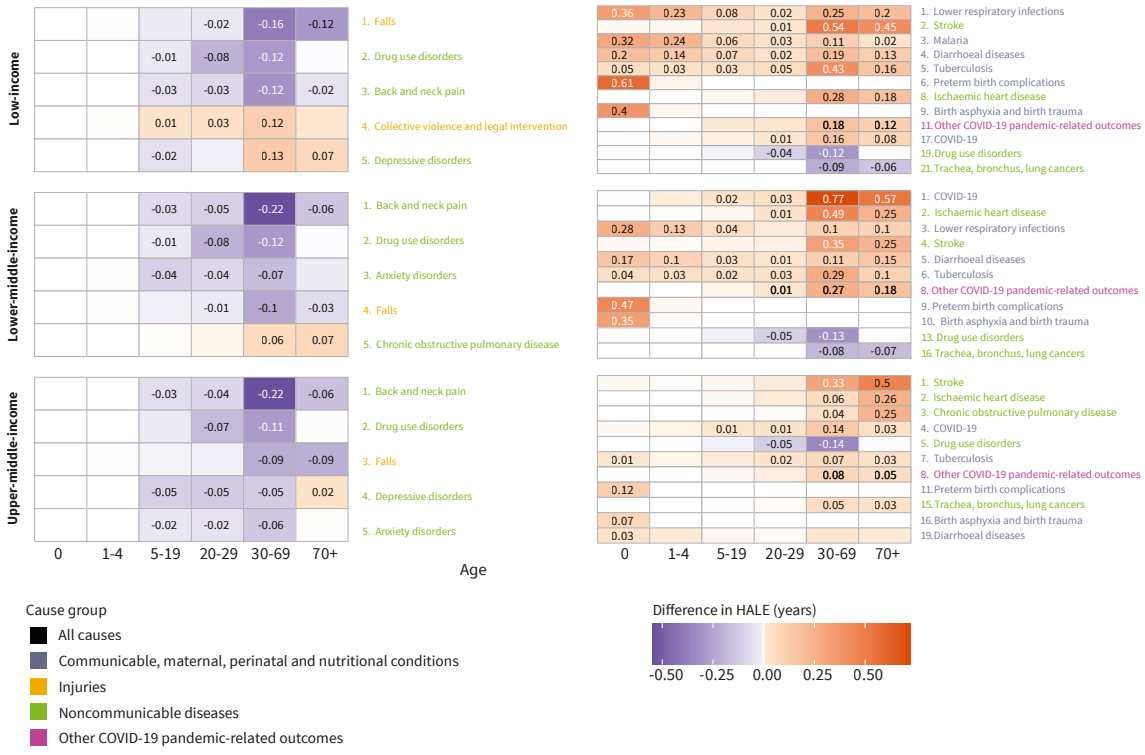

*Source*: WHO *(1)*.

However, high-income countries did not succeed in every aspect. Higher mortality due to trachea, bronchus and lung cancers, particularly among adults aged 30 years and older, led to a negative contribution to the difference in HALE when comparing high-income countries against low-income (–0.17 years) and lower-middle-income countries (–0.2 years). Additionally, populations in high-income countries on average faced higher mortality from drug use disorders in comparison with all the other three income groups, costing high-income countries 0.12, 0.13 and 0.13 years of the HALE lead, respectively, compared with low-income, lower-middle-income and upper-middle-income countries, respectively (Fig. 1.7).

High-income countries also sustained higher rates of morbidity due to some injuries and NCDs. While overall morbidity in high-income countries was still lower than that in low- and lower-middle-income countries in 2019, it was higher than upper-middle-income countries and led to a nearly 1-year negative contribution to the HALE gap between high- and upper-middle-income countries. The major causes leading to high-income countries' disadvantage include falls (losing 0.32, 0.16 and 0.21 years compared with low-, lower-middle- and upper-middle-income countries, respectively), back and neck pain (–0.21, –0.38 and –0.36 years, respectively) and drug use disorders (–0.20, –0.20 and –0.19 years, respectively) (Fig. 1.7).

These patterns in general continued in 2021. However, the different impacts of the COVID-19 pandemic in individual income groups has influenced the gaps in HALE to various degrees compared with high-income countries. Lower mortality due to COVID-19 and other COVID-19 pandemic-related outcomes in high-income countries accounted for the HALE lead of 0.25 years and 0.32 years, respectively, compared with low-income countries; 1.39 and 0.47 years, respectively, compared with lower-middle-income countries; and 0.21 and 0.14 years, respectively, compared with upper-middle-income countries (Fig. 1.8).

**Figure 1.8 Leading contributing causes for the difference in healthy life expectancy (HALE) in 2021 between high-income and other income groups, by cause and age group**

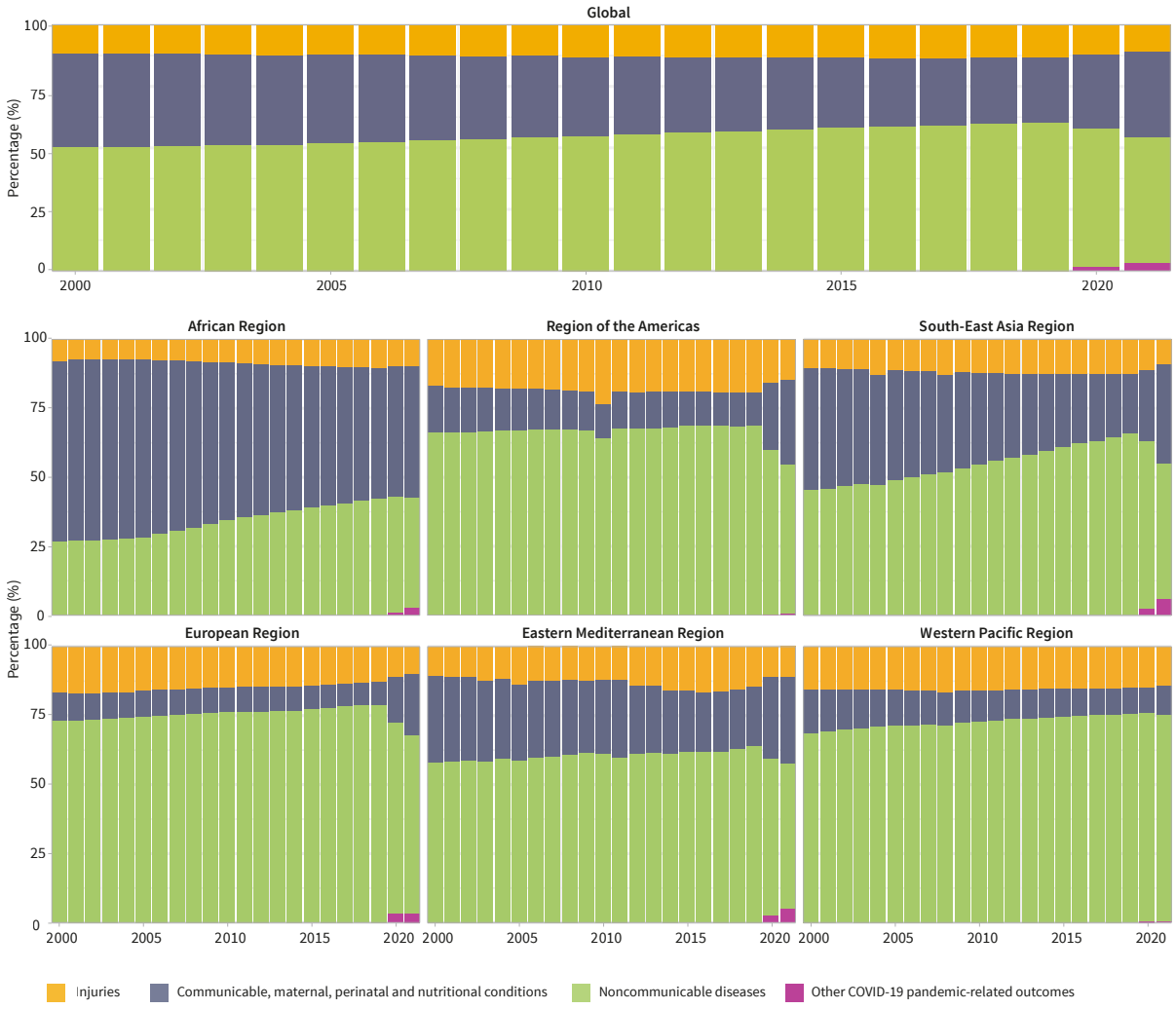



*Source*: WHO *(1)*.

# 1.5 Progress in premature mortality reduction

Deaths occurring before the age of 70 years are considered premature and the majority of these deaths are preventable. Taking into account of the changing population structure over time and its difference across regions, the age-standardized death rate (ASR) for ages under 70 years was in steady decline from 2000 until the start of the COVID-19 pandemic in 2019, both globally and at regional level. It is evident that before the COVID-19 pandemic, NCDs were making up an increasing share of the ASRs of all deaths under age of 70 years across all WHO regions, while the share of communicable diseases was in decline (Fig. 1.9). In 2019, the African Region had the highest ASR of all deaths under age of 70 years (665 per 100 000 population) among all WHO regions, over 80% higher than the global average (366 per 100 000 population) and nearly triple that of the Western Pacific Region (233 per 100 000), the region with the lowest ASRs. The African Region also had the largest share of communicable diseases in the overall ASR under age of 70 years in 2019, at 47.4%, some 5.5 times of that in the European Region (8.6%), which had the lowest share (Fig. 1.9).

**Figure 1.9 Composition of causes of death in the age-standardized death rates for ages under 70 years, by WHO region, 2000–2021**




*Source*: WHO *(1)*.

The probability of dying before the age of 70 years is another important indicator for overall population health with a focus on mortality. Premature mortality had been in decline globally and in all WHO regions, from 2000 to the onset of the COVID-19 pandemic. Globally, a newborn had about 40.4% chance of dying before reaching the age of 70 years in 2000, declining to 29.9% in 2019. Health disparities associated with geography and income are also significant. Africa, the WHO region with the highest premature mortality in 2019, had a probability (46.3%) of dying before the age of 70 years that was double that of the European Region (23.2%) and the Western Pacific region (21.5%), which had the lowest probability. Similarly, the probability in low-income countries (46.8%) was also more than double that of high-income countries (19.8%).

The COVID-19 pandemic has had a marked impact on global health, with global premature mortality increasing by 15.0% between 2019 (29.9%) and 2021 (34.3%). The pandemic impacts were unequal across WHO regions and World Bank income groups. The mortality toll due to COVID-19 was heaviest in relative terms in the Region of the Americas and the South-East Asia Region, where premature mortality increased by 28.9% and 23.7%, respectively. In contrast, the pandemic had a limited impact in the African Region and the Western Pacific Region, where premature mortality increased by just 5.7% and 2.0%, respectively, between 2019 and 2021. By World Bank income groups, the premature mortality in low-income countries increased modestly, by just 5%, during the first two years of the pandemic, while all other income groups experienced a 14.3–17.8% increase.

Despite the overall progress pre-pandemic, stagnation was seen after 2015. The global annual rate of reduction (ARR) in premature mortality was just 1.1% between 2015 and 2019, down from 1.7% during 2000–2015. Among WHO regions, the Region of the Americas and the South-East Asia Region experienced the greatest slowdown, with ARR halving between 2015 and 2019 compared with 2000–2015. The Eastern Mediterranean Region was the only region where some acceleration was seen in 2015–2019, while the progress in the African Region slowed only slightly and the region continued to have the most rapid rate of decline in premature mortality, followed by the European Region. Similarly, progress slowed in 2015–2019 across all World Bank income groups, with low-income countries seeing the smallest relative reduction in ARR and remaining the group with the fastest declining premature mortality.

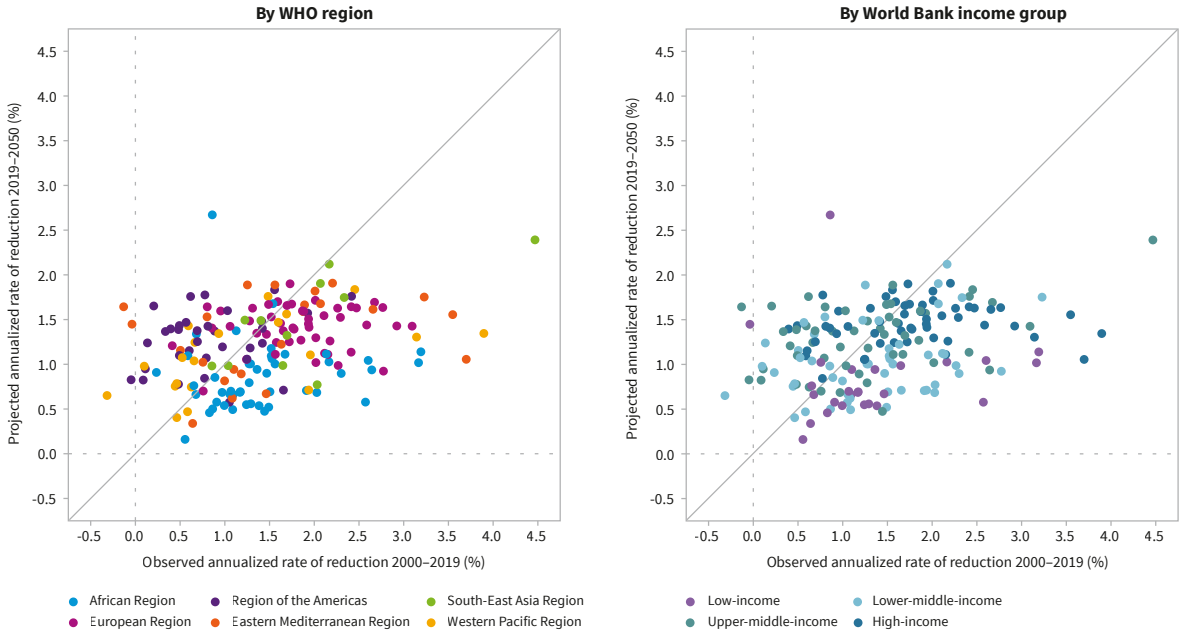
### 1.5.1 The prospect of premature mortality by 2050

Using the WHO mortality estimates in 2019 as the baseline and incorporating the projected age–sex-specific mortality trends by country from the United Nations *World population prospects 2024 (13)*, it is anticipated that the reduction in premature mortality during the three decades between 2019 and 2050 would be moderate compared with the observed progress in 2000–2019. Globally, the probability of dying before the age of 70 years is projected to decline by 24.2% between 2019 and 2050, with reductions ranging from 20.2% in the African Region and 24.5% in the Eastern Mediterranean Region to 33.9% in the Western Pacific region and 35.4% in the South-East Asia Region. This represents a global slowdown, given it had taken one fewer decade to achieve a slightly larger reduction (26.1%) in 2000–2019, equivalent to an estimated ARR of 1.6%, compared with only a projected 0.9% in 2019–2050. Overall, only about one third of countries are projected to have accelerated progress in 2019–2050 compared with 2000–2019. This would largely occur in the Region of the Americas and the Western Pacific Region, where at least half of the countries (76% and 52%, respectively) would see an acceleration (Fig. 1.10). Upper-middle-income countries are the only World Bank income group where more than half (52%) of the countries are projected to see accelerated progress in 2019–2050, while only four (or 15%) of the low-income countries will achieve this (Fig. 1.10).

The Region of the Americas is the only WHO region that is expected to see some accelerated progress, with a projected ARR at 1.2% in 2019–2050, up from 0.9% in 2000–2019. While the ARR in the South-East Asia Region is expected to be largely stable, the other four regions are all expected to see considerable deceleration, with ARR dropping by up to 60% in the African Region. Slowed progress is projected for all World Bank income groups. Although a one-third reduction in premature mortality is expected in both upper-middle-income and high-income countries in 2019–2050, the ARRs are considerably lower than that in 2000–2019 (down by 31.4% and 19.5%, respectively). The ARR in low-income countries is expected to be more than halved the level in 2000–2019, leading to only about a one-fifth reduction in premature mortality in 2019–2050.

Should the global community wish to halve premature mortality by 2050 *(14)*, considerable acceleration would be needed in reducing mortality rates in those aged 0–69 years in the next three decades. The global decline would have to be 1.4 times the observed rate in 2000–2019 to cut the premature mortality in 2019 by half by mid-century. The required regional rate of acceleration relative to the ARR in 2000–2019 would range from 1.1 times in the European Region and the Western Pacific region to 2.4 times in the Region of the Americas, and from 1.2 times in upper-middle-income countries to 1.6 times in lower-middle-income countries. Allowing the mortality trends to continue as projected without interventions would shift a heavier burden of acceleration for meeting the target to future years. At the projected ARR for 2019–2050, a minimum of 2.5 times acceleration is required to halve premature mortality by 2050 globally, and a minimum of about a threefold acceleration in the African Region and low-income countries.

**Figure 1.10 Annual rate of reduction in probability of death under 70 years of age, observed (2000–2019) versus projected (2019–2050)**




*Source*: WHO *(1)*.

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[1] Unless otherwise stated, all references accessed on 5 May 2025.

# 2. Health-related Sustainable Development Goals

This chapter presents the latest available evidence of trends in health-related SDG indicators, assessing progress towards achieving the global targets. The topics covered in this chapter include child mortality, cause-specific mortality, infectious diseases, risk factors for health, and UHC and health systems.

# 2.1 Mortality-related Sustainable Development Goal indicators

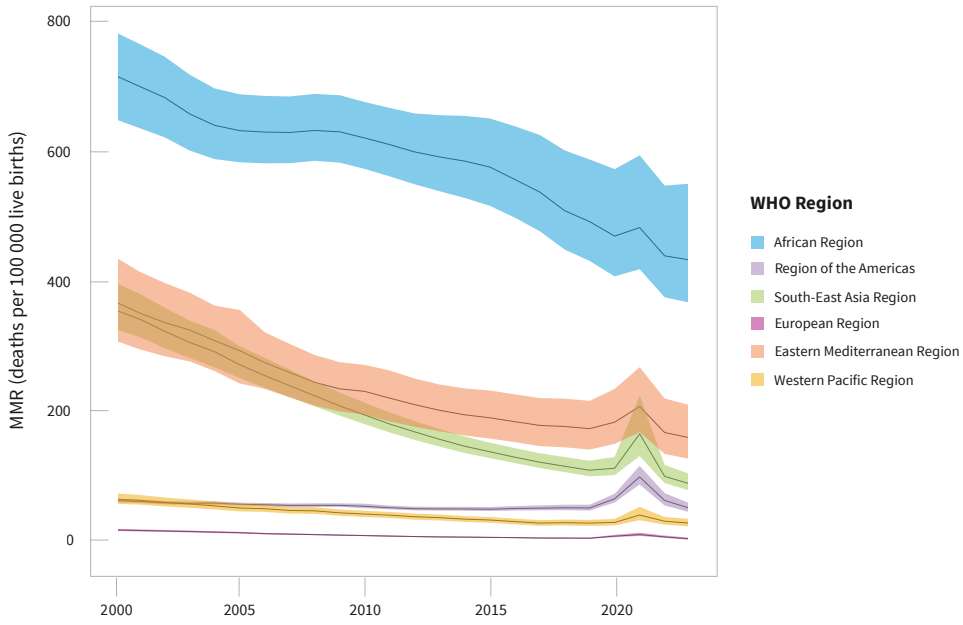
## 2.1.1 Maternal and child mortality

### Maternal mortality

Globally, an estimated 260 000 (uncertainty interval [UI]: 230 000–309 000) women died in 2023 due to maternal conditions, equivalent to an overall maternal mortality ratio (MMR; SDG indicator 3.1.1) of 197 (UI: 174–234) maternal deaths per 100 000 live births. This represents a decline in the global MMR by 40% since 2000, when the rate was 328 (UI: 308–352) per 100 000 live births. Between 2000 and 2023, the average ARR in global MMR was 2.2% (UI: 1.4–2.8%). This led to a significant fall in the number of maternal deaths globally, from 444 000 in 2000 to 260 000 in 2023. A closer examination of the first eight years of the SDG era, between the beginning of 2016 and the end of 2023, reveals that the global MMR declined by 10%, from an estimated 220 (UI: 203–242) maternal deaths per 100 000 live births, at a global average ARR of 1.6% (UI: 0.04–2.7%) *(1)*. If this ARR were to continue until 2030, the global MMR would be 177 in 2030 – two and a half times the SDG target (below 70) *(1,2)*. Achieving the SDG target will require an average ARR of 14.8% over the remaining seven years (2024–2030). This represents an unprecedented challenge and would be equivalent to almost 700 000 deaths averted between 2024 and 2030, compared with a scenario where the 2016–2023 global ARR continues.

MMR declined in all WHO regions between 2000 and 2023. The greatest decline was achieved in the South-East Asia Region, where MMR declined by 73.6%, from 365 (UI: 336–407) in 2000 to 96 (UI: 86–112) maternal deaths per 100 000 live births in 2023 (Fig. 2.1). This equates to an average ARR of 5.8% (UI: 5.1–6.5%). MMR also declined by 56.0% in the Eastern Mediterranean Region, 55.2% in the European Region, 51.2% in the Western Pacific Region, and 39.6% in the African Region between 2000 and 2023. The smallest percentage reduction in MMR was in the Region of the Americas at 16.9%, equivalent to an ARR of 0.8% (UI: 0.2–1.3%).

**Figure 2.1 Estimates of maternal mortality ratio (per 100 000 live births) 2000–2023, by WHO region**




*Source*: WHO et al. *(1)*.

In 2023, the African Region had a high MMR of 442 (UI: 376–560) per 100 000 live births and alone accounted for approximately 70% of global maternal deaths in 2023. The Eastern Mediterranean and South-East Asia Regions each accounted for about 12% of global maternal deaths, with MMRs of 167 (UI: 135–218) and 96 (UI: 86–112), respectively. The MMR was also low in the Region of the Americas, at 59 (UI: 52–66), and the Western Pacific Region, at 35 (UI: 30–42). The European Region had a very low MMR in 2023, at 11 (UI: 10–13) (Fig. 2.1) *(1)*.

## Under-five mortality

Child survival has improved remarkably since 2000, with the global under-five mortality rate (U5MR; SDG indicator 3.2.1) declining by more than half (52%) in the last two decades, from 77 (UI: 76–78) deaths per 1000 live births in 2000 to 37 (UI: 35–41) deaths per 1000 live births in 2023 (Fig. 2.2). Accordingly, the number of global under-five deaths fell to 4.8 million (UI: 4.5–5.3 million) in 2023, a number that is still unacceptably high, despite accounting for less than half of the under-five deaths in 2000 (10.1 million [UI: 9.9–10.2 million]) and almost two thirds less than the estimated 13 million (UI: 12.8–13.2 million) in 1990 *(3)*.

Although the progress is noteworthy at global level, stark inequalities persist across regions and income levels. The WHO African Region remains the region with the highest U5MR, estimated at 67 (UI: 60–80) deaths per 1000 live births in 2023 (Fig. 2.2). The African Region alone accounted for 55% (2.6 million [UI: 2.4–3.1 million]) of the global deaths of children under age 5 in 2023. In 2023, the U5MR in low-income countries (LICs) (62 [UI: 56–75] deaths per 1000 live births) and lower-middle-income countries (LMICs) (43 [UI: 39–50] deaths per 1000 live births) was, respectively, 13 and 9 times the rate in high-income countries (HICs) (5 [UI: 5–5] deaths per 1000 live births) *(3)*.

Globally, infectious diseases, including acute respiratory infections, malaria and diarrhoea, along with pre-term birth complications, birth asphyxia and trauma, and congenital anomalies remain the leading causes of death for children aged under 5. Access to basic lifesaving interventions such as skilled delivery at birth, quality postnatal care, early and continued breastfeeding and adequate nutrition, immunization and treatment for common childhood diseases can save many young lives *(3)*.

**Figure 2.2 Child mortality rate (per 1000 live births), by WHO region, 1990, 2000 and 2023**


*Source*: UN IGME *(3)*.

## Neonatal mortality

The number of deaths occurring in the first 28 days of life (the newborn period) declined from 4.2 million (UI: 4.0–4.3 million) in 2000 to 2.3 million (UI: 2.1–2.6 million) in 2023. However, the 45% decline in the neonatal mortality rate (NMR; SDG indicator 3.2.2) from 2000 (31 [UI: 30–32] deaths per 1000 live births) to 2023 (17 [UI: 16–19] deaths per 1000 live births), has been slower compared with the 58% decline in the mortality rate of children aged 1–59 months (from 47 [UI: 47–48] deaths per 1000 children aged 28 days in 2000 to 20 [UI: 18–23] deaths per 1000 children aged 28 days in 2023) (Fig. 2.2). This has led to a larger share of global newborn deaths among total under-five deaths, up from 41% in 2000 to 48% in 2023 *(3)*.

The chances of survival through the first 28 days of life vary depending on where a child is born. The African Region had the highest regional NMR in 2023, at 26 (UI: 23–31) deaths per 1000 live births, followed by the Eastern Mediterranean Region with 24 (UI: 21–29) deaths per 1000 live births. The South-East Asia Region had the highest regional NMR in 1990 at 53 (UI: 51–55) deaths per 1000 live births (Fig. 2.2), but has experienced a sharp decline with a ARR of 3.6% (UI: 3.2–4.0%) double that of the African Region (1.7% [UI: 1.1–2.0%]) in 1990–2023. Country-level NMR in 2023 ranged from 0.6 to 40.2 deaths per 1000 live births and the risk of dying before the 28th day of life for a child born in the highest-mortality country was approximately 65 times higher than the lowest-mortality country *(3)*.

## Meeting the SDG targets for child survival

If current trends continue, 60 countries will not meet the SDG target for under-five mortality. Of these, 47 countries will need to more than double their current rate of progress or reverse an increasing trend and then accelerate progress to achieve the SDG target by 2030. Even more countries are at risk of missing the SDG target for neonatal mortality. A total of 65 countries will need to accelerate the mortality decline to meet the target on time, with 59 of those countries needing to more than double their current rate of decline or reverse an increasing trend to meet the target by 2030. Reaching this target in all countries will avert 8 million under-5 deaths between 2024 and 2030, some 42% of which would be among neonates *(3)*.

# 2.1.2 Mortality due to noncommunicable diseases

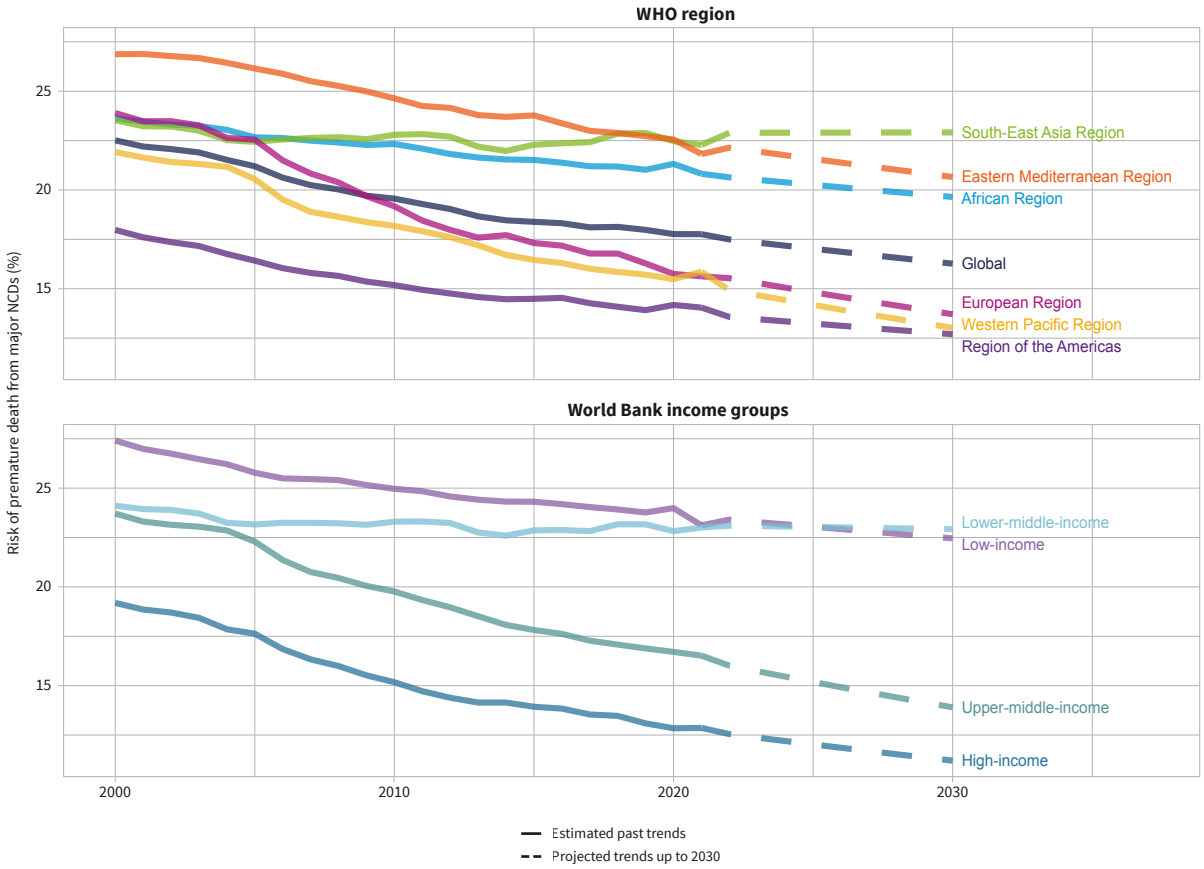
Globally, in 2021, some 18 million people under the age of 70 years died from an NCD, accounting for over half of deaths in that age group. The risk of premature death from NCD, which is measured by SDG indicator 3.4.1, is the unconditional probability of dying from any of the four main NCDs (cardiovascular disease, cancer, diabetes or chronic respiratory disease) between the ages of 30 and 70 years *(2)*. It is estimated that, in 2000, a 30-year-old had a 22.5% chance of dying from one of the four main NCDs before the age of 70 years. This risk fell to 18.4% in 2015 and further to 18.0% in 2019, just prior to the onset of the COVID-19 pandemic *(4)*. The reliability of the estimated risk during 2020–2021 was potentially affected by disruptions associated with the COVID-19 pandemic as countries' ability to monitor trends in NCD mortality was compromised and may have resulted in misclassification of NCD deaths. Where reliable data are available, the risk of premature death from an NCD plateaued during this period.

The observed pre-pandemic trend translates to an ARR of 1.3% between 2000 and 2015 and 0.5% between 2015 and 2019, indicating a remarkable deceleration in progress. With the required ARR to meet the one-third reduction in premature NCD mortality standing at 2.7%, the pre-pandemic progress since 2015 was equivalent to just one fifth of what is needed to meet the target and calls for coordinated action to prevent and treat NCDs.

The level and pace of progress vary by WHO region. The Eastern Mediterranean Region faced the highest risk of premature NCD mortality in 2000 (26.9%), which progressively declined to 22.7% in 2019, at a level that was only lower than the South-East Asia Region (22.9%) that year. Despite the higher risk compared to most other regions, the Eastern Mediterranean Region is the only region where some acceleration of progress was observed during the SDG era (ARR at 1.2% in 2015–2019 compared with 0.8% in 2000–2015). In contrast, the South-East Asia Region saw overall stagnation in 2000–2019, with a slight uptick in risk between 2015 and 2019. The African Region (23.6% in 2000) experienced a moderate but steady decline, with an ARR at about 0.6% in 2000–2019 and reaching a premature NCD mortality of 21.0% in 2019. The European (23.9% in 2000) and Western Pacific (21.9% in 2000) Regions saw the fastest decline among all regions during both 2000–2015 (ARRs at 2.2% and 1.9%, respectively) and 2015–2019 (ARRs at 1.5% and 1.2%, respectively), reaching premature NCD mortality of 16.3% and 15.7%, respectively, in 2019. The Region of the Americas had the lowest risk of NCD premature mortality in 2000 (18.0%) and remained the lowest in 2019 (13.9%), although the pace of progress slowed, with an ARR at 1.4% in 2000–2015 and 1.1% in 2015–2019.

Based on these results, it is evident that neither the world nor any one region is on track to meet the target of reducing the risk for premature NCD mortality by one third by 2030. The South-East Asia Region, where premature NCD mortality has remained high since 2000, is at greatest risk of missing the target (Fig. 2.3).

**Figure 2.3 Observed and projected trends for risk of premature mortality from NCDs (%), by WHO region**




*Source*: WHO *(4)*.

## 2.1.3 Mortality due to injuries

### Road injury

In 2021, an estimated 1.18 million (UI: 1.05–1.32 million) people died due to road injuries globally (SDG indicator 3.6.1). The greatest burden was observed in South-East Asia Region, with around 318 000 (UI: 283 000–358 000) deaths, or 28% of the global burden, and the Western Pacific Region with almost 296 000 (UI: 276 000–316 000) deaths, or 25% of the global burden. Together, these regions account for more than half of the global road traffic deaths. These are followed by the African Region (229 000 [UI: 185 000–274 000] deaths); the Region of the Americas (146 000 (UI: 135 000–158 000) deaths); the Eastern Mediterranean Region (128 000 [UI: 108 000–145 000] deaths); and the European Region (64 000 [UI: 58 000–68 000] deaths) *(4,5)*.

The African Region had the highest crude death rate (CDR) in 2021 (19.5 [UI: 15.7–23.4] per 100 000 population). This was nearly three times that of the European Region, which had the lowest rate of 6.8 (UI: 6.2–7.3) per 100 000 population (Fig. 2.4). By World Bank income levels, the highest death rate from road injuries was observed in LICs, at 21.1 (UI: 16.8–25.2) per 100 000 population, while the lowest was in HICs, at 8.1 (UI: 7.5–8.6) per 100 000 population. Disparity between sexes was also evident. Males were at elevated risk of dying from road injuries compared with females. Globally, the male-to-female ratio of CDRs from road injuries was 3.0, ranging from 2.3 in the African Region to above 3.5 in the South-East Asia Region and the Region of the Americas *(4)*.

Road fatalities declined by 5.5% from 2010–2021, falling from 1.25 million (UI: 1.11–1.39 million) deaths in 2010 *(4)*. This is equivalent to a decline from 17.9 (UI: 15.7–19.9) deaths per 100 000 population to 14.9 (UI: 13.2–16.6) deaths per 100 000 population, and is in spite of the growth in global population and number of vehicles. This indicates that while efforts to enhance road safety are making progress, they remain insufficient to achieve the United Nations Decade of Action for Road Safety 2021–2030 goal of reducing deaths and injuries by half by 2030 *(6)*. There was also a universal decline in the CDRs across all regions in the period. The slowest progress was seen in the Region of the Americas, although rates still declined by 8.9%, from 15.6 (UI: 14.5–16.7) per 100 000 population in 2010 to 14.2 (UI: 13.1–15.4) per 100 000 population in 2021.

## Suicide

An estimated 727 000 people died from suicide globally in 2021, corresponding to a crude suicide mortality rates (CDR; SDG indicator 3.4.2) of 9.2 (UI: 6.9–11.6) per 100 000 population. The rate in males (12.4 (UI: 9.6–15.4) per 100 000) was more than double that in females (5.9 (UI: 4.2–7.7) per 100 000). The highest male-to-female ratio was found in the European Region (3.4) and the Region of the Americas (3.7), while the lowest was in the South-East Asia Region (1.4) *(4)*.

Crude suicide mortality rates and their change over time exhibited wide variations across WHO regions. The European Region had the highest rate among all regions in 2000 (21.5 [UI: 19.9–23.0] per 100 000 population), but has seen rapid decline, with the rate falling by over two fifths, to 12.4 (UI: 10.3–14.4) per 100 000 population in 2021. A rapid decline was also seen in the Western Pacific Region, where the rate in 2000 (14.7 [UI: 10.1–16.9] per 100 000 population) fell by 35% to 9.5 (UI: 7.1–12.3) per 100 000 population in 2021. However, a slight increase was seen in the African Region, where the CDR from suicide in 2021 (7.3 [UI: 4.5–10.7] per 100 000 population) was about 5% higher than in 2000 (6.9 [UI: 4.5–10.0] per 100 000). The Region of the Americas has seen a concerning trend, with the rate increasing by nearly 30% from 7.6 (UI: 7.1–8.3) per 100 000 population in 2000 to 9.9 (UI: 8.9–11.0) per 100 000 population in 2021. The South-East Asia Region had the second highest rate after the European Region in 2021 (10.1 [UI: 7.4–12.6] per 100 000), yet experienced a 20.4% decline from the rate in 2000 (12.7 [UI: 9.4–15.1] per 100 000). The Eastern Mediterranean Region continued to have the lowest rate throughout the period, with a 24.3% decline from 4.7 (UI: 2.7–7.4) per 100 000 population in 2000 to 3.6 (UI: 2.0–5.9) per 100 000 population in 2021 (Fig. 2.4) *(4)*.

## Homicide

Nearly 484 000 (UI: 360 000–648 000) people were victims of intentional homicide (defined as the unlawful death inflicted upon a person with the intent to cause death or serious injury) in 2021. Despite having a slight increase from 480 000 (UI: 400 000–578 000) in 2000, this corresponded to a decline in CDR of 27.1%, from 7.8 (UI: 6.5–9.4) per 100 000 population (SDG indicator 16.1.1) in 2000 to 6.1 (UI: 4.5–8.2) per 100 000 population in 2021 (Fig. 2.4). About 80% of the victims were men *(4)*.

The WHO Region of the Americas had the highest mortality burden from homicide in 2021, with a total of 198 000 (UI: 169 000–232 000) deaths, equivalent to a CDR of 19.3 (UI: 16.4–22.6) per 100 000 population – triple the global average. This region accounted for 40.9% of the total global homicide deaths but only 12.9% of the global population. In contrast, the Western Pacific Region accounted for about a quarter of the global population, but only 6.1% of global homicide deaths, with a CDR (1.5 (UI: 1.1–2.1) per 100 000 population) that was 8% of that in the Region of the Americas. The African Region had the second highest CDR in homicide mortality in 2021, with a CDR that was only half of that in the Region of the Americas, at 9.7 (UI: 5.9–15.0) per 100 000 population, accounting for 114 000 deaths. Compared with the Region of the Americas and the African Region, the CDR of homicide was also relatively low in the European, South-East Asia and Eastern Mediterranean Regions, at 2.6 (UI: 2.1–3.3) per 100 000 population, 3.7 (UI: 2.7–4.9) per 100 000 population and 5.4 (UI: 3.2–8.5) per 100 000 population, respectively (Fig. 2.4) *(4)*.

Men face disproportionately higher risk of homicide deaths than women and the sex disparity was unevenly distributed across WHO regions. Globally, the male-to-female ratio for CDR for homicide mortality in 2021 was 4.0, ranging from 2.9 in the European Region to 7.7 in the Region of the Americas. A strong age pattern was also observed, with young adults aged 20–29 years having the highest age-specific mortality rate, peaking at over 12 deaths per 100 000 population globally and up to nearly 40 deaths per 100 000 population in the Region of the Americas *(4)*.

## Unintentional poisoning

Globally, about 59 000 (UI: 32 000–91 000) people died from unintentional poisoning in 2021, a decline of approximately 4600 from 2000 (64 000 [UI: 47 000–92 000]). This represents a decline of a quarter from a CDR of 1.0 (UI: 0.8–1.5) to 0.7 (UI: 0.4–1.1) per 100 000 population (SDG indicator 3.9.3). The highest CDRs in 2021 were observed in the WHO African Region, at 1.2 (UI: 0.7–2.1) per 100 000 population, closely followed by the Western Pacific Region at just under 1.2 (UI: 0.5–1.7)

per 100 000 population. The greatest decline in CDR was achieved in the European Region, with a decline of nearly two thirds between 2000 and 2021, followed by the South-East Asia and Eastern Mediterranean Regions, with a 36% and 30% decline, respectively. However, the rate stagnated in the African Region and a slight increase was seen in the Region of the Americas and the Western Pacific Region (Fig. 2.4) *(4)*.

Sex and age disparities were observed. Men are at higher risk of dying from unintentional poisoning. Men died at a rate 67% higher than women in 2021, primarily due to occupational hazards and higher rates of risky behaviours. The Region of the Americas and the European Region saw the highest male-to-female ratios, at 2.2 and 2.6 respectively, whereas the lowest ratio was in the African Region, at 1.4. Additionally, the youngest and oldest populations were at the highest risk of dying from unintentional poisoning, with those aged under 5 years and 65 years and older accounting for just 18% of the global population but 38% of the global deaths from unintentional poisoning in 2021 *(4)*.

**Figure 2.4 Crude death rates for injuries (per 100 000 population), by type, sex and WHO region, 2000 and 2021**


AFR: African Region; AMR; Region of the Americas; SEAR: South-East Asia Region; EUR: European Region; EMR: Eastern Mediterranean Region; WPR: Western Pacific Region.

*Source*: WHO *(4)*.

## 2.1.4 Mortality attributable to environmental risk factors

### Air pollution mortality

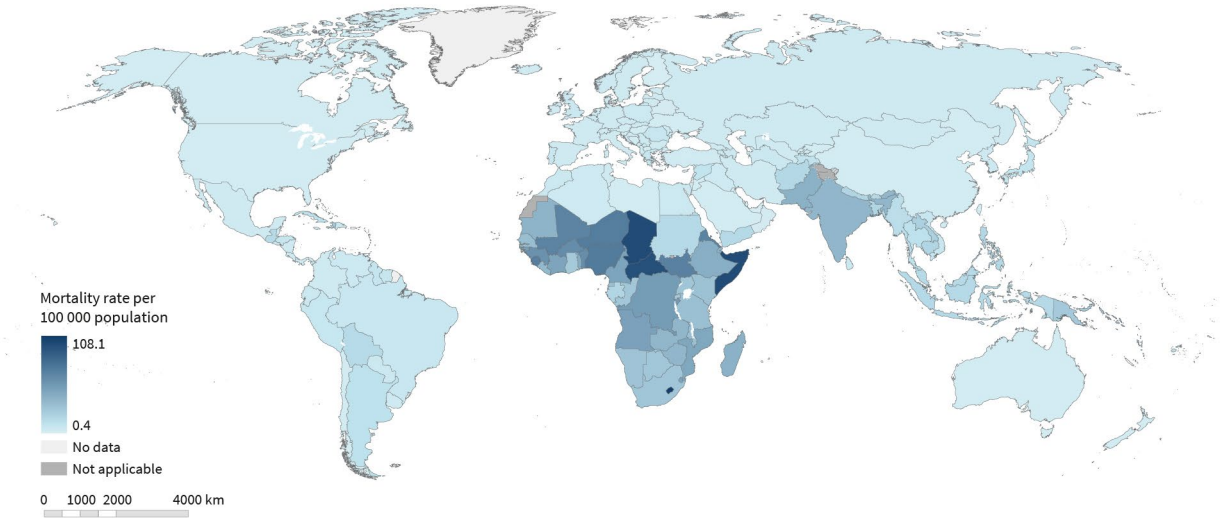
Almost the entire global population is exposed to outdoor (ambient) air pollution in both cities and rural areas and more than a quarter (2.4 billion) is exposed to dangerous levels of household air pollution. Exposure to air pollution increases the risk for many negative health outcomes *(7)*. Five health outcomes – acute lower respiratory infections, lung cancer, cerebrovascular diseases, ischemic heart disease and chronic obstructive pulmonary disease – are currently included in SDG indicator 3.9.1 on mortality attributed to air pollution from particulate matter. In 2019, an estimated 6.7 million deaths worldwide were attributable to indoor and outdoor air pollution from particulate matter jointly – corresponding to an age-standardized mortality rate of 104 (UI: 81–130) deaths per 100 000 population *(8,9)*. People living in LICs and middle-income countries (MICs) disproportionately bear the burden of outdoor air pollution (see also section 2.3.3 subsection “Air pollution”).

## WASH mortality

Millions of people globally lack access to safe water, sanitation and hygiene (WASH) services and consequently suffer from or are exposed to a multitude of preventable illnesses.

Four health outcomes – diarrhoea, acute respiratory infections, undernutrition and soil-transmitted helminthiases – are included in the SDG indicator 3.9.2 on mortality attributed to unsafe WASH. It is estimated that 1.4 million deaths in 2019 were attributable to unsafe WASH services, of which the vast majority were attributable to diarrhoea (73.9%) and acute respiratory infections (25.4%) *(10)*. The global WASH-attributable mortality rate was 18.3 deaths per 100 000 population, ranging from 3.7 in HICs up to 41.7 in LICs *(10)*. Among the six WHO regions, the highest mortality rate was found in the African Region (46.7 per 100 000 population) and the South-East Asia Region (29.6 per 100 000 population) in 2019 *(11)*. These two regions alone accounted for 79% of the total global deaths due to unsafe WASH (Fig. 2.5).

**Figure 2.5 Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population), 2019**




*Source*: WHO *(10)*.

# 2.2 Infectious diseases

In the infectious disease section, the indicators on new HIV infections, tuberculosis and malaria incidence, hepatitis B and neglected tropical diseases are monitored towards progress within SDG target 3.3. In addition, this section also presents the status of AMR.

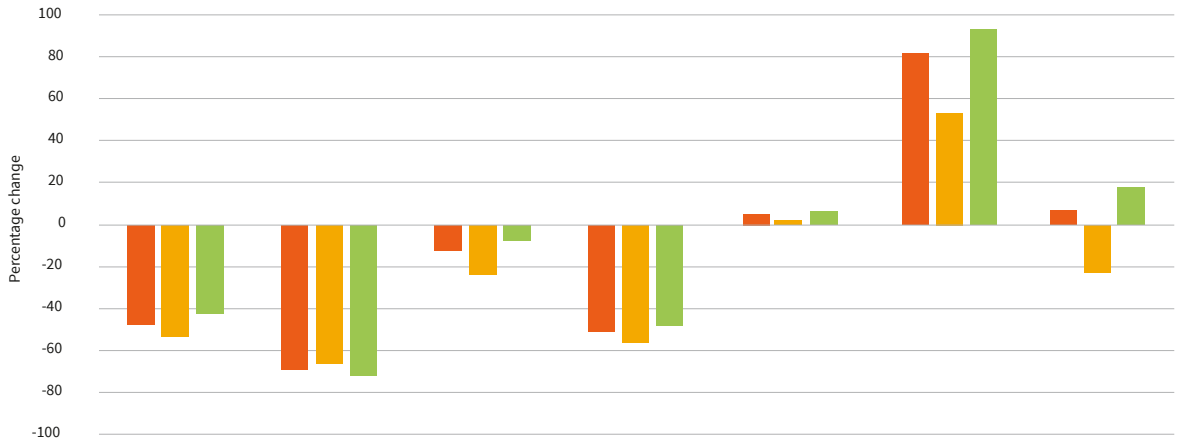
## 2.2.1 HIV

Globally, an estimated 39.9 million (UI: 36.1–44.6 million) people were living with HIV by the end of 2023, of which 30.7 million (UI: 27.0–31.9 million) were receiving lifesaving antiretroviral therapy *(12,13)*.

In 2023, an estimated 1.3 million (UI: 1.0–1.7 million) HIV infections occurred, down from 2.8 million (UI: 2.3–3.6 million) in 2000 and 2.1 million (UI: 1.7–2.7 million) in 2010. Globally, the HIV incidence rate (number of new HIV infections per 1000 uninfected population, SDG indicator 3.3.1) was 0.17 (UI: 0.13–0.21) in 2023, a 48% reduction from 0.32 (UI: 0.25–0.40) in 2010. Regions show different levels of progress since 2010: An 81% increase in HIV incidence rate was observed in the Eastern Mediterranean Region, while it is notable that this region had the lowest number of new infections across all WHO regions in 2023. The South-East Asian and the African Regions recorded a 51% and 69% decrease in HIV incidence rate in the same time period, respectively, while the latter region continued to bear the heaviest HIV burden in 2023. Further disaggregation by sex show that the biggest reduction in HIV incidence rate between 2010 and 2023 was among males in the African Region (–72%) (Fig. 2.6) *(12,14,15)*.

The HIV pandemic and the global response has made progress over the past decade, with fewer people acquiring HIV in 2023 than at any point since the mid-1990s. However, the number of new infections in 2023 was still more than three times the 2025 target of 370 000 or fewer new infections. If this trend continues, the target of ending AIDS as a public health threat by 2030, which requires a 90% reduction in new infections against the 2010 baseline, will not be reached *(16)*.

**Figure 2.6 Percentage change in the number of new HIV infections per 1000 uninfected population, between 2010 and 2023, and HIV incidence rates, 2023, globally and by WHO region**




| HIV incidence rates, 2023 | Global | African Region | Region of the Americas | South-East Asia Region | European Region | Eastern Mediterranean Region | Western Pacific Region |
|---|---|---|---|---|---|---|---|
| Both sexes | 0.17 (0.13-0.21) | 0.55 (0.41-0.73) | 0.16 (0.13-0.20) | 0.06 (0.04-0.08) | 0.18 (0.15-0.21) | 0.09 (0.07-0.12) | 0.07 (0.07-0.08) |
| Females | 0.15 (0.11-0.19) | 0.68 (0.51-0.91) | 0.08 (0.06-0.10) | 0.04 (0.03-0.06) | 0.10 (0.09-0.12) | 0.04 (0.03-0.06) | 0.03 (0.02-0.03) |
| Males | 0.18 (0.15-0.23) | 0.41 (0.31-0.56) | 0.24 (0.20-0.31) | 0.07 (0.06-0.10) | 0.25 (0.21-0.30) | 0.13 (0.10-0.18) | 0.12 (0.11-0.13) |

Note: Percentage change in HIV incidence rate was calculated from unrounded incidence rates in the figure and the corresponding text.
*Source*: UNAIDS/WHO estimates, 2024 *(14,15)*.

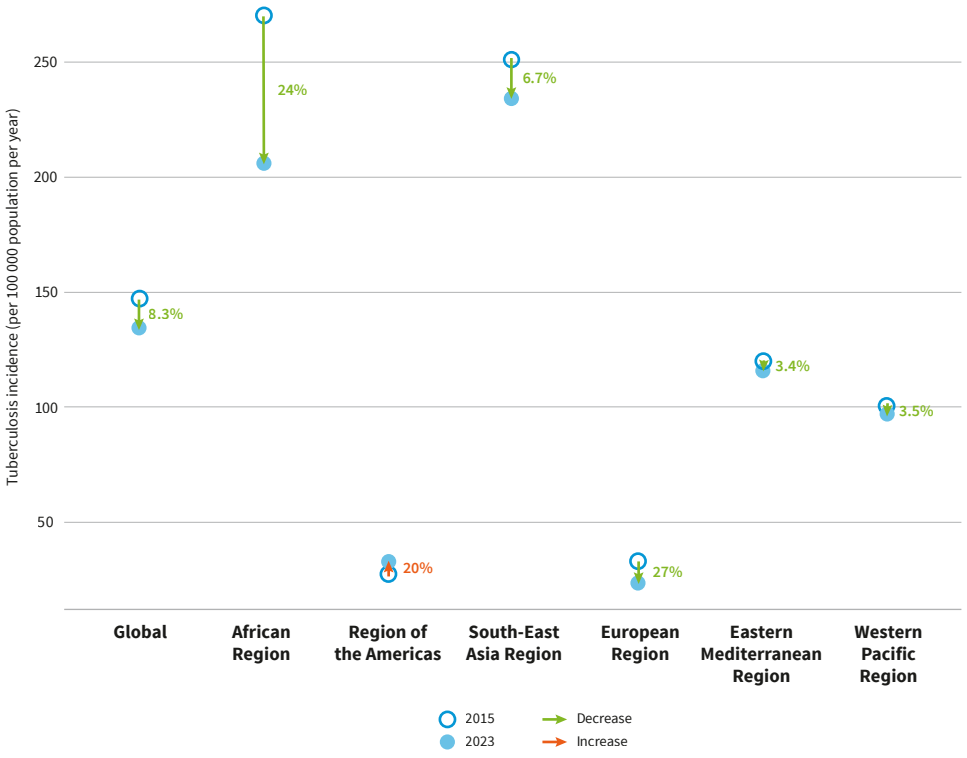
## 2.2.2 Tuberculosis

The global increase in new TB cases that has been observed since the start of the COVID-19 pandemic has slowed and is now stabilizing. In 2023, an estimated 10.8 million people (UI: 10.1–11.7 million) developed TB, a slight rise from 10.7 million (UI: 10.0–11.5 million) in 2022. However, this remains higher than the 10.4 million (UI: 9.7–11.1 million) cases in 2021 and 10.1 million (UI: 9.5–10.7 million) in 2020 *(18)*.

Among those affected who developed TB in 2023, some 55% were men, 33% were women and 12% were children and young adolescents aged 0–14 years. Most of the people who develop TB disease each year are in 30 high TB burden countries, accounting for 87% of the global total in 2023 *(18)*.

The global TB incidence rate (SDG indicator 3.3.2) in 2023 was 134 (UI: 125–145) per 100 000 population, similar to the rate in 2022, and an increase from 129 (UI: 121–136) per 100 000 population in 2020. The net reduction between 2015 and 2023 was 8.3%, falling short of the WHO End TB Strategy target of an 80% reduction by 2030 *(17,18)*. The African and European regions showed the most progress, with decreases of 24% and 27%, respectively (Fig. 2.7) *(18)*.

**Figure 2.7 Percentage change in tuberculosis incidence rate between 2015 and 2023, globally and by WHO region**




Note: Percentage change in TB incidence rate was calculated from unrounded incidence rates.
*Source*: Global tuberculosis report 2024 *(18)*.

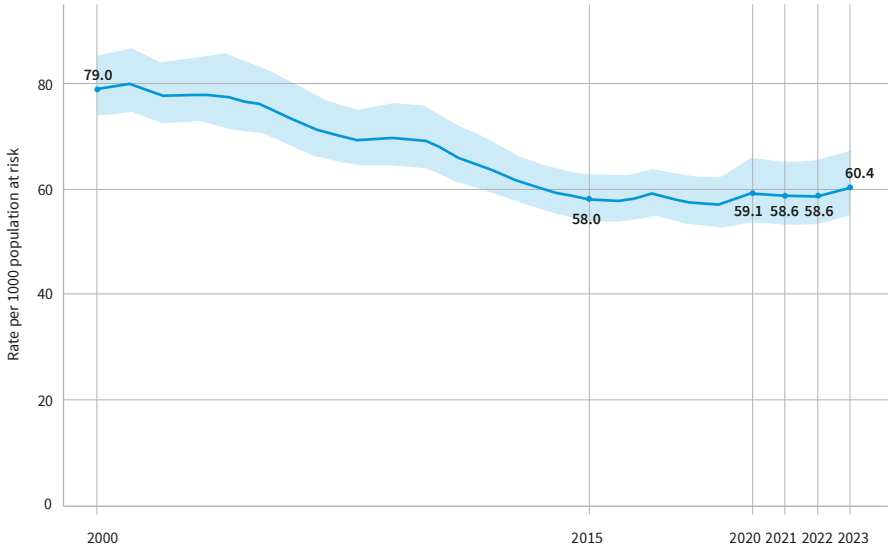
## 2.2.3 Malaria

In 2023, there were an estimated 263 million (UI: 238–294 million) malaria cases globally, an increase of 11 million cases from the previous year. The global incidence rate (SDG indicator 3.3.3) in 2023 was 60.4 (UI: 54.8–67.5) cases per 1000 population at risk, a rise from 58.6 (UI: 53.1–65.6) cases per 1000 population at risk in 2022, and a 4.1% increase from 58.0 (UI: 53.8–62.9) cases per 1000 population at risk in 2015 (Fig. 2.8). The WHO African Region continues to carry the heaviest burden of the disease, accounting for an estimated 94% of cases and 95% of deaths worldwide in 2023 *(19)*.

The Global technical strategy for malaria 2016–2030 (GTS) target for reducing malaria case incidence by 90% by 2030 from the 2015 baseline is unlikely to be achieved *(20)*. In 2023, global malaria incidence remained nearly three times higher than the level required to meet the target. However, the WHO South-East Asia Region is on track to meet the GTS 2030 target *(19)*.

Despite these challenges, some notable progress towards elimination has been made. The number of malaria-endemic countries declined from 85 in 2022 to 83 in 2023, as two countries maintained zero indigenous cases for three consecutive years. By 2024, a total of 26 countries that were endemic for malaria in 2000 have achieved this milestone *(19)*.

**Figure 2.8 Global incidence rate of malaria (per 1000 population at risk), 2000–2023**




*Source*: World malaria report 2024 *(19)*.

## 2.2.4 Hepatitis B

As a major public health challenge of this decade, viral hepatitis B and C lead to chronic disease for hundreds of millions of people and can both cause deaths from liver cirrhosis and liver cancer.

Globally, 1.3 million people died from viral hepatitis-related causes in 2022, including 1.1 million deaths attributed to hepatitis B alone. This represents an increase of deaths attributed to chronic hepatitis B from the 820 000 in 2019. The Western Pacific Region bears the greatest mortality burden, with 518 000 deaths (or 47.1 of the global total) related to hepatitis B *(21)*. Rapid scale-up of treatment is therefore critical to prevent deaths among people living with chronic hepatitis B. Without this expansion in access, the world will face increasing cases of liver cancer in the next generation, with associated increasing care costs and hepatitis-related deaths.

In 2022, an estimated 254 million people were living with hepatitis B globally. About 5% of the general population in the WHO African Region and Western Pacific Region are living with hepatitis B. Children under the age of five are at risk of vertical (mother-to-child) transmission of hepatitis B, notably in settings with high hepatitis B prevalence. Notably, the African Region is the only region where the hepatitis B prevalence among children younger than five years (SDG indicator 3.3.4) exceeded 1% and yet only 17% of newborns in the Region receive the hepatitis B birth dose vaccination *(22)*.

Global new infections of viral hepatitis dropped from 3.0 million in 2019 to 2.2 million in 2022, including 1.2 million newly infected with hepatitis B. The African Region accounted for 63% (or 771 000) of all new hepatitis B infections globally in 2022. This underscores the importance of a focus on scaling up access to viral hepatitis services in Africa, including the hepatitis B birth-dose vaccination, expansion of hepatitis B treatment in the general population and specifically among pregnant women as recently recommended in the 2024 WHO guidelines on people with chronic hepatitis B infection *(23)*.

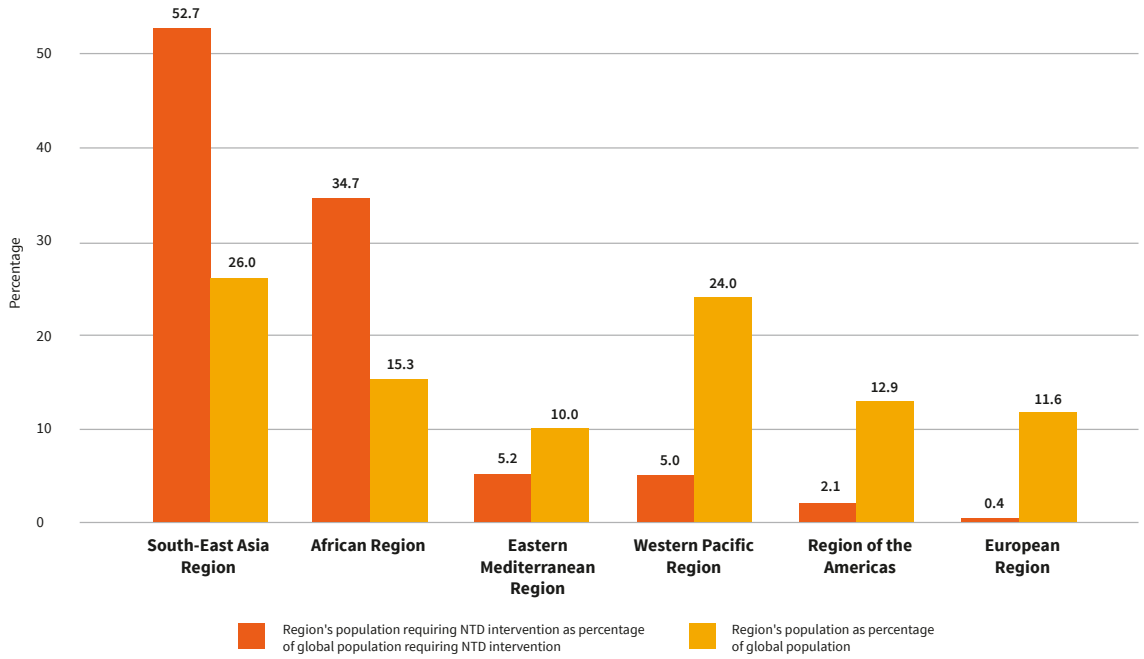
## 2.2.5 Neglected tropical diseases

Neglected tropical diseases (NTDs) are a diverse group of conditions with complex epidemiology.[1] They affect some of the world's most vulnerable people, including those living in remote or impoverished communities, creating NTD-related generational cycles of poverty. Addressing the burden of NTDs can break this cycle and contribute to the health, social and economic well-being of entire communities. Globally, in 2023, 1.495 billion people required interventions against NTDs (SDG indicator 3.3.5), about 122 million people fewer than in 2022. The 2023 number represents a 32% decrease from 2010, falling short of the global target of 90% reduction by 2030. The South-East Asia Region and the African Region, home to 41% of the global population, continue to disproportionately bear the highest burden of NTDs, accounting for 87% of the global number of people needing interventions in 2023 (Fig. 2.9) *(24,25)*.

As of December 2024, 54 countries, areas and territories worldwide have eliminated at least one NTD, as acknowledged by WHO. This is still only about halfway towards the global target of at least 100 countries eliminating at least one NTD by 2030 *(24,25)*.

This slow progress reflects the challenges of addressing NTDs on a global scale. Massive efforts, including through innovative solutions, are needed to accelerate progress in the global fight against NTDs, especially in the context of uncertain and evolving health, political and financial landscapes.

**Figure 2.9 Share of people requiring interventions against NTDs and share of population out of global total, by WHO region, 2023**




Note: The regions are shown in descending order of the number of people requiring interventions against NTDs.
*Source*: Global Health Observatory *(24)*.

[1] NTDs include: Buruli ulcer; Chagas disease; dengue and chikungunya; dracunculiasis; echinococcosis; foodborne trematodiases; human African trypanosomiasis; leishmaniasis; leprosy; lymphatic filariasis; mycetoma, chromoblastomycosis and other deep mycoses; noma; onchocerciasis; rabies; scabies and other ectoparasitoses; schistosomiasis; soil-transmitted helminthiases; snakebite envenoming; taeniasis/cysticercosis; trachoma; and yaws.

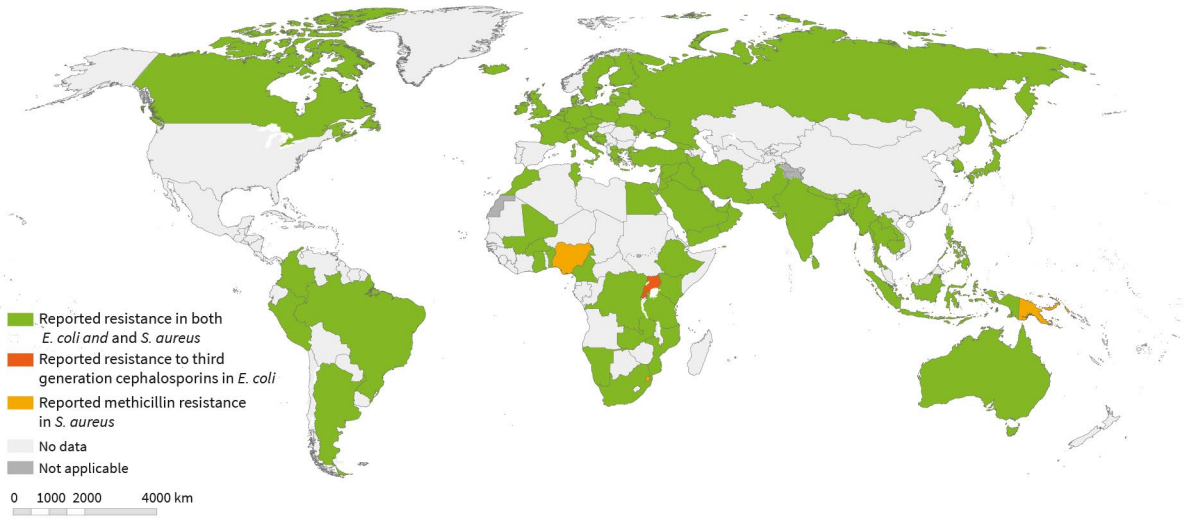
## 2.2.6 Antimicrobial resistance

SDG indicator 3.d.2 monitors the proportion of bloodstream infections caused by antimicrobial-resistant organisms, specifically Escherichia coli resistant to third-generation cephalosporins and methicillin-resistant Staphylococcus aureus (MRSA). In 2022, median resistance proportions were 45.5% (interquartile range [IQR]: 18.2–70.6) for E. coli and 32.2% (IQR: 12.5–54.6) for MRSA, up from 26.9% (IQR: 11.1–42.4) and 13.4% (IQR: 3.6–36.7) in 2016 *(27)*.

These figures should be interpreted with caution due to changes in countries reporting data, with progressively more data collected from resource-limited settings over time. In 2016, only 16 countries reported data on E. coli resistance and 15 on MRSA, compared to 85 and 86 countries, respectively, in 2022 (Fig. 2.10). Many LICs and MICs have limited testing coverage, often restricted to tertiary hospitals and research facilities, where patients are more likely to have received multiple antibiotics, leading to higher and potentially biased resistance rates. Countries with better testing coverage reported much lower resistance proportions in 2022: 11.4% (IQR: 9.4–16.4) for E. coli and 8.5% (IQR: 3.3–27.9) for MRSA, based on median resistance from 21 and 22 countries with testing coverage above the 75th percentile, respectively *(27)*. The 2024 WHO Bacterial Priority Pathogen List *(26)* classifies E. coli resistant to third-generation cephalosporins as a critical priority due to increasing trends, while MRSA is considered as high priority based on its prevalence and impact in health-care settings, and decreasing trends.

Current global AMR data reflect the challenges of early-stage surveillance systems. Strengthening these systems, particularly in LICs and MICs, is essential for improving data accuracy and representativeness to inform interventions to prevent and reduce AMR. The Global Antimicrobial Resistance and Use Surveillance System (GLASS) dashboard *(27)* provides more information on the current AMR situation in the human health sector.

**Figure 2.10 Countries reporting bloodstream infections caused by *Escherichia coli* resistant to third-generation cephalosporins and methicillin-resistant *Staphylococcus aureus* in 2022**




*Source*: Data from GLASS dashboard *(27)*.

# 2.3 Risk factors for health

A risk factor for health is any attribute, characteristic or exposure of an individual that increases their likelihood of developing a disease or injury. This section presents progress towards achieving the SDG targets related to nutritional, behavioural and environmental risk factors that may affect individual and population health.

## 2.3.1 Nutritional risk factors

Multisectoral factors affect the nutritional status of individuals and populations. Mitigating the risks of malnutrition – manifested as undernutrition (wasting, stunting, underweight), micronutrient-related conditions, overweight and obesity – requires multifaceted approaches through nutrition-specific (e.g. food, diet) and nutrition-sensitive strategies (e.g. WASH, education, gender). In fact, undernutrition and food safety are inextricably linked and comprise the essential components of a healthy and sustainable food system. The following sections present the latest available estimates for the global SDG indicators for stunting, wasting and overweight among children under 5 years of age, and anaemia in women aged 15–49 years.

### Child malnutrition

The indicators to monitor progress in reducing child malnutrition among children under 5 years of age include the prevalence of stunting (SDG indicator 2.2.1), and the prevalence of wasting and overweight (SDG indicator 2.2.2).

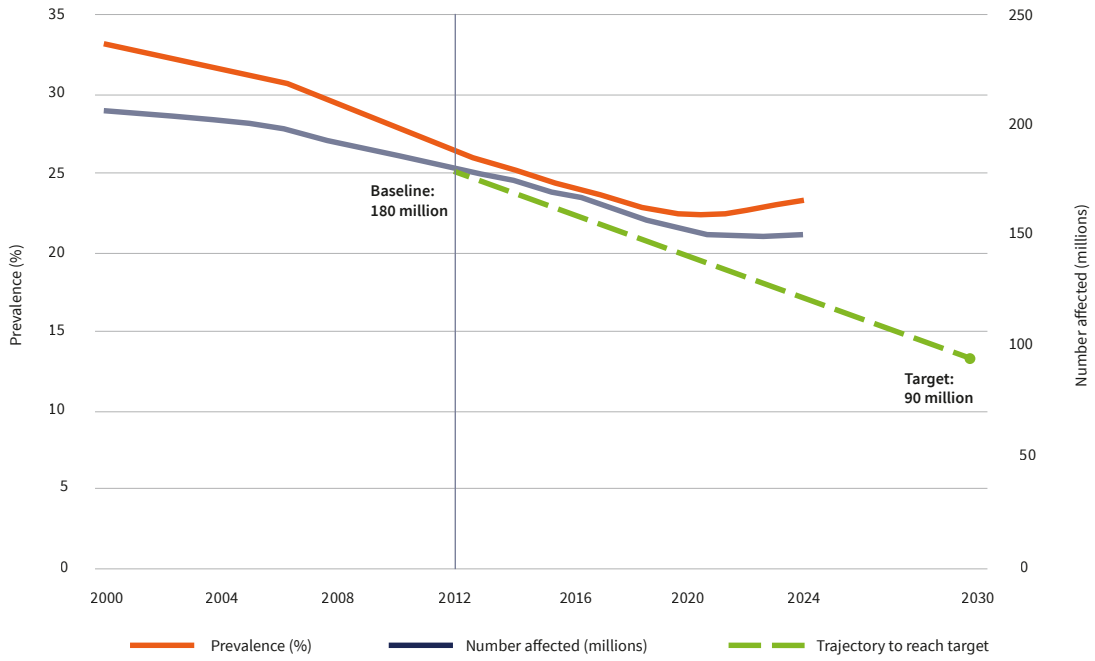
The global prevalence of stunting among children under 5 years of age had been steadily declining from 33.1% (UI: 32.7–33.5%) in 2000 to 22.4% (UI: 22.0–22.8%) in 2020 but had slightly increased since to reach 23.2% (UI: 22.6–23.8%) in 2024 (Fig. 2.11) *(28)*.

The number of children affected by stunting worldwide fell from 180 million in 2012 to 150 million in 2024 (Fig. 2.11) – a net reduction of 17% over the period *(28)*. This pace of reduction is insufficient to achieve the global target of halving the number of children affected by stunting by 2030 from the 2012 baseline *(28,29)*.

Similarly, the world is off track to reach the target of reducing the prevalence of wasting and overweight to less than 3% each by 2030 (Fig. 2.12) *(29)*. In 2024, the global prevalence of wasting among children under 5 years of age stood at 6.6% (UI: 5.3–8.1%), having declined by 11% since 2012, when the prevalence was 7.4% (UI: 6.3–8.7%) *(28)*.

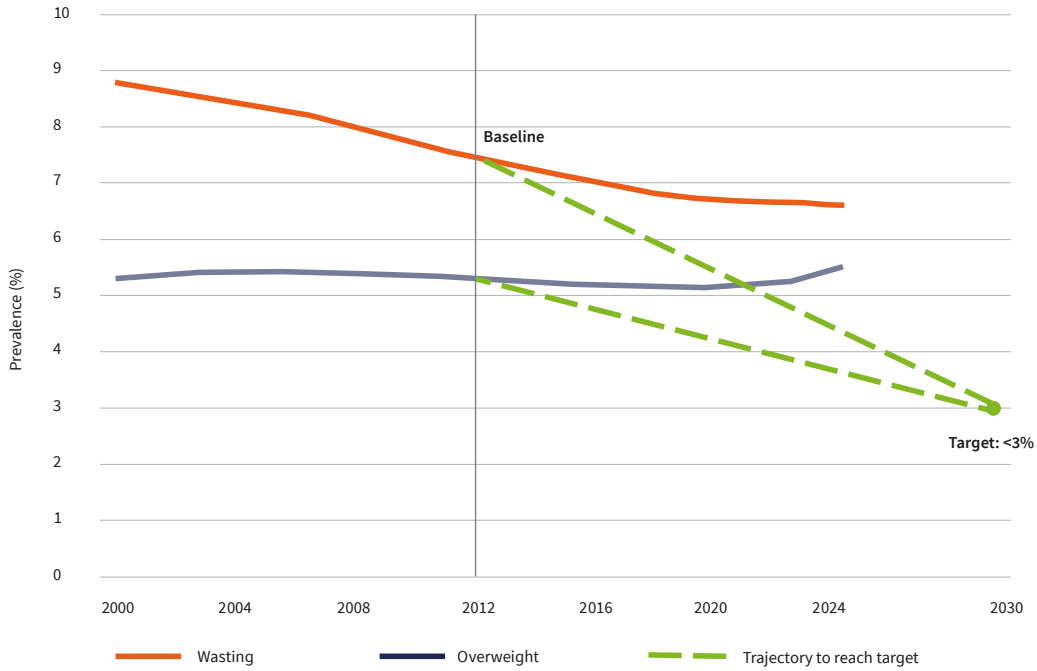
While there was a sign of slight decline in the global prevalence of overweight among children under 5 years of age in the 2010s, it has slightly increased again since 2020 to reach 5.5% (UI: 4.9–6.1%) in 2024. Between 2012 and 2024, there was a net increase of 3% in the global prevalence of overweight, necessitating a reversal of trend and an acceleration of progress to meet the 2030 target *(28)*.

## Figure 2.11 Global prevalence of stunting among children under 5 years of age, 2000–2024, and the 2030 target




*Source*: UNICEF/WHO/World Bank Group joint child malnutrition estimates, 2025 *(28)*.

## Figure 2.12 Global prevalence of wasting and overweight among children under 5 years of age, 2000–2024, and the 2030 target




*Source*: UNICEF/WHO/World Bank Group joint child malnutrition estimates, 2025 *(28)*.

## Anaemia among women

Anaemia is an important global health issue mainly affecting young children, menstruating girls and women, and pregnant and postpartum women. It can affect school performance and productivity in adult life leading to economic losses. During pregnancy, anaemia has been associated with poor maternal and birth outcomes.

The global prevalence of anaemia among all women 15–49 years of age (SDG indicator 2.2.3) declined marginally from 29.3% (UI: 26.4–32.4%) in 2000 to 27.6% (UI: 25.3–29.7%) in 2012 but slightly increased since to reach 30.7% (UI: 26.6–34.9%) in 2023 (Fig. 2.13). At this rate, the world is off track to meet the target of 50% reduction by 2030 (from a 2012 baseline) *(29,30)*.

Among pregnant women globally, the prevalence decreased from 40.3% (UI: 37.7–43.2%) in 2000 to 35.3% (UI: 33.3–37.3%) in 2012, however, it remained stagnant since. In 2023, the prevalence was 35.5% (UI: 32.1–39.1%). By contrast, prevalence among non-pregnant women only decreased slightly from 28.7% (UI: 25.7–31.9%) in 2000 to 27.1% (UI: 24.9–29.4%) in 2012 and increased to 30.5% (UI: 26.2–34.8%) in 2023.

Regional trends in the prevalence of anaemia among all women 15–49 years of age indicate a slight increase in all WHO regions since 2012 except in the Western Pacific Region, where it has remained unchanged (Fig. 2.13). The South-East Asia Region shows the highest level of anaemia since 2000. In 2023, anaemia affected almost half (46.4%, UI: 35.5–56.1%) of all women aged 15–49 years in the region.

## 2.3.2 Behavioural risk factors

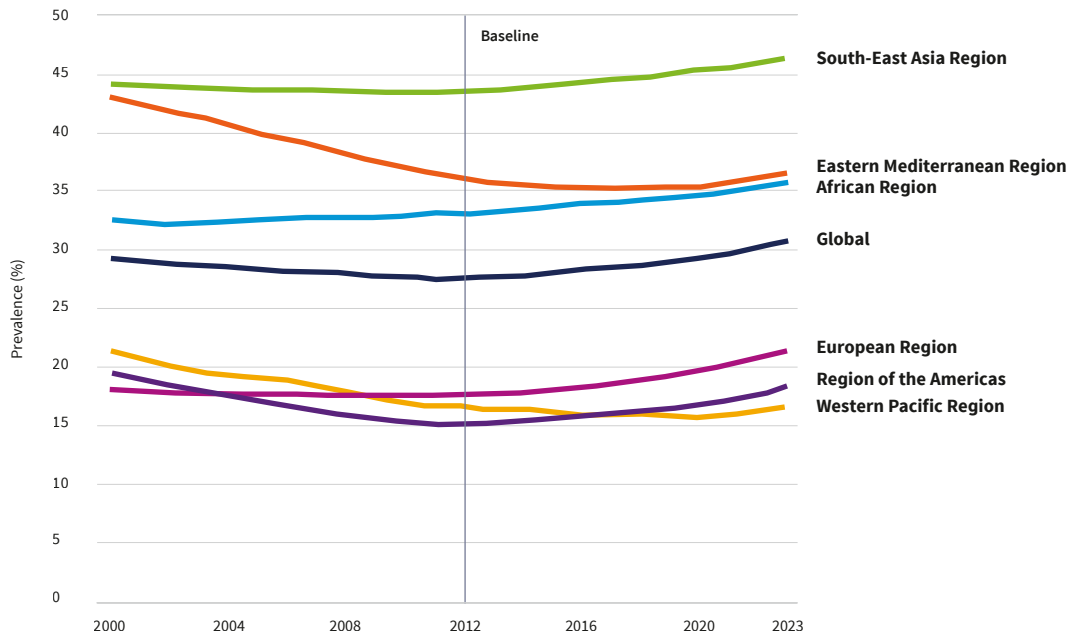
Among the established risk factors associated with NCDs are modifiable behaviours such as tobacco use, alcohol consumption, physical inactivity and unhealthy diet. This section summarizes the global progress towards the reduction of tobacco use and alcohol consumption.

### Tobacco use

Tobacco use is a major risk factor for cardiovascular and respiratory diseases, different types of cancer and many other debilitating health conditions. There is no safe level of exposure to tobacco, and all forms of tobacco are harmful.

In 2022, an estimated 1.25 billion persons aged 15 years and older globally were current tobacco users. This corresponds to an age-standardized prevalence (SDG indicator 3.a.1) of 20.9% (UI: 18.8–22.9%), a 21% relative decline from 26.4% in 2010. If this pace of decline is maintained, the global prevalence would be reduced by 25% by 2025, short of the 30% reduction target. Nevertheless, the African Region and the South-East Asia Region are currently on track to achieve the target, and other regions have also achieved reductions in average prevalence *(31,32)*.

**Figure 2.13 Trends in the prevalence of anaemia among women aged 15–49 years, globally and by WHO region, 2000–2023**




*Source*: WHO *(30)*.

Prevalence remained much higher among men than women globally. In 2022, there were four times as many male tobacco users as female users among those aged 15 years and older. The prevalence among female tobacco users fell by 34% between 2010 and 2022, exceeding even the 2025 global target. Among male users, prevalence has so far declined by only 17%. However, the fastest reduction among male tobacco users was seen in the "initiation ages" (age group 15–24 years), a 20% relative reduction since 2010, which bodes well for continuing reductions in prevalence of tobacco use among men in the future *(31)*.

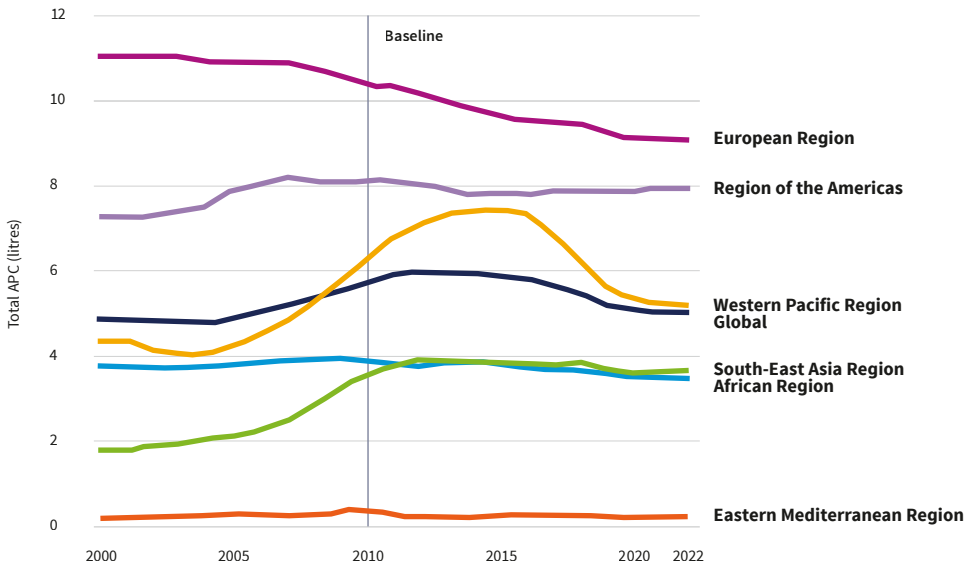
## Alcohol consumption

Drinking alcohol is associated with risks of developing NCDs such as liver diseases, cardiovascular diseases and different types of cancers, as well as mental health and behavioural conditions such as depression, anxiety and alcohol use disorders. Alcohol consumption also causes significant harm to others, as it can lead to injuries such as those caused by road traffic crashes. The Global alcohol action plan 2022–2030 includes a target of at least a 20% relative reduction in the harmful use of alcohol by 2030 (in comparison with 2010) *(33)*.

SDG indicator 3.5.2 is defined as total alcohol per capita consumption (APC) in persons aged 15 years and older within a calendar year, measured in litres of pure alcohol. Globally, the total APC declined by 12% from 5.7 litres (UI: 5.4–6.2) in 2010 to 5.0 litres (UI: 4.7–5.4) in 2022. If this rate of reduction is maintained, the global total APC will reach 4.6 litres in 2030, reaching the 20% reduction target. This is remarkable progress, especially given that in the early 2010s the global total APC was increasing, continuing the upward trend since 2000s, driven mainly by the rise in total APC in the South-East Asia Region and the Western Pacific Region (Fig. 2.14) *(34)*.

The South-East Asia Region has curbed the rise and the APC level in 2022 had returned to its 2010 level. The Western Pacific Region has reversed the trend and is now on track to reach 20% reduction in APC by 2030. The Eastern Mediterranean Region has remained the region with the lowest APC across all regions. The European Region continues to have the highest total APC, although it has declined by 12% since 2010 (Fig. 2.14) *(34)*.

**Figure 2.14 Trends in total alcohol consumption per capita (APC), globally and by WHO region, 2000–2022**




*Source*: WHO *(34)*.

## 2.3.3 Environmental risk factors

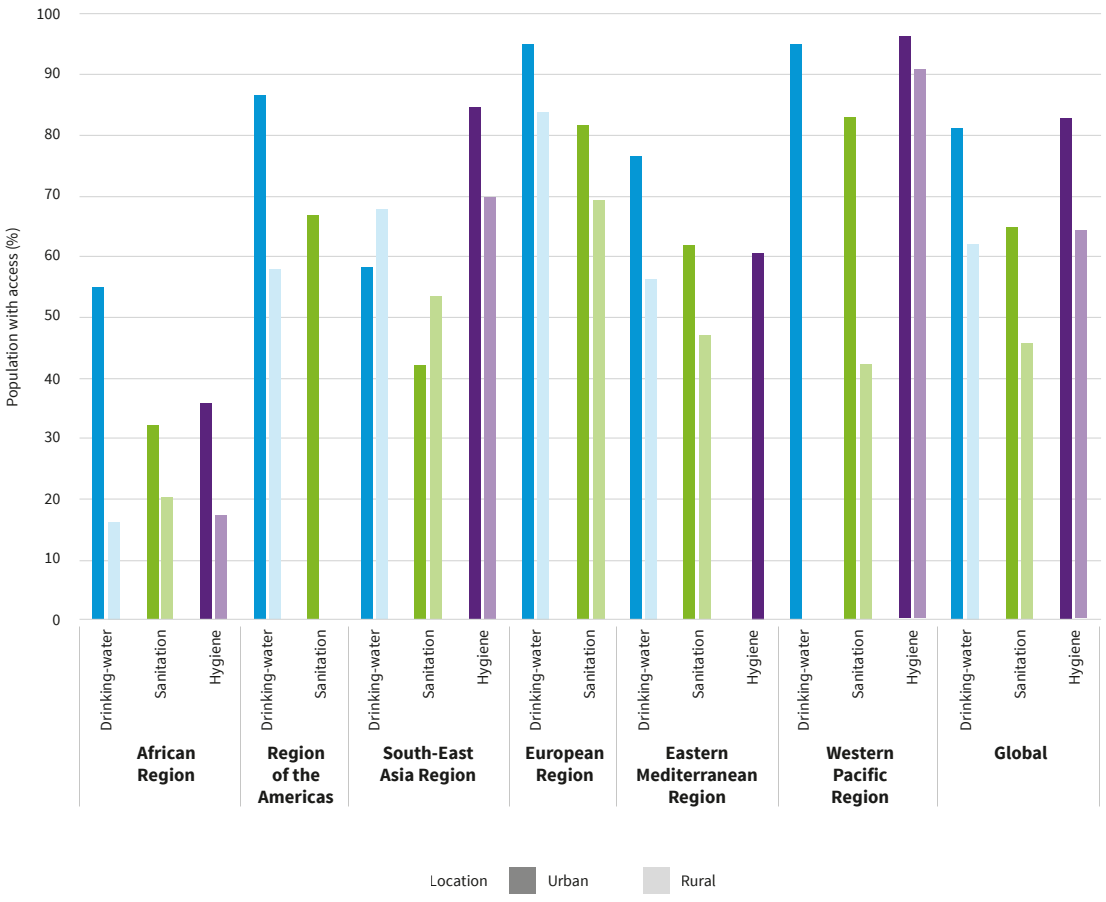
### Water, sanitation and hygiene

Safe drinking water, sanitation and hygiene (WASH) is crucial to human health and well-being. Contaminated water and poor sanitation are linked to transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio.

The global coverage of safely managed drinking water (SDG indicator 6.1.1) increased from 69% in 2015 to 73% in 2022. During the same period, the global coverage of safely managed sanitation (SDG indicator 6.2.1) rose from 49% to 57% and that of basic hygiene services (SDG indicator 6.2.1) increased from 67% to 75%. Despite this progress, if current trends continue the world will not achieve universal coverage of safe WASH by 2030 *(35)*.

Globally, and in all WHO regions with aggregate data for 2022, coverage of safe WASH is higher in urban areas than in rural areas, except in the South-East Asia Region, where the coverage of both safely managed drinking water and safely managed sanitation was higher in rural areas (Fig. 2.15) *(35)*.

**Figure 2.15 Coverage of safe WASH by location, globally and by WHO region, 2022**




Note: Absence of bar for some services and locations means no aggregate statistics are available for 2022.
*Source*: UNICEF and WHO *(35)*.

SDG indicator 6.3.1 monitors the proportion of total, domestic and industrial wastewater flows that are safely treated. Many countries, however, are at an early stage of developing wastewater monitoring systems and there is currently a lack of reporting, especially from industrial sources. Among the 73 countries (representing 42% of the global population) reporting volumes of total wastewater generated and treated, 76% of total wastewater flows received some level of treatment in 2022. Among the 42 countries (representing 12% of global population) reporting the type of treatment, 60% of total wastewater flows was "safely" treated (i.e. had at least secondary treatment, or treatment complying with relevant standards) *(36)*. An estimated 56% of household wastewater was safely treated in 2024, based on data from 142 countries and areas (representing 88% of all household wastewater flows and 84% of the global population) *(37)*. While current data are insufficient to accurately assess progress since the start of the SDG era (mainly due to the lack of baseline data for 2015), data availability has greatly improved. Still, there is little evidence of improvements in the proportion of wastewater that is safely treated globally since global reporting began in 2021.

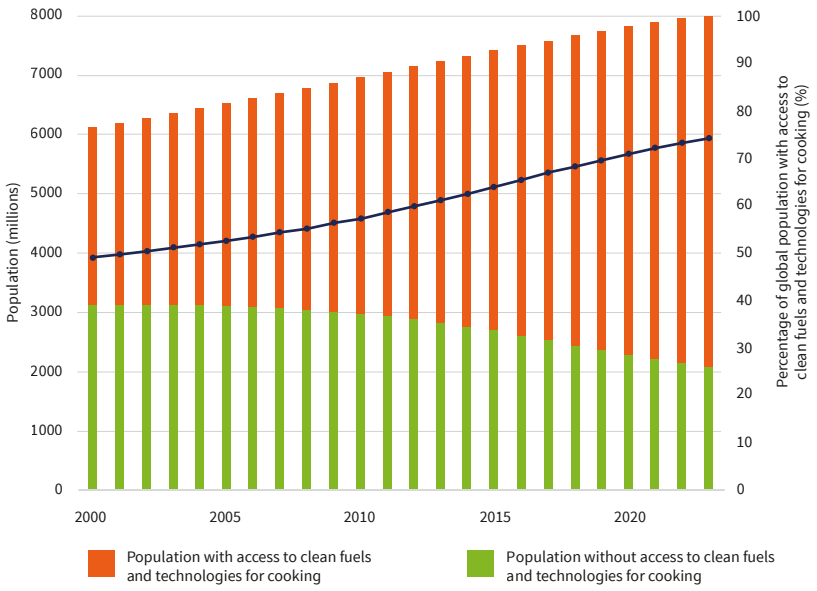
Official development assistance (ODA) disbursements to the water sector (SDG indicator 6.a.1) declined slightly from US$ 8.9 billion in 2022 to US$ 8.7 billion in 2023, however they remained higher than disbursements in 2020 and 2021, which had the lowest levels since the start of the SDGs in 2015. ODA commitments to the water sector decreased more substantially, from US$ 11.4 billion in 2022 to US$ 10.2 billion in 2023 *(38)*.

## Air pollution

Air pollution, both indoor and outdoor (ambient), poses major risks to health. The main pathway of exposure to air pollution is through the respiratory tract. However, the effects on health extend beyond respiratory diseases, as some air pollutants can penetrate the bloodstream via the lungs and circulate throughout the entire body leading to systemic inflammation and carcinogenicity.

Simple stoves paired with charcoal, coal, crop waste, dung, kerosene or wood are an important source of household air pollution. The latest estimates reveal that 2.1 billion (UI: 1.9–2.5 billion) people worldwide were still relying on these polluting cooking fuels and technologies in 2023 – equivalent to slightly over a quarter (26%, UI: 23–30%) of the global population. The proportion of the global population with primary reliance on clean cooking fuels and technologies had increased from 49% (UI: 45–53%) in 2000 to 64% (UI: 60–68%) in 2015 and 74% (UI: 70–77%) in 2023 (Fig. 2.16) *(39)*. Under current trends, the world will miss the target of universal access by 2030.

**Figure 2.16 Global trends in the access to clean cooking fuels and technologies, 2000–2023**




*Source*: WHO *(39)*.

In terms of ambient air pollution, SDG indicator 11.6.2 tracks the annual average concentration of fine particulate matter in urban areas. Globally, air quality levels for particulate matter are still more than six times the recommended level for protecting public health according to the WHO air quality guidelines, which is set at the annual mean of 5 µg/m³. Nearly all populations in HICs, LICs and MICs are exposed to unsafe levels of air pollution. However, the proportion of population in LICs and MICs exposed to levels above the interim target 4 (annual mean of 10 µg/m³) is twice that in HICs, at 93.5% and 47.1%, respectively. The proportion of population in LICs and MICs exposed to levels exceeding interim target 1 (annual mean of 35 µg/m³) is over 10 times that in HICs (42.0% and 3.7%, respectively). In addition, people living in LICs and MICs are less likely to have air quality standards that can protect them. The recent publication of the WHO air quality standard database shows that only 32% of LICs and MICs (17 countries) have annual fine particulate matter (PM2.5) standards while 76% of HICs (44 countries) have such protective standards *(40)*.

## 2.3.4 Risks to girls' and women's health

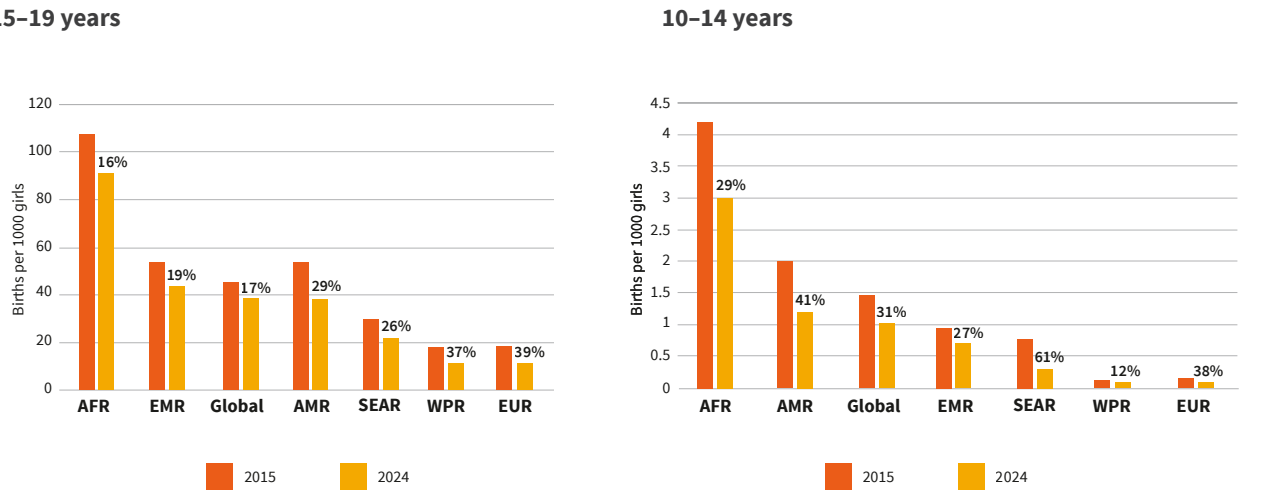
### Adolescent pregnancy

Adolescent pregnancy is a worldwide issue with significant health, social and economic impacts. Teenage mothers aged 10–19 years face higher risks of eclampsia, puerperal endometritis and systemic infections than women aged 20–24 years, and babies of teenage mothers face higher risks of low birth weight, preterm birth and severe neonatal conditions.

The global adolescent birth rate (ABR; SDG indicator 3.7.2) among girls aged 15–19 years declined by 17%, from 45.9 births per 1000 girls in 2015 to 38.3 births per 1000 girls in 2024. The global ABR among girls aged 10–14 years fell at almost double the rate, with a 31% decline from 1.5 births per 1000 girls in 2015 to 1.0 birth per 1000 girls in 2024. While this decline is encouraging, there were still far too many births among adolescent mothers in 2024, accounting for about 9.4% of all births globally *(41)*.

Progress is uneven among regions (Fig. 2.17), as well as among and within countries. The African Region continued to have the highest ABR in both adolescent age groups (10–14 years and 15–19 years). In 2024, the ABR among girls aged 15–19 years was 90.5 births per 1000 girls, over eight times that of the region with the lowest ABR, the Western Pacific Region. The gaps in ABR among girls aged 10–14 years were even larger: at 3.0 births per 1000 girls, it was 35 times that of the regions with the lowest ABR, the European Region. By region and age group, the biggest relative reduction in ABR occurred in the South-East Asia Region, where ABR among girls aged 10–14 years fell by 61%, from 0.8 births per 1000 girls in 2015 to 0.3 births per 1000 girls in 2024 *(41)*.

**Figure 2.17 Adolescent birth rate, globally and by WHO region, 2015–2024**




AFR: African Region; AMR; Region of the Americas; EMR: Eastern Mediterranean Region; EUR: European region; SEAR: South-East Asia Region; WPR: Western Pacific Region.

Note: The regions are shown in descending order of the adolescent birth rate (ABR) in 2024. Values shown above the 2024 bars denote the relative reduction of ABRs between 2015 and 2024.

*Source*: World population prospects 2024 *(41)*.

### Violence against women

Violence against women and girls – particularly intimate partner violence (IPV) and sexual violence – is a violation of human rights and a major public health problem. Such violence often has devastating impacts on the lives and well-being of the victims, as well as their children and families.

According to the latest available global estimates, in 2018 over a quarter (26%, UI: 22–30%) of ever-partnered women aged 15 years or older had experienced IPV at least once in their lifetime (SDG indicator 5.2.1) and 10% (UI: 8–12%) in the past 12 months *(42)*. There has been insufficient progress in reducing IPV against women and girls since 2000 *(43)*.

In 2018, an estimated 6% (UI: 4–9%) of all women globally had been subjected to non-partner sexual violence in their lifetime since the age of 15 (SDG indicator 5.2.2). The true prevalence is likely to be much higher *(42)*.

Population-based surveys which record survivors' responses provide the best information to measure prevalence of IPV and sexual violence. However, even such surveys often have limitations, such as variations in case definitions and recall periods, stigma and repercussions associated with the disclosure of violence against women, and limited data collection from women aged 50 years and older.

# 2.4 Universal health coverage and health systems

Universal health coverage aims to ensure that all individuals and communities have access to the quality health services they need without suffering financial hardship. When more people have access to affordable quality health services, it leads to better overall public health and living standards, including, but not limited to, improved life expectancy, lower rates of preventable diseases and lower rates of poverty due to medical costs.

## 2.4.1 Service delivery

To achieve UHC and improve health outcomes, health systems need strong service delivery mechanisms that ensure comprehensive service coverage, a capable health workforce and adherence to international health regulations (IHRs) to address both routine and emergency health needs.

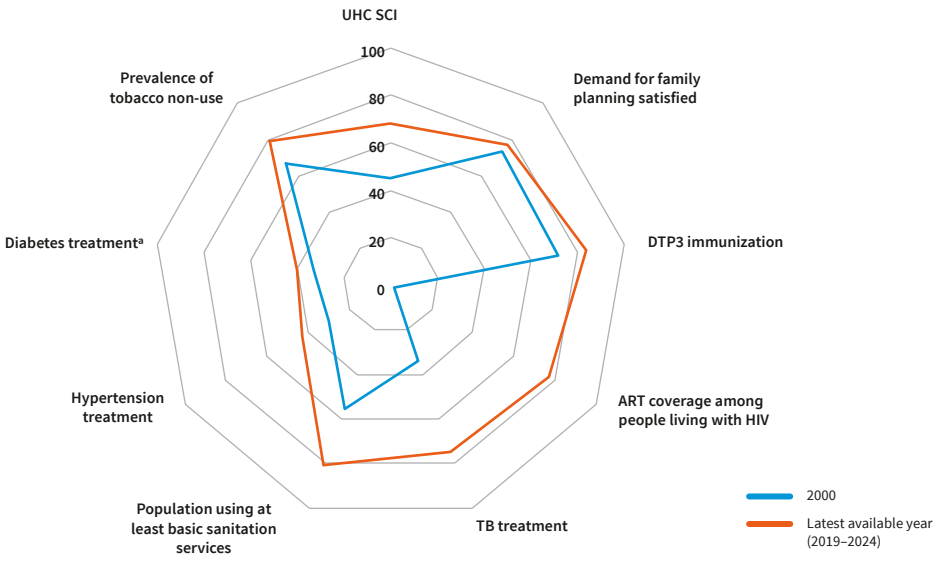
### Service coverage

While gains in UHC service coverage index (UHC SCI; SDG indicator 3.8.1) have been observed globally over the past two decades, progress has slowed in recent years *(44)*. The UHC SCI is composed of 14 tracer indicators selected as a manageable subset to represent overall coverage. These indicators are organized into four domains: reproductive, maternal, newborn and child health (RMNCH); infectious diseases; NCDs; and service capacity and access.

The progress made in the UHC SCI has not been even across domains *(44)*. Figure 2.18 shows the change since 2000 in UHC SCI and selected tracers or related health SDG service coverage indicators.[2] Globally, service coverage tracer indicators improved by a range of 3–75 percentage points from 2000 to the latest available year (2019–2024). There remains significant scope for progress in the area of NCDs, which contribute to the largest proportion of disease burden globally. Hypertension and diabetes treatment coverage (age-standardized) remains below 50% of the target population globally (42% and 40% in 2019 and 2022, respectively) and progress needs to be accelerated *(14,15,18,31,35,44–48)*.

[2] Service coverage indicators (scale of 0–100) with a global baseline of 2000 and a latest available of 2019 or later.

**Figure 2.18 Universal health coverage service coverage index (UHC SCI) and selected tracers globally, 2000 and latest available year (2019–2024)**




ART: Antiretroviral therapy; DTP3: diphtheria, tetanus toxoid and pertussis vaccination; TB: tuberculosis.

[a] Diabetes treatment will be a UHC SCI tracer in the next round of reporting, see Box 2.2 for more information.

*Source*: Sanitation *(35)*, UHC SCI *(44)*, ART *(14,15)*, TB *(18)*, hypertension *(45)*, diabetes *(46)*, tobacco *(31)*, family planning *(47)*, DTP3 *(48)*.

In the domain of RMNCH, the proportion of women of reproductive age having their need for family planning met with modern methods (SDG indicator 3.7.1) has seen a modest improvement of an average of 1.2 percentage points in the each of the last two decades globally, with no WHO region reaching universal coverage (range 58.1–87.3%) in 2024 *(47)*. The global proportion of births attended by skilled health personnel (SDG indicator 3.1.2) increased by 26 percentage points between 2000 and 2024, to 87%. As of 2024, the WHO Region of the Americas and Western Pacific and European Regions have achieved universal or nearly universal coverage, while only 74% of births are attended by a medical doctor, nurse or midwife in the WHO African Region *(49)*.

Vaccination rates of all four childhood vaccines tracked within SDG indicator 3.b.1[3] stagnated or declined between 2020 and 2022. For third dose diphtheria-pertussis-tetanus containing vaccine (DTP3), which is a useful marker of vaccination system functioning, in 2023 vaccination rates had still not fully returned to their 2019 pre-pandemic level, suggesting substantial residual dysfunction in global vaccine delivery systems. Vaccination rates for the other three vaccines increased, although this was partially due to new introductions.

Globally, DTP3 still has the highest coverage of the four vaccines, at 84% in 2023.

The WHO Region of the Americas has the highest coverage of the human papillomavirus (HPV) vaccination among girls aged 9–14 years, reaching 55% within 18 years of introduction of the vaccine. However, globally HPV coverage remains low, meaning millions of girls will remain susceptible to cervical cancer over their lifetimes. Among WHO regions, the European Region has the highest uptake of third dose pneumococcal conjugate vaccine (PCV3), with coverage at 86% in 2023. In 2023, the WHO European and Western Pacific Regions had DTP3 and measles-containing-vaccine second-dose (MCV2) coverage of 90% or higher, and the South-East Asia Region reached 90% for DTP3 *(48)*. However, the 90% global target set by the Immunization Agenda is unlikely to be met for any of these vaccinations if current trends continue *(50)*.

Data collected from about 20 countries between 2015 and 2018 on treatment for alcohol and drug use disorders (SDG indicator 3.5.1) indicate a median contact coverage of 3.2% and 10.0%, respectively. About 40% of the 145 countries who responded to Global Survey 2019 on Progress on SDG health target 3.5 do not collect any data

[3] Diphtheria–tetanus–pertussis (DTP3), measles-containing-vaccine second-dose (MCV2), pneumococcal conjugate 3rd dose (PCV3) and human papillomavirus (HPV) vaccine.

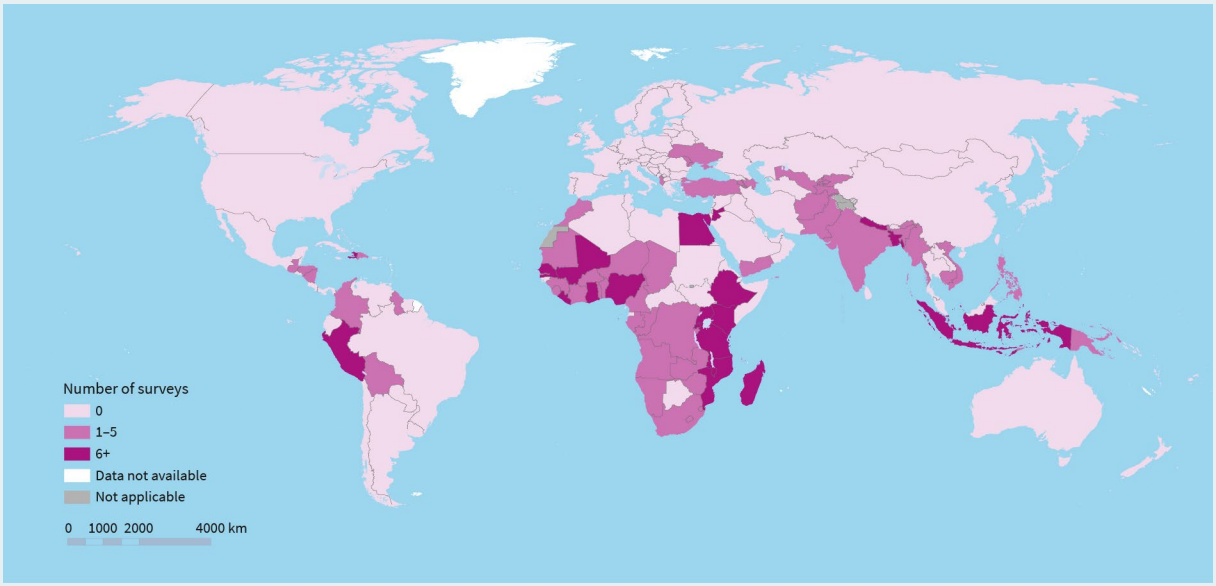
on service provision and service utilization for treatment of alcohol and drug use disorders *(51)*. Alcohol and drug use are risk factors for multiple health conditions, such as cardiovascular diseases, liver diseases, cancer, respiratory diseases, injuries and mental health disorders, all of which contribute to NCD-related morbidity and mortality *(52)*.

Surveys are essential for gathering population health data, including, but not limited to, fertility rates, nutrition, child health and disease prevalence. The data collected by surveys support informing health policy, improving health systems and identifying emerging health issues (see Box 2.1).

## Box 2.1 Demographic and Health Surveys in universal health coverage service coverage index (UHC SCI)

Over half of the UHC SCI tracers use surveys such as Demographic and Health Surveys (DHS) as a data source. The DHS programme was initiated in the early 1980s by the United States Agency for International Development (USAID) with the aim of providing countries with reliable and timely data on critical health and demographic indicators. It aimed to fill a gap in data collection, particularly in developing countries where such information was often lacking or outdated. The first survey was conducted in El Salvador in 1985. Since 2000, there have been around 300 DHS conducted (see Fig. 2.19) *(53)*. The suspension of USAID funding delays crucial public health data, resulting in the short-term in an evidence gap to allocate resources and develop policies. Without immediate actions to replace this data collection, the evidence gap will lead to less effective health interventions and widening health disparities. As statistical offices and ministries of health develop a strategy to mitigate the loss of the DHS, other questionnaires such as the WHO World Health Survey Plus *(54)* can guide comprehensive data collection to monitor progress towards population health targets and health-related SDGs.

**Figure 2.19 Number of demographic and health surveys conducted by DHS programme by country, 2000–2024**




Note: Includes all survey types with data available as of 27 March 2025.
*Source*: DHS *(53)*.

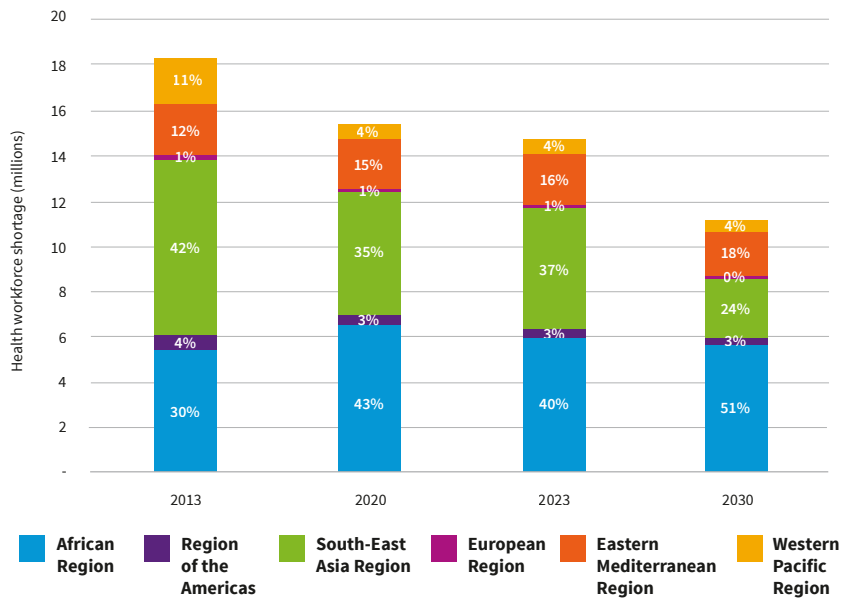
## Health workforce

Health workers are crucial for achieving UHC. Their role goes beyond providing medical care: an ample, well-trained and properly distributed workforce ensures that health services are accessible, effective and of good quality for all, regardless of income or place of residence.

The estimated global stock of health workers exceeds 70 million in 2023, with the five occupations included in SDG target 3.c (dentists, medical doctors, midwifery personnel, nursing personnel and pharmacists) accounting for 52 million *(55)*. Data for 2023 show a 26% increase in the density of dentists, medical doctors, midwifery personnel, nursing personnel and pharmacists since 2013, but with significant differences by region and income group (for instance, on average, 1 for every 64 people in HICs versus 1 for every 621 people in LICs) *(56)*.

The estimated global shortage of 15.4 million health workers in 2020 decreased to 14.7 million in 2023. The projected 2030 shortage of 11.1 million shows slow progress in closing the gap (Fig. 2.20), with the WHO African and Eastern Mediterranean Regions projected to bear nearly 70% of the shortage. HICs and upper-middle-income countries (UMICs), which account for 53% of the global population and 80% of workers in the five occupations under SDG target 3.c, have the highest densities of health workers. Nevertheless, these countries will likely need to recruit 8.4 million additional health workers by 2030 to maintain density levels and meet the rising demands of growing and ageing populations, potentially accelerating international migration of health workers.

**Figure 2.20 Distribution of the global health workforce shortage by WHO region (for 2013, 2020 and 2023, and projected for 2030)**




Note: Percentages represent the relative share of the global health workforce shortage.
*Source*: NHWA *(56)*.

## International health regulations

IHRs are essential to service delivery as they ensure countries have the necessary capacities within their health systems to prevent, prepare, detect in a timely manner and respond to public health emergencies. IHRs therefore contribute to global health resilience and the achievement of sustainable health outcomes for all populations.

IHRs States Parties self-assessment annual reporting tool (SPAR) second edition *(57)*, which assesses 15 capacities, was launched in 2021 and is in its fourth year of reporting. Globally, the capacities average (SDG target 3.d.1) has wavered around 64% between 2021 and 2024. The three main achievement and challenges capacities measured by SPAR (Fig. 2.21) have changed minimally (1 point) globally, with the exception of challenge C1 (Policy, legal and normative instruments to implement IHR), which improved by 3 points globally and by 11 in the South-East Asia Region. The WHO African Region improved its score (from 2 to 6 points) in all three main challenges and two of the achievements between 2021 and 2024 *(58)*.

**Figure 2.21 Global top three challenges and achievements scores in 2024, by WHO region**

| Top global challenges | Global | African Region | Region of the Americans | South-East Asia Region | European Region | Eastern Mediterranean Region | Western Pacific Region |
|---|---|---|---|---|---|---|---|
| C14 Chemical events | 53 | **35** | *51* | **53** | 69 | *55* | *53* |
| C1 Policy, legal and normative instruments to implement IHR | **55** | **38** | **55** | **61** | **64** | **61** | *62* |
| C15 Radiation emergencies | 57 | **38** | *53* | **55** | **77** | **67** | *47* |
| **Top global achievements** | | | | | | | |
| C5 Surveillance | 80 | **73** | *79* | *83* | **85** | *80* | *79* |
| C7 Health emergency management | 71 | **60** | 74 | 75 | *75* | 69 | *76* |
| C8 Health services provision | 71 | *56* | 73 | **78** | 79 | 75 | *73* |

Scores: dark green: > 80; light green: 61–80; orange: 41–60; yellow: 21–40. Change from 2021: bold: increased by more than 1 point; italic: decreased by more than 1 point; not bold or italic: change is 1 point or less.

*Source*: eSPAR *(58)*.

# 2.4.2 Health financing

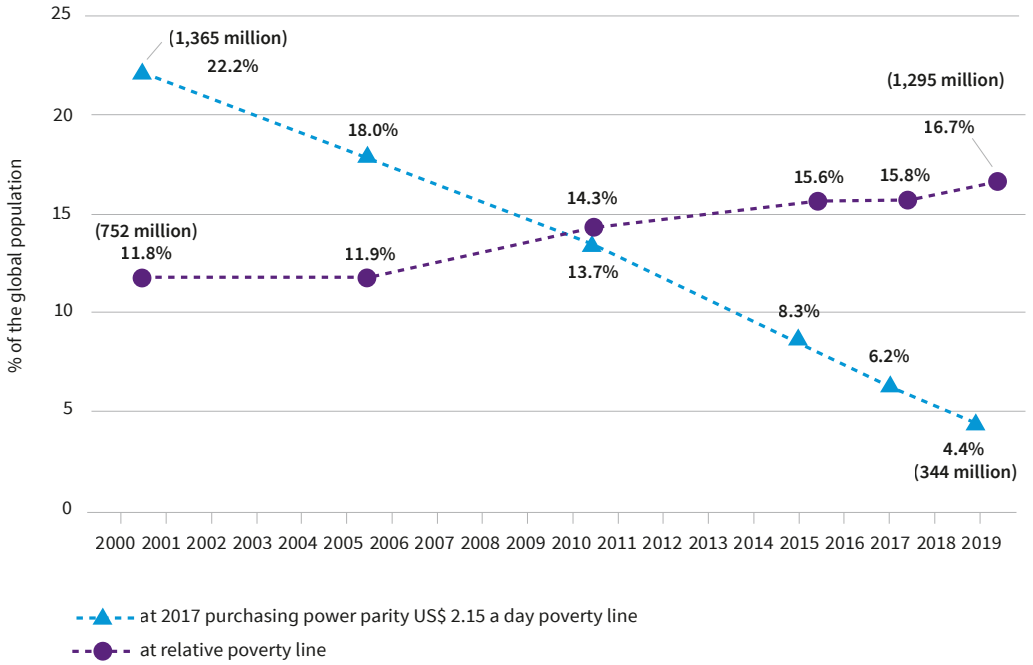
Sustainable, efficient and effective health financing is critical for achieving UHC. By pooling resources, reducing out-of-pocket payments and ensuring financial protection, health financing allows countries to provide equitable access to quality health care for all populations.

## Financial protection

The financial protection dimension of UHC is achieved when there are no financial barriers to accessing needed health services and goods, and out-of-pocket (OOP) health spending is not a source of financial hardship. SDG indicator 3.8.2 measures the proportion of people experiencing catastrophic OOP health spending. The latest data show that the global proportion of the population spending more than 10% of their household budget on health OOP increased from 2000 to 2019, reaching 13.5%, while the global proportion of the population spending more than 25% reached 3.8%.

It is also important to track how many people are impoverished or further impoverished by OOP health spending, as even relatively small OOP payments can threaten the living standards of people living near or in poverty. In 2019, some 344 million people were pushed or further pushed into extreme poverty by OOP health spending, while 13.5% of the global population spent more than 10% of their household budget on OOP payments for health. The proportion of people facing impoverishing OOP spending at the extreme poverty line declined from 22.2% in 2000 to 4.4% in 2019. In contrast, the share at the relative poverty line rose from 11.8% in 2000 to 16.7% in 2019 (Fig. 2.22). These trends suggest that while OOP health spending was less likely to push people into extreme poverty by 2019, it still disproportionately affected those in the lower income brackets *(44)*.

**Figure 2.22 Trends in the incidence of impoverishing health spending at the extreme and relative poverty lines globally, 2000–2019**




*Source*: WHO and World Bank *(44)*.

## Domestic and international funding

Domestic public funds provide long-term sustainability, equity and a foundation for health systems, while international funds address funding gaps, support global initiatives and bring innovation to health care delivery.

The increase in the prioritization of health within general government spending seen in 2020 and 2021 (the health component of SDG indicator 1.a.2) among middle- and high-income groups was not sustained in 2022, and even declined slightly in LICs, LMICs and UMICs. However, the share of health expenditure within total government spending remained higher in 2022 than in 2019 in all income groups *(59)*. Government funding is essential to subsidize health services and ensure they are affordable for everyone, including low-income or vulnerable populations.

Development assistance to medical research is vital for addressing both emerging health challenges and ongoing diseases, particularly in LICs and MICs, where the basic health portion addresses fundamental health-care needs that are critical to UHC. In 2023, LICs received the highest weighted average ODA per capita (SDG indicator 3.b.2), at US$ 6.04, compared with US$ 0.88 and US$ 0.43 for the LMICs and UMICs, respectively. However, ODA varies significantly by country; the five countries with the highest per capita ODA are mostly island states in the middle- and high-income groupings *(60)*.

Since the global indicator framework for SDGs was agreed in 2017 *(61)*, challenges including the rising burden of NCDs, the impact of global health crises like the COVID-19 pandemic, workforce shortages and financial sustainability, have increased. Indicators used to monitor UHC need to adapt to the changing world, improvements in data availability and understanding of populations being left behind (Box 2.2).

### Box 2.2 Revising SDGs to improve monitoring of progress towards UHC

Together, SDG indicators 3.8.1 and 3.8.2 are essential to monitoring progress towards UHC: 3.8.1 aims to assess whether needed services are available and used by those in need, while 3.8.2 assesses whether people are financially burdened by the cost of care. The two indicators were revised as part of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators 2025 comprehensive review *(62)* and approved by United Nations Statistical Commission in March 2025 *(63)*.

The revision of SDG indicator 3.8.1 follows the same principals as its original construction *(64)* but aims to update to indicators with improved data availability for better tracking and alignment with existing SDG indicators. The tracers were selected as a subset of overall coverage and all equally contribute to the UHC SCI. The revision will apply weights based on the population affected by each tracer to better reflect the service burden on a health system; the four domain areas will still equally contribute to the overall SCI.

The revision of SDG indicator 3.8.2 captures financial hardship caused by both substantial and impoverishing OOP health spending. Initially, the budget share definition was retained for SDG indicator 3.8.2, with a 10% threshold used to identify large OOP spending. This was intended to identify hardship in poorer populations. However, global monitoring reports on UHC have shown that many people living in poverty, who spend less than 10% of their household budget on health, are still pushed or further pushed into extreme or relative poverty. The revised indicator is defined as the proportion of the population with OOP household expenditure on health exceeding 40% of the household discretionary budget. A household's discretionary budget is defined as household total consumption expenditure or income net of the societal poverty line (SPL). The SPL is used to assess the cost of basic needs across countries at all income levels. The discretionary budget approach takes into account that poorer households allocate most of their resources to necessities and in effect can spend very little on health OOP without struggling financially, while wealthier households can spend much more before OOP spending leads to financial hardship.

These revisions align with the SDG principle of ensuring no one is left behind and aim to better reflect the realities of service coverage and financial hardship across countries. The new definitions will be reflected in the next *Tracking universal health coverage: global monitoring report (65)* to be published at the end of 2025.

## 2.5 SDG progress to date

As the world moves closer to 2030, progress is insufficient to meet the health-related SDG and other global targets. While there have been improvements for most of the indicators reviewed in this chapter, only one – reducing alcohol consumption – is on track to meet the 2030 target at the global level. The assessment of progress in selected health-related SDG indicators by WHO region is presented in Annex 1. Concerted efforts are needed to accelerate progress and reverse regressing trends globally, as well as at regional, country and community levels.

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# 3. Progress in achieving the Triple Billion targets

The Triple Billion targets, a cornerstone of WHO's Thirteenth General Programme of Work (GPW13), track the collective progress by WHO and its Member States in promoting, providing and protecting health worldwide. The latest update illustrates the progress made since the start of GPW13 in 2018 and the key challenges particularly in the universal health coverage and health emergencies protection billions.

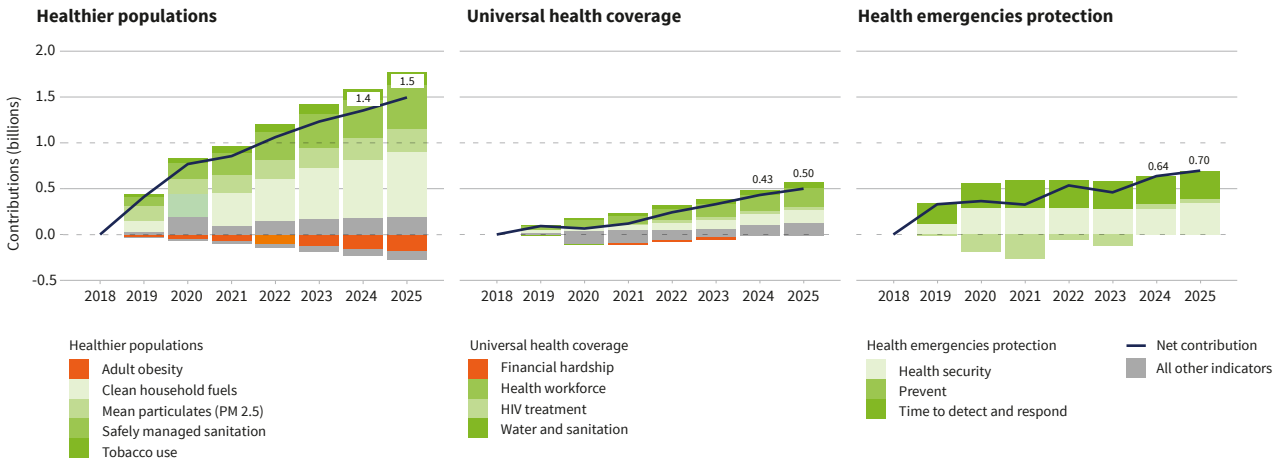
Anchored in the health-related SDGs, WHO's GPW13 provides a strategic roadmap to enhance health and well-being for all *(1)*. More importantly, GPW13 championed the results framework with impact measurement at its core to reinforce organizational accountability and transparency. The foundation of the impact measurement is the 46 outcome indicators centred on promoting the overall health and quality of life for the people, providing essential health services, and protecting people from health emergencies. The Triple Billion targets give strategic clarity to the impact measurement of GPW13. By summarizing the outcome indicators into three ambitious, but easy to understand and communicate goals, the Triple Billion targets effectively convey global health priorities, motivate collective action by the global community, facilitate transparency and accountability, and complement the strategic priorities set by WHO's GPW13 to address current and emerging global health priorities.

For GPW13, the WHO Member States aim to enable one billion more people achieve better health and overall well-being, to provide one billion more people with access to essential health services without incurring financial hardship, and to better protect one billion more people from health emergencies worldwide by the end of the GPW13, extended from 2023 to 2025. This chapter provides a summary of the progress made in achieving the Triple Billion targets with projections to 2025, incorporating the latest available data from the outcome indicators at the country level.

# 3.1 Triple Billion targets progress

Progress towards achieving the Triple Billion targets remains uneven (Fig. 3.1). Growth in providing essential health services is insufficient, with only 431 million more people gaining affordable health-care access by 2024 relative to the GPW13 baseline year of 2018. This is projected to rise to 500 million by 2025 – half the targeted one billion. Furthermore, close to 637 million more individuals will be better protected from health emergencies by 2024. Despite significant progress, this is expected only to increase to 697 million people by 2025, around 30% short of the one-billion target. Remarkably, an estimated 1.4 billion more people will experience healthier lives by 2024, with 1.5 billion expected in 2025, surpassing the original target of one billion. Yet, such progress is not enough to put the world on track to achieve the health-related SDGs by 2030 *(2,3)*. Moreover, recent interruptions in international aid threaten to disrupt health services and systems, disproportionally impacting countries and communities with the greatest health-care needs. Safeguarding the gains made in achieving the Triple Billion targets is a paramount task for the global community in the years ahead.

**Figure 3.1 Progress in achieving the Triple Billion targets and estimated contributions by indicator**



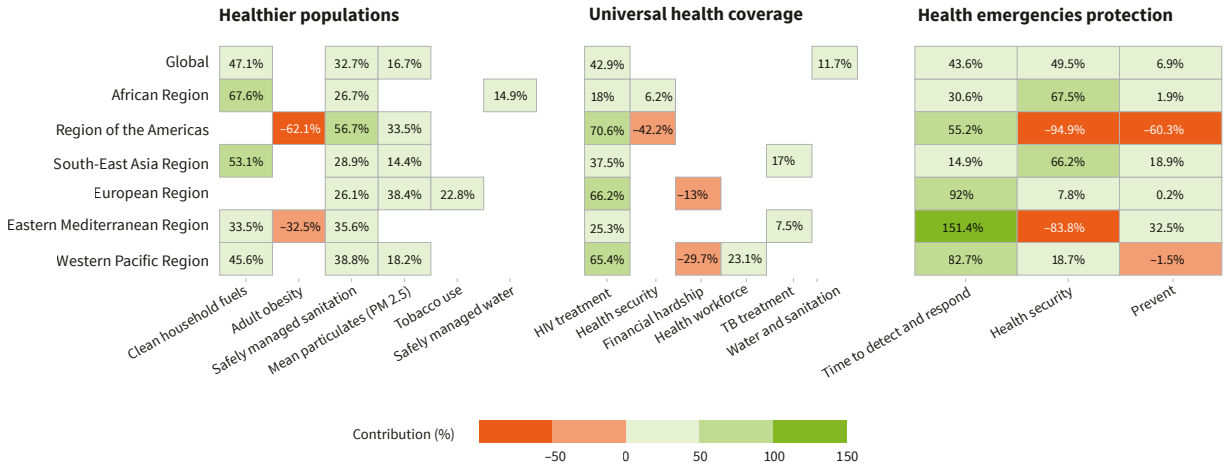
# 3.2 Progress in healthier populations

Current trends indicate that the world is on track to meet the goal of improving health and well-being for one more billion people by 2025. Compared with the baseline year of 2018, some 1.5 billion people are projected to be living healthier lives by 2025. Such progress is primarily due to reduced tobacco use, improved air quality, increased use of clean household fuels, and better access to water, sanitation and hygiene (Fig. 3.1). Yet, at the global level, significant challenges persist in the areas of rising rates of adult and childhood obesity.

Looking at the top contributing indicators by region (Fig. 3.2), the most striking features are worsening rates of adult obesity in the Easter Mediterranean Region and Region of the Americas. These account for setbacks equal to 32.5% and 62.1% of the respective regional net contributions. Despite these difficulties, substantial progress has been made. Most regions are seeing improvements in clean household fuel use as their primary marker of progress, with particularly large effects in the African Region (67.6%) and the South-East Asia Region (53.1%). In both these regions, improvements in clean fuel use represent over half of the additional people living healthier lives.

All regions showed substantial progress in safely managed sanitation, which ranked as the second most important contributor globally (32.7%). The top three indicators contributing to the Triple Billion targets in the European Region are improvements in air quality (38.4%), safely managed sanitation (26.1%) and tobacco use (22.8%). The African Region is unique in having safely managed water as a top contributor (14.9%), highlighting region-specific priorities and challenges in water infrastructure.

**Figure 3.2 Top indicators with most contributions to the Triple Billion targets, 2018–2025[a]**




[a] Percentage is calculated as the ratio of individual indicator contribution over magnitude of the overall contribution.

# 3.3 Progress in universal health coverage

Compared with the baseline year of 2018, about 500 million more people worldwide will enjoy access to essential health services without undue financial burden by 2025. This progress in achieving UHC has been supported by improvements in health workforce, enhanced coverage of hypertension treatment, and better access to family planning. However, the most substantial contributor to achieving UHC, and the progress made so far during the GPW13 period, is the expanded availability of antiretroviral therapy (ART) for HIV and AIDS. Challenges in access to health services continue to hinder faster progress, particularly in diabetes management and mitigating financial hardships incurred by utilizing health services. The declining coverage of DTP3 immunization is especially concerning.

Nearly all regions have seen progress in expanding access to HIV treatment (Fig. 3.2). However, there have been setbacks in progress in health security and affordability. In the Region of the Americas, the strong progress is substantially offset by deterioration in health security (–42.2%). Both the European and Western Pacific regions have seen significant increases in financial hardship. Rising financial hardship in the Western Pacific Region has significantly offset other UHC improvements, reducing progress by nearly 30%.

Most regions show contributions from multiple factors, indicating diverse approaches to managing health-care access. We see smaller, yet still substantial, gains in the health workforce in the Western Pacific Region (23.1%), as well as better tuberculosis treatment in the South-East Asia (17%) and Eastern Mediterranean regions (7.5%).

# 3.4 Progress in health emergencies protection

According to updated information for the outcome indicators, substantial advancements have been made towards better safeguarding an additional one billion people from health emergencies by 2025. Crucial amendments to the International Health Regulations, adopted by the World Health Assembly in 2024, represent a major step forward in global health security and pandemic preparedness. In addition, significant strides in early disease detection, mobilizing emergency response teams and ensuring equitable access to essential medical supplies, are key drivers of global resilience to health emergencies.

Health emergencies protection shows the greatest amount of regional variation in top indicator contributions (Fig. 3.2). The Eastern Mediterranean Region reported exceptional progress in detection and response times (151.4%) but was undermined by worsening health security (–83.8%). Meanwhile, the Region of the Americas faces challenges in both health security (–94.9%) and prevention (–60.3%). The European Region made strong gains in detection and response, with a positive profile across indices (92% time to detect and respond, 7.8% health security). These contrasting outcomes highlight regional differences in emergency preparedness and response strategies.

# 3.5 Forecast to 2030 and scenarios

The Triple Billion target projections through 2030 showed encouraging trends towards a healthier global population. Under the current trajectory, 2.0 billion more people were expected to live healthier by 2030 compared with the 2018 baseline. Figure 3.3 presents an alternative scenario in which all countries meet the annualized targets set by the 2030 Agenda using the same set of 46 outcome indicators *(4)*. In this case, 5.6 billion more people would live healthier lives by 2030 – nearly triple the gain of 2.0 billion under the current trajectory. Similarly, achieving the 2030 SDG and other global targets would result in 2.1 billion more people gaining access to UHC without financial hardship, compared with 0.8 billion under current trends. The gap is smaller for health emergency protection; meeting the 2030 targets would still safeguard 1.0 billion more people against health emergencies, compared with 0.8 billion under the current trajectory.

Figure 3.4 illustrates the potential for additional progress if within-region inequalities were to be addressed. It shows the gap between forecasted contributions and a scenario where all countries are able to match their regional top performers by 2030. The large gaps highlight significant missed opportunities in progress both now and in the future.

The regional disparities are most striking for health emergencies protection. By 2030, an additional 30.6% of people in the Region of the Americas could be better protected if all countries matched their regional leaders – a sharp increase from 10.6% in 2025. Similarly, the African Region could extend protection to an additional 28% of its population, up from 9.6% in 2025.

For UHC, closing these gaps would mean an additional 13.8% of people in the European Region and over 15.5% more people in the Region of the Americas would have affordable access to essential health care. These figures underscore how reducing within-region disparities could dramatically accelerate progress toward the Triple Billion targets.

**Figure 3.3 Progress needed to achieve the Triple Billion and 2030 global targets**

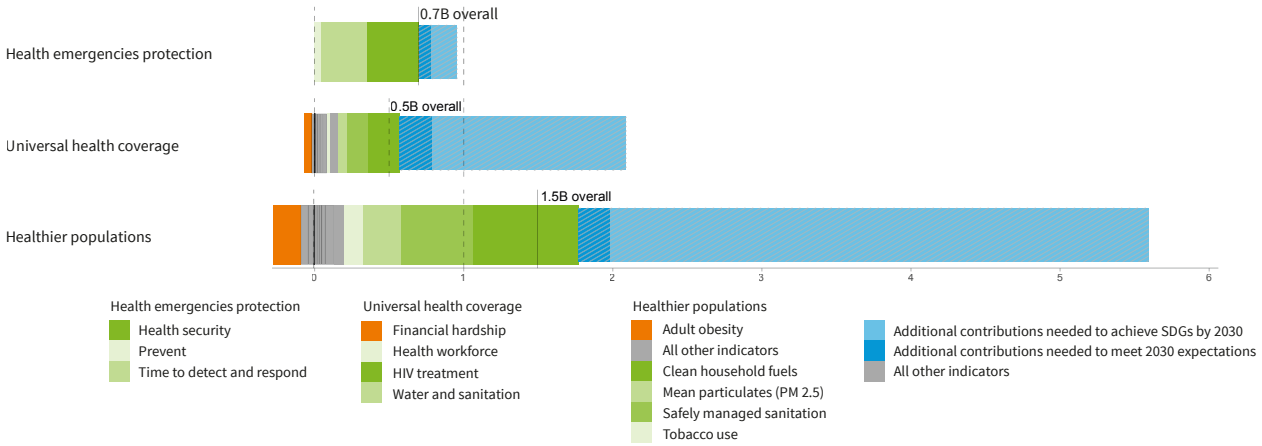
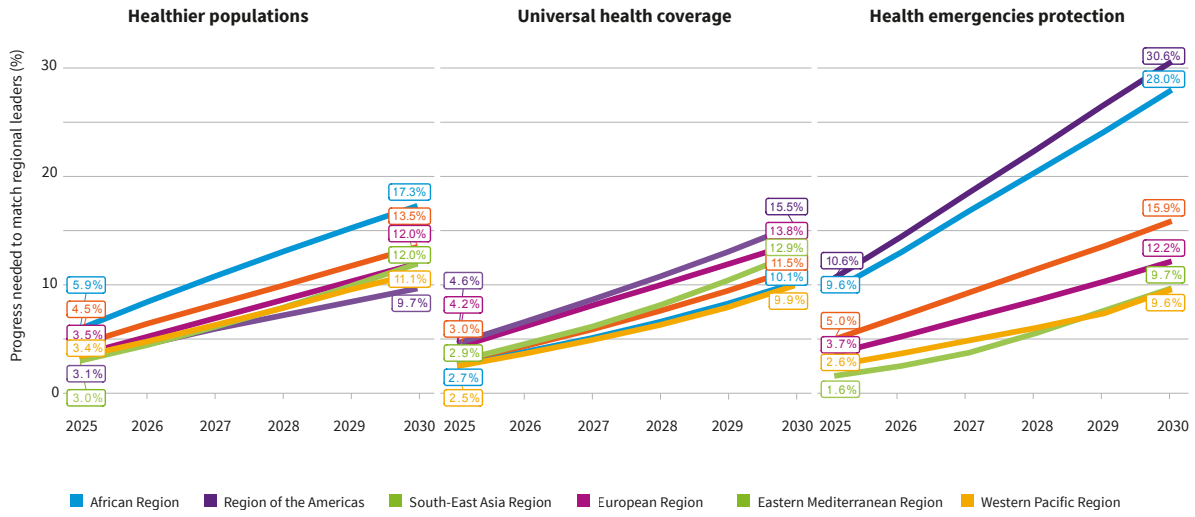


**Figure 3.4 Progress required for all countries to match the top performers in their region, on top of the Triple Billion target projections,[a,b] 2025–2030**




[a] Matching the top performers means achieving the values of the indicators from the 10% best-performing countries in the same WHO region, by 2030.
[b] Percentages are calculated as the ratio of additional persons required to match the top performers over the total 2030 population in the region.

## Box 3.1 Transition from GPW13 to GPW14

The WHO GPW13 (2019–2023, extended to 2025), strengthened WHO's effectiveness and accountability in improving global health outcomes. Triple Billion targets, a key component of GPW13, were designed to enhance accountability and drive measurable health improvements worldwide. By strategically focusing on three target areas and leveraging existing data sources, WHO aimed to deliver tangible health benefits to billions of people.

In September 2023, the United Nations Heads of State and Government Meeting called for doubling the rate of progress on the SDGs to meet the 2030 Agenda *(5)*. In response, WHO is developing the fourteenth general programme of work (GPW14, 2025–2028) to address two fundamental challenges: slow progress and insufficient data.

Building on GPW13, GPW14 focuses on promoting, providing and protecting health while strengthening the global health ecosystem to advance the SDGs. Additionally, it seeks to enhance WHO's organizational performance across all three levels – global, regional and country.

The GPW14 results framework translates health goals into measurable targets through a structured results chain. This chain links WHO's work to broader health and development outcomes. As in GPW13, progress will be assessed using the Triple Billion indices through outcome indicators in three overarching areas: promote, provide and protect.

### Triple Billion targets recalibration

Under GPW13, the Triple Billion targets for 2025 were defined in terms of relative changes – the additional number of people who achieved specific health status compared to 2018:

- 1 billion more people living healthier lives (promote)
- 1 billion more people benefitting from universal health coverage (provide)
- 1 billion more people better protected from health emergencies (protect)

For GPW14, the targets are recalibrated to reflect absolute population coverage by 2028, accounting for improved measurement methods and setting ambitious yet realistic goals:

- 6 billion people living healthier lives (promote)
- 5 billion people benefitting from universal health coverage without financial hardship (provide)
- 7 billion people protected from health emergencies (protect)

The revised Triple Billion targets offer several benefits:

- Better alignment with global targets, including the SDGs and World Health Assembly (WHA) resolutions
- Enable scenario analysis for assessing health interventions at regional and country levels
- Facilitate direct statistical forecasting using past trends and country-specific data
- Support benchmarking assessments to identify best practices at regional and global levels
- Balance ambition with realism, ensuring achievable yet aspirational goals
- Account for uncertainty in observed data and future projections
- Promote equity, ensuring that no one is left behind or unprotected.

# 3.6 Conclusion

The WHO Triple Billion framework has served as both a strategic guide and a practical tool for accountability and accelerating progress in global health. By providing a structured approach to tracking advancements in indicators across regions and countries, it offers decision-makers actionable insights on where to focus resources and policy interventions. The 2025 projections, developed using the most recent available data, reveal both encouraging progress and gaps that require targeted action. Regional analysis shows how varied approaches to reaching these targets reflect different priorities, challenges and opportunities across the six WHO regions.

Looking ahead, as WHO transitions from GPW13 to GPW14 in 2025, the core structure of the Triple Billion targets remains in place. However, the list of outcome indicators has been updated to reflect emerging health challenges and strategic priorities set collectively by the global community for GPW14 (see Box 3.1). Through GPW14, WHO reaffirms its unwavering commitment to addressing emerging global health priorities and tackling challenges, as mandated by its Member States, despite an evolving global landscape.

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# 4. Inequality in immunization

Ensuring equitable access to immunization is vital for achieving public health goals and ensuring that every person, regardless of their background and circumstances, fully benefits from vaccines to improve health and well-being. This chapter presents the state of inequality in immunization coverage. It shows how inequalities in immunization have changed in the last decade and discusses barriers to achieving equitable immunization coverage.

# 4.1 The importance of vaccine equity

Vaccines are life-saving interventions that have dramatically improved global health outcomes. Immunization currently prevents 3.5 million to 5 million deaths every year from diseases such as diphtheria, tetanus, pertussis, measles and influenza *(1)*. Since the launch of the WHO Expanded Programme on Immunization in the mid-1970s, childhood vaccination coverage has improved significantly, contributing to a substantial reduction in U5MR *(2)*. This underscores the critical role of vaccines in safeguarding public health and highlights the importance of continuing efforts to ensure equitable access to immunization worldwide.

Equity in immunization is a cornerstone of the Immunization Agenda 2030 (IA2030), which envisions a world where everyone, everywhere, at every age fully benefits from vaccines to improve health and well-being *(3)*. This global strategy aims to leave no one behind by increasing equitable access to vaccines, ensuring that immunization programmes are integrated into primary health care and contributing to achieving universal health coverage.

Global inequalities persist in vaccine access, financing, availability and distribution – both between countries and within countries. Low-income countries often face challenges in securing sufficient vaccine supplies due to limited financial resources, disruptions in health-care services, logistical challenges and inequities in access to services *(4)*.

Within countries, inequalities in vaccine access and coverage can be influenced by factors such as geographic location, socioeconomic status and education levels. Rural and remote areas may have lower access to vaccination services compared with urban centres, and those affected by social disadvantage may face barriers to immunization due to lack of information or logistical challenges. Addressing inequalities requires targeted efforts to strengthen health systems, improve vaccine delivery infrastructure and ensure that immunization programmes are inclusive and accessible to all segments of the population.

# 4.2 Inequalities in immunization coverage persist within countries

The delivery of three doses of the combined DTP3 vaccine among children under the age of 1 year is used as a proxy indicator for monitoring the capacity of a health system to reliably reach children through routine vaccination channels. Measuring inequalities in DTP3 immunization coverage within countries reveals where gaps exist in a routinely delivered vaccine and helps to inform appropriate approaches to reach under-vaccinated populations.

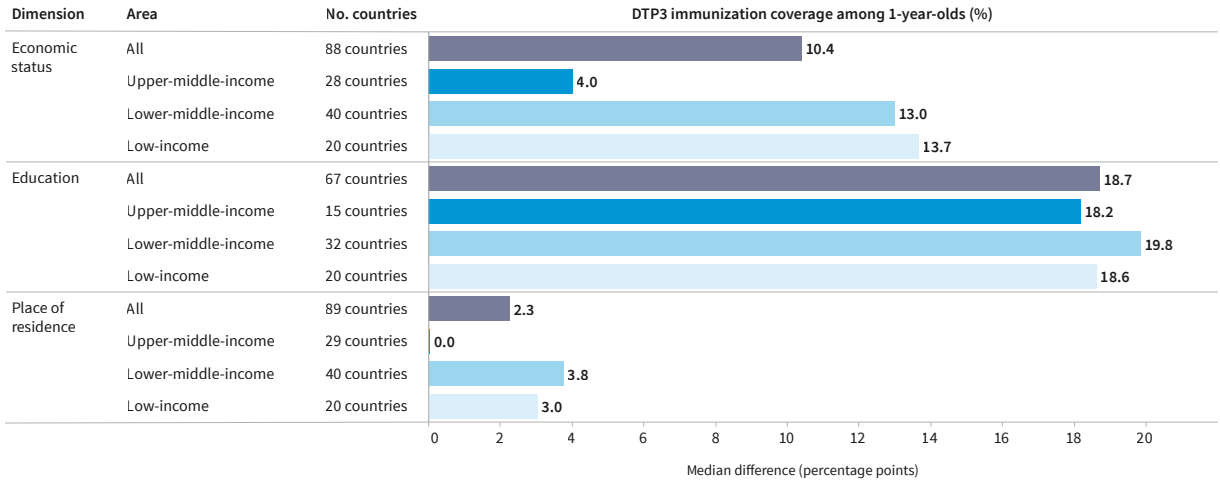
Figure 4.1 shows median inequality in DTP3 immunization coverage across LICs and middle-income countries with a recent household survey (from 2014–2023) by economic status, education and place of residence. For economic status and education, inequality is measured as the difference along the socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration.[1] For place of residence, inequality is measured as the difference between urban and rural subgroups. Medians are calculated across all countries

[1] Also referred to as the slope index of inequality.

with data available, as well as by World Bank country income grouping.

The results indicate inequalities favouring those living in richer households (median economic-related inequality of 10.4 percentage points across 88 countries), having more education (median education-related inequality of 18.7 percentage points across 67 countries) and living in urban areas (median difference of 2.3 percentage points across 89 countries). Economic-related inequality in DTP3 immunization coverage is most pronounced in LICs and LMICs, where there are median inequalities of 13.7 and 13.0 percentage points in coverage along the economic status spectrum, respectively. Education-related inequality was high across UMICs, LMICs and LICs, while differences between urban and rural areas were low overall across country income groupings.

**Figure 4.1 Median economic-related, education-related and place of residence inequality in DTP3 immunization coverage, by World Bank country income group, 2014–2023**

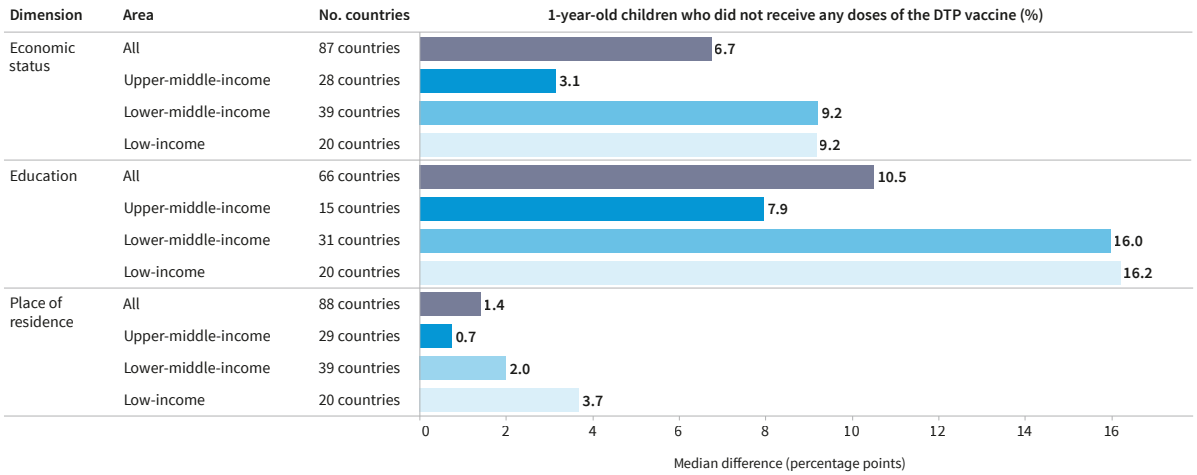



DTP3: diphtheria–tetanus–pertussis vaccine third dose. The median difference for economic status and education reflects the difference along the whole socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration. The median difference for place of residence reflects the difference between urban and rural subgroups.

*Source*: derived from the WHO Health Inequality Data Repository, Childhood Immunization dataset, with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2014 and 2023 *(5)*.

The number of children who have not received any routine vaccines (referred to as zero-dose children) reflects the accessibility of basic health services, including immunization services. The IA2030 includes an objective to extend immunization services to regularly reach zero-dose children, with a target of a 50% reduction in zero-dose children between 2019 and 2030 *(3)*. An analysis of inequalities in the proportion of 1-year-old children who had not received any doses of the DTP vaccine, using household survey data across 88 countries, reveals substantial economic- and education-related inequalities (Fig. 4.2). Data from 87 countries showed a median economic-related inequality of 6.7 percentage points in zero-dose DTP prevalence, but inequalities were particularly pronounced across LMICs and LICs, where median economic-related inequality was greater than 9 percentage points. Across 66 countries, median education-related inequality in zero-dose prevalence was 10.5 percentage points but inequalities were 16 percentage points in LMICs and LICs. Overall, there was low median inequality between rural and urban areas in 88 countries, but zero-dose prevalence was slightly higher in rural than urban areas in LMICs and LICs.

## Figure 4.2 Median economic-related, education-related and place of residence inequality in zero-dose DTP prevalence, by World Bank country income group, 2014–2023

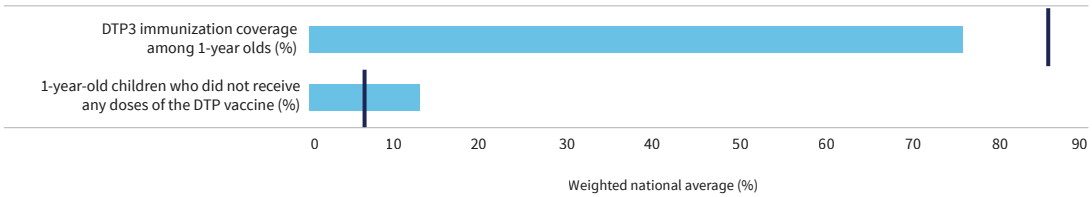



DTP3: diphtheria–tetanus–pertussis vaccine third dose. The median difference for economic status and education reflects the difference along the whole socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration. The median difference for place of residence reflects the difference between rural and urban subgroups.

*Source*: derived from the WHO Health Inequality Data Repository, Childhood Immunization dataset, with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2014 and 2023 *(5)*.

Eliminating economic-related inequality in DTP3 coverage and zero-dose prevalence has the potential for many more children to benefit from immunization. The potential for improvement in each country is premised on all children achieving the same outcome as the richest 20% of households. If economic-related inequality in DTP3 coverage were eliminated across the 88 countries with household survey data from 2014–2023, the weighted national average across these countries would improve from 76.0% to 85.5% (Fig. 4.3). If countries reduced the prevalence of zero-dose children to that of the richest subgroup, the weighted national average prevalence would be more than halved, from 13.1% to 6.3%.

## Figure 4.3 Potential improvement in national average DTP3 coverage and zero-dose children by eliminating economic-related inequality, 88 countries, 2014–2023




DTP3: three doses of diphtheria–tetanus–pertussis vaccine.

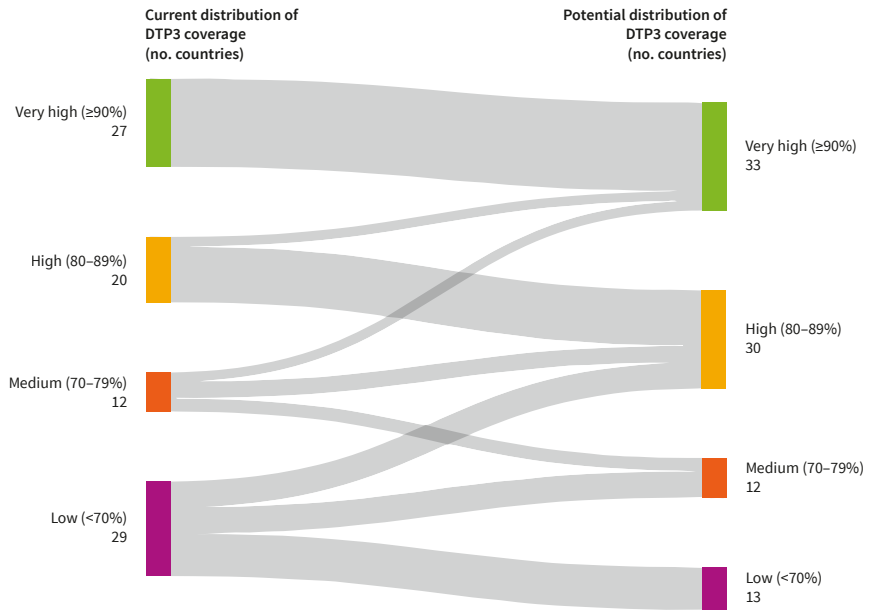
The potential for improvement (dark blue vertical line) represents the overall weighted average that would be possible if, in each country, all 1-year-olds had the same level of coverage as the most advantaged subgroup (richest quintile). The current weighted average is indicated by the light blue bar.

*Source*: derived from the WHO Health Inequality Data Repository, Childhood Immunization dataset, with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2014 and 2023 *(5)*.

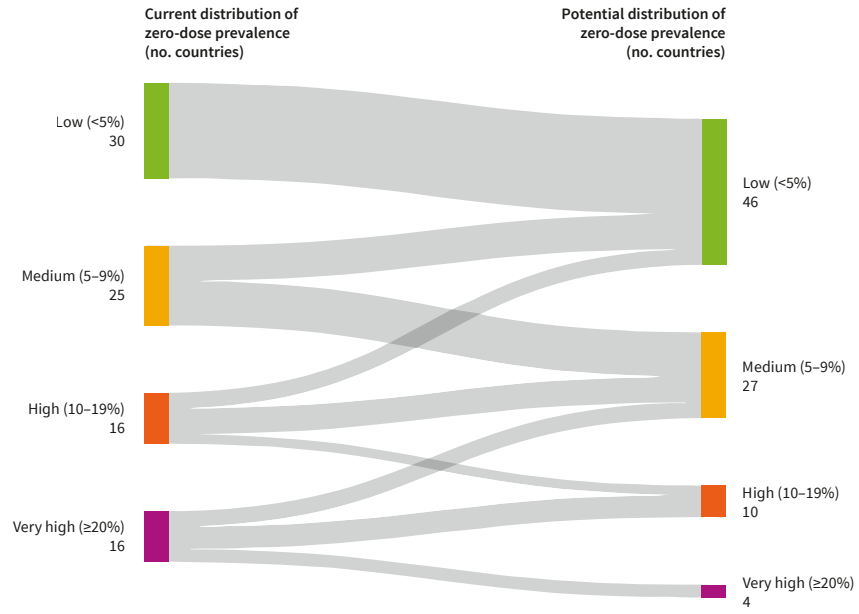
Of 88 countries with household survey data from 2014–2023, only 27 had DTP3 coverage of 90% or more, while coverage was 80–89% in 20 countries, 70–79% in 12 countries and below 70% in 29 countries (Fig. 4.4A). After considering the potential improvement in national average by eliminating economic-related inequality, 6 additional countries would have coverage greater than 90% and 10 additional countries would have coverage of 80–89%. If economic-related inequality in zero-dose prevalence were eliminated, 16 additional countries would reduce zero-dose prevalence to below 5% (Fig. 4.4B). The link between economic status and immunization coverage is complex and, as Box 4.1 shows, inequalities can emerge at various points of contact with the health system – underscoring the need for exploration of the drivers of inequalities and context-specific strategies to address them.

**Figure 4.4 Potential improvement in national average by eliminating economic-related inequality, 88 countries, 2014–2023**

A) **DTP3 immunization coverage**




B) **Zero-dose prevalence**




The potential improvement reflects all 1-year-olds having the same outcome as the richest 20% of the population.

*Source*: derived from the WHO Health Inequality Data Repository, Childhood Immunization dataset, with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2014 and 2023 *(5)*.

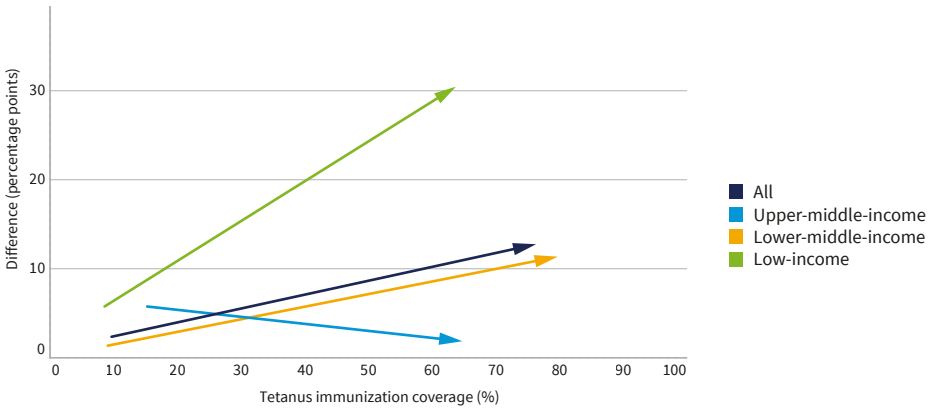
## Box 4.1 Inequalities can be introduced through interventions: the example of tetanus immunization coverage at birth

Maternal and neonatal tetanus (MNT) is a form of tetanus that affects women during pregnancy or within six weeks of the end of pregnancy, and infants during their first 28 days of life *(6)*. MNT constitutes a major public health concern, as neonatal case-fatality rates are upwards of 80% and approach 100% when untreated *(7)*. Immunization of pregnant women against tetanus is a key strategy for reducing tetanus morbidity and mortality while also achieving the goal of maternal and neonatal tetanus elimination. An infant's tetanus protection at birth (PAB) is comprised of immunization received by the woman during and before her pregnancy (e.g. through childhood vaccination, booster doses or mass vaccination campaigns, or during prior pregnancies).

Global inequalities in tetanus immunization coverage at birth are evident across various dimensions, including wealth, maternal age, education and place of residence *(8)*. For instance, poorer households, younger maternal age, lower education of the mother and residence in rural areas tend to have lower rates of PAB. These inequalities are particularly pronounced in LICs and LMICs, but they also persist in UMICs, especially concerning education level of the mother and rural residence.

Findings from a study of 71 LICs and middle-income countries suggest that the majority of tetanus immunization PAB for first births is the result of vaccinations received during pregnancy. The extent of economic-related inequality in PAB increases during pregnancy, as more women from richer households than women from poorer households are vaccinated during pregnancy *(9)*. Economic-related inequality is measured as the difference along the socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration. Overall, LICs and middle-income countries had similar levels of economic-related inequality and tetanus immunization coverage before pregnancy. However, increases in tetanus immunization coverage at birth were coupled with increases in inequality in LICs, overall, in contrast with UMICs (Fig. 4.5). Inequalities in coverage at birth in this group were introduced during pregnancy, likely driven in part by inequalities in antenatal care access and utilization. Addressing these inequalities requires targeted interventions to improve access to and uptake of tetanus vaccines among women from poorer households, ensuring that all pregnant women and newborns receive adequate protection against this preventable disease.

**Figure 4.5 Economic-related inequality in maternal tetanus immunization coverage and average coverage level before pregnancy and at birth, by World Bank country income group, 71 countries, 2013–2022**




The start of the arrow indicates the level of economic-related inequality and tetanus immunization coverage before pregnancy and the end of the arrow indicates the level of inequality and coverage at birth. For each country, economic-related inequality is measured as the difference along the whole socioeconomic spectrum while taking the composition of every socioeconomic subgroup into consideration. For each World Bank income group, the weighted mean difference is calculated across countries. Based on 18 upper-middle-income, 33 lower-middle-income and 20 low-income countries.

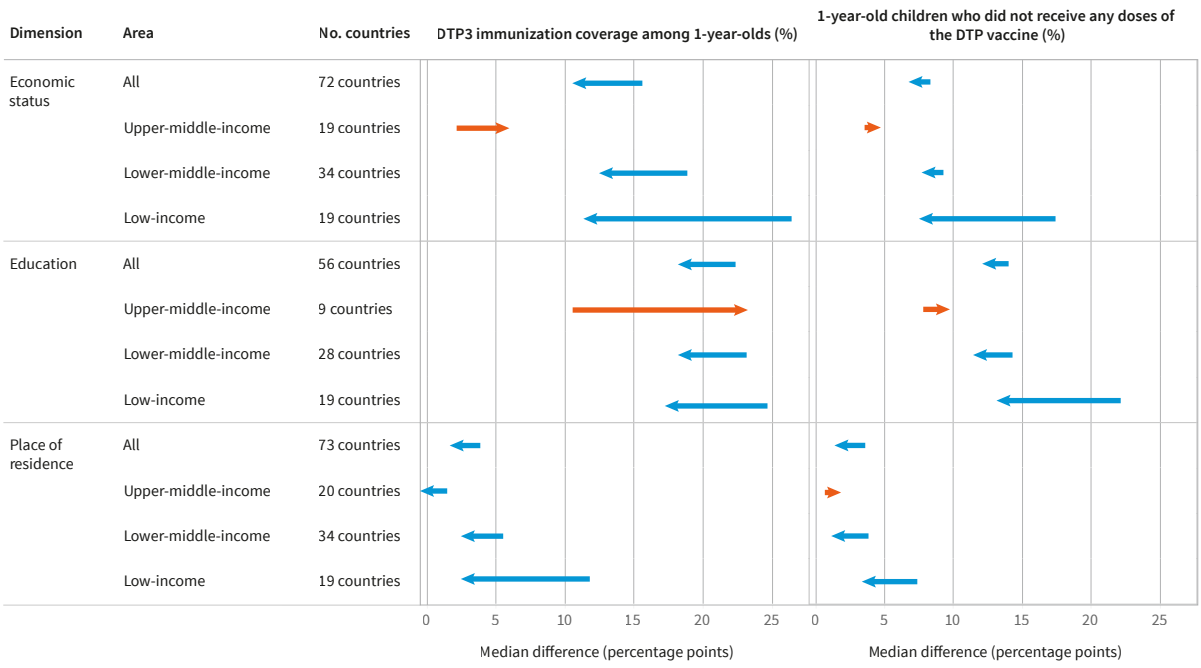
*Source*: derived from Johns et al. *(9)* with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2013 and 2022.

# 4.3 How inequalities have changed over time

Over the past two decades, significant efforts have been made to address inequalities in immunization coverage. IA2030 and its predecessor, the Global Vaccine Action Plan for 2011–2020, focus on reaching zero-dose children and ensuring equitable access to vaccines. Collaborations between WHO, UNICEF and Gavi, the Vaccine Alliance, have significantly impacted the number of zero-dose children in lower-income countries. For example, these efforts have helped to reduce the number of zero-dose children from 15.8 million in 2010 to 12.8 million in 2019 *(10)*. However, the COVID-19 pandemic resulted in setbacks to vaccination programmes, resulting in an increase in the number of zero-dose children to 14.5 million in 2023. In response to disruptions caused by the COVID-19 pandemic, WHO and UNICEF launched catch-up and recovery programmes to restore immunization services. Targeted vaccination campaigns in low-coverage regions aim to close immunization gaps and prevent outbreaks.

The overall change in inequality in DTP3 immunization coverage and zero-dose prevalence can be measured using the median difference along the socioeconomic spectrum (while taking the composition of every socioeconomic subgroup into consideration). Between 2004–2013 and 2014–2023, overall economic- and education-related inequalities in DTP3 immunization coverage decreased (Fig. 4.6). Across 72 countries, economic-related inequality in DTP3 coverage reduced from a median of 15.4 to 11.0 percentage points, and education-related inequality across 56 countries reduced from a median of 22.1 to 18.7 percentage points. Overall, economic- and education-related inequalities in zero-dose prevalence only decreased slightly over this period.

**Figure 4.6 Change in median economic, education and place of residence inequality in DTP3 immunization coverage and zero-dose prevalence between 2004–2013 and 2014–2023, by World Bank country income group**




DTP3: three doses of diphtheria–tetanus–pertussis vaccine.

The start of the arrow indicates the median level of inequality in 2004–2013 and the end of the arrow indicates the median level of inequality in 2014–2023. The median difference for economic status and education reflects the difference along the whole socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration. The median difference for place of residence reflects the difference between urban and rural subgroups for DTP3 coverage and between rural and urban subgroups for zero-dose prevalence. Blue indicates a decrease in inequality, while orange indicates an increase in inequality.

*Source*: derived from the WHO Health Inequality Data Repository, Childhood Immunization dataset, with data sourced from the most recent Demographic and Health Survey or Multiple Indicator Cluster Survey between 2014 and 2023 and between 2004 and 2013 *(5)*.

Changes in immunization inequality related to economic status, education and place of residence varied across country income groupings. Broadly, in the last decade there has been a convergence in inequalities across LICs and LMICs, with inequalities diminishing in LICs to the point that their median level of inequality in 2014–2023 was similar to (or better than) that of LMICs. In particular, across 19 LICs, economic-related inequality in DTP3 coverage and zero-dose prevalence reduced by more than half, from 26.2 to 11.8 percentage points and from 17.2 to 8.0 percentage points, respectively. In UMICs, inequality remained the same for zero-dose prevalence but economic- and education-related inequality in DTP3 coverage increased.

# 4.4 Barriers to immunization

The Equity Reference Group for Immunization[2] has identified several thematic priorities to address inequities in immunization coverage, including urban poor areas, remote/rural areas, children affected by conflict, and gender-related inequities and barriers *(11)*. In such contexts, different strategies are needed to understand coverage levels and address inequities in immunization coverage. Surveys are rarely carried out to enable the accurate assessment of coverage rates in the above contexts, and when they are, they generally lack granularity. This results in a scarcity of disaggregated data and inadequate monitoring of inequalities. Consequently, it is challenging to identify disadvantaged groups within these contexts and implement programmes that prioritize reaching them.

In urban poor areas, overcrowding and poverty can significantly hinder vaccine delivery and uptake. These areas often lack adequate health-care facilities and resources, making it challenging to maintain consistent immunization services. Remote rural regions face similar issues, with limited health-care infrastructure and difficult terrain further complicating efforts to reach all children. For instance, a study in Malawi found that proximity to a health facility providing vaccination services in rural areas was associated with increased likelihood of vaccine receipt, and that remote rural children were more likely to be under-vaccinated *(12)*. Additionally, children affected by conflict experience unique barriers to immunization. Conflict zones often see disrupted health services, displacement of populations and heightened insecurity, all of which contribute to lower immunization rates. These children may miss out on routine vaccinations due to instability and lack of access to health care.

Gender-related barriers can hinder immunization coverage by limiting women's autonomy and decision-making power, which affects their ability to access health services for themselves and their children. Additionally, cultural norms and practices may restrict women's mobility and access to information, further reducing vaccination coverage in communities with high gender inequality. Women with higher social independence, as measured by the Survey-based Women's Empowerment Global Index, are more likely to ensure their children receive vaccinations *(13)*. In contrast, DTP3 coverage tends to be lower, and zero-dose prevalence higher, among children of women with lower social independence.

At the subnational and national levels, areas with higher gender inequality tend to have lower immunization coverage. In a study of 162 countries, those with high gender inequality (favouring men), as measured using the Gender Inequality Index,[3] had DTP3 immunization coverage that was 13 percentage points lower (median value of 81% versus 94%) and zero-dose prevalence 7 percentage points higher (median value of 10% versus 3%) than countries with lower inequality *(14)*. A study of 702 subnational regions across 57 countries also found that regions with greater gender inequality had lower DTP3 coverage and higher zero-dose prevalence *(15)*. Subnational regions with higher gender inequality (favouring men), as measured by the Subnational Gender Development Index, had DTP3 immunization coverage that was 21.6 percentage points lower, while zero-dose prevalence was 13.4 percentage points higher (median values).

[2] The Equity Reference Group for Immunization is an action-oriented think tank that consists of senior experts in global health working with WHO, Gavi, the World Bank, Bill & Melinda Gates Foundation and UNICEF; academic experts in metrics, gender, and health systems development; and senior leaders from the ministries of health in Indonesia, Ethiopia and the United Republic of Tanzania.

[3] The Gender Inequality Index is a composite metric of gender inequality using three dimensions: reproductive health, empowerment and the labour market. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions.

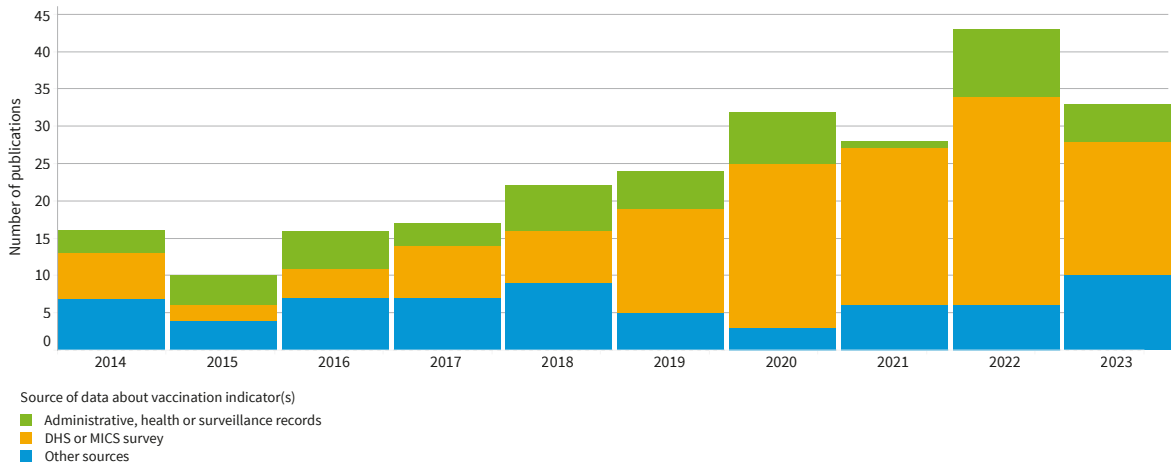
# 4.5 Data availability to monitor inequalities in immunization

Monitoring inequalities in immunization relies on various data sources, each with its own advantages and disadvantages *(16)*. Administrative data are routinely collected by health facilities and can provide timely, comprehensive information on immunization coverage. These data are cost-effective and cover large populations, making them useful for tracking trends over time. However, administrative data can suffer from inaccuracies due to reporting errors, incomplete records, sparse information about dimensions of inequality and uncertainty about target population numbers. Household survey data, such as those from DHS and Multiple Indicator Cluster Surveys (MICS), offer detailed, population-based insights into immunization coverage. These surveys are valuable for capturing data on hard-to-reach populations and for validating administrative data. They also provide rich contextual information, such as socioeconomic and demographic factors. However, household surveys are expensive, time-consuming and conducted infrequently, which can limit their utility for real-time monitoring.

Data availability can be a challenge, particularly in LICs where resources for comprehensive data collection and reporting are often limited. These countries may face difficulties in maintaining accurate and up-to-date records, which can hinder efforts to monitor and address immunization inequalities effectively. Logistical challenges, such as limited access to remote areas and insufficient funding for large-scale surveys, further complicate data collection efforts. Inaccurate estimates of the target population for vaccination can exacerbate these difficulties, particularly when monitoring subnational inequalities and subpopulations of interest. Misestimations can lead to skewed coverage rates, masking inequalities and making it challenging to identify and address areas with the greatest need *(17)*. Addressing these challenges requires investment in strengthening health information systems to ensure reliable data are available for informed decision-making and targeted interventions.

A scoping review of publications in academic journals analysing inequalities in immunization coverage among children revealed a rise in the use of DHS and MICS data between 2014 and 2023 (Fig. 4.7) *(18)*. Across the 10-year period, 129 papers (54%) had utilized DHS and/or MICS data, demonstrating the utility of these data sources for monitoring inequalities in immunization. The number of publications using administrative, health or surveillance records remained relatively stable, as did those based on other sources such as non-routine, study-specific or small-scale surveys.

**Figure 4.7 Publications of studies of inequalities in childhood vaccination coverage between 2014 and 2023 by data source for vaccination indicators**




*Source*: derived from Lyons et al. *(18)*.

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# Annexes

# Annex 1.

## Progress assessment of selected health-related SDG indicators by WHO region

A summary of progress of selected health-related SDG indicators is presented in Table A1.1 for Goal 3 (Health and Well-being) indicators and Table A1.2 for those outside of Goal 3.

An indicator is included in the assessment if it meets the following criteria:

- There is an explicit numerical SDG or other global framework target to be achieved by a defined year, applicable at both global and regional levels.
- Estimates are available for the baseline year and at least one other later year to enable a trend assessment.

For each indicator, the numbers shown in the global and regional cells are the latest available estimated values. The reference year of these values is indicated in the corresponding column.

Progress is assessed based on the latest available value, and the projected value for the target year based on current trends. Unless otherwise noted, current trends are defined by the average annual rates of change between the baseline year and the reference year of the latest available value. Progress is described in three categories as follows:

- "Target reached": target is already achieved
- "Progress on track": target will be achieved by the target year based on current trends
- "Acceleration needed": target will not be met by the target year based on current trends

It is noted that this method of assessment may differ from those used by the United Nations Statistics Division or by the custodian agencies of individual indicators, leading to different assessment results.

Tables A1.3 and A1.4 provide the list of health-related SDG indicators that are not included in Tables A1.1 and A1.2.

## Table A1.1 Latest values[a] and progress assessment[b] of selected SDG 3 indicators,[c] by WHO region

| Indicator | Notes | Year | | | Target | Global | African Region | Region of the Americas | South-East Asia Region | European Region | Eastern Mediterranean Region | Western Pacific Region |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Baseline | Target | Most recent estimate | | | | | | | | |
| 3.1.2 Proportion of births attended by skilled health personnel (%) | | 2015 | 2025 | 2024 | 90 | 87 | 74 | 96 | 90 | 99 | 85 | 98 |
| 3.3.1 New HIV infections (per 1000 uninfected population) | d | 2010 | 2030 | 2023 | Reduce new infections by 90% | 0.17 | 0.55 | 0.16 | 0.06 | 0.18 | 0.09 | 0.07 |
| 3.3.2 Tuberculosis incidence (per 100 000 population) | | 2015 | 2030 | 2023 | Reduce by 80% | 134 | 206 | 33 | 234 | 24 | 116 | 97 |
| 3.3.3 Malaria incidence (per 1000 population at risk) | | 2015 | 2030 | 2023 | Reduce by 90% | 60.4 | 226.8 | 3.6 | 2.3 | 0.0 | 17.9 | 2.3 |
| 3.3.4 Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years (%) | e | 2015 | 2030 | 2020 | 0.1 | 0.9 | 2.5 | 0.1 | 0.4 | 0.3 | 0.8 | 0.3 |
| 3.3.5 Reported number of people requiring interventions against NTDs (millions) | f | 2010 | 2030 | 2023 | Reduce by 90% | 1495 | 518.6 | 30.7 | 787.7 | 5.9 | 78.0 | 74.0 |
| 3.4.1 Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes or chronic respiratory illness (%) | | 2015 | 2030 | 2019 | Reduce by 1/3 | 18.0 | 21.0 | 13.9 | 22.9 | 16.3 | 22.7 | 15.7 |
| 3.4.2 Suicide mortality rate (per 100 000 population) | | 2015 | 2030 | 2021 | Reduce by 1/3 | 9.2 | 7.3 | 9.9 | 10.1 | 12.4 | 3.6 | 9.5 |
| 3.5.2 Total alcohol per capita (aged 15 years and older) consumption (litres of pure alcohol) | | 2010 | 2030 | 2022 | Reduce by 20% | 5.0 | 3.5 | 8.0 | 3.6 | 9.1 | 0.2 | 5.2 |
| 3.6.1 Death rate due to road traffic injuries (per 100 000 population) | g | 2021 | 2030 | 2021 | Halve the number of deaths | 14.9 | 19.5 | 14.2 | 15.4 | 6.8 | 16.3 | 15.4 |
| 3.a.1 Age-standardized prevalence of current tobacco use among persons 15 years and older (%) | h | 2010 | 2025 | 2022 | Reduce by 30% | 20.9 | 9.5 | 16.6 | 26.5 | 25.3 | 17.9 | 22.5 |
| 3.b.1 Diphtheria–tetanus–pertussis third-dose (DTP3) immunization coverage among 1-year-olds (%) | | 2019 | 2030 | 2023 | 90 | 84 | 74 | 86 | 90 | 95 | 79 | 92 |
| 3.b.1 Measles-containing-vaccine second-dose (MCV2) immunization coverage by the locally recommended age (%) | | 2019 | 2030 | 2023 | 90 | 74 | 49 | 75 | 85 | 91 | 73 | 90 |
| 3.b.1 Pneumococcal conjugate vaccine third-dose (PCV3) immunization coverage among 1-year-olds (%) | i | 2019 | 2030 | 2023 | 90 | 65 | 70 | 76 | 75 | 86 | 52 | 26 |
| 3.b.1 Human papillomavirus (HPV) immunization coverage estimates among 15-year-old girls (%) | i | 2019 | 2030 | 2023 | 90 | 20 | 32 | 55 | 8 | 35 | 2 | 7 |

NTDs: neglected tropical diseases.

Notes:

a The numbers shown in the global and regional cells are the latest available estimated values.

b Progress is assessed on the basis of the latest available value, and the projected value for the target year based on the average rates of change since the baseline year, unless otherwise stated.

c An SDG 3 indicator is included if: (1) there is an explicit numerical SDG or other global framework target to be achieved by a defined year, applicable at global and regional levels, and (2) data are available for the baseline year and at least one other later year.

d Progress assessment is based on the change in the total number of new infections.

e Projection takes into account preliminary updates to the estimates.

f Projection is based on multi-disease country-level data and planned interventions in the next years.

g Projection for the 2030 number of deaths is based on the change in the number of deaths since 2010, which was the baseline of the first United Nations Decade of Action for Road Safety 2010–2020.

h No region or country will be assessed as "Target reached" before 2025 data are available.

i Projection takes into account recent introduction of the vaccine in several countries.

*Source*: Births attended by skilled health personnel *(1)*, HIV *(2,3)*, tuberculosis *(4)*, malaria *(5)*, hepatitis *(6)*, NTD *(7)*, noncommunicable disease premature mortality *(8)*, suicide mortality *(8)*, alcohol *(9)*, road traffic mortality *(8,10)*, tobacco *(11)*, immunization *(12)*.

Target reached

Progress on track

Acceleration needed

## Table A1.2 Latest values[a] and progress assessment[b] of selected health-related SDG indicators (excluding Goal 3),[c] by WHO region

| Indicator | Notes | Year | | | Target | Global | African Region | Region of the Americas | South-East Asia Region | European Region | Eastern Mediterranean Region | Western Pacific Region |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Baseline | Target | Most recent estimate | | | | | | | | |
| 2.2.1 Prevalence of stunting among children under 5 years of age (%) | d | 2012 | 2030 | 2024 | Halve the number of stunted children | 23.2 | 31.7 | 9.9 | 29.7 | 4.6 | 26.0 | 10.2 |
| 2.2.2 Prevalence of wasting among children under 5 years of age (%) | d | 2012 | 2030 | 2024 | 3 | 6.6 | 5.6 | 0.7 | 13.9 | 1.0 | 6.3 | 1.9 |
| 2.2.2 Prevalence of overweight among children under 5 years of age (%) | d | 2012 | 2030 | 2024 | 3 | 5.5 | 4.2 | 9.1 | 3.3 | 7.5 | 4.5 | 9.7 |
| 2.2.3 Prevalence of anaemia in women aged 15 to 49 years (%) | d | 2012 | 2030 | 2023 | Reduce by 50% | 30.7 | 36.5 | 18.3 | 46.4 | 21.3 | 35.8 | 16.5 |
| 6.1.1 Proportion of population using safely managed drinking water services (%) | | 2015 | 2030 | 2022 | 99 | 73 | 33 | 81 | | 92 | 67 | |
| 6.2.1 Proportion of population using safely managed sanitation services (%) | | 2015 | 2030 | 2022 | 99 | 57 | 26 | 66 | 49 | 78 | 55 | 68 |
| 6.2.1 Proportion of population using a handwashing facility with soap and water (%) | e | 2015 | 2030 | 2022 | 99 | 75 | 26 | | 76 | | 72 | 95 |
| 7.1.2 Proportion of population with primary reliance on clean fuels and technology (%) | | 2015 | 2030 | 2023 | 99 | 74 | 24 | 93 | 73 | 97 | 74 | 87 |

Notes:

a The numbers shown in the global and regional cells are the latest available estimated values.

b Progress is assessed on the basis of the latest available value, and the projected value for the target year based on the average rates of change since the baseline year, unless otherwise stated.

c An indicator is included if: (1) there is an explicit numerical SDG or other global framework target to be achieved by a defined year, applicable at global and regional levels, and (2) data are available for the baseline year and at least one other later year.

d Methodology based on the WHO–UNICEF Methodology for monitoring progress towards the 2030 global nutrition targets. Global Nutrition Targets Tracking Tool https://www.who.int/tools/global-targets-tracking-tool.

e Projection for the Western Pacific Region is based on the average annual rate of change since 2017, the earliest year for the which the regional estimate is available.

*Source*: Child malnutrition *(13)*, anaemia *(14)*, water, sanitation and hygiene *(15)*, clean fuels *(16)*.

Target reached

Progress on track

Acceleration needed

Insufficient data to assess progress

## Table A1.3 List of SDG 3 indicators not included in the assessment

| Indicator | Reason for exclusion |
|---|---|
| 3.1.1 Maternal mortality ratio | Target set at the global level; progress not assessed at the regional level |
| 3.2.1 Under-5 mortality rate | Target set at the country level; progress not assessed at the regional level |
| 3.2.2 Neonatal mortality rate | Target set at the country level; progress not assessed at the regional level |
| 3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders | No explicit numerical target |
| 3.7.1 Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods | No explicit numerical target |
| 3.7.2 Adolescent birth rate | No explicit numerical target |
| 3.8.1 Coverage of essential health services | No explicit numerical target |
| 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income | No explicit numerical target |
| 3.9.1 Mortality rate attributed to household and ambient air pollution | No explicit numerical target |
| 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene | No explicit numerical target |
| 3.9.3 Mortality rate attributed to unintentional poisoning | No explicit numerical target |
| 3.b.3 Health product access index | No explicit numerical target |
| 3.c.1. Health worker density and distribution | No explicit numerical target |
| 3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness | No explicit numerical target |
| 3.d.2 Percentage of bloodstream infections due to selected antimicrobial-resistant organisms | No explicit numerical target |

## Table A1.4 List of health-related SDG indicators (excluding Goal 3) not included in the assessment

| Indicator | Reason for exclusion |
|---|---|
| 1.a.2 Domestic general government health expenditure (GGHE-D) as percentage of general government expenditure (GGE) (%) | No explicit numerical target |
| 5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months (%) | Trend data not available |
| 5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in lifetime (%) | Trend data not available |
| 6.3.1 Proportion of domestic and industrial wastewater flows safely treated (%) | Baseline data not available |
| 11.6.2 Annual mean concentrations of fine particulate matter (PM2.5) in urban areas (μg/$m^3$) | No explicit numerical target |
| 16.1.1 Mortality rate due to homicide (per 100 000 population) | No explicit numerical target |

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# Annex 2.

## Summary of methodology

### Chapter 1

The analysis presented in Chapter 1 is based on the WHO Global health estimates 2021 (GHE2021), which included the latest estimates on life expectancy, healthy life expectancy, causes of deaths and disability globally, by region and country, and by age and sex. The GHE2021 were produced using data from multiple sources, including national vital registration data, latest estimates from WHO technical programmes, United Nations partners and inter-agency groups, and the Institute for Health Metrics and Evaluation Global Burden of Disease and other scientific studies. The GHE2021 was reviewed by WHO Member States through consultation with national focal points and WHO country and regional offices. The GHE2021 summary of methodology can be accessed online *(1)*.

Secondary analysis was performed using well-established demographic methods to decompose the change and difference in healthy life expectancy over time or between different populations, by age and cause, using GHE2021 data *(2,3)*.

### Chapter 2

The analysis presented in Chapter 2 is based on data available from the global monitoring of health-related SDG indicators as of April 2025. Data were compiled from publications and databases produced and managed by WHO or United Nations partner entities. The methodology for each indicator is available from the cited references for the chapter. The data reference years for each indicator differ as data series are updated on different timelines and with different lags between the data reference year and the publication year. Unless otherwise stated, the assessment of progress towards reaching a target is determined by whether the target will be met if the current average annual rate of change applies until the target year.

### Chapter 3

The Triple Billion estimates in Chapter 3 were calculated following the WHO GPW13 measurement framework, developed through extensive review and consultation with experts, WHO regional offices and Member States *(4)*. Estimates were derived from 46 outcome indicators *(5)*, using the latest available country-level data as of March 2025. Indicator-level projections were generated using statistical forecasting models that account for historical trends, data sparsity and recent developments, according to methods in Concept and methodologies in estimation and forecasting of Triple Billion targets and improving the WHO results framework *(6)*.

Additionally, two hypothetical scenarios are presented. The first shows estimated progress if all countries were to achieve the annualized targets set by the 2030 Agenda *(5,7)*. This scenario was constructed by calculating a population-weighted global average of expected 2030 values for each indicator. Each country's expected 2030 value was adjusted by the proportion needed to close the gap between the global average and the SDG target/indicator. The second scenario shows potential gains in progress if countries within each WHO region were to match the expected progress of top countries in their respective regions by 2030. Region-specific targets are defined as the top decile of the regional distribution of 2030 values for each indicator. Country-specific trajectories for the scenario were calculated by finding the annualized rate of change required to meet regional-targets, from a baseline year of 2023.

### Chapter 4

Economic status is measured using a wealth index and is composed of five subgroups, each accounting for 20% of the population. Education refers to the highest level of education attained by the mother and is composed of three subgroups (no education, primary education and secondary or higher education). For economic status and education, inequality was measured as the difference along the socioeconomic spectrum, while taking the composition of every socioeconomic subgroup into consideration. This is also known as the slope index of inequality (SII). Subgroups were ranked from the most disadvantaged to the most advantaged, factoring in their population sizes, and the indicator value regressed against these relative ranks. SII represents the absolute difference between the two extremes of this regression line. For place of residence, inequality was measured as the difference between urban and rural subgroups (for DTP3 coverage) and the difference between rural and urban subgroups (for zero-dose prevalence). Since place of residence is categorized into two subgroups (urban and rural), the inequality measured by the difference might be less than when there are more subgroups (as is the case with economic status and education). This is because a larger number of groupings typically captures more heterogeneity. Globally and within World Bank country income groups, inequality was calculated as the median difference across countries. Change in inequality over time was measured using countries with two data points, from 2004 to 2013 and from 2014 to 2023 (spanning approximately 10 years).

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