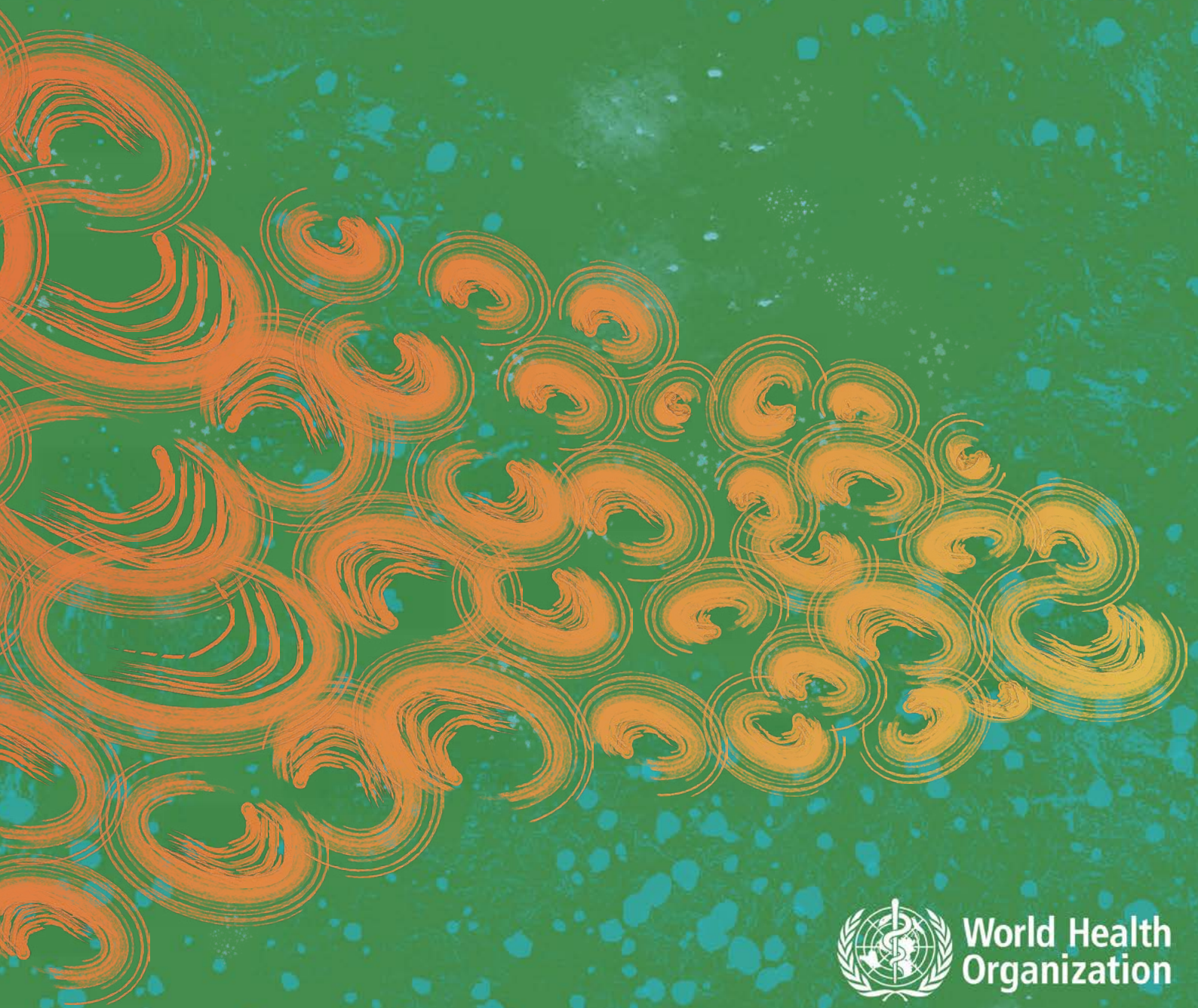
Global hepatitis report 2026



World Health Organization

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Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization

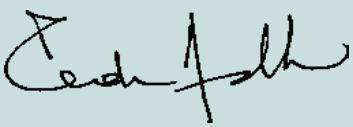
The WHO Global hepatitis report *underscores both encouraging progress and an urgent need for acceleration. While countries that have strengthened political commitment are demonstrating tangible results, overall progress remains too slow and uneven to meet the 2030 elimination targets.*

This report affirms that the tools and strategies required to eliminate viral hepatitis as a public health threat are firmly established. High coverage of the hepatitis B vaccine has marked a major preventive success, while the advent of highly effective direct-acting antivirals has transformed hepatitis C treatment, achieving cure rates exceeding 95%. Improvements in blood safety and injection practices have further reduced transmission risks, reinforcing that elimination is achievable.

However, despite these advances, the global response has yet to match the scale of the challenge. In many countries, efforts remain at an early stage, constrained by limited data, insufficient investment and uneven implementation.

This report calls for urgent recalibration and renewed commitment from all countries to scale up prevention, diagnosis and treatment. By closing critical gaps and seizing the opportunities identified, millions of lives can be saved.

The World Health Organization remains committed to supporting governments, partners and communities to accelerate progress and ensure that no one is left behind in the path towards elimination by 2030.



Dr Tereza Kasaeva
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The WHO Global hepatitis report *demonstrates that meaningful progress is achievable, while making clear that critical gaps persist in the global response. Every missed diagnosis and untreated infection due to chronic viral hepatitis represents a preventable death. Countries must move faster to integrate hepatitis services for people living with hepatitis B and C into primary care, and to reach the communities most affected.*

The World Health Organization calls for renewed urgency and coordinated action to scale-up proven interventions. With stronger commitment and focused implementation, the global community can move decisively towards eliminating viral hepatitis as a public health threat by 2030.

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Abbreviations

ALT	alanine aminotransferase
BCG	bacille Calmette-Guérin
CDAF	Center for Disease Analysis Foundation
COVID-19	coronavirus disease
DAA	direct-acting antiviral
ECDC	European Centre for Disease Prevention and Control
EMTCT	elimination of mother-to-child transmission
GDP	gross domestic product
GHO	Global Health Observatory
GHSS	Global health sector strategy
HAV	hepatitis A virus
HBIG	hepatitis B immunoglobulin
HBsAg	hepatitis B surface antigen
HBcAg	hepatitis B core antigen
HBeAg	hepatitis B e antigen
HBV	hepatitis B virus
HCC	hepatocellular carcinoma
HCV	hepatitis C virus
HCVcAg	hepatitis C core antigen
HDV	hepatitis D virus
HEV	hepatitis E virus
IPC	infection prevention and control
LMICs	low- and middle-income countries
NHS	national health service
NSP	needle and syringe programme
OAMT	opioid agonist maintenance treatment
PMTCT	prevention of mother-to-child transmission
RNA	ribonucleic acid
SDG	Sustainable Development Goal
TB	tuberculosis
TDF	tenofovir disoproxil fumarate
TRIPS	Trade-Related Aspects of Intellectual Property
TTIs	transfusion-transmissible infections
UHC	universal health coverage
UN	United Nations
USA	United States of America
WHA	World Health Assembly
WHO	World Health Organization

Chapter 1

Introduction

Viral hepatitis is one of the world's most important public health challenges. Hepatitis B virus (HBV) and hepatitis C virus (HCV) continue to cause chronic infection in hundreds of millions of people, leading to cirrhosis, liver cancer and over 1 million premature deaths each year, even though both infections are preventable and treatable. Together, HBV and HCV account for over 95% of global mortality caused by viral hepatitis, with hepatitis A virus (HAV), hepatitis D virus (HDV) and hepatitis E virus (HEV) accounting for the remainder.

People can be infected with viral hepatitis through exposure to infected blood (HBV, HCV and HDV) and other bodily fluids (HBV and HDV), contaminated water (HAV and HEV) and contaminated food (HAV). In highly endemic areas, most chronic HBV infections occur in children aged under 5 years, either through mother-to-child transmission at birth or horizontal transmission through person-to-person contact in the presence of open cuts and sores. The most common routes of HCV transmission are unsafe injections and medical procedures, unscreened blood transfusions, and sharing of needles and syringes among people who inject drugs. All forms of viral hepatitis infection can cause acute liver inflammation; however, HBV, HCV and HDV can progress to chronic infection, with those infected with HBV in infancy or early childhood (aged <5 years) being at the highest risk (about 95%).

Basic facts about viral hepatitis are provided in **Box 1.1**.

All Member States of the United Nations (UN) and the World Health Organization (WHO) have committed to eliminating viral hepatitis as a global public health threat by 2030, through their adoption of the UN Sustainable Development Goals (SDGs) in 2015, resolutions at the WHO World Health Assembly (in 2010 and 2014) and the WHO global health sector strategy (GHSS) on viral hepatitis (2022–2030) *(1–4)*. Such high-level political commitment provides the essential foundation for global, regional and national efforts to eliminate hepatitis.

Elimination of viral hepatitis can be achieved through high coverage of five interventions for prevention and treatment *(4)*. These interventions are hepatitis B vaccination, with a birth dose followed by two or three further doses in early infancy, which confers protection to about 95% of those vaccinated for at least 20 years or for life; antiviral prophylaxis to prevent mother-to-child transmission of HBV; blood and injection safety; prevention of HCV transmission among people who inject drugs through harm-reduction services; and testing for infection followed by treatment for people diagnosed with HBV or HCV infection, including a 12-week oral treatment for HCV that has a cure rate of about 95%.

Research and innovation are also critical to accelerate progress towards elimination of hepatitis. Current research is focusing on the development of curative treatment for HBV infection, and a safe and effective vaccine for hepatitis C *(5–7)*.

In the past decade, national governments, UN agencies and global health partners have worked together to mobilize resources, strengthen health systems and promote equitable access to prevention, testing and treatment for viral hepatitis. Encouragingly, a growing number of countries are translating global commitments into concrete actions aligned with the recommended interventions and targets defined in WHO's GHSS 2022–2030 for viral hepatitis *(3)*.

WHO initiated global hepatitis reporting from Member States in 2016 *(8)*, with reports published in 2017, 2021 and 2024 *(9–11)*. Their main purpose was to provide an up-to-date assessment of the status of the HBV and HCV epidemics (given that they cause >95% of mortality related to viral hepatitis) and progress in response efforts at global, regional and country levels, in the context of global commitments, strategies and targets. This 2026 edition provides an up-to-date assessment, covering the period between 2015 and 2024.

The report is organized around four major topics. **Chapter 2** gives an overview of past and current global commitments, strategies and targets related to viral hepatitis. **Chapter 3** presents and discusses the status of the HBV and HCV epidemics and trends in the period 2015–2024. **Chapter 4** reviews progress in coverage of the five interventions for prevention, diagnosis and treatment. **Chapter 5** highlights what is needed to achieve the 2030 elimination targets, including examples from countries that are leading the way.

The report is primarily based on data compiled in periodic rounds of global hepatitis data collection managed by WHO and model-based estimates of incidence, prevalence and mortality, produced in collaboration with external partners (**Annex 1**). In the 2025 round, 140 WHO Member States reported data (**Annex 2**), an increase from 113 in the previous round in 2023. Additional data sources include the WHO Global Health Observatory (GHO) and databases managed by other UN agencies. Data and estimates can be downloaded from the GHO hepatitis page *(12)* and country dashboards are available online *(13)*.

The report's main findings and messages are highlighted in **Box 1.2**, followed by an illustrative overview of global progress towards the 2030 elimination targets.

Box 1.1. Basic facts about viral hepatitis

Hepatitis A

Hepatitis A is a liver infection caused by the hepatitis A virus (HAV). It is usually transmitted through exposure to contaminated food or water, or exposure to infected people. Almost everyone infected with HAV recovers fully with lifelong immunity, and this virus does not cause chronic infection. However, in rare cases, HAV infection can lead to acute liver failure. A safe and effective vaccine is available.

Hepatitis B

Hepatitis B is a liver infection caused by the hepatitis B virus (HBV). It is spread through infected blood and other body fluids. In highly endemic areas, most chronic HBV infections occur in children aged under 5 years, either through mother-to-child transmission at birth or horizontal transmission through person-to-person contact in the presence of open cuts and sores. HBV can also be spread via needle-stick injuries, tattooing, piercing, sexual contact (especially among unvaccinated individuals with multiple partners), and sharing of contaminated needles or sharp instruments in health care settings or among people who inject drugs.

HBV infection can be acute or chronic. The risk of developing a chronic infection is highest in children aged under 5 years. Infection in infancy or early childhood results in chronic hepatitis in about 95% of cases, while the risk of chronic infection is below 5% for infections acquired in adulthood. Chronic infection significantly increases an individual's risk of developing cirrhosis and liver cancer, usually about 20–30 years after infection.

Hepatitis B can be prevented through vaccination, administered as a birth dose within 24 hours of delivery, followed by two or three additional doses during early infancy. The birth dose is critical for preventing mother-to-child transmission. A complete vaccine series induces protective immunity in more than 95% of infants, children and young adults, with protection lasting at least 20 years and often for life. WHO recommends catch-up vaccination for unvaccinated children, adolescents and high-risk adults (e.g. health care workers and individuals with chronic liver disease).

Chronic HBV infection can be diagnosed using point-of-care rapid tests and can be effectively managed with lifelong antiviral therapy. The annual cost of tenofovir-based treatment ranges from about US$ 34 to US$ 300 per person, with the lower prices being available through generic formulations.

Hepatitis C

Hepatitis C is a liver infection caused by hepatitis C virus (HCV). It is transmitted through contact with infected blood; common routes of transmission include unsafe injections and medical procedures, unscreened blood transfusion, and sharing of needles and syringes among people who inject drugs. HCV can lead to both acute and chronic illness, ranging in severity from mild illness to serious, lifelong illness including liver cirrhosis and cancer.

About 15–45% of individuals with HCV infection spontaneously clear the virus through an immune response but remain antibody positive. HCV infection is diagnosed through serological testing for antibodies, followed by nucleic acid testing to confirm active infection. It can be cured using 12-week oral regimens of direct-acting antivirals (DAAs), which achieve cure rates of around 95%. The full 3-month DAA regimen costs about US$ 55–100 in access markets (i.e. countries that benefit from voluntary licensing and generic manufacturing) and US$ 300–500 in non-access markets.

Hepatitis D

Hepatitis D is a liver disease caused by the hepatitis D virus (HDV), a defective ribonucleic acid (RNA) virus that requires the presence of HBV for replication. HDV infection can occur either as a coinfection (i.e. when individuals acquire HBV and HDV simultaneously) or as a superinfection (i.e. when HDV infects someone who is already chronically infected with HBV). Thus, prevention of HBV infection through vaccination also prevents HDV infection. HBV–HDV co-infection is the most aggressive form of viral hepatitis due to its rapid progression towards cirrhosis and HCC. Treatment options remain limited and are much less effective than those for hepatitis B and C.

Hepatitis E

Hepatitis E is a liver infection caused by the hepatitis E virus (HEV). It is transmitted via the faecal–oral route, mainly through contaminated water. In most cases, the infection resolves spontaneously within 2–6 weeks. In rare instances, the infection can become severe and progress to fulminant hepatitis (acute liver failure). There is no specific treatment. A vaccine has been developed but its use is limited *(14)*.

Box 1.2. Report findings and messages – key points

Progress towards the global goal of eliminating viral hepatitis as a public health threat by 2030 is off track.

Viral hepatitis remains a leading global health problem, despite the availability (since the 1990s) of a hepatitis B vaccine that has 95% efficacy, effective (although lifelong) antiviral treatments for chronic HBV infection and (since 2015) a 12-week antiviral treatment for HCV infection that has a 95% cure rate.

Globally in 2024, an estimated 1.1 million people (95% uncertainty interval [UI]: 0.9–1.3 million) died from HBV-related cirrhosis and liver cancer, a 17% increase compared with 2015; 240 000 people (95% UI: 160 000–370 000) died from HCV-related cirrhosis and liver cancer, a reduction of 12% compared with 2015.

Most (75%) HBV-related deaths and the highest mortality rates in 2024 were in the WHO African and Western Pacific regions. Ten countries accounted for 69% of the global total: Bangladesh, China, Ethiopia, Ghana, India, Indonesia, Nigeria, the Philippines, South Africa and Viet Nam.

Geographically, the distribution of HCV-related deaths was much more dispersed. In 2024, 10 countries accounted for 58% of the global total: China, India, Indonesia, Japan, Nigeria, Pakistan, the Russian Federation, South Africa, the USA and Viet Nam.

To achieve the 2030 global targets of reducing both HBV- and HCV-related deaths by 65% compared with 2015 levels, the coverage of treatment for people with HBV or HCV infection needs to be rapidly expanded.

Worldwide in 2024, there were an estimated 240 million people living with a chronic HBV infection (95% UI: 202–296 million), equivalent to 2.9% of the global population. Of them, less than 5% were on treatment, although an estimated 50% are eligible based on the latest (2024) WHO guidelines.

Globally in 2024, treatment coverage among the cumulative total of 68 million people with HCV infection eligible for treatment since 2015 was 20%.[a] In 2024, there were an estimated 11 million people who had been diagnosed with HCV infection and were alive but not yet treated.

In the longer term, the best way to reduce HBV- and HCV-related mortality is to prevent new HBV and HCV infections. This is also necessary to achieve the 2030 targets for reductions in incidence and prevalence.

Globally, the number of people newly infected with HBV in 2024 was 0.9 million (95% UI: 0.7–1.2 million); this was a decline of 32% from 2015. The WHO African Region accounted for 68% of new infections in 2024.

Most chronic HBV infections are acquired in the first 5 years of life, either through mother-to-child transmission or horizontal transmission through person-to-person contact in the presence of open cuts and sores, with the sequelae that cause mortality occurring about 3 decades later.

The global prevalence of HBV infection in children aged under 5 years was 0.6% in 2024, a reduction from 0.8% in 2015 but still far from the 2030 target of 0.1%.

The most severe burden of HBV infection among children aged under 5 years is predominantly in countries in the WHO African Region; in 2024, prevalence was above 1% in most countries[b] and in the range of 2–5% in several countries. Worldwide, 85 countries have achieved a prevalence of less than 0.1%.

Achieving the 2030 global target of a 95% reduction in HBV incidence (compared with 2015) requires a large improvement in birth-dose coverage of hepatitis B vaccination in the WHO African Region (where it was 17% in 2024) and expanded provision of antiviral prophylaxis to prevent mother-to-child transmission of HBV infection.

In 2025, 20 out of 47 countries in the African Region were not implementing hepatitis B birth-dose vaccination.

Globally, the number of people newly infected with HCV in 2024 was 0.9 million (95% UI: 0.6–1.4 million); this was a decline of 8.1% from 2015, far off the 2030 target of an 80% reduction.

Historically, unsafe medical injections have been important sources of HCV transmission. Globally, the latest data indicate that safety is high, although there are a few country exceptions.

To accelerate progress towards the 2030 target, the highest priority is to ensure that non-medical injections and practices are safe. In particular, the coverage of harm reduction services among people who inject drugs, who account for about 44% of new HCV infections globally, needs improvement.

In 2024, the average number of needles and syringes distributed per person who inject drugs was only 35, far short of the 2030 global target of 300.

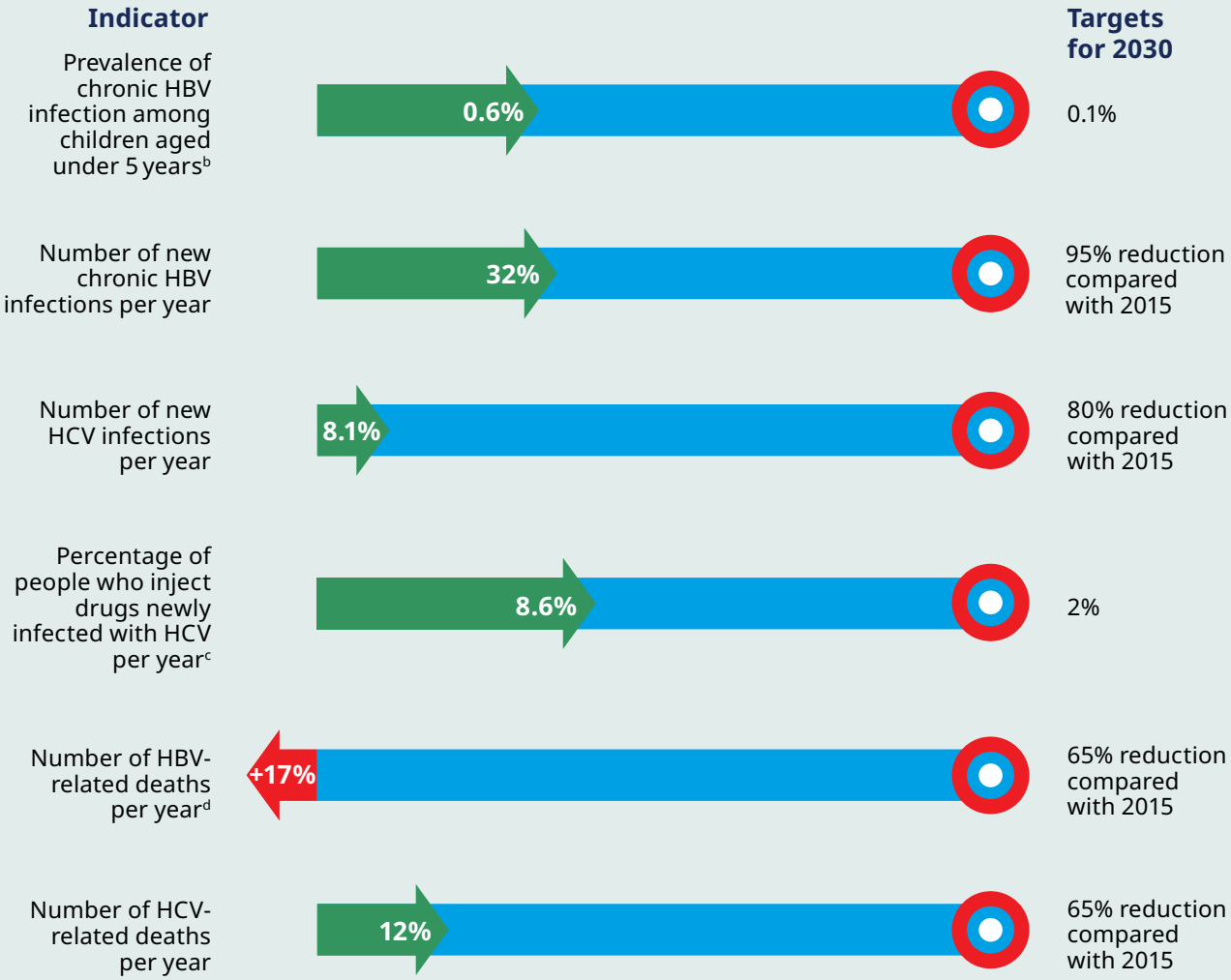
A growing number of countries are taking action to accelerate national progress towards elimination; some have already achieved impressive results. The report features examples from Bangladesh, Brazil, Cameroon, China, Egypt, Ghana, Georgia, Italy, Madagascar, Maldives, Mexico, Pakistan, Rwanda, Thailand, Togo and the United Kingdom of Great Britain and Northern Ireland (United Kingdom).

Available interventions to prevent and treat viral hepatitis need to be urgently scaled up, especially in countries with the highest burden.

[a] In 2024 specifically, there were an estimated 47 million people (95% UI: 31–71 million) living with HCV infection.
[b] In 2024, the regional average was 1.4%. The prevalence in all other WHO regions was <1%.

Global targets: latest status of progress[a]

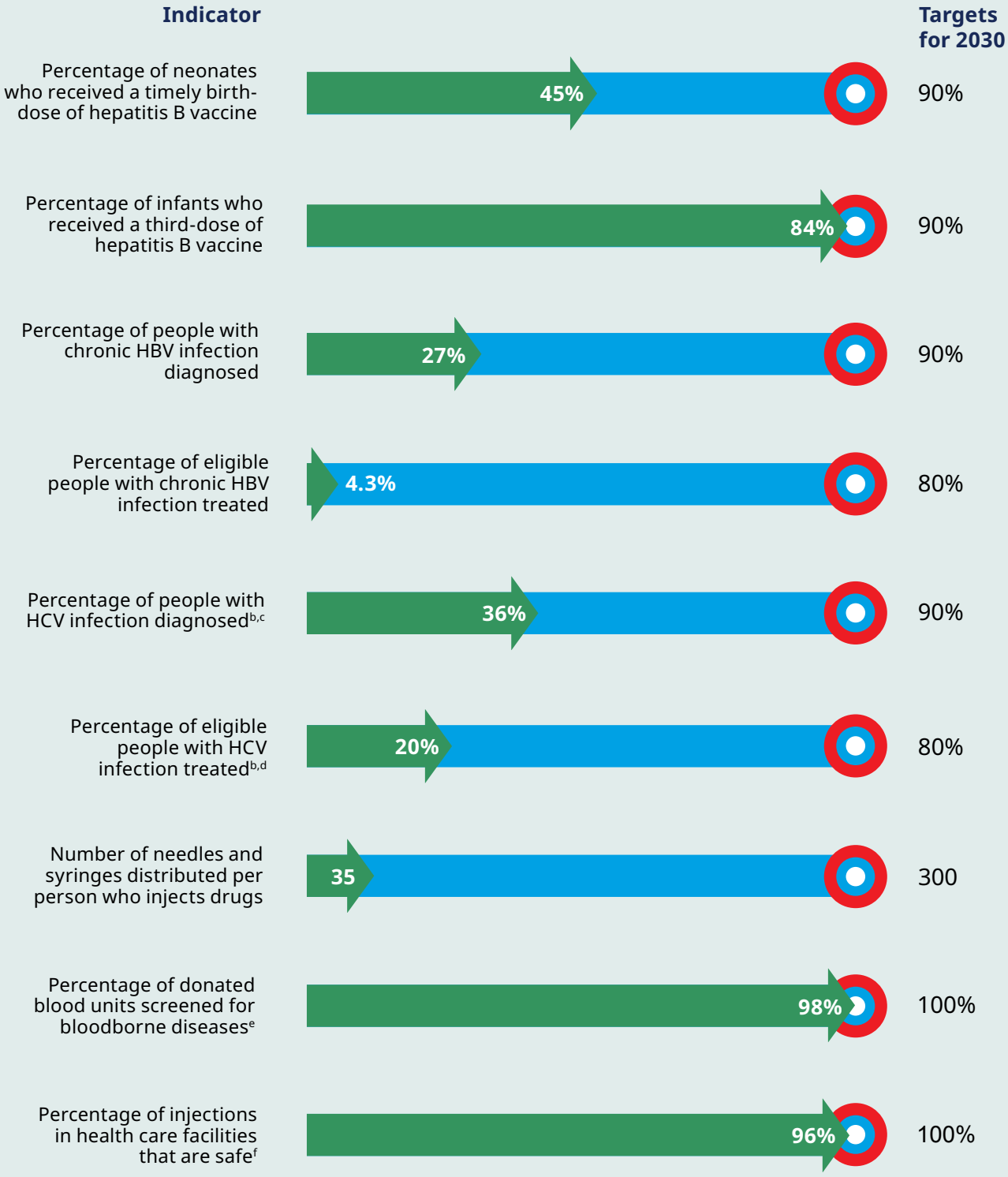
a) Impact targets



[a] This is 2024 for all indicators unless otherwise stated.
[b] The baseline estimate for 2015 is 0.8%.
[c] Data are for 2021.
[d] There was a 17% increase in HBV-related deaths between 2015 and 2024.

Global targets: latest status of progress[a]

b) Service coverage targets



[a] This is 2024 for all indicators unless otherwise stated.
[b] The denominator is the cumulative number of people with an HCV infection at any time in the period 2015–2024
[c] The numerator is the cumulative number of people diagnosed with HCV infection in the period 2015–2024.
[d] The numerator is the cumulative number of people with HCV infection who were treated in the period 2015–2024.
[e] Data are for 2018.
[f] Data are for between 2011 and 2015.

Chapter 2

Global commitments, strategies and targets

2.1 How hepatitis rose onto the global health agenda

Efforts to prevent and treat viral hepatitis changed markedly between the early 1990s and 2015. Starting from a point of relative neglect, by 2015 a global agenda for hepatitis elimination had been adopted by all Member States of the United Nations (UN) and the World Health Organization (WHO), and a new, highly effective treatment for hepatitis C had become available.

Global commitments and actions specific to viral hepatitis began in 1992, when the World Health Assembly (Health Assembly) adopted a resolution (WHA45.17) that urged all Member States to include the hepatitis B vaccine in routine infant immunization schedules *(15)*. This was the first time that hepatitis prevention had been addressed through a disease-specific, population-wide intervention. Previously, hepatitis had featured only indirectly on the global health agenda – most notably in 1975, with the adoption of a Health Assembly resolution (WHA28.72) on blood safety and associated strengthening of national blood services *(16)*.

Almost 2 decades later, 2010 was a landmark year that saw the adoption of the first-ever Health Assembly resolution on viral hepatitis (WHA63.18) *(1)* (**Annex 3**). This resolution was the culmination of several years of efforts to estimate and raise awareness of the disease burden caused by viral hepatitis (especially deaths from hepatitis B and C), and to improve diagnostic and treatment options, with major breakthroughs close to becoming a reality.

The 2010 resolution recognized viral hepatitis as a major global public health problem, responsible for about 78% of all cases of primary liver cancer and 51% of all cases of liver cirrhosis *(1)*. Member States committed to strengthening surveillance, laboratory capacity, immunization (including the hepatitis B birth dose), blood and injection safety, harm reduction, and equitable access to testing and treatment, and agreed to designate 28 July as World Hepatitis Day. Member States also asked WHO to develop guidelines and a comprehensive strategy, and to report on progress.

In 2011, WHO established a Global Hepatitis Programme, and in the following year, WHO published a framework for global action to prevent and control viral hepatitis infection *(17)*.

A second Health Assembly resolution on viral hepatitis (WHA67.6) was adopted in 2014 *(2)* (**Annex 3**). By this time, in addition to the hepatitis B vaccine, there were new and much more effective treatment options for hepatitis B and C. The resolution introduced the prospect of eliminating hepatitis B and C as public health threats. It called for countries to develop national strategies, expand vaccination coverage (including a timely birth dose), strengthen infection control, provide comprehensive services for people who inject drugs (e.g. needle and syringe programmes and opioid agonist therapy) and ensure equitable access to affordable diagnostics and medicines.

Political commitment to combating viral hepatitis entered a new phase in 2015, when the UN General Assembly adopted the 2030 Agenda for Sustainable Development. The Sustainable Development Goals (SDGs) included hepatitis within SDG target 3.3, which is to "...end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis...". The SDG indicator for assessment of progress (3.3.4) is the incidence of hepatitis B *(18)*.[1]

One year later, in 2016, the Health Assembly adopted WHO's first *Global health sector strategy on viral hepatitis (4)*.

2.2 The first WHO global hepatitis strategy and the 2030 elimination goal

Guided by the Health Assembly resolutions on viral hepatitis adopted in 2010 and 2014 (WHA63.18 and WHA67.6), the *Global health sector strategy on viral hepatitis, 2016–2021* (GHSS 2016–2021) was adopted at the Health Assembly in 2016 *(4)*.

This first global strategy addressed all five hepatitis viruses (A, B, C, D and E), but had a particular focus on hepatitis B and C because they account for the vast share (>95%) of deaths related to viral hepatitis (**Chapter 1**). The strategy considered interventions to prevent, treat and cure viral hepatitis within the broader context of universal health coverage (UHC), and called for a public health approach. The strategy encouraged integrated planning of hepatitis services together with those for HIV and sexually transmitted infections, to optimize the use of shared platforms including primary health care, antenatal services, harm-reduction programmes and laboratory networks – a paradigm shift from the previous emphasis on specialized services.

The goal of the GHSS 2016–2021 was elimination of viral hepatitis as a public health threat by 2030. The corresponding targets for 2030 were a 90% reduction in new infections and a 65% reduction in deaths, compared with

[1] Progress is being monitored using the prevalence of chronic hepatitis B infection at age 5 years – a proxy measure of the cumulative incidence of chronic hepatitis B infections in the first 5 years of life. This is the period when most chronic infections are acquired, either resulting from mother-to-child transmission or horizontal transmission through person-to-person contact in the presence of open cuts and sores (**Chapter 1**).

levels in 2015, to be achieved by expanding five major categories of intervention towards universal coverage by 2030 *(19, 20)*:

1. **Vaccination**, including the hepatitis A, B and E vaccines, with an emphasis on childhood vaccination for hepatitis B.
2. **Prevention of mother-to-child transmission of hepatitis B**, through birth-dose vaccination, antenatal testing for chronic infection and antiviral prophylaxis for those eligible.
3. **Injection, blood and surgical safety**, to eliminate health care-associated transmission of hepatitis B and C.
4. **Harm-reduction services for people who inject drugs**, as part of comprehensive services to prevent bloodborne infections.
5. **Testing and treatment**, leveraging highly effective antiviral therapies to reduce hepatitis-related morbidity and mortality.

The strategy envisaged the expansion of interventions in two main phases. The first phase (2015–2020) was a period of modest expansion in testing and treatment, allowing time for reductions in commodity prices and simplification of approaches to implementation. At the time of strategy development, the cost of direct-acting antivirals (DAAs) to treat people with hepatitis C was tens of thousands of US dollars per person.[1] The cost of antivirals to treat hepatitis B was several times the cost of similar treatment for HIV. The second phase (2020–2028) was then a period of massive expansion in treatment, towards universal access.

The strategy also established targets for levels of service coverage as a cascade. These were defined as diagnosing 90% of people living with chronic hepatitis B and C, and treating 80% of those eligible. Prevention milestones for hepatitis B vaccination, blood and injection safety, and harm reduction were also included, aligning with the five core interventions. Mathematical modelling suggested that hepatitis B and C could be eliminated as a public health threat by 2030 if countries achieved the service coverage targets for all five core interventions *(19, 20)*.

2.3 Renewal for 2022–2030: integrated strategies and clearer accountability

Upon expiration of the first strategy, WHO developed a second global strategy on viral hepatitis for the period 2022–2030, as part of the *Global health sector strategies on HIV, viral hepatitis and sexually transmitted infections, 2022–2030 (3)*. This was considered and noted with appreciation at the 2022 Health Assembly (WHA75.20) *(21)*.

The second strategy reaffirmed the goal of eliminating hepatitis as a public health threat. It also defined indicators and associated elimination targets for 2030 (**Table 2.1**).

The 2030 global targets for reductions in incidence and deaths are a 95% reduction in the annual number of new hepatitis B infections, an 80% reduction in the annual number of new hepatitis C infections,[2] a 65% reduction in the annual number of hepatitis B-related deaths and a 65% reduction in the annual number of hepatitis C-related deaths, compared with levels in 2015.[3] The other epidemiological targets (also for 2030) are to reduce the prevalence of chronic hepatitis B infection among children aged under 5 years (to 0.1%) and to reduce the incidence of new hepatitis C infections among people who inject drugs (to 2 per 100 people per year).

The current global strategy on viral hepatitis is aligned with global commitments on primary health care, UHC, health security, leveraging stronger laboratory systems and blood safety.

WHO has helped countries to translate the global strategies on viral hepatitis into national-level action by providing normative products *(4, 22–42)* and associated support for the scale-up of prevention, testing and treatment services.

[1] The full 3-month DAA regimen currently costs about US$ 55–100 per person in access markets (i.e. countries that benefit from voluntary licensing and generic manufacturing) and US$ 300–500 in non-access markets (**Chapter 1**).

[2] In combination, the 80% and 95% targets correspond to the 90% target that was included in the first GHSS on viral hepatitis.

[3] A tabular summary of these relative reduction targets is provided in WHO guidance on country validation of viral hepatitis elimination; see page 13 *(22)*.

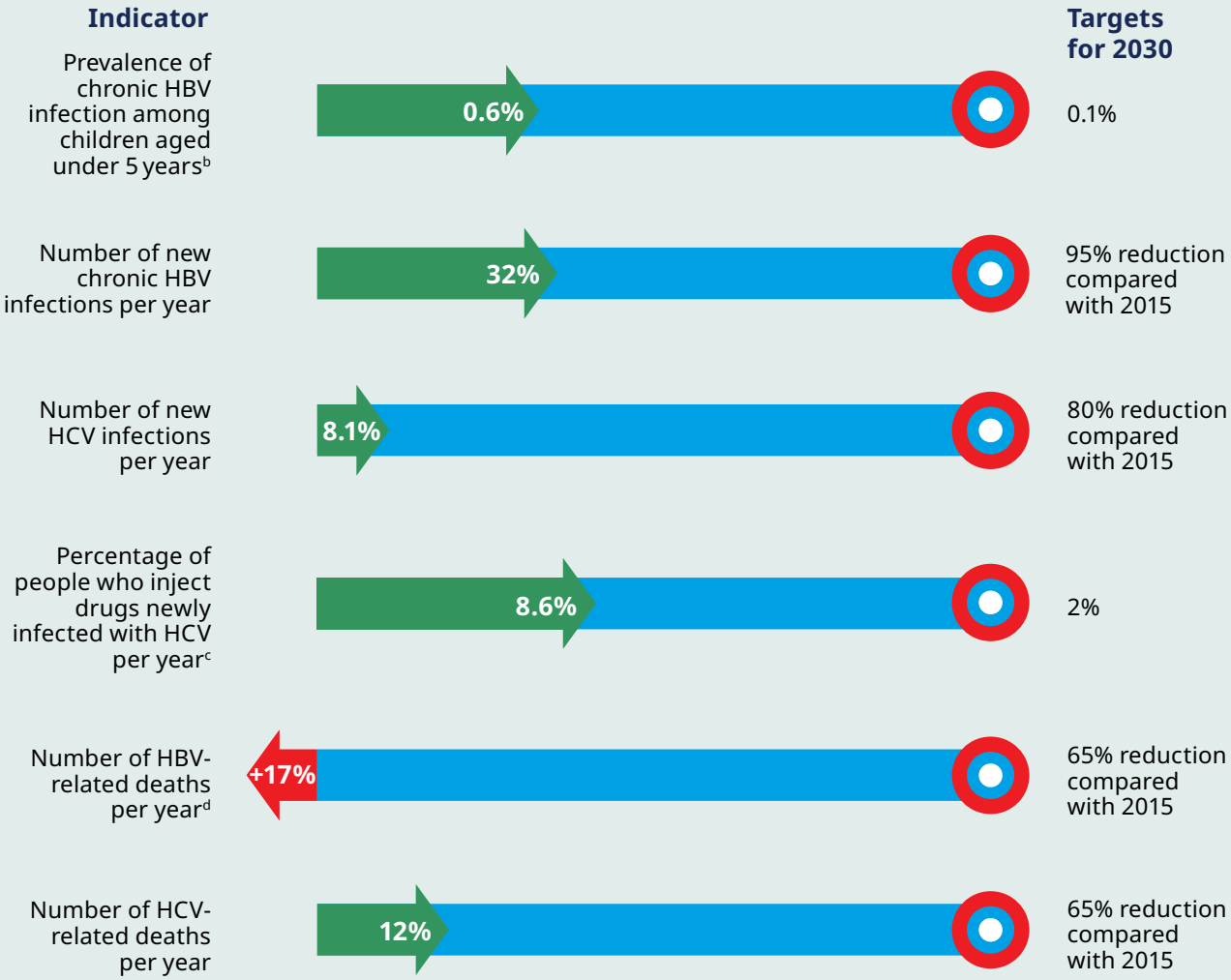
Table 2.1. The global strategy on viral hepatitis, 2022–2030: vision, goal, indicators and elimination targets for 2030

Vision	**A world where viral hepatitis transmission is halted and everyone living with viral hepatitis has access to safe, affordable and effective prevention, care and treatment services**
Goal	**Eliminate viral hepatitis as a public health threat by 2030**
Indicators	**Targets for 2030**
Epidemic impact (incidence, prevalence and mortality)[a]	
Prevalence of chronic HBV infection among children aged under 5 years	0.1%
Hepatitis B: Number of new chronic HBV infections per year	95% reduction compared with 2015
Hepatitis C: Number of new HCV infections per year	80% reduction compared with 2015
Hepatitis C: Percentage of people who inject drugs newly infected per year	2%
Hepatitis B: Number of HBV-related deaths per year	65% reduction compared with 2015
Hepatitis C: Number of HCV-related deaths per year	65% reduction compared with 2015
Service coverage (prevention, diagnosis and treatment)	
Hepatitis B timely birth-dose vaccine: Percentage of neonates vaccinated	90%
Hepatitis B third-dose vaccine: Percentage of infants vaccinated	90%
Hepatitis B: Percentage of people with chronic infection diagnosed	90%
Hepatitis B: Percentage of eligible people with chronic infection treated	80%
Hepatitis C: Percentage of people with HCV infection diagnosed	90%
Hepatitis C: Percentage of eligible people with HCV infection treated	80%
Harm reduction: Number of needles and syringes distributed per person who injects drugs	300
Blood safety: Percentage of donated blood units screened for bloodborne diseases	100%
Safe injections: Percentage of injections in health care facilities that are safe	100%

HBV, hepatitis B virus; HCV, hepatitis C virus.

[a] In the GHSS (2022–2030) strategy document *(3)*, the targets for relative (%) reductions in incidence and mortality were shown in terms of absolute numbers and rates. Given updates to time series of estimates (**Chapter 3, Annex 1**), including for the baseline year of 2015, these absolute numbers are not shown in this table.

Global targets: latest status of progress[a]



[a] This is 2024 for all indicators unless otherwise stated.
[b] The baseline estimate for 2015 is 0.8%.
[c] Data are for 2021.
[d] There was a 17% increase in HBV-related deaths between 2015 and 2024.

Chapter 3

Epidemic status and trends

There are five hepatitis viruses: A, B, C, D and E (HAV, HBV, HCV, HDV and HEV). This chapter focuses on HBV and HCV, because they account for more than 95% of viral hepatitis-related deaths (**Chapter 1**) and are the forms of hepatitis for which global targets have been set in the World Health Organization (WHO) *Global health sector strategy on viral hepatitis, 2022–2030* (GHSS 2022–2030) (**Chapter 2**).

People can be infected with HBV and HCV through exposure to infected blood (HBV and HCV) or other bodily fluids (HBV). In highly endemic areas, most chronic HBV infections occur in children aged under 5 years, either through mother-to-child transmission at birth or horizontal transmission through person-to-person contact in the presence of open cuts and sores. People can also be infected with HBV through exposure to infected blood via needle-stick injuries, tattooing, piercing, sexual contact and sharing of contaminated needles or sharp instruments in health care settings or among people who inject drugs. The most common routes of HCV transmission are unsafe injections and medical procedures, unscreened blood transfusions, and sharing of needles and syringes among people who inject drugs.

HBV and HCV infections evolve in stages.

People with a new infection are typically asymptomatic, although occasionally a new infection can cause acute hepatitis. In some people, infection becomes chronic, persisting silently (i.e. without symptoms) for many years. Over a period of about 3 decades following initial infection, chronic infection can advance to severe sequelae such as cirrhosis and hepatocellular carcinoma (HCC), which drive hepatitis-related morbidity and mortality *(43, 44)*. Cirrhosis is an advanced stage of liver disease characterized by extensive hepatic fibrosis, nodularity of the liver, alteration of liver architecture and disrupted hepatic circulation. Both HBV and HCV are established carcinogens that can cause HCC, a primary cancer of the liver arising from the hepatocytes.

People infected with HBV in infancy or early childhood (before reaching 5 years of age) are at highest risk (about 95%) of developing a chronic infection, while the risk of developing a chronic HBV infection is below 5% for people infected in adulthood *(45, 46)*. HCV infection becomes chronic in about 55–85% of infected individuals (across all age groups), with the remainder clearing the virus spontaneously *(44)*.

Incidence is defined as the number or rate (per 100 000 population) of new chronic HBV infections or viremic HCV infections (including reinfections for HCV) in a year; it reflects the ongoing risk of transmission.

Prevalence is defined as the number or percentage of people in a population that are infected at a given point in time. A chronic HBV infection is defined as the persistence of hepatitis B surface antigen (HBsAg) for 6 months or more after acute infection. An HCV infection is defined as the presence of viremic HCV RNA or HCV core antigen (HCVcAg) in association with positive serology for HCV antibodies.

Mortality is defined as deaths resulting from the sequelae of chronic HBV or HCV infection, including cirrhosis and HCC.

Several interventions are available to prevent HBV and HCV infections, and to treat people who are already infected (**Chapter 1**, **Chapter 2** and **Chapter 4**). Levels of coverage and time-lags in the impact of these interventions drive trends in the incidence and prevalence of HBV and HCV infections, and associated mortality:

- A hepatitis B vaccine has been recommended by WHO since the early 1990s. A birth dose followed by two or three further doses in infancy has 95% efficacy and confers protection for at least 20 years or for life *(26, 38)*. The most immediate benefit of vaccination is a reduction in the prevalence of HBV infection in children aged under 5 years, with the impact on HBV-related morbidity and mortality following with a time-lag of about 30 years.
- Antivirals are available to treat people with a chronic HBV infection. Current regimens are not curative and need to be taken for life; however, they reduce HBV-related mortality. Antivirals can also be used as prophylaxis to prevent mother-to-child transmission of HBV.
- A 12-week direct-acting antiviral (DAA) regimen to treat HCV, with a cure rate of about 95%, has been available since 2015 *(23)*. Scaling up treatment coverage can have a rapid impact on HCV incidence, HCV prevalence and HCV-associated mortality.
- Measures to ensure blood safety and infection prevention and control (IPC) prevent both HBV and HCV infections. For HCV specifically, infections can also be prevented by harm-reduction services for people who inject drugs.

The global targets for 2030 are a 95% reduction in the number of new HBV infections and an 80% reduction in new HCV infections, compared with 2015; a 65% reduction in the number of HBV and HCV-related deaths in the same time period; a reduction in the prevalence of HBV infection among children aged under 5 years to 0.1%; and a reduction in the percentage of people who inject drugs who acquire a new HCV infection each year to 2% (**Chapter 2**).

Box 3.1. Chapter findings and messages – key points

- Viral hepatitis remains a leading global health problem, despite the availability of a vaccine for hepatitis B (since the early 1990s) that has 95% efficacy, effective (although lifelong) antiviral treatments for people with a chronic HBV infection and (since 2015) a 12-week antiviral treatment for people with HCV infection that has a 95% cure rate.
- Globally in 2024, there were an estimated 1.1 million (95% uncertainty interval [UI]: 0.9–1.3 million) HBV-related deaths and 240 000 (95% UI: 160 000–370 000) HCV-related deaths.
- Most (75%) HBV-related deaths and the highest mortality rates in 2024 were in the WHO African and Western Pacific regions. Ten countries accounted for 69% of the global total: Bangladesh, China, Ethiopia, Ghana, India, Indonesia, Nigeria, the Philippines, South Africa and Viet Nam.
- Geographically, the distribution of HCV-related deaths was much more dispersed. In 2024, 10 countries accounted for 58% of the global total: China, India, Indonesia, Japan, Nigeria, Pakistan, the Russian Federation, South Africa, the USA and Viet Nam.
- Globally, the annual number of HBV-related deaths increased by 17% between 2015 and 2024, while HCV-related deaths decreased by 12%. To achieve the 2030 global targets of a 65% reduction in both HBV- and HCV-related deaths compared with 2015 levels, the coverage of antiviral treatment for people with a chronic HBV or HCV infection needs to be rapidly expanded.
- Globally in 2024, there were an estimated 240 million people living with a chronic HBV infection (95% UI: 202–296 million), equivalent to 2.9% of the global population, and 47 million with a viremic HCV infection (95% UI: 31–71 million).
- In the longer term, the best way to reduce HBV- and HCV-related mortality is to prevent new HBV and HCV infections. This is also necessary to achieve the 2030 elimination targets for reductions in incidence and prevalence.
- Globally, the number of people newly infected with HBV in 2024 was 0.9 million (95% UI: 0.7–1.2 million); this was a decline of 32% from 2015.
- Most chronic HBV infections are acquired in the first 5 years of life, with the sequelae that cause mortality developing about 3 decades later. The global prevalence of HBV infection in children aged under 5 years (an indicator of the cumulative incidence of infection in the first 5 years of life) was 0.6% in 2024, a reduction from 0.8% in 2015 but still far from the 2030 target of 0.1%.
- The most severe burden of HBV infection among children aged under 5 years is predominantly in countries in the WHO African Region; in 2024, prevalence was above 1% in most countries and in the range of 2–5% in several countries. Worldwide, 85 countries have achieved a prevalence of less than 0.1%.
- Achieving the 2030 target of a 95% reduction in HBV incidence (compared with 2015) requires a large improvement in birth-dose coverage of the hepatitis B vaccine as part of childhood immunization programmes, especially in the WHO African Region, and expanded coverage of antiviral prophylaxis to prevent mother-to-child transmission of HBV infection.
- Globally, the number of people newly infected with HCV in 2024 was 0.9 million (95% UI: 0.6–1.4 million); this was a decline of only 8.1% from 2015.
- Achieving the 2030 target of an 80% reduction in HCV incidence (compared with 2015) requires high coverage of treatment of people who are already infected, ensuring that medical and nonmedical injections are safe (e.g. through proper sterilization of needles and syringes, and avoiding their reuse), ensuring the safety of national blood services and addressing national opioid epidemics.

This chapter provides:

- global and regional estimates of the incidence of HBV and HCV infections in the 10-year period between 2015 (the baseline year of the first GHSS on viral hepatitis: GHSS 2016–2021 *(4)*) and 2024 (the latest year for which estimates are currently available);
- global and regional estimates of the prevalence of HBV and HCV infections in the period 2015–2024, for children aged under 5 years (HBV) and for the general population (HBV and HCV);
- global and regional estimates of HBV- and HCV-related mortality in the period 2015–2024;
- a categorization of countries in terms of their levels of HBV and HCV incidence and prevalence in 2024, using three or four categories that are defined according to the 2030 global targets;[1]
- graphics that highlight which countries and WHO regions accounted for the largest share of the global number of prevalent HBV and HCV infections, and HBV- and HCV-related deaths, in 2024;
- a listing of countries that have reduced the prevalence of HBV infection in children aged under 5 years to less than 0.1% (based on 2024 estimates);[2] and
- a categorization of countries in terms of their levels of HBV- and HCV-associated mortality in 2024, using four categories that are defined according to the 2030 global targets.

All estimates related to HBV and HCV are based on modelling work by the Center for Disease Analysis Foundation (CDAF),[3] except for those concerning HCV incidence among people who inject drugs and the contribution of unsafe medical injections to HCV transmission.[4] Estimates were produced using the latest available data and analytical methods, and include updates compared with data in previous WHO reports.[5] The main updates for this report are explained in **Annex 1** and details are provided in an online technical appendix. A limited amount of data related to HDV are available, based on country-level data reported through WHO's 2025 round of global hepatitis reporting by Member States (**Annex 2**). These data are summarized in **Section 3.4**.

Following the World Health Assembly in May 2025, Indonesia was reassigned to the WHO Western Pacific Region, having previously been part of the South-East Asia Region.[6] In this chapter, all trend analyses by WHO region include Indonesia in the Western Pacific Region for the entire time series.

The most important chapter findings and messages are summarized in **Box 3.1**.

3.1 The incidence of HBV and HCV infections

3.1.1 The general population

Globally in 2024, an estimated 1.8 million people (95% UI: 1.3–2.6 million) were newly infected with HBV or HCV, with similar numbers for both viruses: 0.9 million (95% UI: 0.6–1.4 million) for HCV and 0.9 million (95% UI: 0.7–1.2 million) for HBV. The annual numbers of people newly infected have been declining for both HBV and HCV since 2015, but with a much faster rate of decline for HBV (**Fig. 3.1**).

Between 2015 and 2024, the annual number of new HBV infections worldwide decreased by 32%, driven largely by expanded birth-dose and infant vaccination coverage over the past 20 years (**Chapter 4**). This is a substantial reduction, but still far from the target of a 95% reduction by 2030.

The number of new HCV infections declined by 8.1% in the same period; this rate of decline needs to rapidly accelerate to reach the 2030 target of an 80% reduction. Slower progress compared with HBV reflects uneven access to prevention, diagnosis and treatment (**Chapter 4**), and the lack of a vaccine.

Large regional differences persist (**Fig. 3.2**, **Fig. 3.3**).

In 2024, HBV incidence remained highest in the WHO African Region, where there were 622 000 (95% UI: 507 000–810 000) new infections, equivalent to 68% of the global total, followed by the Eastern Mediterranean Region.

Between 2015 and 2024, there were impressive declines (of about 50%) in the number of new HBV infections in the WHO European, South-East Asia and Western Pacific regions (54%, 54% and 49% respectively). There were also large reductions in the WHO Region of the Americas (43%) and the African Region (25%). The smallest net reduction was in the WHO Eastern Mediterranean Region (17%), with a concerning upward trend emerging after 2022. Overall, the declines largely reflect sustained improvements in childhood vaccination coverage over the past decade (**Chapter 4**).

In 2024, HCV incidence was highest in the WHO South-East Asia Region, with 191 000 (95% UI: 117 000–347 000) new infections, followed by the Region of the Americas at 184 000 (95% UI: 131 000–249 000) and the African Region at 181 000 (95% UI: 97 000–293 000).

The largest declines in new HCV infections between 2015 and 2024 were in the WHO Eastern Mediterranean and European regions (both 28%). These reductions are mainly the result of strong national HCV elimination efforts; notable country examples include Egypt and the United Kingdom (**Chapter 5**). Three other WHO regions also achieved declines: the African, South-East Asia and Western Pacific regions. At the other extreme, there was

[1] Further country-specific details will be made available by WHO in online country profiles, which will be published after this report.

[2] The cumulative incidence of chronic HBV infection at 5 years of age was selected as the indicator for monitoring progress related to the SDG target of "combating hepatitis" (SDG 3.3.4). Measurement of the prevalence of chronic HBV infection among children aged under 5 years is used to estimate this indicator indirectly.

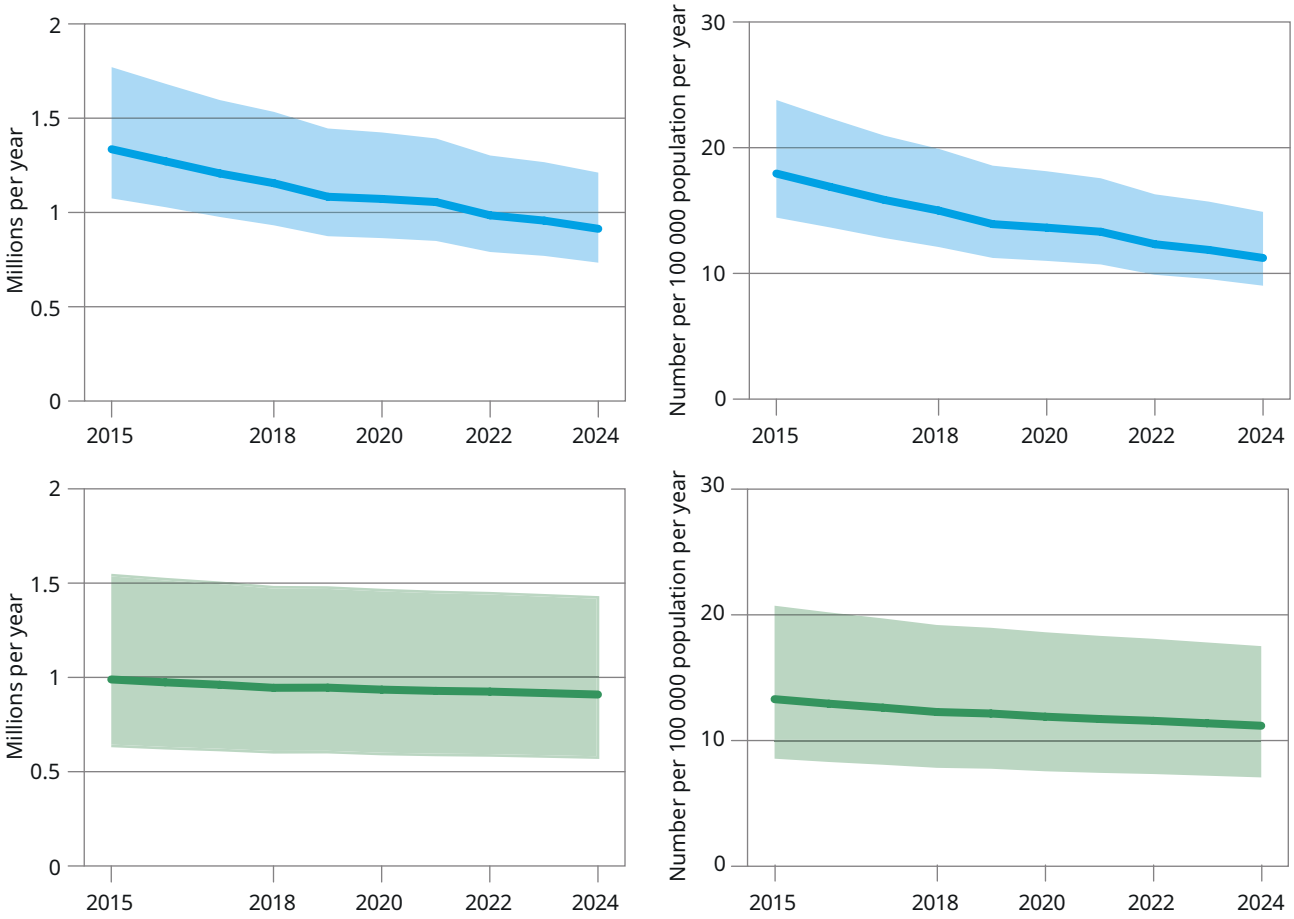
[3] The CDAF is a WHO collaborating centre.

[4] Estimates of HCV incidence among people who inject drugs and the contribution of unsafe medical practices to HCV transmission were not updated for this report; estimates are reproduced based on those published previously *(11, 47)*.

[5] For this reason, estimates in this report should not be directly compared with those published in previous reports.

[6] In accordance with resolution WHA78.25 (2025), adopted on 27 May 2025.

Fig. 3.1. Global trends in the incidence of HBV (**blue**) and HCV (**green**) infections, absolute numbers (left panels) and rates (right panels), 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

an estimated increase in HCV infections of 57% in the WHO Region of the Americas, highlighting an urgent need for expanded prevention and harm-reduction interventions in this part of the world, particularly in the USA.

The severity of national HBV and HCV epidemics – in terms of the number of new infections per 100 000 population per year – varies widely among countries (**Fig. 3.4**, **Fig. 3.5**). In 2024, estimated HBV incidence ranged from less than 0.1 to 165 per 100 000 population, while HCV incidence ranged from 0.1 to 121 per 100 000 population. The highest rates of HBV infection are found primarily in the WHO African Region and in a few countries in the South-East Asia and Western Pacific regions. The picture for HCV infections is more mixed, with high rates found in at least one country in all six WHO regions.

The stark variation in incidence rates at regional and country levels underlines the need for sustained, targeted efforts to close gaps and accelerate progress towards the 2030 targets, harnessing the various preventive, diagnostic and treatment interventions that are already available.

3.1.2 Contribution of injecting drug use and unsafe medical injections to HCV incidence

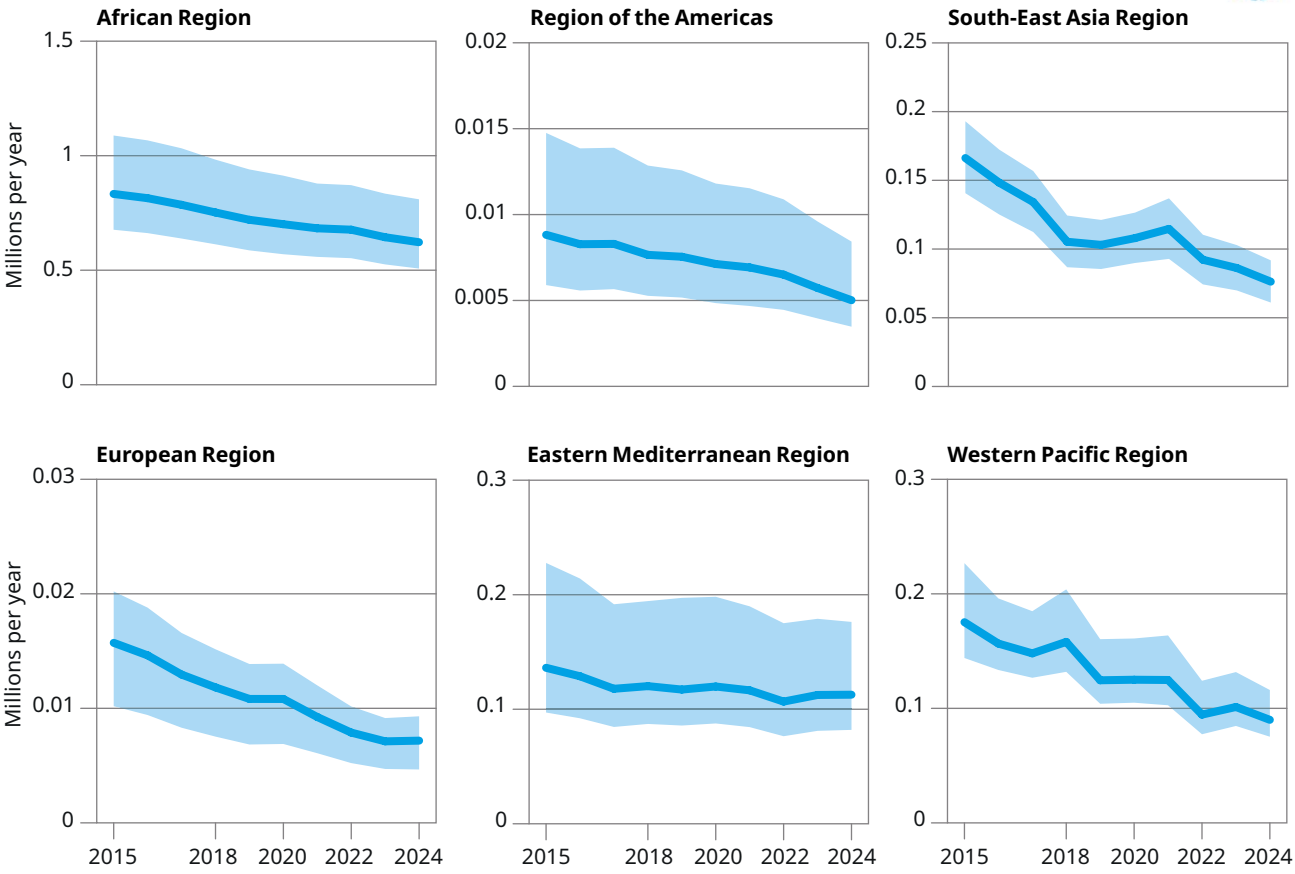
In 2023, WHO collaborated with an external partner (University of Bristol, the United Kingdom) to review and update estimates (at country, regional and global level) of the contribution of injecting drug use and unsafe medical injections to HCV transmission *(11, 47)*.

The estimated contribution of unsafe medical injections to HCV transmission was derived from data from 60 countries, which collectively accounted for about 45% of the world's population.

Overall, unsafe medical injections were estimated to account for 14% (95% UI: 8.8–20%) of new HCV infections globally in 2023 (**Table 3.1**). The contribution varied substantially among WHO regions, ranging from 4.0% (95% UI: 2.4–6.2%) in the Region of the Americas and 5.0% (95% UI: 3.2–7.5%) in the African Region, to considerably higher shares in the South-East Asia Region (21%; 95% UI: 14–30%) and the European Region (18%; 95% UI: 11–27%). Intermediate levels were estimated for the WHO Eastern Mediterranean Region (14%; 95% UI: 9.0–20%) and the Western Pacific Region (6.1%; 95% UI: 3.8–9.4%).

Although the overall incidence of HCV infections has declined in recent years, updated global estimates of infections attributable specifically to unsafe medical

Fig. 3.2. Trends in the incidence of HBV infections (absolute numbers) by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

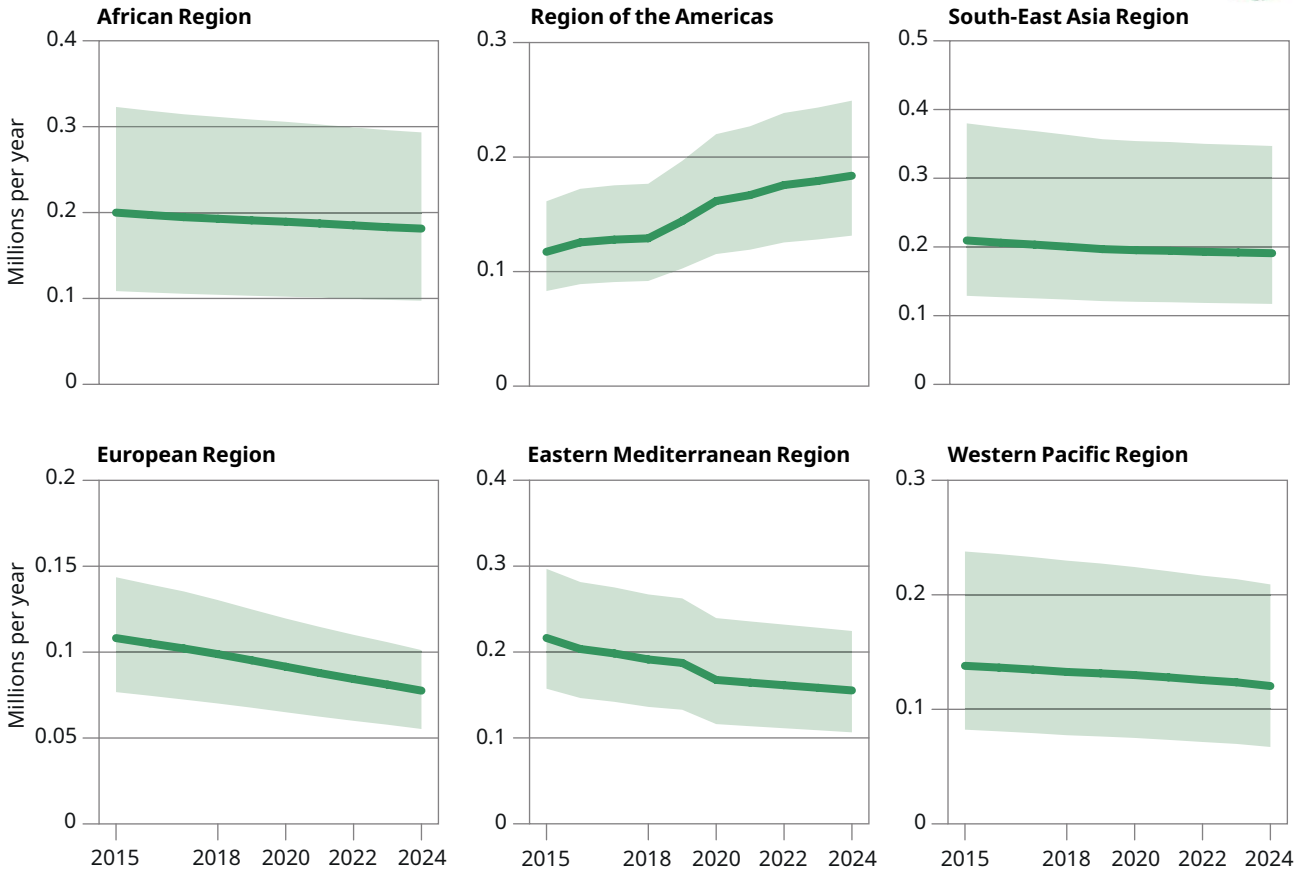
injections are not yet available. Such updating requires strengthening of HCV surveillance systems, and a better understanding of how unsafe medical injections and other medical and community practices contribute to ongoing transmission. Both are critical for designing effective HCV prevention responses. New HCV infections can be prevented through the consistent implementation of safe medical injection practices at all levels of the health system, as part of broader IPC measures (**Chapter 4**).

In addition to transmission associated with medical practices, injecting drug use continues to be a major driver of new HCV infections globally. The contribution of injecting drug use to the global incidence of HCV infection was estimated based on data from 105 countries *(47)*. It was estimated to have declined from 14 per 100 person-years (95% UI: 12–16 per 100 person-years) in the pre-2015 period to 8.6 per 100 person-years (95% UI: 7.1–11 per 100 person-years) in 2021 (**Table 3.2**). Although this represents a 38% decline over the period, incidence remains far above the elimination target of 2 per 100 person-years set in the current GHSS on viral hepatitis (**Chapter 2**) *(22)*.

Persistent regional disparities in HCV incidence among people who inject drugs reflect varying epidemic dynamics and coverage of prevention and treatment services. Between the pre-2015 and 2015–2021 periods, there was a significant decline in HCV incidence in the WHO Western Pacific Region (incidence rate ratio [IRR]: 0.32; 95% UI: 0.23–0.50), the Eastern Mediterranean Region (IRR: 0.67; 95% UI: 0.50–0.89) and the European Region (IRR: 0.79; 95% UI: 0.63–1.0), attributable to expanded harm-reduction services and access to treatment with DAAs. In contrast, no meaningful change was detectable in the WHO Region of the Americas (IRR: 0.76; 95% UI: 0.45–1.4). There are substantial data gaps, particularly in the WHO African and South-East Asia regions, where insufficient data precluded analysis of trends and some reported incidences appeared implausibly low (**Table 3.2**).

Overall, HCV incidence among people who inject drugs at regional level remains far above the WHO target (**Table 3.2**). To accelerate progress towards HCV elimination, there is an urgent need for region-specific strategies to address the opioid epidemic and scale up evidence-based harm-reduction services, improve monitoring systems and expand access to curative treatment.

Fig. 3.3. Trends in the incidence of HCV infections (absolute numbers) by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

3.2 The prevalence of HBV and HCV infections

3.2.1 HBV, children aged under 5 years

In 2024, the global prevalence of chronic HBV infection among children aged under 5 years was estimated at 0.6% (95% UI: 0.5–0.8%) (**Table 3.3**). This is a reduction from 0.8% (95% UI: 0.6–1.1%) in 2015.[1] Prevalence remains considerably above the 2030 SDG and WHO hepatitis elimination target of 0.1% (**Fig. 3.6**).

Marked regional disparities persist (**Table 3.3**).

The WHO African Region, with a prevalence of 1.4% (95% UI: 1.1–1.8%), remains far from the target and continues to face the greatest burden, owing to a combination of high maternal prevalence and inadequate coverage of universal childhood vaccination, in addition to poor access to timely birth-dose vaccination in highly endemic countries (**Chapter 4**). The WHO Eastern Mediterranean Region also has a prevalence that is far above the 2030 target, at 0.5% (95% UI: 0.6–0.8%).

In contrast, two WHO regions have already achieved levels that have surpassed the 2030 target: the European Region (0.06%; 95% UI: 0.04–0.09%) and the Region of the Americas (0.03%; 95% UI: 0.02–0.06%). The WHO Western Pacific Region (0.4%; 95% UI: 0.3–0.5%) and the South-East Asia Region (0.2%; 95% UI: 0.2–0.3%) have made impressive progress and now require further intensification of efforts to achieve the 2030 target.

There is substantial variation in trends at regional level (**Fig. 3.7**). Between 2015 and 2024, the WHO African Region achieved the largest absolute decline, from 2.0% to 1.4% (a 29% reduction). There was also major improvement in the WHO South-East Asia Region, with prevalence falling from 0.5% to 0.2% (a 56% reduction). The WHO Region of the Americas has already achieved and gone beyond elimination-level prevalence, with a reduction from 0.05 to 0.03%. Similarly, the WHO European Region has sustained a very low prevalence and achieved a 49% reduction, from 0.11% to 0.06% between 2015 and 2024. Declines in the WHO Eastern Mediterranean Region (27%) and Western Pacific Region (25%) were more modest and prevalence remains above the 2030 target level.

The most severe burden of HBV infection among children aged under 5 years is in countries in the WHO African Region (**Fig. 3.8**); in many countries in this region,

[1] Estimates for HBV prevalence among children aged under 5 years have been updated following a recalibration of global data and they provide a more accurate picture of progress. Methodological details are summarized in **Annex 1** and details are explained in an online technical appendix.

Fig. 3.4. HBV incidence rates (new infections per 100 000 population) at country level, 2024

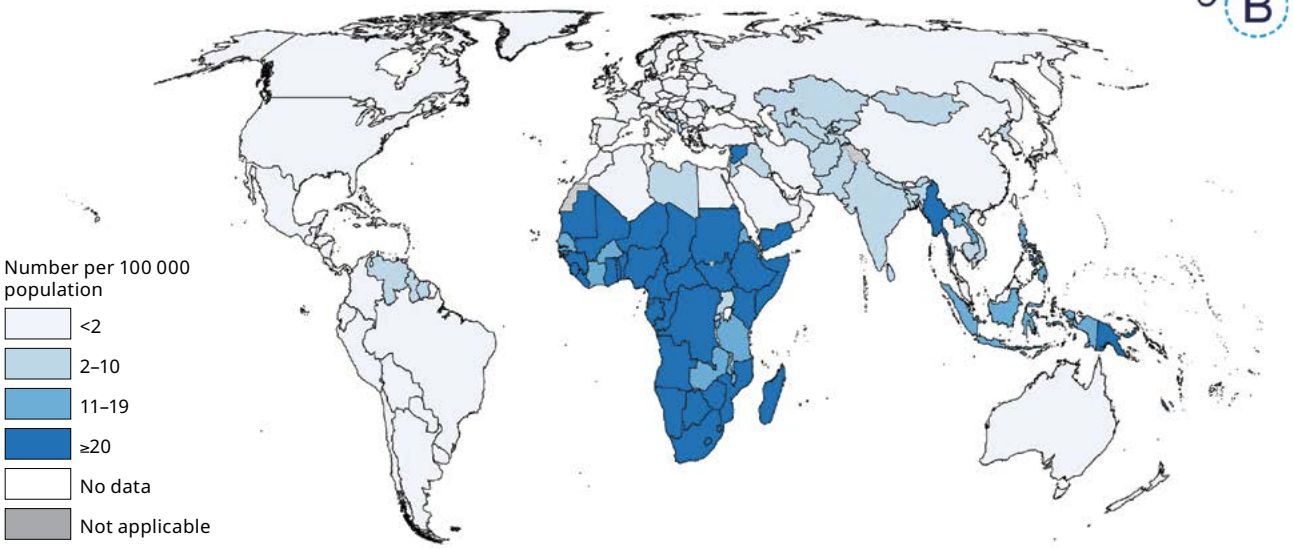
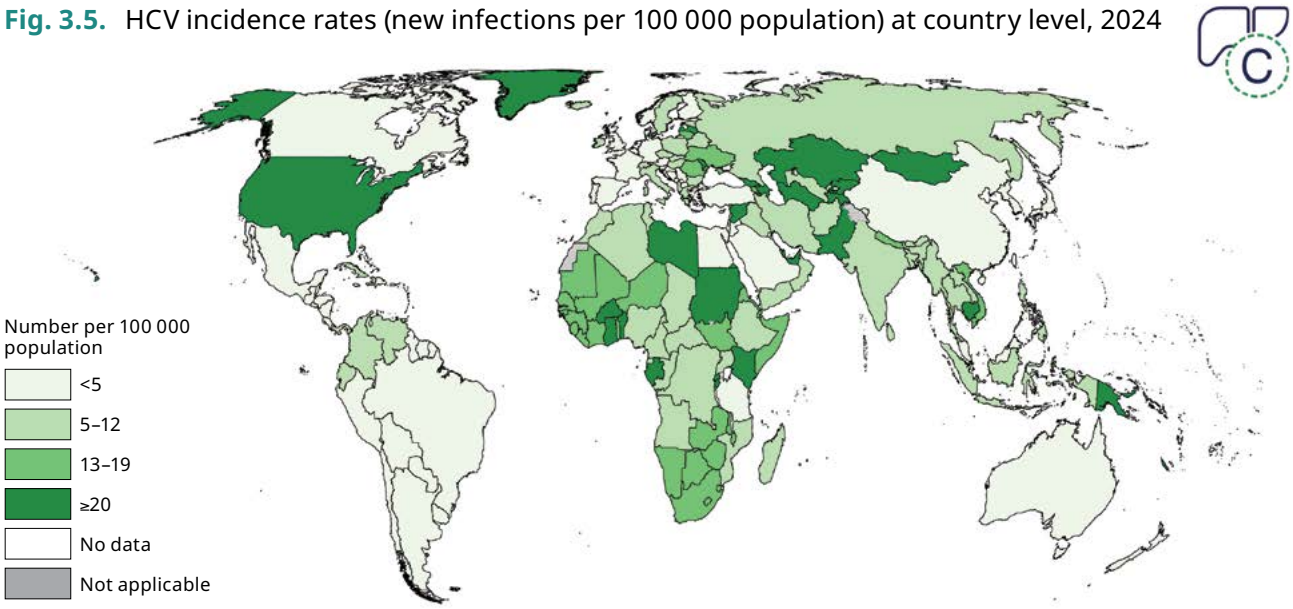


Fig. 3.5. HCV incidence rates (new infections per 100 000 population) at country level, 2024



prevalence is above 1%. This indicates persistent early-life transmission and major gaps in universal childhood immunization, timely birth-dose administration of the hepatitis B vaccine, and antenatal screening and prophylaxis (further details are provided in **Chapter 4**).

The Central African Republic had the highest estimated prevalence in 2024 (5.3%), followed by Somalia (4.0%), Gabon (3.2%), the Niger (3.2%) and Angola (3.1%). Several other countries had very high prevalence levels, including the Syrian Arab Republic (2.9%), Guinea (2.8%), Guinea-Bissau (2.7%), Nigeria (2.7%) and Papua New Guinea (2.5%). In these high-burden countries and elsewhere, there is an urgent need to expand hepatitis B birth-dose vaccination, strengthen antenatal screening, and improve linkages to prophylaxis and care during pregnancy.

As of 2024, 85 countries had surpassed the SDG target of a prevalence of 0.1% (**Table 3.4**). However, 32 countries still have prevalence levels above 1%. The coexistence of strong progress in many settings and persistently high prevalence in others shows two things: that the elimination target is achievable and that there is a need for intensified, targeted support to countries (mostly in the WHO African Region) that are lagging far behind.

Table 3.1. Contribution of unsafe medical injections to new HCV infections by WHO region, 2023

WHO region	Number of studies included	Percentage contribution of unsafe medical injections to new HCV infections (95% UI)
African Region	35	5.0 (3.2–7.5)
Region of the Americas	7	4.0 (2.4 –6.2)
South-East Asia Region	7	21 (14–30)
European Region	5	18 (11–27)
Eastern Mediterranean Region	3	14 (9.0–20)
Western Pacific Region	3	6.1 (3.8–9.4)
Global	**60**	**14 (8.8–20)**

Table 3.2. HCV incidence among people who inject drugs, globally and by WHO region, pre-2015 and in the period 2015–2021 *(47)*

WHO region	Pre-2015 (per 100 person years; 95% UI)	2015–2021 (per 100 person years; 95% UI)	HCV incidence rate ratio (95% UI) for 2015–2021 versus pre-2015[a]
African Region	3.9 (3.1–4.8)	2.8 (2.0–4.5)	NE
Region of the Americas	15 (11–21)	12 (7.4–20)	0.76 (0.45–1.4)
South-East Asia Region	7.9 (4.0–18)	21 (18–24)	NE
European Region	13 (11–17)	9.5 (8.2–11)	0.79 (0.63–1.0)
Eastern Mediterranean Region	11 (7.5–16)	7.0 (5.8–8.4)	0.67 (0.50–0.89)
Western Pacific Region	19 (15–25)	5.8 (4.0–9.1)	0.32 (0.23–0.50)
Global[b]	**14 (12–16)**	**8.6 (7.1–11)**	**NE**

NE: not estimated.

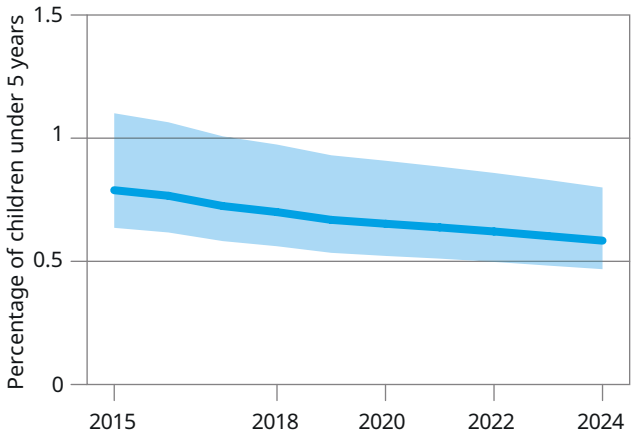
[a] Estimate only for countries with HCV incidence data across both time periods. The incidence rate ratio could not be estimated for the WHO African and South-East Asia regions, where five countries or fewer had data across both time periods. Also, it was not possible to estimate the global rate ratio, because these two WHO regions lacked sufficient data.

[b] Globally, HCV incidence data were available for 85 countries for pre-2015 and 97 countries for 2015–2021.

Table 3.3. Prevalence of chronic HBV infection among children aged under 5 years, globally and by WHO region, 2024

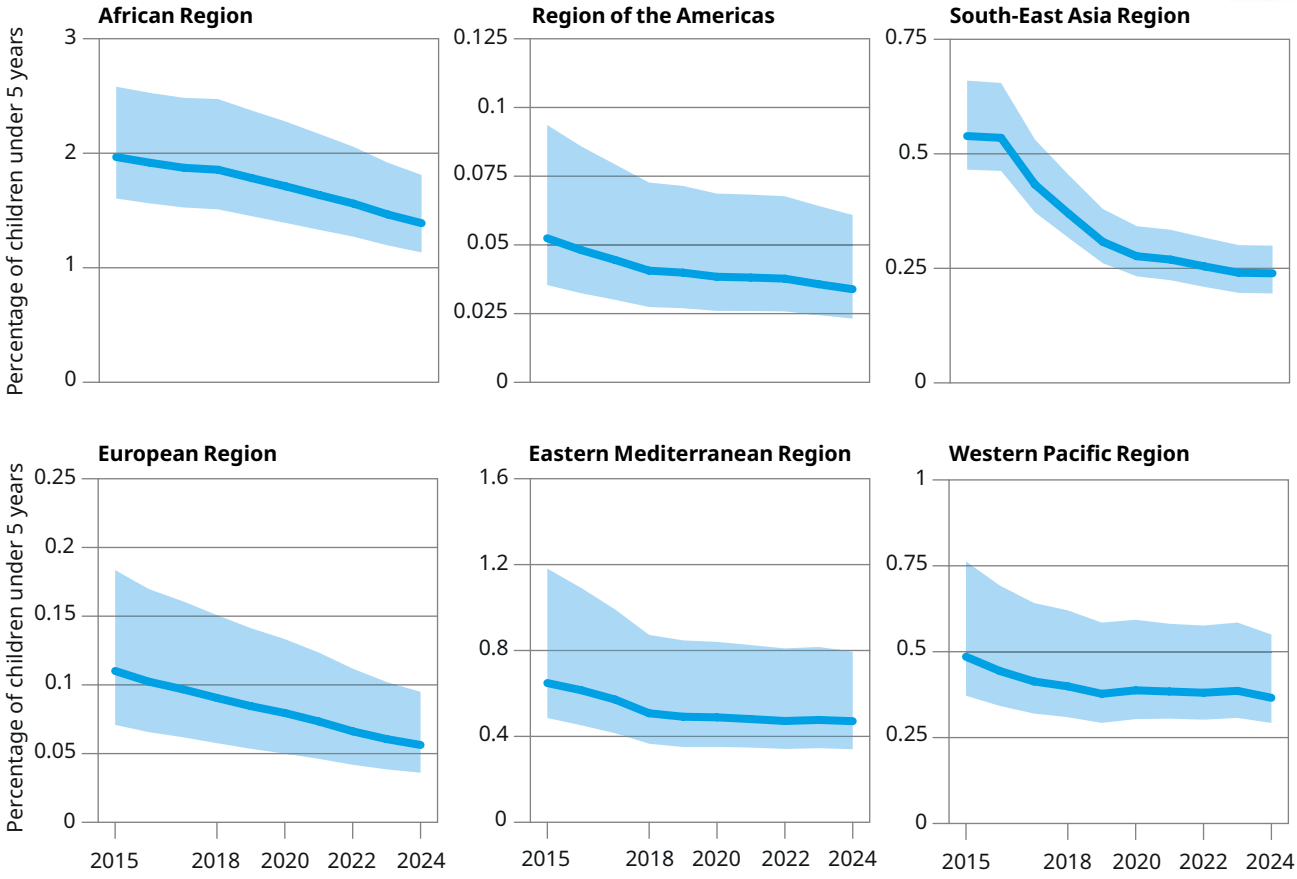
WHO region	Percentage prevalence (95% UI)
African Region	1.4 (1.1–1.8)
Region of the Americas	0.03 (0.02–0.06)
South-East Asia Region	0.24 (0.20–0.30)
European Region	0.06 (0.04–0.09)
Eastern Mediterranean Region	0.5 (0.3–0.8)
Western Pacific Region	0.4 (0.3–0.6)
Global	**0.6 (0.5–0.8)**

Fig. 3.6. Global trend in the prevalence of chronic HBV infection among children aged under 5 years, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.7. Prevalence of chronic HBV infection among children aged under 5 years by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.8. Prevalence of chronic HBV infection among children aged under 5 years at country level, 2024

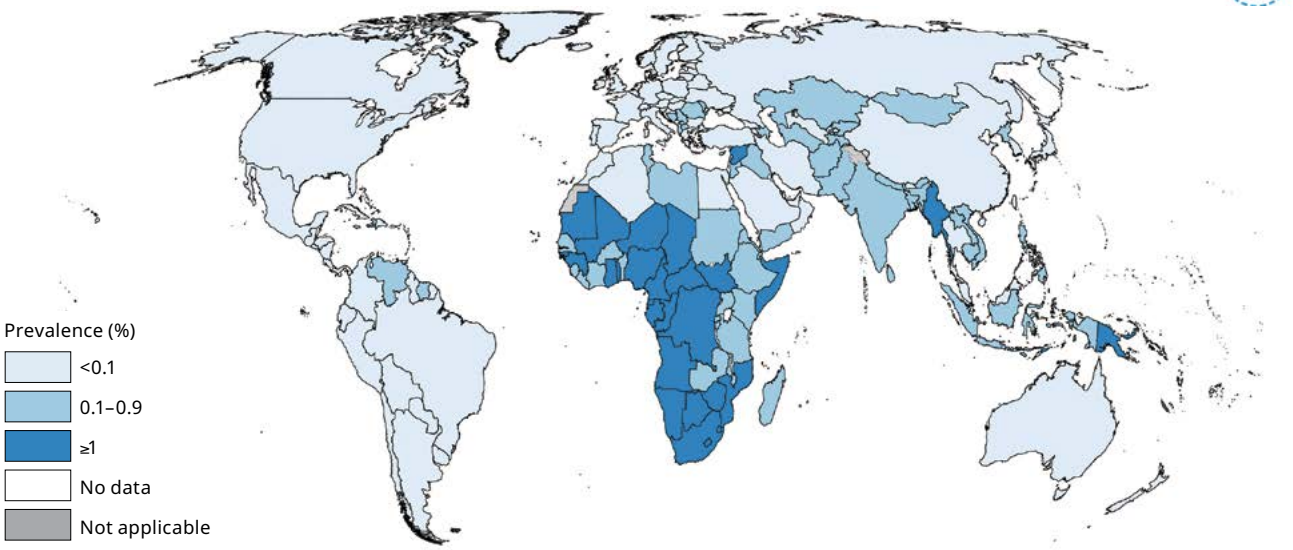


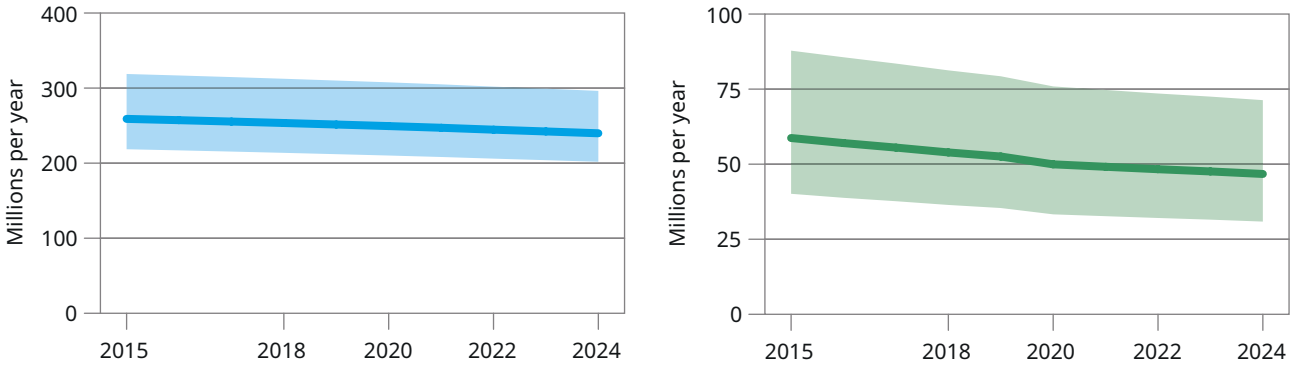
Table 3.4. Countries that had surpassed (in 2024) the 2030 SDG target of reducing the prevalence of chronic HBV infection among children aged under 5 years to 0.1%

WHO region	Country
African Region (n=1)	Algeria
Region of the Americas (n=22)	Argentina, Belize, Bolivia (Plurinational State of), Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and the USA
South-East Asia Region (n=2)	Bhutan and Thailand
European Region (n=41)	Andorra, Armenia, Austria, Belarus, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, the Russian Federation, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom and Uzbekistan
Eastern Mediterranean Region (n=10)	Bahrain, Egypt, Iran (Islamic Republic of), Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia and United Arab Emirates
Western Pacific Region (n=9)	Australia, China, Cook Islands, Japan, Malaysia, New Zealand, Niue, Republic of Korea and Singapore

Table 3.5. Prevalence of HBV and HCV infections, globally and by WHO region, 2024

WHO region	Prevalence in the general population (%) (95% UI)		Total number (all ages) of people infected (millions) (95% UI)	
	Chronic HBV infection	HCV infection	Chronic HBV infection	HCV infection
African Region	5.1 (4.1–6.3)	0.7 (0.4–1.1)	64 (53–81)	8.8 (4.9–14)
Region of the Americas	0.5 (0.3–0.8)	0.5 (0.4–0.7)	5.0 (3.2–8.1)	5.3 (3.7–7.5)
South-East Asia Region	2.3 (2.0–2.7)	0.4 (0.3–0.8)	43 (36–50)	8.1 (5.0–15)
European Region	1.0 (0.7–1.3)	0.6 (0.4–0.8)	9.7 (6.5–13)	5.6 (3.8–7.1)
Eastern Mediterranean Region	1.9 (1.4–3.5)	1.4 (1.1–2.0)	16 (11–29)	12 (8.8–16)
Western Pacific Region	4.6 (4.1–5.2)	0.3 (0.2–0.5)	102 (92–117)	7.0 (4.6–11)
Global	**2.9 (2.5–3.6)**	**0.6 (0.4–0.9)**	**240 (202–296)**	**47 (31–71)**

Fig. 3.9. Global trends in the estimated numbers of people with a chronic HBV (left panel) or HCV infection (right panel), 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

3.2.2 HBV, general population

In 2024, 240 million people (95% UI: 202–296 million) were living with a chronic HBV infection, equivalent to 2.9% (95% UI: 2.5–3.6%) of the global population.

The burden is concentrated in two WHO regions. In 2024, in the WHO Western Pacific Region, there were 102 million people with a chronic HBV infection (95% UI: 92–117 million), equivalent to 4.6% of the general population (95% UI: 4.1–5.2%); and in the WHO African Region, there were 64 million people with a chronic HBV infection (95% UI: 53–81 million), equivalent to 5.1% of the general population (95% UI: 4.1–6.3%). Together, these two regions accounted for 70% of the global number of people living with a chronic HBV infection in 2024 (Table 3.5).

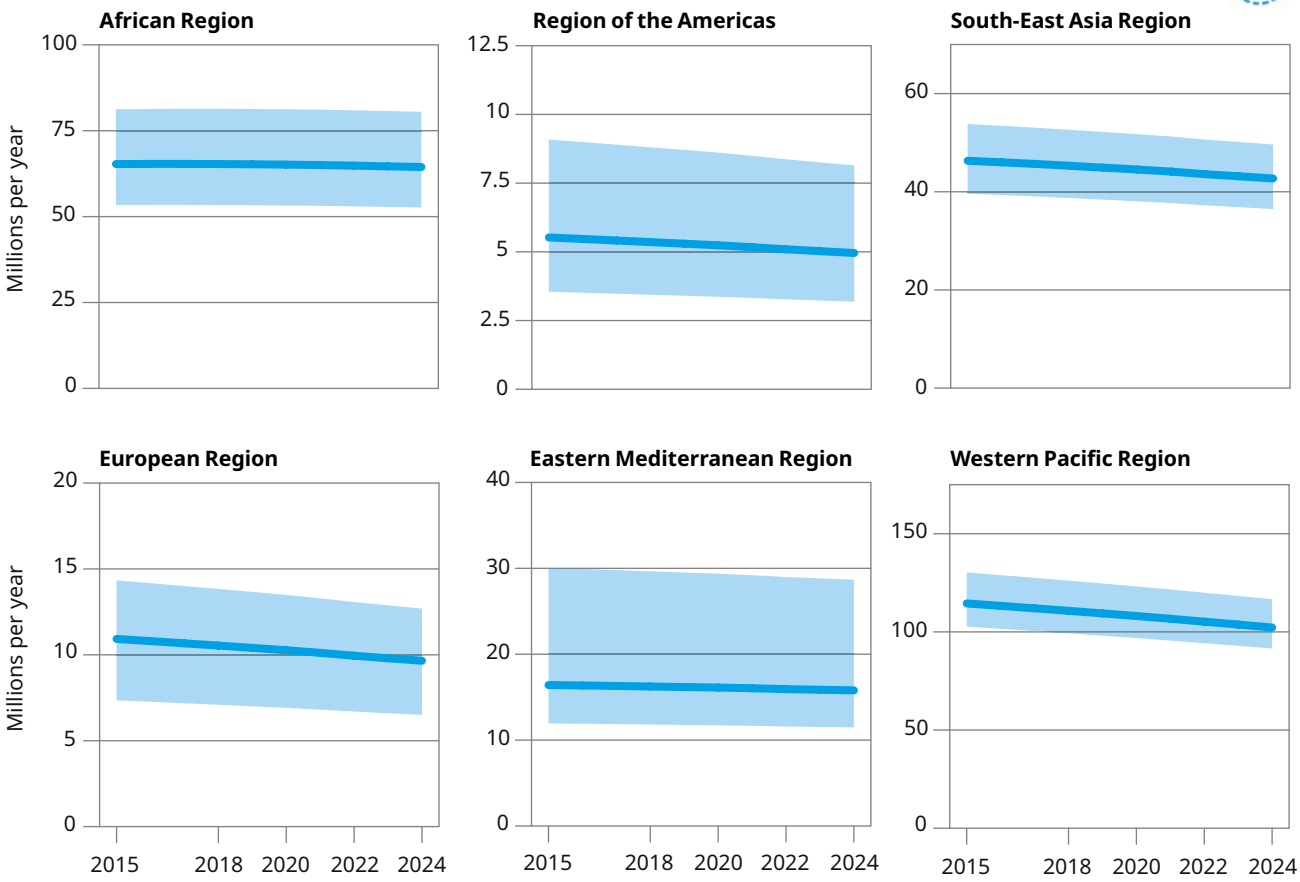
Between 2015 and 2024, the global number of people with a chronic HBV infection declined by 19 million – a 7.4% reduction (Fig. 3.9). There were reductions in all WHO regions, although the pace of decline varied, depending on baseline endemicity and access to treatment (Fig. 3.10).

The largest absolute reduction was in the WHO Western Pacific Region (12 million, equivalent to a decline of 11%), followed by the South-East Asia Region (3.6 million, equivalent to a reduction of 7.8%). The WHO European Region achieved the largest relative decline (12%); there was also a marked reduction in the Region of the Americas (10%). Regions with long-standing investments in immunization and robust prevention systems have seen the steepest declines, whereas high-burden regions with structural and programmatic challenges have made much slower progress.

A small number of countries account for a large share of the global burden of chronic HBV infection (Fig. 3.11 and Fig. 3.12); in 2024, the top 10 countries accounted for 67%. The top 10 countries in terms of their absolute number of people living with a chronic HBV infection were Bangladesh, China, Ethiopia, India, Indonesia, Nigeria, Pakistan, the Philippines, South Africa and Viet Nam (Fig. 3.12).

The persistence of large, affected populations in particular countries shows that both intensified and country-tailored strategies to reduce this burden are needed.

Fig. 3.10. Trends in the estimated number of people with a chronic HBV infection by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.11. Prevalence of chronic HBV infection in the general population at country level, 2024 (%)

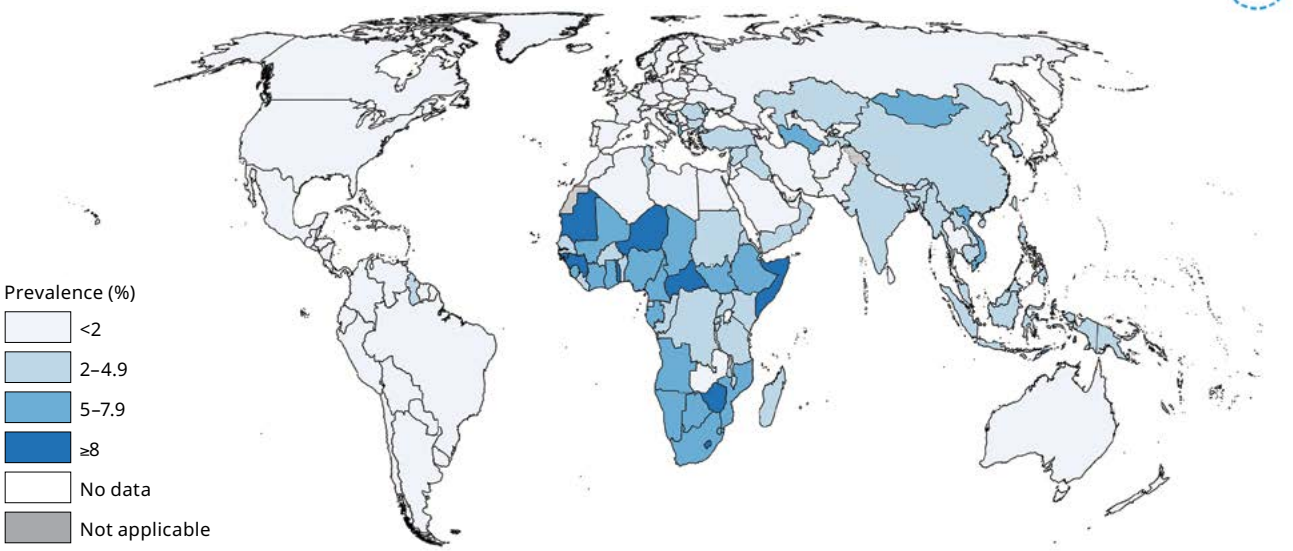
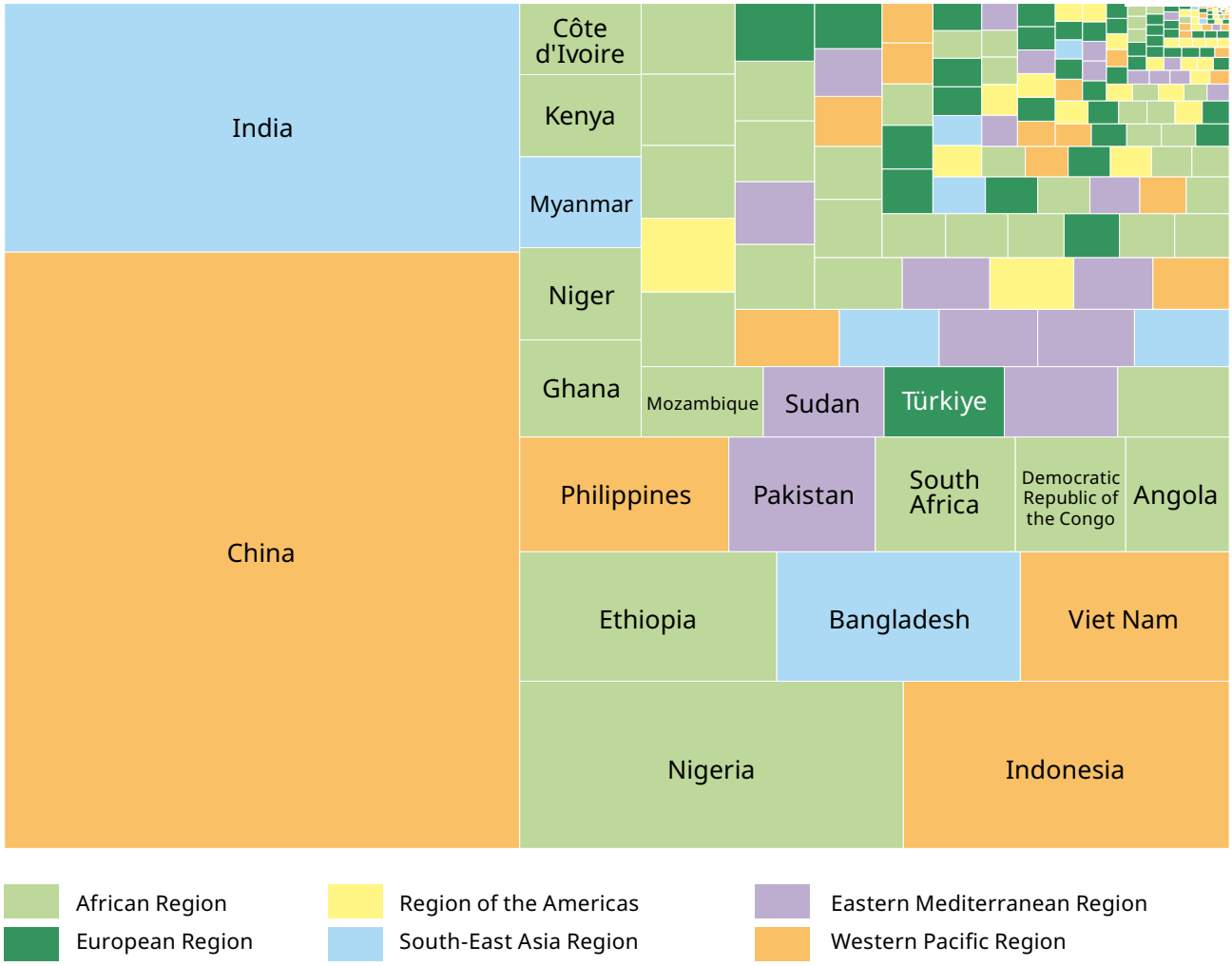


Fig. 3.12. Geographic distribution of the global number of people with a chronic HBV infection, 2024[a]



[a] The size of each rectangle represents each country's estimated share of the global number of people infected with HBV. Only the top 20 countries are labeled.

3.2.3 HCV, general population

In 2024, an estimated 47 million people (95% UI: 31–71 million) were living with an HCV infection, equivalent to 0.6% of the global population (95% UI: 0.4–0.9%).

The WHO Eastern Mediterranean Region accounted for a disproportionate share (relative to population size): 12 million people (95% UI: 8.8–16 million), equivalent to 25% of the global total, and the only region in which more than 1% of the general population was infected (**Table 3.5**). The high HCV burden in the WHO Eastern Mediterranean Region is largely the result of historical health care-associated transmission, particularly the widespread reuse of needles for injections *(48–50)*. This burden is concentrated in a small number of countries, initially Egypt and more recently Pakistan *(51)*.[1] In Egypt, mass intravenous anti-schistosomiasis campaigns in the mid-20th century used inadequately sterilized needles, leading to extensive population-level transmission that shaped the regional epidemic for decades *(48–50)*.

[1] Further details for these two countries are provided in **Chapter 5**.

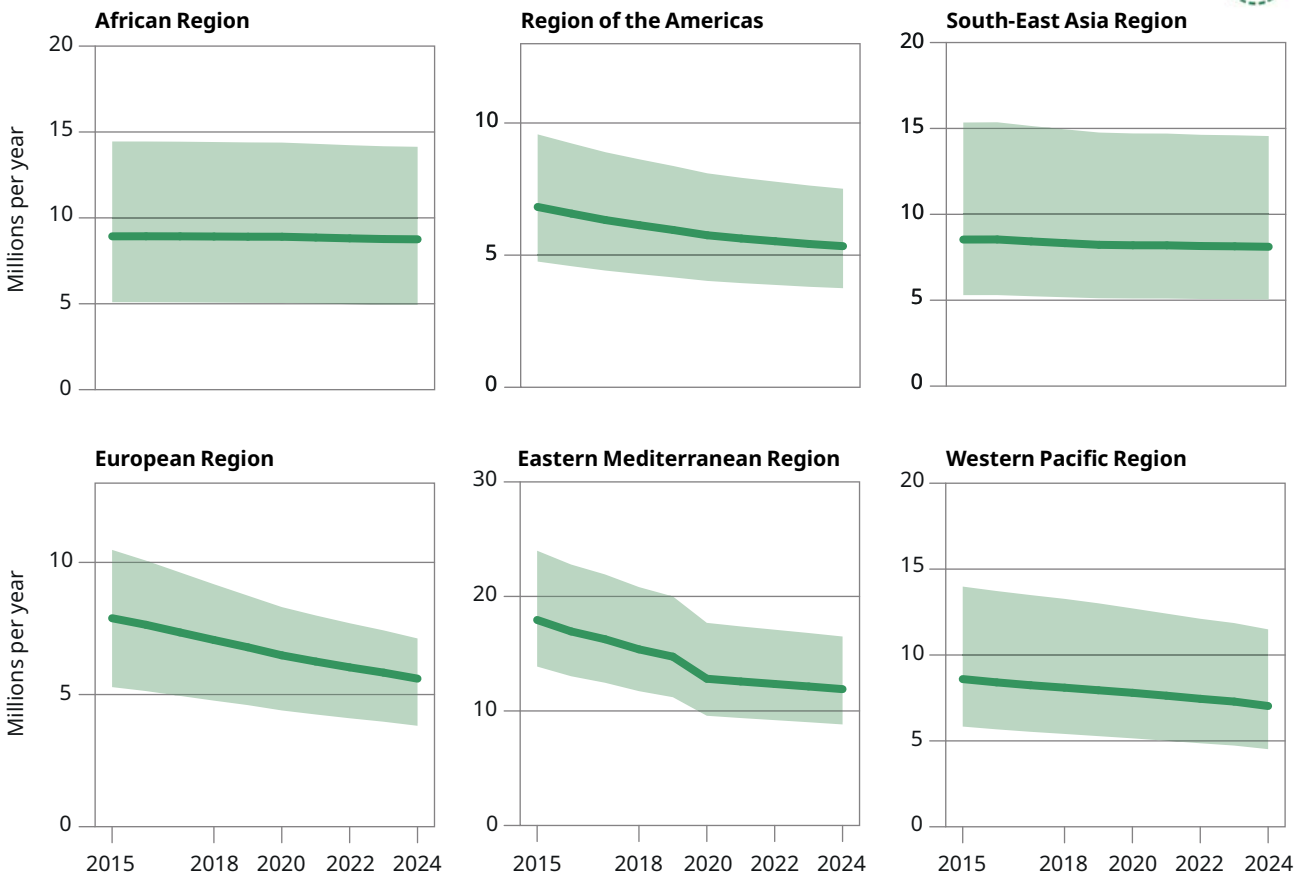
Between 2015 and 2024, the global number of people living with HCV infection fell by 20%, from 59 million (95% UI: 40–88 million) to 47 million (95% UI: 31–71 million) (**Fig. 3.9**). This reduction has been driven by the rapid expansion of curative treatment, especially since 2015, when a short 12-week course of DAAs, with a cure rate of about 95%, became available. Improvements in infection control and harm-reduction services have also contributed to the decline, but to a lesser extent.

The fact that almost 50 million people were still living with HCV infection in 2024, despite the availability of curative treatment, shows that there are still major gaps in access to diagnosis and treatment, particularly in regions where DAA availability remains limited and health system constraints impede care (**Chapter 4**).

Trends at regional level vary markedly. Substantial declines have been achieved in three WHO regions, while other regions have made much more modest progress.

The largest absolute and relative reductions between 2015 and 2024 were achieved in the WHO Eastern Mediterranean Region: the number of people infected fell by

Fig. 3.13. Trends in the estimated number of people with an HCV infection by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.14. Prevalence of HCV infection in the general population at country level, 2024 (%)

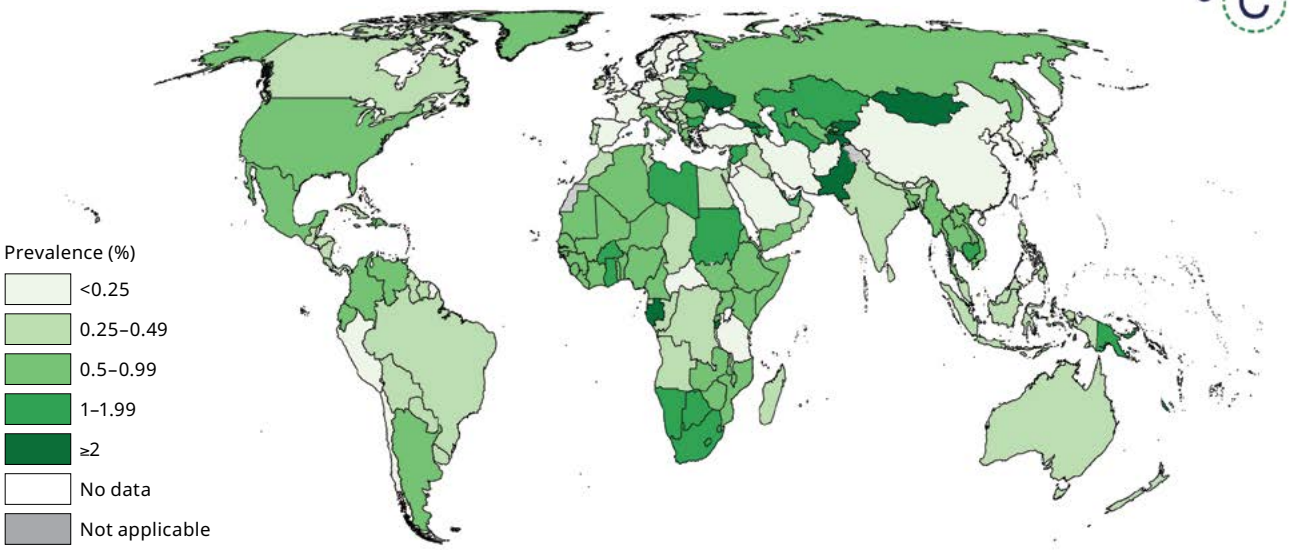


Fig. 3.15. The 20 countries with the largest numbers of people living with HBV or HCV infection, 2024

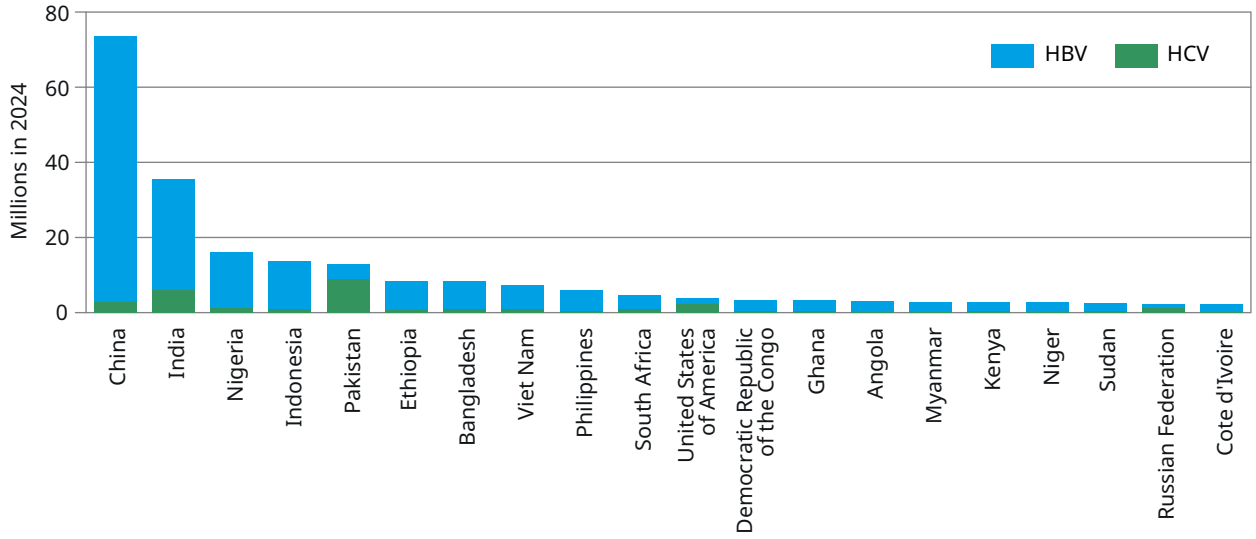
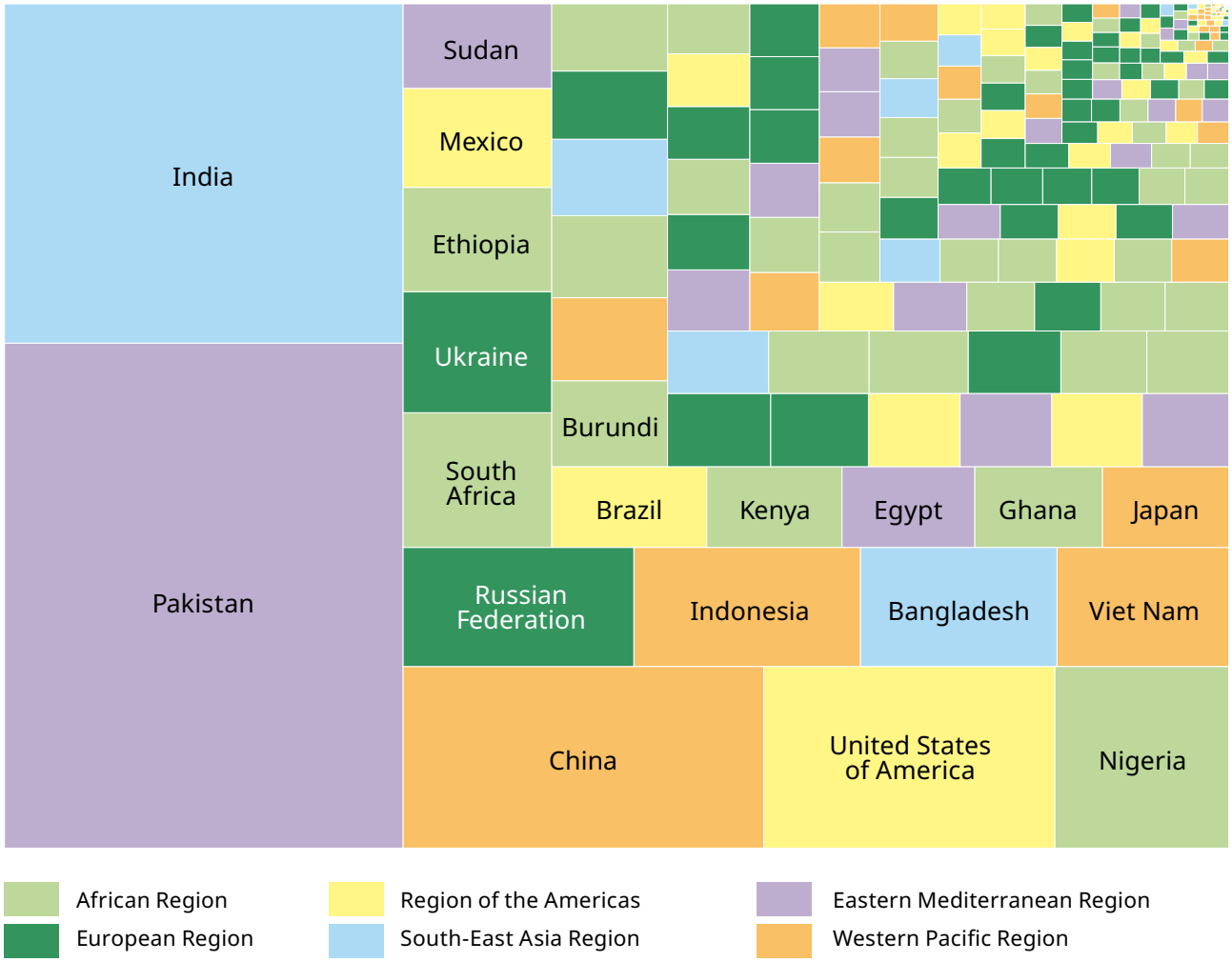


Fig. 3.16. Geographic distribution of the global number of people with an HCV infection, 2024[a]



[a] The size of each rectangle represents each country's estimated share of the global number of people infected with HCV. Only the top 20 countries are labeled.

6 million, a 34% decline (Fig. 3.13). This steep decline was driven primarily by large-scale provision of curative treatment in Egypt, a historically high-burden country *(48, 51)*. The WHO European Region and the Region of the Americas also achieved large relative reductions (29% and 22% respectively), reflecting broad access to DAAs, strengthened harm-reduction services, improved testing strategies and elimination initiatives in several countries.[1]

In contrast, regions with lower diagnostic and treatment coverage – particularly the WHO African Region and the South-East Asia Region – have made much slower progress (reductions of 1.9% and 4.9%, respectively).

The global distribution of HCV infection in 2024 was highly uneven (Fig. 3.14), with a small number of countries accounting for a disproportionately large share of the total burden (Fig. 3.15, Fig. 3.16). As illustrated in the treemap (Fig. 3.16), in which the largest tiles represent countries with both large population size and persistent HCV transmission, a few countries dominate the global landscape.

Pakistan stands out clearly as the single largest contributor to the global number of people with HCV infection; India follows with the second-largest block, and then China. Together, these three countries account for about 39% of the global number of people living with HCV.

Beyond the top three, a group of countries with moderate-sized tiles complete the top 10: Bangladesh, Indonesia, Nigeria, the Russian Federation, South Africa, the USA and Viet Nam. This list of countries highlights the geographical diversity of the HCV burden, which is driven by historical transmission, unsafe medical practices and injecting drug use (particularly where harm-reduction services are limited), with persistent gaps in diagnosis and treatment access constraining the extent to which the burden has been reduced (Chapter 4). In combination, the top 10 countries accounted for 58% of the global burden of HCV infection in 2024.

Sustained and country-tailored efforts to expand testing, treatment and prevention services, particularly in these high-burden countries, will be essential to accelerate progress and advance towards the 2030 global HCV elimination target.

3.3 Mortality resulting from HBV and HCV infection

Globally in 2024, the sequelae of chronic HBV and HCV infections – HCC and liver cirrhosis – are estimated to have caused a combined total of 1.3 million deaths worldwide (95% UI: 1.1–1.7 million). HBV-related deaths are increasing globally, while HCV-related deaths are plateauing.

3.3.1 HBV-related mortality

Globally, the number of HBV-related deaths reached 1.1 million (95% UI: 0.9–1.3 million) in 2024, up from 0.9 million (95% UI: 0.8–1.1 million) in 2015 (Fig. 3.17), equivalent to a 17% increase. This reflects the ageing of a large number of people living with a chronic infection (Fig. 3.9), disease progression to liver cirrhosis and cancer, and inadequate access to diagnosis and treatment in many settings (Chapter 4).

Most HBV-related deaths in 2024 were in two WHO regions: the Western Pacific Region (527 000; 95% UI: 476 000–593 000) and the African Region (308 000; 95% UI: 252 000–375 000). In combination, these two regions accounted for 75% of the global total.

To reach the global target of a 65% reduction compared with 2015, the annual number of HBV-related deaths needs to be reduced to about 0.3 million by 2030 (about 4 per 100 000 population).[2]

The absolute number of HBV-related deaths increased in all WHO regions between 2015 and 2024, although to varying degrees (Fig. 3.18). The largest absolute increases were in the African and South-East Asia regions (both 26%), followed by the Eastern Mediterranean Region (15%), the Western Pacific Region (12%), the Region of the Americas (10%) and the European Region (8%).

Between 2015 and 2024, the HBV-related mortality rate increased or remained high across all regions (Fig. 3.19).

The largest relative increase was in the WHO South-East Asia Region (16%, from 7.6 to 8.9 per 100 000 population). The WHO Western Pacific Region also experienced a notable increase (7.9%, from 22 to 24 per 100 000 population). Smaller increases were observed in the WHO European Region (5.0%, from 4.0 to 4.2 per 100 000 population) and the Region of the Americas (3.1%, from 1.8 to 1.9 per 100 000 population).

The WHO Eastern Mediterranean Region was the only region to record a decline in mortality rates between 2015 and 2024 (–2.1%, from 6.0 to 5.8 per 100 000 population).

The WHO African Region experienced little change (+0.4%) over the decade, with mortality rates remaining persistently high (24 per 100 000 population), reflecting a sustained and entrenched mortality burden.

At country level, the most severe burden (in terms of HBV-related mortality rates) in 2024 was predominantly in countries in the WHO African and Western Pacific regions (Fig. 3.20).

In 2024, 10 countries accounted for 69% of the global total of HBV-related deaths: Bangladesh, China, Ethiopia, Ghana, India, Indonesia, Nigeria, the Philippines, South Africa and Viet Nam (Fig. 3.21).

There is an urgent need for intensified national, regional and global efforts to improve the prevention, diagnosis and treatment of chronic HBV infection.

3.3.2 HCV-related mortality

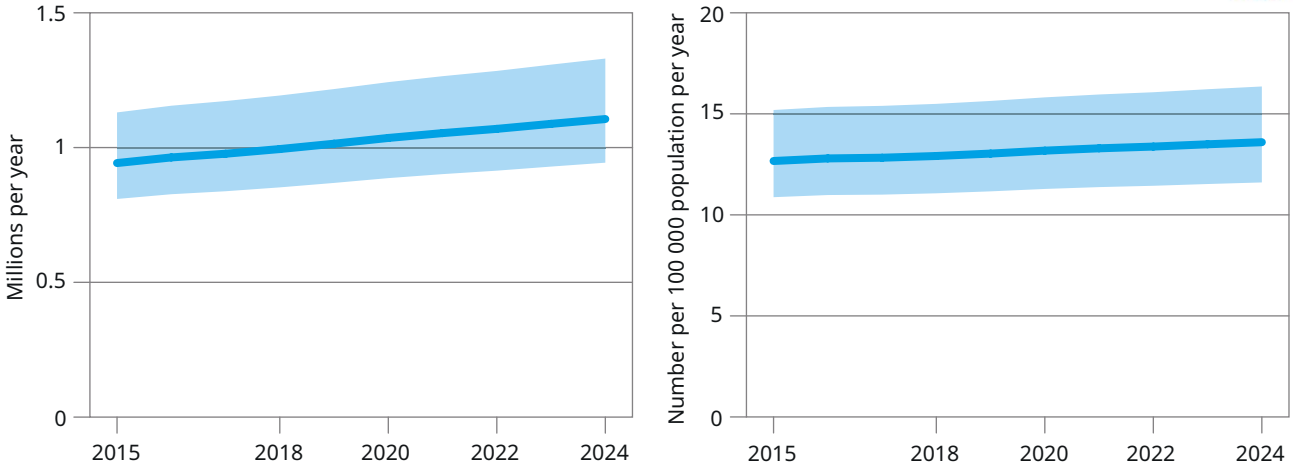
In contrast to HBV, the global number of HCV-related deaths was lower in 2024 than in 2015. However, following a period of slow decline from 2015 to 2019–2020, the number of HCV-related deaths and the HCV-related mortality rate (i.e. the number of deaths per 100 000 population) plateaued (Fig. 3.22).

Globally, there were 240 000 (95% UI: 160 000–370 000) HCV-related deaths in 2024, a reduction of 12% from 270 000 (95% UI: 190 000–410 000) in 2015. The

[1] Country examples are provided in Chapter 4 and Chapter 5.

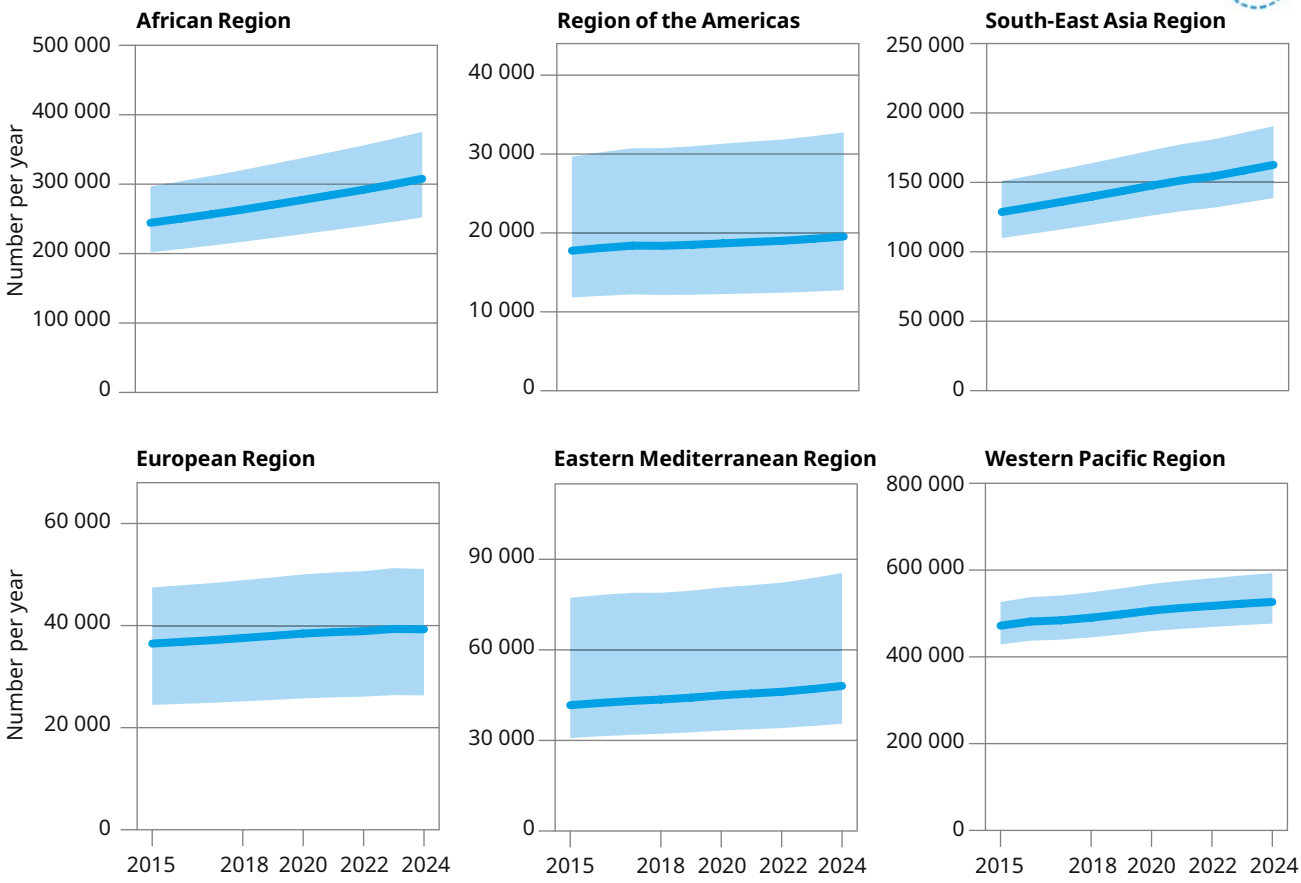
[2] However, for validation of elimination, a combined mortality threshold for HBV and HCV of fewer than 6 deaths per 100 000 population per year is applicable *(22)*.

Fig. 3.17. Global trends in HBV-related mortality, absolute numbers (left panel) and rates (right panel), 2015–2024[a]



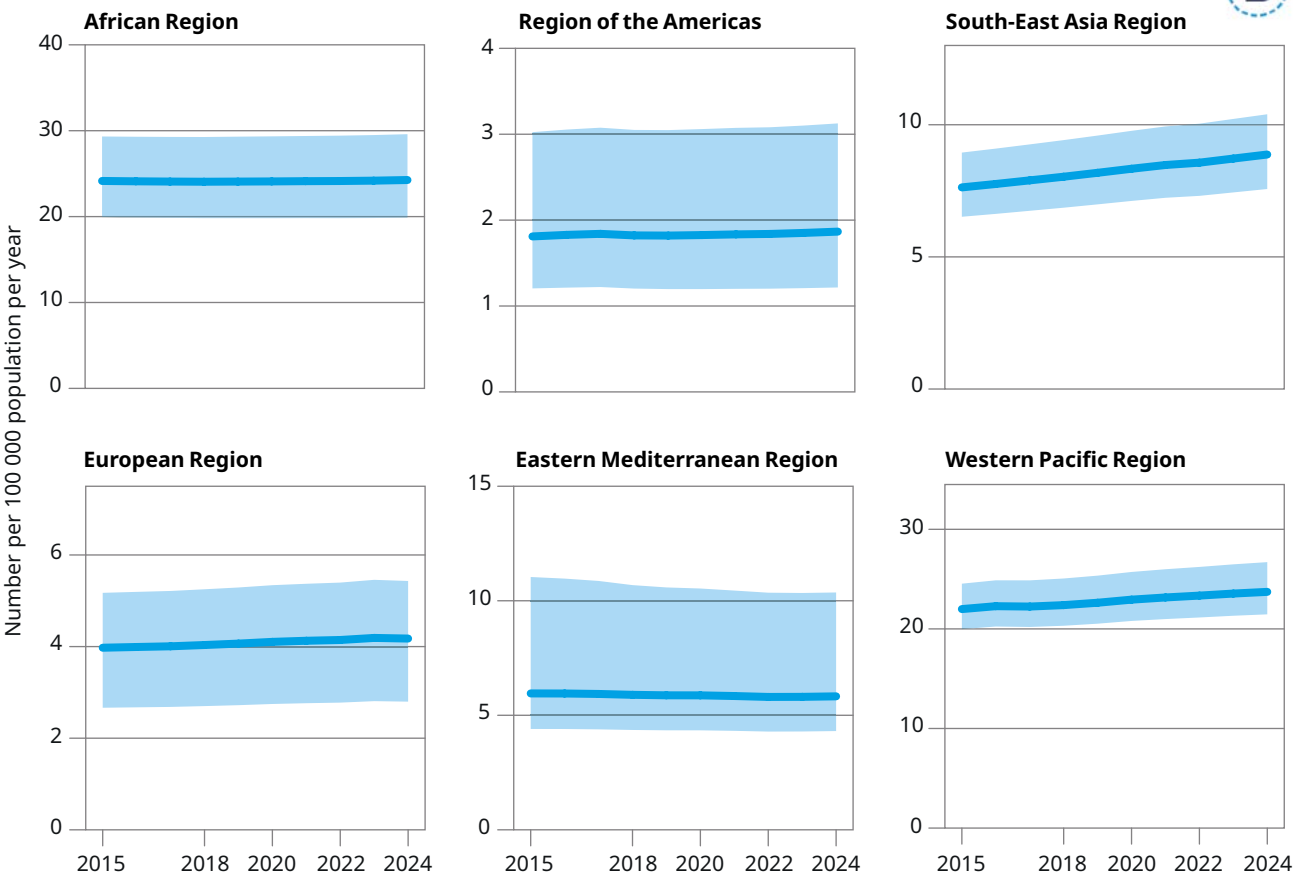
[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.18. Trends in the absolute number of HBV-related deaths by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.19. Trends in HBV-related mortality rates by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.20. HBV-related mortality rates (number of deaths per 100 000 population) at country level, 2024

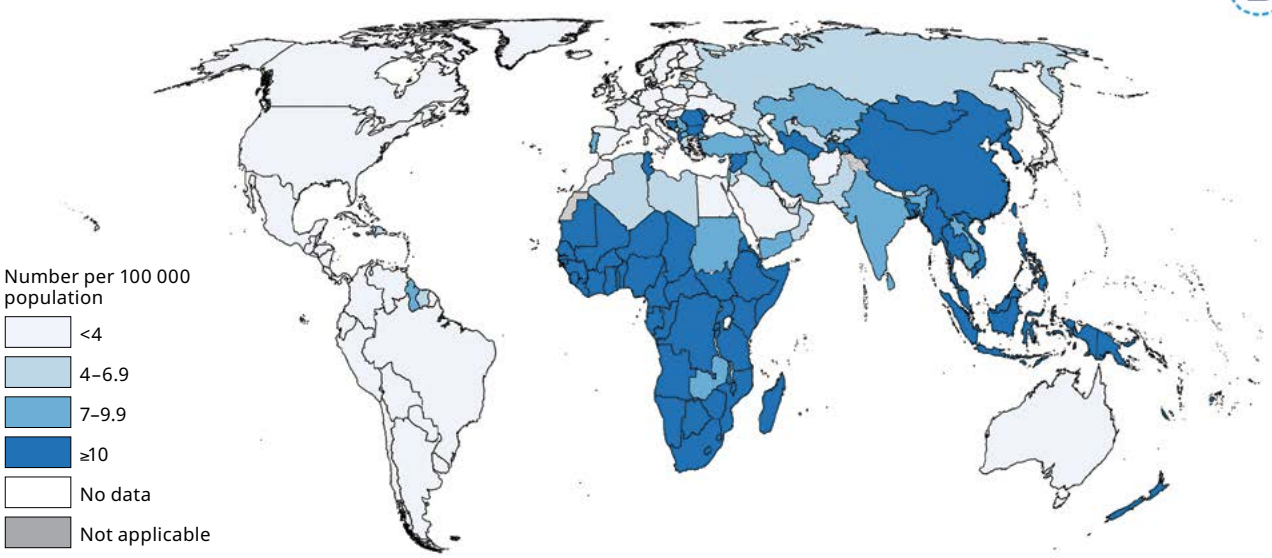
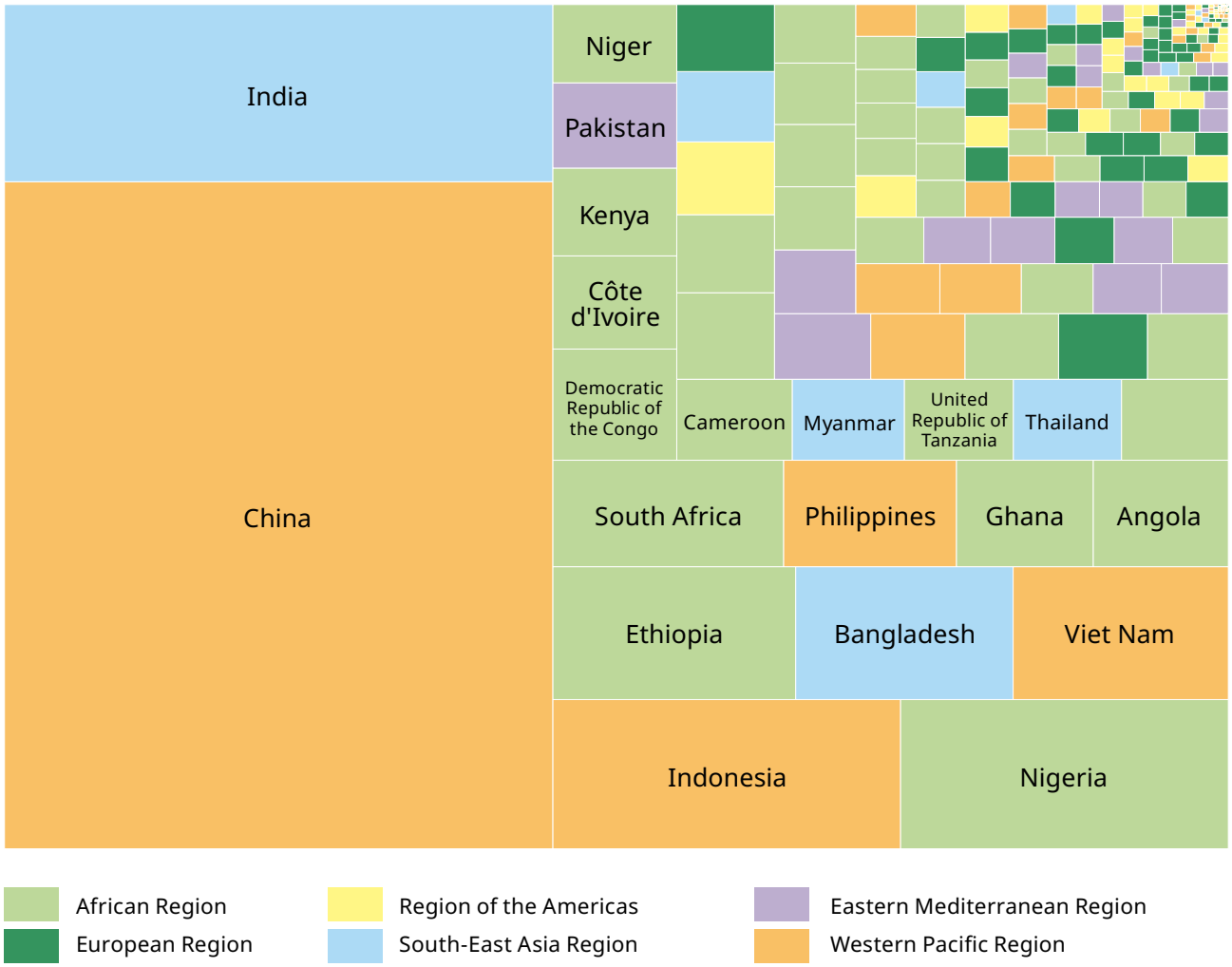
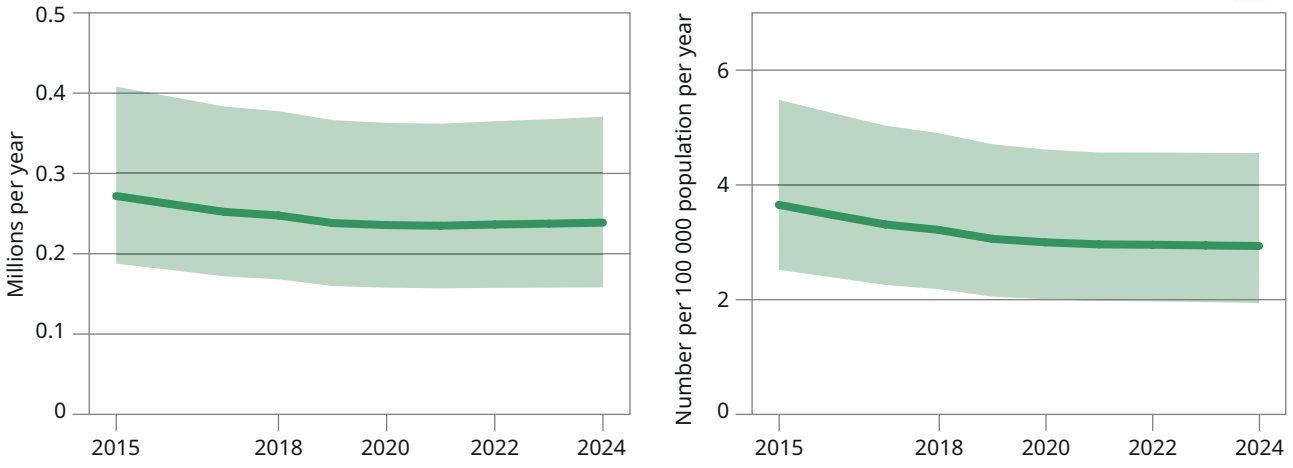


Fig. 3.21. Geographic distribution of the global number of HBV-related deaths, 2024[a]



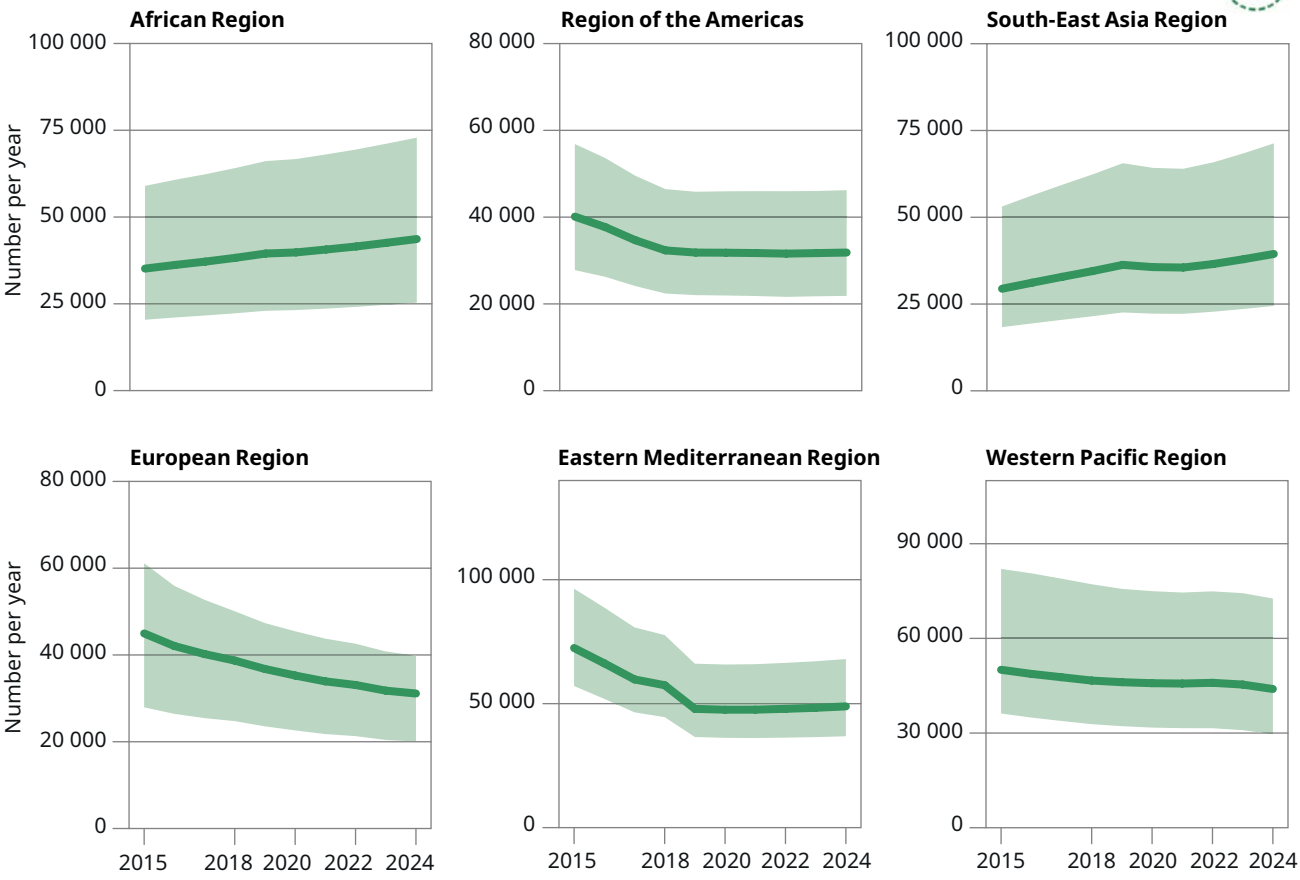
[a] The size of each rectangle represents each country's estimated share of the global number of HBV-related deaths. Only the top 20 countries are labeled.

Fig. 3.22. Global trends in HCV-related mortality, absolute numbers (left panel) and rates (right panel), 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.23. Trends in the absolute number of HCV-related deaths by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

global mortality rate fell from 3.7 (95% UI: 2.5–5.5) to 2.9 (95% UI: 1.9–4.6) per 100 000 population in the same 10-year period, a 20% decline. Reductions achieved by 2024 were still far from the global target of a 65% reduction compared with 2015, which is equivalent to about 0.1 million HCV-related deaths in 2030 (about 2 deaths per 100 000 population).[1]

Regional trends vary (**Fig. 3.23**, **Fig. 3.24**).

The absolute number of deaths decreased between 2015 and 2024 in four WHO regions: the Eastern Mediterranean Region (33%), the European Region (31%), the Region of the Americas (21%) and the Western Pacific Region (12%). The absolute number of deaths increased by 24% in the WHO African Region and by 34% in the South-East Asia Region.

The largest relative reductions in the mortality rate were in the WHO Eastern Mediterranean Region (–43%, 10 to 5.9 per 100 000 population) and the European Region (–33%, 4.9 to 3.3 per 100 000 population), followed by the Region of the Americas (–26%, 4.1 to 3.0 per 100 000 population) and the Western Pacific Region (–15%, 2.3 to 2.0 per 100 000 population). There was a very small decline in the WHO African Region (–0.9%, 3.5 to 3.4 per 100 000 population), indicating largely stagnant mortality rates over the decade.

The WHO South-East Asia Region was alone in experiencing an increase in the HCV-related mortality rate (+23%), from 1.7 to 2.2 per 100 000 population.

As of 2024, 51 countries had a mortality rate below 2.0 per 100 000 population while at the other extreme, 29 countries had a rate of more than 5.0 per 100 000 population (**Fig. 3.25**), showing that major inequities in access to diagnosis and treatment persist and need to be addressed.

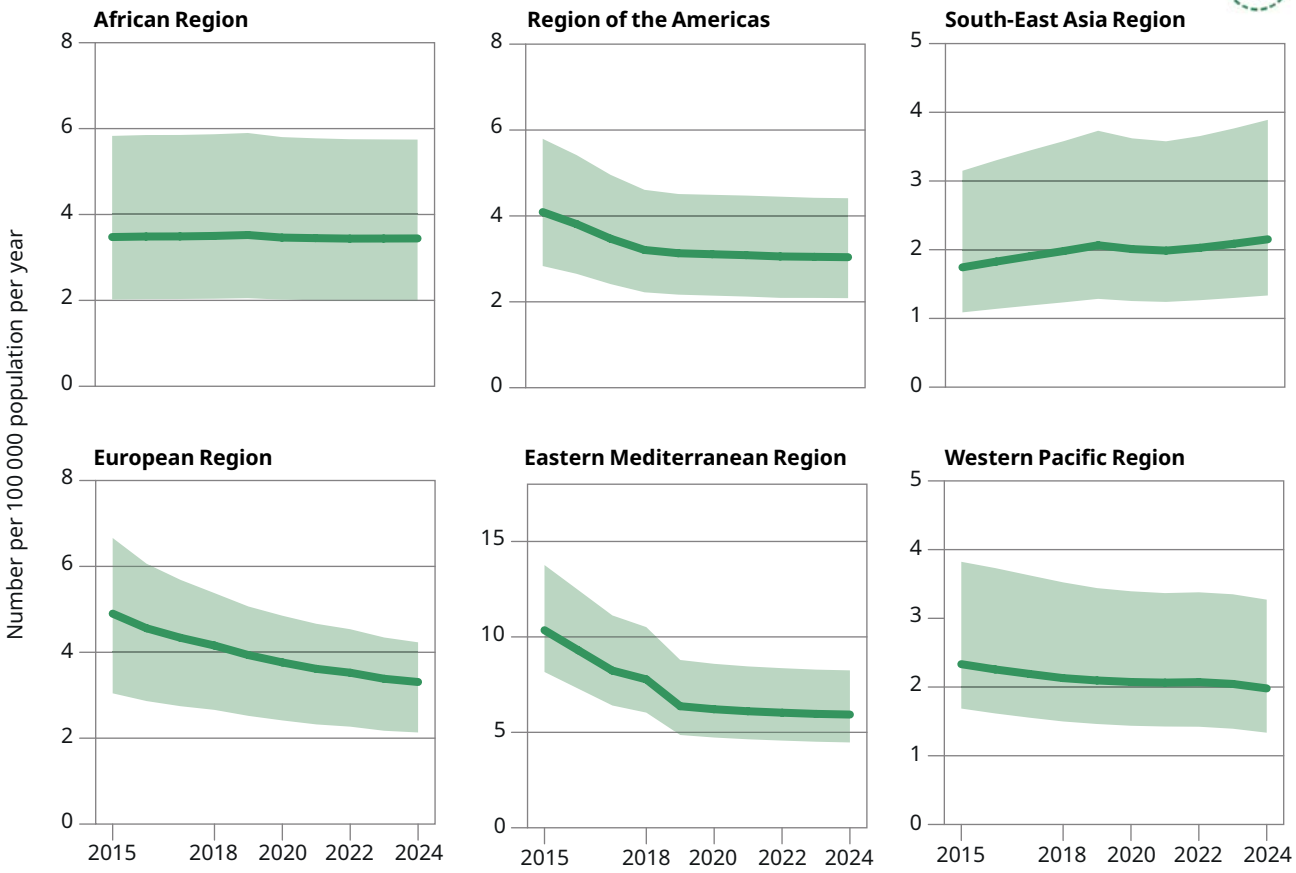
In 2024, 10 countries accounted for 58% of the global total of HCV-related deaths: China, India, Indonesia Japan, Nigeria, Pakistan, the Russian Federation, South Africa, the USA and Viet Nam (**Fig. 3.26**).

3.3.3 HBV- and HCV-related mortality, combined

When considering HBV- and HCV-related mortality in combination, the global mortality rate has remained largely unchanged: 16 (95% UI: 13–21) per 100 000 population in 2015 and 17 (95% UI: 14–21) per 100 000 population in 2024 (**Fig. 3.27**). In absolute terms, the combined number of HBV- and HCV-related deaths rose from 1.2 million (95% UI: 1.0–1.6 million) in 2015 to 1.3 million (95% UI: 1.1–1.7 million) in 2024, with increases in HBV-related deaths outweighing reductions in HCV-related deaths.

[1] For validation of elimination, a combined mortality threshold for HBV and HCV of fewer than 6 deaths per 100 000 population per year is applicable *(22)*.

Fig. 3.24. Trends in HCV-related mortality rates by WHO region, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.25. HCV-related mortality rates (number of deaths per 100 000 population) at country level, 2024

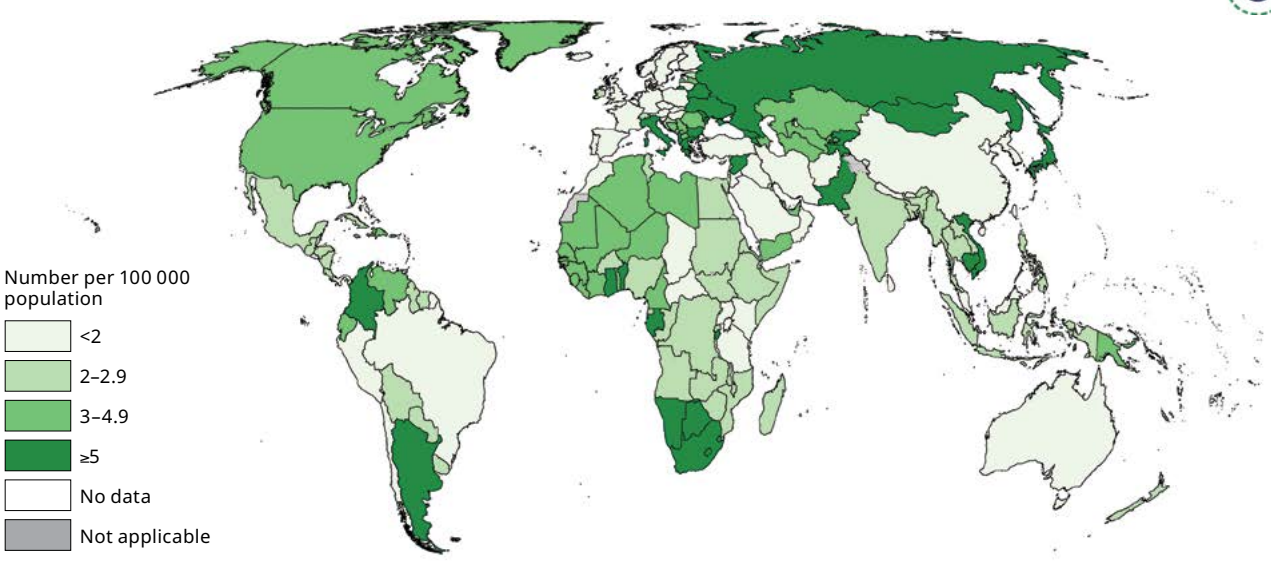
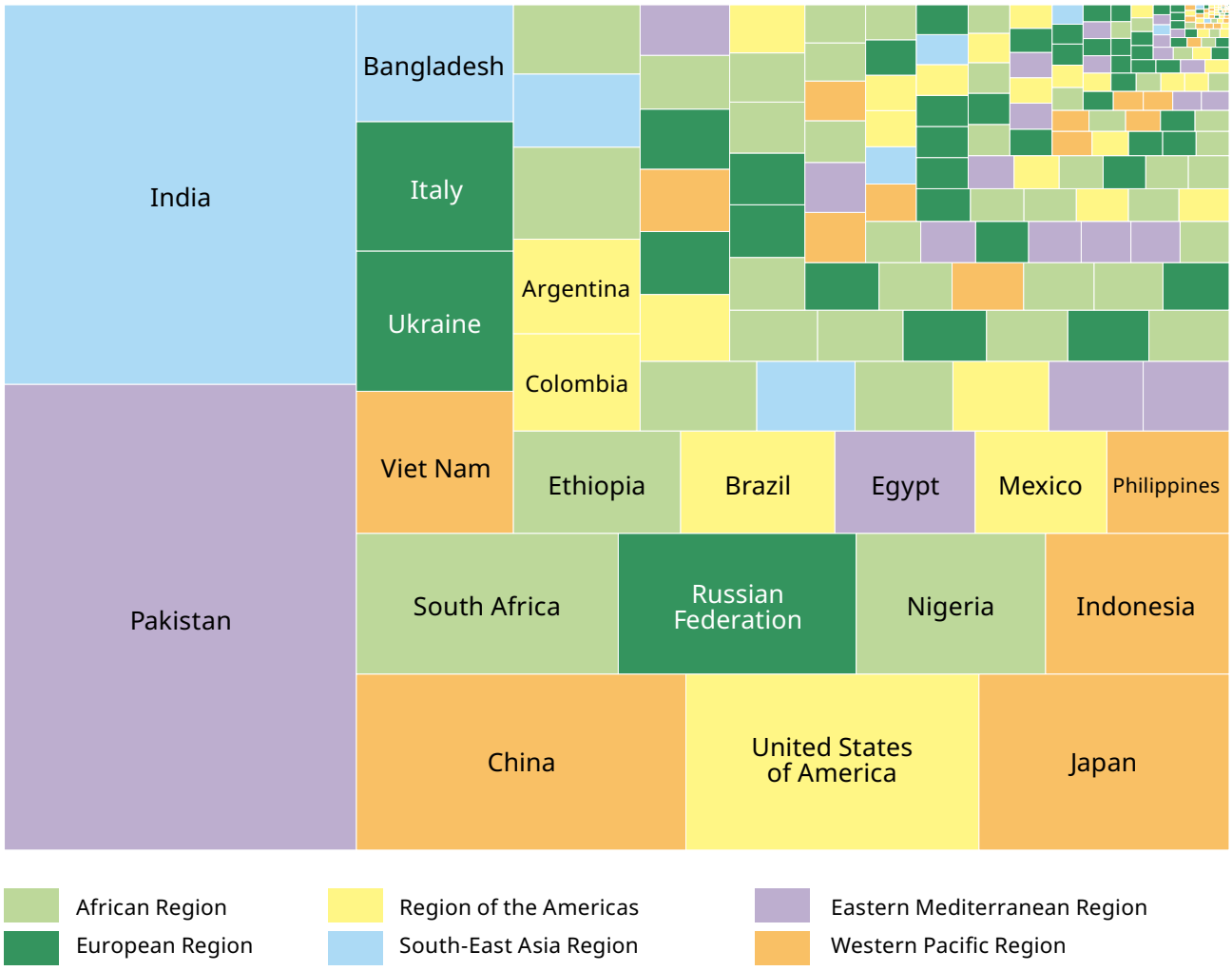
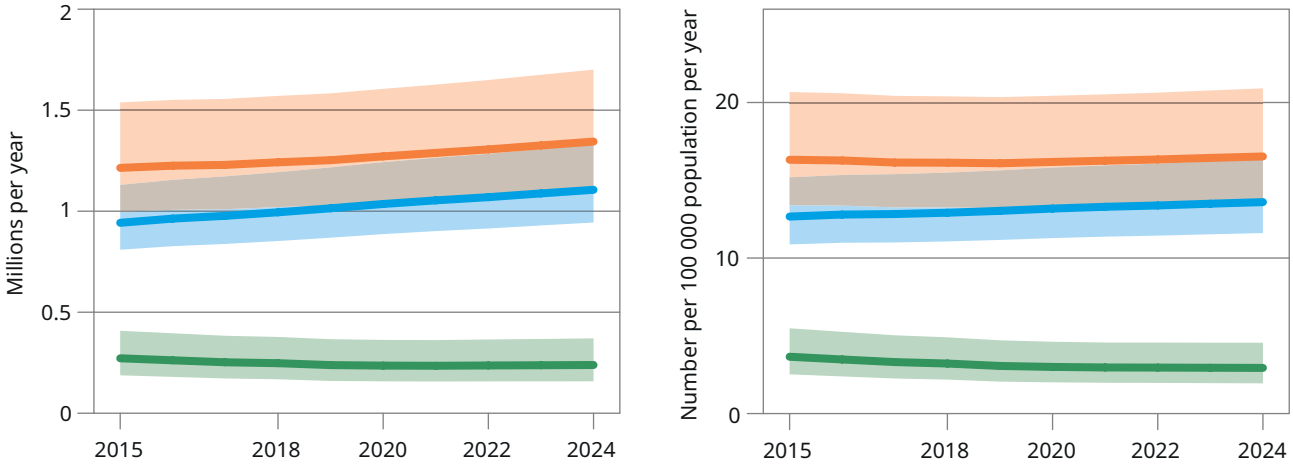


Fig. 3.26. Geographic distribution of the global number of HCV-related deaths, 2024[a]



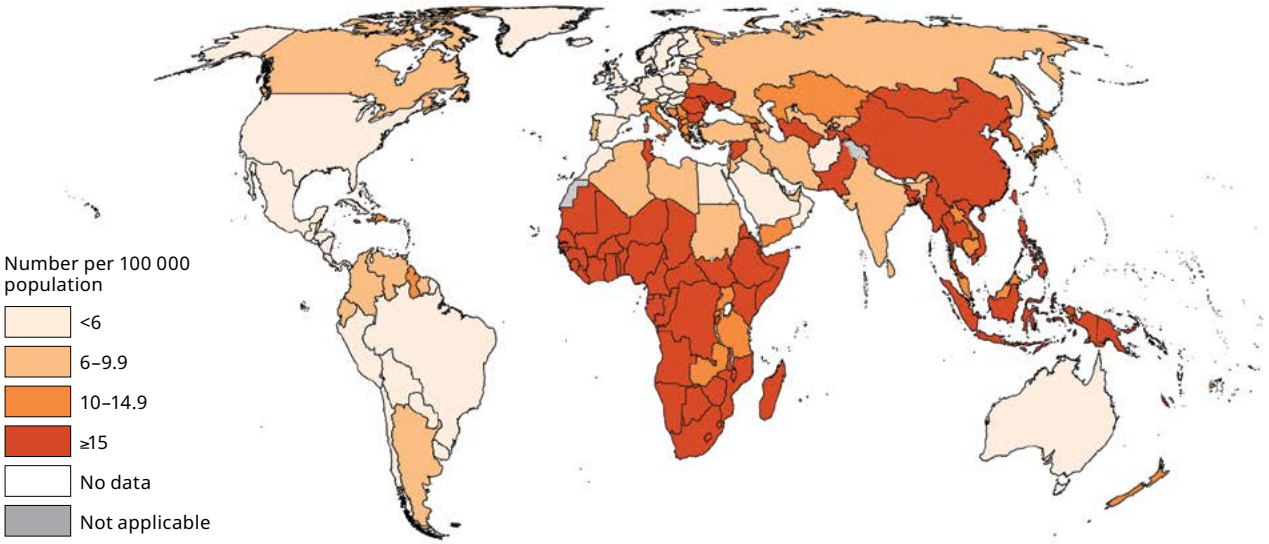
[a] The size of each rectangle represents each country's estimated share of the global number of HCV-related deaths. Only the top 20 countries are labeled.

Fig. 3.27. Global trends in HBV and HCV-related deaths combined (**orange**), HBV only (**blue**) and HCV only (**green**), absolute numbers (left panel) and rates (right panel), 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

Fig. 3.28. Combined HBV and HCV-related mortality rate (number of deaths per 100 000 population) at country level, 2024



As of 2024, 90 countries had a combined mortality rate of fewer than 10 deaths per 100 000 population; of these, 49 countries had fewer than 6.0 deaths per 100 000 population (**Fig. 3.28**).

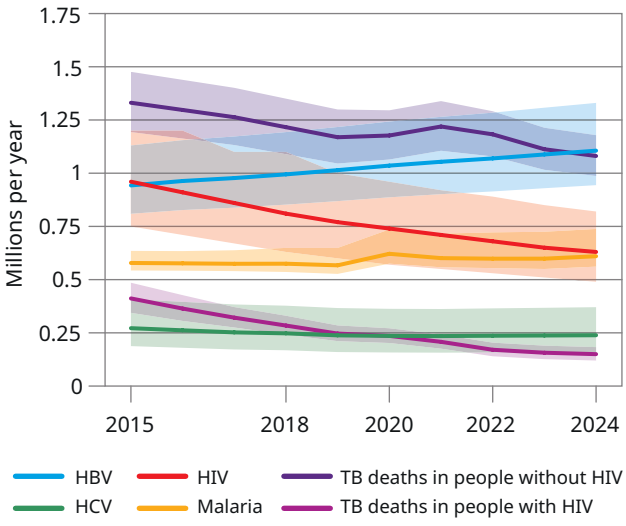
3.3.4 Comparisons with other major infectious diseases

The increasing number of hepatitis-related deaths globally over the past decade is in striking contrast to major reductions in the number of deaths caused by HIV; deaths from tuberculosis (TB) have also fallen year-on-year during most of the period 2015–2024[1] (**Fig. 3.29**). The impressive reductions in HIV-related deaths follow substantial investment in testing, treatment and prevention and the high coverage of antiretroviral treatment (78% of people living with HIV at the end of 2024).

HBV-related deaths – at 1.1 million in 2024 – are now almost double the number caused by HIV, and are comparable to those caused by TB.

Renewed, heightened and sustained political commitment and funding are urgently required to reduce hepatitis-related deaths and put the world on track for elimination by 2030. The preventive, diagnostic and treatment interventions needed to do this are already available; however, they need to be deployed to maximum effect. The status of progress in prevention, diagnosis and treatment is discussed in **Chapter 4**, after which **Chapter 5** sets out what needs to be done in the years up to 2030, illustrated with country examples.

Fig. 3.29. Global number of HBV- and HCV-related deaths compared with deaths caused by other major infectious diseases, 2015–2024[a]



[a] Shaded areas represent 95% uncertainty intervals.

[1] The exception was 2020 and 2021, when deaths from TB increased due to coronavirus disease (COVID-19) related disruptions to diagnosis and treatment *(52)*.

3.4 Hepatitis D

Hepatitis D is a severe liver disease caused by HDV, a defective RNA virus that requires the presence of HBV for replication (**Chapter 1**). HDV infection can occur either as a coinfection (i.e. when individuals acquire HBV and HDV simultaneously) or as a superinfection (i.e. when HDV infects someone already chronically infected with HBV).

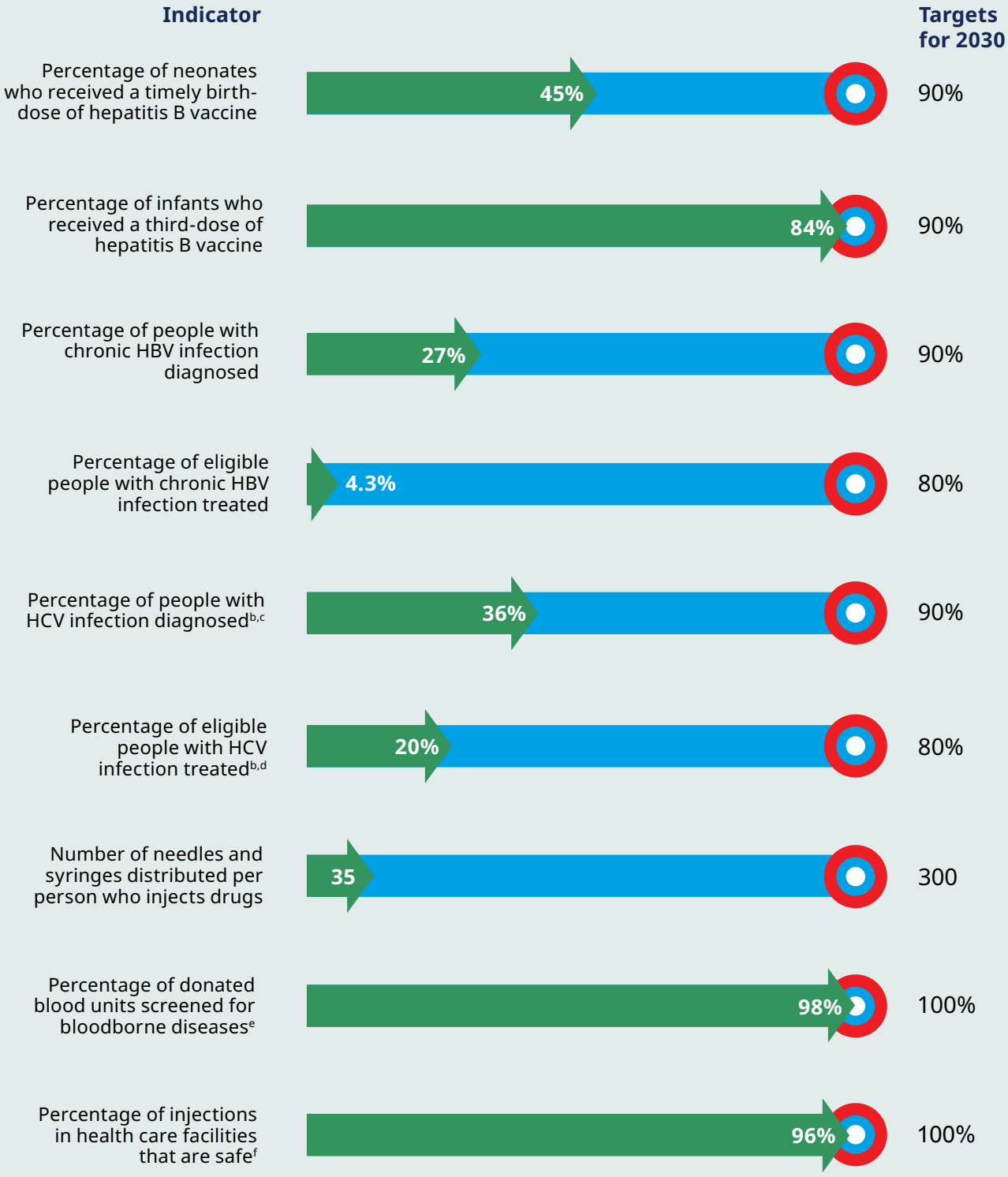
Globally, an estimated 4.5% of people with a chronic HBV infection are coinfected with HDV, equivalent to about 12 million people *(53)*.

In the 2025 round of WHO global hepatitis data collection (**Annex 2**), among countries reporting anti-HDV IgG prevalence among HBsAg-positive individuals by the end of 2024 (or the latest year available), marked geographic heterogeneity was observed. Very high levels of HDV coinfection were reported in Kiribati (42%), Mongolia (37%), and Chad (14%). Other countries reported moderate levels of HDV coinfection, ranging from below 1% to nearly 8%. Within this range, the highest prevalence was reported in Spain (7.7%), followed by France (6.4%) and Portugal (6.3%), with similarly elevated levels in Greece (5.8%), Germany (5.7%) and Belgium (5.5%). Intermediate prevalence was observed in Romania (4.9%) and the United Kingdom (4.9%), followed by Georgia (3.7%), the Netherlands (3.7%), Italy (3.4%) and Norway (3.2%). Lower prevalence was reported in Qatar (2.5%), Brazil (1.5%) and Austria (0.8%). In terms of absolute numbers of reported cases of HDV coinfection in 2024 (or the latest year available), the highest numbers were in Kazakhstan (3700), the United Kingdom (1727), Azerbaijan (984) and Ukraine (953) .

Interpretation of these data requires caution, since there is a great deal of uncertainty about the prevalence of HDV coinfection among people living with a chronic HBV infection. Much of the reported data originates from countries with a relatively low burden of chronic HBV infection, particularly in Europe, where the observed prevalence of HDV is consequently lower. Limited reporting from several high HBV-endemic countries constrains the global representativeness of available HDV prevalence data. In addition, in many low- and intermediate-prevalence countries, chronic HBV infection, and therefore HDV testing, occurs predominantly among migrant populations originating from high-endemicity settings, which may influence national estimates. Furthermore, in some settings, such as Kiribati, very high reported prevalence may partly reflect selection bias, as HDV testing is often conducted among a subset of HBV-infected patients with advanced liver disease, including cirrhosis or HCC. In contrast, the high prevalence reported in Mongolia is consistent with the well-documented concentration of HDV infection in areas of high endemicity; notably, Mongolia is recognized in the published literature as having one of the highest HDV burdens globally *(54)*.

In general, HDV disproportionately affects low and middle-income countries with constrained testing capacity, limited routine screening among people living with a chronic HBV infection and inadequate access to confirmatory HDV RNA testing. These disparities highlight the need for strengthened diagnostic strategies, standardized surveillance and integration of HDV monitoring within broader HBV services. Such improvements are essential to reduce uncertainty in estimates of the burden of HDV and to support targeted interventions for the populations at greatest risk.

Global targets: latest status of progress[a]



[a] This is 2024 for all indicators unless otherwise stated.
[b] The denominator is the cumulative number of people with an HCV infection at any time in the period 2015–2024
[c] The numerator is the cumulative number of people diagnosed with HCV infection in the period 2015–2024.
[d] The numerator is the cumulative number of people with HCV infection who were treated in the period 2015–2024.
[e] Data are for 2018.
[f] Data are for between 2011 and 2015.

Chapter 4

Prevention, diagnosis and treatment

Viral hepatitis remains a leading global health problem (**Chapter 3**).

Globally in 2024, the sequelae of chronic hepatitis B virus (HBV) and hepatitis C virus (HCV) infections – liver cirrhosis and hepatocellular cancer (HCC) – caused a combined total of 1.3 million deaths (95% uncertainty interval [UI]: 1.1–1.7 million). This included 1.1 million (95% UI: 0.9–1.3 million) HBV-related deaths and 240 000 (95% UI: 160 000–370 000) HCV-related deaths.

Globally in 2024, there were an estimated 240 million people living with a chronic HBV infection (95% UI: 202–296 million), equivalent to 2.9% of the global population; and 47 million living with HCV infection (95% UI: 31–71 million), equivalent to 0.6% of the global population.

Globally in 2024, an estimated 1.8 million people (95% UI: 1.3–2.6 million) were newly infected with HBV or HCV (0.9 million for each virus).

As explained in **Chapter 3**, HBV and HCV infections evolve in stages. People with a new infection are typically asymptomatic. Following infection, some people clear the virus and others become chronically infected. The risk of developing a chronic HBV infection is highest (about 95%) among children aged under 5 years; the risk is much lower for infections acquired in adulthood (about 5%). About 55–85% of people infected with HCV develop a chronic infection. Both HBV and HCV infections persist silently (without symptoms) for many years; however, over a period of about 3 decades they can advance to cirrhosis and HCC.

This burden of silent infection, and subsequent morbidity and mortality, is preventable or treatable.

As explained in previous chapters, several interventions are available:

- A hepatitis B vaccine. This has been recommended by the World Health Organization (WHO) since the early 1990s. A birth dose followed by two or three further doses in infancy has 95% efficacy and confers protection for at least 20 years or for life. The most immediate benefit of vaccination is a reduction in the prevalence of chronic HBV infection in children aged under 5 years; this is followed by the impact on HBV-related morbidity and mortality, after a time-lag of about 30 years.
- Antiviral prophylaxis to prevent mother-to-child transmission of HBV infection.
- Lifelong antiviral treatment for people with a chronic HBV infection. This can halt or slow the progression of infection and reduces HBV-related mortality.
- Treatment for people with HCV infection with a 12-week direct-acting antiviral (DAA) regimen. DAA combination regimens with a 95% cure rate have been available for programmatic use since 2015.
- Measures to ensure the safety of blood services and injections in health care facilities. These prevent both HBV and HCV infections.
- Harm-reduction services. These can help to prevent HCV infections among people who inject drugs – a population that accounts for about 44% of new HCV infections globally.

All Member States of WHO and the United Nations (UN) have committed to 2030 global targets for hepatitis elimination (**Chapter 2**) *(3, 4)*. The global elimination targets for 2030 are:

- a 95% reduction in the annual number of new HBV infections, compared with 2015;
- an 80% reduction in the annual number of new HCV infections, compared with 2015;
- a 65% reduction in the annual number of HBV- and HCV-related deaths, compared with 2015;
- a reduction in the prevalence of chronic HBV infection among children aged under 5 years to 0.1%; and
- a reduction in the percentage of people who inject drugs who acquire a new HCV infection each year to 2%.

To reach these targets, it will be necessary to achieve high levels of coverage of all available interventions. Accordingly, WHO's current global health sector strategy (GHSS) on viral hepatitis *(3)* defines the levels of intervention coverage required by 2030 to achieve the targeted reductions in incidence, prevalence and mortality (**Table 4.1**), informed by modelling. It also defines interim coverage targets for 2025.

This chapter provides the latest data about the coverage of interventions for prevention, diagnosis and treatment, highlighting areas where progress has been made and major gaps that remain.

The most impactful interventions (in terms of their contribution to achieving global elimination targets)[1] are covered first. These interventions are hepatitis B vaccination at birth and in infancy, which can prevent almost all chronic HBV infections; antiviral prophylaxis to prevent mother-to-child transmission of HBV infection; and antiviral treatment for people with a chronic HBV or HCV infection, which is essential for achieving the 2030 targets for mortality reductions.

The remaining sections of the chapter cover measures to ensure blood and injection safety in health care settings, and harm-reduction services for people who inject drugs.

The most important chapter findings and messages

[1] The relative importance of interventions varies among WHO regions.

Box 4.1. Chapter findings and messages – key points

- The interventions required to achieve the 2030 global targets for elimination of viral hepatitis as a public health threat already exist, but coverage levels need to be improved.
- Hepatitis B vaccination given at birth followed by two or three further doses in infancy has 95% efficacy and can confer protection for at least 20 years or for life.
- Globally in 2024, the coverage of third-dose vaccination was 84%. However, coverage of birth-dose vaccination – which is particularly critical for preventing mother-to-child transmission – was only 45%.
- In the WHO African Region, which has the most severe burden of chronic HBV infection and accounted for 68% of new HBV infections in 2024, hepatitis B birth-dose vaccination coverage was only 17%. In 2025, 20 of the 47 countries in the African Region were not implementing hepatitis B birth-dose vaccination.
- Provision of antiviral prophylaxis to pregnant women with a chronic HBV infection can also prevent mother-to-child transmission. Data on global levels of coverage are not available, but information about policies in place at national level in 2025 suggests that provision remains limited.
- Among 130 countries that reported data, 128 had a policy of universal screening of pregnant women for HBV infection but only 51 were providing screening nationwide. A policy of providing antiviral prophylaxis to prevent mother-to-child transmission of HBV infection was reported by 80 countries.
- Lifelong antiviral treatment for people with a chronic HBV infection can halt or slow the progression of infection and reduce HBV-related mortality. Based on the latest WHO guidelines, approximately 50% of people with HBV infection worldwide are eligible for treatment.
- Globally in 2024, only 27% of the estimated 240 million people with HBV infection had been diagnosed and 4.3% were on treatment.
- The WHO Western Pacific Region had the highest diagnostic and treatment coverage for people with HBV infection (53% and 8.2%, respectively). However, in absolute terms it still had the biggest gap between the number of people with HBV infection and the number on treatment.
- A 12-week oral treatment with DAAs that has been available since 2015 can cure almost everyone with HCV infection. Globally in 2024, treatment coverage among the cumulative total of 68 million people eligible for treatment since 2015 was 20%.
- The WHO Eastern Mediterranean Region has achieved the highest level of treatment coverage for HCV infection (31%). However, in 2024 it was also the region with the largest number of people diagnosed with HCV infection who remained alive and untreated, and the biggest gap (in terms of absolute numbers) between the number of people with HCV infection and the number of people treated.
- Ensuring the safety of blood services and medical injections in health care facilities is essential to prevent new HBV and HCV infections. Available data suggest that the safety of national blood services and medical injections is high, with 98% of blood units screened for bloodborne disease and 96% of injections in health care facilities assessed to be safe.
- Harm-reduction services are important for preventing new HCV infections among people who inject drugs – a population that accounts for about 44% of new HCV infections globally. In 2024, the average number of needles and syringes distributed per person was only 35, far short of the target of 300.
- Available interventions to prevent and treat viral hepatitis need to be urgently scaled up, especially in the countries with the highest burden.

are summarized in **Box 4.1**. An overview of the status of intervention coverage in 2024 and how this compares with the 2030 targets (and interim targets for 2025) is provided in **Table 4.1**.

4.1 Hepatitis B vaccination

4.1.1 Birth-dose vaccination

The hepatitis B vaccination became available in the early 1980s; WHO recommended that it should be routinely used in infancy in the early 1990s (**Chapter 2**).

Since 2009, WHO has recommended that all infants should receive their first dose of the hepatitis B vaccine as soon as possible after birth, preferably within 24 hours *(55)*. Birth-dose vaccination was recommended based on evidence that infections acquired at birth or in early infancy carry a much higher risk of becoming chronic, compared with infections later in life. Research has shown that about 90% of infants infected perinatally develop a chronic HBV infection, compared with only about 5% of people first infected as adults, and that timely birth-dose vaccination is essential to prevent transmission at delivery or during the first hours of life, when the risk of developing a chronic infection is highest.

As of December 2025, 118 of 194 (61%) WHO Member States had incorporated universal hepatitis B birth-dose vaccination into their immunization programmes (**Fig. 4.1**). An additional 25 countries (13%) had implemented targeted birth-dose vaccination for infants born to HBV-positive mothers. Eight countries had plans to introduce universal birth-dose vaccination before 2030.

Table 4.1. Global status of progress (in 2024) towards intervention coverage targets for elimination set in WHO's global health sector strategy (GHSS) on viral hepatitis, 2022–2030

Intervention	2024 status	2025 target	2030 target
Hepatitis B vaccination			
Hepatitis B timely birth-dose vaccine: percentage of neonates vaccinated	45%	70%	90%
Hepatitis B third-dose vaccine: percentage of infants vaccinated	84%	90%	90%
Hepatitis B and C diagnosis and treatment			
Hepatitis B diagnosis: percentage of people with chronic HBV infection diagnosed	27%	60%	90%
Hepatitis B treatment: percentage of eligible people with chronic HBV infection treated[a]	4.3%	50%	80%
Hepatitis C diagnosis: percentage of people with HCV infection diagnosed	36%	60%	90%
Hepatitis C treatment: percentage of people with HCV infection treated	20%	50%	80%
Safety of blood and health care injections			
Blood safety: percentage of donated blood units screened for bloodborne diseases	98%	100%	100%
Safe injections: percentage of injections in health care facilities that are safe	96%	100%	100%
Harm-reduction services			
Harm reduction: annual number of needles and syringes distributed per person who injects drugs	35	200	300

[a] To allow comparability across countries and facilitate global monitoring, HBV treatment coverage is reported as the percentage of all people with a chronic HBV infection who initiated antiviral therapy. It is acknowledged that eligibility criteria for treatment vary across countries and regions, and that the total number of people eligible for treatment globally is unknown. It is estimated that, once the latest (2024) WHO guidelines are fully implemented, about 50% of diagnosed individuals would meet eligibility criteria; thus, treatment coverage among those eligible would be higher than the current global estimate.

Owing to slow uptake of the WHO recommendation for universal birth-dose vaccination, global coverage remains well below the 70% target set for 2025 and even further from the 90% target set for 2030. In 2024, global coverage was 45%, up from 5% in 2000 (**Fig. 4.2**).

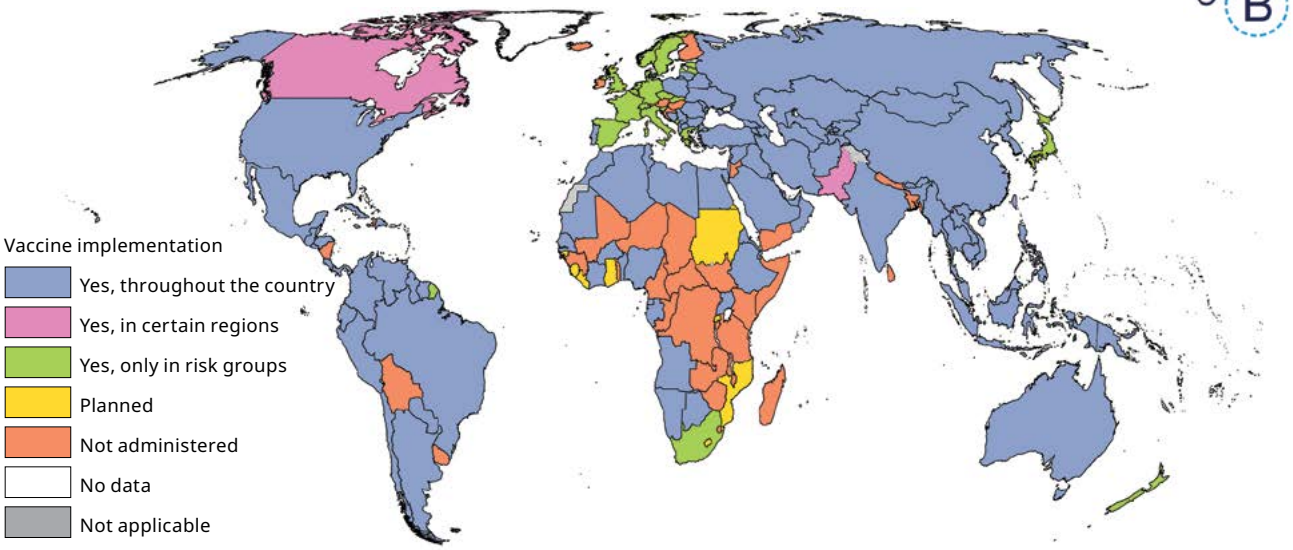
The global trajectory of progress between 2000 and 2024 was steady but uneven. Initial progress (2000–2006) was slow, with coverage increasing from about 5% to about 20%, driven mainly by rapid uptake in specific regions (notably the WHO Western Pacific Region). After the 2009 WHO birth-dose recommendation, implementation expanded from 2010 onwards as more countries introduced universal birth-dose policies. There was a minor reversal of progress during the coronavirus disease (COVID-19) pandemic, followed by a recovery in 2022. Progress then stalled between 2022 and 2024.

At regional level, progress between 2000 and 2024 has varied (**Fig. 4.3**). One WHO region – the Western Pacific – reached the 2025 target (70%), with a coverage level of 78% in 2024. In that region, birth-dose vaccination was rapidly scaled up in the mid-2000s, and coverage has been maintained at above 70% for many years, despite a worsening trend during and after the COVID-19 pandemic. The WHO Region of the Americas is approaching the 2025 target, reaching 68% coverage in 2024. The WHO South-East Asia Region has made rapid progress since 2011, improving from near zero to over 50% coverage by 2024. This progress was largely driven by updates to national policies and an expansion of birth-dose delivery platforms. In the WHO Eastern Mediterranean and European regions, overall coverage remains comparatively low (40% and 42%, respectively, in 2024). In the European Region, overall coverage is relatively low because most countries provide targeted birth-dose vaccination to neonates born to mothers with chronic HBV infection; in countries that provide universal hepatitis birth-dose vaccination, coverage is consistently high (>90%).

The lowest levels of birth-dose coverage are in the WHO African Region, a distressing reality given that this is the part of the world where the burden of HBV infection is most severe in terms of incidence, prevalence and mortality per 100 000 population (**Chapter 3**). Coverage was only 17% in 2024, albeit an improvement from near zero in the early 2000s. Low coverage reflects structural challenges in policy adoption (**Fig. 4.1**), health facility delivery rates and timely vaccine availability.

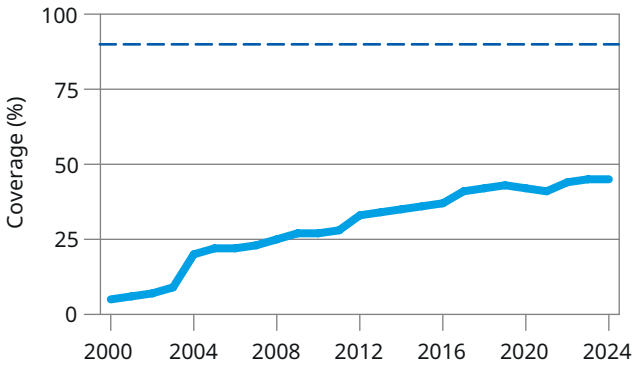
In parts of the world where HBV infection is endemic, adoption of a policy of universal birth-dose vaccination and high coverage of birth-dose vaccination is critical. Efforts to deliver the hepatitis B vaccine as soon as possible after birth need to be closely integrated with strategies to increase facility-based deliveries and to prevent mother-to-child transmission of other infections, particularly HIV and syphilis. In many settings, particularly in the WHO African Region, existing birth-dose vaccination platforms could facilitate delivery of the hepatitis B birth

Fig. 4.1. Implementation status of hepatitis B birth-dose vaccination at country level, 2025[a]



[a] Source: WHO Immunizations, Vaccines and Biologicals (IVB) database (https://immunizationdata.who.int/global/wiise-detail-page/introduction-of-hepb-birth-dose?ISO_3_CODE=&YEAR=), December 2025.

Fig. 4.2. Global coverage of timely birth-dose hepatitis B vaccination, 2000–2024[a]



[a] The horizontal dashed line marks the 2030 target of 90%.

dose. In addition to platforms such as those used for bacille Calmette–Guérin (BCG), which is given intradermally, routine vitamin K administration given at birth as an intramuscular injection offers an excellent opportunity for co-administration, given that it uses the same route of administration and skillset as hepatitis B birth-dose vaccination.

Urgent action on all three fronts is needed to achieve the 2030 global targets for hepatitis elimination.

4.1.2 Vaccination during infancy

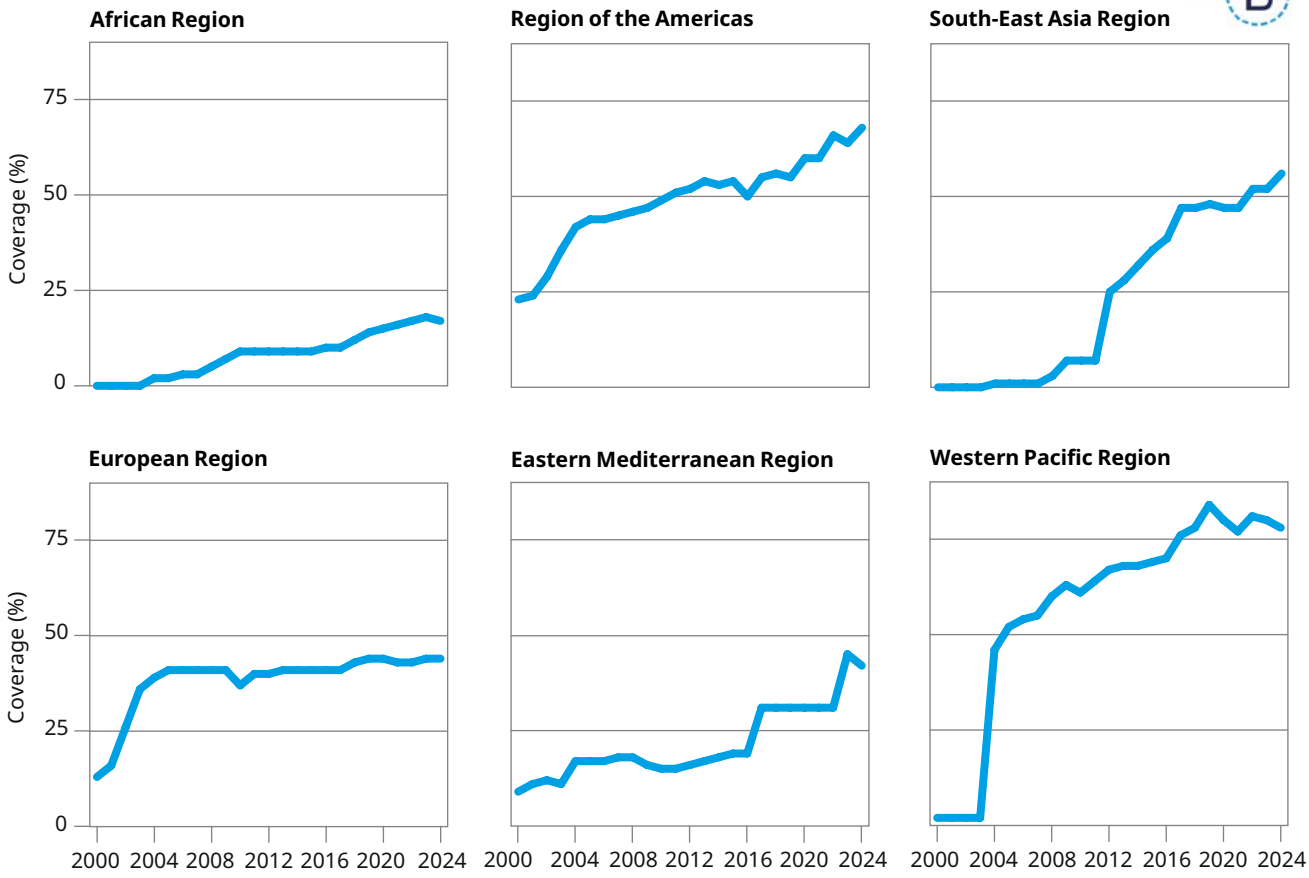
WHO recommends that timely birth-dose vaccination should be followed by two or three additional doses, with the exact number depending on the specific schedule used. In national immunization programmes, additional doses are usually combined with other vaccines such as diphtheria–tetanus–pertussis and *Haemophilus influenzae* type b *(55)*. WHO recommends that all infants complete the full primary vaccination series by the age of 6 months.

Substantial progress in providing hepatitis B vaccination during infancy has been made since 1992, when its inclusion in national immunization programmes was first recommended *(15, 55)*.

As of 2025, most countries had included universal hepatitis B infant vaccine in their national immunization plans. Four countries did not have a policy to provide universal hepatitis B infant immunization: Denmark, Finland, Hungary and Iceland *(56)*. These are countries with low HBV prevalence. Hungary has a universal hepatitis B vaccination policy that targets school-aged children, and the other three countries provide targeted hepatitis B vaccination to specified high-risk groups.

In 2024, global coverage of the third dose of the hepatitis B vaccine was 84%, close to the 90% target set for 2025 in the GHSS 2022–2030 *(3)* (**Fig. 4.4**). High levels of

Fig. 4.3. Coverage of timely birth-dose hepatitis B vaccination by WHO region, 2000–2024

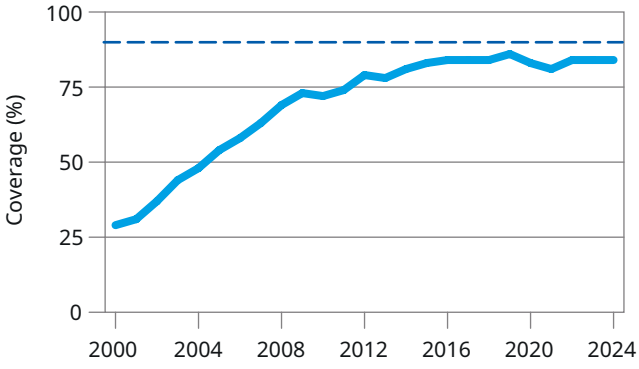


coverage, now sustained for more than a decade, have driven a substantial decline in the prevalence of chronic HBV infection among children aged under 5 years (**Chapter 3**).

The high global coverage of hepatitis B third-dose vaccination in the past decade follows major gains that were made between 2000 (29%) and 2009 (73%), when there was a massive expansion of provision in low and middle-income countries (LMICs), strongly supported by Gavi, the Vaccine Alliance, and optimized procurement mechanisms (e.g. the Revolving Fund in the WHO Region of the Americas). The highest level of coverage to date was reached in 2019 (86%), just before the onset of the COVID-19 pandemic. The pandemic resulted in a modest decline, with coverage falling to 81% in 2021. The next 3 years saw a gradual recovery, although not reaching the pre-pandemic peak. The plateauing of coverage over the past decade highlights the challenge of completing the "last mile".

Despite this global progress, regional disparities persist (**Fig. 4.5**). Coverage in the WHO African Region (76%) and Eastern Mediterranean Region (79%) remains below the global average, highlighting the need for accelerated efforts. The WHO European and South-East Asia regions have already achieved the 90% coverage targets for both 2025 and 2030, demonstrating what is feasible with strong immunization systems and sustained political commitment.

Fig. 4.4. Global coverage of third-dose hepatitis B vaccination, 2000–2024[a]



[a] The horizontal dashed line marks the 2030 target of 90%.

Fig. 4.5. Global coverage of third-dose hepatitis B vaccination by WHO region, 2000–2024

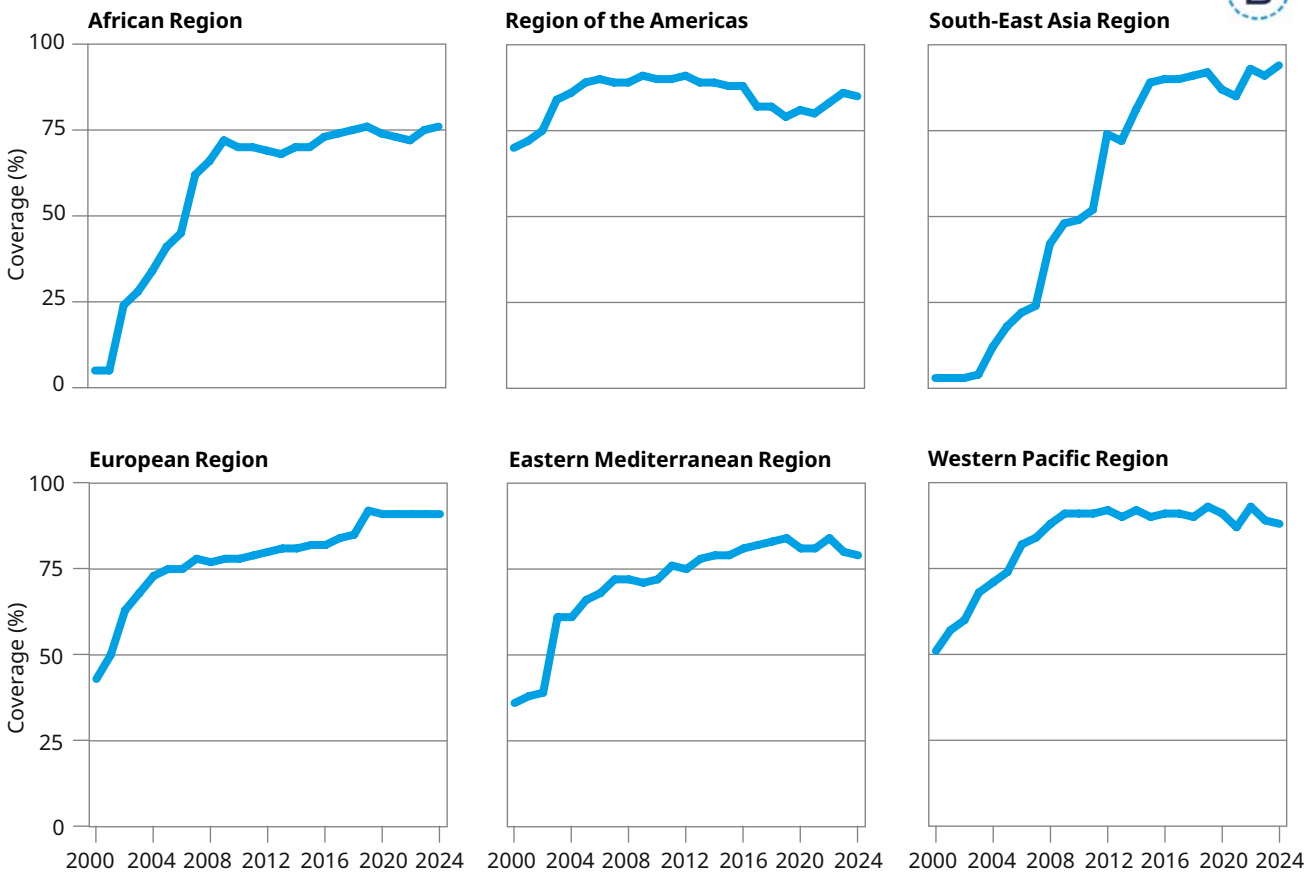
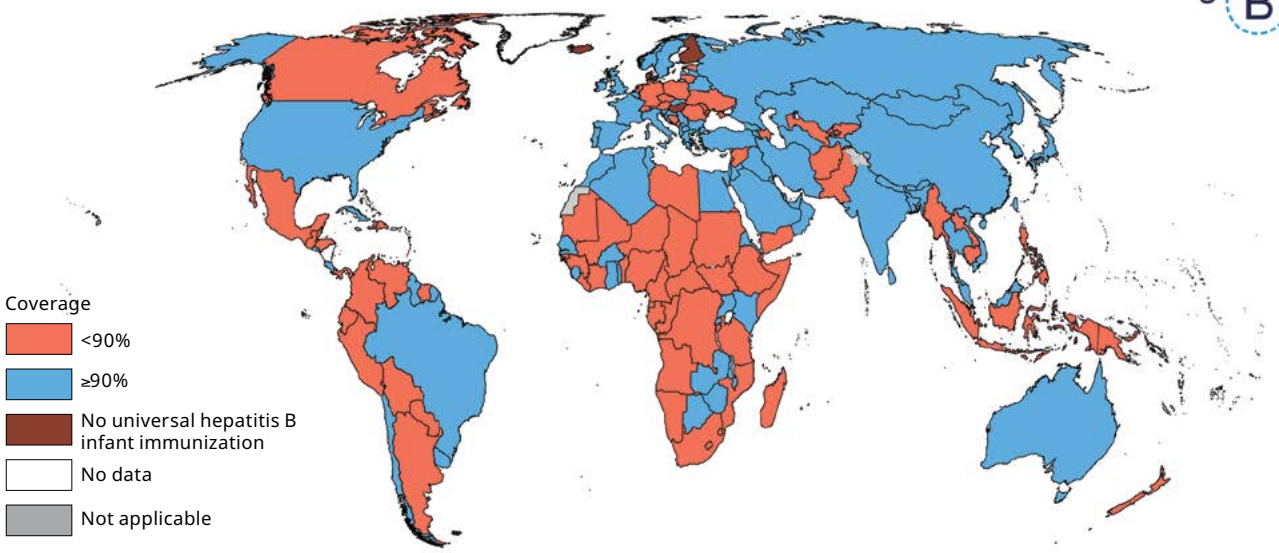


Fig 4.6. Coverage of third-dose hepatitis B vaccination at country level, 2024[a]



[a] Source: WHO Immunizations, Vaccines and Biologicals database (https://immunizationdata.who.int/global/wiise-detail-page/hepatitis-b-vaccination-coverage?CODE=Global&ANTIGEN=HEPB3&YEAR=), July 2025.

The WHO African Region made steady gains from very low levels in the early 2000s, reaching 73% by 2010 and maintaining coverage levels in the mid-70s up to 2024. The WHO Eastern Mediterranean Region achieved similar early progress, with coverage then stabilizing at about 75–80%. The WHO European Region achieved rapid scale-up early on and has sustained a high level of coverage (consistently about or above 90% since the mid-2010s). The WHO Region of the Americas achieved high coverage levels of about 90% for over a decade (2006–2015); subsequently, coverage has been lower, especially during the COVID-19 pandemic. The WHO South-East Asia Region has achieved strong and sustained improvements, increasing from very low coverage in the early 2000s to nearly 90% in recent years. The WHO Western Pacific Region, historically a global leader, has maintained coverage close to or above 90% for many years.

The coverage of third-dose vaccination at country level varies in 2024 (**Fig. 4.6**). A total of 103 countries achieved a coverage of 90% or above, but levels were relatively low in the WHO African Region.

4.1.3 Vaccination in adulthood

In addition to childhood vaccination, WHO recommends hepatitis B vaccination for people at high risk of HBV infection in older age groups and catch-up vaccination for unvaccinated cohorts if the necessary resources are available *(38, 55)*.

In WHO's 2025 round of global hepatitis reporting (**Annex 2**), 139 countries reported having targeted hepatitis B vaccination policies for adults at high risk of infection (**Fig. 4.7**). Globally, 107 countries (77%) reported vaccination policies for health care workers. Policies for people living with HIV were reported by 73 countries (53%), for people who inject drugs by 65 countries (47%) and for military personnel by 45 countries (32%). Vaccination policies for men who have sex with men were reported by 60 countries (43%), while 43 countries (31%) reported policies for people diagnosed with HCV infection and commercial sex workers.

A total of 39 countries reported additional ("other") population groups eligible for hepatitis B vaccination. The most frequently mentioned groups included people in prisons and other correctional or detention facilities (e.g. prisoners and inmates); patients undergoing renal replacement therapy, including those on haemodialysis or peritoneal dialysis and individuals with chronic kidney disease; and household and sexual contacts of people with chronic HBV infection, including family members and close contacts.

Other commonly reported groups were individuals receiving repeated blood transfusions or living with haematological conditions; institutionalized populations and staff, including residents and personnel of facilities for individuals with developmental or mental disabilities; occupational risk groups outside the health care sector, such as waste collectors, tattoo artists, manicure and pedicure workers, and veterinary staff; and health care-related students, including nursing, medical and other health sciences students, as well as laboratory trainees.

4.2 Antiviral prophylaxis to prevent mother-to-child HBV transmission

Infants born to HBV-infected mothers can acquire infection from the mother, mostly during birth *(57, 58)*. The risk of infection is higher in infants born to mothers who are positive for both hepatitis B surface antigen (HBsAg)[1] and hepatitis B e antigen (HBeAg)[2] than in infants born to mothers who are HBsAg-positive but HBeAg-negative *(59–61)*.

Provision of antiviral prophylaxis to pregnant women with a chronic HBV infection and a high viral load helps to suppress the virus and significantly reduces the risk of mother-to-child transmission, compared with the use of hepatitis B immunoglobulin (HBIG)[3] or vaccination alone *(57, 61, 62)*.

Prophylaxis combined with the hepatitis B birth-dose vaccination (**section 4.1**) prevents almost all mother-to-child transmission of HBV. Mothers who are HBeAg-negative have a low risk of transmitting HBV to their children when vaccination is given at birth *(60, 63)*, whereas HBeAg-positive mothers have a 20% risk of transmitting the virus despite vaccination at birth *(64)*.

WHO recommends testing of all pregnant women for HIV, syphilis and HBV infection as early as possible in pregnancy *(38)*. For those diagnosed with HBV, WHO recommends antiviral prophylaxis with tenofovir disoproxil fumarate (TDF) for women with HBV DNA of at least 200 000 IU/mL or who are HBeAg-positive. This prophylaxis should start in the second trimester and continue until delivery or completion of the infant's hepatitis B vaccination series. In settings where HBV DNA or HBeAg testing are not available, universal provision of prophylaxis to all HBsAg-positive women can be considered, as a time-limited approach to reduce ongoing vertical transmission until access to HBV DNA testing is improved.

4.2.1 National plans and policies

Of the countries that reported data about policies for HBV testing and antiviral prophylaxis among pregnant women in WHO's 2025 round of global hepatitis reporting (**Annex 2**), 76 (69% of 110 responding) reported having a national plan for the elimination of vertical transmission of HBV as part of their plans for triple elimination of hepatitis B, HIV and syphilis (**Fig. 4.8**).

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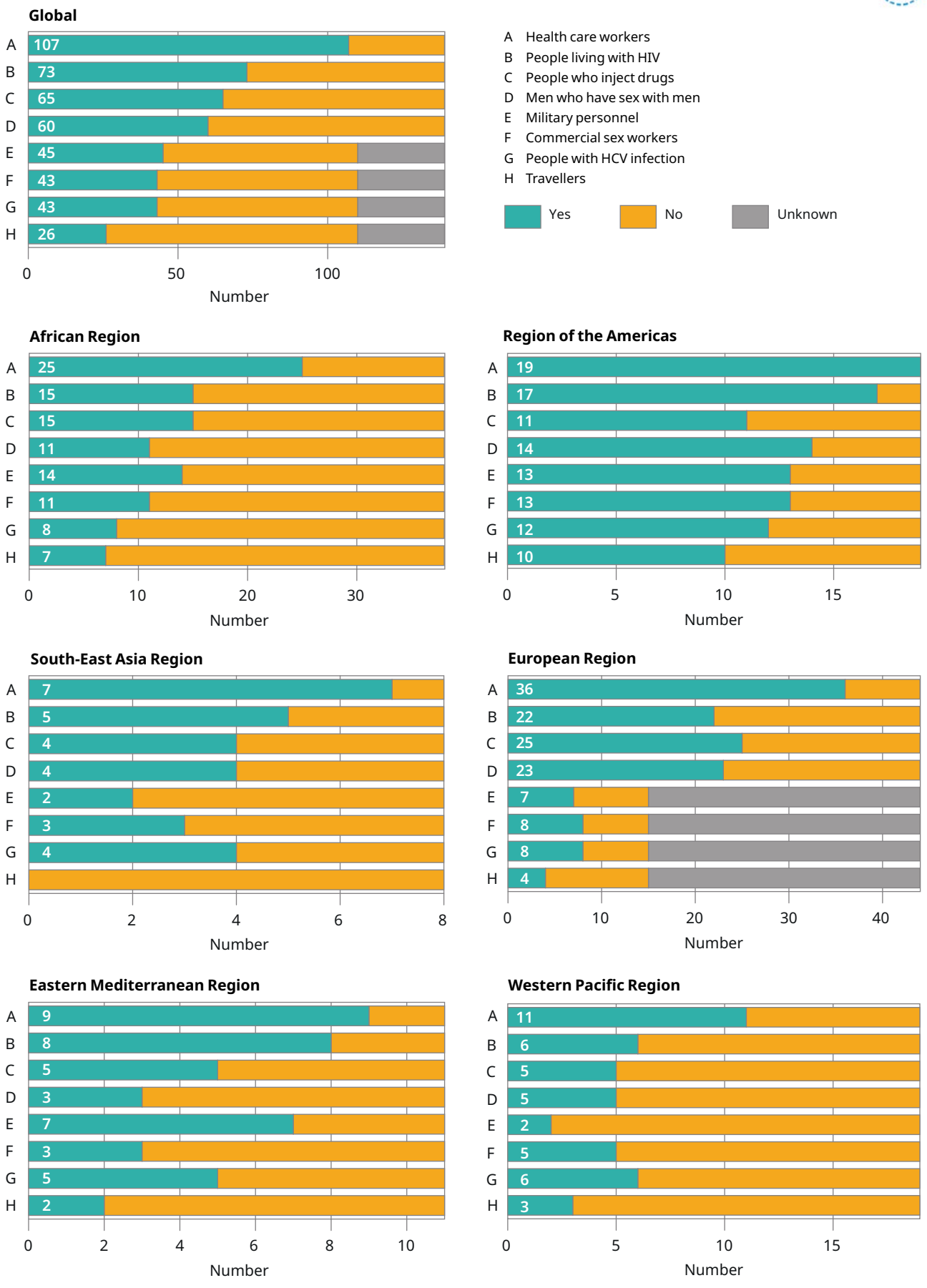
[1] HBsAg is a protein on the surface of HBV that is detectable in blood tests; it is the earliest marker of active infection. A positive result indicates that someone has an acute or chronic HBV infection, whereas a negative result typically indicates no infection or immunity.

[2] HBeAg is a viral protein produced by HBV that is a key marker of active, high-level viral replication and high transmissibility. It is used to monitor chronic infections and treatment effectiveness.

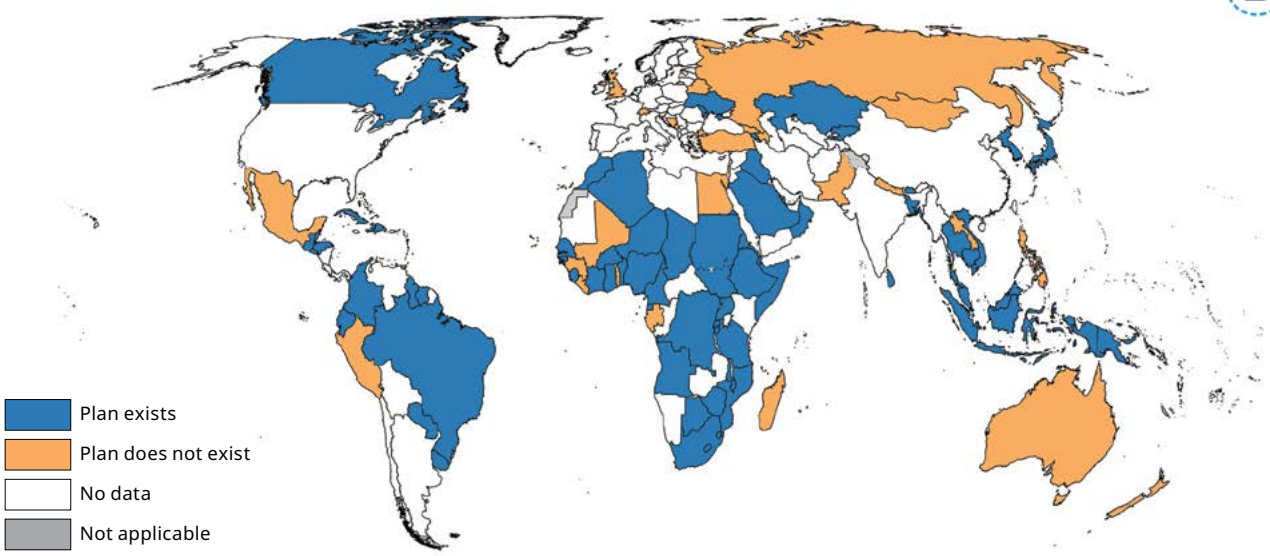
[3] HBIG contains antibodies against HBsAg (anti-HBs) and provides immediate, short-term passive protection against HBV. It is used for post-exposure prophylaxis among exposed infants born to HBsAg-positive mothers, especially those with high HBV DNA. It should always be administered in combination with the hepatitis B birth-dose vaccination.

Fig. 4.7. National policies on hepatitis B vaccination among the adult population, globally and by WHO region, 2025[a]



[a] The numbers shown in each plot are restricted to countries that responded to the policy questions in the WHO 2025 round of global hepatitis reporting.

Fig. 4.8. Existence of a national plan for the elimination of mother-to-child transmission of HBV as part of triple elimination of HBV, HIV and syphilis, by country, 2025



There was variation in terms of adoption and implementation of national policies to prevent mother-to-child transmission of HBV (**Fig. 4.9** and **Fig. 4.10**).

Globally, the most widespread policy was universal HBsAg screening of pregnant women for HBV infection; this was reported by 128 of 130 countries (98%). However, among these 128 countries, 86 reported that it had been implemented; of these, only 51 were implementing screening nationwide, 18 were implementing screening in more than half of the country's health facilities and 17 were implementing it in less than half of the country's health facilities (**Fig. 4.10**).

Among countries reporting that HBsAg screening of pregnant women was in place, 64 were also testing HBsAg-positive women for HBeAg or HBV DNA.

Provision of antiviral prophylaxis to prevent mother-to-child transmission of HBV infection was reported by 80 countries, while 61 countries reported recommending HBIG for infants exposed to HBV.

The mix of policies adopted varies among WHO regions (**Fig. 4.9**). Although policies for HBsAg screening of pregnant women are widely established in all WHO regions, there are still substantial gaps in the provision of more targeted interventions – particularly those that are resource intensive (e.g. HBeAg or HBV DNA testing, and antiviral prophylaxis). In general, uptake is slower in LMICs.

In the WHO African Region, 36 of 38 reporting countries had a policy for universal HBsAg screening of pregnant women; of these, 17 countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis during pregnancy was reported by 30 countries. A policy for the use of HBIG for HBV-exposed infants was reported by 14 countries.

In the WHO Region of the Americas, 16 of 19 reporting countries had a policy for universal HBsAg screening of pregnant women; of these, 12 countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis was reported by 10 countries. A policy for the use of HBIG for exposed infants was reported by 12 countries.

In the WHO South-East Asia Region, seven of the eight reporting countries had a policy for universal HBsAg screening of pregnant women; of these, five countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis was reported by six countries. A policy for the use of HBIG for exposed infants was reported by seven countries.

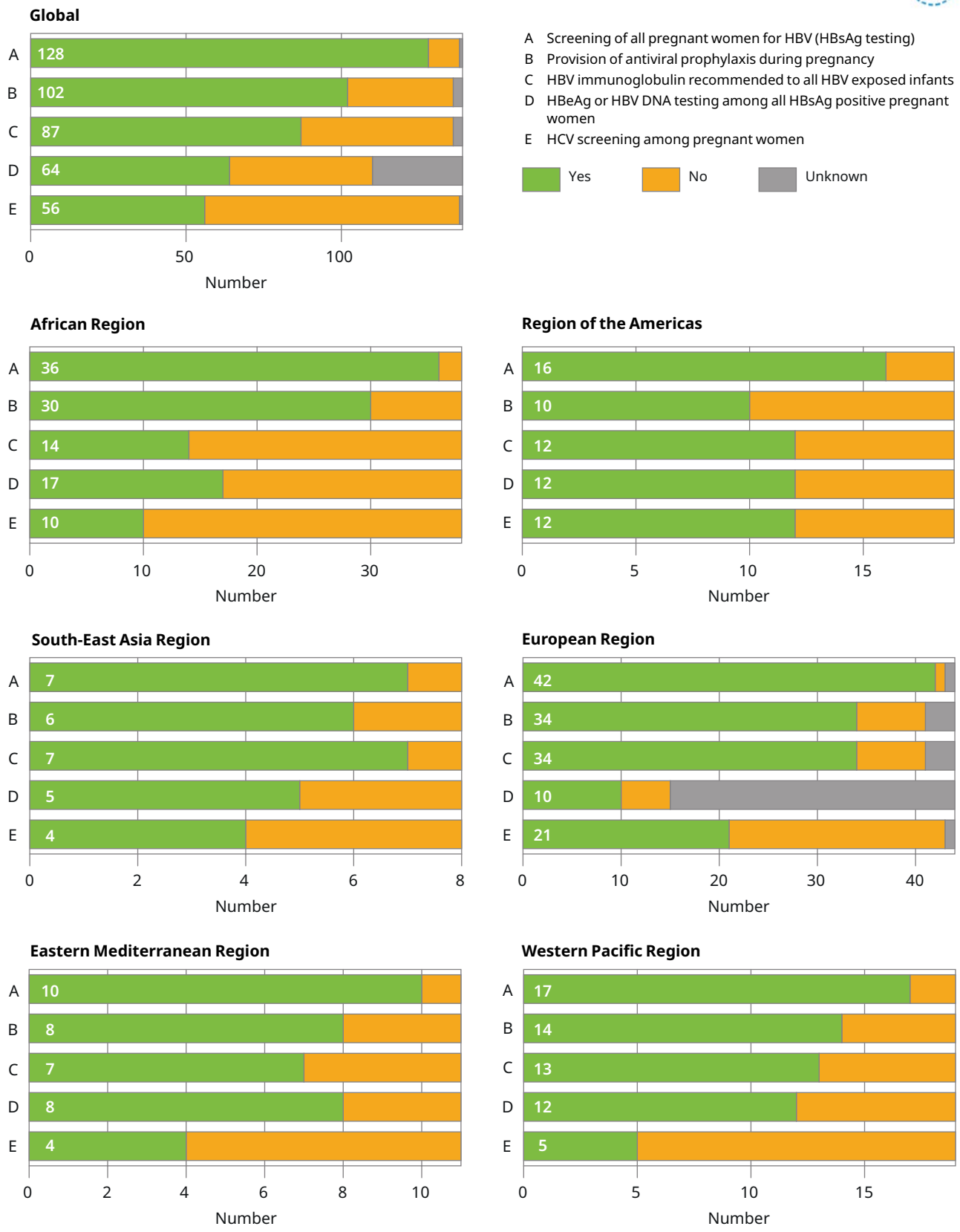
In the WHO European Region, 15 of the 44 reporting countries had a policy for universal HBsAg screening of pregnant women; of these, 10 countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis was reported by 34 countries. A policy for the use of HBIG for exposed infants was reported by 34 countries.

In the WHO Eastern Mediterranean Region, 10 of the 11 reporting countries had a policy for universal HBsAg screening of pregnant women; of these, eight countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis was reported by seven countries. A policy for the use of HBIG for exposed infants was reported by seven countries.

In the WHO Western Pacific Region, 17 of the 19 reporting countries had a policy for universal HBsAg screening of pregnant women; of these, 12 countries had a policy for HBeAg or HBV DNA testing among HBsAg-positive pregnant women. A policy for provision of antiviral prophylaxis was reported by 14 countries. A policy for the use of HBIG for exposed infants was reported by 14 countries.

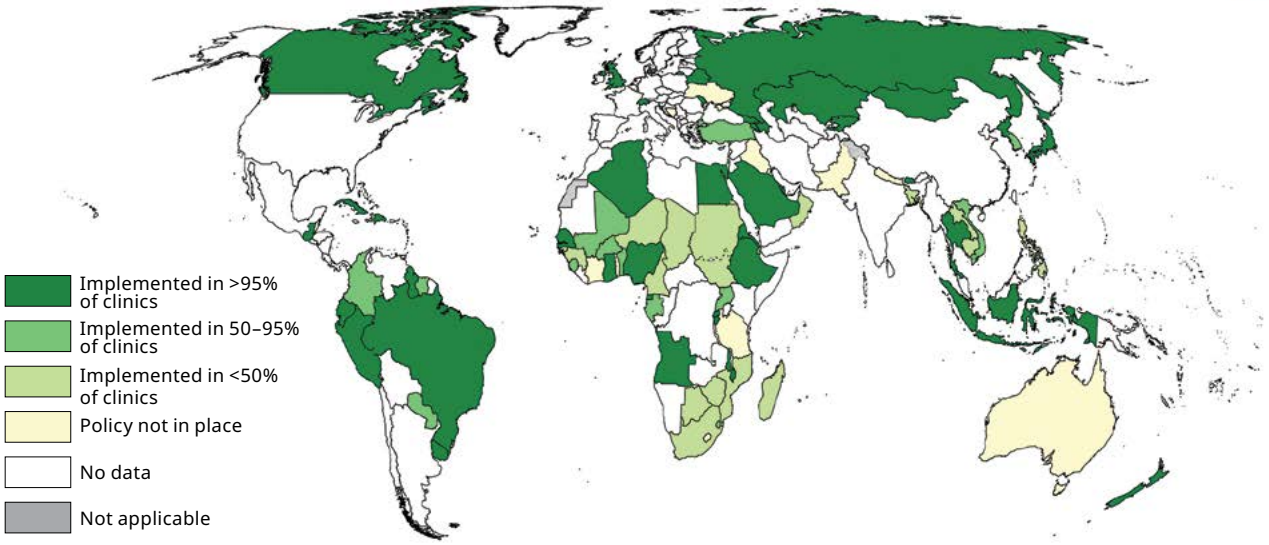
Country examples of efforts to prevent mother-to-child transmission of HBV are provided in **Box 4.2**.

Fig. 4.9. Number of countries with policies to prevent mother-to-child transmission of HBV, globally and by WHO region, 2025[a]



[a] The numbers shown in each plot are restricted to countries that responded to the policy questions in the WHO 2025 round of global hepatitis reporting.

Fig. 4.10. The status of implementation of a policy on testing women for HBV infection during pregnancy in public antenatal clinics, by country, 2025



4.2.2 Screening for HCV during pregnancy

WHO recommends HCV screening among pregnant women from populations with high HCV prevalence and among those with identified risk factors, including as part of routine antenatal care in high-prevalence settings (a country example is provided in **Box 4.3**). WHO does not currently recommend universal HCV screening during pregnancy at global level *(42)*.

Globally and across all WHO regions, screening for HCV among pregnant women remains limited. Of the 110 countries that reported data about HCV screening in WHO's 2025 round of global hepatitis reporting (**Annex 2**), 56 had a policy for HCV screening during pregnancy. They comprised 10 countries in the African Region, 12 in the Region of the Americas, four in the South-East Asia Region, 21 in the European Region, four in the Eastern Mediterranean Region and five in the Western Pacific Region.

4.3 Diagnosis and treatment of hepatitis B

WHO has provided recommendations related to testing for chronic HBV infection and treatment options for people found to be infected *(38)*, and set targets for diagnostic and treatment coverage levels to be reached by 2025 and 2030 (**Table 4.1**). The 2030 targets are that 90% of people living with chronic HBV infection are diagnosed and that treatment is being provided to 80% of those who meet treatment eligibility criteria.

4.3.1 Diagnosis

WHO recommends that HBV testing strategies are tailored to national epidemiology. Strategies include general population testing in higher prevalence settings, age-based or birth-cohort testing, and focused testing of populations at higher risk of infection. Routine HBsAg testing of all pregnant women, as part of integrated antenatal screening, is recommended in all settings, as is testing for HDV among people with HBV.

The initial test for chronic HBV infection is a quality-assured laboratory immunoassay or rapid diagnostic test for HBsAg, with rapid tests prioritized where laboratory access is limited. A single positive result is sufficient to diagnose HBV infection in higher prevalence settings. In low-prevalence settings, confirmatory testing is recommended. Testing for HBV DNA is recommended to guide treatment decisions.

In 2024, of the estimated 240 million people (95% UI: 202–296 million) living with chronic HBV infection globally, 27% (65 million) had been diagnosed (**Table 4.2**, **Fig. 4.11**).

Among WHO regions, the highest diagnostic coverage was in the Western Pacific Region (53%). This is the only region that is approaching the 2025 target of 60% (**Table 4.1**), with a steady increase in coverage over the past decade (**Fig. 4.12**), driven largely by progress in China. Other WHO regions had much lower estimated levels of coverage, ranging from 3.0% in South-East Asia to 24% in both the Region of the Americas and the European Region.

In terms of absolute numbers, the biggest gaps in diagnosis and treatment were in the WHO Western Pacific and African regions (**Table 4.2**, **Fig. 4.11**).

Box 4.2. Eliminating mother-to-child transmission of hepatitis B: country experience from Maldives, Togo and Madagascar

Maldives: Achieving triple elimination of mother-to-child transmission

In October 2025, WHO formally validated the Maldives as the first country in the world to achieve triple elimination of mother-to-child transmission (EMTCT) of HIV, syphilis and hepatitis B. This historic success demonstrated that integrated elimination is achievable, including in geographically complex settings.

As a small island developing state with nearly 200 inhabited islands dispersed across the Indian Ocean, the Maldives faced significant operational challenges in ensuring consistent antenatal care, laboratory quality, surveillance and follow-up across all communities. These challenges were addressed through sustained domestic investment in health systems, universal access to free antenatal care and diagnostics, mandatory health insurance for foreign residents, and government-provided routine vaccination for all children regardless of nationality. Overall, health expenditure exceeded 10% of gross domestic product (GDP).

Hepatitis B services were fully integrated into maternal and child health and EMTCT platforms, resulting in near-universal antenatal screening, and hepatitis B birth-dose vaccination coverage that was consistently above 95%. WHO provided sustained technical support (at country, regional and headquarters levels) for laboratory strengthening, surveillance verification, validation dossier development and review missions. Elimination outcomes were confirmed by the absence of mother-to-child transmission of HIV or syphilis in 2022–2023 and by a 2023 national seroprevalence survey that found no HBV infections among first-grade schoolchildren.

The experience of Maldives provides a replicable model for integrated HBV prevention of mother-to-child transmission (PMTCT) and triple elimination. It shows that strong domestic commitment, policy coherence and coordinated technical partnerships can deliver elimination without reliance on large-scale external financing.

Togo: Translating regional learning into expanded efforts to prevent mother-to-child HBV transmission

In Togo, WHO has supported the transition of HBV PMTCT from policy intent to practical implementation through the BBNT initiative – a south-to-south collaboration between Benin, Burkina Faso, the Niger and Togo aimed at strengthening national programmes for HIV, hepatitis, sexually transmitted infection, tuberculosis (TB) and malaria. A situation analysis conducted in early 2024 revealed that although Togo had achieved good coverage of PMTCT for HIV and syphilis, coverage of PMTCT for HBV lagged behind owing to the absence of clear operational guidelines; limited funding that covered HBsAg testing but not antiviral prophylaxis; lack of universal birth-dose vaccination; and reliance on specialist referral for HBV-positive pregnant women.

Drawing on Burkina Faso's experience with a simplified "prophylaxis-for-all" approach and task-sharing with nurses and midwives, WHO facilitated a peer-country visit in June 2024. Following sharing of experience from Burkina Faso, Togo adopted pragmatic solutions, including targeted hepatitis B birth-dose vaccination and use of widely available TDF-based regimens for prophylaxis during pregnancy. As a result, HBV PMTCT coverage improved markedly between 2023 and 2025. The coverage of HBsAg testing among pregnant women increased from 45% to 90%, and provision of TDF prophylaxis among HBsAg-positive women rose from near zero to 58%, in a setting where HBV prevalence among pregnant women ranges from 5.7% to 8.2%. Togo's experience illustrates how peer learning, adaptable service delivery models and WHO technical support can rapidly accelerate HBV PMTCT implementation.

Madagascar: Revitalizing PMTCT of HBV through system strengthening and partnership

In Madagascar, HBV prevalence is estimated at 3.5% in the adult population and hepatitis services have long been limited by health system constraints. Since 2023, WHO has worked closely with the Ministry of Health to revitalize efforts to prevent mother-to-child transmission of HBV and rebuild the hepatitis programme from the ground up – establishing national coordination mechanisms, developing the country's first strategic plan and clinical management protocol, and advocating for the introduction of a timely hepatitis B birth-dose vaccine. Emphasis has been placed on protecting pregnant women and neonates, including support for HBsAg screening among pregnant women through the acquisition of tests kits and the integration of hepatitis data into the DHIS2 surveillance platform for routine monitoring. With technical support from WHO and the Africa Centres for Disease Control and Prevention (Africa CDC), 45 health care providers have been trained, hepatitis services have been expanded to 25 health facilities, and referral hospitals are now reporting monthly treatment data. These efforts have laid the foundation for scaling up PMTCT of HBV nationwide, demonstrating how coordinated leadership, strengthened surveillance and early-life prevention can advance hepatitis elimination even in highly resource-constrained settings.

Box 4.3. From silent infection to cure: integrating hepatitis C screening into antenatal care in Cox's Bazar, Bangladesh

When a 24-year-old Rohingya refugee living in Cox's Bazar attended a routine antenatal visit, she expected a standard pregnancy check-up. Instead, she was offered HCV screening as part of expanded maternal health services. Although she felt healthy and had never been tested before, her screening result was reactive and confirmatory testing showed active HCV infection. With counselling and follow-up, she was reassured that her pregnancy would be closely monitored and that curative treatment would be provided once she finished breastfeeding.

Cox's Bazar hosts more than 1 million displaced Rohingya refugees living in densely populated camps *(65)*, where HCV prevalence is substantially higher than in the general population (estimated at 20% among displaced populations *(66)* compared with 0.6% in the general population in Bangladesh). In March 2024, the government of Bangladesh, with support from WHO and health sector partners, integrated HBV and HCV screening into routine primary health care services, including antenatal care. This approach ensured that testing was systematic, stigma-free and directly linked to confirmation, monitoring and treatment.

Between March 2024 and February 2026, more than 90 000 refugees were screened for HBV and HCV across 106 primary health facilities. Over 14 000 people were diagnosed with viremic HCV infection and linked to care. Six treatment centres now operate across the camps, and cure rates exceed 95% among patients who complete therapy and follow-up testing.

Maternal health services have played a central role in this effort. Since the programme began, more than 16 000 pregnant refugee women have been screened for HCV through routine antenatal visits. Women with confirmed infection are monitored during pregnancy and breastfeeding, with curative treatment initiated after breastfeeding has stopped, while exposed infants are enrolled in follow-up care.

The experience in Cox's Bazar demonstrates that integrating HCV screening into antenatal services is feasible and effective, even in complex humanitarian settings. By embedding testing and linkage to care within routine maternal health services, the programme is protecting mothers and neonates, preventing future liver disease and bringing elimination of hepatitis closer for populations often left behind.

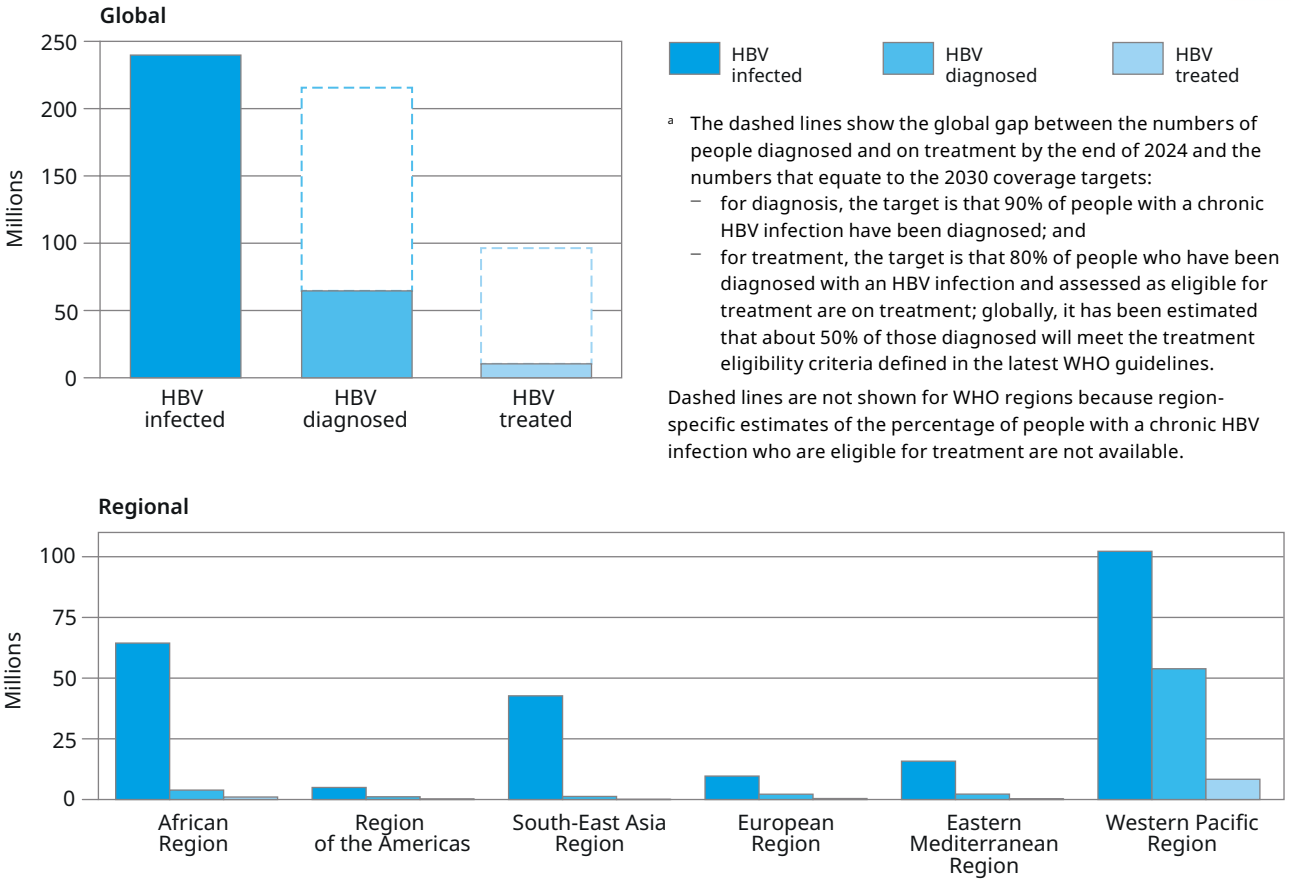
Left: Pregnant woman meets with a health professional for a clinical consultation at a health facility in Cox's Bazar. © WHO/ Terence Ngwabe Che

Right: Pregnant woman attends a postnatal follow-up visit with her newborn at a health facility in Cox's Bazar. © WHO/ Terence Ngwabe Che

Table 4.2. Coverage of HBV diagnosis and treatment, globally and by WHO region, 2024

WHO region	Number of people with a chronic HBV infection in 2024 (millions) (95% UI)	Number of people with a chronic HBV infection who had been diagnosed by the end of 2024 (millions) (95% UI)	Number of people on treatment for HBV by the end of 2024 (millions) (95% UI)	Percentage of people with a chronic HBV infection who had been diagnosed by the end of 2024 (95% UI)	Percentage of people diagnosed with a chronic HBV infection who were on treatment by the end of 2024 (95% UI)	Percentage of all people with a chronic HBV infection who were on treatment by the end of 2024 (95% UI)
African Region	64 (53–80)	3.9 (3.4–4.5)	1.0 (0.9–1.1)	6.0 (4.5–7.7)	27 (22–31)	1.6 (1.2–2.0)
Region of the Americas	5 (3.2–8.1)	1.1 (0.7–1.8)	0.2 (0.2–0.4)	23 (7.8–41)	20 (7.9–34)	4.5 (1.7–8.0)
South-East Asia Region	43 (36–50)	1.3 (1.1–1.4)	0.1 (0.1–0.1)	3.0 (2.4–3.6)	4.8 (3.6–6.0)	0.1 (0.1–0.2)
European Region	9.7 (6.5–13)	2.2 (1.4–2.9)	0.4 (0.3–0.6)	23 (12–34)	18 (9.7–28)	4.2 (2.3–6.3)
Eastern Mediterranean Region	16 (11–29)	2.2 (1.7–5.1)	0.3 (0.2–0.7)	14 (1.3–29)	13 (0–30)	1.8 (0–3.8)
Western Pacific Region	102 (92–117)	54 (49–59)	8.3 (7.7–8.9)	53 (45–61)	15 (14–17)	8.2 (7.0–9.4)
Global	**240 (202–296)**	**65 (58–75)**	**10 (9.3–12)**	**27 (21–34)**	**16 (13–19)**	**4.3 (3.4–5.4)**

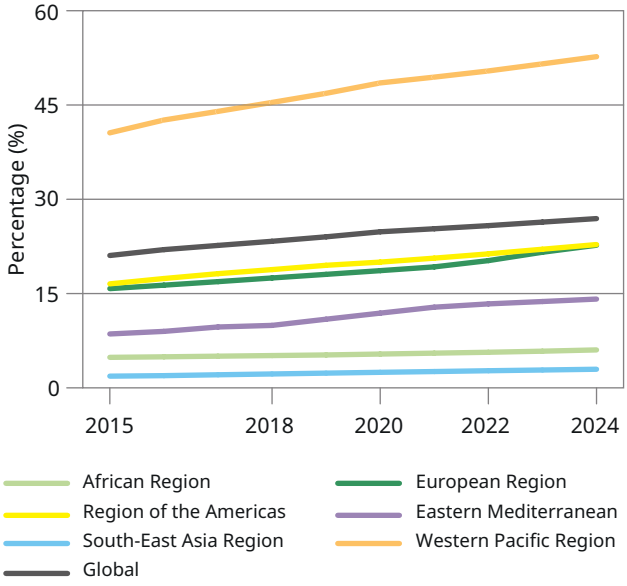
Fig. 4.11. Cascade of care for people with a chronic HBV infection, globally and by WHO region, 2024[a]



[a] The dashed lines show the global gap between the numbers of people diagnosed and on treatment by the end of 2024 and the numbers that equate to the 2030 coverage targets:
- for diagnosis, the target is that 90% of people with a chronic HBV infection have been diagnosed; and
- for treatment, the target is that 80% of people who have been diagnosed with an HBV infection and assessed as eligible for treatment are on treatment; globally, it has been estimated that about 50% of those diagnosed will meet the treatment eligibility criteria defined in the latest WHO guidelines.

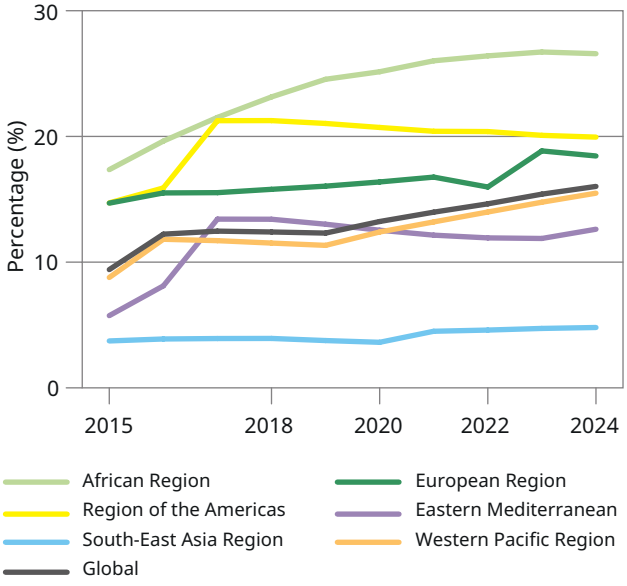
Dashed lines are not shown for WHO regions because region-specific estimates of the percentage of people with a chronic HBV infection who are eligible for treatment are not available.

Fig. 4.12. Percentage of people with a chronic HBV infection diagnosed, globally and by WHO region, 2015–2024[a]



[a] Only best estimates are shown.

Fig. 4.13. Coverage of treatment among people diagnosed with a chronic HBV infection, globally and by WHO region, 2015–2024[a]



[a] Only best estimates are shown.

4.3.2 Treatment

For people diagnosed with a chronic HBV infection, eligibility for treatment needs to be assessed and, if criteria are met, treatment initiated.

Not everyone diagnosed with HBV requires treatment. The most recent WHO guidelines (2024) introduced expanded and simplified treatment eligibility criteria for adults and adolescents *(38)*. Specifically, the guidelines prioritize evidence of liver disease over biochemical and virologic thresholds.[1] In addition to the reduced reliance on specialist diagnostic tests, eligibility has been extended to adolescents and pregnant women. Together, these changes support the decentralization of treatment in primary health care and are expected to expand treatment eligibility to about 50% of people diagnosed with HBV.

For people meeting the latest eligibility criteria, long-term treatment is recommended to prevent disease progression and reduce the risk of developing liver cirrhosis and cancer. The recommended first-line antivirals are TDF or entecavir (one pill per day) due to their high barrier to resistance, or dual therapy (with TDF/lamivudine or TDF/emtricitabine) where TDF is not readily available; alternative options are recommended for people with renal disease or osteoporosis, and for children and adolescents where appropriate.

[1] This includes treatment initiation for individuals with ≥F2 fibrosis identified using simple non-invasive tests and the removal of mandatory alanine aminotransferase (ALT) and HBV DNA cut-offs. In settings without DNA testing for HBV, persistently elevated ALT levels can be used to guide treatment initiation. The recommendation applies to adults and adolescents aged 12 years or more.

Of the estimated 240 million people (95% UI: 202–296 million) living with chronic HBV infection globally in 2024, 65 million (27%) had been diagnosed and 10 million (4.3%) were on antiviral treatment (**Table 4.2** and **Fig. 4.11**). To reach the 2030 targets (i.e. diagnosing 90% of people with chronic HBV infection and providing treatment to 80% of those meeting eligibility criteria), about 86 million people (36% of the 240 million people living with chronic HBV infection) should be on antiviral treatment by 2030.

In 2024, treatment coverage was very low in all WHO regions (**Table 4.2**, **Fig. 4.13**). The lowest coverage was in the WHO South-East Asia Region, where only 0.1% of people with a chronic HBV infection had initiated treatment (4.8% of those diagnosed); the highest coverage was in the Western Pacific Region, where 8.2% of people living with HBV had initiated treatment (15.5% of those diagnosed).

Among people diagnosed with a chronic HBV infection, the highest treatment coverage was in the WHO African Region (27%). However, this was 27% of a very small number; overall, only 1% of the estimated number of people with a chronic HBV infection in 2024 were on treatment.

Wider adoption and implementation of the latest eligibility criteria for treatment recommended by WHO are required. To date, only a few countries have adopted the latest guidelines (**Fig. 4.14**). Currently, treatment eligibility criteria vary widely among regions and, in some cases, within countries.

In the past, the price of antiviral medicines was an important barrier to the provision of treatment. However, the price has been reduced substantially and is now

Box 4.4. Expanding access to diagnosis of HDV infection

HDV infection occurs only in individuals with HBV infection. It is increasingly recognized as an important coinfection that is associated with accelerated progression to liver cirrhosis and a two-fold to six-fold higher risk of developing liver cancer, compared with HBV alone *(53)*.

The 2024 WHO guidelines on chronic hepatitis B *(38)* recommend testing for anti-HDV antibodies for all individuals who are HBsAg-positive, using laboratory-based reflex testing (whereby anti-ADV antibody testing is automatically done following a positive HBsAg result). This enables diagnosis using a single specimen and in one clinical visit, with results returned concurrently to patients and health care workers. Following a positive anti-HDV antibody test, HDV RNA testing is recommended if it is available.

The availability and implementation of anti-HDV testing remains highly uneven across countries, reflecting persistent gaps in diagnostic practices.

If universal testing is not feasible owing to limited laboratory capacity or resources, testing should be prioritized for HBsAg-positive individuals at higher risk. This includes people from HDV-endemic areas, those with advanced liver disease, those on HBV treatment, those with features suggestive of HDV infection (e.g. low HBV DNA with elevated alanine aminotransferase [ALT]) and people at increased risk of HDV infection, such as haemodialysis recipients, people living with hepatitis C or HIV, people who inject drugs, men who have sex with men, and sex workers.

Of the 137 countries that responded to questions about HDV testing in WHO's 2025 round of global hepatitis reporting (**Annex 2**), 58 (42%) reported that no HDV testing was performed for people diagnosed with HBV infection, indicating that insufficient testing is a major barrier to timely diagnosis of HDV infection (**Fig. B4.4.1**). A further 55 countries (40%) reported that HDV testing was done only for specific subgroups of people diagnosed with HBV infection – typically those with elevated clinical suspicion or recognized risk factors. Only 24 countries (18%) reported universal HDV testing for people diagnosed with HBV infection. Countries that have adopted this more comprehensive approach include Azerbaijan, Belarus, Bermuda, Canada, Colombia, Gabon, Georgia, Germany, Ireland, Kazakhstan, Kyrgyzstan, Mongolia, Norway, Oman, Qatar, the Republic of Moldova, the Russian Federation, Seychelles, Slovenia, Spain, Sweden, Türkiye, Ukraine and the United Kingdom.

The concentration of universal HDV testing in this subset of countries highlights both the feasibility and urgency of expanding systematic HDV screening globally, to reduce missed diagnoses, improve HDV surveillance and support earlier linkage to care.

Fig. B4.4.1. National policies on HDV testing among patients diagnosed with HBV infection, 2025

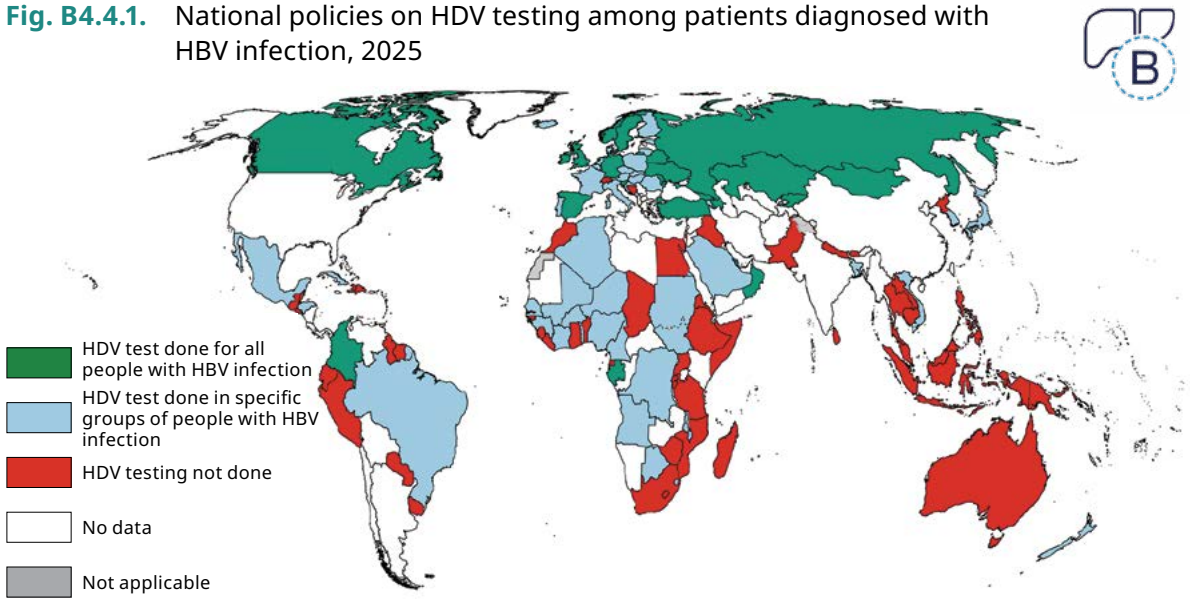


Fig. 4.14. Status of national HBV treatment guidelines, 2025

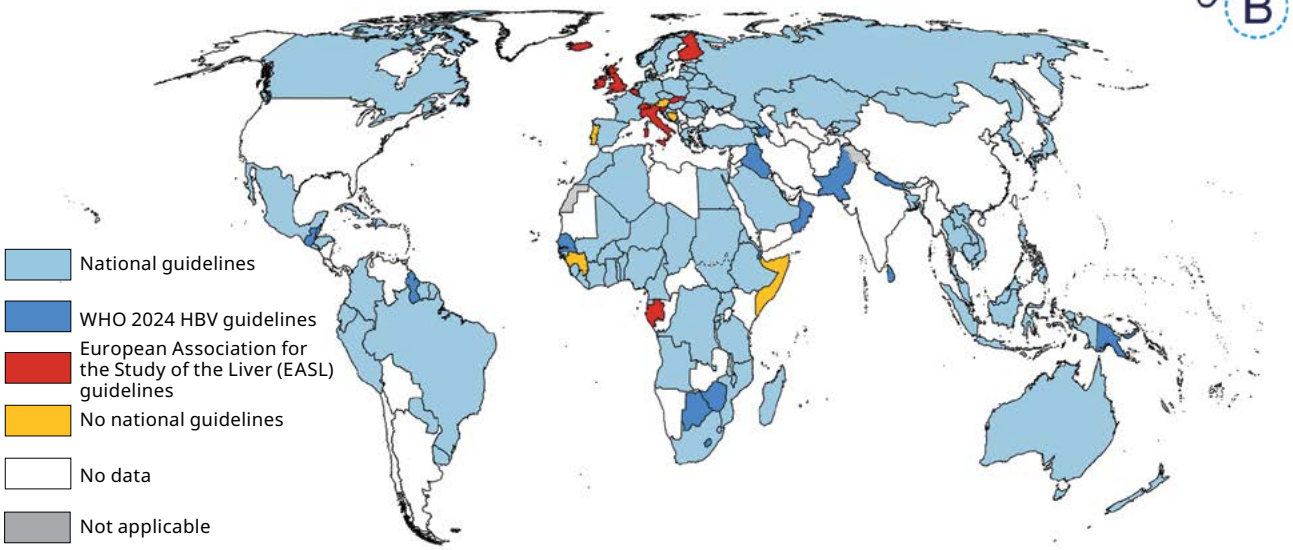
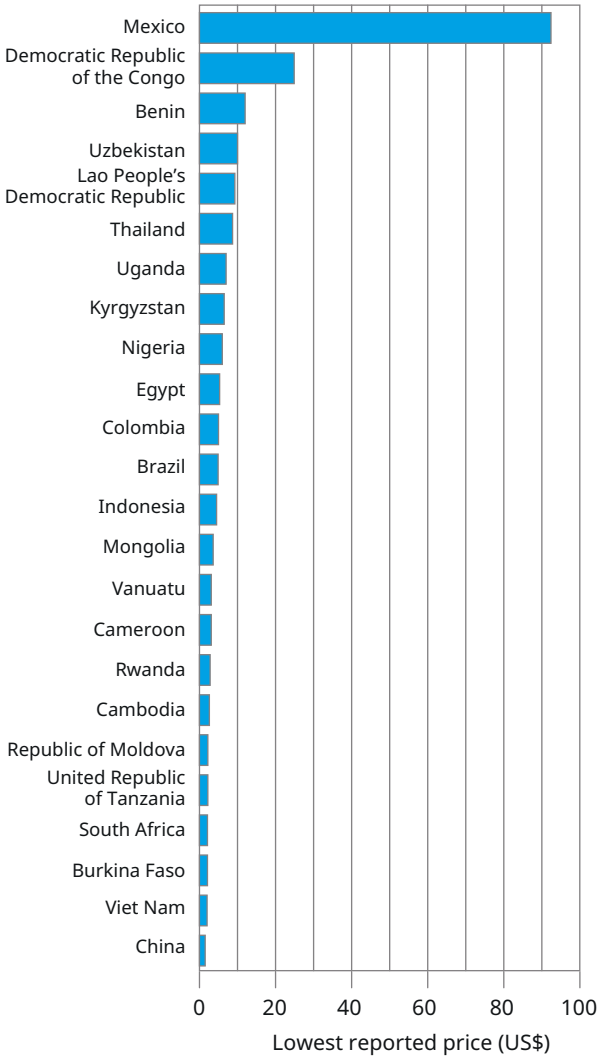


Table 4.3. Coverage of HCV diagnosis and treatment, globally and by WHO region, 2024

WHO region	Cumulative number of people with HCV infection at any time in the period 2015–2024 (millions) (95% UI)	Cumulative number of people with HCV infection who had been diagnosed at any time in the period 2015–2024 (millions) (95% UI)	Cumulative number of people on treatment for HCV at any time in the period 2015–2024 (millions) (95% UI)	Percentage of people with HCV infection who had been diagnosed at any time in the period 2015–2024 (95% UI)	Percentage *of all people* with HCV infection who were on treatment at any time in the period 2015–2024 (95% UI)	Number of people diagnosed with HCV infection and alive in 2024 but not yet treated (millions) (95% UI)
African Region	11 (6.1–18)	1.3 (0.7–2.0)	0.2 (0.2–0.4)	12 (3.6–22)	2.0 (0.5–3.7)	0.9 (0.5–1.4)
Region of the Americas	8.3 (5.8–12)	3.4 (2.3–4.7)	2.3 (2.0–2.9)	40 (21–62)	27 (17–39)	1.2 (0.8–1.7)
South-East Asia Region	10 (6.5–19)	2.2 (1.4–3.8)	1.1 (1.0–1.9)	21 (4.5–41)	11 (3.6–20)	1.0 (0.6–1.6)
European Region	8.8 (5.9–12)	4.0 (2.6–5.7)	2.0 (1.8–2.9)	45 (23–70)	22 (13–33)	1.9 (1.2–2.5)
Eastern Mediterranean Region	20 (15–26)	8.6 (6.8–11)	6.1 (5.5–7.9)	44 (28–62)	31 (20–42)	3.1 (2.3–4.3)
Western Pacific Region	9.9 (6.6–16)	4.9 (3.7–7.3)	1.8 (1.6–4.0)	50 (21–85)	18 (3.6–34)	2.6 (1.9–3.8)
Global	**68 (46–102)**	**24 (18–35)**	**13 (12–20)**	**36 (17–57)**	**20 (10–31)**	**11 (7.4–15)**

Fig. 4.15. The price of antiviral treatment for HBV infection in 2024[a]



[a] The lowest reported price for 1 month of tenofovir disoproxil fumarate (TDF) in each country is shown, in constant US$ (2024 prices). Data are limited to countries that self-reported procurement prices. Data on procurement volumes were not captured. Source: WHO survey among focus countries for the viral hepatitis response, 2024.

less than US$ 10 per person per month in many countries (**Fig. 4.15**).

A special focus on expanding diagnosis and the provision of treatment for HBV is needed in the WHO African and Western Pacific regions, given their high burden and the large gap between the absolute numbers of people with chronic HBV infection and the numbers on treatment.

Expanded access to HDV diagnosis is needed in many countries with a high burden of chronic HBV infection (**Box 4.4**).

4.4 Diagnosis and treatment of hepatitis C

HCV was discovered in 1989. Initially, treatment relied on interferon-based regimens, which were later combined with ribavirin. The combination treatment achieved sustained virological response rates among 40–65% of individuals, but was poorly tolerated. A therapeutic breakthrough occurred with the introduction of oral DAAs, which directly inhibit HCV replication; these DAAs substantially improved the efficacy and tolerability of treatment. The first oral DAA, sofosbuvir, was approved in 2013, and by 2015, multiple DAA combinations were available. In line with these advances, WHO issued its first HCV treatment guidelines in 2014 *(67)*, with updates in 2016 *(25)* and 2022 *(35)*, reflecting rapid advances in HCV therapy and treatment eligibility.

Hepatitis C is now considered curable. DAA drugs achieve a sustained virologic response 12 weeks after treatment (SVR12) in over 95% of individuals, effectively eliminating the virus from the body. Reaching SVR12 is clinically significant, because it reduces the risk of developing liver cancer by 85% and lowers overall mortality by 70–75% *(44)*. WHO recommends pangenotypic DAA treatment for all individuals aged 3 years and older with viremic HCV, regardless of disease stage. This includes adults and adolescents (strong recommendation) and children aged 3–11 years (strong or conditional recommendations depending on age and certainty of evidence). Treatment should also be offered without delay to individuals with recently acquired HCV infection and ongoing risk of infection.

Between 2015 and the end of 2024, a global total of 24 million people (95% UI: 18–35 million) were diagnosed with viremic HCV infection (**Table 4.3**, **Fig. 4.16**), representing 36% of the cumulative total of 68 million people (95% UI: 46–103 million) estimated to have been living with HCV infection at some point during this 10-year period.[1] A global total of 13 million people (95% UI: 12–20 million) were treated, representing 20% of the global number of people living with HCV infection at some point during the period 2015–2024 (**Table 4.3**).

Globally, the highest annual numbers of people diagnosed and treated for HCV infection were achieved in 2018 and 2019 (**Fig. 4.17**, **Fig. 4.18**), during a nationwide campaign in Egypt to screen the whole population for HCV infection and to treat all those diagnosed with viremic HCV infection *(68)*.[2] This massive effort also explains the relatively high level of diagnostic and treatment coverage in the WHO Eastern Mediterranean Region (44% and 31%, respectively), and the regional trend (a major improvement in 2018 and 2019 followed by a slowdown from 2020 onwards) (**Fig. 4.17**, **Fig. 4.18**). The only other WHO region with a similar level of treatment coverage is the Region of the Americas.

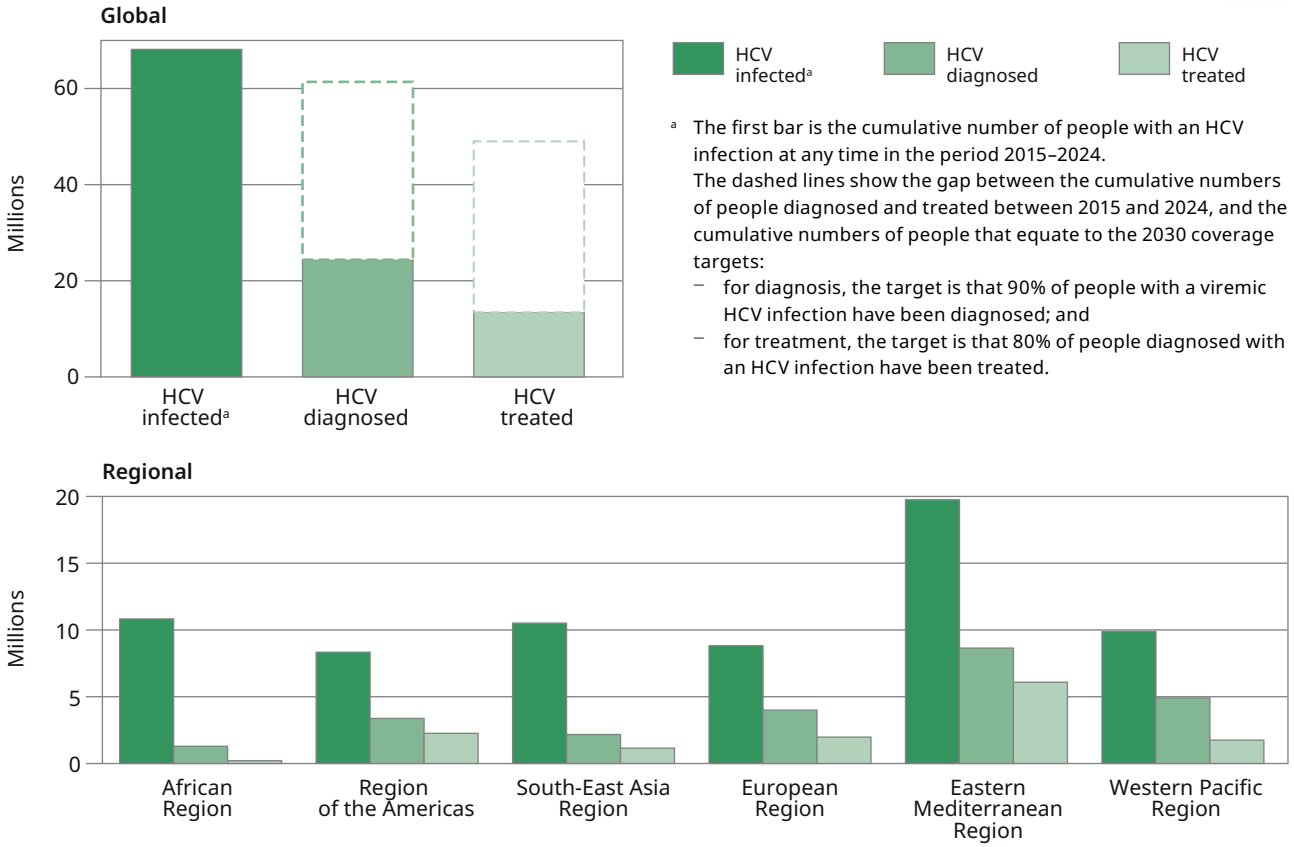
The lowest levels of diagnostic and treatment coverage are in the WHO South-East Asia and African regions. Recently, an important step to help fill gaps in the WHO African Region was an initiative by Egypt to provide 1 million courses of DAA treatment to countries in sub-Saharan Africa; Ghana is one of the recipients (**Box 4.5**).

Gaps in provision of treatment for people diagnosed

[1] That is, including people who were cured, died or were newly infected between 2015 and 2024.

[2] Further details are provided in **Chapter 5**.

Fig. 4.16. Cascade of care for people with an HCV infection, globally and by WHO region, 2024[a]



[a] The first bar is the cumulative number of people with an HCV infection at any time in the period 2015–2024.
The dashed lines show the gap between the cumulative numbers of people diagnosed and treated between 2015 and 2024, and the cumulative numbers of people that equate to the 2030 coverage targets:
- for diagnosis, the target is that 90% of people with a viremic HCV infection have been diagnosed; and
- for treatment, the target is that 80% of people diagnosed with an HCV infection have been treated.

with HCV infection mean that there were still large numbers of people diagnosed with HCV infection and alive but not yet treated at the end of 2024 (**Fig. 4.19**).

When DAA treatments first became available, a high barrier to the provision of treatment for HCV infection was the cost of medicines. This barrier has been substantially lowered over time (**Fig. 4.20**). Nonetheless, scaling up provision of diagnosis and treatment requires major increases in funding.

Among 110 countries reporting data to WHO in 2025 (**Annex 2**), 72 countries reported having access to DAAs. However, there was wide variation in levels of access, both among and within countries *(11)*. The availability of guidelines related to treatment of HCV infection at country level is shown in **Fig. 4.21**.

4.5 Safety of blood services and injections in health care facilities

4.5.1 Blood services

WHO recommends that all blood donations are screened for infections before use. Screening for HIV, HBV, HCV and syphilis should be mandatory *(69, 70)*. These four infections form the four mandatory transfusion-transmissible infections (TTIs). This recommendation dates back to a World Health Assembly resolution in 1975 (WHA 28.72), which called for strengthening of national blood services *(16)* (**Chapter 2**).

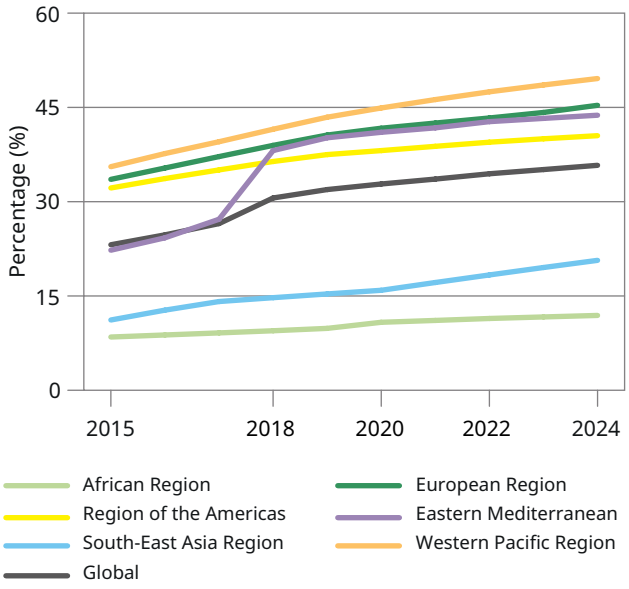
Systematic screening and testing of blood donations for TTIs is an important step in reducing the risk of their transmission. However, data from the Global Database on Blood Safety indicate that universal screening of blood donations for TTIs has not yet been fully achieved in all countries, with gaps in the coverage and quality of testing persisting *(71)*. Although most countries report having national policies for screening for major TTIs, implementation varies. For viral hepatitis specifically, among 171 responding countries, 166 reported having a national policy for screening all blood donations for HBV and 164 reported a policy for serological screening for HCV *(71)*.

In 2018, among the 107 countries that reported on this indicator to the Global Database on Blood Safety, 98% were screening all blood donations for TTIs using basic quality procedures that included documented standard operating procedures and participation in an external quality assurance scheme *(71)*.[1] This aggregated estimate probably overstated global performance, because countries with weaker quality systems were less likely to report data. When disaggregated by income level, 99.8% of donations in high-income countries and 99.9% in upper-middle-income countries were screened following basic quality procedures, but only 83% in lower-middle-income countries and 76% in low-income countries.

Ten countries (five in the WHO African Region, three in the Western Pacific Region, one in the Region of the Americas and one in the Eastern Mediterranean Region) reported not being able to test 100% of the blood collect-

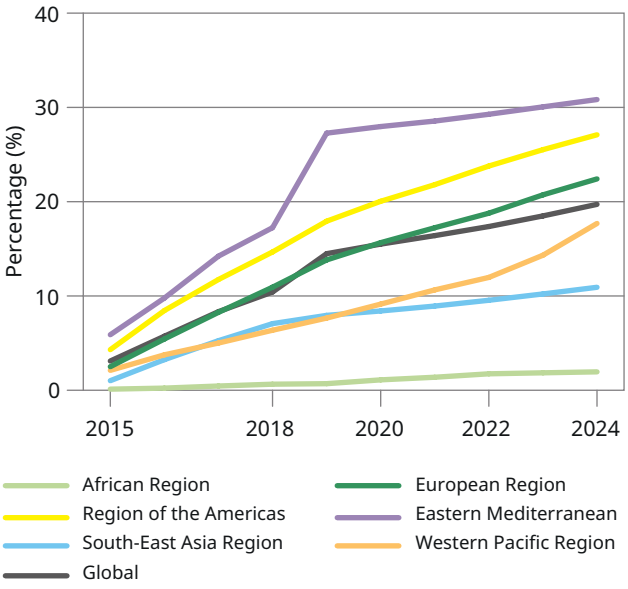
[1] As of April 2026, the latest year for which data are available is 2018. More up-to-date data are being compiled in 2026.

Fig. 4.17. Cumulative percentage of people with an HCV infection who were diagnosed in the period 2015–2024, globally and by WHO region[a]



[a] The denominator is the number of people with an HCV infection at any time during the period 2015–2024.

Fig. 4.18. Cumulative percentage of people with an HCV infection who were treated in the period 2015–2024, globally and by WHO region[a]



[a] The denominator is the number of people with an HCV infection at any time during the period 2015–2024.

Fig. 4.19. Number of people diagnosed with an HCV infection and alive in 2024 but not yet treated, globally and by WHO region

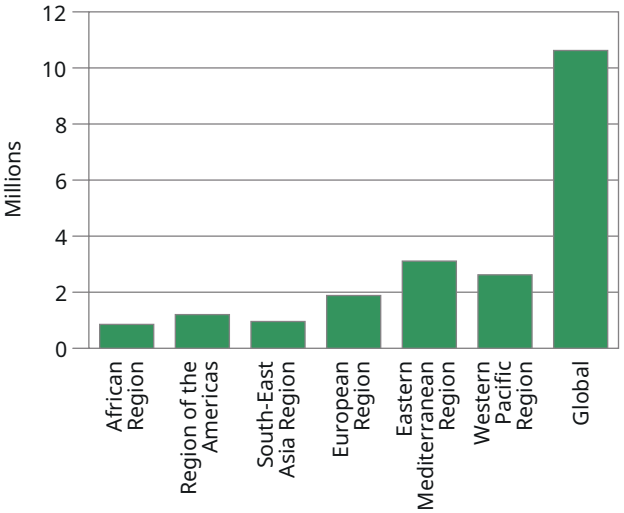
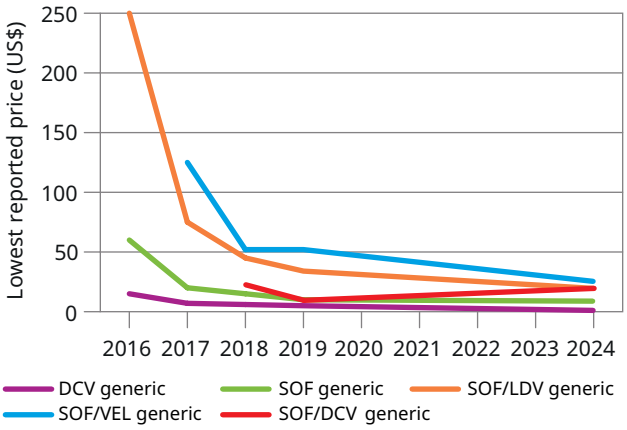


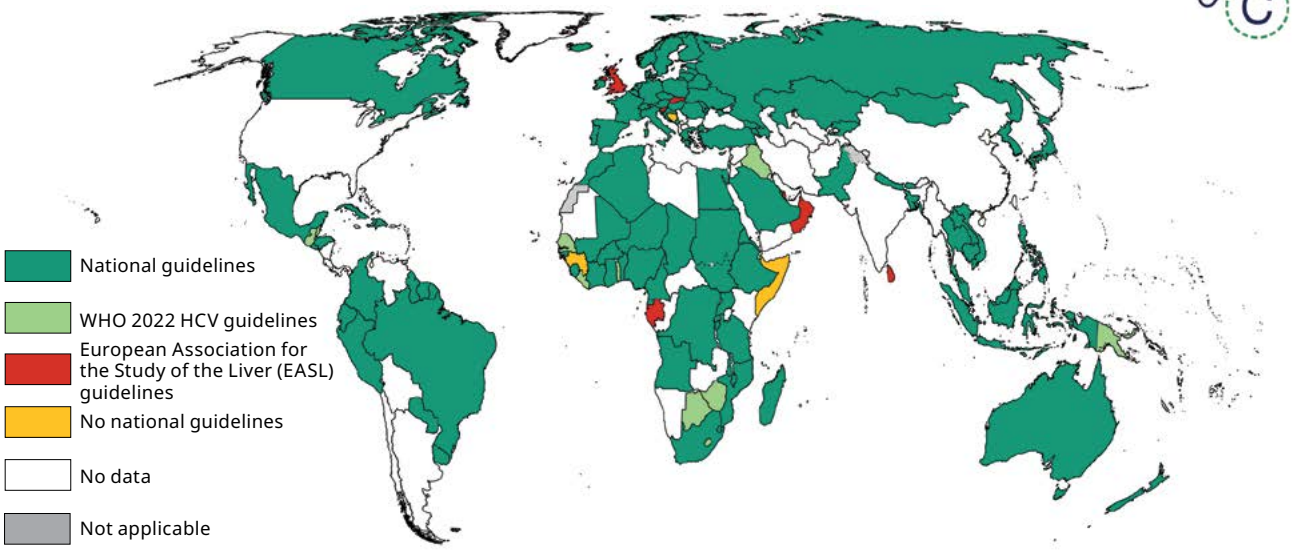
Fig. 4.20. The price of DAA treatment for HCV infection, 2016–2024[a]



DAA, direct-acting antiviral; DCV, daclatasvir; SOF, sofosbuvir; LDV, ledipasvir; VEL, velpatasvir.

[a] The lowest reported public-procurement price for 1 month of generic DAA treatment is shown, in constant US$ (2024 prices). Data are limited to countries that self-reported procurement prices. Data on procurement volumes were not captured. Source: WHO survey among focus countries for the viral hepatitis response, 2024.

Fig. 4.21. Status of national HCV treatment guidelines, 2025



Box 4.5. Country examples of hepatitis C services: Ghana and Italy

Initiating hepatitis C services in Ghana through strong partnerships

A 33-year-old woman from northern Ghana, diagnosed with HCV during a free community screening, learned that cure was possible and treatment was available at no cost. Her experience reflects Ghana's rapid scale-up of hepatitis C services through the STOP Hep C Ghana initiative, launched in 2023 by the Ministry of Health and Ghana Health Service, with support from national and international partners.

Community-based testing has been expanded through churches, mosques, markets and universities, and facility-based services have been strengthened. More than 700 health workers have been trained on national hepatitis guidelines, and standardized care is now available in 19 treatment centres nationwide. A decisive enabler has been a donation of DAAs from the government of Egypt, with a commitment to provide free treatment for at least 50 000 patients. Public awareness activities are supported by Gilead Sciences, while WHO provides technical guidance and civil society organizations ensure community engagement and stigma reduction.

By mid-2025, nearly 1000 patients had initiated treatment, achieving cure rates above 90%, demonstrating how coordinated partnerships can achieve rapid progress.

Significant progress towards hepatitis C elimination in Italy through integrated screening and treatment

Italy has historically been one of the countries with a high burden of HCV infection in the WHO European Region, with substantial HCV-related morbidity and mortality from cirrhosis and HCC. Over the past decade, more than 300 000 people have been treated with DAAs, leading to a marked reduction in advanced liver disease and associated hospitalizations.

Building on this success, Italy has transitioned toward a screening-driven HCV elimination strategy, supported by national policies and dedicated funding. A free-of-charge screening programme targets both the general population (1969–1989 birth cohort) and key populations. Screening coverage has reached approximately 17% in the general population, 47% among people who use drugs and over 70% in prison settings. HCV testing has also been integrated into routine clinical pathways for patients with chronic illnesses such as diabetes, renal disease, and systemic conditions. Future priorities include further improvements in screening coverage, strengthening linkages to care pathways across regions and maintaining momentum in provision of treatment.

At the population level, screening and treatment interventions have already led to a substantial decline in HCV-related hospitalizations and model-based projections suggest that Italy is on track to achieve the 2030 target of a 65% reduction in HCV-related mortality.

Table 4.4. Proportions of blood donations with positive/reactive results on screening tests, by country income group

	Percentage of blood donations with positive/reactive results (median and interquartile range, %)			
Country income group	**HIV**	**HBV**	**HCV**	**Syphilis**
High-income	0.002 (<0.001–0.01)	0.02 (0.005–0.12)	0.007 (0.002–0.06)	0.02 (0.003–0.12)
Upper-middle-income	0.10 (0.03–0.23)	0.29 (0.13–0.62)	0.19 (0.07–0.36)	0.35 (0.13–1.10)
Lower-middle-income	0.19 (0.04–0.62)	1.70 (0.70–4.74)	0.38 (0.12–0.99)	0.69 (0.19–1.38)
Low-income	0.70 (0.28–1.60)	2.81 (2.00–6.02)	1.00 (0.50–1.67)	0.90 (0.60–1.81)

Source: World Bank *(77)*, data are for 2018.

ed for one or more of the four TTIs, as required by their national testing policy, often because of an irregular supply of test kits.

In addition, six countries (three in the WHO Eastern Mediterranean Region and three in the Western Pacific Region) could not provide data about the coverage of one or more screening tests for the four key infectious markers of HIV, HBV, HCV and syphilis, highlighting persistent weaknesses in monitoring systems.

At a population level, unsafe transfusion is not a major source of HCV or HBV infection *(72, 73)*, because blood transfusions are an uncommon event in a person's life compared with other unsafe health care exposures, such as dental treatment or injections *(74)*. However, unsafe blood transfusion is still a concern, especially in LMICs, where the prevalence of the TTIs is high and the quality and coverage of blood screening may not be adequate *(73, 75, 76)*. The proportion of blood donations with positive or reactive results in screening tests for HIV, HBV, HCV and syphilis varies considerably by country income group, with the lowest prevalence of TTIs in blood donations being found in high-income countries and higher prevalence in LMICs (**Table 4.4**).

The prevalence of an infection in blood donations depends on two factors: the prevalence of an infection in the population from which blood donors are selected, and the effectiveness of donor recruitment and selection processes.

4.5.2 Injection safety in health facilities

WHO recommends that health care workers use a new sterile needle and syringe for every injection and, when delivering injectable medications (intramuscular, subcutaneous or intradermal), that they use syringes with sharps injury protection and reuse-prevention features *(78, 79)*.

Available estimates indicate that 96% of health care injections globally were administered using a new, unopened syringe and needle, corresponding to about 3.9% of injections being unsafe *(80)*. These estimates were based on demographic and health survey data from 40 countries conducted between 2011 and 2015.

Injection safety varied substantially by WHO region,[1] with the highest levels observed in the Western Pacific Region (99%) and the Region of the Americas (98%); similarly, high levels were seen in the European Region (97%) and the African Region (97%), where injection frequency was also moderate or low.

In contrast, the WHO Eastern Mediterranean Region had both the highest injection frequency and the lowest level of injection safety, with only 90% of injections using new devices. The WHO South-East Asia Region also showed lower injection safety (93%) alongside relatively high injection frequency.

Overall, these findings highlight that unsafe health care injections remain concentrated in regions with high injection use.

Injection safety is a core component of infection prevention and control (IPC) and is essential for preventing the transmission of bloodborne pathogens (including HBV, HCV and HIV) in health care settings *(81)*. At the health care facility level, injection safety is not measured as a standalone global indicator but is assessed as an integral part of the implementation of IPC programmes.

The most recent WHO global report on IPC, published in 2024, notes that despite progress since the COVID-19 pandemic, implementation of IPC programmes remains uneven worldwide *(82)*. In 2023–2024, only 39% (72 of 184) of countries reported that IPC programmes had been fully implemented nationwide, while 8.6% (16 of 186) reported having no IPC programme or plan in place; the remaining countries reported partial implementation, indicating important gaps in coverage and functionality. In the 2023–2024 global survey, 80% of countries (120 of 150) met at least half of the IPC minimum requirements, but only 6.0% (9 of 150) fulfilled all requirements. A further 14% of countries (21 of 150) met at least 90% of the minimum requirements. However, marked disparities were observed across income-level groups, with high-income countries generally reporting a higher fulfilment of IPC minimum requirements.

IPC coverage reflects the extent to which facilities have established and operationalized a set of core WHO-recommended elements, including governance and leadership for IPC; the availability of trained IPC personnel; adherence to standard precautions (e.g. safe injection practices, hand hygiene and sharps management); access to adequate water, sanitation and hygiene services;

[1] In these estimates, Indonesia was included in the WHO South-East Asia Region.

appropriate waste management systems; surveillance of health care-associated infections; and education and training of health care workers.

Given that injection safety is embedded within standard precautions and routine clinical practice, gaps in IPC programme implementation, particularly in LMICs, are closely linked to continued risks of unsafe injections and health care-associated transmission of viral hepatitis.

In terms of systems, strengthening IPC programmes at national and facility levels is the most appropriate way to improve injection safety and reduce hepatitis transmission in health care settings.

4.6 Harm-reduction and viral hepatitis services for people who inject drugs

People who inject drugs are at increased risk of acquiring HBV and HCV infection, mainly through the sharing of injecting equipment. As a result, harm-reduction services are central to the global commitment to eliminate hepatitis, particularly HCV. Core harm-reduction services include providing sterile injecting equipment through needle and syringe programmes (NSPs) and access to opioid agonist maintenance treatment (OAMT) for opioid dependence *(83)*. These interventions are globally recognized as best practice for preventing bloodborne infections and reducing the broader health and social harms associated with drug use.

WHO recommends that all individuals from key populations who inject drugs have access to sterile injecting equipment through NSPs *(36)*, and that all people who are dependent on opioids are offered OAMT in keeping with WHO guidance, including those in prison and other closed settings *(36, 84, 85)*. Since 2016, these interventions have been consistently prioritized within the WHO global health sector strategies on HIV, viral hepatitis and sexually transmitted infections, with explicit coverage targets for 2030 to support the elimination of HIV and hepatitis C *(3, 4, 22)*.

The population in need of harm-reduction services remains large. The UN Office on Drugs and Crime (UNODC) estimates that, in 2023, 14 million people worldwide – representing 0.3% of the global population aged 15–64 years – were injecting drugs *(86)*. An estimated 39% (95% confidence interval: 31–47%) of people who inject drugs are living with HCV infection *(109)*, compared with 0.6% in the general population (**Chapter 3**).

NSPs remain the cornerstone of comprehensive harm-reduction strategies and are effective across all types of injected substances, including stimulants, the use of which is rising in many settings. Beyond delivering sterile equipment, NSPs play a vital role in reaching marginalized, stigmatized and often criminalized populations. Despite strong evidence for its efficacy and long-standing institutional endorsement, NSP coverage

Box 4.6. Making hepatitis services accessible: Unitaid's support for innovation and scale-up

Unitaid saves lives by making new health products affordable and available in LMICs. Collaborating with partners, Unitaid identifies innovative treatments, tackles market barriers and quickly delivers solutions to those in need across LMICs.

Unitaid has supported projects to improve access to care for people with HCV infection *(91)*. With these investments, Unitaid has driven efforts to develop simpler diagnostic tests that can be used at decentralized levels by non-specialist staff. Further, working with collaborators (the Medicines Patent Pool, Médecins Sans Frontières and Coalition PLUS), Unitaid has contributed to securing more affordable prices for medicines to treat people with HBV and HCV infection, and has facilitated scale-up by identifying cost-effective ways to deliver these medicines.

Through its support for the Longevity Project, led by the University of Liverpool, Unitaid is contributing to research aimed at developing a single-injection cure for hepatitis C; regulatory submission is anticipated in 2028 pending successful clinical development.

With Coalition PLUS, Unitaid has supported advocacy efforts at the government level and awareness raising at the community level to increase diagnosis, combat stigma and generate demand for treatment. Raising awareness about viral hepatitis and working with communities has remained a key feature of Unitaid's work. Key partners in current projects include the International Network of People who Use Drugs (INPUD), the International Community of Women living with HIV Eastern Africa (ICWEA) and the World Hepatitis Alliance.

Since 2023, Unitaid has supported harm reduction services to prevent HCV infections among people who inject drugs and others at high risk, including by piloting the use of novel or underused products designed to reduce risks associated with injecting drugs, such as low dead space syringes and new, long-acting formulations of buprenorphine, a medicine used in opioid agonist therapy. Frontline AIDS, Médecins du Monde and PATH lead the work in 10 countries to assess demand and generate evidence needed to trigger broader scale-up of HCV testing, treatment and prevention through these complementary projects.

In 2025, Unitaid started supporting work on integrated elimination of vertical (mother-to-child) transmission of HBV, alongside HIV, syphilis and Chagas, in endemic areas *(92)*. Timely diagnosis and treatment of these infections are critical to protect the health and well-being of women, infants and young children. Support over 4 years focuses on supporting country and community leadership to design and scale up integrated, people-centred services that meet local needs.

remains insufficient. Among the 190 countries that have reported the presence of people who inject drugs, about half have at least one NSP *(83, 87, 88)*.

Globally, coverage of harm-reduction services falls below recommended levels. It is estimated that only 18 per 100 people who inject drugs have access to OAMT, and that only 35 needles and syringes are distributed annually for each person who injects drugs – far below the 2025 target of 200 and even further from the 2030 target of 300 *(89)*. Only five countries (Australia, Finland, Norway, Slovenia and Switzerland), representing about 2% of the global population of people who inject drugs, have achieved high coverage of both NSPs and OAMT *(89)*.

UNAIDS found that, among 35 countries reporting on needle and syringe distribution in 2024, only three met the 2025 distribution target of 200 syringes per person who injects drugs per year. Coverage of OAMT is similarly limited; UNAIDS found that, since 2019, only two of the 26 reporting countries (Malaysia and Seychelles) reached the target of providing OAMT to at least 50% of people who inject drugs *(90)*. Among the 26 countries reporting on OAMT, regional medians were far below the target in Asia and the Pacific (9.4%, 9 reporting countries), eastern Europe and central Asia (7.8%, 9 reporting countries), and western and central Africa (6.5%, 2 reporting countries).

The combination of a large population of people who inject drugs and persistently low coverage of harm-reduction services helps to explain why injecting drug use continues to drive HCV transmission in many countries. Overall, there is a need to scale up NSPs and OAMT, and implement policies that address stigma, discrimination and criminalization, to reduce new infections and contribute to the achievement of hepatitis elimination targets.

Unitaid is an example of a global agency supporting efforts to improve prevention of HCV infections among people who inject drugs (**Box 4.6**).

Chapter 5

The road to elimination

The possibility that viral hepatitis could be eliminated as a public health threat worldwide was first recognized by all Member States of the World Health Organization (WHO) in 2014 (**Chapter 2**). Subsequently, the goal of the first WHO global health sector strategy on viral hepatitis (GHSS 2016–2021) *(4)*, adopted by all Member States in 2016, was defined as elimination of viral hepatitis as a public health threat by 2030. This goal was retained in the second GHSS, for 2022–2030 *(3)*.

The 2030 elimination targets are:

- a 95% reduction in the annual number of new hepatitis B virus (HBV) infections and an 80% reduction in the annual number of new hepatitis C virus (HCV) infections, compared with 2015;
- a 65% reduction in the annual number of HBV- and HCV-related deaths, compared with 2015;
- a reduction in the prevalence of HBV infection among children aged under 5 years to 0.1%; and
- a reduction in the percentage of people who inject drugs who acquire a new HCV infection each year to 2%.

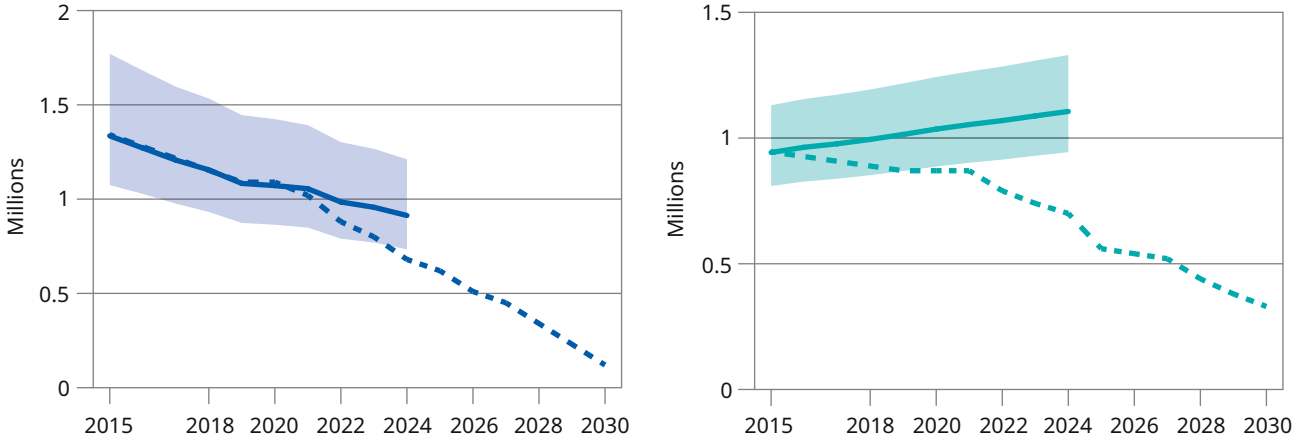
Achieving these targets is possible with preventive and treatment interventions that are already available (**Chapter 3**, **Chapter 4**).

In endemic areas, most new HBV infections are acquired in the first 5 years of life. Most of them can be prevented through hepatitis B vaccination; a birth dose followed by two or three further doses in infancy has 95% efficacy and confers protection for at least 20 years or for life. The most immediate benefit of vaccination is a reduction in the prevalence of HBV infection in children aged under 5 years, followed by the impact on HBV-related morbidity and mortality, which has a time-lag of about 30 years.

New infections of HBV and HCV can also be prevented through measures to ensure the safety of blood services, medical injections and nonmedical injections.

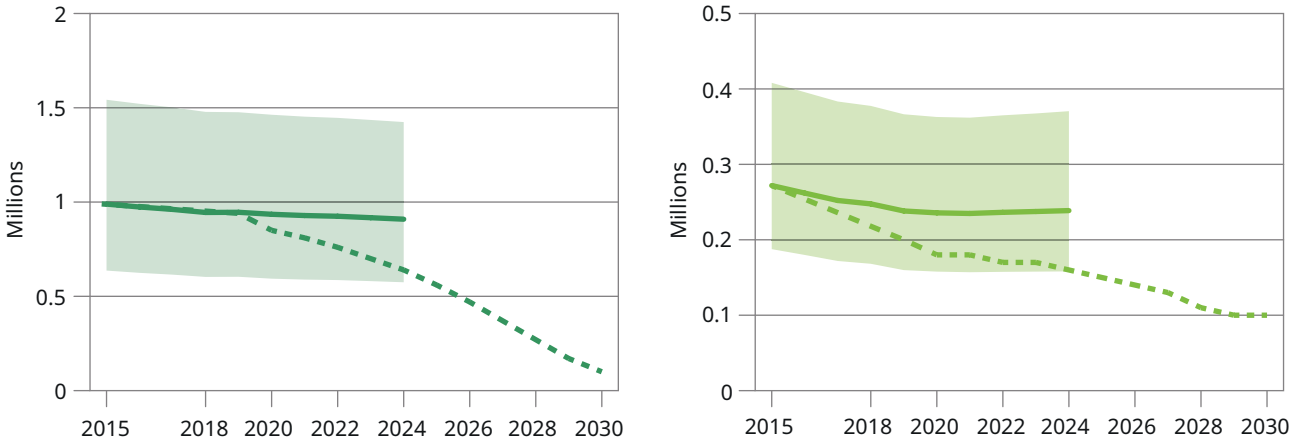
For people with a chronic HBV infection, antiviral treatment is available to halt or slow progression of infection to liver disease and associated mortality, although it has to be taken for life; additionally, antiviral prophylaxis can prevent mother-to-child transmission of HBV. A 12-week treatment with direct-acting antivirals (DAAs), which has been available for more than 10 years, can cure about 95% of people with HCV infection. The prices of antivirals for HBV and HCV treatment have been substantially reduced since 2015; treatment for HBV can cost less than US$ 50 per person per year, and the one-time treatment for HCV costs US$ 55–100 per person if generic formulations are used (**Chapter 1**).

Fig. 5.1. Global number of new chronic HBV infections (left panel) and HBV-related deaths (right panel) 2015–2024, compared with the trajectories[a] required to reach 2030 elimination targets (dashed lines)[b]



[a] The trajectories shown are the ones used for the GHSS on viral hepatitis, 2022–2030.
[b] Shaded areas represent 95% uncertainty intervals.

Fig. 5.2. Global number of new HCV infections (left panel) and HCV-related deaths (right panel) 2015–2024, compared with the trajectories[a] required to reach 2030 elimination targets (dashed lines)[b]



[a] The trajectories shown are the ones used for the GHSS on viral hepatitis, 2022–2030.
[b] Shaded areas represent 95% uncertainty intervals.

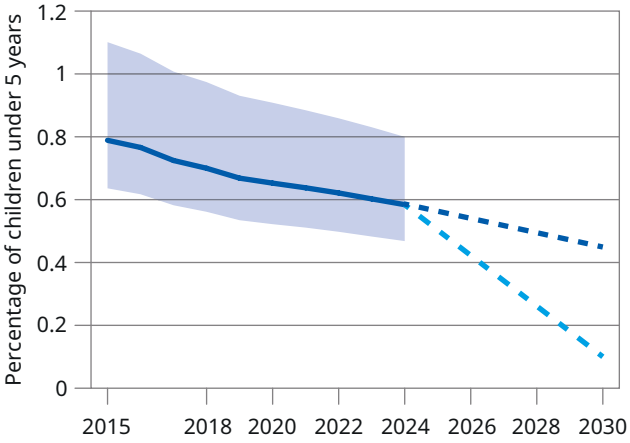
Globally, progress in prevention and treatment is being made, but not fast enough to reach the 2030 targets for reductions in incidence, prevalence and mortality (**Chapter 3**, **Fig. 5.1**, **Fig. 5.2**, **Fig. 5.3**):

- the number of new HBV infections fell by 32% between 2015 and 2024;
- the number of new HCV infections fell by 8.1% between 2015 and 2024;
- the prevalence of HBV infection among children aged under 5 years was 0.6% in 2024;
- the number of HBV-related deaths increased by 17% between 2015 and 2024; and
- the number of HCV-related deaths fell by 12% between 2015 and 2024.

Globally in 2024, there were an estimated 240 million people living with HBV infection (95% uncertainty interval [UI]: 202–296 million), equivalent to 2.9% of the global population, and 47 million with HCV infection (95% UI: 31–71 million), equivalent to 0.6% of the global population. There were an estimated 1.1 million (95% UI: 0.9–1.3 million) HBV-related deaths and an additional 240 000 (95% UI: 160 000–370 000) HCV-related deaths.

Globally in 2024, the coverage of preventive and treatment interventions remained far too low (**Chapter 4**). The coverage of hepatitis B birth-dose vaccination was only 45%, far short of the 2030 target of 90%, although three-dose coverage in infancy was much better (84%). Fewer than 5% of people with HBV infection were on antiviral treatment, even though it is estimated that about 50% would have been eligible for it based on the latest WHO guidelines *(38)*. At the end of 2024, treatment coverage for people with HCV infection was 20%. The safety of national blood services was high, with an estimated 98% of units screened for bloodborne diseases. Up-to-date data about injection safety and harm-reduction services for people who inject drugs are limited.

Fig. 5.3. Global prevalence of chronic HBV infection among children aged under 5 years, 2015–2024, and the expected trajectory up to 2030 at the current pace of progress, compared with the trajectory required to reach the 2030 elimination target at a constant rate of progress (dashed line, **light blue**)[a]



[a] Shaded areas represent 95% uncertainty intervals.

This chapter discusses the main priorities for action at global and regional levels to accelerate progress towards the 2030 elimination targets and provides 10 examples of action or impact at country level.

5.1 Priorities for global and regional action

To achieve the 2030 global elimination targets, there are five major priorities for global and regional action:

- scaling up treatment for people with HBV infection, especially in the WHO African and Western Pacific regions;
- scaling up treatment for people with HCV infection, especially in the WHO Eastern Mediterranean Region;
- improving the coverage of hepatitis B birth-dose vaccination, especially in the WHO African Region;
- improving the coverage of antiviral prophylaxis for prevention of mother-to-child transmission of HBV infection, especially in the WHO African Region; and
- improving the safety of nonmedical injections, in particular through harm-reduction services for people who inject drugs.

5.1.1 Scaling up treatment for people with HBV infection

Globally in 2024, HBV-related deaths accounted for 82% of the combined total of HBV- and HCV-related deaths, and close to 80% of the total number of deaths resulting from viral hepatitis. The number of people living with chronic HBV infection was about five times the number of people with HCV infection.

In the period up to 2030 (and for some years thereafter), reducing HBV-related deaths requires provision of antiviral treatment to people who already have a chronic HBV infection. This is because HBV-related mortality arises from infections acquired decades earlier.

The latest WHO treatment guidelines have simplified and expanded treatment eligibility criteria *(38)*. Globally, according to these criteria, it is estimated that about 50% of people with a chronic HBV infection are eligible for treatment.

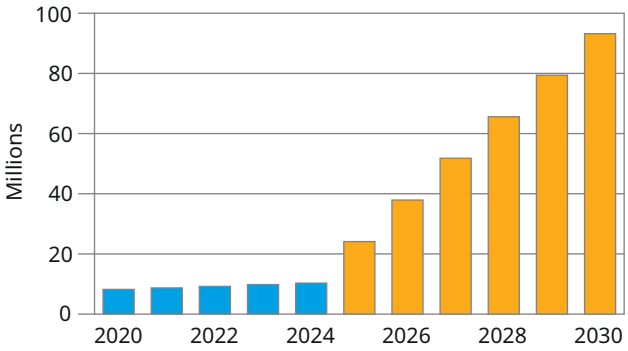
Compared with levels of treatment provision in 2020–2024, a major expansion is needed between 2025 and 2030 (**Fig. 5.4**).[1]

Of the estimated 240 million people living with a chronic HBV infection in 2024, about 102 million (43%) were in the WHO Western Pacific Region and 64 million (27%) were in the African Region. Scaling up HBV diagnosis and treatment is of particular importance in these two parts of the world.

Estimates of the funding required for diagnostic testing and treatment (focused on commodities only; i.e. tests and antiviral medicines) produced during the development of the GHSS on viral hepatitis, 2022–2030 *(3)* suggested that the annual amount for both HBV and HCV would reach around US$ 8 billion in 2028, before declining (**Fig. 5.5**); diagnosis and treatment of HBV accounted for about 75% of the total.

[1] The 2030 targets for diagnosis and treatment are that 90% of people with HBV infection are diagnosed, and that, of these, treatment is provided to 80% of those meeting eligibility criteria.

Fig. 5.4. The scale up of treatment for people with a chronic HBV infection required between 2025 and 2030 (**orange**),[a] compared with the actual number of people on treatment between 2020 and 2024 (**blue**)



[a] Treatment is lifelong; each bar shows the number of people requiring treatment in each year (as opposed to the number of people who started treatment in each year).

5.1.2 Scaling up treatment for people with HCV infection

As with HBV, in the period up to 2030 (and for some years thereafter), the only way to reduce HCV-related deaths is to provide antiviral treatment to people already infected with HCV (**Fig. 5.6**). This can also help to prevent onward transmission.

The most immediate priority is to provide treatment for the estimated 11 million people who have been diagnosed with HCV infection but remain alive and untreated (**Chapter 4**). Of these, 3.1 million are in the WHO Eastern Mediterranean Region and 2.6 million are in the Western Pacific Region. Of the estimated 47 million people living with HCV infection in 2024, about one quarter were in the WHO Eastern Mediterranean Region (**Chapter 3**).

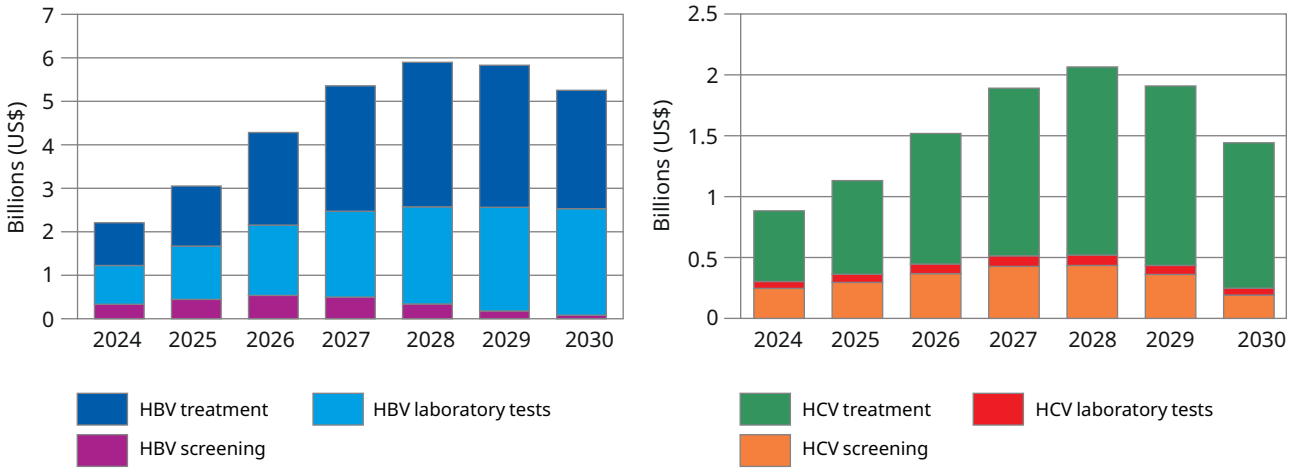
5.1.3 Improving the coverage of hepatitis B birth-dose vaccination

The best way to prevent HBV-related morbidity and mortality – and the only way to eliminate HBV as a public health threat in areas where it is currently endemic – is to protect children aged under 5 years from infection. This can be done by ensuring high coverage of hepatitis B vaccination.

In 2024, the most severe burden of HBV infection in children aged under 5 years was in the WHO African Region (**Chapter 3**). In most countries in the region, more than 1% of children in this age group were infected, and in several countries the figure was much worse, at 2–5%. The regional average was 1.4%. Of the estimated 0.9 million new HBV infections in 2024, 68% were in the WHO African Region.

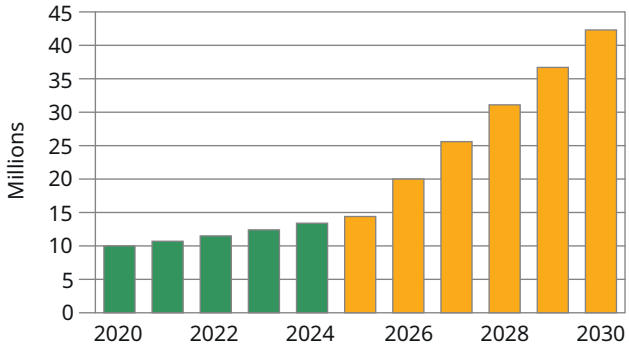
To prevent new HBV infections, the coverage of birth-dose hepatitis B vaccination needs to be massively improved. This is most urgent in the WHO African Region, where coverage was only 17% in 2024.

Fig. 5.5. Funding required[a] to expand diagnosis and treatment of HBV infection (left panel) and HCV infection (right panel), 2024–2030



[a] Estimates were developed for the GHSS on viral hepatitis, 2022–2030 *(3)*. Funding amounts are for commodities only, and in constant US$ (2020 prices).

Fig. 5.6. The scale up of treatment for people with an HCV infection required between 2025 and 2030 (**orange**),[a] compared with the number of people that had been treated by the end of 2024 (**green**)



[a] Numbers are cumulative (since 2015).

5.1.4 Improving the coverage of antiviral prophylaxis for prevention of mother-to-child transmission of HBV infection

In addition to hepatitis B birth-dose vaccination, provision of antiviral prophylaxis to pregnant women with HBV infection helps to prevent mother-to-child transmission. A triple-panel rapid test for HBV, HIV and syphilis is available, and provision of 3 months of antiviral prophylaxis in the last trimester to any pregnant woman who tests positive for HBV infection is recommended (**Chapter 4**). Expanding testing and prophylaxis could have a major impact on the incidence of chronic HBV infections, especially in countries where improving vaccination coverage is challenging.

Expanded coverage of HBV testing and provision of antiviral prophylaxis is particularly important in the WHO African Region, where the burden of HBV infection in the general population is most severe (**Chapter 3**) and coverage of hepatitis B birth-dose vaccination remains low.

Expanding HBV testing among pregnant women and provision of antiviral prophylaxis to those who test positive could facilitate broader scale-up of HBV treatment (**Section 5.1.1**). For example, women could be eligible to continue treatment after pregnancy. In addition, their antenatal care may provide an entry point for testing and treatment for other household or family members.

5.1.5 Improving harm-reduction services for people who inject drugs

The risk of HCV infection through the use of shared needles is 5–10 times higher than the risk for HIV, and high rates of new infection and reinfection occur, regardless of age.[1,2]

[1] Among adults, chronic HBV infection rarely results from newly acquired infections, owing to the maturity of the immune system.

[2] Compared with HIV, it reaches much higher concentrations in the blood and survives for longer outside the body.

Following widespread scaling up of measures to ensure that medical injections and blood transfusion services are safe, a high priority for reducing new HCV infections is to ensure the safety of nonmedical injections – especially for people who inject drugs.[1] This requires needle and syringe programmes and harm-reduction services.

5.2 Country examples of action and impact

Although progress at global level is not yet fast enough to reach the 2030 elimination targets, there are excellent examples of action or impact at country level. This section provides 10 examples, drawn from all WHO regions.

5.2.1 Brazil – progress towards elimination of mother-to-child transmission of HBV and expanded access to treatment

Brazil has achieved substantial progress in reducing the burden of viral hepatitis through its Unified Health System – a universal, publicly funded system that guarantees free nationwide access to prevention, diagnosis and treatment. Based on this foundation, strategies at national and subnational levels have been developed to reduce gaps in the hepatitis continuum of care, and promote equitable access to technologies and innovations.

At national level, recent progress in reducing mother-to-child transmission of HBV includes the following:

- the coverage of hepatitis B vaccination among neonates and infants improved from 77% in 2023 to 98% in 2025 *(93)*;
- since 2024, hepatitis B has been part of the Ministry of Health's certification process for elimination of vertical transmission at both state and municipality level;
- HBV infection among pregnant and postpartum women, women in labour and infants exposed to the virus has been added to the national list of notifiable conditions *(94)*; and
- the certification process has been associated with strengthened surveillance, reorganization of care pathways, institutionalization of investigation committees related to mother-to-child transmission, and improved monitoring of pregnant women and exposed children.

Through the certification process, the Ministry of Health is also fostering and recognizing efforts at subnational level (states and municipalities); this includes mobilizing key stakeholders, including civil society. By 2025, two municipalities had been certified as having achieved elimination of mother-to-child transmission; a further 42 municipalities and four states had been awarded gold, silver or bronze tier status.

Efforts to expand the provision of diagnosis and treatment for people with HBV and HCV infection have also been made:

- in 2025, about 14 million rapid tests for HCV screening and 10 million for HBV screening were distributed by the Ministry of Health, along with supplies for about 100 000 HBV and 64 000 HCV viral load tests;
- in 2024, treatment was provided to about 41 000 people with HBV infection and 14 000 people with HCV infection;
- in 2025, treatment for people with HCV infection was strengthened through the incorporation of sofosbuvir/velpatasvir in granular formulation, enabling more appropriate treatment for children;
- in 2025, a monitoring dashboard was introduced *(93)*, built from four linked national databases, to provide information about diagnostic and treatment gaps, and inform actions needed to close those gaps; and
- the dashboard and a mapping of the location of hepatitis services has supported efforts to strengthen the care cascade at state level, in line with national guidance *(95)*.

Between 2014 and 2024, the reported HBV-related mortality rate was reduced by 50%, to 0.1 deaths per 100 000 population *(96)*. The reported HCV-related mortality rate fell by 60%, to 0.4 deaths per 100 000 population *(96)*.

Despite progress, barriers to accessing services remain, due mainly to socioeconomic and geographical factors. Since 2024, multisectoral coordination related to the hepatitis response has been strengthened through the Healthy Brazil Program. This programme brings together 14 ministries to address social determinants of health, with the aim of advancing progress towards micro-elimination of viral hepatitis among people deprived of liberty, indigenous peoples, hard-to-reach communities, and other key and vulnerable groups.

5.2.2 Cameroon – reducing mother-to-child transmission of HBV

Cameroon has reduced the prevalence of HBV infection among people born after 2005 to 0.7%, compared with 11% in people born before 2005. Despite this progress, reducing mother-to-child transmission remains a major challenge, given the high prevalence of infection among women who were infected 20–30 years ago. Liver cancer is among the top causes of cancer-related deaths.

Hepatitis B vaccination has been part of the childhood immunization programme since 2005 and the birth dose costs about US$ 0.30. Nonetheless, birth-dose coverage remains very low, at 12%. Barriers include insufficient integration of hepatitis B vaccination into maternal and newborn health protocols, insufficient awareness about the benefits of vaccination among health care workers, limited or no availability of cold chain storage, concerns about vaccine wastage for multidose vials and a high percentage of births outside health facilities.

To address some of these challenges, the integration of birth-dose immunization into maternal and newborn care services is being piloted in 15 health centres. In addition, efforts are underway to improve diagnosis of HBV infection early in pregnancy, using rapid tests, and to expand the coverage of antiviral prophylaxis for those diagnosed with chronic HBV infection.

[1] Although up-to-date estimates are not available, people who inject drugs are estimated to have contributed to about 44% of new HCV infections in recent years (**Chapter 4**).

5.2.3 China – scaling up testing and treatment for people with HCV and HBV infection

As one of the countries with the heaviest burden of viral hepatitis, China's commitment and actions are critical to achieving global elimination targets.

Following the adoption of WHO's GHSS 2016–2021 *(4)*, China developed a national plan for prevention and control of viral hepatitis for 2017–2020, aligned with global targets. Among the comprehensive set of interventions included in the plan, targeted measures for HCV elimination were prioritized, recognizing their greater feasibility (compared with HBV). A public health initiative to eliminate HCV was launched in 2018.

In 2021, nine national authorities, led by the National Health Commission, jointly issued a plan for 2021–2030 that had the goal of eliminating HCV as a public health threat. The plan included operational targets and core strategies under the principle of "test all who should be tested and treat all who should be treated".

Based on the plan:

- the policy of "test all who should be tested" was implemented across health care facilities;
- HCV testing was integrated into intervention programmes for populations at high risk of HIV, enabling simultaneous testing for multiple diseases and improving case detection among key populations;
- standardized protocols for in-hospital management of people with HCV infection were promoted;
- a nationwide HCV information system was established, enabling tracking across the full cascade from screening and confirmation to referral and treatment;
- large-scale follow-up initiatives were implemented, with a focus on reaching people previously diagnosed with HCV infection who had not yet been treated.

Following these efforts, almost 200 000 people with HCV infection have been newly diagnosed and reported annually. Over a period of about 4–5 years, a cumulative total of almost 1 million people with HCV infection have been treated.

New HBV infections have already been effectively controlled in China. However, there are an estimated 75 million people living with a chronic HBV infection, equivalent to about 30% of the global total. In response, local-level pilot initiatives have been encouraged, rather than waiting for a single, uniform solution.

The "2+3" Health Service Package implemented in Hainan Province is a notable example. Under this initiative, HBV screening, diagnosis and treatment have been integrated into the basic public health service package at community level, together with diabetes, hypertension, tuberculosis (TB) and severe mental disorders. Large-scale community-based screening is conducted free of charge; hepatitis B vaccination is provided to individuals lacking protective antibodies, also free of charge; and health records are established for people who test positive for hepatitis B surface antigen (HBsAg), with standardized referral for care and treatment. Similarly, Fujian and Guangdong provinces have piloted approaches to ensure "early prevention and early treatment", exploring community-based models for HBV screening, referral, treatment and follow-up. Results to date from the three provinces include the screening of more than 20 million people aged 20–70 years for HBV infection and diagnosis of more than 1 million people with chronic HBV infection. These pilots have demonstrated that integrating hepatitis B prevention and care into routine primary health services and community-based health management can be an effective strategy to engage individuals with chronic HBV infection in standardized care.

Building on these experiences, a new national plan for prevention and control of viral hepatitis has been developed for 2025–2030. For the first time, diagnostic and treatment coverage for people with HBV and HCV infection have been included as core quantitative indicators. Consequently, the national monitoring framework now extends beyond vaccination coverage and the incidence of new infections to explicitly focus on two critical bottlenecks for elimination: finding people who are infected and ensuring they receive treatment. This evolution represents a significant deepening of China's viral hepatitis response, moving from a traditional prevention model centred on population-level immunity towards a comprehensive public health management approach that encompasses the full continuum of screening, referral, treatment and follow-up.

Looking ahead, China is leveraging its advances in health information systems to further accelerate progress. Through the nationwide deployment of intelligent early-warning software for communicable disease surveillance that is integrated into health care facility information systems, hepatitis-related testing and treatment data can be captured in close to real-time, facilitating automated case notification and seamless management of care. Concurrently, drawing on experience from the HIV response, a "multi-disease prevention" approach is being actively promoted. This includes further integration of hepatitis B and hepatitis C prevention and control networks with the HIV programme, to enable shared resources for workforce training, laboratory services and intervention platforms.

By continuing to strengthen collaboration and integration between community services, healthcare facilities, and centers for disease control and prevention — an approach termed "medical-prevention coordination and integration" — and by extending services deeper into the community, China is not only developing solutions for the millions of people living with chronic HBV infection, but also exploring a feasible pathway for other low- and middle-income countries transitioning from high disease burden towards high-quality elimination efforts. China's experience indicates that eliminating hepatitis requires not only accessible medicines but also institutional innovation and robust primary health service delivery systems.

5.2.4 Egypt – diagnosis and treatment of HCV on a massive scale

Egypt has been a pioneer in efforts to eliminate HCV as a public health threat through universal screening, diagnosis and treatment.

Egypt's high burden of HCV infection arose from the

inadvertent transmission of infection through unsafe injection practices, which were used during efforts to control schistosomiasis between the 1950s and 1980s. In 2015, HCV-related deaths accounted for 7.6% of all deaths in the country and Egypt had the highest HCV infection rate in the world.

Following the development of curative treatment with DAAs, Egypt planned a nationwide campaign to eliminate hepatitis C. To ensure that this was affordable, reduced DAA prices were negotiated, such that the 12-week treatment could be purchased for US$ 900 per person (1% of the initial price). Subsequently, companies in Egypt and India were given permission to manufacture generic versions of the drugs in exchange for royalties, lowering the cost of treatment to US$ 40 per person.

In 2018, the government launched a campaign called "100 Million Healthy Lives", with the aim of detecting and treating everyone with HCV infection. Initially, testing was offered to everyone aged over 18 years; this was later expanded to all children aged 12 years and above. In addition to routine testing at all health care facilities, testing was offered in the community, with teams visiting large squares, markets, workplaces, sports clubs, mosques and churches, and popular meeting places such as barbershops. As part of the campaign, people were also offered assessments for other chronic diseases, such as hypertension and diabetes, and treatment if appropriate.

In 2018 and 2019, 60 million people were screened using rapid tests and by the end of 2020, 5.5 million people with HCV infection had been treated *(97)*.

Economic evaluations suggested that the HCV elimination effort was highly cost-effective and would be cost-saving by 2029 *(68, 98, 99)*.

In 2023, Egypt became the first country to achieve "gold tier" status for HCV elimination, based on WHO's framework for hepatitis elimination *(97, 100)*.

5.2.5 England (United Kingdom of Great Britain and Northern Ireland) – progress towards HCV elimination

England has made major gains towards eliminating HCV. Between 2015 and 2024, the number of people living with HCV infection fell by 62%, with an even bigger reduction of 82% among people who inject drugs – the group at highest risk of infection. More than 80% of people living with HCV infection have been diagnosed since 2015, and by 2024 more than 80% of those diagnosed had been treated. HCV-related mortality continues to decrease.

This progress has been driven by free and unrestricted access to National Health Service (NHS) and local-government-funded testing and curative treatment, including regular testing within drug services and opt-out testing in prisons. Peer-led outreach and mobile inclusion health teams have been central to reaching people with complex needs. As England advances towards elimination, case finding is being further strengthened by new NHS-funded initiatives such as opt-out testing in emergency departments, risk-based testing in primary care, a national web-based testing portal, and high-intensity test-and-treat programmes across more than 80 prisons.

Since 2015, the NHS England HCV Elimination Programme has supported delivery of over 90 000 treatments through leading an innovative national procurement partnership. A national re-engagement initiative, informed by surveillance data, is helping to bring people back into care. Public health evaluations, behavioural science and economic analyses guide programme planning and support decisions on the combination of interventions needed to achieve and sustain elimination.

Despite the progress, challenges remain. England is seeking to reach the WHO target for reducing new HCV infections, but reinfection rates remain elevated, particularly among individuals recently treated. Since 2022, additional funding has been allocated to strengthen drug and alcohol treatment and recovery systems, including harm-reduction services. One in three people who inject drugs report inadequate access to needle and syringe provision.

The UK Health Security Agency is developing HCV outbreak guidance and expanding genomic surveillance to support detection, monitor resistance and track treatment outcomes.

England's progress reflects strong multisectoral commitment, community engagement and evidence-based approaches – essential foundations for achieving and sustaining hepatitis C elimination beyond 2030.

5.2.6 Georgia – progress towards HCV elimination

In 2015, Georgia launched the world's first nationwide HCV elimination programme. At the time, it had one of the highest levels of HCV infection in the general population in the world (5.4% in the adult population). Since then, prevalence has been reduced by 67%.

Various factors have contributed to this success:

- strong political commitment, which enabled rapid mobilization of resources and institutional support;
- international collaboration, including with WHO, the United States Centers for Disease Control and Prevention and a technical advisory group;
- public and private partnerships, including an agreement with Gilead Sciences to donate DAAs;
- public awareness campaigns and engagement with civil society, which have helped to reduce stigma and promote uptake of services;
- expansion of screening to over 1000 sites, including inpatient facilities and prisons, and mobile outreach units, which brought services closer to patients and reduced bottlenecks;
- a decentralized model of care delivery, including the expansion of treatment services from specialized centres to 39 facilities nationwide, including primary health care centres and sites for provision of harm-reduction services;
- electronic data management platforms, including screening and treatment registries, which allow real-time monitoring of diagnostic and treatment outcomes; and
- strengthened blood safety systems, infection prevention and control measures, and expanded harm-reduction services, to address the main transmission pathways.

By the end of 2025, 2.8 million people (89% of the adult population) had been tested at least once for HCV infection and 89% of the estimated number of people living with HCV had been diagnosed.

Further progress will require sustained political and financial commitment and continued innovation. Current priorities are improving linkages to care, preventing reinfection and ensuring long-term follow-up of people who have already been treated, expanding the use of primary health care and community-based interventions, and further strengthening of digital systems to track disease trends.

Efforts to eliminate HCV are now providing the foundation for broader efforts to reduce the burden of viral hepatitis. In 2024, the elimination programme was expanded to cover HBV. Integration of services for HCV and HBV screening and treatment, and integration of HCV and HBV surveillance, could support the elimination of both infections.

5.2.7 Mexico – a national strategy for HCV elimination

There are about 0.7 million people living with HCV infection in Mexico. Transmission is concentrated in specific states and localities, rather than uniformly distributed nationwide. Some of the most affected parts of the country are Baja California, Sinaloa, Sonora, Chihuahua, Jalisco and Mexico City; these areas have high rates of HCV transmission strongly associated with injecting drug use.

Mexico has a national HCV elimination programme that combines universal access to DAAs with targeted testing and micro-elimination strategies for priority populations and areas with relatively high transmission. Nearly 6 million rapid diagnostic tests have been distributed through decentralized, community-based services, clinics and outreach services that provide rapid testing and curative treatment throughout the country. For people who inject drugs, screening and harm-reduction services are integrated. For people living with HIV, universal HCV screening is offered as part of HIV care services, followed by treatment for those diagnosed with HCV infection. HCV screening is also implemented in correctional facilities, in coordination with state authorities, to expand testing among people deprived of liberty and to facilitate linkage to care.

The national elimination programme is supported by ongoing capacity-strengthening efforts and expansion of service provision. More than 230 000 health care professionals have been trained through continuing education programmes and telementoring initiatives, and service delivery has expanded to more than 1500 health facilities. Between 2020 and 2025, about 48 000 people were diagnosed with viraemic HCV infection, about 80% of whom were successfully linked to DAA treatment.

5.2.8 Pakistan – diagnosis and treatment of HCV infection

Pakistan is the country with the largest number of people living with HCV infection – about 9 million people in 2024.

In July 2024, a prime ministerial plan to scale up HCV prevention, diagnosis and cure was put in place *(101)*. The aim is to treat 50% of people with HCV infection by 2027 and to achieve the 2030 targets contained in the GHSS on viral hepatitis by 2030.

Federal funding that covers 50% of the plan costs is being provided to support action at provincial level. In the first phase of the plan, from 2024 to 2027, the focus is on provinces with the highest prevalence in the general population: Punjab (8.9%), Sindh (6.2%), Balochistan (5.2%) and Khyber Pakhtunkhwa (6.5%).

The plan was based on an investment case that compared maintenance of the status quo with what could be achieved if the 2027 and 2030 targets were met *(102)*. The investment case estimated that implementation of the plan would reduce the number of people with HCV infection to 2.8 million by 2030. Costs for screening, testing and treatment would increase until 2027 but subsequently would be offset by lower health care costs. By 2030, it was estimated that the national return on investment would be US$ 8 for every US$ 1 invested.

Pakistan is using WHO-prequalified diagnostics, locally manufactured antivirals and a national electronic medical record system to ensure effective tracking, treatment and follow-up. The country has the largest use of DAAs worldwide, and it has implemented decentralized and community-based strategies, including door-to-door screening and task shifting to primary care. Active and passive HCV screening is offered to everyone who visits a health facility, for any reason. In an initial pilot phase in Gilgit-Baltistan, the whole population was screened. There is a Prime Minister's portal that allows anyone to register for services.

With high-level leadership, strong governance, full domestic funding and ambitious targets, Pakistan's approach to achieving the 2030 targets provides a model for other countries with a high burden of HCV.

5.2.9 Rwanda – progress towards elimination of HCV and mother-to-child transmission of HBV

Rwanda's health system has played a crucial role in increasing life expectancy from 48 years in 2001 to 67.5 years in 2022 (*103*). There has been high-level political commitment to a decentralized health care model that prioritizes person-centred care and integrated services, supported by effective governance. This primary health care approach is now providing the foundation for HCV elimination.

In 2018, the government set a national goal to eliminate HCV, supported by the performance contract (Imihigo) system. This holds local governments accountable for screening targets. By 2020, the prevalence of HCV had been significantly reduced through extensive case finding, decentralization of services and the introduction of affordable treatment options *(104)*. A major achievement was the government's negotiation of lower prices for diagnostic tests and antivirals. The cost of treatment was reduced from several thousands of US dollars to US$ 60 per person, and screening costs were reduced from US$ 30 to US$ 1 per person *(104)*. This enabled the expansion of decentralized services, including the integration of GeneXpert® platforms for viral load testing. By 2020,

13 hubs were providing viral load testing and 82 primary health care centres were providing treatment services; in addition, all 508 health centres were offering HCV screening *(105, 106)*.

The decentralized model also incorporated task sharing, with nurses leading treatment services supported by district-level mentors. Peer educators contributed by supporting treatment adherence, reducing stigma and ensuring patient engagement in care. By 2024, more than 6000 health care providers had been trained and nearly 9 million people screened for HCV infection, resulting in treatment for more than 61 000 people *(105)*.

In 2026, Rwanda became the first country in sub-Saharan Africa to apply to WHO for validation of HCV elimination and elimination of mother-to-child transmission of HBV.

5.2.10 Thailand – antiviral prophylaxis for prevention of mother-to-child transmission of HBV, and HCV treatment

Thailand has a high coverage of HBsAg screening among pregnant women and a long-standing national immunization programme. Among HBsAg-positive pregnant women, the mother-to-child transmission rate is well below the WHO threshold of 2%; it was 1.4% in 2024 and 1.0% in 2025.

Some barriers to prevention of mother-to-child transmission persist. Some women do not attend antenatal services or attend very late. HBsAg screening coverage is high, but the coverage of HBV DNA viral load testing and HBeAg screening for HBsAg-positive pregnant women was only about 50% in 2020–2022. Follow-up care for HBV-infected mothers and their children has been challenging; this includes testing children at 12 months of age for infection and immunity status. Services to prevent mother-to-child transmission of HBV are less well established than those for prevention of mother-to-child transmission of HIV and syphilis.

Efforts are now underway to integrate screening and treatment protocols for HIV, syphilis and HBV into a single service delivery model. This approach prioritizes early and comprehensive antenatal care, with a "triple diseases" target that at least 75% of pregnant women begin antenatal care before 12 weeks, and receive standardized screening and treatment for all three diseases. In addition, options for antiviral prophylaxis for HBV-infected pregnant women have been expanded to include tenofovir alafenamide (TAF), as well as tenofovir disoproxil fumarate (TDF).

To further increase treatment coverage, since 2026 the national guidelines for screening and treatment include an alternative protocol for facilities unable to perform screening or refer pregnant women for HBeAg or HBV DNA viral load testing. The alternative protocol allows such facilities to initiate treatment without HBeAg or HBV DNA viral load results. Under this protocol, HBsAg-positive pregnant women can begin antiviral prophylaxis at between 16 and 28 weeks, with the option to start even later if they first present for care shortly before delivery.

There are currently about 0.2 million people with HCV infection in Thailand. The overall prevalence of HCV infection in the general population (aged ≥6 months) is estimated at 0.4% *(107)*. Among people in high-risk groups born before 1992, national data showed that the prevalence was higher, at about 1.05%.

A massive HCV screening campaign was launched in 2024; by 2030, the campaign aims to reach 42 million people born before 1992. A "test and treat" model is being used to transform what was a complex medical journey into an accessible, nationwide public health success.

If a rapid test for HCV infection at a primary care unit is positive, a confirmatory HCV RNA or HCV core antigen blood draw is performed immediately, during the same visit. This model empowers village health volunteers and district hospitals to manage the "test and treat" pathway, ensuring that even those in more remote areas can access care near their homes.

After 3 years of implementation, the programme has already reached 7.3 million people and identified almost 75 000 people with HCV infection. Those with confirmed infection were offered a 12-week DAA treatment with sofosbuvir and velpatasvir; more than 50 000 people have been treated.

A critical factor in this success is that screening and treatment are provided free of charge to all citizens, as part of Thailand's universal coverage scheme *(108)*. The Department of Disease Control has also expanded its reach to vulnerable groups, including people who inject drugs and prisoners, using protocols that are designed to ensure that people complete treatment before they leave the care or penitentiary system.

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Annex 1

Methodological notes

This annex summarizes the main updates to methods used to produce epidemiological estimates (incidence, prevalence and mortality) and associated estimates of diagnostic and treatment coverage, compared with those used in previous World Health Organization (WHO) global reports on hepatitis, published in 2017 and 2024 *(1, 2)*. The updates reflect the availability of new data, refinements in modelling methods and enhanced calibration procedures that, overall, improve the accuracy, comparability and interpretability of global and regional trends.

The annex also highlights specific methodological points concerning the use of modelled rather than country-reported estimates.

Further methodological details (e.g. related to data sources, estimation of uncertainty, calibration procedures and stratification of estimates by risk group) are provided in the **online technical appendix** that accompanies the report.

A1.1 Recalibration of historical estimates and updates to modelling inputs

WHO and the Center for Disease Analysis Foundation (CDAF)[1] undertook a full recalibration of global models for hepatitis B virus (HBV) and hepatitis C virus (HCV), to incorporate new epidemiological, programmatic and demographic data. This recalibration ensured that all published estimates reflect the latest available evidence and modelling methods, and that time series are internally consistent.

As is standard in disease burden estimation, updates applied to the most recent year propagate backwards through the historical time series. Estimates published in previous reports are no longer applicable and should not be compared with the ones published in this report.

The updated modelling approach has resulted in substantive revisions to historical estimates of incidence, prevalence and mortality, which in turn affect estimates of diagnostic and treatment coverage.

HBV prevalence among children aged under 5 years

In the *Global hepatitis report 2024 (2)*, HBV prevalence among children aged under 5 years was estimated as 0.9% in 2020, based on model-based estimates published in 2020. Following recalibration with new data, the revised estimate for 2020 is 0.65%, indicating that the 2020 target of 1%, set in WHO's first global health sector strategy (GHSS) on viral hepatitis *(3)*, was achieved earlier than previously reported.

[1] The CDAF is a WHO collaborating centre.

Baseline incidence estimates used in WHO global health sector strategies on viral hepatitis

The 2030 elimination targets in WHO's first GHSS on viral hepatitis (for 2016–2021) *(3)* and the current strategy for 2022–2030 *(4)* were set with respect to a baseline year of 2015. Both strategies used an estimate of 6–10 million new HBV and HCV infections in 2015. This estimate has been revised substantially downwards and estimated declines in incidence, prevalence and mortality since 2015 are now smaller.

A1.2 Introduction of trend analyses for 2015–2024

Previous reports included estimates for the latest available year. This report includes time series of estimates of incidence, prevalence and mortality, as well as diagnostic and treatment coverage, for 2015–2024, enabling an assessment of progress in the 10-year period since the first GHSS on viral hepatitis was adopted by all WHO Member States at the World Health Assembly *(3)*.

A1.3 Use of modelled estimates for global maps, rankings and target assessments

Chapter 3 includes maps that show country-level estimates of incidence, prevalence and mortality according to three or four categories. Best estimates and 95% uncertainty intervals are not shown at the country level. The maps are based on modelled estimates, rather than country-reported values, to ensure a consistent approach across all countries as well as consistency with the regional and global estimates that are the main focus of the report.[2] WHO will publish country-reported data within online country profiles; it is expected that the current profiles *(5)* will be updated in about mid-2026.

For similar reasons, model-based estimates were used to assess which countries have already achieved the 2030 target for reducing HBV prevalence among children aged under 5 years to 0.1%.

Modelled estimates may differ markedly from national surveillance data or country-specific survey results. Thus, modelled country estimates should not be cited as the official evidence base for assessing whether a country has achieved elimination targets. Instead, the estimates should serve as signals indicating which countries may wish to initiate an in-depth review of their progress towards elimination and, if that review has a satisfactory

[2] For example, reporting years varied widely across countries (e.g. a prevalence survey conducted in 2018 in one country compared with one conducted in 2022 in another). Population sampling frames and data sources also differed substantially.

outcome, may seek to undertake the validation process outlined in WHO guidance *(6)*. During the WHO validation process, countries must provide national data sources that substantiate achievement of the relevant benchmarks. This process is supported by WHO regional and global teams.

A1.4 Updates in the presentation of the HBV and HCV cascade of care

HBV

HBV treatment is recommended only for individuals who meet specific clinical criteria as defined in national or regional guidelines. To generate policyrelevant estimates of unmet treatment need, the latest (2024) WHO treatment guidelines *(7)* were used to provide an approximate assessment of the percentage of people diagnosed with HBV infection who would be eligible for treatment, if countries were to adopt these recommendations. Based on the recommended criteria for assessment of treatment eligibility, it was assumed that 50% of diagnosed individuals globally would be eligible for treatment. As more countries adopt the 2024 guidelines, it is expected that future reports will be able to present more accurate estimates of the size of the eligible population and better assessment of the HBV cascade of care.

HCV

HCV treatment has a cure rate of about 95%. To illustrate progress made since treatment became available in 2015, the HCV cascade of care is presented as the cumulative number of individuals ever diagnosed and ever treated since 2015. The cascade was derived from updated modelled estimates of the number of people infected, diagnosed and treated.

Estimates of the number of people already diagnosed with HCV who remain alive and untreated were included, to highlight gaps in access to treatment. These estimates are essential to inform policy and planning related to accelerating progress towards elimination targets.

A1.5 Country profiles to be published online

To support national interpretation and use of results, WHO will publish updated hepatitis country profiles online following the release of this report *(5)*. These profiles will present a consolidated view of national hepatitis data, including:

- country reported data from the 2025 round of global hepatitis reporting;
- modelled estimates, where applicable, for key epidemiological indicators;
- cascades of care for HBV and HCV infections, including indicators for prevention of mother-to-child transmission of HBV where available; and
- the status of policy adoption for core interventions.

The online profiles are intended to complement the global and regional analyses presented in this report, and to enable countries to better track progress, identify gaps, and inform national planning and implementation.

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Annex 2

The global hepatitis reporting process

Global hepatitis reporting is conducted every 2 years by the World Health Organization (WHO). All Member States, as well as additional countries and areas, are asked to report data related to the epidemiological burden of viral hepatitis and the coverage of essential interventions for prevention, diagnosis and treatment, in alignment with the WHO monitoring and evaluation framework for viral hepatitis *(1)*. The focus is primarily on hepatitis B virus (HBV) and hepatitis C virus (HCV).

In 2025, data were collected, validated and finalized between July and December. Data for quantitative indicators were requested for the 2024 calendar year. For national policies, the status at the time of reporting in 2025 was requested.

The global hepatitis reporting process included six main phases, described below.

In the first phase, in April 2025, a standardized data collection form was developed and made available in English, French, Russian and Spanish.

In June, WHO informed all Member States about the reporting process, via WHO country representatives. This included an official memo to request the designation of a focal point (or focal points) for reporting from each ministry or department of health. Following receipt of nominations, each focal point was sent individualized credentials to access the online reporting platform. Country-specific estimates for key indicators, developed by the Center for Disease Analysis Foundation (CDAF) in collaboration with WHO (**Annex 1**), were shared with the relevant focal points.

On 25 June 2025, the global data reporting platform was officially launched through a webinar with WHO country and regional focal points. Subsequently, monthly webinars were held to provide ongoing technical support and training. These sessions included presentations by CDAF to explain the estimation methodology. All sessions were recorded, and participants were given access to the recordings and accompanying PowerPoint® presentations. Additionally, region-specific webinars were organized upon request, with interpretation services provided as needed. In the WHO European Region, data for European Union countries were collected jointly by WHO and the European Centre for Disease Prevention and Control (ECDC), in alignment with existing surveillance efforts.

During the period of data reporting and for the purposes of consistency and transparency, countries were provided with the following prioritization algorithm for data submission:

- Validated country data. Countries were encouraged to submit programmatic data and burden estimates, with references where available. These data were prioritized for cascade-of-care and burden analyses.
- Regionally validated data. If WHO regional offices had already conducted validation exercises, countries were advised to use those datasets.
- WHO estimates. Where there were data gaps, countries were encouraged to use WHO estimates from 2024, provided they endorsed the figures. If discrepancies existed between national data and WHO estimates, countries were asked to provide explanatory comments.

Following reporting of data, WHO regional and country offices supported data validation efforts in collaboration with ministries of health. Upon request, WHO facilitated country-level triangulation and validation exercises, engaging technical experts and partners to ensure data quality.

In the final phase, from 11 to 28 November 2025, countries were invited to review and provide feedback on their final datasets through the WHO country consultation portal. The final datasets for analysis were compiled in December 2025.

The online reporting system and the data collection form can be accessed via the WHO website *(2)*.

A summary of the number of Member States that reported data is provided in **Table A2.1**.

Table A2.1. Number of Member States that reported data in the 2025 round of global hepatitis reporting, globally and by WHO region

WHO region	Number of Member States	Number of Member States that reported data
African Region	47	38
Region of the Americas	35	19
South-East Asia Region	10	8
European Region	53	45
Eastern Mediterranean Region	21	11
Western Pacific Region	28	19
All regions	**194**	**140**

References

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Annex 3

World Health Assembly resolutions on viral hepatitis

There have been two World Health Assembly resolutions on viral hepatitis. The first was adopted in 2010 (WHA63.18) *(1)*. The second was adopted in 2014 (WHA67.6) *(2)*. The main commitments made by Member States and associated requests to the World Health Organization (WHO) are summarised in **Box A3.1** and **Box A3.2**.

Box A3.1. The first World Health Assembly resolution on viral hepatitis in 2010 (WHA63.18): summary of Member State commitments and requests to WHO *(1)*

Member State commitments

- **World Hepatitis Day.** Designate 28 July as World Hepatitis Day, to raise awareness and strengthen prevention and control measures.
- **Surveillance.** Implement or improve epidemiological surveillance systems, to generate reliable data for guiding prevention and control.
- **Integrated approach.** Support integrated, cost-effective prevention and management of viral hepatitis, considering HIV coinfection and multisectoral collaboration.
- **Adopt WHO guidance.** Incorporate WHO-recommended policies, strategies and tools for prevention, diagnosis and care.
- **Strengthen health systems.** Enhance national health systems for prevention, diagnosis, treatment, vaccination and injection safety.
- **Protect health workers.** Provide vaccination strategies and infection-control measures for health care workers.
- **Mobilize resources.** Use national and international resources to strengthen health systems and deliver affordable interventions suited to local needs.
- **Access to medicines.** Consider legislative mechanisms and flexibilities within the Trade-Related Aspects of Intellectual Property Rights (TRIPS)[a] agreement to promote access to essential pharmaceuticals and technologies.
- **Monitoring and evaluation.** Develop and implement tools for monitoring preventive, diagnostic and treatment activities.
- **Promote awareness.** Celebrate World Hepatitis Day annually, to sustain public engagement.

Requests to WHO

- **Guidelines and strategies.** Establish time-bound goals and tools for the prevention and control of viral hepatitis.
- **Research support.** Promote scientific research on prevention, diagnosis and treatment.
- **Burden assessment.** Improve global estimates of economic impact and disease burden.
- **Support resource-constrained countries.** Help countries to organize World Hepatitis Day events and strengthen their capacity for diagnostics and treatment.
- **Mobilize international support.** Engage international organizations and financial institutions to provide resources and technical assistance equitably.

[a] The World Trade Organization General Council, in its Decision of 30 August 2003 (i.e. on Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health), decided that "pharmaceutical product" means any patented product or product manufactured through a patented process of the pharmaceutical sector needed to address the public health problems as recognized in paragraph 1 of the Declaration. It is understood that active ingredients necessary for the manufacture of a pharmaceutical product and diagnostic kits needed for its use would be included.

Box A3.2. The second World Health Assembly resolution on viral hepatitis in 2014 (WHA67.6): summary of Member State commitments and requests to WHO *(2)*

Member State commitments

- **National strategies.** Develop and implement coordinated multisectoral strategies for prevention, diagnosis and treatment, based on local epidemiology.
- **Health promotion and immunization.** Strengthen health promotion and prevention, and enhance immunization strategies, including for hepatitis A, and for hepatitis B through a timely birth dose.
- **Civil society engagement.** Involve civil society in all aspects of hepatitis prevention, diagnosis and treatment.
- **Surveillance.** Establish robust surveillance systems to guide evidence-based policy.
- **Blood and organ safety.** Ensure quality-assured screening of blood, tissues and organs, and promote voluntary, non-remunerated donation.
- **Prevent perinatal hepatitis B virus transmission.** Deliver the hepatitis B birth-dose vaccine and expand infant immunization coverage.
- **Food and water safety.** Strengthen measures to prevent hepatitis A and E through hygiene and safe water.
- **Infection control.** Prevent reuse of single-use equipment and ensure proper sterilization of multiuse devices.
- **Equitable access.** Guarantee prevention, diagnosis and treatment for vulnerable groups (e.g. indigenous people, migrants and people who inject drugs).
- **Access to medicines.** Use TRIPS[a] flexibilities and legal mechanisms to promote access to pharmaceuticals and technologies.
- **Programmes for people who inject drugs.** Implement comprehensive harm-reduction programmes (i.e. through nine core interventions) for people who inject drugs.
- **Safe injection devices.** Transition to WHO-prequalified safety-engineered injection devices by 2017.
- **Anti-stigma measures.** Review policies to eliminate discrimination and stigma in employment, education and travel.

Requests to WHO

- **Technical support.** Assist Member States in developing robust national strategies with time-bound goals.
- **Guidelines.** Develop affordable diagnostic algorithms and cost-effective integration of hepatitis services into health systems.
- **Monitoring and reporting.** Establish systems for regular reporting of progress on prevention, diagnosis and treatment.
- **Comprehensive access.** Support equitable access to prevention, testing, care and treatment, including harm reduction for people who inject drugs.
- **Blood safety guidance.** Provide technical guidance on safe blood donation and screening practices.
- **Elimination feasibility.** Examine strategies and feasibility for eliminating hepatitis B and C, and consider global targets.
- **Burden assessment.** Estimate economic impact and disease burden at different levels: global, regional and national.
- **TRIPS support.** Provide technical assistance for using TRIPS flexibilities to improve access to medicines.
- **Synergies.** Maximize integration with noncommunicable disease prevention and other health programmes.

[a] The World Trade Organization General Council, in its Decision of 30 August 2003 (i.e. on Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health), decided that "pharmaceutical product" means any patented product or product manufactured through a patented process of the pharmaceutical sector needed to address the public health problems as recognized in paragraph 1 of the Declaration. It is understood that active ingredients necessary for the manufacture of a pharmaceutical product and diagnostic kits needed for its use would be included.

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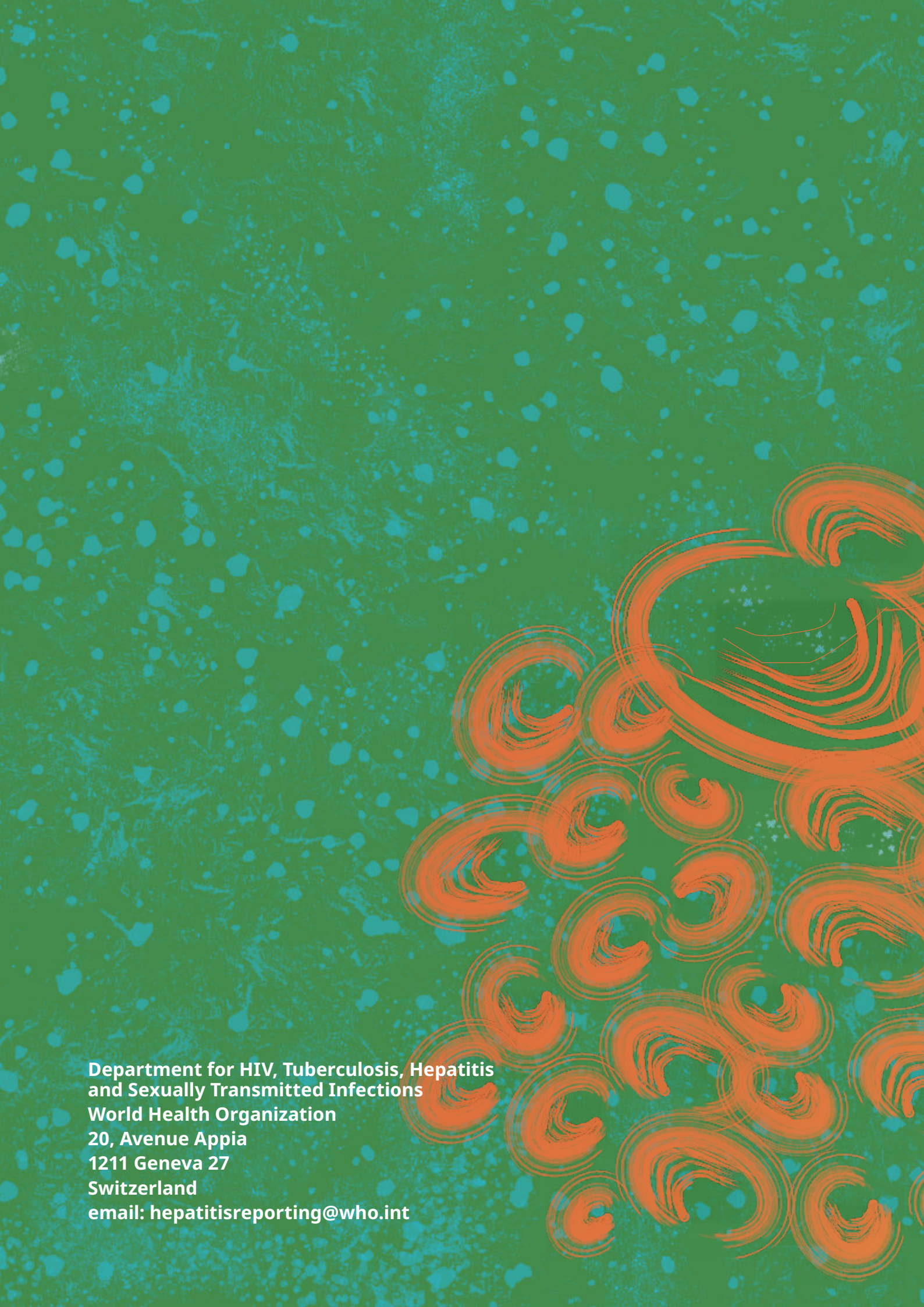

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