

Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030

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1 Ending epidemics in a new global health era

The 2022–2030 global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections guide the health sector in implementing strategically focused responses to achieve the goals of ending AIDS, viral hepatitis B and C and sexually transmitted infections by 2030.¹ Building on the achievements and lessons learned under the 2016–2021 global health sector strategies,^{2,3,4} the 2022–2030 strategies consider the epidemiological, technological and contextual shifts of recent years, foster learnings across the disease areas, and create opportunities to leverage innovations and new knowledge for effective responses to HIV, viral hepatitis and sexually transmitted infections. The strategies recommend shared and disease-specific country actions for the next eight years, supported by actions by WHO and partners.

Each country should define the populations that are most affected and at risk for HIV, viral hepatitis and sexually transmitted infections and commit to actions that respond to local epidemiological and health system contexts while upholding fundamental human rights and through a focus on equitable access to health and evidence-informed practice.

The 2022–2030 strategies underline the critical role of the health sector in ending these epidemics, acknowledging that a multisectoral “Health in All Policies” approach is required to remove structural and systemic barriers to accelerating progress.⁵ The strategies call for a more precise focus to reach the people most affected and at risk for each disease and to address inequities. They promote synergies under a universal health coverage and primary health care framework and contribute to achieving the goals of the 2030 Agenda for Sustainable Development.⁶

1.1 Major epidemics with uneven progress

HIV, viral hepatitis and sexually transmitted infections collectively cause 2.3 million deaths and 1.2 million cases of cancer each year⁷, and continue to impose a major public health burden worldwide. More than 1 million people are newly infected with sexually transmitted infections each day, and 4.5 million with HIV, hepatitis B and hepatitis C, each year. Although progress has been made in all three disease areas, the global response is off-track and most

¹ While acknowledging the importance of viral hepatitis A and E, both of which cause acute viral hepatitis, the global health sector strategies focus primarily on chronic viral hepatitis B and C. These two infections, which may lead to cirrhosis and hepatocellular cancer, accounts for 96% of all viral hepatitis mortality. Hepatitis D co-infection or superinfection accelerates progression of chronic liver disease but only in people living with Hepatitis B. Further details are provided in Chapter 5.

² Global health sector strategy on HIV 2016–2021: towards ending AIDS. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/246178> , accessed 31 December 2021).

³ Global health sector strategy on viral hepatitis 2016–2021: towards ending viral hepatitis. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/246177> , accessed 31 December 2021).

⁴ Global health sector strategy on sexually transmitted infections 2016–2021: towards ending STIs. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/246296> , accessed 31 December 2021).

⁵ Thirteenth General Programme of Work, 2019–2023. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/279451> , accessed 31 December 2021).

⁶ Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (<https://sustainabledevelopment.un.org/post2015/transformingourworld/publication> , accessed 31 December 2021)

⁷ Including hepatocellular carcinoma caused by hepatitis B and C; cervical cancer caused by human papillomavirus, and other types of cancer caused by viral hepatitis and human papillomavirus.

global health targets for 2020 were missed (Box 1.1). The full benefits of available tools and technologies are not being realized, many populations are left behind, and structural, systemic and financial barriers to accelerating progress persist. The COVID-19 pandemic has further hampered progress, and accelerated action is needed to end these epidemics.

Box 1.1: Achievements and gaps during 2016-2021

The HIV, viral hepatitis and sexually transmitted infection epidemics and responses are at different stages.⁸

The global **HIV** epidemic has been transformed with the large-scale expansion of antiretroviral therapy, reducing global HIV-related deaths to their lowest since 1994. Nevertheless with 680,000 people dying from HIV-related causes in 2020, mortality continues to be unacceptably high and progress in reducing mortality is stalling. Further, more than 1.5 million people acquire new HIV infections each year and the global targets for reducing this number are off-track. Access to services for children and adolescents lags behind the progress achieved for adults. Key populations, in the context of HIV, include men who have sex with men, people who inject drugs, sex workers, transgender people and people in prisons⁹. Key populations and their partners account for 65% of the people acquiring HIV worldwide, yet these populations face many barriers to accessing services, including legal and policy barriers and structural and social health determinants within and beyond the health sector.

The **viral hepatitis** response gained significant momentum during the 2016-2021 implementation period. However, funding commitments remain inadequate to meet global goals. The global 2020 target of reducing the incidence of hepatitis B virus was met, supported by infant vaccination and prevention. The number of people receiving treatment for chronic hepatitis C virus infection increased almost 10-fold from 2015, reducing hepatitis C-related mortality. Nevertheless nearly 80% of people with hepatitis B or C virus remain undiagnosed, and affordable treatments are not being accessed. Hepatitis B and C together continue to cause 1.1 million deaths per year as a result of chronic liver disease and cancer. Timely access to birth-dose hepatitis B vaccine remains low in many low- and middle-income countries.

The multiple epidemics of **sexually transmitted infections** continue to cause a significant disease burden and the global response has lagged severely, resulting from a lack of visibility, funding and implementation support. **Four curable sexually transmitted infections** – syphilis (*Treponema pallidum*), gonorrhoea (*Neisseria gonorrhoeae*), chlamydia (*Chlamydia trachomatis*) and trichomoniasis (*Trichomonas vaginalis*) – cause more than 1 million infections each day. An estimated 604,000 cases of cervical cancer were diagnosed among women worldwide in 2020, most of which are linked to infection with high-risk human papillomavirus. Human papillomavirus can also cause anogenital warts and certain types of cancer among men. Further, more than 500 million people have genital herpes simplex virus

⁸ Global progress report on HIV, viral hepatitis and sexually transmitted infections, 2021: accountability for the global health sector strategies 2016–2021: actions for impact. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/341412> , accessed 31 December 2021).

⁹ “Each country should define the specific populations that are central to their epidemic and response, based on the local epidemiological context ... noting that global epidemiological evidence demonstrates that key populations are more likely to be exposed to HIV or to transmit it” United Nations General Assembly Resolution 75/284. Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030, 2021 (<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/145/30/PDF/N2114530.pdf?OpenElement>, accessed 20 April 2022)

infection. When left untreated, sexually transmitted infections can lead to long-term irreversible and potentially fatal outcomes including chronic pelvic pain, cancers, ectopic pregnancies, infertility, adverse pregnancy outcomes, neonatal death, and congenital abnormalities. Nevertheless, there has been a major lack of progress in addressing these infections, and many infections remain undiagnosed and untreated. The incidence of most other sexually transmitted infections is plateauing, and no global 2020 targets were met.

1.2 Strategic shifts towards ending epidemics: joint action with disease focus

The achievements to date have demonstrated that strong leadership coupled with innovative technologies and practices, financial investment and community engagement can reduce disease transmission, improve treatment outcomes and save lives. Any loss of focus over the next eight years would jeopardize the gains achieved so far with a risk of resurgence. Strategic and innovative shifts are needed to protect the progress to date, and to bring the world closer to the goal of ending the epidemics of AIDS, viral hepatitis and sexually transmitted infections.

Acknowledging the commonalities and differences among these disease areas, the 2022-2030 global health sector strategies provide a framework to strategically combine shared and disease-specific approaches in ways that place people at the heart of the response.

1.2.1 *Putting people at the centre*

HIV, viral hepatitis and sexually transmitted infections share modes of transmission and common interventions. They are also shaped in similar ways by social and structural determinants of health, such that communities facing poorer socioeconomic conditions, or discrimination, including discrimination experienced by key populations, experience greater vulnerability to infection and worse health outcomes. Putting people at the centre of rights-based health system responses – by organizing services around people’s needs rather than around diseases, and by promoting integrated patient-centred approaches and linkages with primary health care services – is the key to ending these epidemics (Box 1.2). The 2022–2030 strategies emphasize that different populations have unique health needs and circumstances and promote tailored responses that recognize and respond to the lived experiences of the people who occupy one or more of these groups. The strategies also clearly acknowledge that the burden and distribution of HIV, viral hepatitis and sexually transmitted infections vary across countries, and that responses need to be adapted to different epidemiological and health system contexts.

Box 1.2: Integrated people-centred health services

Health systems that are organized around the needs of people and communities perform more effectively, cost less, improve health literacy, increase patient engagement, and are better prepared to respond to health crises. People-centred health services are an important feature of primary health care and contribute to expanding universal health coverage.¹⁰ Making health services more people-centred requires integrating service delivery elements in new ways, such that people receive a continuum of health services in a coordinated manner across the different levels and sites of care, within and beyond the health sector, and according to their needs throughout the life course. This includes developing referral systems and networks, and approaches to support, enable and empower patients and communities to participate in their own care, including recognition of the burden of unpaid care on women and others.

1.2.2 Addressing unique priorities for each disease area

Although the epidemics of HIV, viral hepatitis and sexually transmitted infections are interrelated, they present different sets of challenges. Further, their responses have historically evolved in different ways and are at different stages. The unique priorities in each disease area must be addressed in order to accelerate progress (Box 1.3).

Box 1.3: Disease-specific roadmaps to ending epidemics by 2030

HIV, viral hepatitis and sexually transmitted infections will require dedicated action to address the specificities and gaps for each disease area.

The global response to **HIV** has benefitted from more than 40 years of global action to raise resources, expand services and address inequities, supported by strong community engagement. Nevertheless, progress has been uneven. Many countries with a high-burden of HIV-infection have reached high levels of service coverage, but much more needs to be done for key populations, including reviewing and reforming harmful legislation and policies that create barriers to evidence-based interventions and services. A renewed focus is also needed to eliminate vertical (mother-to-child) transmission of HIV and address care needs for children, and to better engage men in the response. Greater attention is needed to reduce the unacceptably high HIV-related deaths, including by addressing tuberculosis (TB), cryptococcal meningitis, severe bacterial infections, and other comorbidities. The last-mile efforts to end HIV as a public health threat over the next eight years require reducing the number of people acquiring HIV from 1.5 million in 2020 to 335,000 by 2030 and avoiding more than 500,000 annual deaths. Recent scientific advances in HIV treatment and technologies, and innovative service delivery methods, provide an unprecedented opportunity to make this happen. Success will require sustained commitment and flexible approaches to addressing a changing epidemic, with reinvigorated primary prevention efforts, differentiated service delivery to meet the diverse needs of specific populations and settings, and effective outbreak preparedness. It will also require continued investments in

¹⁰ Framework on integrated, people-centred health services: report by the Secretariat. 69th World Health Assembly, 2016. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/252698>, accessed 31 December 2021).

innovative technologies, including new treatment regimens and possibilities of a vaccine and cure.

The global response to **viral hepatitis** has witnessed increasing momentum and political commitment during the 2016-2021 strategy implementation period, supported by tremendous advances in public health approaches to prevention and treatment. Although all key interventions for a viral hepatitis response have been shown to be highly cost-effective, there is need for a marked increase in financial investment to achieve disease elimination goals. The existence of safe and effective vaccines for hepatitis B, and antiviral medicines that could prevent the transmission of hepatitis B and provide an effective cure for hepatitis C, provide great potential for ending viral hepatitis epidemics by 2030. Some countries with a high burden of viral hepatitis have pioneered action to address these diseases; however huge gaps in diagnosing and treating hepatitis infection remain in most countries. To achieve the goals of the global strategy over the next eight years, new infections from viral hepatitis B and C must be reduced from around 3 million new cases in 2020 to 520,000 by 2030; and deaths from viral hepatitis B and C must be reduced from 1.1 million to less than 500,000 deaths. This requires massive expansion in the availability of prevention, diagnostic and treatment services in low- and middle-income countries, and universal access to the hepatitis B birth-dose vaccine to end infections in children. Integrating viral hepatitis services into universal health coverage packages, simplifying and decentralizing service delivery, reviewing and reforming harmful legislation and policies that create barriers to evidence-based interventions and services, and improving coordination with other health areas such as those addressing cancer and maternal and child health care, supported by greater public and political awareness and adequate funding, will be required to make this happen.

The global response to **sexually transmitted infections** urgently needs to be reenergized and reframed after years of neglect and a lack of political commitment and funding. These infections continue to carry stigma and remain hidden; and most of the 374 million people who acquire these infections each year lack access to screening, diagnosis and treatment. There have been some successes, notably with 15 countries eliminating the vertical transmission of syphilis by 2020. The human papillomavirus vaccine is also being rolled out as part of national immunization schedules, but coverage remains low. Many countries have limited data about sexually transmitted infections and are not adequately capitalizing on opportunities to link sexually transmitted infection responses with responses to HIV and other communicable diseases. Ending sexually transmitted infection epidemics as public health concerns by 2030 will require a massive reduction in new infections, supported by efforts to vastly scale up primary prevention and increase access to screening for sexually transmitted infections, increase awareness of the public health impact of sexually transmitted infections, and secure adequate funding. Achieving these ambitious goals also requires increasing access to high-quality people-centred sexually transmitted infection case management delivered by public, private and non-governmental service providers, and leveraging synergies with sexual and reproductive health, family planning, adolescent health and HIV services through a primary health care approach, strengthening surveillance for sexually transmitted infections and antimicrobial resistance, supporting accelerated research in point-of-care and home-based diagnostics and new vaccines, and expanding partnerships, including with the private sector, will also be needed to achieve these ambitious goals.

1.2.3 Taking a shared approach towards strengthening health and community systems

There are many opportunities to increase the impact of disease-specific responses by addressing diseases jointly under a universal health coverage framework. The strategies emphasize the need for coordinated action to strengthen health and community systems, ensure strong linkages among health and community system actors, and expand collaboration within and across systems and sectors. Health systems must address the needs of individuals, families and communities across multiple disease areas in a coordinated manner and must leverage synergies in relation to service delivery and other health system domains such as governance, financing and health information. Communities must be empowered and resourced to enhance their indispensable role in delivering people-centred services with strong linkages to health services, and in promoting accountability. Although there is no one-size-fits-all approach to balancing disease-specific considerations with health systems strengthening, these strategies provide guidance for framing national responses within this vision.

1.2.4 Responding to a swiftly changing health and development context

The responses to HIV, viral hepatitis and sexually transmitted infections are evolving in an increasingly complex environment. The COVID-19 pandemic has altered the landscape of global health by shifting resources, drawing attention to the gaps in health systems, and exposing and exacerbating the disparities and inequalities that make some populations more vulnerable to disease, including key populations which face pre-existing barriers to services. This has drawn attention to the importance of integrating a rights-based public health response to mitigate the impact of public and social measures, and the need for a strong and well-supported health workforce to maintain service continuity. The pandemic has demonstrated the vital role of communities in meeting people's needs during crises and has highlighted inequalities in the burden of this care in the community. It has also catalyzed innovations in health and community systems, such as the rapid development and deployment of new vaccines and technologies, and the expanded use of integrated diagnostics systems and platforms, health information systems, digital health solutions and self-care approaches. Rapid progress on COVID-19 vaccines has reenergized the global health community and has provided renewed hope for other innovations; yet it has also exposed deep inequities in access to such innovations. Many important lessons from the COVID-19 pandemic will inform future responses to infectious diseases. Further, challenges such as demographic shifts, the growing burden of noncommunicable diseases, climate change, population displacement and economic insecurity are also shaping the health and development context worldwide. For example, the health sector has a role to play in promoting climate adaptive interventions such as the greening of health procurement, service delivery and healthcare waste disposal. This is an unprecedented time to build resilient and adaptable health and community systems¹¹ to promote health security, uphold human rights, protect people from future pandemics and other challenges, and advance human health and well-being.

¹¹ Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. WHO, 2021 Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/346515> , accessed 31 December 2021).

1.2.5 *Eliminating stigma, discrimination and other structural barriers*

The large expansion in services that is required to achieve 2030 targets will not be achieved unless it is accompanied by efforts to address the stigma, discrimination, inequalities, and criminalization of key populations which exacerbate the risk of infection and prevent many people from accessing essential services. The health sector has a critical role to play in addressing stigma, discrimination and policy barriers within the health care setting, including through generating data on how stigma and discrimination affects the populations most affected by HIV, viral hepatitis and sexually transmitted infections. The health sector also plays an important convening role for multisectoral partnerships to address the broader determinants of health. The health sector must raise awareness about the importance of addressing these epidemics and overcoming taboos and discriminatory or stigmatizing behaviour, consistent with WHO's commitment to eliminating discrimination in health care settings.¹²

1.3 Framing the strategies

The 2022-2030 global health sector strategies on HIV, viral hepatitis and sexually transmitted infections position the health sector response to these epidemics as being critical to the achieving the goals of the 2016–2030 Agenda for Sustainable Development (or the Sustainable Development Goals), especially the goals of ending AIDS, tuberculosis and malaria; and achieving universal health coverage and healthy lives and well-being for all at all ages by 2030. The strategies are grounded in human rights standards and principles including the right of all people to the highest attainable standard of physical and mental health.¹³ They contribute to realizing the vision of the United Nations Political Declaration of the High-level Meeting on Universal Health Coverage¹⁴ and the renewed commitment to primary health care in the 2018 Declaration of Astana¹⁵.

Within WHO, the strategies contribute directly to achieving the goals of WHO's Thirteenth General Programme of Work, which is guided by the "Triple Billion" targets related to universal health coverage, protection from health emergencies, and promotion of better health and well-being for all¹⁶. They are also aligned with related commitments expressed in other global health strategies and plans, including the United Nations General Assembly's 2021 Political Declaration on HIV and AIDS¹⁷, the United Nations General Assembly Quadrennial Comprehensive Policy Review of operational activities for development of the

¹² Joint United Nations statement on ending discrimination in health care settings. Geneva: World Health Organization; 2017 (<https://apps.who.int/iris/handle/10665/259622>, accessed 31 December 2021).

¹³ International Covenant on Economic, Social and Cultural Rights. Geneva: Office of the United Nations High Commissioner on Human Rights; 1966 (<https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx>, accessed 31 December 2021).

¹⁴ Political declaration of the high-level meeting on universal health coverage. General Assembly resolution 74/2 (2019). New York: United Nations; 2019 (<https://daccess-ods.un.org/tmp/8215806.48422241.html>, accessed 31 December 2021).

¹⁵ Declaration of Astana: Global Conference on Primary Health Care. Astana, Kazakhstan, 25–26 October 2018. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/328123>, accessed 31 December 2021).

¹⁶ Thirteenth General Programme of Work, 2019–2023. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/279451>, accessed 31 December 2021).

¹⁷ Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030. New York: United Nations; 2021 (https://www.unaids.org/en/resources/documents/2021/2021_political-declaration-on-hiv-and-aids, accessed 31 December 2021).

United Nations system¹⁸, the Pan-American Health Organization Disease Elimination Framework¹⁹, and work underway to develop a Global Framework for Multi-disease Elimination. They build on the inequalities lens of the UNAIDS Global AIDS Strategy 2021–2026²⁰ for an effective health sector response and are aligned with the Secretary-General’s Call to Action for Human Rights, especially the key principles of a human rights-based approach, leaving no one behind, and gender equality and women’s empowerment across all Sustainable Development Goals, including Dimension 1: Rights at the Core of Sustainable Development²¹, the priorities of the Global Fund to Fight AIDS, Tuberculosis and Malaria²², UNITAID²³ and key bilateral partners.

Reflecting the complex interaction of health issues associated with HIV, viral hepatitis and sexually transmitted infections, these strategies are also aligned with other global health strategies and plans that address a wide range of related diseases and health concerns.²⁴

1.4. The strategy development process

Draft Global Health Sector Strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030 were developed through a consultative, and largely virtual, process led by WHO throughout 2021. Building on an analysis of progress and gaps at the end of the previous implementation period of 2016–2021, the strategies sought inputs from Member States, communities and other stakeholders to define the key priorities and strategic shifts required to achieve the goals of ending epidemics by 2030. The lessons from the previous implementation period also provided inputs to improve the format and structure of the document itself, including the consolidation of the strategies into a single

¹⁸ United Nations General Assembly. Quadrennial comprehensive policy review of operational activities for development of the United Nations System. New York: United Nations; 2020 (<https://www.un.org/ecosoc/en/content/2020-qcpr>, accessed 31 December 2021).

¹⁹ An integrated, sustainable framework for the elimination of communicable diseases in the Americas. Concept note. Washington (DC): Pan American Health Organization; 2019 (<https://iris.paho.org/handle/10665.2/51106>, accessed 31 December 2021).

²⁰ Global AIDS Strategy 2021–2026. End Inequalities. End AIDS. Geneva: UNAIDS; 2021 (<https://www.unaids.org/en/resources/documents/2021/2021-2026-global-AIDS-strategy>, accessed 31 December 2021).

²¹ Secretary-General Antonio Guterres. The highest aspiration: a call to action for human rights. New York: United Nations; 2020 (<https://www.un.org/en/content/action-for-human-rights/index.shtml>, accessed 31 December 2021).

²² The Global Fund 2023–2028 strategy framework. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria; 2021 (https://www.theglobalfund.org/media/11223/strategy_globalfund2023-2028_framework_en.pdf, accessed 31 December 2021).

²³ Strategy 2017–2021. Geneva: Unitaid; 2017 (<https://unitaid.org/about-us/strategy/#en>, accessed 31 December 2021).

²⁴ These include, among others: The Global Strategy for Women’s, Children’s and Adolescents’ Health (2016–2030): early childhood development: report by the Director-General. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/276423>, accessed 31 December 2021); The global action plan for healthy lives and well-being for all: strengthening collaboration among multilateral organizations to accelerate country progress on the health-related Sustainable Development Goals. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/330060>, accessed 31 December 2021); Global action plan for the prevention and control of noncommunicable diseases 2013–2030. Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/handle/10665/94384>, accessed 31 December 2021); Global action plan on antimicrobial resistance. Geneva: World Health Organization; 2015 (<https://apps.who.int/iris/handle/10665/193736>, accessed 31 December 2021); WHO global disability action plan 2014–2021: better health for all for people with disability. Geneva: World Health Organization; 2014 (<https://apps.who.int/iris/handle/10665/199544>, accessed 31 December 2021); WHO global strategy on health, environment and climate change: the transformation needed to improve lives and wellbeing sustainably through healthy environments. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/331959>, accessed 31 December 2021); Global strategy to accelerate the elimination of cervical cancer as a public health problem. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/336583>, accessed 31 December 2021).

document with shared and disease-specific content, the reduction and prioritization and country actions, and the inclusion of a theory of change with a strengthened accountability framework. Input was gathered through a series of virtual consultations from April to July 2021 in all WHO regions. In parallel with these consultations, an online survey, open to all stakeholders including Member States, was conducted from May to August 2021, alongside a series of stakeholder briefings. Member States were briefed before the 148th and 150th Executive Board meetings and in advance of the 74th and 75th meetings of the World Health Assembly and comments raised during the briefings and during discussion of relevant agenda items were taken into full consideration. WHO Regional Committees variously considered frameworks to cover the disease areas in question during the 2021 cycle of committee sessions or made plans to reflect on the global strategies in 2022. For example, the Regional Committee for the WHO African Region adopted a Framework for an integrated multisectoral response to tuberculosis, HIV, sexually transmitted infections and hepatitis for 2021-2030 in August 2021. The regional framework is fully aligned with the proposed global health sector strategies.

WHO convened a meeting of the Strategic and Technical Advisory Group on HIV, viral hepatitis and sexually transmitted infections in September 2021 for a review of the first full draft of the strategies document. The first full draft was also made available for Member States review in October 2021 using a document collaboration tool and comments were invited over a four-week period. A second draft was uploaded online on 20 December 2021 and was referenced during discussions at the 150th Executive Board.

Member States spoke in support of the draft strategies at the 150th Executive Board with several Member States proposing reconsideration of the use of some terminology included in the first full draft. Further informal consultations ahead of the 75th World Health Assembly were organized, and a final draft was made available to Member States in advance of the Assembly.

1.5. How to navigate this document

The 2022-2030 global health sector strategies on HIV, viral hepatitis and sexually transmitted infections are presented in a single document that includes both shared and disease-specific content (Fig 1.1). Following this chapter, the document is organized as follows:

Chapter 2 presents the vision, goals, strategic direction and main impact targets for all three strategies.

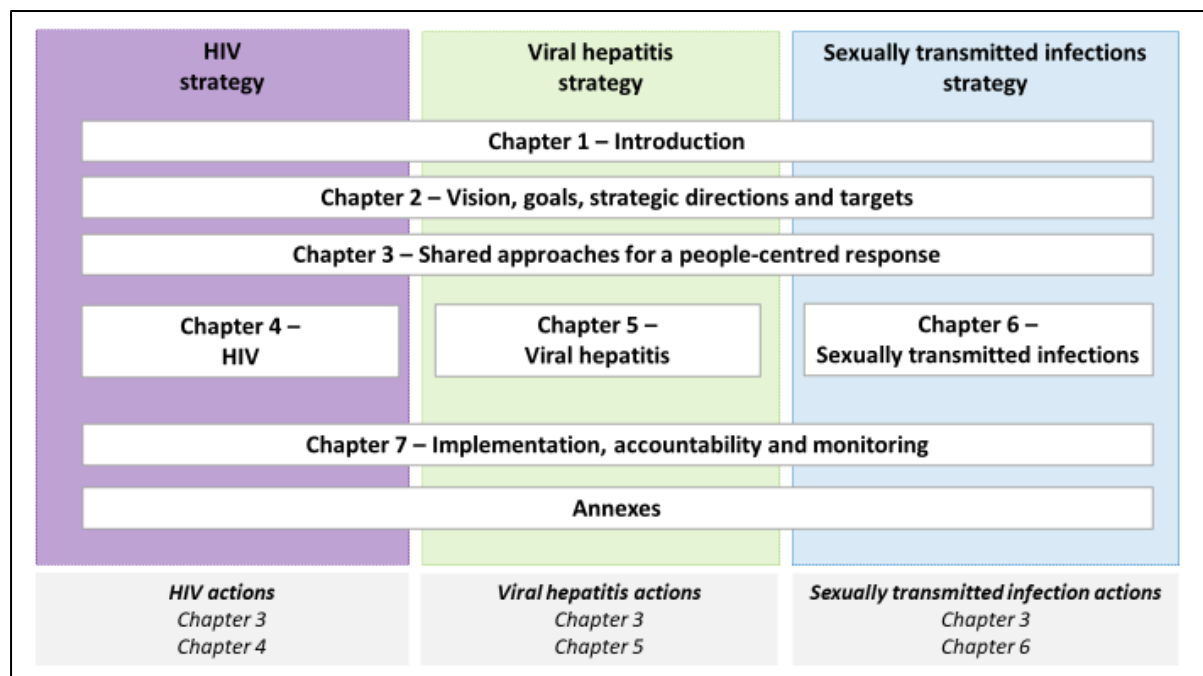
Chapter 3 defines shared country actions across HIV, viral hepatitis and sexually transmitted infections to deliver results under a universal health coverage and primary health care framework.

Chapters 4, 5 and 6 define additional disease-specific country actions relating to HIV, viral hepatitis and sexually transmitted infections, respectively. Each of the disease-specific chapters should be read in conjunction with Chapter 3, and the actions in Chapter 3 should be considered essential elements of the disease strategies.

Chapter 7 discusses implementation, accountability, monitoring and costing for all three disease areas, and presents WHO-specific actions to support the strategies.

The annexes provide a consolidated list of all actions and the measurement framework.

Fig. 1.1 Structure of the draft global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, for the period 2022–2030



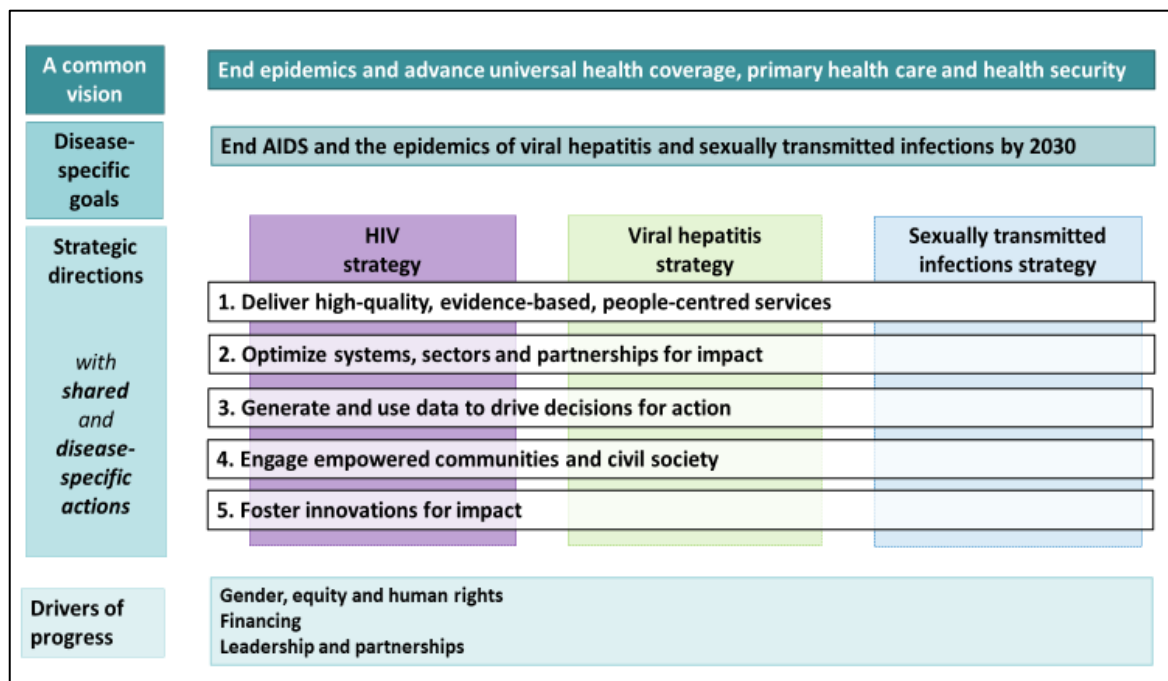
2 Vision, goals, strategic directions and targets

This chapter presents the global vision, goals and strategic directions of the strategies. It also presents the main impact targets.

2.1 Vision, goals and strategic directions

The 2022–2030 global health sector strategies on HIV, viral hepatitis and sexually transmitted infections share a common vision to end the epidemics and advance universal health coverage, primary health care and health security. Five strategic directions guide actions across all three strategies, reflecting synergy in the responses to HIV, viral hepatitis and sexually transmitted infections (Fig. 2.1).

Fig 2.1. Vision, goals and strategic directions of the draft global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, for the period 2022–2030



Vision: The strategies aspire to a common vision to end epidemics and advance universal health coverage, primary health care and health security in a world in which all people have access to high-quality evidence-based people-centred health services and can lead healthy and productive lives.

Goals: The strategies aim to end AIDS and the epidemics of viral hepatitis and sexually transmitted infections by 2030, through joint action in areas of convergence while maintaining disease specificities. The goals are aligned with the goals of the 2030 Agenda for Sustainable Development and WHO’s General Programme of Work.

Strategic directions: Five strategic directions provide the overall guiding framework for country actions to implement the strategies:

- **Strategic direction 1: Deliver high-quality evidence-based people-centred services.** Use evidence-informed guidance and service delivery innovations to accelerate access to and the uptake of a continuum of high-quality essential services for HIV, viral hepatitis and sexually transmitted infections and other related health services, tailored to meet the needs of people in diverse populations and settings, ensuring that no one is left behind.
- **Strategic direction 2: Optimize systems, sectors and partnerships for impact.** Take a systems-oriented approach that promotes synergies with primary health care, health governance, financing, workforce, commodities and service delivery

while also fostering multisectoral responses to social and structural determinants of health. Align and collaborate with partners – including funders, academic and research institutions, professional bodies and private sector entities – for maximum impact.

- **Strategic direction 3: Generate and use data to drive decisions for action.** Gather, analyse and use evidence and data, with disaggregation by sex, age and other relevant population characteristics, to monitor and evaluate progress, and to guide action, innovation, research and development and to promote data transparency and accountability.
- **Strategic direction 4: Engage empowered communities and civil society.** Engage communities and civil society, including key and affected populations, and support their self-empowerment and pivotal role in advocacy, service delivery and policy-making, including to ensure that services are culturally appropriate and responsive to community needs, and to address stigma and discrimination and tackle social and structural barriers.
- **Strategic direction 5: Foster innovations for impact.** In collaboration with partners, contribute to defining and implementing national, regional and global research and innovation agendas that give priority to developing new technologies, service delivery models and health system practices that will overcome key barriers to achieving progress against HIV, viral hepatitis and sexually transmitted infections.

Drivers of progress: The successful implementation of the strategies rests on common drivers of progress:

- ***Gender, equity, and human rights.*** The vision and goals of the strategies will not be achieved without addressing the inequalities that drive epidemics and prevent people from accessing health services and being active in improving their own health. The right to the highest attainable standard of physical and mental health applies to everyone and to all communities. However, this right should not be compromised by discrimination based on age, gender, sexual orientation, and other population characteristics. Promoting equity and gender equality, and respecting, protecting, and fulfilling the human rights and dignity of all, are critical enabling factors for success at the country level and central to WHO's work in progressively incorporating and monitoring gender, equity and human rights across the organization as part of its mission to serve the vulnerable and leave no one behind.
- ***Financing.*** For a sustainable response, the global health sector strategies must be fully funded as part of broader efforts to increase overall investments in health. The responses to HIV, viral hepatitis and sexually transmitted infections face different financing challenges, which national financing systems must address. WHO supports countries to achieve continued and predictable funding, reduction

of catastrophic expenditures on health, and affordable access to health commodities.

- **Leadership and partnerships.** Effective implementation requires strong political and community leadership and partnerships, including multisectoral action through a “whole-of-government” and “whole-of-society” Health in All Policies approach. WHO plays an important role in fostering partnerships, including with other United Nations entities, funding partners and the private sector, and engaging in policy dialogue with other United Nations Country Team members and national authorities to strengthen cross-sectoral action in developing common country analyses, United Nations development cooperation frameworks and bilateral support through country support plans. Investing in the next generation of leaders is critical to long-term success.

2.2 Targets and impact

The 2022–2030 global health sector strategies on HIV, viral hepatitis and sexually transmitted infections seek to end AIDS and the epidemics of viral hepatitis and sexually transmitted infections by 2030.

Progress towards this goal is measured by a set of shared and disease-specific global targets and milestones for 2025 and 2030. Fig. 2.2-2.5 show the projected impact of the strategies in reducing the incidence and mortality of HIV, viral hepatitis and sexually transmitted infections. Achieving the 2030 targets will result in huge public health gains, including achieving the following health impact between the baseline of 2020 and the end of these strategies in 2030:

- Annual new HIV and viral hepatitis cases are reduced from 4.5 million to less than 500,000;
- Annual new cases of four curable sexually transmitted infections among adults are reduced from 374 million to less than 150 million;
- The number of countries validated for the elimination of vertical (mother-to-child) transmission of either HIV, hepatitis B or syphilis increase from 15 to 100;
- The number of annual deaths from HIV, viral hepatitis and sexually transmitted infections are reduced from 2.3 million to less than 1 million; and
- The number of annual new cases of cancer due to HIV, viral hepatitis and sexually transmitted infections are reduced from 1.2 million to less than 700,000.

The shared and disease-specific chapters of this document (Chapters 3–6) present the full set of shared and disease-specific indicators, targets and milestones. Annex 2 presents the consolidated measurement framework.

Fig. 2.2. HIV incidence and mortality from new actions implemented under the strategy versus no new actions, 2020-2030

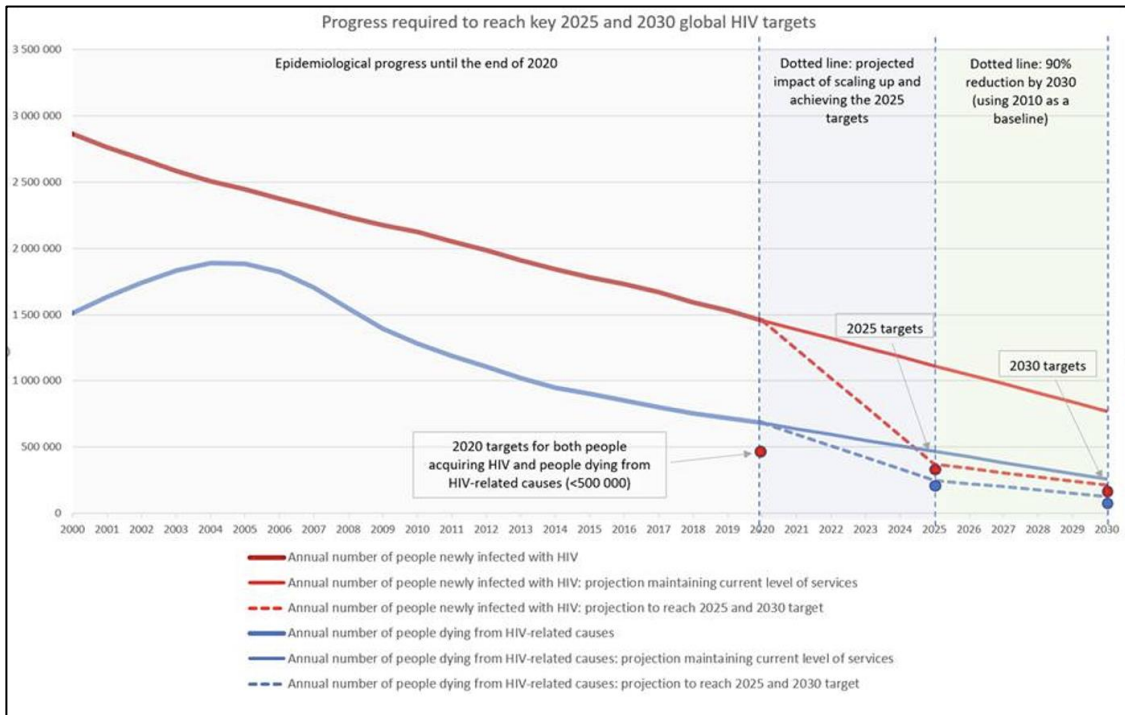


Fig. 2.3. Hepatitis B incidence and mortality trends from new actions implemented under the strategy versus no new actions, 2020-2030

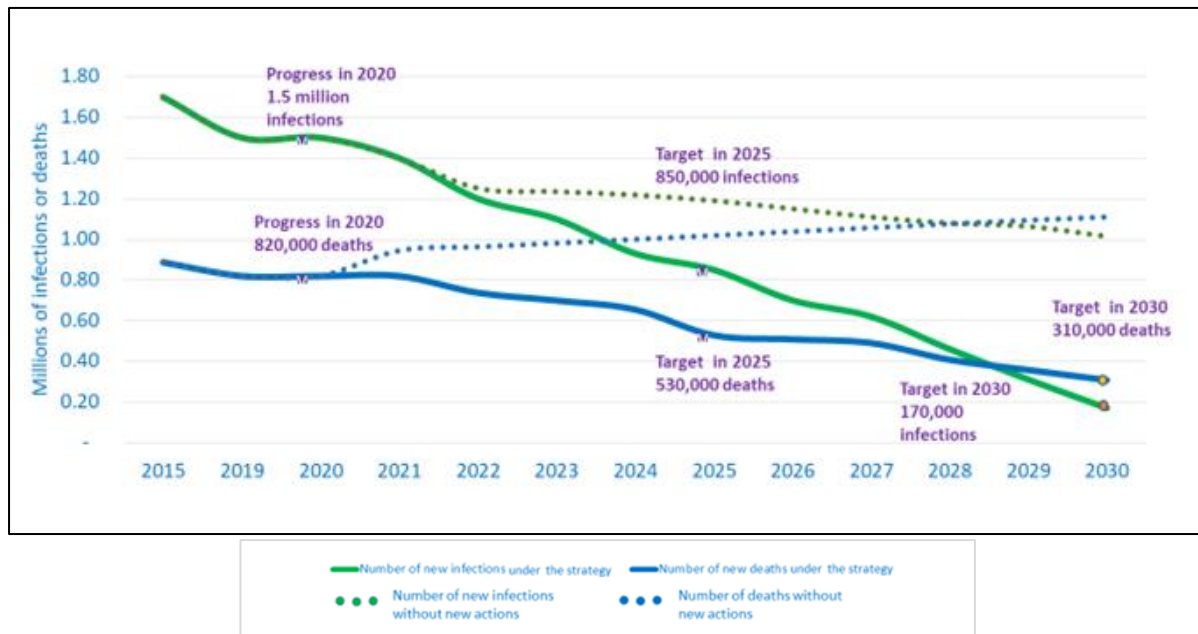


Fig. 2.4. Hepatitis C incidence and mortality trends from new actions implemented under the strategy versus no new actions, 2020-2030

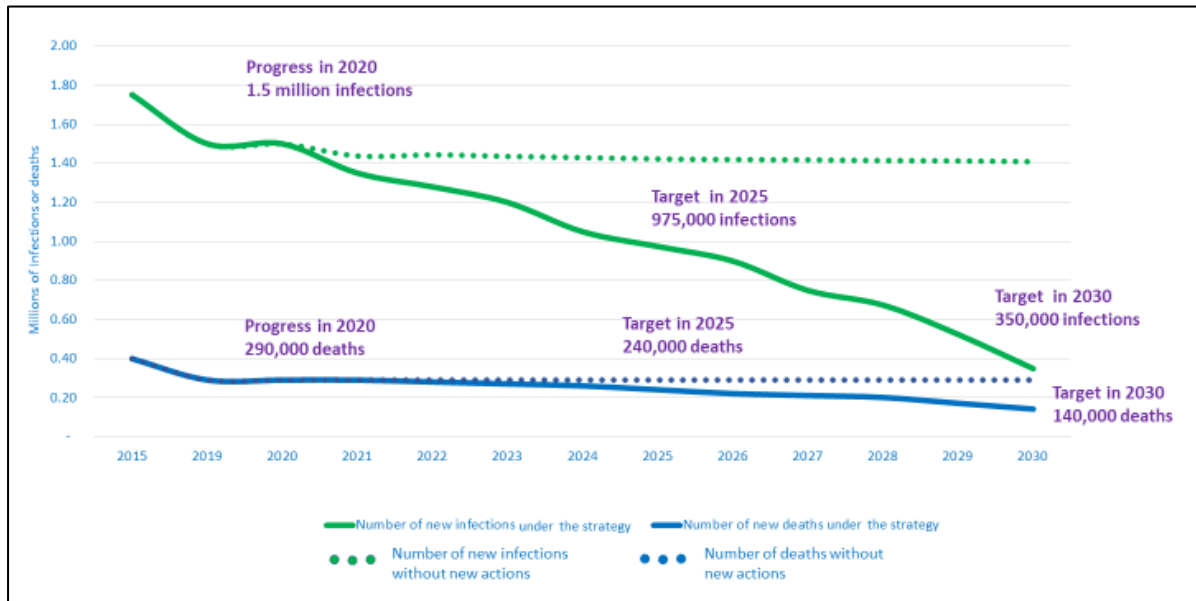
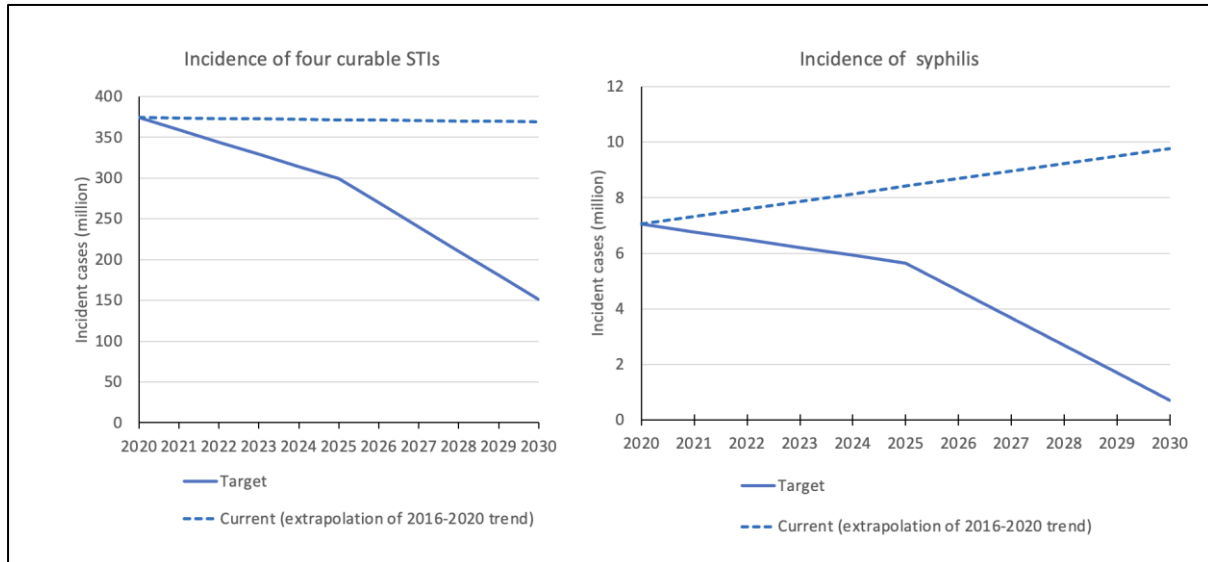


Fig. 2.5. Incidence of four curable sexually transmitted infections and syphilis from new actions implemented under the strategy versus no new actions, 2020-2030



The strategies maintain the highest level of ambition to end these epidemics by 2030, although the pace at which different regions and countries may achieve this will differ. The global targets provide a guide for national targets and should be adapted to each country context. Equitable progress toward the targets is required across all populations, and the strategies promote disaggregated analyses of data by sex, age and other relevant population characteristics to track inequities and ensure that most affected and at-risk populations are not left behind.

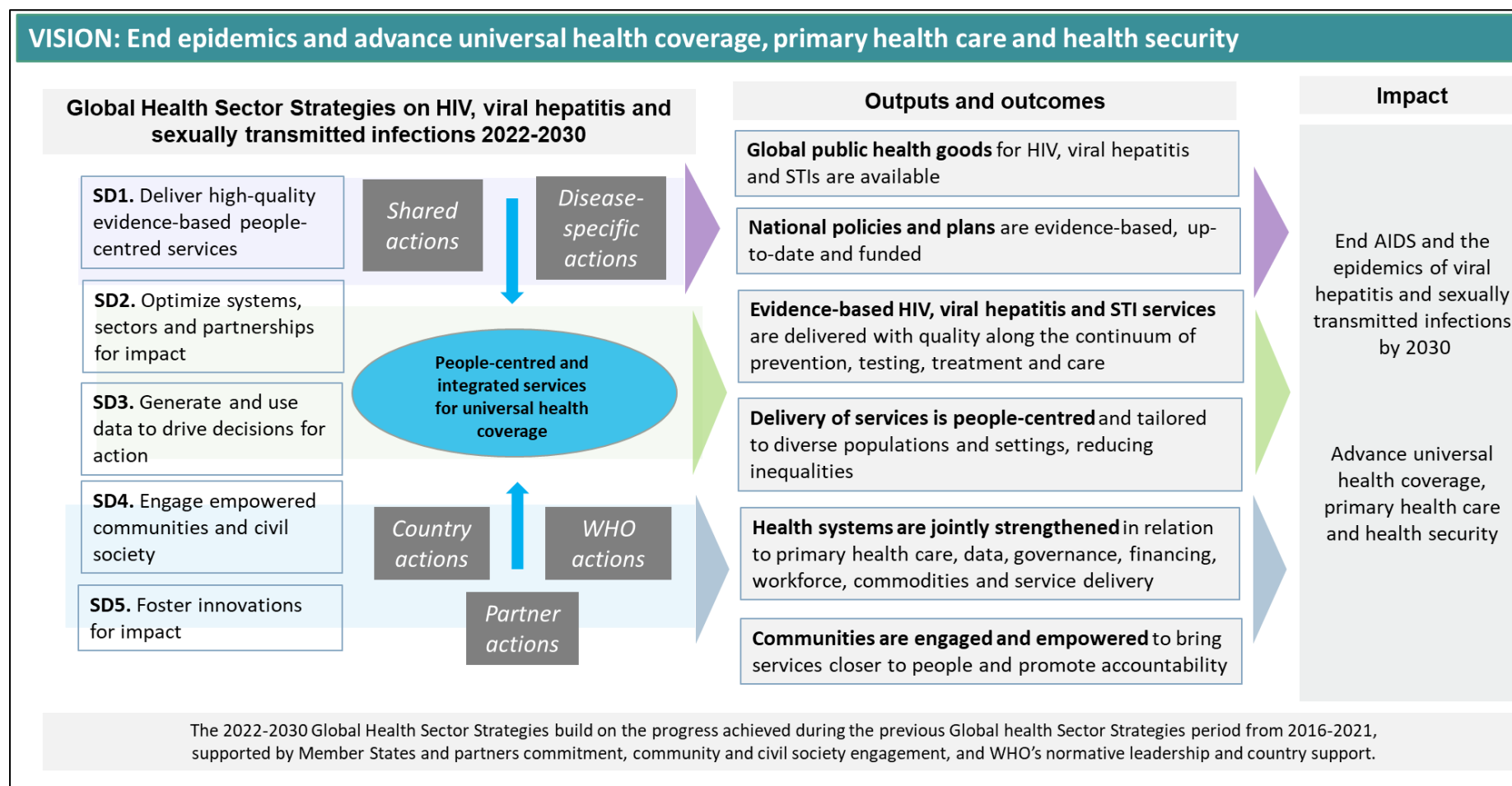
2.3 Theory of change

The vision, goals, strategic directions and actions of the strategies come together in a theory of change that demonstrates the pathway by which their implementation will lead to the desired results (Fig. 2.6). By implementing the five strategic directions through tailored shared and disease-specific country actions across the disease areas (Box 2.1), and by placing people at the centre of all efforts, the global community can jointly contribute to ending the epidemics and advancing universal health coverage and health security.

Box 2.1: Setting priorities for action for each regional and country context

The global health sector strategies for HIV, viral hepatitis and sexually transmitted infections provide a comprehensive global framework of shared and disease-specific actions to guide countries and partners in their efforts to achieve the goals of ending these epidemics. One size does not fit all, and individual regions and countries are encouraged to select, set priorities for, and adapt, these actions in relation to local epidemiological and health system contexts, while upholding fundamental human rights, including the cross-cutting principle of equality and non-discrimination in the availability, accessibility, acceptability and quality of health services, products, approaches and interventions. The optimal selection of actions and service delivery models should be aligned with broader national strategies within a universal health coverage framework, and responsive to the needs of individuals and local communities.

Fig. 2.6. Theory of change



3 Shared approaches for a people-centred response

HIV, viral hepatitis and sexually transmitted infections share common modes of transmission and determinants, and many of the populations affected by these diseases may overlap (Box 3.1). People-centred approaches that are organized around the needs of affected individuals can enhance health care delivery, advance universal health coverage, increase service quality and sustainability, and maximize the impact of available health resources.

This chapter presents common interventions and service delivery models across HIV, viral hepatitis and sexually transmitted infections under a universal health coverage and primary health care framework. It also presents country actions addressing shared concerns in relation to other health system functions such as inclusive governance, health information, health financing, commodities, health workforce needs, and efforts to promote health security. All actions in this chapter should be considered in conjunction with disease-specific country actions presented in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections). Implemented jointly, these actions are critical to ensure the success of these strategies.

Health systems encompass the public health sector as well as key non-state actors such as private sector health care providers, civil society and community-based organizations that design and deliver health services. Access to effective interventions also depends on the social, cultural, political and legal context within which people live and access these services. Health sector decisions regarding the integration of services across multiple disease areas should be considered in context and be informed by the status of national epidemics, health system priorities, and consultation with service providers, individuals and communities. Stakeholders must ensure that integration efforts do not have unintended negative consequences, and that the progress achieved by disease-specific responses is sustained, especially for the most affected and at-risk populations.

Box 3.1 – Priority populations across HIV, viral hepatitis and sexually transmitted infections

Many of the populations most affected by and at-risk for HIV, viral hepatitis and sexually transmitted infections overlap across these disease areas. Further, many of these populations experience vulnerabilities or are at risk as a result of social and structural determinants of health including multiple forms of discrimination and conditions of marginalization or exclusion in which they live. Shared priority populations across national HIV, viral hepatitis and sexually transmitted infection responses may include:

- people exposed through sexual transmission including: young people and adolescents; men who have sex with men; sex workers and their clients; transgender people; people in prisons and closed settings; and people whose sexual behaviour is mediated by drug or alcohol use;
- people exposed through unsafe blood supplies and unsafe medical injections and procedures;
- people who inject and use drugs;
- children exposed through vertical (mother-to-child) transmission or early childhood infection;
- pregnant and breastfeeding women;

- women and girls, including adolescent girls and young women, who face risks associated with gender inequalities and exposure to violence, in conjunction with increased biological risks on the basis of sex;
- young people, including young key populations;
- people of all ages, including men who are less likely to use health services;
- migrants and mobile populations, and people affected by conflict and civil unrest;
- indigenous peoples; and
- persons with disabilities.

Each country should define the specific populations that are most affected and at-risk for HIV, viral hepatitis and sexually transmitted infections within the local context and address their needs through an intersectional lens that takes their overlapping forms of risk and vulnerability into account. Countries are encouraged to select, set priorities for and adapt the proposed country actions in relation to local epidemiological and health system contexts while upholding fundamental human rights, equitable access to health, and evidence-based practice. The disease-specific chapters (Chapters 4-6) provide further information on the most affected and at-risk populations for each disease area.

3.1. Key targets across HIV, viral hepatitis and sexually transmitted infections

Table 3.1 below presents the shared and disease-specific impact indicators and targets across HIV, viral hepatitis and sexually transmitted infections. Additional disease-specific indicators and targets are presented in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections) respectively.

Table 3.1. Impact indicators and targets for HIV, viral hepatitis and sexually transmitted infections, by 2030^a

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target
Shared	Reduced incidence - Number of new HIV and viral hepatitis cases per year - Number of new cases of syphilis, gonorrhoea, chlamydia and trichomoniasis ^c among people 15–49 years old per year	4.5 million 374 million	<1.5 million < 300 million	<500 000 <150 million ^d
	Healthy lives – reduced mortality and cancers - Number of people dying from HIV, viral hepatitis and sexually transmitted infections ^e per year - Number of new cases of cancer from HIV, viral hepatitis and sexually transmitted infections per year	2.3 million 1.2 million	<1.7 million <900 000	<1 million <700 000
HIV	Number of people newly infected with HIV per year	1.5 million	370 000	335 000
	Number of people newly infected with HIV per 1000 uninfected population per year	0.19	0.05	0.025
	Number of children 0-14 years old newly infected with HIV per year	150 000	20 000	15 000
	Number of people dying from HIV-related causes per year	680 000	250 000	<240 000
	Number of people living with HIV dying from TB, hepatitis B and hepatitis C	210 000	110 000	55 000
Viral hepatitis	Hepatitis B surface antigen prevalence among children 0-4 years old ^f	0.94%	0.5%	0.1%
	Number of new hepatitis B infections per year	1.5 million new cases 20 per 100 000	850 000 new cases 11 per 100 000	170 000 new cases 2 per 100 000
	Number of new hepatitis C infections per year	1.575 million new cases	1 million new cases	350 000 new cases

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target
		20 per 100 000	13 per 100 000	5 per 100 000
	Number of new hepatitis C infections among persons who inject drugs per year	8 per 100	3 per 100	2 per 100
	Number of people dying from hepatitis B per year	820 000 deaths 10 per 100 000	530 000 deaths 7 per 100 000	310 000 deaths 4 per 100 000
	Number of people dying from hepatitis C per year	290 000 deaths 5 per 100 000	240 000 deaths 3 per 100 000	140 000 deaths 2 per 100 000
Sexually transmitted infections	Number of new cases of syphilis among people 15–49 years old per year	7.1 million	5.7 million	0.71 million
	Number of new cases of gonorrhoea among people 15–49 years old per year	82.3 million	65.8 million	8.23 million
	Number of congenital syphilis cases per 100 000 live births per year	425	<200	<50
	Percentage of girls fully vaccinated with human papillomavirus vaccine by 15 years of age	14%	50%	90%

^a The proposed impact indicators and targets are in accordance with target 3.3 and indicators 3.3.1 and 3.3.4 of the Sustainable Development Goals.

^b Some targets are based on data from 2019 because of COVID-19-related service disruptions in the data reported for 2020. All data will be disaggregated by age, sex and, where relevant, key and focus populations specific to the disease.

^c Curable sexually transmitted infections.

^d Includes the target of 90% reduction in the number of new cases of syphilis and gonorrhoea as well as 50% reduction in the number of new cases of chlamydia and trichomoniasis by 2030.

^e The mortality data will be further disaggregated to assess the urgent need to tackle the drivers and causes of deaths. For HIV, these include cryptococcal meningitis, tuberculosis, and severe bacterial infections; for viral hepatitis, they include other types of cancer and harmful use of alcohol.

^f Please note that the targets in this table are global targets and should be adapted by Member States according to the national context when setting country targets. For example, in some countries a target for the prevalence of hepatitis B surface antigen among children younger than five years old may be less than 0.1% or 0.2%, although the overall global target is 0.1%.

3.2. Strategic direction 1: Deliver high-quality, evidence-based, people-centred services

This section describes shared country actions across HIV, viral hepatitis and sexually transmitted infections, and other related health areas, that can be integrated or are replicable across multiple disease areas for a more effective people-centred response. Actions in this section should be implemented by countries in conjunction with disease-specific country actions described under Strategic Direction 1 in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections).

3.2.1. Shared interventions across HIV, viral hepatitis and sexually transmitted infections

Action 1: Primary prevention. Renew investments in primary prevention interventions and scale up their delivery, including comprehensive education and information about sexual and reproductive health and HIV prevention²⁵ noting WHO technical guidance²⁶, correct and consistent condom use, addressing the harmful use of alcohol and drugs in the context of sexual behaviour, and using evidence-based and differentiated prevention strategies, such as vaccination, with a focus on key and affected populations, in the context of broadly promoting sexual and reproductive health and well-being. Critical interventions to reduce the number of people newly infected in accordance with global targets include: increasing access to scientifically accurate, age-appropriate comprehensive education, relevant to cultural contexts, that provides adolescent girls and boys and young women and men, consistent with their evolving capacities, with information on sexual and reproductive health and HIV prevention, communication and risk reduction skills and a focus on developing respectful relationships, in full partnership with young persons, parents, legal guardians, caregivers, educators and health-care providers, in order to enable them to protect themselves from HIV, aligned with scientifically accurate evidence and international technical standards and in accordance with national legislation; providing family planning services; promoting correct and consistent use of male and female condoms and lubricants with innovative programming; and promoting access to vaccines such as for human papillomavirus and hepatitis B; are critical interventions to reduce new infections in line with global targets. HIV is a major sexually transmitted infection, and shares behavioural, social and structural determinants with other sexually transmitted infections. Although the sexual transmission of viral hepatitis B and C plays a relatively minor role in most hepatitis epidemics, specific attention should be given to certain populations, such as men who have sex with men. Targeted public awareness campaigns are urgently needed to make these populations aware of disease transmission risks including the role of the harmful use of alcohol and drugs. To be effective, prevention approaches must be tailored to the needs of affected populations in various contexts.

²⁵ United Nations General Assembly Resolution 75/284. Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030, 2021 (<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/145/30/PDF/N2114530.pdf?OpenElement> accessed 20 April 2022)

²⁶ International technical guidance on sexuality education: an evidence-informed approach, Revised Edition: United Nations Educational, Scientific and Cultural Organization, UNAIDS Secretariat, the United Nations Population Fund, the United Nations Children's Fund, UN Women and the World Health Organization, 2018. (<https://www.unfpa.org/sites/default/files/pub-pdf/ITGSE.pdf> accessed 25 March 2022)

Action 2: Harm reduction and treatment interventions for people who inject drugs. Implement a comprehensive package of accessible harm reduction and treatment services, where appropriate, as part of a comprehensive package of interventions for the prevention, treatment, and care of HIV among people who inject drugs^{27,28} and for people who use stimulant drugs²⁹, in line with the domestic context, legislation and jurisdictional responsibilities. The essential package of harm reduction services for people who inject drugs includes the provision of sterile injecting equipment through needle and syringe programmes, opioid agonist maintenance therapy for people dependent on opioids, and the community distribution of opioid antagonist medication for the management of opioid overdose, along with targeted information and communication, and testing, diagnosis and management of HIV, hepatitis B and C virus, sexually transmitted infections and related infections. Interventions tailored to the needs of people who use or inject drugs such as amphetamine-type stimulants, and to address other forms of sexualized drug use among some key populations, are also important, as well as offering appropriate treatment including evidence-based psychosocial interventions that are effective in reducing drug use, promoting abstinence and preventing relapse. Harm reduction is most effective when it is rolled out in the context of broader prevention and treatment efforts, and a combination of harm reduction interventions with high coverage levels is needed for maximum impact. Harm reduction should be made available as part of a comprehensive prevention, treatment and care approach for people who use drugs, which includes different forms of drug treatment including for people seeking to stop their drug use.

Action 3: Vertical transmission of HIV, syphilis and hepatitis B virus. Advance the triple elimination of vertical (mother-to-child) transmission of HIV, syphilis and hepatitis B virus by delivering comprehensive and accessible prevention, testing, treatment and follow-up services for women, children and their families through an integrated approach with maternal and child health services and promoting gender equality and human rights. The commonalities across interventions required to prevent the vertical transmission of HIV, syphilis and hepatitis B virus make eliminating new infections among children through an integrated approach highly feasible. Essential services include rights-based and gender-sensitive family planning; testing for HIV, syphilis and hepatitis B virus in antenatal care; prompt and efficacious interventions to treat pregnant women who test positive and to prevent transmission of the infection(s) to their infants; counselling for pregnant women and their partners; safe delivery; follow-up of exposed infants, including the hepatitis B vaccine birth dose and completion of the three-dose series of the hepatitis B vaccine; optimal infant feeding; and follow-up treatment and care for mothers, children and families. Access to services for all women of reproductive age, before or between pregnancies, is also critical to reduce transmission during pregnancy. WHO can validate the elimination of vertical

²⁷ Resolution WHA67.6 Hepatitis, World Health Organization, 2014

(https://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R6-en.pdf accessed 23 February 2022)

²⁸ Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users. WHO, UNODC, UNAIDS (2021 revision)

(https://www.unaids.org/sites/default/files/sub_landing/idu_target_setting_guide_en.pdf accessed 23 February 2022)

²⁹ HIV prevention, treatment, care and support for people who use stimulant drugs. Technical Guide. UNODC, WHO and UNAIDS, 2019. (https://www.unodc.org/documents/hiv-aids/publications/People_who_use_drugs/19-04568_HIV_Prevention_Guide_ebook.pdf accessed 23 February 2022)

transmission of these infections with standardized processes and ongoing targeted attention to the needs of women living with HIV.

Action 4: Prevention, treatment and care for children and adolescents. Prevent all new infections among children from HIV, viral hepatitis and sexually transmitted infections, and address the longer-term monitoring, treatment and care needs of affected children and adolescents as part of a family-centred approach. Special attention needs to be paid to address the prevention, care and treatment needs of children related to HIV, viral hepatitis and sexually transmitted infections. About half of all children living with HIV are not being diagnosed and initiated on antiretroviral therapy and access to effective antiretroviral therapy must be scaled up urgently. Substantial progress has been made towards controlling hepatitis B globally with achievement of the Sustainable Development Goals targets to reduce hepatitis B surface antigen prevalence to less than 1% among children younger than five years by 2020. This has been supported by an increase in the coverage of the highly effective hepatitis B vaccine among infants. However, despite this progress, expansion of the hepatitis B virus birth dose vaccine, given within 24 hours of birth and improvement in routine childhood vaccination will be critical to achieving the hepatitis B virus elimination goals for 2030. Older unvaccinated children may also be at risk of acquiring chronic hepatitis B infection and require additional prevention and care and children can be at risk of acquiring hepatitis A and B virus horizontally within households and families. The needs of children must be addressed through family-centred approaches that support their brain health and development and are aligned with broader maternal and child health programmes, including with interventions that empower all boys, girls and young people for gender equal, respectful sexual relationships. Supporting children living with HIV for a healthy transition into adolescence and providing longer-term care are equally critical, including through regular monitoring and follow-up through adolescent-friendly health services, and through the review of policy barriers related to age of consent for seeking services.

Action 5: Infection prevention and control. Prevent disease transmission in formal and informal health care settings and other service settings. Health systems must be able to guarantee safe medical injections and blood supplies, and must universally follow standard precautions, especially relating to hand hygiene, blood screening, personal protective equipment, and waste management. Airborne infection control measures should be considered for the prevention of diseases such as tuberculosis and COVID-19. Unnecessary injections should be eliminated, with particular attention to settings in which many unnecessary injections are administered, including by informal majority female health workers, who may require targeted support and training. Safety-engineered syringes should be used for all medical injections. Medical devices must be decontaminated in strict accordance with established protocols, and health facilities must provide the infrastructure and equipment required by these protocols. Comprehensive screening of blood products should be in place with sources of potentially unsafe blood products eliminated. Outside of health facilities, interventions are needed to prevent unsafe injections and to prevent transmission through contact with bodily fluids in the informal health sector and in services such as tattooing, piercing and beauty care.

Action 6: Integrated testing. Integrate testing for HIV, hepatitis B virus, hepatitis C virus, sexually transmitted infections, tuberculosis and other diseases. Integrated testing for multiple diseases with appropriate linkage to care is a key element of people-centred health services. Providing multiple tests in the same session can increase testing uptake and enable health systems to save costs in relation to outreach, infrastructure and human resources. Integrated testing protocols must meet the needs of service recipients, be reliable, and be feasible for service providers to implement. Some integrated testing models may use multiplex diagnostic tools to streamline the collection and screening of biological specimens. For example, testing for syphilis and HIV may be performed using the same blood sample. Rapid point-of-care multiplex tests for HIV and hepatitis C virus and for HIV, hepatitis B virus and hepatitis C virus make it possible to provide community-based and self-administered integrated testing services to be provided for these diseases and facilitate immediate treatment initiation. Other integrated testing models may require multiple specimens but organize service delivery in ways that facilitate the uptake of multiple tests in the same clinic visit. Integrated testing services also offer opportunities to review the vaccination status of individuals. The use of common laboratory systems and networks, in addition to the use of integrated diagnostics platforms, can also enable enhanced flexibility and shared support for laboratory staff, sample transportation, and laboratory information systems.

Action 7: Voluntary partner notification and other partner services and social network approaches. Develop and implement human rights-based and gender-sensitive strategies for voluntary partner notification and other services for sexual partners of people diagnosed with HIV, hepatitis B virus, hepatitis C virus and sexually transmitted infections. Approaches to informing sexual and injecting drug use partners, including partners of key populations, and offering them testing, counselling and treatment vary according to circumstances and should consider gender inequalities and other forms of stigma and discrimination in each context. Offering testing to contacts within social networks can also be an effective way of increasing access to HIV, viral hepatitis and sexually transmitted infection services.

Action 8: Stigma and discrimination in health care settings. Eliminate stigma and discrimination in health care settings and strengthen accountability for discrimination-free health care. Stigma and discrimination experienced by people living with, or affected by, HIV, viral hepatitis and/or sexually transmitted infections, including key populations, or on the basis of gender, or other factors, negatively affect the response to these diseases. The health sector is responsible for ensuring that everyone can access services for HIV, viral hepatitis and sexually transmitted infections in an inclusive, non-discriminatory and supportive environment.³⁰ Key health sector interventions include regular trainings for all health care staff to increase knowledge of these diseases, address misconceptions and underlying fears, and raise awareness about the harmful consequences of stigma and discrimination, including delayed health service utilization and health inequalities; and the development and monitoring of standards for health care workers to ensure that all patients are treated with respect, dignity and compassion. Health-care workers should be educated about patient rights, as well as their own, and about how to sensitively provide care to all patients, especially key and most-affected populations. Stigma and discrimination towards health-care

³⁰ Joint United Nations statement on ending discrimination in health care settings. Geneva: World Health Organization; 2017 (<https://apps.who.int/iris/handle/10665/259622> , accessed 31 December 2021).

workers, including those who may themselves be living with HIV, viral hepatitis or sexually transmitted infections, must also be addressed to advance this goal.

3.2.2. Shared interventions to enhance integration and linkages with other health areas

Action 9: Communicable and noncommunicable diseases. Strengthen integration and linkages across communicable and noncommunicable disease services. Communicable and noncommunicable diseases that occur among people with HIV, viral hepatitis and sexually transmitted infections should be addressed in a coordinated people-centred manner. Depending on the health system context and the needs of affected populations, services may be integrated or linkages may be established to facilitate comprehensive care. Integrated management of HIV, viral hepatitis infection and sexually transmitted infection should include early diagnosis and treatment of co-infections in accordance with guidelines. In addition to tuberculosis (*see action 10 below*), people living with HIV should be screened and treated for viral hepatitis, sexually transmitted infections and other comorbidities such as cryptococcal meningitis and severe bacterial infections. People seeking sexually transmitted infection services should be tested for HIV, and those who might benefit from pre-exposure prophylaxis for HIV and from voluntary medical male circumcision should be educated about these services and given referrals. Vaccination for hepatitis B and human papillomavirus should be promoted for people with co-infection with HIV or sexually transmitted infections. Depending on epidemiological dynamics, other infectious diseases of concern in the context of HIV, viral hepatitis and sexually transmitted infection services may include COVID-19 and malaria. Linkages with noncommunicable disease services also needs to be strengthened, for example viral hepatitis causes a large burden of liver cancer and chronic liver disease and further coordination and integration between viral hepatitis and cancer programmes as well as strengthened surveillance are encouraged. The increasing burden of cervical cancer among women living with HIV, associated with human papillomavirus infection, requires specific attention, especially given the availability of effective human papillomavirus vaccines and screening and treatment strategies to prevent cervical cancer. People living with HIV and viral hepatitis also need care for other noncommunicable diseases including cardiovascular disease, diabetes, chronic lung disease, hypertension and other conditions that may develop over the life course. Reliable data and evidence are needed to guide decision-making about how HIV, viral hepatitis and sexually transmitted infection services should address communicable and noncommunicable diseases. Strong linkage with primary health care services is important for addressing diverse health needs through a comprehensive gender- and culturally-sensitive people-centred approach.

Action 10: Tuberculosis. Reduce tuberculosis-related morbidity and mortality through prevention and timely diagnosis and treatment of tuberculosis in people living with HIV and viral hepatitis. Tuberculosis is the leading cause of death among people living with HIV. Offering timely diagnosis and treatment of tuberculosis, including among children, and TB preventive treatment to people at highest risk of developing TB disease, is critical. Additionally, HIV and tuberculosis often occur in communities where hepatitis B is endemic, and co-infections with HIV and tuberculosis occur among people at increased risk of hepatitis C virus, especially people who inject drugs. Populations at increased risk of infection with hepatitis C virus such as people in prisons and people who inject drugs are at risk of infection with tuberculosis, including multi-drug resistant tuberculosis. This can pose a particular challenge for clinical management and warrants extra clinical vigilance. Co-management of

hepatitis C and tuberculosis needs to take into consideration the side-effects and interactions of the drugs used to treat the various diseases. Anti-tuberculous therapy often exacerbates underlying liver disease in people with chronic hepatitis B. Shared responsibility among governments, communities and partners, with joint planning and delivery of integrated HIV, viral hepatitis and tuberculosis services remains a priority, especially in countries with a high burden of these diseases.

Action 11: Sexual and reproductive health. Strengthen programmatic linkages and integrated services to enable people using HIV, viral hepatitis and sexually transmitted infection services to easily access human rights-based sexual and reproductive health services in line with the domestic context and legislation. Priority actions to deliver HIV, viral hepatitis and sexually transmitted infection interventions as part of comprehensive sexual and reproductive health services include establishing programmatic linkages; providing integrated services in settings in which integrated models would be beneficial; utilizing technological advances in digital health and self-care interventions to aid underserved populations in realizing their right to health; strengthening multisectoral partnerships to further contribute to advancing universal health care; and generating interdisciplinary implementation research that supports the national scale-up of evidence-based service delivery models for HIV, viral hepatitis, sexually transmitted infections, and other sexual and reproductive health services.

Action 12: Mental health. Ensure that the mental health needs of people affected by HIV, viral hepatitis and sexually transmitted infections are addressed through adequate linkages with safe and non-discriminatory mental health, neurological and substance use services. The relationship between mental health, and HIV, viral hepatitis and sexually transmitted infections, is bidirectional. Many populations that are severely affected by HIV, viral hepatitis and sexually transmitted infections also have a high burden of mental, neurological and substance use disorders including depression, anxiety, post-traumatic stress disorder, and alcohol and drug dependence; and mental illness can adversely affect health outcomes. Screening and integrated care for mental health disorders should be linked with prevention and care services for HIV, viral hepatitis and sexually transmitted infections, with the primary health care system functioning as a linking mechanism when appropriate.

Action 13: Disability. Promote disability-inclusive programming and ensure that HIV, viral hepatitis and sexually transmitted infection services are accessible to people with disabilities. Complications and sequelae of HIV, viral hepatitis and sexually transmitted infections can be associated with high levels of disability; and people with existing disabilities may be at elevated risk of developing HIV, viral hepatitis or sexually transmitted infections as a result of physical and information barriers, or related to societal norms and attitudes. The involvement and engagement of people with disabilities in planning and decision-making is critical to ensure that HIV, viral hepatitis and sexually transmitted infection services meet their needs.

Action 14: Gender-based violence. Prevent and respond to gender-based violence, including sexual violence. This includes implementing policies to guide prevention of and responses to violence; providing comprehensive health services to survivors; preventing such violence; and gathering of evidence and data including through health information systems. These four pillars of action are specified in the WHO global plan of action on health systems

response to violence, in particular against women and girls and against children, which has been endorsed through World Health Assembly resolutions and recognizes the critical role of the health sector in addressing gender-based violence.^{31,32} Provision of comprehensive health services to survivors should follow the WHO guidelines and tools for clinical and policy responses to gender-based violence.³³ The root cause of gender-based violence is gender inequality, and therefore prevention and response to such violence requires evidence-based interventions to promote gender equality. Implementation of these evidence-based interventions should be guided by the WHO and UN Women *RESPECT women: preventing violence against women* package for policy makers endorsed by 12 other UN, bilateral and multilateral agencies.³⁴ Adolescent girls and young women experience particular harms related to violence, and evidence shows that women living with HIV, sex workers and transgender people are also at higher risk of violence, including disrespect and abuse from the health sector. WHO calls for policies and accountability measures to prevent disrespect and abuse of patients/clients.³⁵ Health workers, particularly female health workers, who comprise a majority of front-line workers are also subjected to violence and harassment in the workplace. WHO has issued guidance for the occupational safety of health workers that addresses the prevention of sexual harassment faced by health workers.³⁶

Action 15: Gender equality. Promote gender equality by integrating its promotion across all actions as well as through dedicated attention. Women require targeted approaches to address their needs, including those beyond vertical (mother-to-child) transmission risks. In addition to addressing their immediate practical needs in gender-sensitive ways, strategies are required to address underlying gender inequalities that generate risk of infection, such as female genital mutilation, child marriage and lack of sexual and reproductive decision-making autonomy. The latter includes engaging male partners and implementing strategies to promote gender-equal relationships and addressing stigma and discrimination experienced by people living with, or affected by, HIV, viral hepatitis and/or sexually transmitted infections including key populations. The specific risks faced by female health workers need to be addressed by promoting women's leadership and decision-making in the health system. The provision of unpaid care in the community, primarily by women, needs formal recognition and support.

³¹ Global plan of action to strengthen the role of the health system within a national multisectoral response to address interpersonal violence, in particular against women and girls, and against children. Resolution WHA 69.5 (2016). Geneva: World Health Organization; 2016 (https://apps.who.int/gb/ebwha/pdf_files/WHA69-REC1/A69_2016_REC1-en.pdf#page=27), accessed 31 December 2021).

³² Strengthening the role of the health system in addressing violence, in particular against women and girls, and against children. Resolution WHA 67.15 (2014). Geneva: World Health Organization; 2014 (https://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R15-en.pdf), accessed 31 December 2021).

³³ Caring for women subjected to violence: WHO training curriculum for health providers and managers, revised edition, WHO, 2021 <https://apps.who.int/iris/handle/10665/349539>

³⁴ WHO. *RESPECT women: Preventing violence against women*. WHO, 2019 (<https://www.who.int/reproductivehealth/publications/preventing-vaw-framework-policymakers/en/>)

³⁵ The prevention and elimination of disrespect and abuse during childbirth: WHO statement, WHO 2015, http://apps.who.int/iris/bitstream/10665/134588/1/WHO_RHR_14.23_eng.pdf?ua=1&ua=1;

³⁶ ILO and WHO, Caring for those who care – guide for the development and implementation of occupational health and safety programmes for health workers. ILO and WHO, 2022; https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_837585.pdf

3.3. Strategic direction 2: Optimize systems, sectors and partnerships for impact

This section describes shared approaches to strengthen health service delivery and optimize other health system functions in collaboration with partners under a universal health coverage and primary health care framework. The actions in this section should be implemented in conjunction with disease-specific actions described under Strategic Direction 2 in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections).

3.3.1 Universal health coverage and primary health care

Action 16: Universal health coverage. Strategically leverage health systems to deliver essential HIV, viral hepatitis and sexually transmitted infection services as part of universal health coverage, by aligning disease-specific and health system efforts at the policy, programme and service levels. Universal health coverage means that all people have access to the health services they need, when and where they need them, without financial hardship. To end the epidemics, essential services for HIV, viral hepatitis and sexually transmitted infections need to be incorporated into national priority health benefits packages, supported by adequate financing. Coordinated actions to advance towards universal health coverage include alignment at the policy and planning levels; coordinated input functions including for health financing, data, commodities and workforce; delivery of shared interventions through integrated approaches; empowering communities; and addressing common social determinants of health.

Action 17: Primary health care. Promote the integration of HIV, viral hepatitis and sexually transmitted infection services and their key co-infections and comorbidities into primary health care platforms where feasible and appropriate, including through decentralized and community-based service delivery, and contribute to jointly strengthening these platforms for sustainable progress towards universal health coverage. Primary health care covers the range of disease prevention, health promotion, treatment, rehabilitation and palliative care that are needed throughout the life course, delivered as close as feasible to people's everyday environment. It is the foundation of universal health coverage and essential to advance health equity. Primary health care can provide the platform to address multimorbidity where feasible and appropriate, and can empower individuals, families, and communities to optimize their health. The successful integration of HIV, viral hepatitis and sexually transmitted infection services with primary health care requires investments in strengthening primary health care infrastructure and the health workforce. Primary health care also recognizes that the health and well-being of people and populations result from the interaction of social, economic, environmental and commercial factors; and the health sector must collaborate closely with other sectors to systematically address the broader determinants of health through evidence-informed multisectoral policies and actions. The health sector must also address challenges related to these determinants within the sector itself, such as the "greening" of the health system to increase the use of renewables and reduce carbon emissions.

3.3.2 Shared service delivery models

Action 18: Differentiated service delivery. Identify and optimize opportunities to use differentiated service delivery models for HIV, viral hepatitis and sexually transmitted infection services, guided by strategic information to understand the diverse needs and preferences of beneficiary populations in various settings, as a means to expand access to comprehensive people-centred services. By adapting service provision to the diverse needs and preferences of affected communities, differentiated approaches can improve service uptake, enhance service quality, and optimize the use of health system resources. Differentiated service delivery has been used most frequently to deliver antiretroviral therapy for HIV, through approaches such as task sharing, modifying service delivery hours, and adapting the frequency of clinical visits and medicine refills. During the COVID-19 pandemic, many countries further accelerated the application of differentiated models to ensure the continued provision of essential services in contexts of stay-at-home measures, physical distancing requirements and supply disruptions. Expanded use of such approaches can offer long-term opportunities to bring HIV, viral hepatitis and sexually transmitted infection services closer to people in an integrated manner. Health providers must be equipped to provide differentiated service delivery, including by leveraging technology- and community-based approaches, and to deliver high-quality people-centred services that are free of stigma and discrimination.

Action 19: Decentralization. Identify and optimize opportunities to decentralize the delivery of HIV, viral hepatitis and sexually transmitted infection services when appropriate, by diversifying their provision to include lower administrative levels and non-specialized personnel and simplifying protocols where appropriate, as a means to expand access to comprehensive people-centred services. Together with differentiated service delivery, decentralization provides opportunities to expand services beyond specialized or tertiary facilities through task-sharing with non-specialized personnel, community-based services, telemedicine, and other approaches to expand geographical outreach. Decentralization may also involve engaging more actively with the private health care sector. Countries need to assess which elements of responses require and would benefit from centralized or decentralized approaches, in order to deliver primary health care and achieve universal health coverage goals. Laboratory services can be optimized in ways that identify opportunities to expand the catchment area of specialized or tertiary laboratories through non-specialized health facilities and primary health care platforms to expand geographical coverage. Decisions to decentralize service delivery must be adapted to local contexts, supported by policy and legislation, and accompanied by investments to strengthen infrastructure at the primary care levels, and to provide adequate support and capacity building to health care personnel and formal or informal community health workers providing this care, to maintain service quality and the confidence of service users.

Action 20: Special settings. Provide equitable access to services in special settings, including prisons and other closed settings, and settings of humanitarian concern. Access to basic health services can be severely compromised in specific settings, including prisons and other closed settings as well as settings of humanitarian concern. Mobile and displaced populations are often dislocated from their communities and may have inadequate access to local services because of lack of necessary documentation, language barriers or high costs. Vulnerability may increase during emergencies and in humanitarian settings when health service delivery

is disrupted. Outbreaks of hepatitis A and hepatitis E virus may also occur in places with poor sanitary and hygienic conditions. The United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)³⁷ requires that health care services in prisons and other closed settings, such as detention centres, should be equivalent to those available to the broader community, and the continuity of these services should be ensured when people move within and between these settings and the broader community.

Action 21: Digital innovations. Harness the growing power of digital technologies to enhance the coverage and quality of health interventions. Digital health technologies can enhance targeted client communication, such as towards young people or individuals who may avoid in-person gatherings because of concerns about stigma and discrimination. Social listening approaches such as virtual mapping and online surveys can help to better understand the needs and preferences of target populations. Digital health technologies can improve patient autonomy and agency by using wearable devices and mobile apps for personal health monitoring. Digitized health worker support tools can improve the quality of patient management and follow-up, and electronic health information systems can enhance the quality of data. Digital health interventions must be designed and implemented within the broader digital health architecture of a national health system. Their deployment must ensure that the risks and barriers related to their use, such as risks related to confidentiality and privacy, are adequately addressed. The use of digital technologies should not replace in-person services or create inequalities for people who may not have access to digital technologies.

3.3.3 Governance

Action 22: Effective and inclusive governance. Strengthen national governance structures and costed strategic plans to guide national responses to HIV, viral hepatitis and sexually transmitted infections, with meaningful engagement of communities and promoting synergies with broader health governance structures and plans, aligned with international human rights principles and standards. National governance structures for health must comprehensively address disease-specific issues and meaningfully engage communities living with and affected by HIV, viral hepatitis and sexually transmitted infections. Similarly, disease-specific governance structures, where they exist, must be appropriately aligned with and linked to broader national health and development structures and plans. Effective governance is inclusive and participatory, and promotes representative leadership within the health system, including women and people from affected communities, as well as collaboration across sectors and stakeholders, including governments, diverse civil society organizations, the private sector and communities, in a whole-of-government and whole-of-society approach.

3.3.4 Financing

Action 23: Financing. Address the financing of HIV, viral hepatitis and sexually transmitted infection responses through national health financing systems, avoiding fragmented funding; maximize the efficient use of resources; and minimize overall catastrophic health

³⁷The United Nations Standard for Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules). Vienna: UNODC; 2015 (https://www.unodc.org/documents/justice-and-prison-reform/Nelson_Mandela_Rules-E-ebook.pdf), accessed 31 December 2021).

expenditures for households. Continuing to drive progress in the three disease areas requires strategic shifts in health financing systems to achieve three key goals: raising sufficient funds through domestic sources, complemented by external sources; establishing equitable mechanisms to pool funds to enable financial risk protection; and optimizing the use of resources by integrating services, reducing costs and fragmented funding streams, and improving efficiencies; and pursuing price reduction strategies. It is important to ensure that HIV, viral hepatitis and sexually transmitted infection services are part of essential health benefit packages, and to document and address gaps in financing for essential services and interventions. Resource allocations should be reflective of service delivery and health needs, including the needs of key and at-risk populations nationally and in specific settings. Countries must be supported to increase domestic financing for prevention including for interventions that reach the people most affected by and at-risk for HIV, viral hepatitis and sexually transmitted infections. The private sector, especially as a health service provider, should be engaged through strategic purchasing mechanisms.”. Financing for the health sector must also consider the growing needs of information technology infrastructure needed to support health system functions.

3.3.5 Commodities

Action 24: Essential health commodities. Ensure equitable and reliable access to quality-assured and affordable medicines, diagnostics and other health products for HIV, viral hepatitis and sexually transmitted infections, by accelerating their development, quality assurance and in-country registration; reducing prices; strengthening local development, manufacturing and distribution capacity; and aligning efforts with broader health commodity plans and budgets. The long-term secure supply of commodities that are accessible, affordable, and acceptable, is a critical element of the public health approach to ending these epidemics. Research and development in commodities and technologies must be supported and oriented to public health needs. National regulatory capacity must be strengthened to ensure the timely registration of new products, and ensure the safety, quality and efficacy of all health products in the market. Price reduction strategies such as fostering further generic competition through voluntary licensing on public health-oriented terms and conditions a key mechanism for improving and accelerating access to the current HIV and viral hepatitis treatments, can also be used for expanding access to new products in low and middle income countries, as well as; promoting voluntary technology sharing on mutually agreed terms and addressing intellectual property-related barriers by leveraging the use of Trade-related Aspects of Intellectual Property Rights flexibilities; promoting differential pricing; and engaging in direct price negotiations with manufacturers and the sharing of product prices, can be pursued to improve affordability and access. Logistics management information systems must be strengthened to ensure timely and accurate data regarding commodity needs and consumption for decision-making and accountability, and efforts made to promote green procurement and waste disposal.

3.3.6 Health workforce

Action 25: Health workforce strengthening. Address immediate and future health workforce needs in relation to HIV, viral hepatitis and sexually transmitted infections in ways that are synergistic with efforts to strengthen the overall health workforce. Efforts to end the epidemics of AIDS, viral hepatitis and sexually transmitted infections by 2030 will

place further demands on health workforces that are already overburdened in many settings. Health workers are increasingly expected to work across health issues and with different client groups. Disease-specific needs should be quantified and considered in broader decision-making about the health workforce and facility staffing. Comprehensive national health workforce plans should optimize the utilization of the existing workforce, including community health workers, and advance multi-disciplinary team-based care for delivery of HIV, viral hepatitis and sexually transmitted infections services across the continua of services, with different cadres of health workers performing different roles. Health workers should be compensated in accordance with education level, tasks performed and broader labor market conditions. Financial incentives that create inequalities among health workers or negatively affect other service delivery areas should be avoided. The competencies required for disease-specific roles should be mainstreamed and integrated into pre-service education. Workforce policies should address harmful gender norms, span entry requirements, education, deployment and management strategies.

Health systems should invest in capacity-building, ongoing training and supportive supervision for health workers, including initial and postgraduate training of facility-based and community health workers at all levels on sexual health and the needs of people affected by HIV, viral hepatitis and sexually transmitted infections. Health systems must also ensure that health workers are protected with necessary protective equipment and the means to implement universal precautions, and broader workplace safety and wellbeing. Strategies are needed to increase the numbers of nurses and midwives in many settings. Young people should be encouraged to embark on careers in health care and in the HIV, viral hepatitis and sexually transmitted infection fields. The health workforce must be engaged in comprehensive efforts to eliminate stigma and discrimination associated with HIV, viral hepatitis and sexually transmitted infections in health-care settings, as described in action 8 earlier in this chapter.

3.3.7 Social and structural determinants of health

Action 26: Legal, regulatory and policy reform. Create an enabling legal environment by reviewing and reforming restrictive legal and policy frameworks, as needed, in order to enable equitable access to health services, especially for most affected and at-risk populations, and create institutional and community environments, including in health care settings, that make it safe for people to access services. The health sector has an obligation to promote a safe and non-discriminatory environment within the health care setting, as well as to promote an enabling environment in other sectors in order to reduce people's vulnerability and promote access to health services for all. Countries should be supported to review and reform, as needed, restrictive legal and policy frameworks, including discriminatory laws and practices that create barriers or reinforce stigma and discrimination such as laws related to HIV non-disclosure, exposure and transmission, those that impose HIV-related travel restrictions and mandatory testing, or laws related to criminalizing drug use, sex work and same sex relations, that affect the health, safety and access to services of the most vulnerable people. Laws and policies related to age of consent should also be reviewed in order to enable adolescents and young people to seek testing, prevention and treatment services for HIV, viral hepatitis and sexually transmitted infections. It is equally important to develop supportive legislation that upholds the implementation of evidence-based interventions, promotes and protects human rights and gender equality, and reduces

stigma and discrimination, and to support the provision of legal aid for people in need. Actions to improve health through an enabling legal environment need to consider the domestic context, legislation and jurisdictional responsibilities.

Action 27: Multisectoral partnerships to address stigma, discrimination and other social and structural barriers. Establish, catalyze and coordinate multisectoral and community partnerships to address social and structural barriers hindering effective responses to HIV, viral hepatitis and sexually transmitted infections. Persistent stigma and discrimination are a major barrier to responding effectively to HIV, viral hepatitis and sexually transmitted infections. People living with HIV, and key populations who are most affected by HIV, continue to face stigma, discrimination and criminalization that exacerbate their risks and infringe on their rights to accessing the services they need. In many settings, people living with viral hepatitis face social exclusion, barriers to healthcare, or workplace-related discrimination. Sexually transmitted infections continue to carry shame and remain hidden. Many of these barriers are influenced by policies and activities across multiple sectors such as education, nutrition, justice, labor, social protection, housing and the environment. A comprehensive response to HIV, viral hepatitis and sexually transmitted infections must include collaboration across sectors to ensure positive action on the critical enablers that aim to improve the accessibility, acceptability, uptake and quality of interventions for all. This includes strengthened collaboration with United Nations entities with specialized technical expertise at the regional level and especially at the country level, including UNAIDS, the United Nations Office of the High Commissioner for Human Rights, and the United Nations Office on Drugs and Crime. The effective engagement and empowerment of individuals and communities, including those representing key populations and other beneficiaries, plays a key role in reducing these barriers.

3.3.8 Health security

Action 28: Protecting people during pandemics and other health emergencies. Protect the gains achieved in the responses to HIV, viral hepatitis and sexually transmitted infections, and ensure the continuity of essential health services in the context of pandemics and other emerging health threats by building health and community system resilience. The COVID-19 pandemic disrupted access to HIV, viral hepatitis and sexually transmitted infection services worldwide, threatening to halt or reverse the gains achieved in the response to these diseases. At the same time, the pandemic also demonstrated the ability of health and community systems to adapt and evolve to continue to reach people in need. For example, community-led action spurred innovations to maintain essential health services for populations in need in challenging contexts of stay-at-home measures, and service and supply disruptions; and digital technologies provided an opportunity to deliver virtual care for remote populations. These innovations must be sustained to ensure the continuous delivery of essential services during pandemics and emerging health threats, with joint efforts to build the resilience of health and community systems, strengthen linkages to primary health care, ensure access to prevention and vaccine efforts, and provide social protection for the most vulnerable people during pandemics and health emergencies.

Action 29: Managing future disease outbreaks. Leverage the lessons from the COVID-19 response to prevent and manage future disease outbreaks. Innovative approaches applied during the COVID-19 pandemic to differentiate, decentralize and simplify the delivery of

essential health services in times of crisis provided a historical opportunity to strengthen responses to infectious diseases more broadly. As countries move towards the last mile of disease elimination for HIV, viral hepatitis and sexually transmitted infections, the lessons from the COVID-19 response must be leveraged to increase the preparedness and agility of health and community systems to identify and manage future outbreaks of HIV, viral hepatitis and sexually transmitted infections, as well as other emerging health threats, as they arise.

3.4. Strategic direction 3: Generate and use data to drive decisions for action

This section describes shared approaches to strengthen health information systems for better data availability, use and accountability. The actions in this section should be implemented in conjunction with disease-specific actions described under Strategic Direction 3 in Chapter 4 (HIV), Chapter 5 (Viral hepatitis) and Chapter 6 (Sexually transmitted infections).

Action 30: Data availability, analysis and use. Generate high-quality data and use data analyses to drive action, including at decentralized levels. Accurate, timely and granular data are essential for national strategic planning, resource allocation, health service delivery, advocacy, and accountability. Joint efforts to strengthen strategic information systems, including population-based burden estimates and relevant disaggregation of data by sex, age and other relevant population characteristics, are important to guide programme implementation and quality improvement. Investing in capacity building for strengthened data collection, reporting, analysis and use is important, including for comorbidities. Data must inform decision-making and programme improvement, including at subnational levels, supported by adequate analytical capacity at the national, district and facility levels. Regular reporting on programme implementation, financing, performance and impact, and data transparency, are important for accountability.

Action 31: Person-centred data monitoring. Expand person-centred monitoring to support people-centred services, by placing the individual at the centre of health information systems and by increasing the granularity of data appropriately disaggregated by sex, disability, age and other relevant population characteristics, supplemented by information from community-led monitoring. Person-centred monitoring supports individuals as they move through the service continuum and helps to deliver differentiated services that meet people's needs, support long-term retention in health care, and improve programme outcomes. Community-led monitoring – in which communities contribute directly to collecting, analysing and using information to monitor and improve service quality, address bottlenecks and hold service providers and decision-makers accountable, and empower individuals, families, and communities to optimize their health – can be an important component of a health information system. Health workers must be empowered to analyse and use data to improve the quality of service delivery. The rigorous application of standards in gathering and using person-centred data is key to ensure data security and protect the confidentiality of individuals and communities, strengthen the interoperability of data systems, and to ensure that data collection efforts cause no harm.

Action 32: Health information systems. Align information systems related to specific diseases or infections with broader health information systems to strengthen universal health coverage and support the transition to digital information systems with appropriate attention to data governance, security and interoperability. Harmonized approaches to

strengthening information systems, such as joint investments in strengthening vital registration and routine service monitoring systems, integrated disease surveillance, shared approaches to surveillance of antimicrobial resistance, and combined surveys where relevant, provide an opportunity to improve alignment and efficiency, enhance the quality of data for all diseases, and improve patient level tracking across the health system. Community-level data should be integrated or linked with clinical data management platforms. As more countries transition to electronic health information systems, it is important to ensure data confidentiality and security across systems, develop joint data standards, and promote interoperability among data platforms used by different programme areas and related functions such as those for logistics management and laboratory systems. Strengthening public-private partnerships is also critical, to expand access to services through the private sector, ensure harmonized service quality standards, and promote data sharing in compliance with security and data protection standards.

3.5. Strategic direction 4: Engage empowered communities and civil society

This section describes shared approaches to engage and support the empowerment of communities, civil society organizations and affected populations in advocacy, service delivery, policy-making and initiatives to enhance service delivery and tackle social and structural barriers. The actions in this section should be implemented in conjunction with disease-specific actions described under Strategic Direction 4 in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections).

Action 33: Community and civil society leadership. Engage and support communities and civil society to enhance their pivotal contributions to advocacy, service delivery, policymaking, monitoring and evaluation, and initiatives to address social and structural barriers. Communities and diverse civil society organizations deliver an essential complement to facility-based services and are an integral part of effective health care, especially among populations that may face barriers to accessing services, or in situations in which health facilities may be inaccessible. The meaningful participation of communities and civil society in national health planning processes and service delivery brings services closer to people in need; improves service acceptability, uptake and retention; empowers individuals with greater autonomy and self-care possibilities and promotes equity. Communities and civil society organizations bolster advocacy efforts, strengthen programme design and delivery, and promote accountability, including through community-led monitoring. To be effective, community-based and civil society organizations require predictable funding and must be recognized by other stakeholders as key partners in efforts to end the epidemics of HIV, viral hepatitis and sexually transmitted infections.

Action 34: Community health workers. Provide adequate regulation, training, supervision and support for community-based members of the health workforce. Addressing major gaps in the HIV, viral hepatitis and sexually transmitted infection responses requires expanding community capacity to provide services and commodities to populations that are not reached effectively through traditional clinic-based approaches. The needs of the community-based health workforce must be addressed on par with the needs of the formal health workforce in terms of regulation, training and supervision. Linkages need to be strengthened between community-based health services and formal health services. Community-based health workers must be compensated appropriately for their work. Like all health workers, they

should have access to protective equipment and be safeguarded by infection control protocols.

3.6. Strategic direction 5: Foster innovations for impact

This section describes shared approaches to foster and disseminate innovations for accelerated impact. The actions in this section should be implemented in conjunction with disease-specific actions described under Strategic Direction 5 in Chapter 4 (HIV), Chapter 5 (viral hepatitis) and Chapter 6 (sexually transmitted infections).

Action 35: Partnerships for innovation. Optimize the potential for innovation through market analysis and strengthening research- and development-based partnerships, including strengthening engagement with the private sector and communities. To achieve global targets, countries need to not only leverage new knowledge, technologies and service delivery approaches, but also use existing tools more efficiently and adapt them for different populations, settings and purposes. WHO and countries work with many innovation partners to drive and catalyze innovations in HIV, viral hepatitis and sexually transmitted infection responses and broader health, to ensure that innovative products, tools and methods emerging in high-income countries can reach low- and middle-income countries at affordable prices and with reduced burden on health systems. This includes using digital technologies for health that bring new opportunities for improving service quality, self-care options for patients, and analyzing and using data. Community involvement in research, including community-led research, is important for ensuring the relevance of proposed innovations and encouraging their future adoption.

4 HIV

This chapter presents the global health sector strategy on HIV. It presents the key strategic and operational shifts required to end AIDS as a public health threat by 2030 (Box 4.1), with priority targets, interventions and innovations. The strategy for HIV fully aligns with the Global AIDS Strategy 2021–2026, the End TB Strategy (Box 4.2) and other related global strategies. A mid-term review in 2026 against common 2025 targets will facilitate the future alignment with any subsequent Global AIDS Strategy. Actions for countries in this chapter should be implemented in conjunction with the shared actions for countries defined in Chapter 3.

Box 4.1: Key strategic and operational shifts required to end AIDS as a public health threat by 2030:

- Renew the focus on primary prevention
- Address the major causes of HIV-related deaths, including tuberculosis, cryptococcal meningitis, and severe bacterial infections
- Close gaps in service access for children and adolescents
- Ensure continued engagement of people living with HIV in HIV treatment and care services, and addressing chronic care needs to improve the quality of life for an ageing cohort of people living with HIV
- Address the barriers faced by key populations
- Apply differentiated approaches to service delivery to meet the specific needs of populations and settings
- Leverage innovations, including new treatment regimens, new prevention approaches, vaccines and effective cures, supported by research that includes the needs of resource-limited settings.

Box 4.2: Responding jointly to tuberculosis and HIV

Tuberculosis (TB) is the leading cause of death among people living with HIV. Although the number of deaths has declined between 2010 and 2019, less than half of the estimated number of people co-infected with HIV and TB were reported to be receiving both HIV and TB treatment in 2019.³⁸ The global End TB Strategy³⁹ gives priority to collaborative activities to jointly address TB and HIV through integrated people-centred care that includes systematic screening for TB symptoms among people living with HIV, TB preventive treatment, HIV testing of all people with diagnosed or presumed TB, timely initiation of antiretroviral therapy for people with TB, WHO-approved chemoprophylaxis and the treatment of drug-susceptible and drug-resistant TB. Opportunities for programme collaboration, such as joint planning, surveillance and

³⁸ Global tuberculosis report 2020. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/handle/10665/336069> , accessed 31 December 2021).

³⁹ The end TB strategy. Geneva: World Health Organization; 2015 (<https://apps.who.int/iris/handle/10665/331326> , accessed 31 December 2021).

financing, and common approaches to address the inequalities that drive both HIV and TB, are also important to prevent and manage HIV-associated TB.

4.1. HIV targets

Table 4.1 below presents impact and programmatic coverage indicators and targets, and policy milestones, for HIV.

Table 4.1. Impact and coverage indicators, targets and milestones for HIV, by 2030

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030
Impact	Number of people newly infected with HIV per year	1.5 million	370 000	335 000
	Number of people newly infected with HIV per 1000 uninfected population per year (Sustainable Development Goal 3.3.1)	0.19	0.05	0.025
	Number of children 0-14 years of age newly infected with HIV per year	150 000	20 000	15 000
	Number of people dying from HIV/related causes per year ^b (including disaggregation by HIV cryptococcal meningitis, tuberculosis, and severe bacterial infections)	680 000	250 000	<240 000
	Number of people living with HIV dying from tuberculosis, hepatitis B and hepatitis C^c	210 000	110 000	55 000
	Number of countries validated for the elimination of vertical (mother-to-child) transmission of either HIV, hepatitis B, or syphilis	15	50	100
	Coverage	Percentage of people living with HIV who know their HIV status ^d	84%	95%
Percentage of people who know their HIV-positive status are accessing antiretroviral therapy ^d		87%	95%	95%
Percentage of people living with HIV, receiving treatment, who have suppressed viral loads ^d		90%	95%	95%
Percentage of people at risk of HIV who use combination prevention with a defined service package		8%	95%	95%

	Condom/lubricant use at last sex with a client or non-regular partner		90%	90%
	Number of needles- or syringes distributed per person who injects drugs (as part of a comprehensive harm reduction programme)	200	200	300
	Percentage of people living with HIV who receive preventive therapy for TB	50%	95%	95%
	Percentage of people living with HIV and people at risk who are linked to integrated health services, including sexually transmitted infections and viral hepatitis		95%	95%
Milestones	Stigma and discrimination - percentage of people living with HIV, viral hepatitis and sexually transmitted infections and priority populations who experience stigma and discrimination		Less than 10%	Less than 10%
	Laws and policies - percentage of countries which have punitive laws and policies	Varied by population ^e	Less than 10%	Less than 10%
	Gender equality – prevalence of recent (last 12 months) intimate partner violence among women and girls 15-49 years old^f	13%	11%	Less than 10%
	Integration - Percentage of people living with HIV, viral hepatitis and sexually transmitted infections linked to other integrated Health Services		95%	95%
	Late-stage disease – percentage of people starting antiretroviral therapy with a CD4 count of less than 200 cells/mm³ (or stage III or IV)^g	30%	20%	10%
	Differentiated service delivery - percentage of countries that have implemented six-month refill of drugs	19 countries	50%	80%
	Innovation – number of additional diseases (HIV, viral hepatitis and sexually transmitted infections) covered by vaccine or cure		1	2

^a Latest data for end 2020. Some targets use data from 2019 because of COVID-19 related service disruptions in the data reported for 2020. Targets for 2025 are not expected to be affected by COVID-19. All data will be disaggregated by age, including adolescents, sex and where relevant focus populations specific to the disease

^b The mortality data will be further disaggregated to assess the urgent need to tackle the drivers and causes of deaths, specifically for HIV cryptococcal meningitis to reduce deaths by 50% in 2025 and 90% by 2030, tuberculosis and severe bacterial infections

^c The data will be disaggregated and reported by cause, including the cascade of tuberculosis service interventions needed to reduce mortality, systematic screening of tuberculosis symptoms, rapid tuberculosis diagnosis and preventive treatment, and treatment of drug-resistant tuberculosis

^d Achieved in all ages, sexes and focus populations

^e HIV transmission 61%, transgender people 24%, sex workers 87%, people who use or possess drugs 83%, same sex sexual relations 36%

^f SDG indicator 5.2.1: Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age (<https://unstats.un.org/sdgs/metadata/?Text=&Goal=5&Target=> accessed 28.04.2022)

^g To achieve all people living with HIV should receive a CD4 test result, and at least 90% by 2025 and 95% by 2030
Shared targets across HIV, viral hepatitis and sexually transmitted infections are shown in **bold**.

4.2. Strategic direction 1: Deliver high-quality evidence-based people-centred services

This section describes HIV-specific priority actions for countries along the continuum of HIV prevention, diagnosis, care and treatment services. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 1 in Chapter 3, and their delivery must be tailored to the needs of different affected populations and according to different epidemiological contexts (Box 4.3).

Box 4.3 – Priority populations for HIV

People living with HIV are central to the response and must be made a priority population within country responses in all settings. Certain populations are disproportionately affected by epidemics as a result of biological, behavioural and structural factors that increase their risk of and vulnerability to HIV. Global evidence indicates that for HIV, five key populations – men who have sex with men, people who inject drugs, sex workers, transgender people, and people in prisons and other closed settings – are disproportionately affected as compared with the general population in all settings. In 2020, key populations and their sexual partners accounted for 65% of the people acquiring HIV globally: 93% of the people newly infected were outside of sub-Saharan Africa and 39% in sub-Saharan Africa. These populations are critical to the dynamics of HIV transmission and essential partners in an effective response.

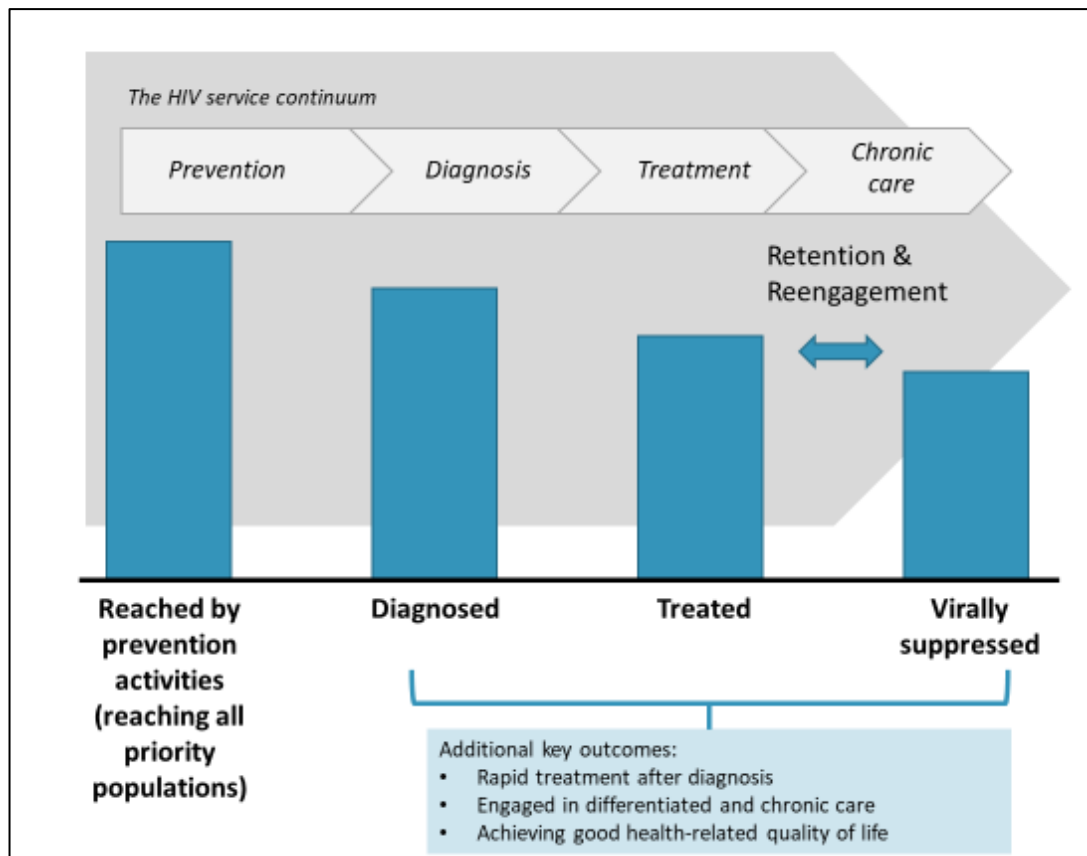
Women, including pregnant and breastfeeding women and adolescent girls, children, and adolescents and young people, including young key populations, are also vulnerable to HIV infection in specific contexts. Men and boys are less likely to use health services and have poorer health outcomes in some settings. Other priority populations may include people with disabilities, indigenous peoples, migrants and mobile populations, and people in settings of humanitarian concern in some settings including people affected by conflict and civil unrest.

In addition to populations, focusing efforts on geographical locations where the burden of HIV may be high or where service gaps may be the largest is equally important. For example, adolescent girls and young women in sub-Saharan Africa face increased vulnerability and can benefit from integrated approaches that address HIV, sexually transmitted infections and sexual and reproductive health. Targeted approaches are also required for key and marginalized populations that may be hard to reach, hidden, unrecognized (by others or by themselves) or not willing to disclose their status. Meaningful engagement with the most affected and at-risk populations has never been more critical as countries respond to challenges to service access triggered by health emergencies including COVID-19, climate-related crises and insecurity.

4.2.1. HIV service delivery interventions

Action 36: Continuum of HIV services. Organize health service delivery to address people’s needs across the full continuum of HIV services by providing comprehensive prevention services, ensuring early access to and engagement in care, continuity of treatment, reengagement, and monitoring the service cascade for improving programmes. The continuum of HIV services provides an organizing framework for implementation of essential interventions that comprehensively address people’s needs relating to HIV prevention, testing, treatment and chronic care. As people move along the continuum, service access may be interrupted at each step. Health services must be organized such that individuals can be continuously engaged in care, including through community access points where appropriate, to optimize outcomes at the patient and population levels, including with appropriate linkages across services to ensure continuum of care across various stages of life. The retention cascade should be monitored to identify areas in which programmatic improvements are needed (Fig. 4.1).

Fig. 4.1. The HIV service engagement cascade



Action 37: HIV intervention packages. Define a core package of evidence-based interventions relevant to each country context and tailored to the needs of diverse populations and settings. Each country needs to define a package of essential HIV interventions along the service continuum, informed by data, scientific evidence, good practice, and community input, and to consider burden, equity, effectiveness, cost, acceptability, feasibility and impact. The intervention package should be aligned with

universal health coverage benefits packages and linked with primary health care where feasible and relevant.

Action 38: HIV prevention. Determine and implement the optimal mix of HIV prevention interventions for specific populations and locations. People may require different HIV prevention options based on their age, sex and circumstances, and individual risks and needs may change across a person's lifetime. People should be provided with options and choices in relation to services and service delivery approaches to address individual needs and preferences, including innovative approaches such as using digital technologies. Data should be used to determine the optimal mix of prevention interventions for different populations and locations, with person-centred monitoring to adapt services to the needs of individuals and populations. Comprehensive prevention packages should be considered that include biomedical, behavioural and structural interventions.

Action 39: Antiretroviral drugs for HIV prevention. Maximize the prevention benefits of antiretroviral drugs by providing antiretroviral therapy for all people living with HIV and implementing a strategic combination of pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) with other prevention interventions. Antiretroviral therapy must be provided to all people living with HIV focusing on the use of WHO-recommended treatment regimens, viral load monitoring and retention in care to achieve undetectable viral loads in order to prevent onward sexual transmission. Pre-exposure prophylaxis (PrEP), or the use of antiretroviral drugs by people who are not infected with HIV, should be offered as an additional prevention choice for all individuals who request PrEP and made available to those who are at substantial risk of acquiring HIV. Post-exposure prophylaxis (PEP) should be made available to people who have had a significant exposure to HIV while not taking PrEP. A vaginal ring releasing an antiretroviral drug provides an additional prevention choice for women who are unable or do not want to take use oral daily PrEP. While only one vaginal ring product was available in 2022 other injectable and implantable PrEP formulations are expected to become available during the 2022-2030 strategy implementation period.

Action 40: Voluntary medical male circumcision. Maximize the HIV prevention impact of voluntary medical male circumcision as part of comprehensive services to improve the health and well-being of adolescent boys and men. Safe voluntary medical male circumcision should be offered as an additional HIV prevention option for adolescents aged 15 years and older and adult men, to reduce the risk of heterosexually acquired HIV infection in settings with generalized epidemics in eastern and southern Africa.

Action 41: People-centred HIV testing. Expand people-centred HIV testing through decentralized and differentiated service delivery with timely linkage to treatment and care. HIV testing is a pivotal pathway to both HIV prevention and treatment. The optimal combination of HIV testing approaches, including through clinical settings, community-based approaches or self-testing, depends on epidemic dynamics, population needs, and the local health system. Expanding testing coverage, including index testing, requires specific attention to ensuring the quality of the diagnostics and services to minimize the risk of misdiagnosing HIV. Countries should ensure that the age of consent for HIV testing is aligned with the age of consent for treatment. Coverage of diagnosis of HIV infection among infants and children remains inadequate, and children living with HIV often require more targeted case finding efforts integrated with the entirety of the health system in order to maximize effectiveness.

Action 42: HIV treatment. Rapidly initiate HIV treatment with WHO-recommended treatment regimens for all people living with HIV through differentiated service delivery models that provide people-centred care, monitoring, and support for adherence and for retention and re-engagement in care. Rapid initiation of antiretroviral therapy, defined as within seven days of HIV diagnosis, should be offered to all people living with HIV regardless of WHO clinical stage and at any CD4 cell count. Working closely with communities and monitoring people receiving antiretroviral therapy, including with point-of-care viral load testing, are important to ensure successful treatment outcomes, and to realize the preventive effect of HIV treatment. Tailored adherence support must be offered to everyone in order to improve retention in care, along with interventions to trace people who have disengaged from care and support their re-engagement.

Action 43: HIV drug resistance. Prevent, monitor and respond to HIV drug resistance through coordinated action that includes support for continued research and development, transition to HIV therapies that have a higher barrier to resistance, ensuring uninterrupted drug supplies, and strengthening monitoring and surveillance. All antiretroviral drugs, including newer classes, are at risk of becoming partly or fully inactive because of the emergence of drug-resistant virus strains. Strategies to prevent and respond to HIV drug resistance include supporting transition to WHO-preferred first line recommended treatment regimens, including integrase inhibitors, that have a higher barrier to resistance, access to viral load testing, monitoring HIV care service delivery, and ensuring uninterrupted drug supplies. This also requires high-quality data on HIV drug resistance including using new tools for monitoring HIV drug resistance, expanding laboratory capacity to monitor HIV drug resistance and ensuring ongoing research and innovation for approaches that will have the greatest public health impact in minimizing HIV drug resistance.

Action 44: Antiretroviral drug toxicity. Monitor antiretroviral drug toxicity and promote patient safety. HIV services must include a combination of approaches to monitor antiretroviral drug toxicity and promote patient safety, including surveillance of the safety of antiretroviral drugs used in pregnancy and active and routine toxicity monitoring in all populations, including adults, adolescents, pregnant women and children.

Action 45: Advanced HIV disease. Provide care for children, adolescents and adults with advanced HIV disease. Many people living with HIV present for care with advanced HIV disease, which is associated with an increased risk of death, opportunistic infections and other AIDS-related and non-AIDS-related comorbidities. In addition to TB, the care package for advanced HIV disease should include screening, diagnostic workup, treatment and/or prophylaxis to address other major causes of morbidity and mortality among people living with HIV, such as severe bacterial infections and other opportunistic diseases including cryptococcal meningitis, histoplasmosis, toxoplasmosis and *Pneumocystis jirovecii* pneumonia. Kaposi's sarcoma also remains a neglected type of HIV-related cancer with inadequate access to treatment options. Everyone presenting for HIV care, including treatment naïve people and previously diagnosed people returning to care after interrupted treatment, must be assessed for advanced HIV disease and their needs addressed with appropriate interventions. All children younger than five years are considered to have advanced disease given their heightened risk of disease progression and mortality.

Action 46: Chronic care and quality of life for people with HIV (complements shared action 9). Address the chronic care and quality of life needs of children, adolescents and adults living with HIV. People living with HIV experience a broad range of other health and well-being issues over the long-term, including those related to the pathophysiology of the disease; the side-effects of treatment; non-HIV related co-infections and comorbidities; managing drug-drug interactions, such as people with HIV and epilepsy; mental health; and ageing – all of which require comprehensive care and management. The quality of life of adults and children living with HIV should be monitored and their and their health and well-being needs addressed holistically over the lifetime. Palliative care, to address conditions such as pain and other physical symptoms related to HIV infection or its treatment, and other health-related suffering, is an essential component of comprehensive clinical management for people living with HIV.

Action 47: Elimination of vertical transmission and HIV prevention, treatment and care for children and adolescents (complements shared actions 3 and 4). Eliminate vertical (mother-to-child) transmission of HIV, close the gaps in access to HIV testing and treatment services for infants and children, and support them in staying healthy into adolescence and adulthood. Eliminating vertical transmission of HIV, requires promoting integrated approaches with sexual and reproductive health programmes for HIV prevention and family planning; ensuring treatment continuity between service delivery points for preventing mother-to-child transmission and for antiretroviral therapy; and providing a comprehensive package of care for HIV-exposed infants including infant testing and prophylaxis. Ensuring that the gaps in treatment for infants living with HIV is equally critical, such that all children living with HIV receive timely HIV testing, appropriate treatment and adherence support and adequate longer-term care as they transition to adolescence and adulthood. Children and adolescents should also be screened for chronic comorbidities and disabilities, including developmental delays and neurocognitive impairment, mental health disorders and organ system morbidities, and receive nurturing care that supports their development as they age. The distinct needs of adolescents living with HIV must also be addressed, through providing peer-driven and adolescent-friendly health services, engaging them in their own care, and linking with psychosocial and peer-support interventions. Policy barriers related to age of consent for accessing testing and treatment services must be addressed.

4.2.2. HIV interventions to enhance integration and linkages with other health areas

Action 48: Communicable and non-communicable diseases among people living with HIV and at increased risk of acquiring HIV (complements shared action 9). Strengthen linkages and integration of HIV services with services for related communicable and non/communicable diseases through a quality of life and holistic approach to care. Integrated management of HIV and viral hepatitis infection should include early diagnosis and treatment of both HIV infection and viral hepatitis infection. People living with, and at increased risk of acquiring HIV should be screened and treated for sexually transmitted infections. People living with HIV are also at increased risk of developing a range of various noncommunicable diseases including cardiovascular disease, diabetes, hypertension, neurocognitive disorders, chronic lung disease, osteoporosis and various types of cancer. The increasing burden of cervical cancer among women living with HIV, associated with human papillomavirus co-infection, requires specific attention, especially given the availability of an effective vaccine, screening and treatment.

Action 49: HIV and tuberculosis (complements shared action 10). Reduce tuberculosis-related morbidity and mortality through timely diagnosis and treatment of people with HIV and tuberculosis, supported by strong collaboration between HIV and tuberculosis responses. Tuberculosis is the leading cause of death among people living with HIV. Collaborative interventions to jointly address tuberculosis and HIV through integrated people-centred care include systematic screening for tuberculosis symptoms among people living with HIV, tuberculosis preventive treatment (particularly with short regimens), HIV testing of all people with diagnosed or presumed tuberculosis, timely initiation of antiretroviral therapy and WHO-recommended chemoprophylaxis for people with tuberculosis co-infection, and treatment of drug-susceptible and drug-resistant tuberculosis in people living with HIV. The successful delivery of collaborative interventions requires harmonized approaches to planning, surveillance and monitoring, financing and other health system areas, and common approaches to address the inequalities that drive both HIV and tuberculosis.

Action 50: Rehabilitation to address HIV-related disability (complements shared action 13). Provide rehabilitation services as part of comprehensive HIV services to address the impairments that may affect people living with HIV. People living with HIV may experience a range of various impairments that affect their everyday functioning, including difficulties in mobility, cognition, vision, hearing, communication and nutrition. As people age with HIV, they may experience premature cardiovascular disease, neurological, bone and joint disorders. Rehabilitation and palliative care services, including provision of assistive products to improve and maintain people's functioning, must be available as part of comprehensive HIV services to address these changing health needs of people living with HIV. Rehabilitation should be integrated into clinical guidance and protocols for people-centered HIV care for early identification of rehabilitation needs, referrals and delivery of appropriate interventions using multidisciplinary teams.

4.3. Strategic direction 2: Optimize systems, sectors and partnerships for impact

This section describes HIV-specific priority actions to strengthen health service delivery and other health system functions including multisectoral collaboration. The actions in this section should be implemented in conjunction with the relevant shared actions described under Strategic Direction 2 in Chapter 3.

Action 51: Differentiated service delivery for HIV (complements shared action 18). Identify and optimize opportunities to use differentiated service delivery models for HIV. All populations established on antiretroviral therapy, for treatment or prevention, should benefit from differentiated service delivery models and their institutionalization into health system infrastructure, enabling HIV service provision to be maintained long-term. For example, they may be offered longer-duration refills of medication and less frequent clinical visits, or treatment may be started and provided outside of the health facility, including monitoring by lay providers. Group models and community venues can be leveraged for refills. Children, adolescents, key populations, and pregnant women are still accessing treatment through conventional delivery models in many settings, and efforts should focus on ensuring that these groups also benefit from differentiated service delivery. Such models can also be used to expand the uptake and outcomes of other HIV interventions. Health-care providers must

be equipped to provide differentiated service delivery and high-quality people-centred services.

Action 52: Essential HIV health commodities (complements shared action 24). Ensure equitable and reliable access to quality-assured and affordable medicines, diagnostics and other health products for HIV. Rapid expansion in coverage of HIV testing, prevention and treatment requires the availability and secure supply of affordable and high-quality HIV prevention products (such as male and female condoms, lubricants, commodities for voluntary medical male circumcision, and needles and syringes for harm reduction, etc.), HIV tests, HIV medicines and other optimized health products for advanced HIV disease. Barriers to procuring and supplying WHO-recommended first-line antiretroviral therapy regimens must be addressed to ensure access to effective, well tolerated, and affordable antiretroviral therapy regimens for everyone. New products such as HIV rapid point-of-care tests and HIV self-tests, and new antiretroviral drugs, must be made widely available to all. Challenges remain to ensure access to health products for specific populations such as people with advanced HIV disease and people with comorbidities. More work is also needed to develop and roll out optimized and affordable regimens for children and point-of-care early infant diagnostic platforms.

4.4. Strategic direction 3: Generate and use data to drive decisions for action

This section describes HIV-specific actions to strengthen health information systems for better data availability, use and accountability. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 3 in Chapter 3.

Action 53: Person-centred data monitoring for HIV (complements shared actions 30 and 31). Expand person-centred monitoring and case surveillance for HIV to support people-centred HIV services. HIV information systems should seek to enable person-centred monitoring through routine surveillance systems, using unique identifiers to track and report individual access and outcomes along the cascade of HIV prevention, care and treatment services. They should generate granular data by location (such as by sub-national administrative level), population characteristics (such as age, sex and presence of comorbidities and co-infections), and priority population group (such as key populations), including population size estimates, for tailored action and efficiently mobilizing and allocating resources. Person-centred data needs to be accessible at the point of care to facilitate timely decision-making for a given individual by health care providers for each individual. Recent infection surveillance can help programmes in strengthening the early identification of outbreaks to achieve and sustain epidemic control.

Action 54: Health information systems for HIV (complements shared action 32). Integrate health information systems for HIV with broader health information systems. HIV information systems should be aligned with other health information systems, including facility-based and community health information systems, thereby enabling integration with other services such as TB, non-communicable diseases and primary health care more broadly. Strong data governance is required for effective interoperability among systems, and to ensure the security, privacy and confidentiality of data.

4.5. Strategic direction 4: Engage empowered communities and civil society

This section describes HIV-specific actions to engage communities, civil society organizations and affected populations in advocacy, service delivery, policy-making and initiatives to enhance service delivery and tackle social and structural barriers. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 4 in Chapter 3.

Action 55: Community and civil society leadership for HIV (complements shared actions 33 and 34). Engage and support the self-empowerment of HIV key populations, people including women living with HIV, and civil society to enhance their role in advocacy, service delivery, policymaking, monitoring and evaluation, and initiatives to address social and structural barriers, to improve the reach, quality and effectiveness of health services. The meaningful involvement of the community, including women living with HIV and the key populations for HIV and people living with HIV, is essential for delivering effective HIV services. Targeted community-based interventions accelerate efforts to reach undiagnosed people and address gaps in service access. Truly empowered communities are also able to mobilize and engage in collective action to address the social and structural barriers that affect the risks, vulnerabilities and access to health of communities. Community-based workers, including peers and lay providers, play an important role in the HIV response by providing outreach, prevention and testing, dispensing of medications, and providing broader support for adherence and navigating the health system. Community organizations also generate strategic information that might not be available through national HIV information systems and promote and protect human rights.

4.6. Strategic direction 5: Foster innovations for impact

This section describes HIV-specific actions to foster and disseminate innovations for accelerated impact. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 5 in Chapter 3.

Action 56: New HIV diagnostics technologies and testing approaches. Continue to improve diagnostics technologies and testing approaches for earlier and more accurate HIV diagnosis and strengthened patient monitoring. HIV self-testing and rapid testing is an acceptable and empowering way for many people to test for HIV infection and improve equity in access to HIV testing. Fully benefitting from HIV self-testing requires assuring the quality of self-tests and providing linkage to confirmatory testing and broader HIV services. Further expansion of simple, affordable and reliable point-of care technologies, and innovations that could help further decentralize testing and monitoring, can be instrumental in taking HIV testing and patient monitoring to communities and remote areas. Polyvalent or integrated diagnostic platforms for the combined diagnosis of HIV and comorbidities, such as tuberculosis, viral hepatitis and syphilis, will increase service efficiency and improve patient care. Similarly modern genomic approaches that have broad applicability for other pathogens should be encouraged. With numerous initiatives underway to support innovation in this field, greater collaboration and research, supported by WHO and partners, can accelerate timeframes to ensure that innovations are available for new populations, such as for children, and in countries as early as possible.

Action 57: New options for antiretroviral-drug based prevention. Expand effective antiretroviral-drug based HIV prevention options appropriately to all people affected and at-risk groups through strengthened collaboration with research- and development-based partnerships, communities and the private sector. Although the prevention benefits of treatment have been understood for many years, women-controlled options using this technology have been limited. A vaginal ring releasing an antiretroviral drug, which WHO conditionally recommended in 2021, offers an additional choice as part of a comprehensive service package for adolescent girls and women who are unable, or do not want, to take oral PrEP. Research is underway on the safety and use-case of biologicals (broadly neutralizing antibodies or BNABs), oral and injectable long acting formulations and subcutaneous implants and micro-needle patches, and ultimately, multipurpose prevention tools (MPT). This research should include all populations -- including pregnant and breastfeeding women, adolescents, children and people with co-infections – and assess the use-case of post-natal prophylaxis. Long-acting pre-exposure prophylaxis products may offer choices for people who do not want to take, or find it difficult to adhere to, an oral pre-exposure prophylaxis regimen, and research must address the challenges and opportunities of using the same new technologies and new classes of medicines for treatment and for prevention.

Action 58: Optimized use of antiretroviral drugs. Support research on optimal doses and formulations of antiretroviral drugs that minimize toxicity and drug-drug interactions and reduce costs. Much progress has been made in the development of simple and effective first-line antiretroviral regimens and formulations, whereas innovation is required to develop simple and robust fixed-dose second-line and third-line regimens. Research on optimal doses and formulations of emerging antiretroviral and non-antiretroviral drugs should aim to inform effective regimens while minimizing toxicity and drug-drug interactions and reducing costs. Support is needed for research on optimal drug formulations for children, and to develop more effective drugs and regimens for preventing and managing major co-infections and other comorbidities. This area of innovation must address the research and policy implications of a prevention and treatment pipeline that is converging, with multiple possibilities for leveraging across both to assess dosing, toxicity, safety, outcomes among children and pregnant and breastfeeding women, HIV drug resistance monitoring, and market shaping.

Action 59: HIV vaccines. Promote the HIV vaccine agenda by encouraging investments and visibility in efforts to secure a viable HIV vaccine, including through strengthened collaboration with partnerships based on research and development, the private sector and communities. HIV preventive and therapeutic vaccine research and efforts to functionally cure people living with HIV will continue to be a key component of the HIV research agenda, including potential lessons learned from the messenger RNA technology successfully used for COVID-19 vaccines.

Action 60: HIV cure. Encourage investments and visibility in efforts to secure a viable HIV cure through strengthened collaboration with research- and development-based partnerships, communities and the private sector. Before COVID-19, scientists broadly agreed that a meaningful cure for HIV was still many decades away – and certainly beyond the 2030 horizon of this strategy. The rapid acceleration of commodities during the COVID-19 pandemic (development of broadly neutralizing antibodies or BNABs) has re-opened questions about what might be possible in a shorter time frame, especially for a functional

cure or long-term remission. It is critical to strengthen investment and visibility for the HIV cure agenda, and to ensure that clinical trials on early potential cure regimens include resource-limited settings from the start.

5. Viral hepatitis

This chapter presents the global health sector strategy on viral hepatitis. While acknowledging the importance of viral hepatitis A and E^{40 41}, both of which cause acute viral hepatitis, the strategy focuses primarily on chronic viral hepatitis B and C. These two infections, which may lead to cirrhosis and hepatocellular cancer, account for 96% of all viral hepatitis mortality. Hepatitis D co-infection or superinfection accelerates the progression of chronic liver disease but only among people living with hepatitis B. This chapter presents the key strategic and operational shifts required to eliminate chronic viral hepatitis B and C as public health threats by 2030 (Box 5.1), with priority targets, interventions and innovations. Hepatitis-specific actions for countries in this chapter should be implemented in conjunction with the shared actions for countries defined in Chapter 3.

Box 5.1. Key strategic and operational shifts required to eliminate hepatitis B virus and hepatitis C virus as public health threats by 2030:

- Promote greater public and political awareness of the importance of viral hepatitis B and C prevention, testing and treatment
- Allocate increased financial resources to viral hepatitis B and C, which may include external catalytic funding and domestic funding through including viral hepatitis prevention, testing and treatment as part of essential national health benefit packages
- Scale up universal access to hepatitis B birth-dose vaccines and improved services for testing of pregnant women for preventing the vertical (mother-to-child) transmission of hepatitis B
- Ensure continued investment in primary prevention, including improved safety of medical injections and procedures, comprehensive prevention including harm reduction and other evidence-based measures for people who inject drugs, and hepatitis B vaccination for infants and at-risk populations
- Substantially increase access to hepatitis B and hepatitis C testing to reach people living with chronic hepatitis B virus and hepatitis C virus infection, of whom more than 80% and 90%, respectively are currently undiagnosed
- Substantially increase treatment access by building on existing community and health facility based services
- Promote simplified service delivery models that include decentralizing hepatitis B and C testing and treatment to lower-level health facilities including primary care; integrating with other services, such as at harm reduction and HIV services; and task-sharing with delivery of care and treatment by non-specialists and nurses
- Address the barriers faced by populations most affected and at-risk
- Strengthen community and civil society engagement and innovative partnerships

⁴⁰ WHO position paper on hepatitis A vaccines: June 2012 – recommendations. *Vaccine*. 2013;31:285–6.

⁴¹ The global prevalence of hepatitis E virus infection and susceptibility: a systematic review. Geneva: World Health Organization; 2010 https://apps.who.int/iris/bitstream/handle/10665/70513/WHO_IVB_10.14_eng.pdf?sequence=1, accessed 31 December 2021).

- Advance the research agenda focusing on developing curative treatment strategies for hepatitis B virus and a preventative vaccine for hepatitis C

5.1. Viral hepatitis targets

Table 5.1 below presents impact and programmatic coverage indicators and targets, as well as policy milestones, for viral hepatitis.

Table 5.1. Impact and coverage indicators, targets and milestones for viral hepatitis by 2030

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030
Impact	Hepatitis B surface antigen (HBsAg) prevalence among children younger than 5 years old ^b	0.94%	0.5%	0.1%
	Number of new hepatitis B infections per year	1.5 million new cases	850 000 new cases	170 000 new cases
		20 per 100 000	11 per 100 000	2 per 100 000
	Number of new hepatitis C infections per year	1.575 million new cases	1 million new cases	350 000 new cases
		20 per 100 000	13 per 100 000	5 per 100 000
	Number of new hepatitis C infections per year among people who inject drugs per year	8 per 100	3 per 100	2 per 100
	Number of people dying from hepatitis B per year	820 000 deaths	530 000 deaths	310 000 deaths
10 per 100 000		7 per 100 000	4 per 100 000	
Number of people dying from hepatitis C per year	290 000 deaths	240 000 deaths	140 000 deaths	
	5 per 100 000	3 per 100 000	2 per 100 000	
Coverage	Hepatitis B – percentage of people living with hepatitis B diagnosed / and treated	30%/30%	60%/50%	90%/80%
	Hepatitis C – percentage of people living with hepatitis C diagnosed / and cured	30%/30%	60%/50%	90%/80%
	Percentage of newborns who have benefitted from a timely birth dose of hepatitis vaccine and from other interventions to prevent the vertical (mother-to-child) transmission of hepatitis B virus ^c	50%	70%	90%
	Hepatitis B vaccine coverage among children (third dose)	90%	90%	90%

	Number of needles and syringes distributed per person who injects drugs ^d	200	200	300
	Blood safety - proportion of blood units screened for bloodborne diseases	95%	100%	100%
	Safe injections - proportion of safe health-care injections	95%	100%	100%
Milestones	Planning – number of countries with costed hepatitis elimination plans	TBD	30	50
	Surveillance - number of countries reporting burden and cascade annually	130	150	170
	Hepatitis C virus drug access – percentage average reduction in prices (to equivalent generic prices by 2025)	20%	50%	60%
	Hepatitis B virus drug access - percentage average reduction in average prices (alignment with HIV drug prices by 2025)	20%	50%	60%
	Elimination of vertical (mother-to-child) transmission - number of countries validated for the elimination of vertical transmission of either HIV, hepatitis B, or syphilis	15	50	100
	Elimination - number of countries validated for elimination of hepatitis C and/or hepatitis B	0	5	20
	Integration - proportion of people living with HIV tested for/and cured from hepatitis C	To be determined	60%/50%	90%/80%

^a Latest data for end 2020. Some targets use data from 2019 because of COVID-19 related service disruptions in the data reported for 2020. COVID-19 is not currently expected to affect the targets for 2025. All data will be disaggregated by age, sex and when relevant the focus populations specific to the disease.

^b Please note that the targets in this table are global targets and should be adapted to set targets for countries in relation to the national context. For example, in some countries a target for hepatitis B surface antigen prevalence among children younger than five years may be less than 0.1% or 0.2%, although the overall global target should be 0.1%.

^c In addition, the proportion of infants younger than 12 months of age who received the third dose of hepatitis B vaccine should also be measured as well as other indicators for preventing vertical transmission such as maternal testing and prophylaxis.

^d As part of a comprehensive harm reduction strategy and in line with national priorities.

5.2. Strategic Direction 1: Deliver high-quality, evidence-based, people-centred services

This section describes viral hepatitis-specific priority actions for countries along the continuum of viral hepatitis prevention, diagnosis, care and treatment services. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 1 in Chapter 3, and their delivery must be tailored to the needs of different affected populations and according to different epidemiological contexts (Box 5.2).

Box 5.2 – Populations affected by chronic viral hepatitis

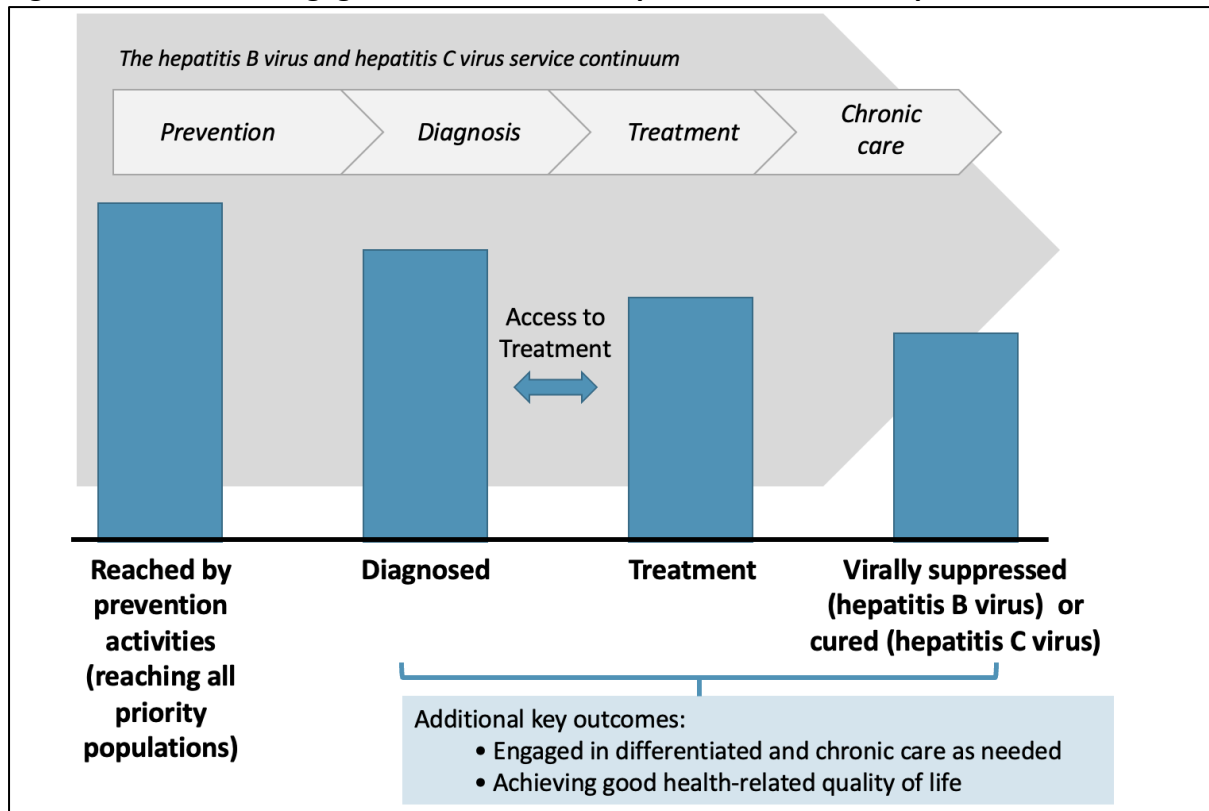
Populations affected by viral hepatitis vary greatly worldwide. In many regions, viral hepatitis B and C epidemics affect the general population but also some other at-risk populations, who are part of a population with higher prevalence or with a history of exposure and/or high-risk behaviour for infection. This includes certain mobile and migrant populations from high and intermediate endemic countries, some indigenous populations or those who have a history of exposure or high-risk behaviour for especially hepatitis C virus infection, such as people who inject drugs, people in prisons and other closed settings, men who have sex with men, sex workers, people living with HIV and children of mothers with chronic hepatitis B or hepatitis C infection, especially if living with HIV.

Populations that also require focused attention in many countries include those at risk of exposure through unsafe blood supplies, unsafe medical injections and other health procedures. In settings with high hepatitis B prevalence, vertical (mother-to-child) transmission of hepatitis B is the major mode of transmission, along with early childhood infection among those who have not been vaccinated. People who inject drugs are at high risk of viral hepatitis, especially hepatitis C virus. In some settings, some populations, including men who have sex with men, may also be at risk of sexually acquiring hepatitis B virus or hepatitis C virus. People displaced by conflict and humanitarian emergencies may be at particular risk of acquiring hepatitis A and E, because of their living conditions and inability to access clean water and safe food. Specific attention must also be given to people with advanced liver disease and people with various comorbidities such as tuberculosis, HIV, alcohol and drug use disorders, and noncommunicable diseases that may result in higher morbidity and mortality.

5.2.1. Viral hepatitis service delivery interventions

Action 61: Continuum of viral hepatitis services. Deliver a comprehensive continuum of viral hepatitis prevention, testing and treatment services. The continuum of viral hepatitis services provides an organizing framework for implementing essential interventions that comprehensively address people's needs. Services should be organized in ways that promote early engagement in care, maximize retention, and maximize treatment adherence. The retention cascade should be monitored to identify areas in which programmatic improvements are needed (Fig. 5.1).

Fig. 5.1. The service engagement cascade for hepatitis B virus and hepatitis C virus



Action 62: Viral hepatitis intervention packages. Define a core package of evidence-based interventions relevant to each country context and tailored to the needs of diverse populations and settings. Each country needs to define a package of essential viral hepatitis interventions along the service continuum, focusing particular attention to the distinct health service needs associated with hepatitis B virus and hepatitis C virus. The selection of interventions should be informed by data, scientific evidence, good practice, and community input, and consider burden, equity, effectiveness, cost, acceptability and feasibility. The intervention package should be aligned with universal health coverage benefit packages and linked with primary health care where feasible and relevant.

Action 63: Vertical transmission of hepatitis B and C virus (complements shared action 3). Elimination of vertical (mother-to-child) transmission of hepatitis B virus requires a comprehensive approach that includes adoption of the universal adoption of the hepatitis B birth-dose and infant vaccination, in addition to routine screening of all pregnant women for chronic hepatitis B virus infection and providing antiviral prophylaxis to those who are eligible. Pregnant women who are at risk for hepatitis C virus or live in settings in which this disease is endemic should also be screened for hepatitis C so that appropriate care and follow-up services can be provided for the mother and the infant. Treatment for hepatitis C is not currently recommended during pregnancy, but screening in pregnancy in endemic regions or among at-risk people can provide the opportunity for case finding and linkage to care and treatment.

Action 64: Viral hepatitis vaccines. (complements shared action 3). Implement a universal hepatitis B virus infant vaccination programme as part of the national immunization programme to reduce new hepatitis B infections. Infant vaccination against hepatitis B virus

also prevents hepatitis D infection and increasing infant vaccination will reduce the burden of chronic liver disease and death. Hepatitis B virus vaccination is also recommended as a catch-up for unvaccinated adolescents and targeted adult populations, including household contacts of people living with hepatitis B, health care workers, and frequent recipients of blood and blood products. Effective vaccines also exist for preventing acute viral hepatitis A infections in outbreaks alongside other preventative measures based on the country context. More comprehensive data are required on the routine use of the hepatitis E vaccine in outbreaks.

Action 65: Viral hepatitis testing. Increase awareness of the need for viral hepatitis B and C testing, expand access to testing through effective people-centred approaches, and link people who undergo testing to treatment and care. Under-diagnosis of viral hepatitis remains a critical barrier to eliminating viral hepatitis as a public health threat. National viral hepatitis policies and guidelines should define testing strategies for general and high-risk populations in accordance with the epidemiology of viral hepatitis in the country, and services should be appropriately tailored to the needs of affected populations in different settings. Public awareness campaigns educating endemic and at-risk populations and healthcare workers about the importance of testing should be greatly intensified. For people diagnosed with hepatitis B virus, providing hepatitis B testing and vaccination to those household contacts for whom it is warranted can prevent new infections and enhance the timely diagnosis of unrecognized infections. There is also a need to increase awareness of hepatitis D virus co-infection or superinfection among people with chronic hepatitis B infection, and to increase hepatitis D testing in people with hepatitis B virus infection, especially in settings in which hepatitis D virus co-infection is common. Populations that have high rates of hepatitis C infection, including people who inject drugs and men who have sex with men, should be given priority for hepatitis C testing, including self-testing, with efforts made to identify reinfection among people with ongoing high-risk behaviour. In many countries, laboratory capacity must be increased, laboratory systems strengthened, and measures taken to integrate testing platforms for multi-disease approaches (including molecular platforms) and also to ensure the reliable supply of quality-assured (WHO-prequalified) diagnostics and the timely reporting of testing results.

Action 66: Viral hepatitis treatment. Provide treatment for chronic hepatitis B and C infection to all adults, adolescents and children who are eligible for treatment, especially those with more advanced disease, ensuring that the most effective treatment regimens are accessible and affordable to all populations. Effective antiviral agents against viral hepatitis B and C have the potential to dramatically reduce morbidity and mortality, including among people who are living with HIV. Although treatment is recommended for chronic hepatitis C infection for all adults, adolescents and children in those aged three years or older, only a few of those with chronic hepatitis B infection will require treatment based on current eligibility criteria for long-term treatment. People living with chronic viral hepatitis need to be assessed for stage of liver disease before initiating treatment to ensure appropriate management. Ongoing monitoring is needed for those who have chronic hepatitis B and are not yet receiving treatment to determine when initiating hepatitis B treatment may be appropriate. Oral pan-genotypic direct-acting antiviral regimens for the treatment of chronic hepatitis C virus have cure rates exceeding 95%. Effective oral treatment with nucleoside analogs is available for chronic hepatitis B virus infection, although lifelong treatment is

usually required. WHO guidelines for treating chronic viral hepatitis B and C infection promote a simplified public health approach.

Action 67: Chronic care for people with viral hepatitis. Address the chronic care and quality of life needs associated with viral hepatitis through people-centred approaches and using service delivery models that address comorbidities in an integrated manner. People with chronic viral hepatitis infection may require care for a range of health and psychosocial problems. In addition to liver cirrhosis and hepatocellular carcinoma, people with chronic hepatitis infection may experience extrahepatic manifestations of their infection, including insulin resistance and diabetes. Alcohol use, hypertension and obesity may complicate chronic hepatitis B and C virus infection and may accelerate the progression of liver disease. Assessing alcohol intake is recommended for all people with chronic viral hepatitis infection followed by the offer of behavioural interventions to cease or reduce alcohol intake.

People living with chronic hepatitis B or C may also have co-infections such as HIV or with hepatitis D virus for those with chronic hepatitis B. Most people living with HIV who are also co-infected with hepatitis B virus are receiving antiretroviral drug regimens which are also active against hepatitis B infection. hepatitis D virus superinfection with hepatitis B virus can lead to severe chronic hepatitis and accelerate liver disease progression. Improved access to testing for hepatitis D virus is important, especially in countries in which hepatitis D virus is endemic, although treatment options are limited and costly.

Another common chronic care need for people living with hepatitis B, including those with significant liver fibrosis who have been treated successfully for hepatitis C, is the management of advanced liver disease, especially decompensated cirrhosis as well as screening for and managing hepatocellular carcinoma. Treatment options including endoscopic therapy, surgical resection, chemotherapy and liver transplantation, are limited in most low- and middle-income settings, highlighting the need to prevent disease progression and provide good quality palliative and end-of-life care.

Action 68: Viral hepatitis prevention, treatment and care for children and adolescents (complements shared actions 3 and 4). Prevent all new viral hepatitis B and C infections among children, and address the longer-term monitoring, treatment and care needs of affected children and adolescents. In many settings, particularly in the WHO African Region, coverage with hepatitis B vaccination at birth and infancy is still sub-optimal. More than 4.7 million children younger than five years live with chronic hepatitis B virus infection and are in need of ongoing monitoring for early detection of disease progression. An estimated 3.26 million children and adolescents have hepatitis C virus infection globally, and national testing and treatment programmes and elimination strategies should address their needs. WHO now recommends hepatitis C treatment for adolescents and children aged three years or older, using the same direct-acting antiviral regimens approved in adults. This should include providing adolescent-friendly services that also address psychosocial support and management of stigma for children and adolescents with hepatitis B and hepatitis C virus infection.

5.2.2. Viral hepatitis interventions to enhance integration and linkages with other health areas

Action 69: Chronic viral hepatitis B and C and primary liver cancer (complements shared action 9). Strengthen integration and linkage between efforts to prevent and manage chronic viral hepatitis and primary liver cancer. In the absence of effective treatment, an estimated 20–30% of people with chronic hepatitis B or C virus infection will develop cirrhosis and are at risk of developing liver cancer. Liver cancer remains a key driver of hepatitis B virus and hepatitis C virus liver-related mortality, and routine screening for primary liver cancer urgently needs to be improved among people who have chronic viral hepatitis B and C infection and are at risk for progressive disease. Linkage between viral hepatitis services and cancer prevention, control and treatment efforts is also needed.

5.3. Strategic direction 2: Optimize systems, sectors and partnerships for impact

This section describes viral hepatitis-specific priority actions to strengthen health service delivery and other health system functions including multisectoral collaboration. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 2 in Chapter 3.

Action 70: Decentralized and differentiated viral hepatitis services (complements shared actions 18 and 19). Decentralize viral hepatitis services and provide differentiated care to deliver the appropriate services to people with different levels of needs. Viral hepatitis B and C interventions have traditionally been delivered through hospital-based tertiary services and by specialists. Eliminating hepatitis will require adopting a public health approach using simplified service delivery protocols, including decentralizing testing and treatment to lower-level health facilities, including primary care, harm reduction sites or prisons, ideally with delivering testing and treatment at the same site to promote linkage; integration of viral hepatitis testing and treatment services into existing primary health care, HIV, harm reduction, or prison health; and delivery of care and treatment by non-specialists including primary care physicians and nurses with support from peer workers and patient navigators in some settings. Differentiated service delivery promotes people-centred care and optimizes the use of health system resources by tailoring services to specific needs. For example, non-symptomatic patients or those who are clinically stable may be served through primary health care and community-based services, whereas those with advanced liver disease may require more intensive clinical support and additional psychosocial and mental health support.

Action 71: Financing for viral hepatitis (complements shared action 23). Implement strategies to increase investment in viral hepatitis, including by leveraging domestic and existing donor funding and by accelerating new opportunities for catalytic and innovative funding. Although the key interventions for hepatitis B virus and hepatitis C virus prevention, testing and treatment are cost-effective interventions across most settings and populations, the public health response to viral hepatitis have been severely underfunded. To date, very little external development assistance has been made available for comprehensive viral hepatitis specific responses. It is important to ensure that viral hepatitis services are part of national essential health benefit packages supported by adequate financing and coordinated actions to advance towards universal health coverage and primary health care platforms, in

addition to optimizing the use of resources by integrating services, reducing costs and improving efficiencies; and pursuing price reduction strategies. Countries must take opportunities to develop evidence-based investment cases for including viral hepatitis interventions in essential health benefit packages, and strategies to increase investment in hepatitis need to be part of broader efforts to increase overall investments in health, so that all priority health services can be scaled up towards universal health coverage.

Action 72: Essential viral hepatitis commodities (complements shared action 24). Ensure equitable and reliable access to quality-assured and affordable medicines, diagnostics and other health products for viral hepatitis. In many settings, lack of availability of low-cost diagnostics for hepatitis B and C testing and clinical management, along with a lack of laboratory capacity, contribute to low testing levels and poor clinical outcomes. Although prices for the rapid diagnostic screening tests for hepatitis B and C are generally low, the costs for the required molecular hepatitis C virus RNA and hepatitis B virus DNA assays are still comparatively high relative to the treatment costs, posing a major barrier to scaling up diagnosis and treatment of hepatitis B and C infection. A generic drug formulation for the treatment of hepatitis B virus is widely available and affordable in many countries, although obstacles to registration have prevented its use in some countries. Treatment for hepatitis C virus infection with direct-acting antiviral agents is well tolerated and curative. Major obstacles to increasing access to treatment include limited domestic financing and high costs due to supply chain mark-ups, fragmented demand and low-volume orders. Comprehensive strategies need to be pursued to improve the affordability and availability of viral hepatitis diagnostics and treatment, including by addressing generic competition and greater market transparency, facilitating timely product registration, and leveraging strategic procurement options.

Action 73: Health workforce for viral hepatitis (complements shared action 25). Increase general health workforce competencies relating to viral hepatitis testing and treatment. Many essential viral hepatitis prevention interventions are integrated within broader health services, including programmes for childhood vaccination, blood and injection safety, food safety, water and sanitation, and health and treatment interventions, including harm reduction, for people who use drugs. Testing and treatment are being increasingly incorporated into the clinical management of infectious diseases and chronic care for non-communicable diseases. In all settings, including primary health care, health workers should be knowledgeable about viral hepatitis risk factors, prevention and management, and about the package of essential hepatitis interventions. They should be competent to work with adults and children living with chronic hepatitis infection and with at-risk populations and should be trained in non-stigmatizing and non-discriminatory behavior. Given the risk of viral hepatitis transmission in formal and informal health-care settings, all health workers should be protected by comprehensive occupational health and safety programmes, including routine hepatitis B vaccination to prevent high-risk exposure to hepatitis B virus or hepatitis C virus. Health systems need to invest in capacity-building, ongoing training, mentorship and supervision and to support non-specialists, including primary care physicians and nurses, to deliver hepatitis C and B care and treatment.

5.4. Strategic direction 3: Generate and use data to drive decisions for action

This section describes viral hepatitis-specific actions to strengthen health information systems for better data availability, use and accountability. The actions in this section should be implemented in conjunction with the relevant shared actions described under Strategic direction 3 in Chapter 3.

Action 74: Person-centred data monitoring for viral hepatitis (complements shared actions 30 and 31). Expand person-centred monitoring for viral hepatitis to support people-centred viral hepatitis services. Existing person-centred monitoring systems for prevention, testing and treatment, including those for HIV, can be leveraged to monitor hepatitis services along the cascade. If individual-level monitoring is not feasible, for example during early stages of expansion of the viral hepatitis response, aggregate data can be used to assess cascades of care. Disaggregated data analyses, such as by geographical location or socioeconomic status, are important to improve quality and equity.

Action 75: Health information systems for viral hepatitis (complements shared action 32). Invest in strengthening information systems for viral hepatitis and integrating them more fully into broader health information systems. Viral hepatitis information systems are complex as they need to capture new or acute infections, chronic infections, and sequelae that lead to morbidity and mortality. Since the gap between people being infected with hepatitis B or C and dying can be 20-30 years, and different parts of the health system capture the data, viral hepatitis information systems should be integrated and enable data triangulation for analysis. Strengthening surveillance and monitoring for advanced liver disease and hepatocellular carcinoma is especially important to monitor progress and to enable WHO to validate the elimination of viral hepatitis. Integrated health information systems are also required in relation to efforts to progress towards the triple elimination of vertical (mother-to-child) transmission of HIV, syphilis and hepatitis B virus and improving linking to other systems, such as vital statistics, cancer registries, immunization, sexual and reproductive health towards validating the elimination of hepatitis B and C virus as public health threats.

5.5. Strategic direction 4: Engage empowered communities and civil society

This section describes viral hepatitis-specific actions to engage communities, civil society organizations and affected populations in advocacy, service delivery, policy-making and initiatives to enhance service delivery and tackle social and structural barriers. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 4 in Chapter 3.

Action 76 Community and civil society leadership for viral hepatitis (complements shared action 33). Engage and support people living with viral hepatitis and communities to play a central role in efforts to eliminate viral hepatitis through advocacy, policy-making, research, service delivery and monitoring and evaluation. The meaningful involvement of people living with viral hepatitis, communities and civil society promotes awareness-raising for hepatitis B and C and equitable responses to viral hepatitis and is key to effectively addressing the stigmatization, discrimination, social marginalization and gender-based violence faced by people living with viral hepatitis and those at risk. Stigma and discrimination take different

forms in relation to hepatitis B virus and hepatitis C virus and must be addressed as distinct issues. Some of these barriers can be overcome by adapting existing service delivery models to meet the needs of affected populations. Others may require the reviewing and reforming of certain laws, regulations and policies that limit access to health services. Discrimination against people based on their hepatitis diagnosis can limit their employment opportunities and impede their ability to access health services and improve their quality of life. Populations that commonly encounter legal and policy barriers to accessing viral hepatitis services include adolescents and young people, migrants from countries with a high burden of hepatitis, and key populations.

5.6. Strategic direction 5: Foster innovations for impact

This section describes viral hepatitis-specific actions to foster and disseminate innovations for accelerated impact. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 5 in Chapter 3.

Action 77: New viral hepatitis diagnostics technologies and testing approaches. Continue to improve diagnostics technologies and testing approaches for simplified, timely and accurate diagnosis of chronic hepatitis B and hepatitis C virus and strengthened patient monitoring. Underdiagnosis of viral hepatitis B and C infection remains a major barrier to achieving elimination goals. Further development and expansion of simple, affordable and reliable point-of-care technologies to confirm the presence of viraemic hepatitis C virus infection and evaluate hepatitis B virus viraemia for monitoring or treatment eligibility are needed. The availability of a rapid diagnostic test for hepatitis C virus core antigen represents another potential solution that would promote access to treatment and facilitate service decentralization. Numerous research initiatives are also underway to develop polyvalent or integrated diagnostic platforms as well as point-of-care solutions for the combined diagnosis of HIV, viral hepatitis, sexually transmitted infections and tuberculosis. Greater collaboration, supported by WHO and partners, can accelerate timeframes to ensure that such innovations are available in countries as early as possible. In 2021, WHO recommended self-testing for hepatitis C virus, an acceptable and empowering means for many affected populations to access testing. Additional research and product development are needed to evaluate the contribution of hepatitis C virus self-testing in different populations and to develop similar self-testing options for hepatitis B virus. Finally, affordable and reliable point-of-care methods need to be developed for assessing liver damage.

Action 78: Optimized antiviral agents for hepatitis B and C virus. Support research on optimal doses and formulations of antiviral agents for hepatitis B and C virus. The development of long-acting therapies for hepatitis B and C virus offer the potential to further simplify care pathways, increase adherence and retention, and improve outcomes. Improved and accessible treatment formulations for children are also needed, as is research into affordable and acceptable treatment solutions for hepatitis D virus.

Action 79: New viral hepatitis vaccines. Promote the hepatitis C and hepatitis E virus vaccine agenda by strengthening collaboration with research and development-based partnerships, the private sector and communities. Efforts to develop an effective vaccine against hepatitis C virus continue to be an important component of the viral hepatitis research agenda. A hepatitis E vaccine is widely used in outbreaks, but experience is still limited with its use

outside of China, in a range of outbreak settings, and among pregnant women who are at high risk of mortality. Innovation is also required in using controlled temperature chain and compact pre-filled auto-disable devices for the hepatitis B birth-dose vaccine to expand coverage and achieve elimination targets in low- and middle-income countries.

Action 80: Hepatitis B virus cure research. Promote investments and visibility in efforts to secure viable hepatitis B virus cure strategies through strengthened collaboration with research- and development-based partnerships, the private sector and communities.

Although a sterilizing cure for hepatitis B virus, which would result in elimination of the virus from the body, is not immediately foreseen, research efforts continue to explore the development of a functional cure that would highly simplify hepatitis B virus care and markedly increase treatment access.

6 Sexually transmitted infections

This chapter presents the global health sector strategy on sexually transmitted infections. It presents the key strategic and operational shifts required to end sexually transmitted infections as public health concerns by 2030 (Box 6.1), with priority targets, interventions and innovations. Actions for countries in this chapter should be implemented in conjunction with the shared actions for countries defined in Chapter 3.

Box 6.1. Key strategic and operational shifts required to end sexually transmitted infections as public health concerns by 2030:

- Create an environment that enables individuals to comfortably talk about their sexual health, adopt safer sexual practices, and seek treatment for sexually transmitted infections
- Vastly scale up primary prevention and increase access to screening for sexually transmitted infections
- Increase access to high-quality, people-centred case management of sexually transmitted infections delivered by public, private and non-governmental service providers
- Increase the integration of sexually transmitted infection services with primary health care, sexual and reproductive health, family planning, adolescent health, and HIV services
- Ensure sufficient financing for sexually transmitted infection services as part of national health financing mechanisms
- Strengthen the capacity of national health information systems to ensure the timely collection and analysis of disaggregated data to inform health policies, treatment guidelines and resource allocation
- Support accelerated research and development on prevention technologies, diagnostics, treatments and vaccines for sexually transmitted infections

More than 30 pathogens can be transmitted sexually, and individuals may have more than one infection at the same time. Sexually transmitted infections often do not cause symptoms or may have long asymptomatic periods and thus can be unknowingly transmitted during sexual intercourse or during pregnancy. Women and girls are disproportionately affected by sexually transmitted infections. When left untreated, sexually transmitted infections can, depending on the nature of the specific infections, lead to long-term irreversible and potentially fatal outcomes including chronic pelvic pain, cancers, ectopic pregnancies, infertility, adverse pregnancy outcomes, neonatal death, and congenital abnormalities. Some sexually transmitted infections can also facilitate HIV acquisition.

The global health sector strategy on sexually transmitted infections is not limited in scope to specific pathogens, and instead recognizes that sexually transmitted infections can be prevented, diagnosed and treated through the use of integrated health system strategies. This approach contributes to people-centred health services by focusing on the overall needs of people who have or are at risk for sexually transmitted infections. Countries need to address the individual, community and structural factors that contribute to the spread of

sexually transmitted infections, ensuring that people have access to high-quality health care services to prevent the transmission of sexually transmitted infections and to treat and care for those who have them, free from stigma and discrimination.

Three infections of major global significance are syphilis (*Treponema pallidum*), gonorrhoea (*Neisseria gonorrhoeae*) and human papillomavirus infection, all of which are being targeted by specific global initiatives.^{42 43 44} These infections warrant specific attention because of factors such as high incidence and prevalence, serious adverse outcomes, the existence of cost-effective infection-specific tools, and the potential for developing treatment resistance. Other important infections include chlamydia (*Chlamydia trachomatis*), trichomoniasis (*Trichomonas vaginalis*), herpes simplex virus and human T-lymphotropic virus type 1 (HTLV-1) (Box 6.2).

Box 6.2. Human T-lymphotropic virus type 1 (HTLV-1)

The human T-lymphotropic virus type 1, also known by the acronym HTLV-1, is a retrovirus transmitted primarily through sexual intercourse, including through semen and vaginal secretions. It can also be transmitted through blood and breast-milk. Risk factors for transmission include unprotected sex, injecting drug use, and receiving blood transfusions. HTLV-1 can cause a range of clinical syndromes including adult T-cell leukaemia and HTLV-1-associated myelopathy/tropical spastic paraparesis. Major gaps exist in the epidemiology, public health impact, disease progression and broader health consequences, including preventing the transmission and management of HTLV-1 disease exist. Few countries have established policies, strategies, budgets and services relating to HTLV-1 prevention, testing, treatment and care. Countries can integrate the prevention and management of HTLV-1-associated conditions into other programme areas, such as services for sexually transmitted infections, cancer prevention and management and nervous system disorders. HTLV-1 incidence and morbidity can be reduced by incorporating control measures into existing disease control interventions and public health strategies such as condom promotion and blood safety screening.

The global targets presented in the next section of this strategy are based on estimates derived from current data, which for many countries are very limited. WHO and technical partners need to continue to support national governments and other stakeholders to develop and implement practical methods for data collection on sexually transmitted infections.

⁴² Triple elimination initiative of mother-to-child transmission of HIV, syphilis and hepatitis B. Geneva: World Health Organization; 2019 (<https://www.who.int/initiatives/triple-elimination-initiative-of-mother-to-child-transmission-of-hiv-syphilis-and-hepatitis-b>), accessed 31 December 2021).

⁴³ The WHO GASP network. Geneva: World Health Organization; 2019 (<https://www.who.int/initiatives/gonococcal-antimicrobial-surveillance-programme/gasp-network#:~:text=The%20WHO%20Gonococcal%20Antimicrobial%20Surveillance%20Programme%20%28GASP%29%20is,%20antimicrobial%20susceptibility%20in%20gonorrhoea%20in%20participating%20countries>), accessed 31 December 2021).

⁴⁴ Cervical cancer elimination initiative. Geneva: World Health Organization; 2020 (<https://www.who.int/initiatives/cervical-cancer-elimination-initiative>), accessed 31 December 2021).

6.1. Sexually transmitted infection targets

Table 6.1 below presents impact and programmatic coverage indicators and targets, as well as policy milestones, for sexually transmitted infections.

Table 6.1. Impact and coverage indicators, targets and milestones for Sexually transmitted infections by 2030

	Indicator	Baseline – 2020 ^a	Targets - 2025	Targets - 2030
Impact	Number of new cases of syphilis, gonorrhoea, chlamydia and trichomoniasis ^b among people 15–49 years old per year	374 million	<300 million	<150 million ^c
	Number of new cases of syphilis among people 15–49 years old per year	7.1 million	5.7 million	0.71 million
	Number of new cases of gonorrhoea among people 15–49 years old per year	82.3 million	65.8 million	8.23 million
	Congenital syphilis cases per 100,000 live births per year	425	< 200	< 50
	Percentage of girls fully vaccinated with human papillomavirus vaccine by 15 years of age	14%	50%	90%
Coverage	Percentage of pregnant women attending antenatal care screened for syphilis / percentage treated if positive	66% / 78% ^d	> 85% / > 90%	> 95% / > 95%
	Percentage of priority populations ^e screened for syphilis / percentage treated if positive	No data/ No data	> 80% / > 90%	> 90% / > 95%
	Percentage of priority populations ^e screened for gonorrhoea/percentage treated if positive	No data/ No data	> 20% / > 90%	> 90% / > 95%
	Percentage of women screened for cervical cancer using a high-performance test, by the age of 35 years and again by 45 years / percentage screened and identified as having pre-cancer treated or invasive cancer managed	No data/ No data	>40% / > 40%	> 70% / > 90%
	Number of countries reporting antimicrobial resistance in <i>Neisseria gonorrhoeae</i> to the WHO Gonococcal Antimicrobial Surveillance Programme	36%	>60%	> 70%

	Indicator	Baseline – 2020 ^a	Targets - 2025	Targets - 2030
Milestones	Planning - Number of WHO member states with national sexually transmitted infection plans updated within the past five years	44% ^f	>70%	> 90%
	Policies - Number of WHO Member States with national sexually transmitted infection case management guidelines updated within the past three years	62% ^f	>70%	>90%
	Surveillance - Number of countries with strong sexually transmitted infection surveillance systems ^g	No data	>50%	>90%

^a Latest data for end 2020. All data will be disaggregated by age, including adolescents where available, sex and when relevant focus populations specific to the disease

^b Curable sexually transmitted infections.

^c 2025 targets reflect a 20% reduction in incidence of all 4 diseases (2020 baseline) whilst the 2030 targets reflect target of 90% reduction in the number of new cases of syphilis and gonorrhoea as well as 50% reduction in the number of new cases of chlamydia and trichomoniasis by 2030.

^d 2016 estimates

^e Priority populations are defined by individual countries; for screening include men who have sex with men, sex workers and people living with HIV.

^f Estimates based on 112 countries reporting on national sexually transmitted infection strategic plans and national sexually transmitted infection treatment guidelines that have been updated within the past five years: found in: Assessment of country implementation of the WHO Global health sector strategy for sexually transmitted infections (2016-2021): results of a national survey <https://www.who.int/publications/i/item/9789240025585>.

^g A strong surveillance system for sexually transmitted infections incorporates four core competencies: case reporting, regular prevalence assessments among antenatal care, men and priority populations, regular annual reviews of the causation of sexually transmitted infection syndromes and symptomatic data corrected for underreporting and monitoring of antimicrobial resistance for *Neisseria gonorrhoea*.

6.2. Strategic direction 1: Deliver high-quality, evidence-based, people-centred services

This section describes priority actions for countries to make high-quality sexually transmitted infection services more widely available and accessible. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 1 in Chapter 3. Their delivery must be tailored to the needs of most-affected populations within each epidemiological context (Box 6.3).

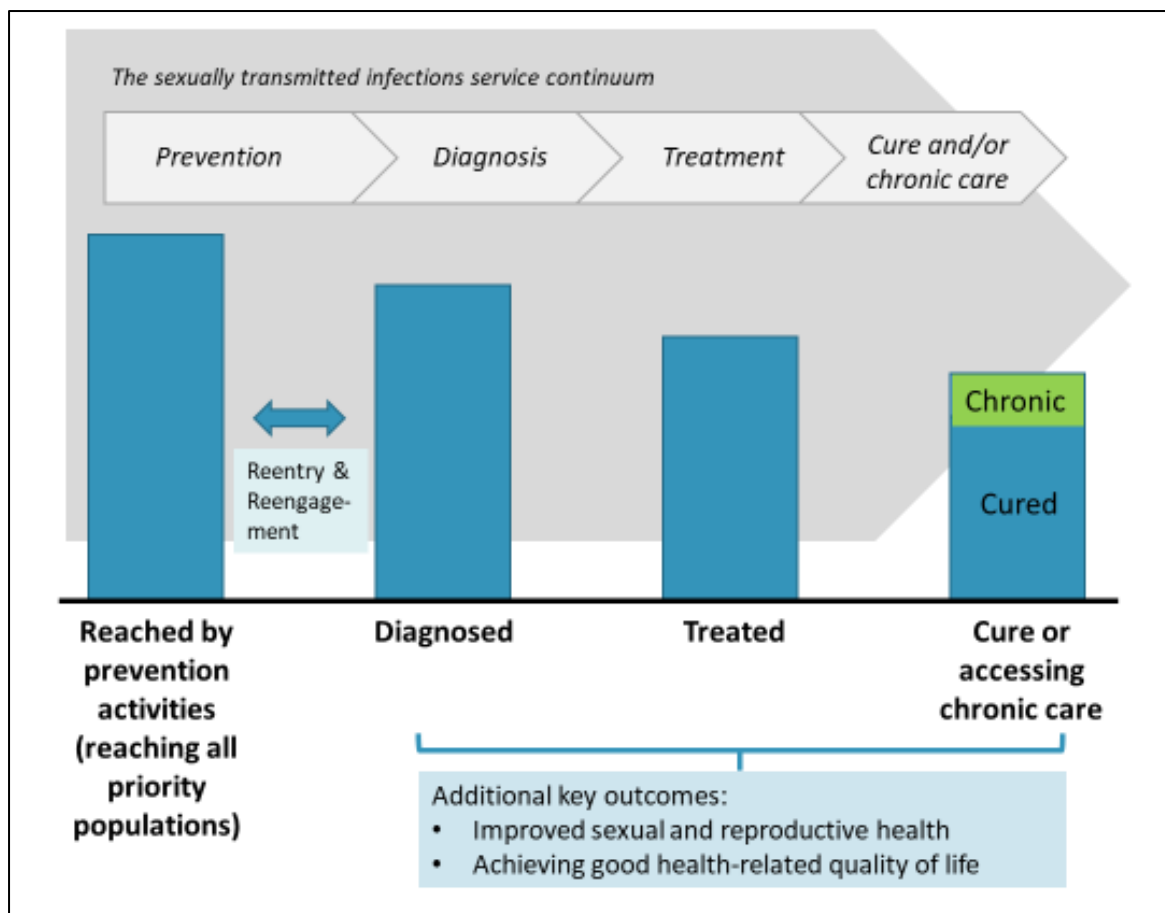
Box 6.3 – Priority populations for sexually transmitted infections

Health systems need to focus on reaching specific populations in order to achieve equitable progress against sexually transmitted infections, taking into account variations in incidence and prevalence, sexual behaviours and local contexts. Priority populations in many settings include adolescent girls and boys, young people, sex workers and their clients, men who have sex with men, transgender people, people living with HIV, people who have other sexually transmitted infections, and pregnant women. Other groups that are especially vulnerable to sexually transmitted infections in many settings include people who have experienced gender-based violence, indigenous peoples, children and young people living on the street, people affected by conflict and civil unrest, and people with disabilities.

6.2.1 Sexually transmitted infections service delivery interventions

Action 81: Continuum of sexually transmitted infection services. Provide a comprehensive continuum of sexually transmitted infection services within the context of promoting sexual health and well-being to address people’s needs. The continuum of services for sexually transmitted infections provides an organizing framework for implementing essential interventions that comprehensively address people’s needs relating to prevention, testing, treatment and care. For sexually transmitted infections, the continuum of services has two pathways reflecting the differences between infections that can be treated and cured, and those that are lifelong infections. Health services should be organized so that individuals with curable sexually transmitted infections are diagnosed and treated on the same day and individuals with lifelong sexually transmitted infections are retained in long-term care. The retention cascade should be monitored to determine where loss to follow-up is occurring and needs to be remedied (Fig. 6.1). Diagnose-and-treat strategies and access to conveniently located referral services can help to optimize outcomes at the individual and population levels.

Fig. 6.1. The service engagement cascade for sexually transmitted infections



Action 82: Sexually transmitted infection intervention packages. Define a core package of evidence-based interventions relevant to each country context and tailored to the needs of diverse populations and settings. Each country needs to define a package of essential

sexually transmitted infection interventions along the service continuum, with particular attention to the distinct health service needs associated with sexually transmitted infections. The selection of interventions should be informed by data, scientific evidence, good practice, and community input, and consider burden, equity, effectiveness, resistance, cost, acceptability and feasibility. The intervention package should be aligned with universal health coverage benefits packages and linked to primary health care where feasible and relevant.

Action 83: Prevention of sexually transmitted infections (complements shared action 1).

Scale up primary prevention interventions that are tailored to different populations and locations. People may require different sexually transmitted infection prevention options based on their age, sex and circumstances, and individual risks and needs may change across the life-course. Data should be analysed to determine the optimal mix of prevention interventions for different populations and locations, with person-centred monitoring to adapt services to population needs. Key interventions include comprehensive education focused on sexual and reproductive health, (as described in action 1), access to condoms, providing partner services, (as described in action 7), post-exposure prophylaxis when needed, promoting voluntary medical male circumcision where appropriate, and suppressive therapy for people with herpes simplex virus.

Action 84: Vaccines for sexually transmitted infections (complements shared action 1).

Implement a comprehensive human papillomavirus vaccination programme and accelerate the uptake of vaccines for other sexually transmitted infections as they are developed. Effective vaccines exist for preventing human papillomavirus infections, and wider provision of these vaccines will drastically reduce new cases of cervical, penile and anal cancers. More than 100 countries have now included human papillomavirus vaccine in vaccination strategies, but coverage within countries needs to increase and strategies to promote vaccination targeting adolescent girls need to be strengthened. Barriers in uptake of vaccination and vaccine hesitancy should be addressed. In countries with sufficient resources, human papillomavirus vaccine programmes are expanding to include vaccination of adolescent boys.

Action 85: Vertical transmission of sexually transmitted infections (complements shared action 3). Prevent vertical (mother-to-child) transmission of sexually transmitted infections.

Several sexually transmitted infections, including HIV, syphilis, gonorrhoea, chlamydia, herpes simplex virus, and HTLV-1, can be transmitted vertically. Reducing vertical transmission will require improving access to antenatal care services and ensuring that antenatal clinics have the means to effectively prevent and manage these infections. To prevent reinfection with curable sexually transmitted infections, pregnant women should be assisted to notify their sexual partners for treatment. For syphilis, the earlier in pregnancy a woman is screened and treated, the lower the risk of an adverse birth outcome, ideally in the first antenatal care visit. Infants born to untreated or mothers with syphilis not treated with benzathine penicillin G will require adequate follow up. Suppressive herpes simplex virus therapy should be considered for women with suspected primary genital herpes during the last trimester of pregnancy to prevent neonatal herpes, and their infants followed up. In addition, all newborns should be provided with their hepatitis B birth dose, and in settings in which mothers are not routinely screened for gonorrhoea and chlamydial infection, routine prophylaxis for ophthalmia neonatorum should be administered during delivery.

Action 86: Sexually transmitted infection awareness and treatment-seeking behaviour. **Increase awareness of sexually transmitted infections and their symptoms and encourage individuals to seek early treatment.** Health education activities in health care settings, community settings and other settings must normalize the dialogue about sexual health. Information and age-appropriate education campaigns should take positive approaches to promoting sexual health and teaching individuals to prevent and recognize the signs and symptoms of sexually transmitted infections and the importance of seeking treatment and preventing reinfection. Health promotion activities and targeted education conducted by community groups are also needed. Self-care strategies, including self-collection of specimens and telemedicine, can reduce barriers to accessing sexually transmitted infection services.

Action 87: Case management for symptomatic sexually transmitted infections. **Provide effective and comprehensive case management for people with symptomatic sexually transmitted infections and prevent onward transmission.** Individuals need to be able to access quality sexually transmitted infection services in an environment in which they feel comfortable and in which care is provided in a non-discriminatory and non-stigmatizing manner, including in primary health care settings, community settings and pharmacies. If possible, diagnosis should be supported by aetiologic testing and timely reporting. New models for delivering sexually transmitted infection services should also be implemented to increase the quality and convenience of sexually transmitted infection diagnosis, care, and treatment, such as telehealth, express clinics, pharmacy-based services, self-testing and self-collected specimens, mobile clinics, and expedited partner therapy. Evidence based national case management guidelines need to be updated regularly to reflect advances in treatments and diagnostics and the development of resistance to medicines. As reliable and affordable new quality-assured diagnostic tests become available, national case management guidelines will need to be adjusted. Transition from syndromic management to causative management for gonorrhoea, chlamydia and syphilis, as well as trichomoniasis where possible, should be scaled up with high coverage in primary health care.

Action 88: Sexual partner services for sexually transmitted infections (complements shared action 7). **Implement strategies for providing voluntary partner notification and accessible follow-up services for partners.** Partner services can make an important contribution to averting further transmission of sexually transmitted infections and reinfection. Partner services interventions should only be offered if engagement in services is voluntary. Confidentiality must be ensured for the index case and that person's partners. Evidence-based strategies, such as expedited partner treatment and voluntary provider-assisted referral of sexual partners and potentially social network-based approaches developed for HIV testing provide opportunities to reach and offer partner management services for the sexual partners of those diagnosed with other sexually transmitted infections. Innovations in contact tracing for COVID-19, including through the use of digital platforms, might also be adapted to support voluntary partner testing and related services.

Action 89: Screening priority populations for sexually transmitted infections. **Expand access to sexually transmitted infection screening services for priority populations.** Screening priority populations and treating everyone infected improves the health of individuals and reduces prevalence in the community. National sexually transmitted infection policies and guidelines should define screening strategies based on available epidemiological data. All

pregnant women should be screened for HIV and syphilis at least once and as early as possible during pregnancy, and priority populations, including individuals taking pre-exposure prophylaxis for HIV, should be screened regularly for HIV and syphilis. In addition, priority populations should be screened with quality-assured diagnostic tests for gonococcal and chlamydial infections where possible. Multiple anatomic site sampling and pooling of samples should be considered. Women of reproductive age should be screened regularly for cervical disease following national guidelines. Screening programmes for sexually transmitted infections are currently limited by the availability of accurate low-cost point-of-care diagnostic tests. Efforts are needed to make laboratory testing for sexually transmitted infections more affordable and accessible.

Action 90: Treatment for the complications and sequelae of sexually transmitted infections.

Provide appropriate prevention and management of sexually transmitted infection complications and their sequelae. Early diagnosis and treatment of sexually transmitted infections will prevent complications and sequelae such as pelvic inflammatory disease, ectopic pregnancy, neurosyphilis, disseminated gonococcal and chlamydial infection, among others. Early diagnosis and treatment also contribute to the prevention of cancers caused by some sexually transmitted infections such as human papilloma virus and HTLV-1.

Action 91: Drug resistance in sexually transmitted infections. Monitor the patterns of antimicrobial resistance to inform treatment recommendations and policies.

There is widespread resistance to most medicines used to treat gonorrhoea in many parts of the world. Other sexually transmitted infection pathogens with potential antimicrobial resistance include *Mycoplasma genitalium* and *Trichomonas vaginalis*. The development of antimicrobial resistance is a global challenge. Countries need to strengthen and expand surveillance and monitoring of treatment failures and participate in building regional networks of laboratories to perform gonococcal culture and antimicrobial susceptibility testing. Data obtained through antimicrobial surveillance should be used to regularly update national treatment guidelines and policies. Strengthening national drug regulations and prescription policies and increasing awareness of the correct use of antimicrobial agents among health care providers and consumers, especially in priority populations, are also important. Efforts to address antimicrobial resistance in relation to sexually transmitted infections should be aligned with the overall WHO global antimicrobial resistance action plan.²⁰ In response to the challenge of widespread resistance to most medicines used to treat gonorrhoea, WHO has strengthened the Gonococcal Antimicrobial Surveillance Programme by establishing a network of laboratories to coordinate gonococcal antimicrobial resistance surveillance linked to the Global Antimicrobial Resistance and Use Surveillance System.

6.2.2. Sexually transmitted infection interventions to enhance integration and linkages with other health areas

Action 92: Linking sexually transmitted infection services with other health services (complements shared actions 9 and 11).

Strengthen linkages, collaboration and integration between sexually transmitted services and other health services. Delivering sexually transmitted infection services alongside other health services has the potential to reduce costs, improve efficiency, and increase access to and uptake of services. Given the high morbidity of sexually transmitted infection across a range of populations, integrating sexually transmitted infection services into primary health care is essential. Prevention and case

management for sexually transmitted infections should be linked closely with HIV prevention services, including community-based and outreach services for HIV key populations. Linkage to adolescent health services and school health education services are important to reach adolescent boys and girls. Sexually transmitted infection services also need to develop strong referral mechanisms with cancer services. Other areas in which sexually transmitted infection services and other services might be combined include family planning, maternal and neonatal care, immunization, noncommunicable diseases, mental health, and health promotion, including sexual health promotion. Countries should develop appropriate models for integration and linkage based on their context and health system characteristics.

6.3. Strategic direction 2: Optimize systems, sectors and partnerships for impact

This section describes priority actions specific to sexually transmitted infections to strengthen health service delivery and other health system functions including multisectoral collaboration. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 2 in Chapter 3.

Action 93: People-centred sexually transmitted infection services (complements shared actions 18 and 19). Expand access to and uptake of people-centred sexually transmitted infection services. Sexually transmitted infection targets will not be reached unless services become more accessible to the populations most at risk. The use of simplified service delivery models must be expanded and more widely integrated with other health services, including primary health care, HIV, antenatal care, and sexual and reproductive health. Implementation science should guide the scaling-up of programmes for sexually transmitted infections, including decentralized services delivered through task-sharing with primary health care and community-based services. Health systems must increase the capacity of primary health care services to prevent and manage sexually transmitted infections along with HIV and viral hepatitis. Focused efforts are needed to engage men and boys in sexually transmitted infection services through interventions that speak to their specific needs. Service delivery models must be developed to make high-quality non-stigmatizing sexually transmitted infection services accessible and acceptable to priority populations, including through community-led service delivery; and to empower individuals to become active participants in promoting their own health.

Action 94: Financing for sexually transmitted infections (complements shared action 23). Implement strategies to increase investment in the prevention and treatment of sexually transmitted infections. Although interventions to prevent and treat sexually transmitted infections exist, national governments and external development agencies have not yet given priority to funding for the public health response to sexually transmitted infections. Countries need to identify opportunities to mobilize funding for sexual health and to incorporate the prevention and treatment of sexually transmitted infections into broader efforts to increase overall investments in health.

Action 95: Essential sexually transmitted infection commodities (complements shared action 24). Ensure equitable and reliable access to affordable quality-assured medicines, diagnostics, vaccines, condoms and other health products for sexually transmitted infections. Sexually transmitted infection prevention, diagnostic and treatment commodities should be incorporated in national health procurement and supply management systems to ensure that the right products are selected, purchased at a reasonable price and efficiently delivered. Stock monitoring systems have an important role to reduce stock-outs and should be linked to national demand and supply forecasts. Pooled and centralized procurement both nationally and regionally can help to reduce costs, assure quality and avoid stock-outs. Providing quality-assured commodities is important, and countries purchasing products with no WHO prequalification nor approval by a stringent regulatory agency face challenges in doing so. This is the current case for penicillin, which is the only drug known to prevent congenital syphilis. WHO is working with partners to ensure the quality of penicillin in the near future.

Action 96: Private-sector and nongovernmental sexually transmitted infection services. Work with the private sector and nongovernmental organizations to increase access to high-quality sexually transmitted infection services. Many providers, including the private sector and nongovernmental organizations, deliver sexually transmitted infection services. Client decision-making about whether and where to utilize sexually transmitted infection services is influenced by the availability of services as well as perceptions about disease seriousness and aspects of care such as cost, confidentiality, user-friendliness and efficacy. Governments need to encourage and work with the private sector, nongovernmental organizations and community groups to develop innovative approaches and collaborations to scale up the provision of prevention campaigns, access to vaccines, laboratory services, treatment and care. Mechanisms for incorporating private and nongovernmental providers into national efforts to improve services for sexually transmitted infections include health franchising, public-private partnerships, and training on sexually transmitted infections for private-sector health care workers. National health information systems should be strengthened to encourage non-public sector health-care providers to share data on service provision and to participate in quality monitoring systems.

Action 97: Laboratory capacity for sexually transmitted infections. Enhance laboratory capacity to improve the case management and surveillance of sexually transmitted infections. Because of the often asymptomatic nature of sexually transmitted infections, appropriate laboratory diagnosis and screening are critical. Laboratory capacity should be expanded, building on existing laboratory systems and networks and quality assurance systems to improve client management and surveillance. Understanding the causation of syndromes and monitoring resistance should be part of this work. Laboratory requirements for the different health-care levels need to be defined and resourced with appropriately trained staff and sufficient laboratory facilities. Referral systems need to be established to ensure that specimens are transported appropriately and that results are returned in a timely fashion.

Action 98. Health workforce for sexually transmitted infections (complements shared action 25). Increase general workforce competencies in the case management of sexually transmitted infections. The overall sexual health education and training of all health-care workers needs to be expanded to strengthen their confidence and skills and to ensure that all

individuals who seek sexual health services can do so in an environment free from stigma and discrimination. Health-care workers, including those at the primary health care and community levels, should be trained to take sexual histories and to provide people-centred services that are accessible, acceptable and appropriate.

6.4. Strategic direction 3: Generate and use data to drive decisions for action

This section describes actions specific to sexually transmitted infections to strengthen health information systems for better data availability, use and accountability. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 3 in Chapter 3.

Action 99: Health information systems for sexually transmitted infections (complements shared actions 30-32). Invest in strengthening health information systems for sexually transmitted infections and linking them more effectively with broader health information systems. Surveillance of sexually transmitted infections has four core competencies: case reporting, monitoring prevalence, assessing the causation of sexually transmitted infection syndromes and monitoring antimicrobial resistance. Surveillance efforts for sexually transmitted infections should be aligned with national health information systems. Strengthening surveillance for pathogens as well as for resistance will require investments in data collection and analysis and in strengthening in-country laboratory capacity and quality. The systematic reporting of case data needs to be improved and opportunities identified to expand surveillance from syndromic case reporting, which only detects symptomatic people with access to diagnosis and treatment, to include individuals who are asymptomatic or do not seek health care. Data should be disaggregated by sex, age, socio-economic status, geography, and other relevant population characteristics, including in alignment with national priorities, to monitor equity in access and outcomes. Reporting systems should also collect data on other health outcomes related to sexually transmitted infections such as congenital syphilis.

Action 100: Sexually transmitted infections data from the private sector and nongovernmental service providers. Establish monitoring systems for collecting data on sexually transmitted infection services provided and commodities distributed by the private sector and nongovernmental service providers. In countries in which private sector laboratories, pharmacies and clinicians are a large provider of sexually transmitted infection diagnosis and treatment services, it is important to promote regular reporting from these providers into the national health information system. This should be supported by the development of a registry of these providers, standardized reporting and case definitions and tools, and adequate mechanisms for ensuring data quality, confidentiality, coordination, and feedback to improve services.

6.5. Strategic direction 4: Engage empowered communities and civil society

This section describes actions to engage communities, affected populations and civil society stakeholders in advocacy, service delivery, policy-making and initiatives to tackle social and structural barriers in relation to sexually transmitted infections. The actions in this section

should be implemented in conjunction with the relevant shared actions described under strategic direction 4 in Chapter 3.

Action 101: Community and civil society leadership for sexually transmitted infections (complements shared actions 33 and 34). Engage and support community and civil society organizations, modify health service delivery models, and pursue legal reforms to prevent stigma, discrimination and other social barriers from limiting people's access to sexually transmitted infection services and infringing on their human rights. Representatives of disproportionately affected communities including young people and representatives of key populations and other communities facing stigma and discrimination, should be involved in the design, promotion, implementation and monitoring of sexually transmitted infection services and also in advocacy for greater support for these services. Community-led service delivery approaches empower individuals with a wider choice of interventions, including greater possibilities for self-care such as by supporting the use of self-collection of samples for common sexually transmitted infections. Drawing on community engagement and empowerment strategies in the HIV field, health systems should elevate the role of communities and community-based service providers as partners in promoting sexual health. Community and civil society engagement play a key role in addressing the stigmatization and discrimination that people with sexually transmitted infections may face. Some of these barriers can be overcome by adapting existing service delivery models to meet the needs of affected populations. Others may require reviewing and reforming certain laws, regulations and policies that limit access to health services. Civil society organizations and other stakeholders already working to reduce HIV-related stigma and discrimination should be encouraged to integrate attention to sexually transmitted infections into their efforts.

6.6. Strategic direction 5: Foster innovations for impact

This section describes specific actions to foster and disseminate innovations for accelerated impact in relation to sexually transmitted infections. The actions in this section should be implemented in conjunction with the relevant shared actions described under strategic direction 5 in Chapter 3.

Action 102: Innovative approaches to the prevention of sexually transmitted infections. Identify, evaluate, and scale up best practices in preventing sexually transmitted infections. New prevention models and products are needed to expand the range of interventions that are available and meet the needs of individuals, including vaccines, post-exposure prophylaxis, and multipurpose prevention technologies that combine contraception with protection against sexually transmitted infections including HIV. Advances in HIV prevention services, such as providing community and partner services, also need to be assessed for their relevance to sexually transmitted infections and scaled up as appropriate. Social media and other information channels are playing an increasing role in disseminating health information, and the opportunities and challenges they pose in relation to sexually transmitted infection services should be assessed.

Action 103: New vaccines for sexually transmitted infections. Encourage investments in research and clinical trials for sexually transmitted infection vaccines, including through strengthened collaboration with the private sector and communities. Vaccine development

is a key component of the research agenda for sexually transmitted infections. This includes research directed at improving the understanding of pathogenesis, immunity, and correlates of protection against various infections. Regulatory pathways must be strengthened so that licensed vaccines for sexually transmitted infections can be brought to the market and scaled up in a timely manner, and mechanisms should be established to ensure equitable vaccine distribution to those people at risk of infection. Data from observational studies show that vaccines against serogroup B *Neisseria meningitidis* provide some protection against *Neisseria gonorrhoeae*, and randomized controlled trials are ongoing. Clinical trials are underway to assess therapeutic vaccines for herpes simplex virus, and early clinical trials are underway for chlamydial infection. Preclinical trial research is ongoing to develop vaccines against other sexually transmitted infections, including prophylactic vaccines against herpes simplex virus and gonorrhoea.

Action 104: New diagnostics and testing strategies for sexually transmitted infections.

Support the development and evaluation of new diagnostics and testing strategies for sexually transmitted infections. There is a pressing need for affordable rapid multiplex platforms that can simultaneously diagnose multiple pathogens, and for reliable point-of care technologies appropriate for use in health care settings with no or limited access to a laboratory. The development of these tests will facilitate the shift from syndromic to causative treatment. Low-cost rapid point-of care diagnostic tests are needed for gonorrhoea, chlamydia, human papillomavirus screening for cervical cancer, and a rapid low-cost test that can differentiate active syphilis from ever infected. Human papillomavirus as well as sexually transmitted infection-related complications such as congenital syphilis and pelvic inflammatory disease would also benefit from the development of reliable low-cost diagnostic tools. In addition to diagnosing infection, molecular diagnostic tests are also needed that can rapidly identify and characterize antimicrobial resistance. Research is also needed on improving specimen collection from various anatomical sites when appropriate, and operational research on how to optimally use these tests in various settings, including the option of self-testing.

Action 105: New treatments for sexually transmitted infections. Support the development and clinical testing of new treatments for sexually transmitted infections and their complications and sequelae. Research is needed on multiple aspects of treating sexually transmitted infections, including optimal dosing, drug combinations, drug-drug interactions, and modes of treatment delivery to improve access and compliance. New low-cost and easy-to-use oral treatment options for syphilis are needed. Because resistance to last-line treatment for gonorrhoea is emerging and very few new drugs are in the development pipeline, new treatment options for gonorrhoea urgently need to be developed. New treatments for trichomoniasis and *Mycoplasma genitalium* infection are also needed because of emerging antimicrobial resistance.

7. Implementation, accountability and monitoring

Effective implementation of the global health sector strategies on HIV, viral hepatitis and sexually transmitted infections requires strong leadership, partnerships, solidarity and accountability. This chapter presents the key operational considerations for implementation of the strategies. It also presents actions for WHO that support of country and partner efforts, and describes the accountability framework for the strategies.

7.1 Operationalizing the strategies

The global health sector strategies present a comprehensive set of actions to guide countries and partners to design and implement evidence-based responses to end the epidemics of HIV, viral hepatitis and sexually transmitted infections. Recognizing the commonalities and differences across these disease areas, the strategies promote a combination of shared and disease-specific actions to maximize impact, delivered through aligned and integrated approaches as feasible and relevant within a people-centred universal health coverage framework.

Each unique regional and country context will determine how programming and service delivery will be operationalized such that shared goals can be advanced while sustaining disease-specific progress. Countries are encouraged to base decision-making on their national and subnational contexts, population health needs, and health system strengths and weaknesses. The overall aim should be to equitably implement the highest-impact and most cost-effective interventions through differentiated service delivery models that respond to the needs of different populations and settings. Countries also need to determine how far to extend alignment and integration across HIV, viral hepatitis, sexually transmitted infections and other related health areas; and across primary, secondary and tertiary levels of care. Service integration must be suited to local conditions such that all people can receive a continuum of health services in a coordinated manner across different service delivery points, including those outside of formal health settings, and according to their needs throughout the life course. These decisions may also evolve over time in response to changing health needs and contexts.

Policy frameworks at the country level should be updated to enable the implementation of effective models of delivery, such as regulatory changes that may be required to recognize community health workers as an integral part of the health system, or targeted training programmes designed for multidisciplinary health care teams. Countries are encouraged to strategically leverage innovations to optimize service delivery, such as expanding the use of digital technologies for health. WHO will provide guidance and support to countries to operationalize the strategies as part of national health sector planning processes. WHO will also support capacity-building for the implementation research that will be required for countries to optimally tailor service delivery models to meet their needs, including implementation research on integrating service delivery.

7.2 The importance of partnerships

Many health and development partners work alongside health ministries to address the epidemics of HIV, viral hepatitis and sexually transmitted infections. Global targets will not be

achieved unless all partners are engaged around a common country-led agenda supported by WHO and partners, with strengthened collaboration across systems and sectors.

Country leadership: The global strategies provide the overarching vision and guidance for countries to develop their national strategies towards ending HIV, viral hepatitis and sexually transmitted infections and advancing universal health coverage by 2030. Successful implementation at the country level requires national ownership and leadership to set priorities, secure sustainable resources, and ensure aligned action by policy makers, health service providers, communities and other stakeholders within an enabling legal and social environment.

Multilateral and bilateral donor and development agencies, funds and foundations: A harmonized approach to partnerships at the global, regional and country levels is essential to accelerate progress, with strong collaboration across all partners to work towards shared goals and targets, shared approaches as part of a universal health coverage and primary health care agenda and coordinated implementation support. In addition to United Nations agencies, key global partners that contribute to health sector responses to HIV, viral hepatitis and sexually transmitted infections include the Global Fund to fight AIDS, Tuberculosis and Malaria, UNITAID, the Gavi Alliance, the Bill & Melinda Gates Foundation, the United States President's Emergency Plan for AIDS Relief, and many other bilateral partners. The global responses to viral hepatitis and sexually transmitted infections have historically benefitted from fewer partnerships and funding mechanisms as compared with HIV. Mobilizing and sustaining new partnerships in these disease areas will be especially important to accelerate progress towards the 2030 goals. Ending the epidemics will also require multisectoral approaches and alignment with broader efforts of partners to address major interrelated health and development challenges.

Civil society and communities: Civil society and community-based organizations have played a leading role in HIV-related advocacy, service delivery and accountability since the early stages of the HIV response. More recently, they have also successfully advocated for stronger responses to viral hepatitis and sexually transmitted infections. The COVID-19 pandemic spurred community-based organizations worldwide to step up their innovative efforts to bring services closer to people in need within an environment of trust. Contributions from civil society and communities must be nurtured and more effectively leveraged as countries strive to achieve the goals of ending these epidemics.

Other partners: Academic and research institutions, professional bodies, and private sector entities also play important roles in innovation, service delivery and advocacy within an evolving global health landscape. Coordinating mechanisms are needed at the country and global levels to promote alignment between their priorities and those of other stakeholders.

7.3 The role of WHO

WHO, with its core functions of providing global health stewardship, promulgating evidence-based norms and standards, and supplying technical assistance to countries, is uniquely positioned to catalyze progress to end the epidemics of HIV, viral hepatitis and sexually transmitted infections by 2030. WHO also advocates at the highest levels for political support and sustainable funding for health, and firmly stands for equity, gender equality, and rights-based approaches in all responses. These commitments are enshrined in the WHO

Constitution and in the mission of the Thirteenth General Programme of Work 2019-2023 to “promote health, keep the world safe, and serve the vulnerable”, and underpin all of WHO’s work.

WHO will implement the following actions in support of the country actions outlined in Chapters 3-6:

Action A: Strategic leadership and partnerships. Provide global strategic direction for the health sector effort to end epidemics of HIV, viral hepatitis and sexually transmitted infections, including through leadership, multisectoral partnerships and health diplomacy at the highest political levels. WHO will work closely with Member States and partners to raise and sustain commitment to end the epidemics of HIV, viral hepatitis and sexually transmitted infections as part of universal health coverage goals. WHO will advocate for full funding of the global health sector responses to HIV, viral hepatitis and sexually transmitted infections as part of universal health coverage essential benefit packages, and will pursue comprehensive strategies for sustainability. To respond to the lack of progress towards ending HIV among children, WHO, UNICEF and UNAIDS will convene a new global coalition and initiative to follow up on “Start Free, Stay Free, AIDS Free”, the 2015-2020 global Fast-Track initiative for ending AIDS among children, adolescents and young women. To address the increasing numbers of members of key populations acquiring HIV, WHO will develop an initiative to deliver comprehensive and differentiated services to key populations, including by addressing stigma and discrimination in the health sector. To address financial gaps in scaling up the health sector response to viral hepatitis, WHO will convene a global consortium of partners with the goal of raising catalytic funding to spur efforts to end viral hepatitis epidemics as public health threats. To renew global commitments to address sexually transmitted infections, WHO will lead a multisectoral coalition of partners, advocates and affected communities to raise awareness and leverage funding. In all its work, WHO will facilitate the meaningful engagement of civil society and community actors — including key population-led organizations and networks — in decision-making at the country level and will also ensure their representation within WHO’s own technical advisory groups. Finally, WHO will ensure dedicated expertise and capacity on HIV, viral hepatitis and sexually transmitted infections at headquarters and in all regional offices to ensure that support is provided in and for countries with the highest disease burdens.

Action B: Public health advocacy and communication. Raise and sustain global awareness and commitment regarding the need for urgent action to end these epidemics, including measures to close gaps in the response to HIV, accelerate momentum to address viral hepatitis, and revitalize the response to sexually transmitted infections. WHO will support global and national advocacy and communication efforts relating to HIV, viral hepatitis and sexually transmitted infection responses by developing evidence-based public health messaging to raise awareness on the burden and impact of these diseases; combat the stigma, discrimination and shame associated with them, including within the health sector; and help to reframe discourse around sexual health and well-being rather than around diseases. WHO will leverage partnerships with civil society, academia, the research community, the media and other stakeholders for dissemination. WHO will provide support to global, regional and country advocacy and health communication campaigns, including by developing core materials and tools, and expanding outreach with the use of digital and social media.

Action C: Norms and standards. Develop evidence-based norms, standards and other global public health goods across the range of thematic areas related to HIV, viral hepatitis and sexually transmitted infections, and promote the use of up-to-date guidelines, tools and service delivery approaches by all countries. WHO will be at the forefront of ongoing scientific and technical efforts to develop and update global norms, standards and tools across the range of thematic areas related to HIV, viral hepatitis and sexually transmitted infections through a robust but also dynamic and timely process to evaluate new evidence and update normative guidance. WHO will also provide operational guidance for integrated approaches to HIV, viral hepatitis, sexually transmitted infections and other health concerns, promoting approaches that are people-centred and can be tailored to the needs of specific locations and populations. WHO will use evolving digital platforms to make these outputs optimally accessible to stakeholders.

Action D: Innovation. Provide leadership to shape the global research agendas for HIV, viral hepatitis and sexually transmitted infections, and support the availability and scaling-up of effective health innovations in all countries. WHO will support countries in capitalizing on the massive scientific advances of recent years in vaccines, point-of-care diagnostics, cure strategies and service delivery approaches to accelerate progress towards ending these epidemics. WHO will support ongoing innovation and research by convening governments, communities, and research and development partners around research priority-setting, establishing norms and standards for good research practice, and facilitating the translation of innovations into affordable health technologies and evidence-informed policies. WHO will also work with partners and manufacturers to ensure that essential new technologies will be available and affordable to all countries as soon as possible. WHO will catalyze the availability and use of evidence-based innovations within health systems by engaging with governments, research partners and funding partners, and will promote south-south cooperation in research and innovation.

Action E: Technical support. Provide technical support to countries to review, adapt and implement their national responses to HIV, viral hepatitis and sexually transmitted infections and strengthen primary health care and health systems. WHO will strengthen its work at the country level as a technical support partner for policy development, strategic planning and implementation of national HIV, viral hepatitis and sexually transmitted infection responses with effective involvement of communities in decision-making and service delivery. WHO will also support countries in strengthening public health institutions and building health system capacity. WHO's support will be tailored to individual country contexts and capacity and will focus on driving impact and promoting equity and sustainability in national responses.

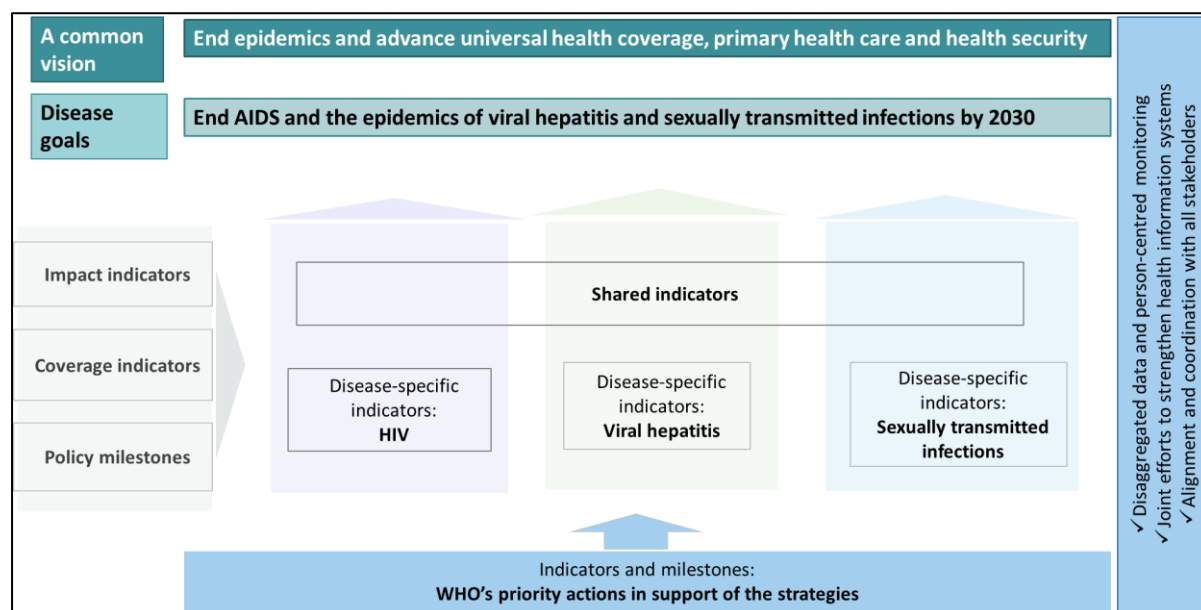
Action F: Global monitoring and reporting. Monitor and report on progress towards achieving global targets for HIV, viral hepatitis and sexually transmitted infections in order to promote evidence-based decision-making and ensure accountability. WHO will set global standards for collecting, analyzing and using health data related to HIV, viral hepatitis and sexually transmitted infections, and support countries to build the capacity of national health data platforms. WHO will advocate for collecting and reporting of disaggregated data by sex, age, key populations, geographical location and other variables as relevant, in order to assess gaps and promote equity. WHO will promote data transparency and the use of data for decision-making, and will report regularly on global progress.

7.4 Accountability, monitoring and reporting

Ending the epidemics of HIV, viral hepatitis and sexually transmitted infections requires collective accountability and transparent accountability mechanisms at all levels, including among disease-specific and broader health system actors. The theory of change for these strategies, presented in Chapter 1, outlines the pathways by which cohesive and complementary implementation of country actions, supported by WHO and partners, will bring the world closer to ending the epidemics and advancing universal health coverage and health security. Accountability for these country and WHO actions will be ensured through regular global monitoring and reporting against priority indicators and milestones that represent the focal areas of these actions.

Global accountability: At the global level, the accountability framework of the global health sector strategies is based on selected indicators and targets, shared and disease-specific and with relevant disaggregation, that will be used to monitor the impact, coverage, equity and quality of the global response. The accountability framework also includes shared and disease-specific milestones to track progress in priority areas related to policy and systems. Fig. 7.1 summarizes the global accountability framework. Annex 2 provides the complete measurement framework with indicators and targets.

Fig. 7.1. Measurement framework for the global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, for the period 2022-2030



The measurement framework sets global targets for 2025 and 2030 for all priority impact and coverage indicators, as well as policy milestones. Global monitoring will be based on data collected from Member States and partners through established mechanisms, with attention to harmonizing data collection processes across the disease areas. In addition to official health statistics, WHO will also promote the inclusion of information gathered from community-based organizations and networks. Data collection and analysis efforts will be aligned with the Global AIDS Monitoring process led by UNAIDS and partner processes. In all monitoring and reporting activities, WHO will ensure that data are sufficiently disaggregated by sex, age and other population characteristics to track inequalities, identify gaps and give

priority to efforts to reach the populations that are being most left behind. Progress reports will be made to the World Health Assembly in 2024, 2026, 2028 and 2031 noting that the 2026 report will provide a mid-term review.

2026 mid-term review: These global health sector strategies span nine years – an evolution from the shorter frameworks of previous strategies. The 2025 targets will provide the basis for a robust mid-term review supported by realigning these strategies, as needed, in 2026, and identifying catch-up actions as needed. The strategies will be implemented in a highly dynamic and unpredictable environment especially in relation to the ongoing impact of COVID-19. A mid-term review will also ensure ongoing alignment with the post-2026 multisectoral Global AIDS Strategy and next-phase strategies of key partners, including the Global Fund to Fight AIDS, Tuberculosis and Malaria.

Country-level accountability: National strategies for HIV, viral hepatitis and sexually transmitted infections should be accompanied by national accountability frameworks, including indicators and targets that are aligned with standardized global guidance. Well-functioning accountability mechanisms, with strong civil society participation and transparent assessment and reporting, are vital at the country level for effective implementation and ownership. Countries are encouraged to undertake regular multi-stakeholder reviews of the implementation of their strategies at the national level, bringing together disease-specific and broader health sector actors.

WHO accountability: WHO will monitor its own performance and contributions to the global health sector strategies through selected priority indicators and milestones related to its core functional areas including leadership; advocacy and communication; norms and standards; technical support; and reporting. WHO's monitoring will be aligned with the results framework of the Thirteenth General Programme of Work 2019-2023 and beyond. WHO's HIV activities are reflected in UNAIDS' Unified Budget, Results and Accountability Framework (UBRAF), and WHO reports on both funds raised through the United Nations Joint Programme (UNAIDS) and from its own funding efforts. As the custodian for monitoring and reporting on the health-related Sustainable Development Goals, WHO will also ensure that progress towards achieving HIV, viral hepatitis and sexually transmitted infection goals and targets is assessed through a harmonized approach with broader health and development monitoring.

7.5 The cost of implementation

The 2022-2030 global health sector strategies on HIV, viral hepatitis and sexually transmitted infections describe the health sector contribution to the Sustainable Development Goals of controlling and ending these epidemics. For the first time, the costing of the strategies has been done together, based on service costs and impact for each disease, improved baseline data, and the identification of cross-cutting actions that will optimize achievement of the 2025 and 2030 targets.

Data for the costing were taken from new data published in the WHO 2021 global progress report on HIV, viral hepatitis and sexually transmitted infections⁴⁵, the coverage and impact targets of the strategies, and a comprehensive review of unit and service costs. In addition, costs related to prevention, health systems and community service delivery were revised,

⁴⁵ Global progress report on HIV, viral hepatitis and sexually transmitted infections, 2021. World Health Organization, 2021

across all three diseases, based on gaps identified in 2020. The costing covers low- and middle-income countries, aligned with the 118 countries included in the costing of the Global AIDS Strategy 2021–2026⁴⁶ for consistency. The baseline year was data from 2020 or from 2019 interpolated to 2020 to account for COVID-19-related service disruptions. Costs were also aligned across diseases to avoid double-counting, building on synergies across the strategies, especially in relation to diagnostics for priority populations across HIV, viral hepatitis and sexually transmitted infections and health-strengthening actions.

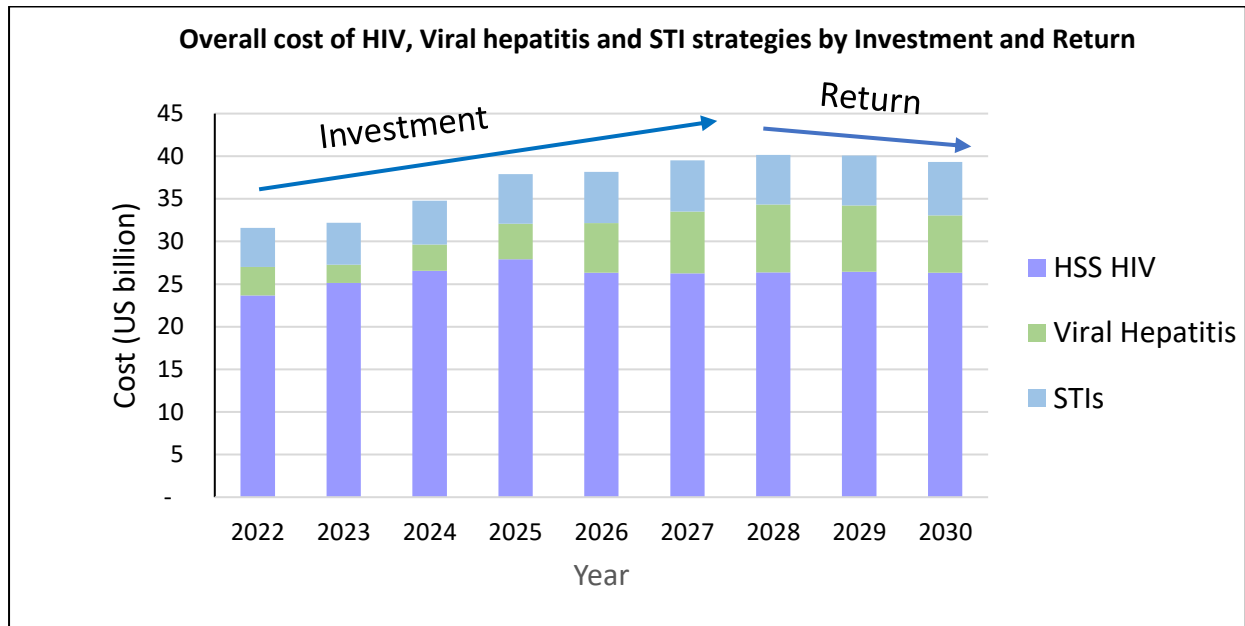
Cross-cutting actions were identified in the WHO 2021 global progress report and the strategy development process, and these were used to suggest efficiency measures from 2022-2030, in accordance with the WHO and country actions proposed. Finally, the costing was developed with partners, and was consistent with other costing efforts, such as the costing of the Global AIDS Strategy and the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem.⁴⁷ The focus on this costing was on the health sector contributions to impact targets.

The total costs for the strategies (Fig 7.2) peak at US\$ 27.9 billion in 2025 for HIV, US\$ 6.3 billion for sexually transmitted infections in 2026, and US\$ 7.96 billion for viral hepatitis in 2028. Across all three strategies, the costs peak at just under US\$ 40.2 billion in 2028. The overall costs decline by 2030 to US\$ 39.2 billion per year as impact and efficiency are achieved with the implementation of cross-cutting strategy actions.

⁴⁶ End Inequalities. End AIDS. Global AIDS Strategy 2021-2016. UNAIDS, 2021.

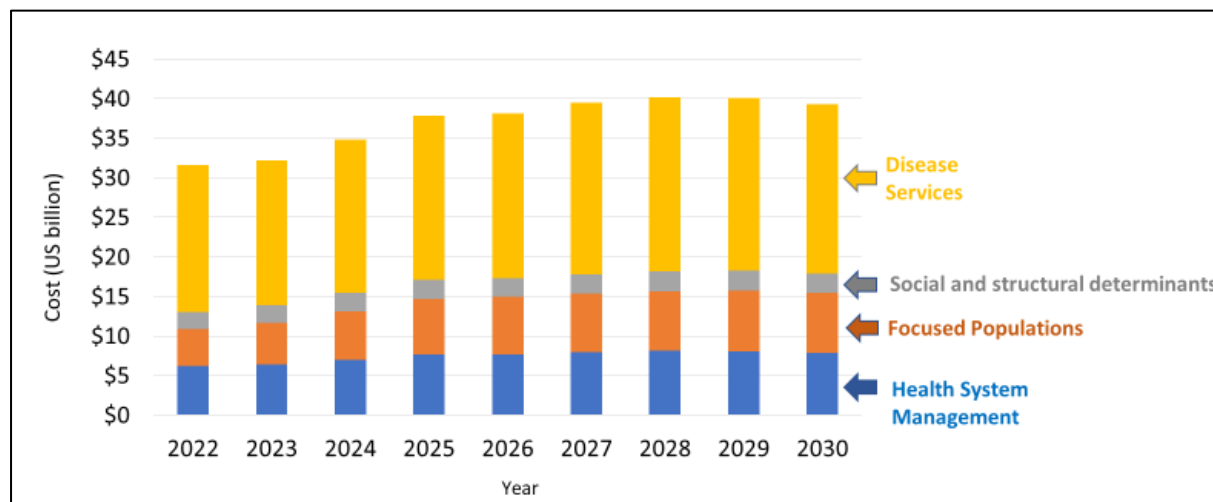
⁴⁷ Global strategy to accelerate the elimination of cervical cancer as a public health problem. WHO, 2020.

Fig 7.2. Overall costing of the global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, for the period 2022-2030



To avoid double-counting, the three strategies were costed together and do not repeat the costs already outlined in the Global AIDS Strategy. The costing shows considerable potential for efficiencies in shared costs across the three strategies. This is the case for the US\$ 8.1 billion per year specified for health management and strengthening costs, accounting for 20.2% of the total costs in 2028. The costing also identified strong synergies in two additional areas. The first area relates to investments in focused populations across HIV, viral hepatitis and sexually transmitted infections, accounting for US\$ 7.57 billion, or 18.8% of total costs. The second area (Fig. 7.3) relates to key social and structural determinants of health of US\$ 2.46 billion per year or 6.1% of total costs. The work on social and structural determinants, specifically interventions tackling stigma, discrimination in the health sector and access to justice, provides a strong basis to work across the three diseases.

Fig. 7.3. Areas of synergy for aligned investments related to health systems, priority populations across HIV, viral hepatitis and sexually transmitted infections; and key social and structural determinants of health, including those related to stigma and discrimination in the health sector



The **health sector components of the multisectoral Global AIDS Strategy** account for 93% of the total costs. Costs outside of the health sector are focused on social support to vulnerable children, comprehensive education approaches (which largely leverage educational sector activities), economic empowerment of adolescent girls and young women, and socio-economic enablers. They account for US\$ 2.07 billion per year at the peak investment in 2028. The support for orphans and vulnerable children has declined in the current Global AIDS Strategy compared to the previous strategy for 2016-2021. The largest cost components for the health sector include are antiretroviral drugs for adults (US\$ 4.7 billion per year), antiretroviral service delivery and laboratory services for adults (US\$ 3.9 billion) and condoms (US\$ 2.4 billion). In addition, significant resources support other priorities including addressing stigma and discrimination (US\$ 1.2 billion), addressing harmful laws and policies (US\$ 1.2 billion) and ensuring services for key populations (US\$ 6.2 billion). The three disease strategies were aligned so that these costs were not repeated in other strategies, for example harm reduction and sexually transmitted infection treatment costs were included here.

For the **viral hepatitis strategy**, baseline unit costs, service coverage and viral hepatitis incidence, prevalence and mortality are included from 2019 and 2020, based on improved country data from the WHO 2021 Global progress report on HIV, viral hepatitis and sexually transmitted infections, and to control for the impact of COVID-related disruptions. In addition, country drug and diagnostic data, and country patent expiration dates were used to project unit costs to 2030. The global health sector strategies project major increases in the coverage of testing and treatment for hepatitis B and hepatitis C virus of 10% per year, so costs peak at US\$ 8 billion in 2028, and then with impact and increased efficiencies decline by 15% to US\$ 6.7 billion per year by 2030. Many of the mortality benefits accrue for several decades towards 2050.

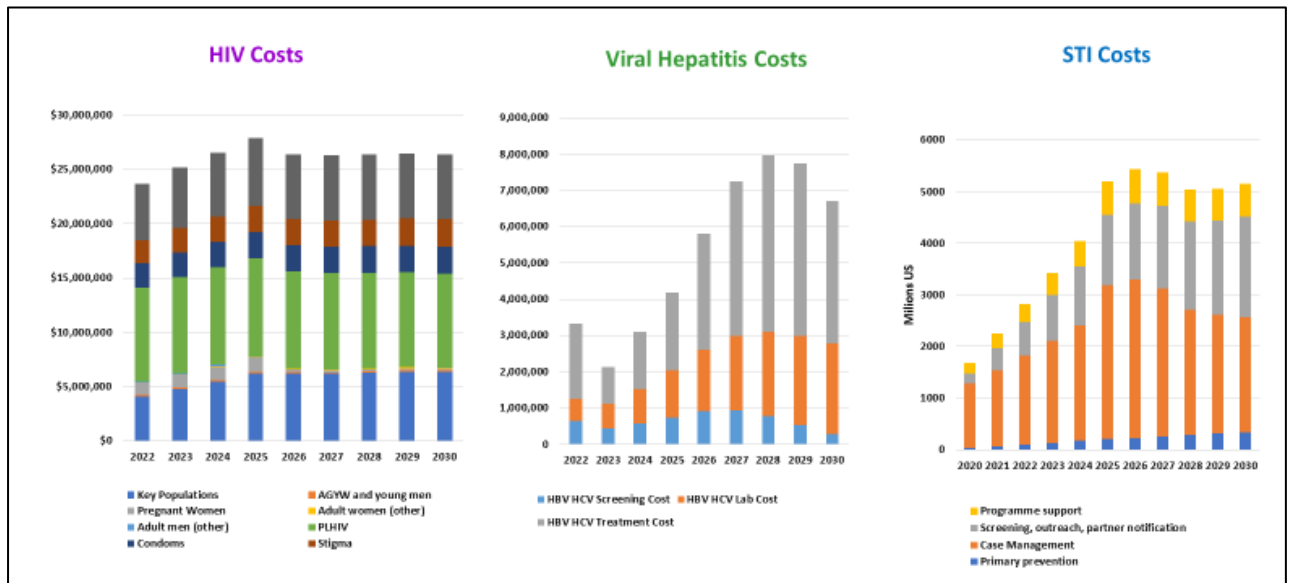
Treatment costs decline and laboratory costs became an increasing proportion of total costs over time, largely because of hepatitis B virus, showing the need for innovations in diagnosis and hepatitis B cure mentioned in the strategy. Costs decline to 2023 as the initial efforts in

Egypt achieve impact and scale up occurs in other countries, showing the importance of rapidly working with other countries. The cure for hepatitis C means that treatment numbers in a country decline rapidly as the country reaches universal access, as is the case in Egypt. The viral hepatitis actions in the strategy are critical to managing the costs and impact, including reduction of baseline hepatitis B virus treatment costs to align with HIV, extension of hepatitis C virus access treatment costs to all eligible countries, and improved community outreach and diagnosis. Finally, the cross-cutting actions are essential, for example with HIV on harm reduction, sustained vaccination, and the significant health and community system investments, to achieve the goals in the strategy.

For the **sexually transmitted infections strategy**, the first ever round of country-level multi-country costing was undertaken, including disaggregation of country needs between subpopulations at high and lower risk of sexually transmitted infections, and with better or worse access to sexually transmitted infection services. In contrast, the previous strategy costing was conducted at WHO regional level without country specific inputs or outputs. This updated costing is aligned with the costing of the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem, but distinguished these in the analysis, so the costs are discrete. Costs related to the human papillomavirus incurs a front-loaded cost, especially with the period of catch-up vaccination of 10–14-year-old girls. For sexually transmitted infection programmes, the global health sector strategy targets imply a progressive and substantial increase in annual investment from current levels, doubling to 2026, after which costs decline because of impact and increased efficiency.

The overall costs peak at US\$ 6.3 billion per year in 2026, with costs related to sexually transmitted infections accounting for US\$ 5.4 billion per year or 86% of the total. To implement the strategic directions of the global health sector strategies, the costing includes increased costs for primary prevention reaching US\$ 344 million per year by 2030 (in addition to HIV costs, to boost outcomes for both sexually transmitted infection and HIV), and outreach and screening to focus populations, tackling of treatment failures, and antibiotic resistance threats reaches US\$ 1.9 billion per year by 2030. Progressively, as rates of sexually transmitted infections fall, outreach screening and diagnostics cover a larger share of total costs, highlighting the importance of innovations and efficiency in implementing new approaches in diagnostics for sexually transmitted infections by 2025.

Fig. 7.4. Investments required for the responses to HIV, viral hepatitis and sexually transmitted infections, by 2030



HIV, viral hepatitis and sexually transmitted infections all require increased investments until 2025 with reduced costs seen by 2030.

ANNEX 1: Consolidated list of country and WHO actions

To note: The numbering of actions in this Annex follows their numbering by chapter in the narrative text.

Strategic direction 1 – Deliver high-quality, evidence-based, people-centred services		
<u>Shared actions (Chapter 3):</u>		
Action 1: Primary prevention		
Action 2: Harm reduction		
Action 3: Vertical transmission of HIV, syphilis and hepatitis B virus		
Action 4: Prevention, treatment and care for children and adolescents		
Action 5: Infection prevention and control		
Action 6: Integrated testing		
Action 7: Voluntary partner notification and other partner services and social network approaches		
Action 8: Stigma and discrimination in health care settings		
Action 9: Communicable and noncommunicable diseases		
Action 10: Tuberculosis		
Action 11: Sexual and reproductive health		
Action 12: Mental health		
Action 13: Disability		
Action 14: Gender-based violence		
Action 15: Gender equality		
<u>HIV actions (Chapter 4):</u>	<u>Viral hepatitis actions (Chapter 5):</u>	<u>Sexually transmitted infection actions (Chapter 6):</u>
Action 36: Continuum of HIV services	Action 61: Continuum of viral hepatitis services	

<p>Action 37: HIV intervention packages</p> <p>Action 38: HIV prevention</p> <p>Action 39: Antiretroviral drugs for HIV prevention</p> <p>Action 40: Voluntary medical male circumcision</p> <p>Action 41: People-centred HIV testing</p> <p>Action 42: HIV treatment</p> <p>Action 43: HIV drug resistance</p> <p>Action 44: Antiretroviral drug toxicity</p> <p>Action 45: Advanced HIV disease</p> <p>Action 46: Chronic care for people with HIV (<i>complements shared action 9</i>)</p> <p>Action 47: Elimination of vertical transmission and HIV prevention, treatment and care for children and adolescents (<i>complements shared actions 3 and 4</i>)</p> <p>Action 48: Communicable and non-communicable diseases among people living with HIV (<i>complements shared action 9</i>)</p> <p>Action 49: HIV and tuberculosis (<i>complements shared action 10</i>)</p> <p>Action 50: Rehabilitation to address HIV-related disability (<i>complements shared action 13</i>)</p>	<p>Action 62: Viral hepatitis intervention packages</p> <p>Action 63: Vertical transmission of hepatitis B and C virus (<i>complements shared action 3</i>)</p> <p>Action 64: Viral hepatitis vaccines (<i>complements shared action 3</i>)</p> <p>Action 65: Viral hepatitis testing</p> <p>Action 66: Viral hepatitis treatment</p> <p>Action 67: Chronic care for people with viral hepatitis</p> <p>Action 68: Viral hepatitis prevention, treatment and care for children and adolescents (<i>complements shared actions 3 and 4</i>)</p> <p>Action 69: Chronic viral hepatitis B and C and primary liver cancer (<i>complements shared action 9</i>)</p>	<p>Action 81: Continuum of sexually transmitted infection services</p> <p>Action 82: Sexually transmitted infection intervention packages</p> <p>Action 83: Prevention of sexually transmitted infections (<i>complements shared action 1</i>)</p> <p>Action 84: Vaccines for sexually transmitted infections (<i>complements shared action 1</i>)</p> <p>Action 85: Vertical transmission of sexually transmitted infections (<i>complements shared action 3</i>)</p> <p>Action 86: Sexually transmitted infection awareness and treatment-seeking behaviour</p> <p>Action 87: Case management for symptomatic sexually transmitted infections</p> <p>Action 88: Sexual partner services for sexually transmitted infections (<i>complements shared action 7</i>)</p> <p>Action 89: Screening priority populations for sexually transmitted infections</p> <p>Action 90: Treatment for complications and sequelae of sexually transmitted infections</p> <p>Action 91: Drug resistance in sexually transmitted infections</p>
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		Action 92: Linking sexually transmitted infection services with other health services (<i>complements shared actions 9 and 11</i>)
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Strategic Direction 2 – Optimize systems, sectors and partnerships for impact		
<u>Shared actions (Chapter 3):</u>		
<p>Action 16: Universal health coverage</p> <p>Action 17: Primary health care</p> <p>Action 18: Differentiated service delivery</p> <p>Action 19: Decentralization</p> <p>Action 20: Special settings</p> <p>Action 21: Digital innovations</p> <p>Action 22: Effective and inclusive governance</p> <p>Action 23: Financing</p> <p>Action 24: Essential health commodities</p> <p>Action 25: Health workforce strengthening</p> <p>Action 26: Legal, regulatory and policy reform</p> <p>Action 27: Multisectoral partnerships to address stigma, discrimination and other structural barriers</p> <p>Action 28: Protecting people during pandemics and other health emergencies</p> <p>Action 29: Managing future disease outbreaks</p>		
<u>HIV actions (Chapter 4):</u>	<u>Viral hepatitis actions (Chapter 5):</u>	<u>Sexually transmitted infection actions (Chapter 6):</u>

<p>Action 51: Differentiated service delivery for HIV (<i>complements shared action 18</i>) Action 52: Essential HIV health commodities (<i>complements shared action 24</i>)</p>	<p>Action 70: Decentralized and differentiated viral hepatitis services (<i>complements shared actions 18 and 19</i>) Action 71: Financing for viral hepatitis (<i>complements shared action 23</i>) Action 72: Essential viral hepatitis commodities (<i>complements shared action 24</i>) Action 73: Health workforce for viral hepatitis (<i>complements shared action 25</i>)</p>	<p>Action 93: People-centred sexually transmitted infection services (<i>complements shared actions 18 and 19</i>) Action 94: Financing for sexually transmitted infections (<i>complements shared action 23</i>) Action 95: Essential sexually transmitted infection commodities (<i>complements shared action 24</i>) Action 96: Private sector and nongovernmental sexually transmitted infection services Action 97: Laboratory capacity for sexually transmitted infections Action 98: Health workforce for sexually transmitted infections (<i>complements shared action 25</i>)</p>
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<p>Strategic Direction 3 – Generate and use data to drive decisions for action</p>		
<p><u>Shared Actions (Chapter 3):</u> Action 30: Data availability, analysis and use Action 31: Person-centred data monitoring Action 32: Health information systems</p>		
<p><u>HIV actions (Chapter 4):</u></p>	<p><u>Viral hepatitis actions (Chapter 5):</u></p>	<p><u>Sexually transmitted infection actions (Chapter 6):</u></p>

<p>Action 53: Person-centred data monitoring for HIV (<i>complements shared actions 30 and 31</i>)</p> <p>Action 54: Health information systems for HIV (<i>complements shared action 32</i>)</p>	<p>Action 74: Person-centred data monitoring for viral hepatitis (<i>complements shared actions 30 and 31</i>)</p> <p>Action 75: Health information systems for viral hepatitis (<i>complements shared action 32</i>)</p>	<p>Action 99: Health information systems for sexually transmitted infections (<i>complements shared actions 30-32</i>)</p> <p>Action 100: Sexually transmitted infections data from the private sector and nongovernmental service providers</p>
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<p>Strategic Direction 4 – Engage empowered communities and civil society</p>		
<p>Shared actions (Chapter 3):</p> <p>Action 33: Community and civil society leadership</p> <p>Action 34: Community health workers</p>		
<p>HIV actions (Chapter 4):</p> <p>Action 55: Community and civil society leadership for HIV (<i>complements shared actions 33 and 34</i>)</p>	<p>Viral hepatitis actions (Chapter 5):</p> <p>Action 76: Community and civil society leadership for viral hepatitis (<i>complements shared action 33</i>)</p>	<p>Sexually transmitted infection actions (Chapter 6):</p> <p>Action 101: Community and civil society leadership for sexually transmitted infections (<i>complements shared actions 33 and 34</i>)</p>

Strategic Direction 5 – Foster innovations for impact		
Shared actions (Chapter 3): Action 35: Partnerships for innovation		
HIV actions (Chapter 4): Action 56: New HIV diagnostics technologies and testing approaches Action 57: New options for antiretroviral-based prevention Action 58: Optimized use of antiretrovirals Action 59: HIV vaccines Action 60: HIV cure	Viral hepatitis actions (Chapter 5): Action 77: New viral hepatitis diagnostics technologies and testing approaches Action 78: Optimized antivirals for hepatitis B and C virus Action 79: New viral hepatitis vaccines Action 80: Hepatitis B virus cure research	Sexually transmitted infection actions (Chapter 6): Action 102: Innovative approaches to the prevention of sexually transmitted infections Action 103: New vaccines for sexually transmitted infections Action 104: New diagnostics and testing strategies for sexually transmitted infections Action 105: New treatments for sexually transmitted infections
WHO actions (Chapter 7): Action A: Strategic leadership and partnerships Action B: Public health advocacy and communication Action C: Norms and standards Action D: Innovation Action E: Technical support Action F: Global monitoring and reporting		

Annex 2: Measurement framework
Impact indicators and targets for HIV, viral hepatitis and sexually transmitted infections, by 2030^a

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target	Disaggregation	Data Sources
Shared	Reduced incidence					
	- New HIV and viral hepatitis cases per year	4.5 million	<1.5 million	<500 000	Disease, WHO Region, Age, Sex.	WHO Global Reporting and Global Burden of Disease.
	- Number of new cases of syphilis, gonorrhoea, chlamydia and trichomoniasis ^c among people 15–49 years old per year	374 million	< 300 million	<150 million ^d	Sexually transmitted infections, WHO region	WHO
	- Number of countries validated for the elimination of vertical (mother-to-child) transmission of either HIV, hepatitis B, or syphilis	15	50	100	WHO region	
	Healthy lives – reduced mortality and cancers					
	- Number of people dying from HIV, viral hepatitis and sexually transmitted infections ^e per year	2.3 million	<1.7 million	<1 million	Disease, WHO Region, Age, Sex	WHO global reporting and Global Burden of Disease.
	- Number of new cases of cancer from HIV, viral hepatitis and sexually transmitted infections per year	1.2 million	<900 000	<700 000	WHO region, disease cause	International Agency for Research on Cancer analysis
HIV	Number of people newly infected with HIV per year	1.5million	370 000	335 000	WHO region, age, adolescents, sex, focus population	UNAIDS/WHO

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target	Disaggregation	Data Sources
	Number of people newly infected with HIV per 1000 uninfected population per year	0.19	0.05	0.025	WHO region, age, adolescents, sex, focus population	UNAIDS/WHO
	Number of children younger than 15 years newly infected with HIV per year	150 000	20 000	15 000	WHO region, age, sex	UNAIDS/WHO
	Number of people dying from HIV-related causes per year	680 000	250 000	<240 000	WHO region, age, sex, cause including for HIV cryptococcal meningitis, tuberculosis, severe bacterial infections	UNAIDS/WHO
	Number of people living with HIV dying from tuberculosis, hepatitis B and hepatitis C	210 000	110 000	55 000	WHO region	UNAIDS/WHO
Viral hepatitis	Hepatitis B surface antigen prevalence among children younger than five years ^f	0.94%	0.5%	0.1%	WHO region	National-wide representative survey/ modelling/ research, WHO
	Number of new hepatitis B infections per year ^f	1.5million new cases 20 per 100 000 population	850 000 new cases 11 per 100 000 population	170 000 new cases 2 per 100 000 population	WHO region	WHO global reporting, nationwide representative survey/ modelling/ research.

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target	Disaggregation	Data Sources
	Number of new hepatitis C infections per year	1.575 million new cases 20 per 100 000 population	1 million new cases 13 per 100 000 population	350 000 new cases 5 per 100 000 population	WHO region, sex, age, priority population	WHO global reporting and partner data (Center for Disease Analysis Foundation, others)
	Number of new hepatitis C infections among people who inject drugs per year	8 per 100	3 per 100	2 per 100	WHO region, sex, age, priority population	WHO global reporting, partner data (Bristol Univ, Center for Disease Analysis Foundation, others)
	Number of people dying from hepatitis B per year	820 000 10 per 100 000 population	530 000 7 per 100 000 population	310 000 4 per 100 000 population	WHO region, sex, age, priority population	WHO global reporting, partner data (International Agency for Research on Cancer, Center for Disease Analysis Foundation, Imperial College London, others)
	Number of people dying from hepatitis C per year	290 000	240 000	140 000	WHO region, sex, age, priority population	WHO global reporting, partner data (Bristol

Disease area	Impact indicator	Baseline 2020 ^b	2025 target	2030 target	Disaggregation	Data Sources
		5 per 100 000 population	3 per 100 000 population	2 per 100 000 population		University, Center for Disease Analysis Foundation, others)
Sexually transmitted infections	Number of new cases of syphilis among people 15-49 years old per year	7.1 million	5.7 million	0.71 million	WHO region, sex, age, priority population	WHO global reporting, Global AIDS Monitoring
	Number of new cases of gonorrhoea among people 15-49 years old per year	82.3 million	65.8 million	8.23 million	WHO region, sex, age, priority population	WHO global reporting, Global AIDS Monitoring
	Number of congenital syphilis cases per 100 000 live births per year	425	<200	<50	WHO region, Age, Male partners	WHO global reporting, Global AIDS Monitoring
	Percentage of girls fully vaccinated with human papillomavirus vaccine by 15 years of age	14%	50%	90%	WHO region, income; assess the district within the country	WHO global reporting

^a The proposed impact indicators and targets are in accordance with target 3.3 and indicators 3.3.1 and 3.3.4 of the Sustainable Development Goals.

^b Some targets are based on data from 2019 because of COVID-19-related service disruptions in the data reported for 2020. All data will be disaggregated by age, sex and, when relevant, key and focus populations specific to the disease

^c Curable sexually transmitted infections.

^d Includes target of 90% reduction in new cases of syphilis and gonorrhoea as well as 50% reduction in new cases of chlamydia and trichomoniasis by 2030. Mortality data will be further disaggregated to assess the urgent need to tackle the drivers and causes of deaths. For HIV, these include cryptococcal meningitis, TB and severe bacterial infections; for viral hepatitis, they include other types of cancer and harmful use of alcohol.

^f Please note that the targets in this table are global targets and should be adapted by countries according to the national context when setting country targets. For example, in some countries, a target for hepatitis B surface antigen prevalence among children younger than five years old may be less than 0.1% or 0.2%, although the overall global target is 0.1%.

HIV indicators, targets and milestones by 2030

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
Impact	Number of people newly infected with HIV per year	1.5 million	370 000	335 000	WHO region, sex, age (including adolescents), priority population	UNAIDS/WHO
	Number of people newly infected with HIV per 1000 uninfected population per year (Sustainable Development Goal 3.3.1)	0.19	0.05	0.025	WHO region, age, sex	UNAIDS/WHO
	Number of children younger than 15 years newly infected with HIV per year	150 000	20 000	15 000	WHO region, age, sex	UNAIDS/WHO
	Number of people dying from HIV-related causes per year ^b (including disaggregation by HIV cryptococcal meningitis, tuberculosis, and severe bacterial infections)	680 000	250 000	<240 000	WHO region, age, sex	UNAIDS/WHO Collaboration with the Institute for Health Metrics and Evaluation and International Agency for Research on Cancer
	Number of people living with HIV dying from causes related to TB, hepatitis B and hepatitis C^c	210 000	110 000	55 000	WHO region	UNAIDS/WHO
	Number of countries validated for the elimination of the vertical transmission of either HIV, hepatitis B or syphilis	15	50	100	WHO region	WHO global reporting

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
Coverage	Percentage of people living with HIV who know their HIV status ^d	84%	95%	95%	WHO region, age, sex, priority population	WHO/UNAIDS
	Percentage of people who know their HIV status are receiving antiretroviral therapy ^d	87%	95%	95%	WHO region, age, sex, priority population	WHO/UNAIDS
	Percentage of people living with HIV receiving treatment who have suppressed viral loads ^d	90%	95%	95%	WHO region, age (including adolescents), sex, priority population	WHO/UNAIDS
	Percentage of people at risk of HIV who use combination prevention with a defined service package	8%	95%	95%	WHO region, sex, priority population	WHO/UNAIDS
	Condom and lubricant use at last sex with a client or non-regular partner		90%	90%	WHO region, sex, age, priority population	WHO/UNAIDS
	Number of needles and syringes distributed per person who injects drugs (as part of a comprehensive harm reduction programme)	200	200	300	WHO region, priority population	WHO/UNAIDS
	Percentage of people living with HIV who receive preventive therapy for TB	50%	95%	95%	WHO region, sex, priority population	WHO, Global TB Reporting
	Percentage of people living with HIV and people at risk of acquiring HIV who are linked to integrated health services, including sexually		95%	95%	WHO region	WHO/UNAIDS

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
	transmitted infections and viral hepatitis					
Milestones	Stigma and discrimination – percentage of people living with HIV, viral hepatitis and sexually transmitted infections and priority populations who experience stigma and discrimination		Less than 10%	Less than 10%	WHO region priority population	WHO/UNAIDS
	Laws and policies – percentage of countries that have punitive laws and policies	Varied by population ^e	Less than 10%	Less than 10%	WHO region	WHO/UNAIDS
	Gender equality – prevalence of recent (last 12 months) intimate partner violence among women and girls 15-49 years old^f	13%	5%	2%	WHO region, age, rural/urban	WHO global reporting
	Integration – percentage of people living with HIV, viral hepatitis and sexually transmitted infections linked to other integrated health services		95%	95%	WHO region, by disease	WHO global reporting
	Late-stage disease – percentage of people starting antiretroviral therapy with a CD4 count of less than 200 cells/mm³ (or stage III/IV)^g	30%	20%	10%	WHO region, age, sex	WHO global reporting
	Differentiated service delivery – percentage of countries which have implemented six-month refill of drugs	19 countries	50%	80%	WHO region	WHO/UNAIDS

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
	Innovation – number of additional diseases (HIV, viral hepatitis and sexually transmitted infections) covered by vaccine or cure		1	2	By HIV, hepatitis B virus, hepatitis C virus, sexually transmitted infections	WHO global reporting

^a Latest data for end 2020. Some targets use data from 2019 because of COVID-19-related service disruptions in the data reported for 2020. The targets for 2025 are not currently expected to be affected by COVID-19. All data will be disaggregated by age, including adolescents, sex and, when relevant, focus populations specific to the disease.

^b Mortality data will be further disaggregated to assess the urgent need to tackle the drivers and causes of deaths, including for HIV cryptococcal meningitis to reduce deaths by 50% in 2025 and 90% by 2030 for tuberculosis and severe bacterial infections.

^c The data will be disaggregated and reported by cause, including the cascade of tuberculosis service interventions needed to reduce mortality, systematic screening of tuberculosis symptoms, rapid tuberculosis diagnosis and preventive treatment, and treatment of drug-resistant tuberculosis

^d Achieved in all ages, sexes and focus populations

^e HIV transmission 61%, transgender people 24%, sex workers 87%, people who use or possess drugs 83%, same sex sexual relations 36%

^f SDG indicator 5.2.1: Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age (<https://unstats.un.org/sdgs/metadata/?Text=&Goal=5&Target=> accessed 28.04.2022)

^g To achieve all people living with HIV should receive a CD4 test result and at least 90% by 2025 and 95% by 2030

Shared indicators and targets across HIV, viral hepatitis and sexually transmitted infections are shown in **bold**.

Viral hepatitis indicators, targets and milestones by 2030

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
Impact	Hepatitis B surface antigen prevalence among children younger than five years old	0.94%	0.5%	0.1%	WHO region	Nationwide representative survey, modelling and research, WHO
	Number of new hepatitis B infections per year ^b	1.5million new cases 20 per 100 000 population	850 000 new cases 11 per 100 000 population	170 000 new cases 2 per 100 000 population	WHO region	WHO global reporting, nationwide representative survey, modelling and research
	Number of new hepatitis C infections per year	1.575 million new cases 20 per 100 000 population	1 million new cases 13 per 100 000 population	350 000 5 per 100 000 population	WHO region, sex, age, priority population	WHO global reporting and Partner data (Center for Disease Analysis Foundation, others)
	Number of new hepatitis C infections per year among persons who inject drugs	8 per 100	3 per 100	2 per 100	WHO region, sex, age, priority population	WHO global reporting, partner data (Bristol University, Center for Disease Analysis Foundation, others)
	Number of people dying from to hepatitis B per year	820 000 10 per 100 000 population	530 000 7 per 100 000 population	310 000 4 per 100 000 population	WHO region, sex, age, priority population	WHO global reporting, partner data (International Agency for Research on Cancer, Center for Disease Analysis Foundation, Imperial College London, others)
	Number of people dying from hepatitis C per year	290 000	240 000	140 000	WHO region, sex, age, priority population	WHO global reporting, Partner data (Bristol University, Center

	Indicator	Baseline – 2020^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
		5 per 100 000 population	3 per 100 000 population	2 per 100 000 population		for Disease Analysis Foundation, others)
Coverage	Hepatitis B – percentage of people living with Hepatitis B diagnosed / treated	30%/30%	60%/50%	90%/80%	WHO region by age and sex	WHO global reporting and partner data
	Hepatitis C – percentage of people living with Hepatitis C diagnosed / cured	30%/30%	60%/50%	90%/80%	WHO region by age and sex	WHO global reporting and partner data
	Percentage of newborns who have benefited from timely birth dose of hepatitis vaccine or from other interventions to prevent mother-to-child transmission of HBV ^c	50%	70%	90%	WHO region	WHO global reporting
	Number of needles and syringes distributed per person who injects drugs^d	200	200	300	WHO region	UNAIDS/WHO
	Blood safety – proportion of blood units screened for bloodborne diseases	95%	100%	100%	WHO region	WHO global reporting
	Safe injections – proportion of safe health/care injections	95%	100%	100%	WHO region	WHO global reporting
Milestones	Planning – number of countries with costed hepatitis elimination plans	TBD	30	50	WHO region, country income	WHO global reporting

	Indicator	Baseline – 2020^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
	Surveillance – number of countries reporting burden and cascade annually	130	150	170	WHO region, country income	WHO global reporting
	Hepatitis C virus drug access – percentage average reduction in prices (to equivalent generic prices by 2025)	20%	50%	60%	WHO region, country income	Global Reporting System on Hepatitis/partner data, Access to Medicines and Diagnostic Services
	Hepatitis B virus drug access – percentage average reduction in prices (alignment with HIV drug prices by 2025)	20%	50%	60%	WHO region, country income	Global Reporting System on Hepatitis/partner data, Access to Medicines and Diagnostic Services
	Elimination – Number of countries validated for elimination of hepatitis C and/or hepatitis B	0	5	20	WHO region, % burden	Global Reporting System on Hepatitis/partner data

^a Latest data for end 2020. Some targets use data from 2019 because of COVID-19-related service disruptions in the data reported for 2020. The targets for 2025 are not currently expected to be affected by COVID-19. All data will be disaggregated by age, sex and, when relevant, focus populations specific to the disease.

^b Please note the targets in this table are global targets and should be adapted to set country targets for countries in relation to the national context. For example, in some countries a target for hepatitis B surface antigen prevalence among children younger than five years may be less than 0.1% or 0.2%, although the overall global target should be 0.1%.

^c In addition, the proportion of infants younger than 12 months of age who received the third dose of hepatitis B vaccine should also be measured.

^d As part of a comprehensive harm reduction strategy.

Sexually transmitted infections indicators, targets and milestones, by 2030

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
Impact	Number of new cases of syphilis, gonorrhoea, chlamydia and trichomoniasis ^b among people 15–49 years old per year	374 million	<300 million	<150 million ^c	WHO region, analysed for each sexually transmitted infection separately, measured through prevalence	WHO global reporting, estimation based on available studies
	Number of new cases of syphilis among people 15-49 years old per year	7.1 million	5.7 million	0.71 million	WHO region, age	WHO global reporting, Global AIDS Monitoring
	Number of new cases of gonorrhoea among people 15–49 years old per year	82.3 million	65.8 million	8.23 million	WHO region, age, sex	WHO global reporting, Global AIDS Monitoring
	Congenital syphilis cases per 100,000 live births per year	425	< 200	< 50	WHO region	WHO global reporting, Global AIDS Monitoring
	Percentage of girls fully vaccinated with human papillomavirus vaccine by 15 years of age	14%	50%	90%	WHO region, income. Assess district within country.	WHO global reporting
Coverage	Percentage of pregnant women attending antenatal care who were screened for syphilis/percentage treated if positive	66% / 78% ^d	> 85% / > 90%	> 95% / > 95%	WHO region, age	WHO global reporting

	Indicator	Baseline – 2020^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
	Percentage of priority populations ^e screened for syphilis/percentage treated if positive	No data/ No data	> 80% / > 90%	> 90% / > 95%	WHO region, age, by priority population	WHO global reporting
	Percentage of priority populations screened for gonorrhoea/percentage treated if positive	No data/ No data	> 20% / > 90%	> 90% / > 95%	WHO region, age, by priority population	WHO global reporting
	Percentage of women screened for cervical cancer using a high-performance test, by the age of 35 years and again by 45 years/percentage screened and identified as having pre-cancer treated or invasive cancer managed	No data/ No data	>40% / > 40%	> 70% / > 90%	WHO region, age	WHO global reporting, International Agency for Research on Cancer analysis
	Number of countries reporting antimicrobial resistance in <i>Neisseria gonorrhoeae</i> to the WHO Gonococcal Antimicrobial Surveillance Programme	36%	>60%	> 70%	WHO region, country income	WHO global reporting
Milestones	Planning - Number of WHO Member States with national sexually transmitted infection plans updated within the past five years	44 ^f	>70%	> 90%	WHO region, country income	WHO global reporting
	Policies - Number of WHO Member States with national sexually transmitted infection case management guidelines updated within the past three years	62% ^f	>70%	>90%	WHO region, country income	WHO global reporting

	Indicator	Baseline – 2020 ^a	Targets – 2025	Targets – 2030	Disaggregation	Data Source
	Surveillance - Number of countries with strong sexually transmitted infection surveillance systems ^g	No data	>50%	>90%	WHO region, country income	WHO global reporting

^a Latest data for end 2020. All data will be disaggregated by age, including adolescents where available, sex and when relevant, focus populations specific to the disease.

^b Curable sexually transmitted infections.

^c The 2025 targets reflect a 20% reduction in the incidence of all four diseases (2020 baseline), whereas the 2030 targets reflect a 90% reduction for syphilis and gonorrhoea and a 50% reduction for chlamydia and trichomonas (2020 baseline)

^d 2016 estimates.

^e The populations are defined by individual countries, for screening, include men who have sex with men, sex workers and people living with HIV.^f Estimates based on 112 countries reporting on national sexually transmitted infection strategic plans and national sexually transmitted infection treatment guidelines that have been updated within the past five years found in: Assessment of country implementation of the WHO Global health sector strategy for sexually transmitted infections (2016-2021): results of a national survey <https://www.who.int/publications/i/item/9789240025585>.

^g A strong sexually transmitted infection surveillance system incorporates four core competencies: case reporting, regular prevalence assessments among antenatal care, men and priority populations, regular annual reviews of the causation of sexually transmitted infection syndromes and symptomatic data corrected for underreporting and monitoring of antimicrobial resistance in *Neisseria gonorrhoea*.

Monitoring WHO actions

WHO action	Indicator
Action A: Strategic leadership and partnerships	<p>a. Health funding- Support for the increase in global and domestic funding for the three disease areas to fill at least 80% of the funding required</p> <p>b. Partnerships for elimination – Implementation and validation criteria for vertical (mother-to-child) transmission and adult elimination of the three diseases</p>
Action B: Public health advocacy and communication	<p>c. Country policy change and diplomacy – Monitoring and closing gaps in service delivery in the majority of countries, including for priority populations</p> <p>d. Advocacy for common approaches across HIV, viral hepatitis and sexually transmitted infections – Accelerating the number of countries implementing shared approaches to diagnostics, and shared HIV prevention approaches that integrates sexually transmitted infections</p>
Action C: Norms and standards	<p>e. Updated guidelines – Major treatment, prevention and strategic information guidelines for HIV, viral hepatitis and sexually transmitted infections, updated at least every three years</p> <p>f. Support for rapid policy change and implementation of guidelines – Ensuring that 80% of countries have adopted key recommendations of WHO guidelines within two years</p>
Action D: Innovation	<p>g. Support for innovations in cure and vaccines - Support for the development of additional vaccines and cures for HIV, viral Hepatitis and sexually transmitted infections</p> <p>h. Innovations in diagnostics - Support for improved point-of-care tests and reduction in prices of diagnostics and drugs</p>
Action E: Technical support	<p>i. Country planning - Ensuring that 80% of countries have recent HIV, viral hepatitis and sexually transmitted infection strategic plans in place with necessary integration and joint approaches where applicable</p> <p>j. Three level technical support - Across WHO headquarters, regional offices and country offices, ensuring that technical support is provided to countries covering 80% of the disease burden in each biennium</p>
Action F: Global monitoring and reporting	<p>k. Global reporting - Ensuring that 80% of countries report key burden and service cascade data for HIV, viral hepatitis and sexually transmitted infections, which are validated by WHO</p> <p>l. Gap analysis for planning - Providing regular analyses of gaps in policies, services and impact to regions and countries to prioritize and guide technical support through global and regional health observatories</p>

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