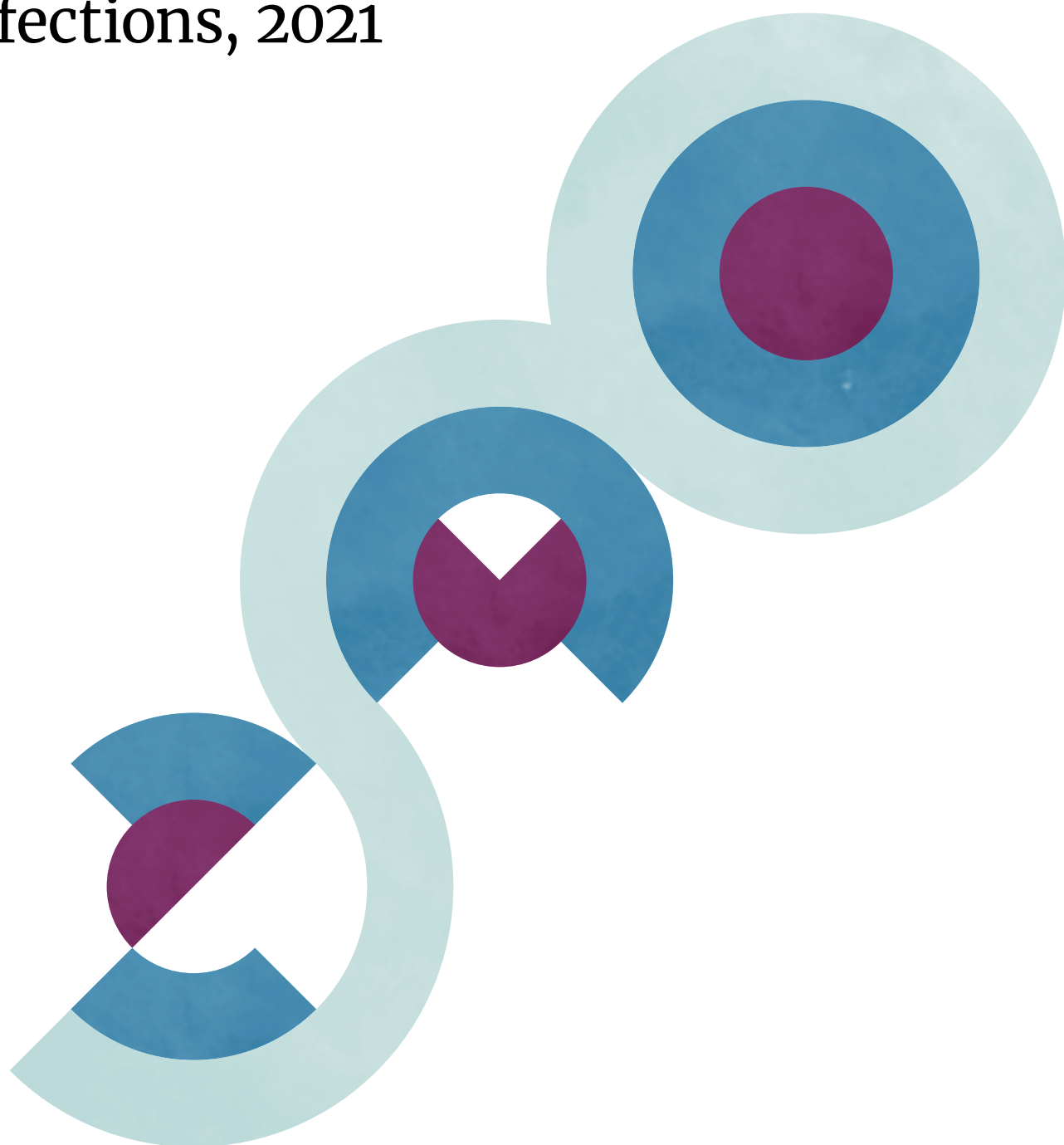


Global progress report on HIV, viral hepatitis and sexually transmitted infections, 2021



Accountability for the global health
sector strategies 2016–2021: actions
for impact

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Foreword



Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization

Progress on the reduction and elimination of HIV, viral hepatitis and sexually transmitted infections looks very different now than it did a year ago. Across the world, the COVID-19 pandemic has disrupted essential health services, including those needed to support the prevention, diagnoses, and treatment of these diseases.

The 2021 global progress report on HIV, viral hepatitis and sexually transmitted infections, is an opportunity to take stock of the progress achieved in addressing these diseases to date, the setbacks caused by the pandemic, and the lessons learned for the coming decade.

This report documents the implementation of the 2016–2021 global health sector strategies for HIV, viral hepatitis and sexually transmitted infections. Drawing on data from multiple sources, it analyses progress and highlights the continuing gaps. It reviews the activities undertaken over the last five years against WHO's five strategic directions: information, services and essential interventions, equity, financing and innovation.

There has been impressive progress in many areas of the response, including the large-scale expansion of HIV treatment, innovations in a cure for hepatitis C virus, and increasing coverage of immunization for hepatitis B virus and for human papillomavirus – the latter a critical intervention to prevent cervical cancer. Nevertheless, we are not on track to eliminate these preventable and treatable diseases, which together result in more than one million new infections every day, and more than two million deaths and 1.2 million new cases of cancer every year. In too many countries, priority interventions remain inaccessible to the populations most severely affected and at higher risk.

The COVID-19 pandemic has impeded the delivery of core services that tackle HIV, viral hepatitis, and sexually transmitted infections. During this incredibly challenging year, we have witnessed the ability of health and community systems to adapt to continue to reach people in need. The lessons learned from the innovations developed during the pandemic response can inform core service delivery programming, as part of the overall effort to achieve universal health coverage.

The report highlights the importance of people-centred services and the urgent need to focus on inequalities and populations left behind: adolescent girls and young women, their male partners, gay men and other men who have sex with men, transgender people, people who inject drugs, sex workers, people in prisons and all vulnerable populations.

Our goal for the coming decade is to get back on track by increasing the equitable delivery of services for HIV, viral hepatitis and sexually transmitted infections across the world. This report lays the groundwork for the next phase of that work.



Acknowledgements

The collaboration of and contributions from health ministries were invaluable in preparing this report. The contribution of technical partners was also crucial, especially the CDA Foundation, which supported each stage together with Imperial College, the University of Bristol, the International Agency for Research on Cancer and UNAIDS. The United States Centers for Disease Control and Prevention, the United States Agency for International Development, the United States President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Bill & Melinda Gates Foundation and UNITAID are major sources of financial support for WHO's work illustrated here and enabled WHO to produce this report.





Key messages

As the global health sector strategies for HIV, viral hepatitis and sexually transmitted infections (STIs) 2016–2021 near the end of their implementation period, this report provides accountability for the main achievements and gaps to date and highlights actions to take forward towards eliminating these diseases as public health threats by 2030. The report publishes new estimates for viral hepatitis with a threefold improvement in the completeness of reporting. It also publishes new estimates for the main STIs, providing a more accurate baseline to guide priorities in the forthcoming decade.

Global messages

1. HIV, viral hepatitis and sexually transmitted infections (STIs) are major public health threats worldwide. They account for more than 2.3 million people dying per year, which represents 14% of all deaths from infectious and parasitic diseases, digestive diseases and cancer. They also result in more than 1 million people newly infected each day and 1.2 million people developing cancer each year. If we lose focus now, the progress achieved so far will plateau with the risk of resurgence. Time is running short. To reach the 2030 targets, we need to accelerate progress, address specific gaps in implementation, and bring innovation to scale across the three diseases.

- 2. The epidemics and responses are at different stages. This strategy implementation period has seen tremendous progress, including achievement of the Sustainable Development Goals target to reduce the incidence of hepatitis B virus.**
- The global target of the Sustainable Development Goals and the global health sector strategy to reduce the incidence of hepatitis B has been met, as measured by the prevalence of hepatitis B surface antigen to less than 1% by 2020 among children younger than five years. Supported by childhood immunization and prevention, the reduction in the incidence of hepatitis B infection is one of the few Sustainable Development Goals health targets that is on track to be achieved. Sustained and regionally focused scale-up of the birth dose of hepatitis B vaccine and of treatment of the mother to prevent further hepatitis B transmission are required to achieve impact by 2030. In addition, there are massive gaps in hepatitis B diagnosis and treatment, including among the populations most severely affected and at higher risk.
 - New data show that 9.4 million people are receiving treatment to cure chronic hepatitis C virus infection, an almost 10-fold increase from the baseline of 1 million at the end of 2015. This scale-up of treatment has been sufficient to reverse the trend of increasing mortality from hepatitis C for the first time. In Egypt, universal access to treatment has resulted in declining mortality and incidence. However, improved data show that the number of people dying from hepatitis B and C worldwide still remains daunting at 1.1 million per year.

- Two thirds of all living with HIV and 85% of pregnant women people living with HIV are receiving antiretroviral therapy, supporting a substantial decline in mortality related to HIV and AIDS. Treatment coverage in sub-Saharan Africa is uniquely higher than global coverage because of sustained partner and country financing.
- The global response to STIs is gathering momentum after years of neglect. More countries have national strategic plans and updated guidelines to address STIs, and coverage of interventions such as syphilis screening of pregnant women in antenatal care and human papillomavirus vaccination, are increasing.

3. Yet many gaps remain. Most global 2020 targets have been missed, and accelerated action is needed to reach the Sustainable Development Goals in the next decade.

- With an estimated 1.7 million people acquiring HIV in 2019, the number has fallen by 23% to the lowest since 2010. However, this remains far below the global target of less than 500 000 people newly infected by 2020. Ending the global HIV epidemic will require stronger commitment to address the inequalities, stigma and discrimination that continue to drive the epidemic and prevent many people from accessing the services they need. This is the focus of the United Nations High Level meeting on HIV in June 2021.

- New data show that hepatitis B and C cause 1.1 million deaths and 3.0 million new infections per year. Only 10% of people who have chronic infection with hepatitis B virus are diagnosed, and 22% of which receive treatment. For hepatitis C infection, 21% of people are diagnosed and 62% of those diagnosed receive treatment. Price reductions have made hepatitis C treatment an affordable high-impact intervention, but coverage needs to increase nearly sixfold in the next decade to reach the 2030 targets for elimination.
- New data on STIs show 374 million new cases per year. Other than slow declines in congenital syphilis, the incidence of most other STIs is plateauing despite ambitious targets. There is a major need to boost synergistic efforts to prevent and treat STIs, including HIV, among adolescent girls and young women and key populations. Global commitment, funding and an integrated public health approach are essential to bend the curve for these infections.
- Although an increasing number of countries are organizing strategies and planning frameworks across HIV, viral hepatitis and STIs, most are missing important opportunities to integrate and link services and responses to provide people-centred services that also leverage efficiency at the primary health care and health system levels.

4. Stigma and inequalities facing the populations most vulnerable and at risk have to be addressed across all diseases to reach the Sustainable Development Goals. Key populations (including gay men and other men who have sex with men, people who inject drugs, sex workers, transgender people and prisoners) and their partners account for 62% of the people acquiring HIV. Viral hepatitis disproportionately affects those who are economically disadvantaged, displaced people and migrants and rural populations. Further, injecting drug use is a major contributor to the number of people newly infected with hepatitis C globally. Many of these population groups overlap with groups recognized as especially vulnerable to STIs. Access to prevention, harm reduction and health-care services for these populations is largely insufficient, and persistent stigma, inequalities, criminalization and other sociostructural barriers are preventing response efforts from reaching the people who need them most.

5. New WHO data show that HIV testing and prevention, as well as Hepatitis B and C services, are among the most frequently disrupted services caused by COVID-19. HIV treatment, as well as STI services have also experienced disruption. The COVID-19 pandemic has forced all three disease programmes to innovate to deliver and maintain essential health services safely within community-led, community-based and differentiated models of care. Making full use of such people-centred and community-led innovations can further enable countries to fully leverage the capacity of health and community systems and respond to the needs of the most vulnerable people in an equitable and sustainable manner.

6. Regional differentiation in implementing the strategies has amplified progress. In the next stages, further granular and differentiated approaches should be developed by region, epidemic status and population to ensure that targets are reached in all settings and that no one is left behind. Chapter 4 of this report present dedicated regional messages.

7. Better data, greater focus on solutions to address gaps in prevention, treatment and delivery and renewed advocacy and demand creation will be needed to reach the 2030 Sustainable Development Goal targets. **This report identifies 10 cross-cutting priority areas that must be strengthened** across HIV, viral hepatitis and STIs to accelerate impact by 2030. They cover actions updated since 2018 based on successes and gaps for each of the five strategic directions. They also include new actions that align with the WHO Triple Billion targets to address social and structural determinants of these infections, promote joint management across diseases and draws on lessons from the COVID-19 pandemic to strengthen community engagement and service delivery.
 1. **Leverage common people-centred and disaggregated data platforms**, including strengthening digital health data and building capacity to analyse and use data for improving programmes.
 2. **Scale up point-of-care diagnostics, self-testing and self-collection** to reach everyone who is vulnerable, at higher risk and hard to reach, including key populations, infants and children and men who are not engaged in care; continue to simplify testing and treatment and improve links so that those already diagnosed can receive care rapidly.
 3. **Achieve triple elimination of mother-to-child transmission** of HIV, hepatitis B virus and syphilis and explore the expansion of the elimination focus to eliminating infection among children for the next phase of the global health sector strategies.
 4. **Improve access to drugs and diagnostics** by further reducing prices, including integrating costs in national health and domestic financing.
 5. **Innovate to maximize the use of differentiated and people-centred service delivery options** across HIV, viral hepatitis and STIs to tailor and deliver services according to people's needs and preferences and train and empower more health-care workers to provide treatment where the availability of specialists is limited.
 6. **Innovate to strengthen community engagement, community-based service delivery and community-led monitoring** in the context of primary health care.
 7. **Protect against the threat of antimicrobial resistance** and other risks, including disruption of services because of COVID-19 and other global health emergencies.
 8. **Strengthen joint responses** for HIV, viral hepatitis and STIs with TB and other key comorbidities by further aligning programme management, service delivery and monitoring to support universal health coverage.
 9. **Integrate sexual and reproductive health and rights** into existing programmes, raise the profile of STIs and reinvigorate the emphasis on primary prevention.
 10. **Address social and structural determinants** that impact vulnerability and access to services and tackle the stigma, discrimination, criminalization and inequalities that undermine the response.

The lessons from the COVID-19 response provide a historical opportunity to foster greater solidarity and innovation in the response to communicable diseases over the next decade. Disease-specific responses and the goals of universal health coverage and global health security are mutually reinforcing and need to be advanced together. By taking decisive action now, we can prevent 2 million people from losing their lives each year and emerge stronger from the challenge of COVID-19 to reach the Sustainable Development Goals by 2030.

The HIV responses of the health sector must be strongly aligned with the Global AIDS Strategy 2021–2026, developed by UNAIDS with support from WHO. It also provides clear opportunities for synergy for the responses focused on viral hepatitis and STIs. The focus of the Global AIDS Strategy on addressing inequalities to end AIDS as a public health threat provides an important framework for all communicable diseases alongside the Strategy's three interlinked priorities: maximizing equitable and equal access to HIV services and solutions; breaking down barriers to achieving HIV outcomes; and fully resourcing and sustaining efficient HIV responses and integrating them into systems for health, social protection, humanitarian settings and pandemic responses.

Regional differentiation, progress and gaps

- The **African Region** leads the way in HIV testing and treatment and has the opportunity over the next decade to extend this to addressing hepatitis B and C virus and to syphilis transmission from mother to child in order to dramatically reduce the high burden of communicable diseases in the Region.
- The **Region of the Americas** has led approaches to advance the triple elimination of mother-to-child transmission of HIV, hepatitis B and syphilis and to deliver services along the cascade for key populations. Over the next decade, they need to systematically fill gaps in the HIV, viral hepatitis and STI service cascades to leave no one behind.
- The **South-East Asia Region** has some of the world's leading programmes for key populations and community-based responses. Three countries in the Region have been validated for EMTCT of HIV and syphilis and four countries have been certified to have achieved hepatitis B control through immunization. Progress in the response to HIV and STIs has nevertheless plateaued. Financing for HIV, viral hepatitis and STIs needs to be sustained and expanded towards universal health coverage.
- In the **European Region**, gaps in testing and treatment for HIV, viral hepatitis and STIs need to be filled rapidly. There have been major advances in hepatitis programme planning, but the estimated number of people acquiring HIV has been increasing.
- The **Eastern Mediterranean Region** leads the way in scaling up testing and treatment for hepatitis C virus, accounting for 37% of the global total number diagnosed and 52% of the global number of people treated in 2019. Some countries have an opportunity to move towards elimination. The impact of these population-based approaches needs to be expanded and transferred to ensure that nobody is left behind in access to hepatitis B, STIs and HIV services.
- The **Western Pacific Region** has made major progress in expanding access to services for hepatitis B and C virus, largely because of domestic funding and substantial drug price reductions. There is an opportunity to include viral hepatitis, HIV and STIs in national health financing.

1

A backdrop of crisis, resilience and innovation

HIV, viral hepatitis and sexually transmitted infections (STIs) account for 2.3 million deaths per year, which represents 14% of deaths from infectious and parasitic diseases, digestive diseases and cancer and 4% of deaths from all causes worldwide (1). They result in 1 million people newly infected per day and 1.2 million people developing cancer per year and continue to be a major public health burden in terms of mortality, morbidity and quality of life. These communicable diseases share common modes of transmission and determinants and call for a common public health approach along the continuum of prevention, diagnosis, treatment and care. Nevertheless, there are key differences in their status in 2020, with important lessons to learn among these diseases and joint opportunities to achieve universal health coverage.

1.2m

people develop cancer each
year due to viral hepatitis,
STIs and HIV

In 2016, WHO Member States adopted three aligned global health sector strategies on HIV, viral hepatitis and STIs, respectively, to guide actions over the period 2016–2021 towards eliminating them as public health threats by 2030. The strategies share a common goal to progress towards universal health coverage, a key priority of WHO's Thirteenth General Programme of Work 2019–2023 and the 2030 Agenda for Sustainable Development (2,3). The strategies are organized around a common framework that promotes synergy across the diseases and with other programmatic health priorities.

This is the second combined progress report on implementation of these strategies, following the mid-term review of progress at the end of 2018 (4). At the time, the pace of progress was uneven and insufficient to meet global targets by 2030. The number of people dying from HIV-related causes was declining with growing access to treatment, but the number of people newly acquiring HIV was not falling rapidly enough. The global response to hepatitis B and C virus was gaining momentum, but access to testing and treatment remained far below needs, and mortality was increasing. The global response to STIs was in crisis after years of neglect, highlighting an urgent need to revitalize STI prevention. Key and vulnerable populations were not adequately reached with essential interventions, and many opportunities for joint action were being missed. The report called for accelerating progress with integrated and people-centred approaches to end the epidemics as public health threats by 2030.

Since the strategies are now in their final year of implementation, this report takes stock of achievements and gaps, globally and by region, at the end of 2020, and highlights action to take forward to the new decade towards elimination by 2030. It also provides new estimates on the disease burden of viral hepatitis and STIs, which will enable a more informed global response as part of the next phase of strategies for the period 2022–2030.

Further, this review comes at a critical moment when the COVID-19 pandemic has placed an enormous strain on health systems and financing worldwide and exposed their weaknesses and inequalities. The report provides an opportunity to assess the initial impact of COVID-19 and draw lessons from the global response. The lessons from COVID-19 and the innovations demonstrated by health and community systems to maintain essential services during a crisis are highlighted throughout the report.





Table 1 presents the impact and service coverage targets of the global health sector strategies for HIV, viral hepatitis and STIs 2016–2021 and provides an update on the achievement of these targets by the end of 2020.

Table 1. Global health sector strategies for HIV, viral hepatitis and STIs 2016–2021: targets and results

HIV

Impact	
Targets (by 2020)	Status
• Reduce the annual number of people dying from HIV-related causes to less than 500 000 globally by 2020 • Reduce the number of people living with HIV dying from tuberculosis (TB)-related causes by 75% by 2020 • Reduce the number of people living with HIV dying from hepatitis B- and C-related causes by 10%, in accordance with the mortality targets for all people with chronic hepatitis B and C infection • Reduce the annual number of people acquiring HIV infection to less than 500 000 by 2020 • Zero new infections among children (0–14 years old) by 2020	• 690 000 [500 000–970 000] people died from HIV-related causes globally in 2019 • 208 000 [177 000–242 000] people living with HIV died from TB-related causes in 2019 • No data • 1.7 million [1.2 million–2.2 million] people acquired HIV infection in 2019 • 150 000 [94 000–240 000] children acquired HIV infection in 2019
Service coverage	
• Ensure that 90% of people living with HIV know their HIV status • Ensure that 90% of the people who know their HIV-positive status receive antiretroviral therapy • Ensure that 90% of people living with HIV receiving treatment have suppressed viral loads	• 81% [68–95%] of people living with HIV knew their HIV status globally in 2019. • 82% [66–97%] of those who knew that they were HIV-positive were accessing treatment in 2019 • 88% [71–100%] of people receiving treatment had suppressed viral loads in 2019

Annex 1 provides a complete set of global and regional data and sources.

Viral hepatitis

Impact	
Targets (by 2020 and 2030)	Status
• 30% reduction in new cases of chronic viral hepatitis B and C infections by 2020, 90% reduction by 2030 • 10% reduction in viral hepatitis B and C deaths by 2020, 65% reduction by 2030	• 1.5 million [1.1 million–2.6 million] people were newly infected with chronic hepatitis B infection in 2019 • 1.5 million [1.3 million–1.8 million] people were newly infected with chronic hepatitis C infection in 2019 • 820 000 [450 000–950 000] people died from hepatitis B infection–related causes in 2019 • 290 000 [230 000–580 000] people died from hepatitis C infection–related causes in 2019
Service coverage	
• 90% coverage of hepatitis B virus vaccine (third dose) by 2020 • 50% coverage of prevention of mother-to-child transmission of hepatitis B virus by 2020, 90% coverage by 2030 • 95% of blood donations screened in a quality-assured manner by 2020, 100% screened by 2030 • 50% of injections administered with safety-engineered devices in and out of health facilities by 2020, 90% by 2030 • 200 sterile needles and syringes provided per person who injects drugs per year by 2020, 300 by 2030 • 30% of chronic viral hepatitis B and C infections diagnosed by 2020, 90% by 2030 • 80% of eligible people with chronic hepatitis B and C virus infection treated by 2030, respectively	• 85% coverage of hepatitis B vaccine (third dose) in 2019 • 43% global coverage for timely birth dose of hepatitis B vaccine in 2019 • Only baseline data available: 97% of donations screened with quality assurance in 2015 • 3.9% reuse of injection equipment in 2017 • 33 syringes or needle sets per person who injects drugs per year in 2017 • 30.4 million [24.3 million–38.0 million] people living with hepatitis B knew their hepatitis B status in 2019 • 6.6 million [5.3 million–8.3 million] people diagnosed with hepatitis B received treatment in 2019 • 15.2 million [11.2 million–19.0 million] people living with hepatitis C knew their hepatitis C status in 2019 • 9.4 million [7.5 million–11.7 million] people diagnosed with hepatitis C infection had been treated using direct-acting antiviral drugs between 2015 and 2019

Annex 1 provides a complete set of global and regional data and sources.

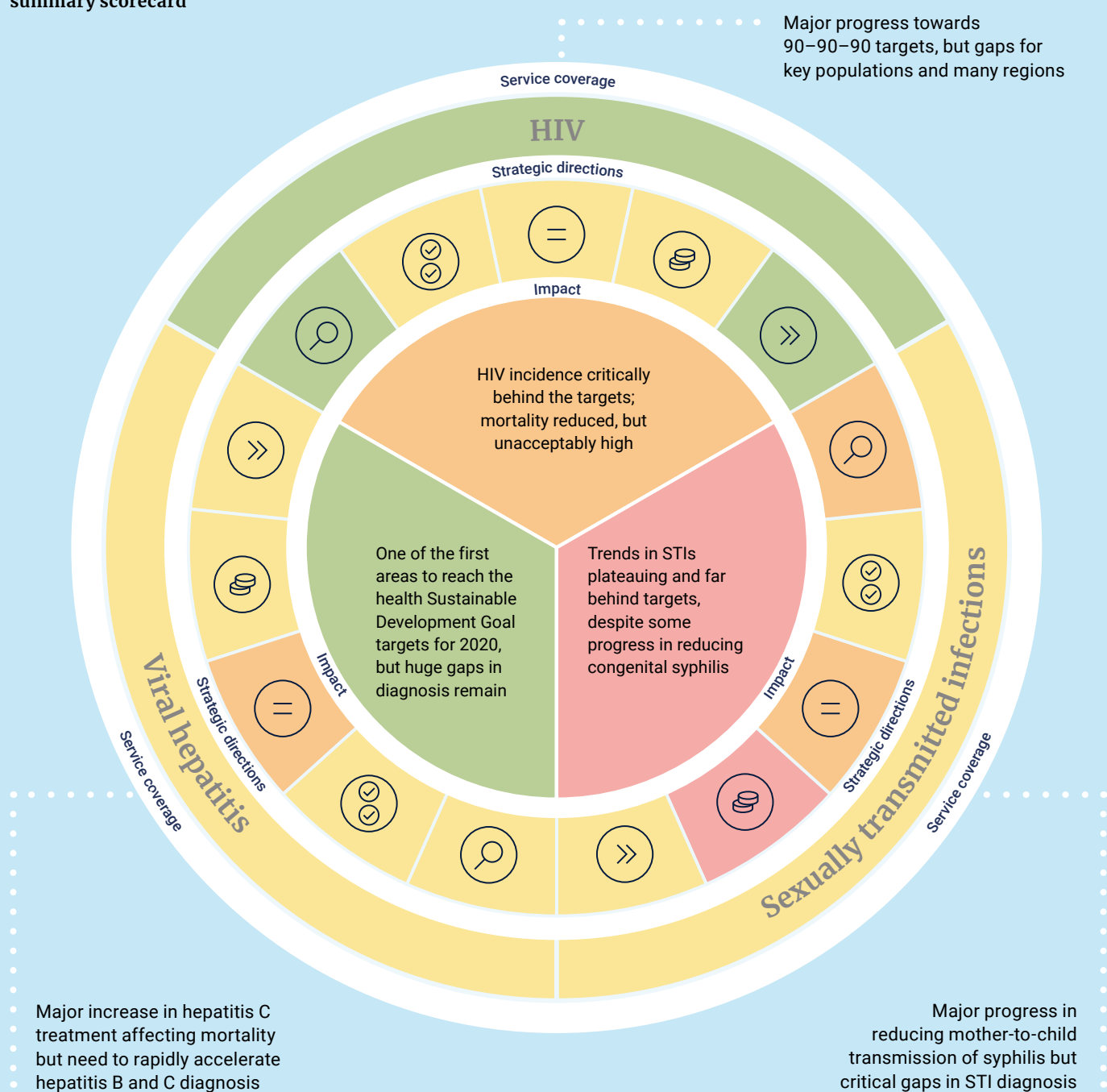
Sexually transmitted infections

Impact	
Targets (by 2020 and 2030)	Status
90% reduction of <i>Treponema pallidum</i> incidence globally (2018 global baseline) 90% reduction in <i>Neisseria gonorrhoeae</i> incidence globally (2018 global baseline) 50 or fewer cases of congenital syphilis per 100 000 live births in 80% of countries - Sustain 90% national coverage and at least 80% in every district (or equivalent administrative unit) in countries with the human papillomavirus vaccine in their national immunization programme	7.1 million [2.4 million–11.5 million] people were newly infected with <i>T. pallidum</i> in 2020 82.4 million [47.7 million–130.4 million] people were newly infected with <i>N. gonorrhoeae</i> in 2020 473 [385–561] congenital syphilis cases per 100 000 live births in 2016, a decline of 12% in 4 years - Of 75 countries surveyed, 19 (25%) reported >80% human papillomavirus vaccine coverage in 2019–2020
Service coverage, by 2020:	
70% of countries have STI surveillance systems in place that are able to monitor progress towards the relevant targets 70% of countries have at least 95% of pregnant women screened for HIV and/or syphilis; 95% of pregnant women screened for HIV and/or syphilis with free, prior and informed consent; 90% of pregnant women living with HIV receiving effective treatment; and 95% of syphilis-seropositive pregnant women treated with at least one dose of intramuscular benzathine penicillin or other effective regimen 70% of key populations for HIV have access to a full range of services relevant to STIs and HIV, including condoms 70% of countries provide STI services or links to such services in all primary, HIV, reproductive health, family planning and antenatal and postnatal care services 70% of countries deliver human papillomavirus (HPV) vaccines through the national immunization programme 70% of countries report on antimicrobial resistance in <i>N. gonorrhoeae</i>	97 of 110 countries (87%) had STI surveillance or monitoring in place in 2019–2020 103 of 111 countries (93%) had policies for antenatal screening and treatment of syphilis in 2019–2020 - No data - Countries provided link to STI services in other health services, such as primary health care (88%), HIV services (91%), reproductive health services (84%), family planning (77%) and pre- and postnatal services (89%) in 2019–2020 59% of countries included the HPV vaccine in the national immunization schedule in 2019–2020 64% of countries conducted surveillance of gonococcal antimicrobial susceptibility in 2019–2020

Annex 1 provides a complete set of global and regional data and sources.

Figure 1 presents the accountability ratings for progress achieved under each of the global health sector strategies, towards impact and service coverage targets and towards implementing the priority actions under each of the five strategic directions of the strategies.

Fig. 1. Accountability for the global health sector strategies 2016–2021: summary scorecard



1.1 Major epidemics with lessons across diseases

Together, HIV, viral hepatitis and STIs form a cluster of interlinked communicable diseases with common determinants of health, modes of transmission and high rates of coinfection, especially among populations most severely affected and at higher risk.

This report publishes new estimates for hepatitis B and C viruses and for the four main STIs, providing a more accurate baseline for the forthcoming decade of progress towards eliminating them by 2030.

Viral hepatitis accounts for a significant global disease burden and high mortality from liver cancer and cirrhosis. In 2019, 296 million people were living with chronic hepatitis B virus infection and 58 million people with chronic hepatitis C virus infection worldwide. New estimates show that about 1.5 million people newly acquire hepatitis B infection each year, despite the availability of a highly efficacious vaccine. About 1.5 million people newly acquire hepatitis C virus infection. Viral hepatitis caused 1.1 million deaths in 2019, 96% of which were caused by hepatitis B and C virus (5). Most of these deaths result from chronic liver disease and liver cancer. The greatest burden of hepatitis B and C infection is concentrated by geography and population, with 80% of the global burden of hepatitis C infection in the 10 most severely affected countries. People from economically disadvantaged regions, displaced people and migrants, and rural populations are more severely affected. Further, injecting drug use is a major contributor to the hepatitis C epidemic globally (6). Other affected population groups include health-care workers exposed through needle-stick injuries, people in prisons and closed settings, and gay men and other men who have sex with men.

STIs are defined by multiple neglected pandemics that cause a significant global disease burden. More than 1 million curable STIs are acquired every day worldwide, primarily caused by *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Treponema pallidum* (syphilis) and *Trichomonas vaginalis* (7). This report published new estimates for four curable STIs that indicate a global incidence of 374 million new cases of these STIs, including 128 million chlamydia cases; 82 million gonorrhoea

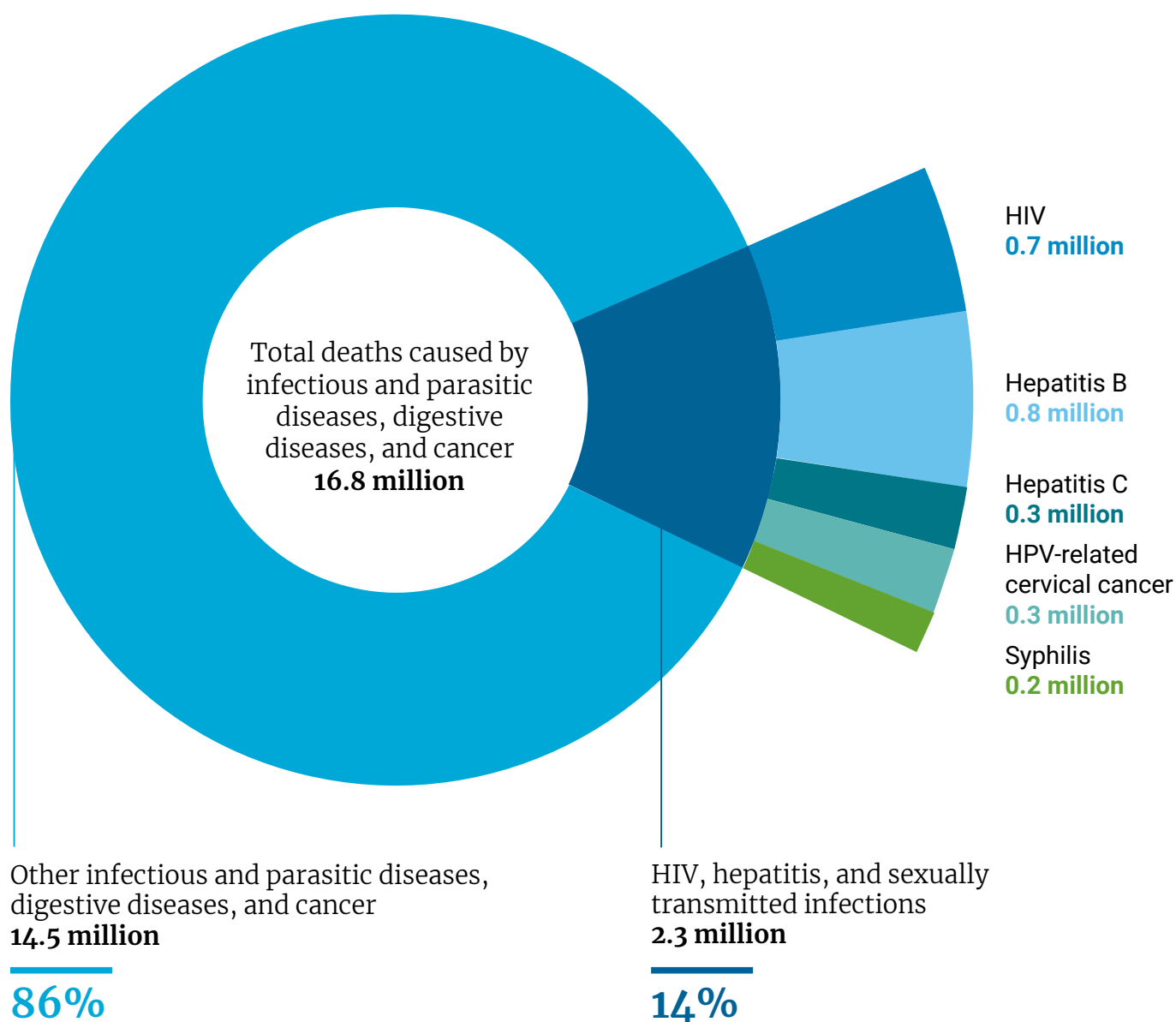
cases; 156 million trichomoniasis cases; and 7 million syphilis cases each year. In addition, previous data indicate that more than 1 in 7 women is estimated to have HPV infection, and more than 500 million people have genital herpes simplex virus (HSV) infection (8–10). Population groups that are especially vulnerable to STIs include sex workers and their clients, gay men and other men who have sex with men, transgender people, young adults and adolescents, mobile populations and people affected by conflict and civil unrest (11). A first systematic review and meta-analysis of the global prevalence of syphilis among gay men and other men who have sex with men found that the global pooled prevalence from 2000 to 2020 was 7.5% versus 0.5% among men in the general population (12). The global health sector strategy focuses on three STIs that require immediate action for control – *N. gonorrhoeae* infection, *T. pallidum* infection with the elimination of congenital syphilis, and HPV infection.

An estimated 38 million people were living with HIV worldwide in 2019. A total of 1.7 million people acquired HIV in 2019 alone, and 690 000 people died from HIV-related causes. Key populations (including men who have sex with men, people who inject drugs, sex workers, transgender people and prisoners) and their partners accounted for 62% of the people newly infected worldwide, including the largest share of people acquiring HIV in nearly all regions (13). About 5500 adolescent girls and young women (15–24 years old) acquire HIV each week, and in sub-Saharan Africa, they are twice as likely to acquire HIV as adolescent boys and young men (14). HIV is a major STI and shares behavioural, social and structural determinants with other STIs.

2.3m

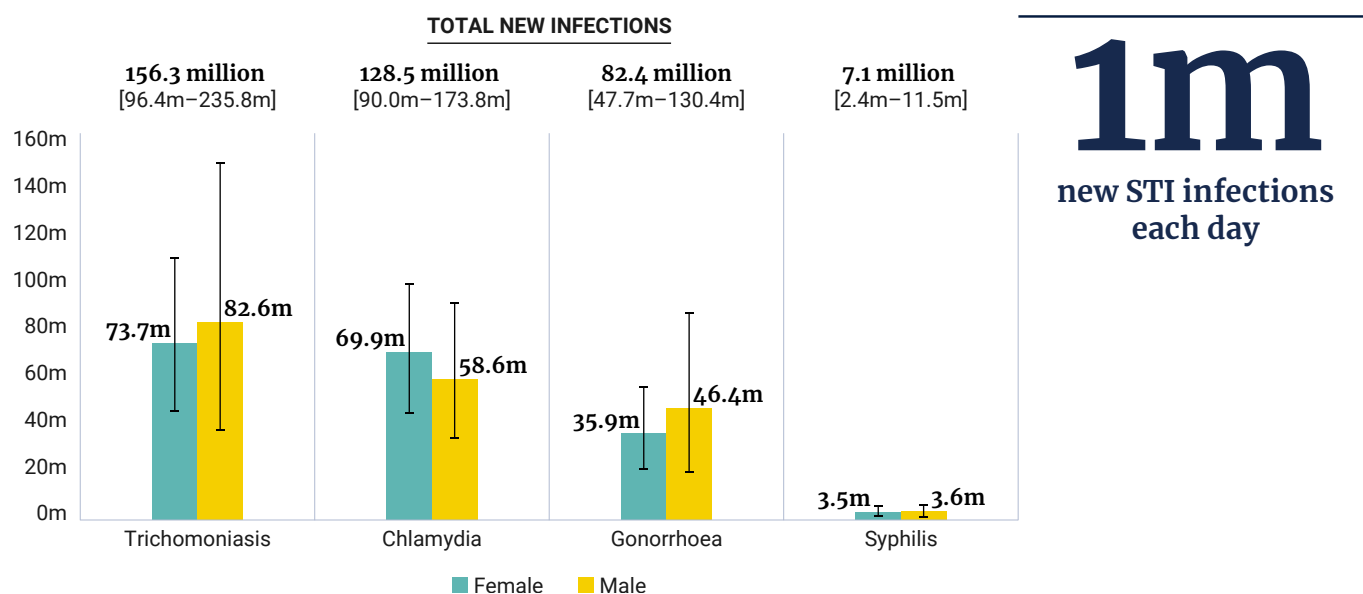
**More than 2.3 million
lives lost each year**

Fig. 2. Deaths related to HIV, viral hepatitis and STIs among all deaths related to infectious and parasitic diseases, digestive diseases, and cancer, 2019



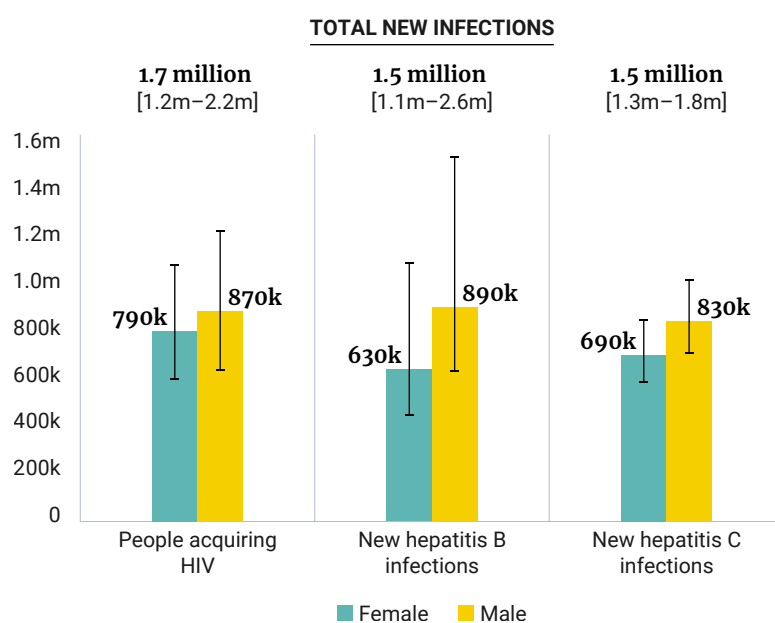
Sources: Overall burden of disease: WHO Global Health Estimates [website] (1). HIV: UNAIDS/WHO, 2020. Hepatitis: WHO, 2021. HPV-related cervical cancer: International Agency for Research on Cancer and WHO, 2021. STIs: Korenromp et al. (15).

Fig.3. New cases of four curable STIs among adults (15–49 years old) per year, by sex, global, 2020



Source: WHO, 2021.

Fig. 4. New cases of HIV, hepatitis B infection and hepatitis C virus infection per year, by sex, global 2019



Sources: HIV: UNAIDS/WHO, 2020. Hepatitis: WHO, 2021.

Table 2. New cancer cases attributable to HIV, viral hepatitis and STIs, 2018

Disease	New cases
Hepatocellular carcinoma caused by hepatitis B and C	500 000
Cervical cancer caused by HPV	570 000
Other types of cancer caused by viral hepatitis and HPV	140 000
Total	1 210 000

Source: Martel et al. (16).

1.2m
new cancer cases
each year

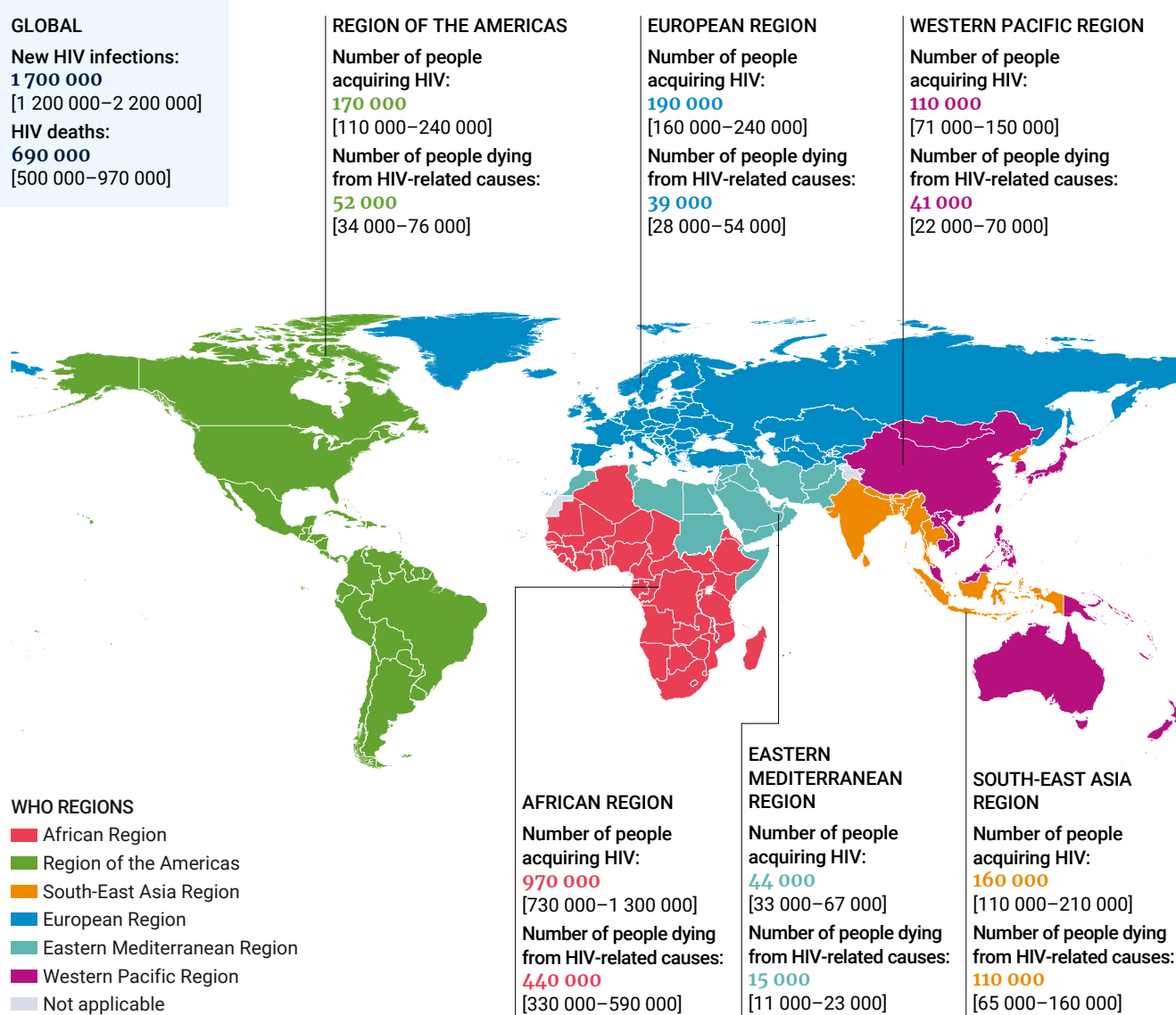
Interlinked diseases with common determinants and coinfections

Table 3. Coinfections and comorbidities related to HIV, viral hepatitis, STIs and other major infectious diseases

Diseases	Summary of the evidence
HIV and viral hepatitis	2.7 million people are coinfecting with HIV and hepatitis B virus (2015) (5). 2.3 million people are coinfecting with HIV and hepatitis C virus (2015) (5).
HIV and viral hepatitis	Among people living with HIV, untreated hepatitis coinfection promotes more rapid progression of hepatitis B- and/or C-related liver disease, hepatocellular cancer and untimely death, undermining the gains of effective HIV treatment. HIV coinfection doubles the risk of mother-to-child transmission of viral hepatitis (5). More than half of all people coinfecting with HIV and hepatitis C are people who inject drugs. Men living with HIV who have sex with men are at substantially higher risk of hepatitis C infection (17).
HIV and all STIs	The presence of untreated STIs can increase the risk of becoming infected with HIV by a factor of up to 10 (18).
HIV and HSV type 2 (HSV-2)	HSV-2 infection resulted in an estimated 420 000 [317 000–546 000] of the 1.4 million people 15–49 years old acquiring HIV through sexual transmission (2016) (8).
HIV and human papillomavirus (HPV)	HIV enhances HPV-induced carcinogenesis, and women living with HIV have a six-fold risk of cervical cancer versus HIV-negative women (19). 28 000 [20 000–36 000] new cervical cancer cases are attributable to HIV infection (2018) (19).
HIV and TB	208 000 [177 000–242 000] people living with HIV died in 2019 from HIV with TB as a contributory cause of death. 815 000 [729 000–906 000] people living with HIV develop a new TB case (2019) (20).
HIV and COVID-19	Preliminary evidence suggests that people with HIV have increased risk of poor outcomes with COVID-19 (21).

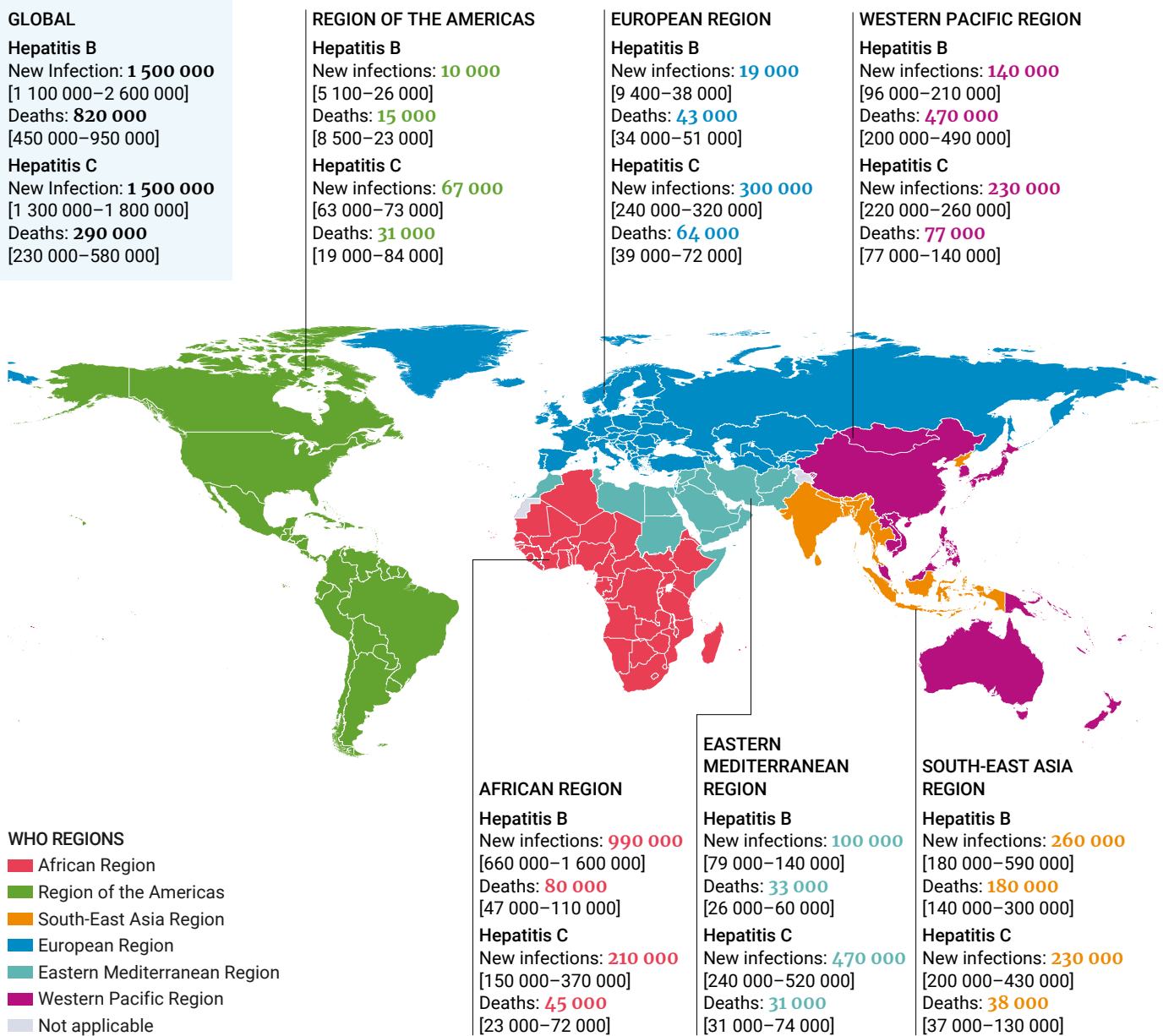
Diverse epidemics by WHO Region

Fig. 5. Number of people acquiring HIV and number of people dying from HIV-related causes, 2019



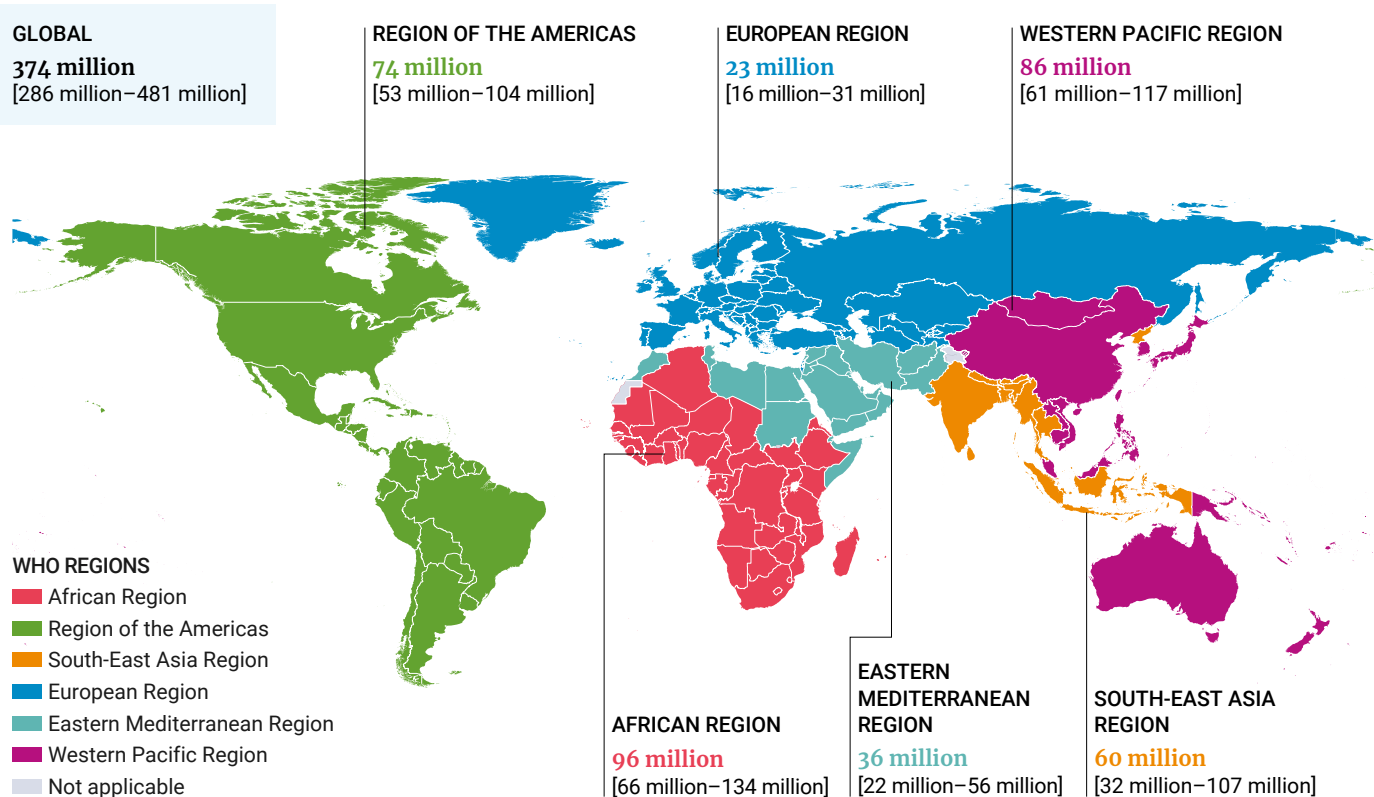
Source: UNAIDS/WHO, 2020.

Fig. 6. Hepatitis B and C new infections and mortality by WHO region, 2019



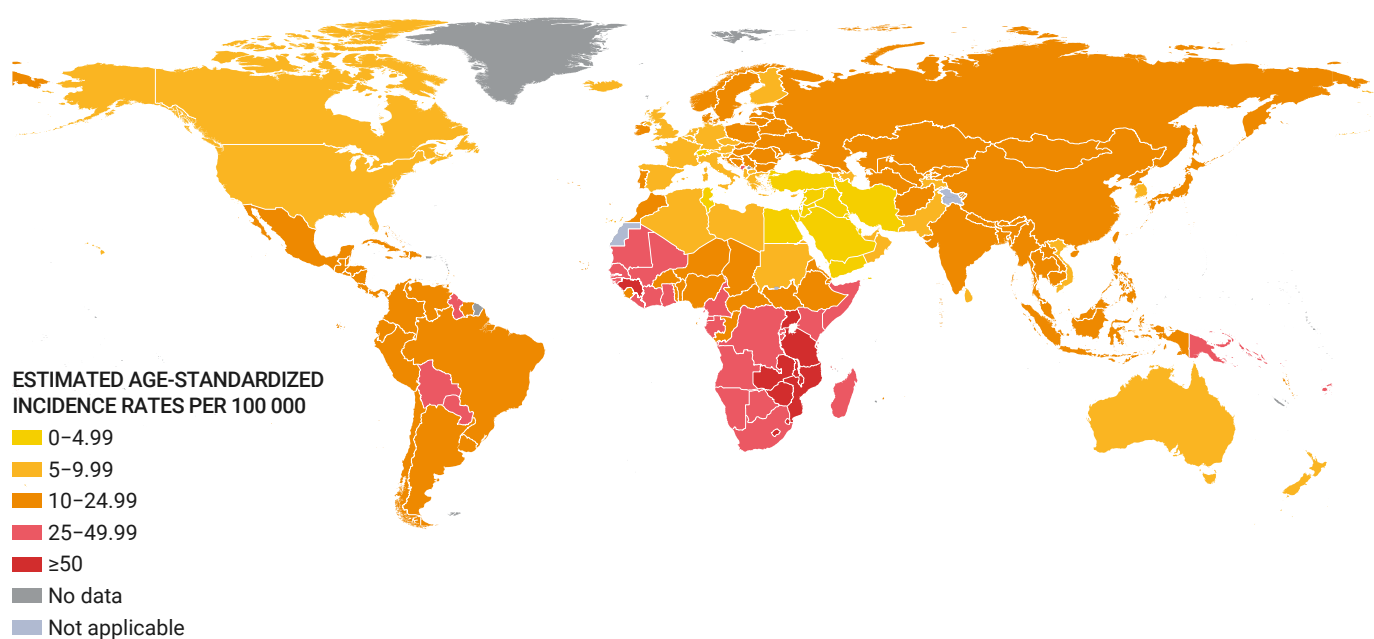
Sources: WHO, 2021

Fig. 7. Incident cases of four curable STIs among adults (15–49 years old), by WHO region, 2020



Source: WHO, 2021.

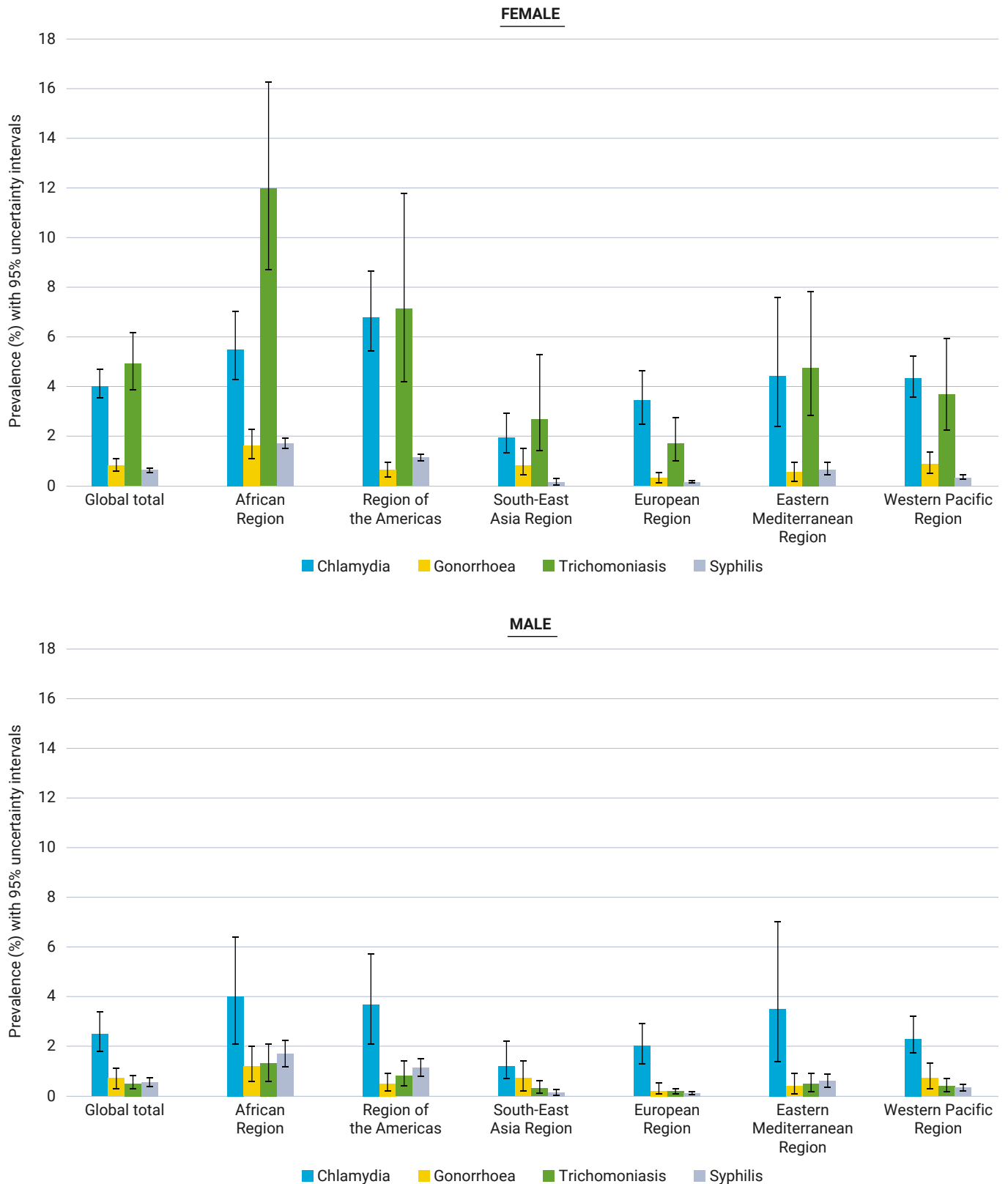
Fig. 8. Estimated age-standardized incidence of cervical cancer, all ages, 2020



Sources: International Agency for Research on Cancer and WHO, 2021.

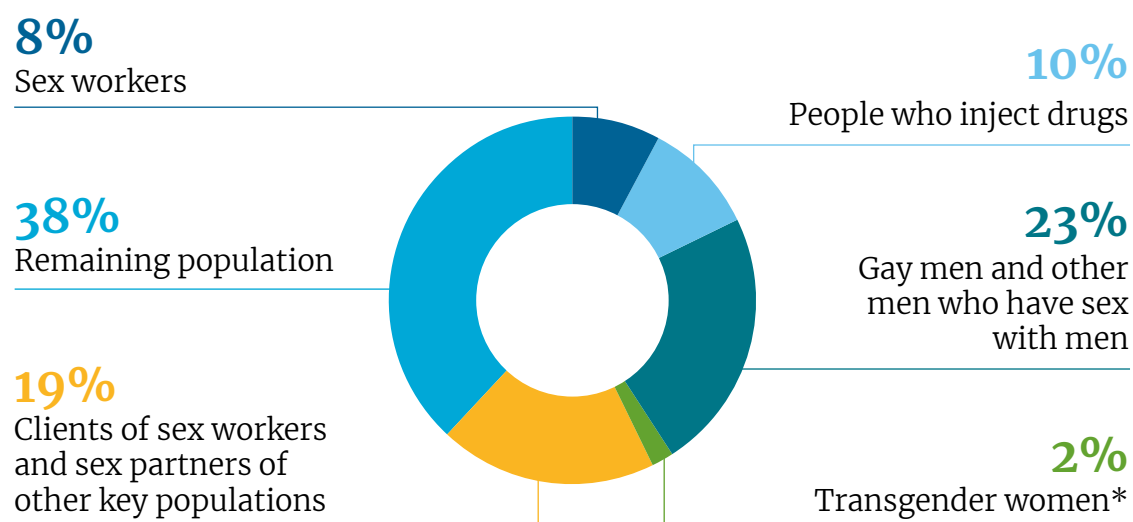
Uneven distribution by population

Fig. 9. Prevalence of sexually transmitted infections among adults (15–49 years old), by sex, by WHO region, 2020



Source: WHO, 2021.

Fig. 10. Members of key populations acquiring HIV, global, 2019



* Data only included from Asia and the Pacific, the Caribbean, eastern Europe and central Asia, Latin America, and western and central Europe and North America.

Source: UNAIDS special analysis, 2020.



1.2 Disruption and opportunities arising from COVID-19

Global efforts to eliminate HIV, viral hepatitis and STIs required acceleration to achieve targets even before the COVID-19 pandemic. As countries worldwide mobilized efforts to mount a comprehensive public health response to a new infectious disease, the fact that global health security would not be achieved without resilient, adaptable and equitable health systems to deliver universal health coverage became more evident than ever.

The response to the pandemic, with stay-at-home measures, travel restrictions, physical distancing requirements and supply chain interruptions, disrupted essential health services in many places and threatened to halt or reverse the progress achieved so far. In the first round of the WHO pulse survey on the continuity of essential services during the COVID-19 pandemic conducted between May and September 2020, nearly all the 105 reporting countries faced some disruption of essential health services as a result of the pandemic (22).

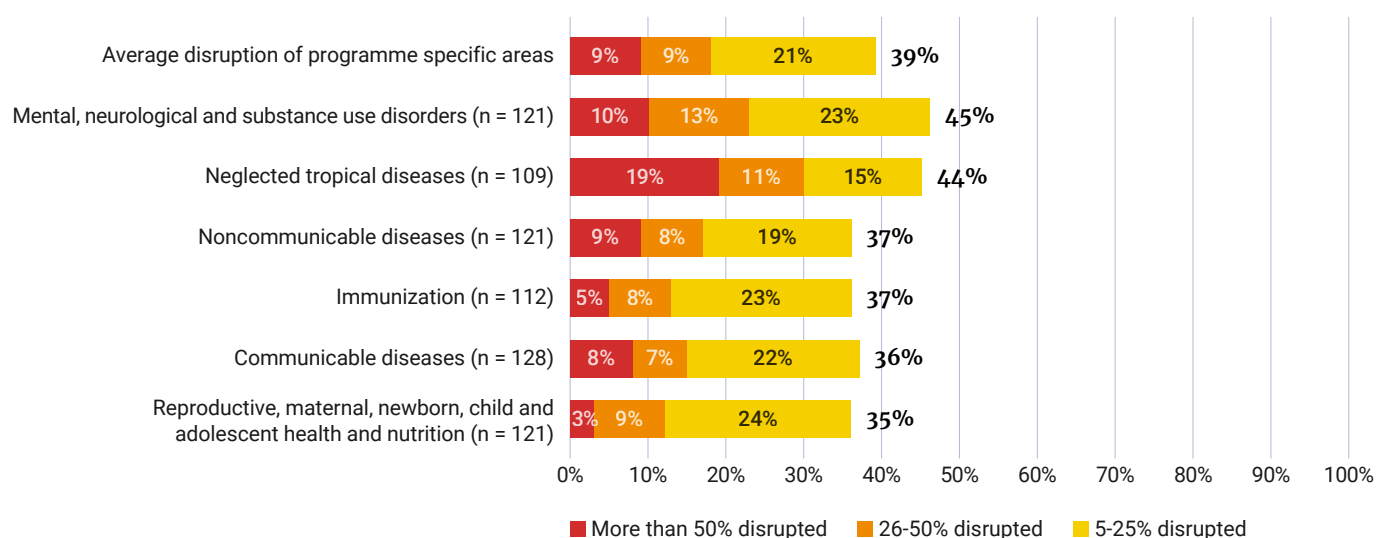
Services for HIV, viral hepatitis and STIs were also affected. In June 2020, 34 countries reported disruption in antiretroviral therapy delivery. A study on how COVID-19 affected harm-reduction services in seven countries in Asia found sudden declines between April and June 2020 in needle and syringe distribution and in HIV testing for people who inject drugs, with some recovery from July 2020 onwards (23). The evidence on how COVID-19 has affected reported STI cases is mixed. The data available are mostly from high-income countries and suggest in some places and among some populations that fewer STIs may have been diagnosed in 2020 than in 2019 (24–30). This may result from interruptions to STI testing services. Fully assessing the impact of COVID requires generating additional clinical, epidemiological and psychosocial data on the behavioural links between COVID-19 and HIV, viral hepatitis and STIs.

Essential health services began to resume by the second half of 2020, but there is no room for complacency. Countries have continued to face challenges as they faced new waves of increasing COVID-19 transmission at the end of 2020. Preliminary findings from the second round of the WHO pulse survey conducted between December 2020 and March 2021 show that, despite evidence of resilience and innovation to restore some services, disruption to essential health services is still geographically widespread, and 94% of reporting countries experienced some disruption. On average, 36% of countries reported disruption to communicable disease services (31).

HIV testing services and thus antiretroviral therapy initiation have also continued to be affected in many countries. In the second round of the WHO pulse survey, 49% of countries reported some disruption to HIV testing and 46% to HIV prevention. The number of countries showing disruption in antiretroviral therapy delivery declined from 34 in June 2020 to 17 by March 2021, but one quarter of the reporting countries continued to face disruption in newly initiating treatment. Similarly, 43% of countries reported disruption in hepatitis B and C diagnosis and treatment (31).

This disruption results from a mix of supply- and demand-side factors, and their extent can differ within a country in terms of service delivery, population or geography. In some places, HIV testing services, especially community and voluntary testing activities, have been limited or restricted. Demand for services has also declined as a result of physical distancing measures, financial constraints or fear of contracting COVID-19. Some countries now face the double challenge of mitigating the risk of further disruption while having to catch up on disruption that has already taken place. Ongoing efforts are needed to focus and set priorities among interventions while planning for strategic efforts to prevent going further off-track from achieving the global goals.

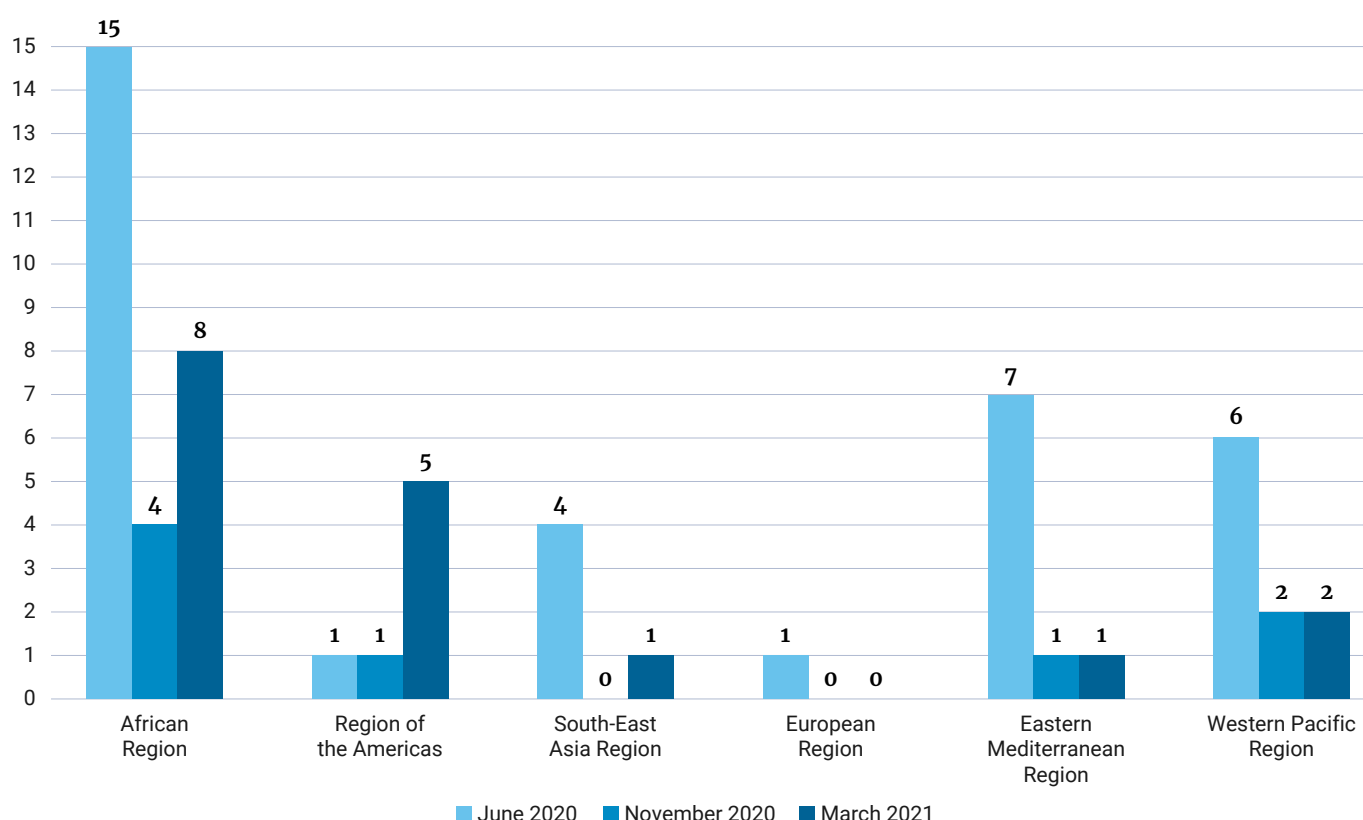
Fig. 11. Percentages of countries reporting disruptions across tracer service areas, January – March 2021



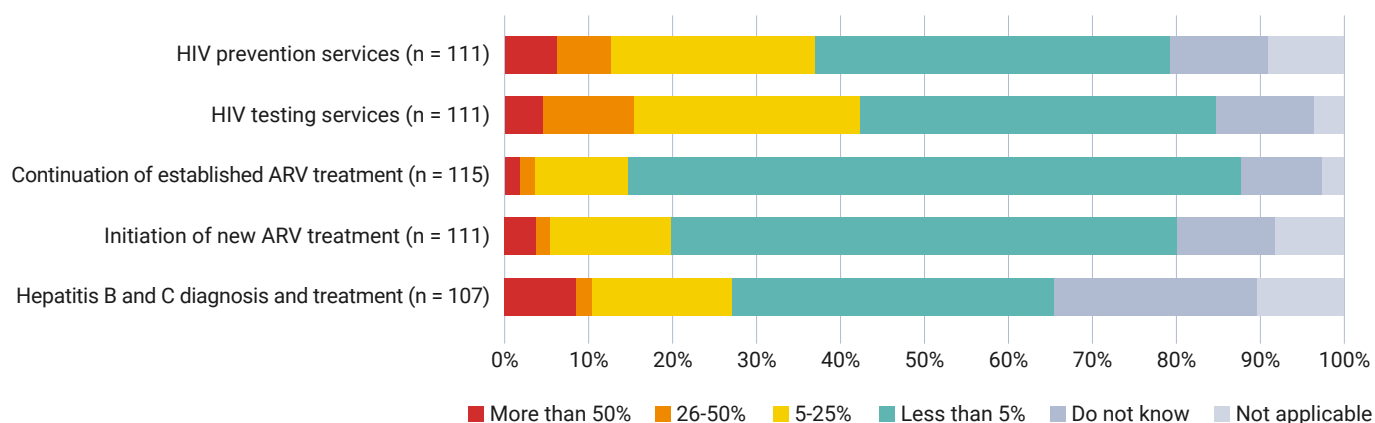
Denominator excludes "Not applicable" or "Do not know" responses.

Source: *Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic: January–March 2021* (31).

Fig. 12. Number of countries reporting disruption in antiretroviral therapy services in June 2020, November 2020 and March 2021



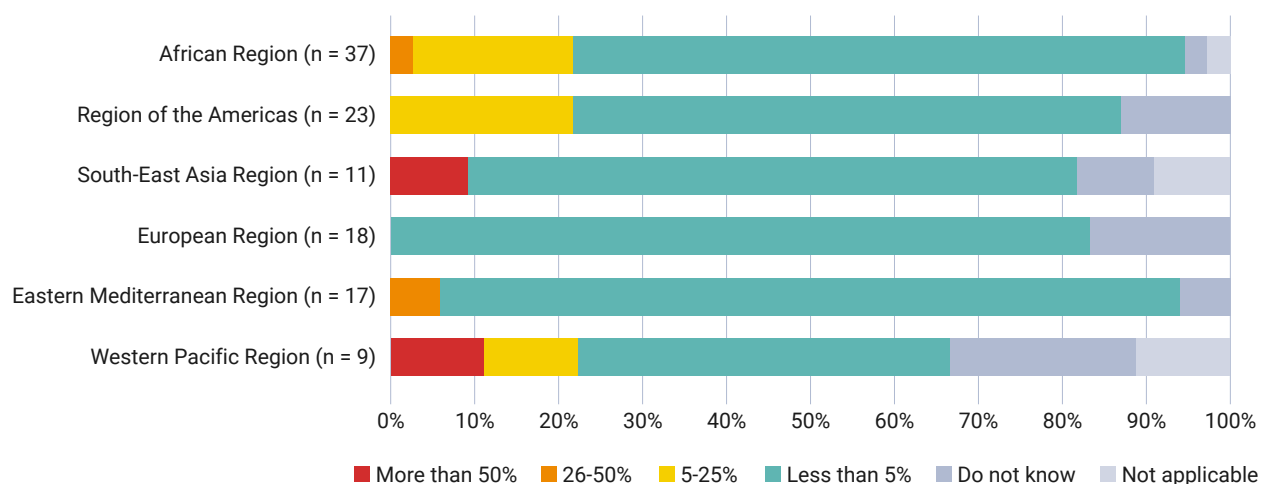
Source: WHO HIV, hepatitis and sexually transmitted infections survey, 2021.

Fig. 13. Disruption in other services for HIV and viral hepatitis, March 2021

PULSE survey results only: in case of exclusion of “Not applicable” or “Do not know” responses in the denominator, the percentages of countries reporting disruptions (i.e. $\geq 5\%$) are as follows: HIV testing services (49%), HIV prevention services (46%), Hepatitis B and C diagnosis and treatment (43%), Initiation of new ARV treatment (25%) and Continuation of established ARV treatment (17%).

For more information on the PULSE survey: <https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS-continuity-survey-2021.1>.

Sources: WHO HIV, hepatitis and sexually transmitted infections survey, 2021 and Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic: January–March 2021 (31) (consolidated data).

Fig. 14. Disruption in antiretroviral therapy services caused by COVID-19 by WHO region, March 2021

Sources: WHO HIV, hepatitis and sexually transmitted infections survey, 2021 and Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic: January–March 2021 (31) (consolidated data).

Worldwide, countries and communities facing the COVID-19 pandemic have responded in innovative ways to adapt, combine, differentiate, decentralize and simplify health services to meet people's needs during the crisis.

- **Accelerating policy implementation.** Many countries worldwide were able to implement existing policies to provide multimonth supplies of antiretroviral medicines to people who did not have access to health facilities. This improved patient security by ensuring continuity of HIV treatment but also required adequate antiretroviral drug stocks. Other programmes followed suit and provided opioid substitution therapy and other treatments for multiple months (32).
- **Leveraging health systems capacity.** In sub-Saharan Africa, countries used existing HIV and TB laboratory infrastructure, sample transportation, quality assurance mechanisms and staff to provide COVID-19 testing, although in some cases this led to delays in testing for other diseases in the early phase of the response (32).
- **Simplifying community-based delivery.** In the South-East Asia Region, countries shifted service delivery from facilities to communities, providing take-home doses of opioid substitution therapy to people who inject drugs, home delivery of antiretroviral medicines for people unable to reach facilities, delivering pre-exposure prophylaxis (PrEP) through communities, introducing telehealth consultations and training HIV teams, including virtually, on COVID-19 prevention and management (33,34).
- **Developing strategies for safe delivery.** In sub-Saharan Africa, programmes delivering voluntary medical male circumcision developed safer and more targeted mobilization strategies. For example, in Uganda, a voluntary medical male circumcision programme got back on track to meet its goals by using strategies such as placing branded handwashing stations in dense urban areas to support COVID-19 prevention efforts and emphasize that voluntary medical male circumcision services remained available, restarting outdoor-only, masked door-to-door mobilization, and employing community educators to deliver both COVID-19 awareness and messages promoting voluntary medical male circumcision (35).

- **Expanding the use of self-care interventions.** A project in Bulgaria provided HIV self-testing and telemedicine to key populations. Supported by a vast social media campaign to disseminate information, the initiative helped to reach men who have sex with men and transgender people with HIV testing without having to visit a health facility (36). A dedicated phone line was also available for follow-up. HIV self-testing has also been expanded in many countries in the African Region, Asia and the Americas.
- **Increasing the use of digital health.** In the Region of the Americas, a project delivering PrEP to young key populations in Brazil adapted its approach during the COVID-19 pandemic by using telehealth, social media and an artificial intelligence chatbot to recruit participants and provide information and peer support. The team also provided discrete home delivery of condoms, lubricants, self-tests for HIV and medicines for PrEP (37).

The pandemic has demonstrated the importance and effectiveness of making full use of such people-centred and community-led solutions to deliver essential services in an equitable and sustainable way. Maintaining these innovative approaches as part of a catch-up of services can enable countries to fully leverage the resilience of health and community systems and respond to the needs of the most vulnerable people in the path towards the Sustainable Development Goals.

Box 1.**HIV is a risk factor for illness severity among people hospitalized with COVID-19**

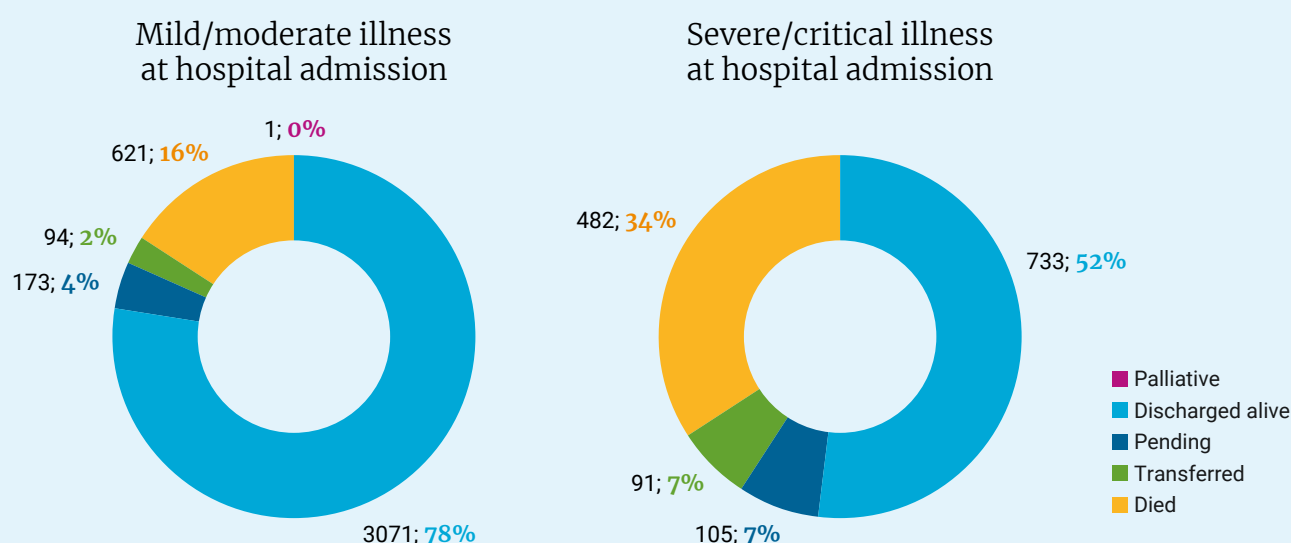
Preliminary analysis of clinical data of people hospitalized with suspected or confirmed COVID-19 infection suggests that HIV appears to be an independent risk factor for illness severity and for in-hospital mortality.

The data submitted from 24 countries between January 2020 and March 2021 show that 46% (2638 of 5733) of people living with HIV hospitalized with suspected or confirmed COVID-19 had one or more underlying conditions at admission. Eight per cent were reported to be coinfecting with TB (current or previous). Of the people living with HIV who were hospitalized with suspected or confirmed COVID-19 infection, 20% died during the hospital stay.

These data were collected as part of the WHO Global COVID-19 Clinical Platform, a global initiative to expand the understanding of clinical characteristics and prognostic factors of people hospitalized with COVID-19 and to inform optimal clinical management. Through a secure web-based database, the initiative is collecting individual anonymized clinical data for people hospitalized with suspected or confirmed COVID-19 from health facilities worldwide (38).

WHO is continuing to expand the collection and analysis of clinical data of people hospitalized with and without HIV through the WHO Global COVID-19 Clinical Platform to improve the understanding of the clinical characterization and management impact of people hospitalized with COVID-19.

Fig.15. Outcomes among people living with HIV hospitalised with COVID-19, by severity of illness at hospital admission



Hospitalized cases from 35 countries submitted to WHO Global Clinical Platform for COVID-19 as of March 17, 2021.

N = 5810 of 67 372 (8.6%) with a recorded HIV status were reported as HIV positive.

90.8% (5275/5810) of the people living with HIV were reported from the WHO African Region.

Source: WHO, 2021.

Box 2.

Methods and data sources

The information presented in this report is compiled from several sources. The main sources and methods are summarized below. Annex 2 provides full details.

Disease burden

This report presents updated disease burden estimates for viral hepatitis B and C and for the four main curable STIs to account for the current status and provide a baseline for the next strategy. Global estimates for viral hepatitis are derived from global reporting, with a threefold increase from 42 in 2018 to 130 in 2019, in the completeness of reporting compared with the previous report. Countries and partners validated the data, to ensure updated data on disease burden and on the diagnosis and treatment service cascade. Data were validated for 130 countries representing 93% of the disease burden and partner data (from the CDA Foundation, Institute for Health Metrics and Evaluation, Imperial College, University of Bristol and WHO) was validated by regions and countries where there are gaps. For STIs, global and regional estimates for chlamydia, gonorrhoea, trichomonas and syphilis were derived using systematic reviews applying the same methods as in 2012 (39) and 2016 (40).

Service coverage and policy uptake

HIV service coverage data have been obtained through the Global AIDS Monitoring System validated by countries, regions and globally. Data for viral hepatitis are derived from the Global Reporting System for viral hepatitis, validated by countries, regions and partners. Data on STIs are derived from a WHO country survey on implementation of STI strategies conducted in 2019 completed by 112 countries (41).

Impact of COVID-19

The data on HIV, viral hepatitis and STIs are complemented by data from successive WHO pulse surveys on continuity of essential health services during the COVID-19 pandemic, conducted between May and September 2020 and December 2020 and March 2021. Further, detailed data were also collected for HIV, viral hepatitis and STI service disruption. Additional data on the impact of COVID-19 from global and country-level partners and published literature are also used where relevant.

Accountability scores

Each global health sector strategy defines fast-track priority actions for implementation by countries and for WHO. To assess progress achieved in implementing the global health sector strategies, documented evidence for completion of each action was reviewed to identify outstanding action and explanations. Based on this review of the completion rate of actions as defined in the strategies, each disease area and strategic direction was rated using a five-point scale of traffic-light colours:

- Dark green: on track, with minor gaps.
- Light green: on track, with few major gaps such as for specific populations, locations or interventions.

- Yellow: incomplete, but major efforts underway.
- Orange: incomplete, with only minor efforts underway.
- Red: no progress.

Using the ratings published in the 2019 mid-term report as a baseline, this report updates the ratings using the latest available data as of the end of 2020. The method used in the 2019 mid-term report is reapplied for these updates. The actions are first scored individually, either by analysing results against targets where quantifiable targets are available or using information on the delivery of the priority actions. Progress by strategic direction is then derived by aggregating the individual scores. This report also identifies priority actions to address underperforming areas. Specifically, it focuses on actions that had not been achieved at mid-term, assesses progress since then and documents the corrective actions undertaken.

Independent expert review

The report also draws on expert opinions from the WHO Strategic and Technical Advisory Committee on HIV and Viral Hepatitis (STAC-HIVHEP) and WHO partners working on STIs. This external advisory group, comprised of expert individuals from all WHO regions and key stakeholder constituencies, provides independent strategic and technical advice on WHO's programme of work. At a meeting held at the end of 2020, they reviewed achievements of the 2016–2021 global health sector strategies and identified gaps to address for developing the next strategies.

The data presented in this report have some limitations

Although the global health sector strategies cover the period 2016–2021, it was considered important to conduct this review at the start of the final implementation year to inform the development of the new strategies during 2021 and incorporate lessons learned from the COVID-19 pandemic. The analysis of progress and gaps in this report therefore primarily reflects data for 2019, collected during 2020 and available by the first quarter of 2021. Updated data from 2021 have been used where available, in particular to reflect the new disease burden estimates for viral hepatitis and STIs and to incorporate the latest information on the impact of COVID-19 on HIV, viral hepatitis and STI services. There has been a considerable country, regional and partner effort to improve the data in this report, especially for viral hepatitis reporting, with completeness increasing from 42 to 130 countries. This provides a more reliable baseline on gaps to fill during the next strategy, but confidence limits need to be considered in interpreting trends over time because of increased accuracy in the data. Using all available data, the report provides a review of all impact and service delivery targets in the strategies as well as the actions proposed at the start of the strategy by strategic direction. In addition, it includes a special focus on actions not achieved mid-term and whether catch-up actions have been implemented.



Box 3.

A country survey to assess the implementation of the global health sector strategy for sexually transmitted infections 2016–2021

In 2019, WHO conducted a country survey among 194 Member States to assess progress towards the targets of the global health sector strategy for sexually transmitted infections 2016–2021 (41). The data collected through this survey are presented in Table 1 and are also included in other sections of this report as relevant. They will also inform the development of the next phase of the strategy for the period 2022–2030.

Specifically, the survey sought to assess the achievement of the following 2020 milestones within the global STI strategy: (1) countries with a STI surveillance system in place; (2) countries with a national policy for universal screening of pregnant women for syphilis; (3) countries providing STI services or links to such services, (4) countries reporting on antimicrobial resistance of *N. gonorrhoeae*; (5) key populations with access to STI and HIV services; and (6) and countries including HPV vaccination within national immunization schedules. The survey also assessed programme service delivery and captured technical assistance needs in STI programming and surveillance.

Of the 194 Member States receiving the survey, 112 returned a complete response. Overall, among these, 64% reported having a national STI strategy, and a higher percentage reported having an STI surveillance system and providing STI services or links to such services in

all primary, HIV, reproductive health, family planning and pre- and postnatal care services. Table 1 presents the results by indicator. Although the data suggest promising evidence that STI programming is being given priority in many reporting countries, they also reflect many gaps. For example, although STI surveillance systems may be in place, they mostly reflect case reporting based on syndromic diagnosis of the common STI clinical presentations. About 96% of countries reported that HIV and syphilis testing was available for the general population, but far fewer countries reported the availability of testing for chlamydia, gonorrhoea, HPV and herpes. Although STI services may be available, the coverage and quality of these services may be lacking. The global strategy milestone target of 70% of countries having the HPV vaccine in national immunization schedules has not been met. Interpretation of all data must also consider reporting rates and reporting bias towards survey completion by countries with better-developed STI programming.

The survey provides important information for future priority setting and investments by countries, global stakeholders and international donors to bring the response to STIs back on track. Direct technical assistance was requested by 70% of surveyed countries to strengthen the STI response and will be needed to accelerate progress.

Box 4.

External review of progress in implementing the global health sector strategies

The STAC-HIVHEP meets biennially to provide the WHO Director-General with independent strategic and technical advice on WHO's programme of work on the two epidemics. In 2020, the STAC-HIVHEP also addressed the STI epidemics. It comprises expert individuals from all WHO regions and key stakeholder groups, as appointed by the WHO Director-General.

In October 2012, the STAC-HIVHEP reviewed the global health sector strategies on HIV, viral hepatitis and STIs 2016–2021, focusing on elements to be highlighted in the forthcoming 2022–2030 strategies.

The global responses to the HIV, viral hepatitis and STI epidemics are at different junctures.

Expanded access to HIV treatment has reduced the number of people dying from HIV-related causes to 690 000 per year, the lowest number since 1994, but prevention is progressing much too slowly with 1.7 million people acquiring HIV annually versus a target of less than 500 000. The 2020 HIV targets were not reached, and equity and financing gaps in the HIV response remain major concerns.

The incidence of viral hepatitis B and hepatitis C infection appears to be declining with 3 million people newly infected, especially for hepatitis B virus, with the 2020 targets of the Sustainable Development Goals being reached, but massive testing and treatment scale-up are needed to reduce unacceptably high mortality of 1.1 million and reach the 2030 targets. There are major opportunities to prevent both hepatitis B and hepatitis C virus infections and to treat and cure hepatitis C virus infection.

Responses to the main STI epidemics are slowly gathering pace, but STI prevention, screening and treatment services are missing many of the estimated 374 million people who are living with at least one of four major STIs (*N. gonorrhoeae*, *C. trachomatis*, *T. pallidum* and *T. vaginalis* infection).

The STAC-HIVHEP strongly supported WHO's commitment to pursue elimination targets for all three health strategies. Success, it said, requires stronger political will, adequate financing and ensuring that programmes reach populations at higher risk, including through stronger community engagement and by upholding people's right to health. Greater health equity is a priority, and integration can be used to greater effect. The STAC-HIVHEP also called on WHO to support countries to use all options to reduce prices for vaccines, diagnostics and drugs for preventing and treating HIV, viral hepatitis and other STIs (and COVID-19).

Strengths

Proven prevention, diagnostic and treatment tools and methods exist for all three epidemics, and a growing number of countries are using them effectively. Strategic information systems are improving, and differentiated services are more common.

HIV. Strong testing and treatment programmes exist in most countries, with 81% of people living with HIV knowing their status, 82% of the people who knew their HIV-positive status accessing treatment and 88% of the people receiving treatment having suppressed viral loads. Strategic information system facilitate fine-tuned interventions and accountability, with 63% of countries having one integrated information system. Although not used widely enough, highly effective prevention technologies and interventions exist, and the obstacles to their use (such as legal and policy barriers, stigma and discrimination and weak demand creation) are well understood. Key populations need to be a focus to achieve ending AIDS as a public health threat.

Viral hepatitis. Scaled-up vaccination has steeply reduced the prevalence of hepatitis B virus infection among children younger than five years (to 0.9% in 2019), although birth-dose coverage has not increased sufficiently. Treatment cures exist for hepatitis C virus and are being used successfully (notably in Egypt, Georgia, Mongolia and Pakistan), and the prices of treatments for hepatitis B virus and hepatitis C virus (including generic direct-acting antiviral drugs) have fallen steeply in many countries.

STIs. There is a renewed focus on STIs, with 88% of countries having STI surveillance in place, progress in eliminating the mother-to-child transmission of syphilis, 64% of countries conducting surveillance of antimicrobial resistance and paying more attention to preventing cervical cancer. There is a basis for a phased approach that builds on existing priority STI interventions and can be expanded to other priority STIs.

Weaknesses

The COVID-19 pandemic caused widespread service disruption and highlighted ongoing inequalities and inequities in who is able to access, afford and use life-saving services and medicines. Diagnostic and treatment gaps persist, especially for key populations. Legal and policy barriers still pose hindrances, and funding shortfalls are a common problem.

HIV. Prevention programmes are not keeping pace, leading to growing epidemics, especially among key populations. Only 40% of countries have operational needle and syringe programmes in the Eastern Mediterranean Region, the European Region, the Region of the Americas and parts of Asia. Adolescent girls and young women continue to be at very high risk of infection in the African Region, and only 55% of countries have prevention strategies addressing adolescent girls and young women. Widespread use of combination prevention interventions is lacking, and funding allocation often does not sufficiently reflect epidemic priorities.

Viral hepatitis. Only a fraction of people living with hepatitis B virus or hepatitis C virus infection are being diagnosed and treated. Globally, only about 5 million people received hepatitis C treatment in 2017 and about 4.5 million people received hepatitis B treatment in 2016. The new estimates bring us to 9.4 million people receiving hepatitis C treatment achieving the 2020 targets, but this is still far from our goal of 40 million to reach 2030 targets. Although a global reporting system was set up in 2018, country reporting is still limited and up-to-date data are lacking. Improved strategic information is vital to mobilize funding, set priorities and monitor and evaluate programmes.

STIs. Major gaps persist in the availability of diagnosis and treatment for the four most common curable STIs, although 88% of countries have STI services as part of primary health care. Programmes are generally underfunded, despite high levels of STI morbidity and mortality, and data gaps undermine advocacy, funding mobilization and scale-up. The STAC-HIVHEP urged WHO to advocate for including STI programmes in national health budgets and improving STI literacy among planners and practitioners in HIV, viral hepatitis and other health programmes.

Opportunities

There are opportunities to further integrate or link services (such as screening for HIV, viral hepatitis, other STIs, diabetes, hypertension etc.), strategic information systems (such as with HIV-related systems), laboratory services and platforms. But integration approaches should not sacrifice crucial features of infection-specific responses (such as community engagement and serving key populations). Stronger action can be taken to remove social, structural and legal barriers.

Facility-based services and support systems can be made more decentralized, people-centred and sustainable through the widespread implementation of differentiated service delivery models of care such as through pop-up clinics, online consultations and teleconsultations, self-testing, multimonth dispensing and providing take-home dosages, telemedicine for treatment follow-up and retention, contact tracing via mobile phone applications and sharing laboratory capacity.

HIV. Reinvigorated primary prevention will strongly influence the course of the epidemic. Improved, disaggregated data will enable financing, resources and interventions to be aligned more effectively with epidemiological trends (and use population and location approaches). Community-led organizations can be involved more centrally in designing, implementing and monitoring services.

Viral hepatitis. Highly effective prevention tools exist for all five hepatitis viruses (including a hepatitis B virus vaccine), and there is effective treatment for chronic hepatitis B and hepatitis C virus infection. There are huge opportunities to use comparatively inexpensive hepatitis B virus treatments (such as tenofovir) more widely and to achieve further price reductions for direct-acting antiviral drugs, especially in low- and middle-income countries. Links with noncommunicable disease programmes can be extended (for example, with cancer control and care or with diabetes screening, as in Egypt) and diagnostics can be integrated (for example, via multiplex platforms) with HIV, TB and other programmes. Simplified testing, care and treatment delivery pathways will enhance programmes.

STIs. Cost-effective interventions exist for the major infections. Countries need to increase access to and manage symptomatic STIs as a priority through appropriate approaches. For example, STI screening and treatment of key populations with prevention and PrEP programmes and giving priority to pregnant women for eliminating syphilis are examples of programme integration for STI impact. Countries can move from syndromic management to etiological diagnosis and management, simplify programmes and focus on enhancing access to currently available interventions through community testing, lay provider testing, assisted partner notification and self-collection for diagnosis and self-care approaches.

Threats

Funding gaps are expected to continue, especially in the wake of the COVID-19 pandemic, and the responses to HIV, viral hepatitis and STIs risk being overshadowed by other public health and development priorities.

HIV. International donor funding has levelled off over the past several years, and the political will to support priority services for key and other marginalized populations is faltering in several countries.

Viral hepatitis. Programmes are being held back by a lack of funding and the high prices of diagnostics, treatments and vaccines, especially in low- and middle-income countries with a high viral hepatitis burden. The COVID-19 pandemic threatens the expansion of nascent viral hepatitis programmes.

STIs. Programmes are underfunded despite high levels of STI morbidity and mortality. Poor awareness about the STIs epidemics and continued stigma could lead to programmes being eclipsed by other priorities. A resurgence of conservatism in many countries threatens STI and sexual and reproductive health programmes.

2 Progress towards impact

There has been significant progress in many areas during this strategy implementation period, but most global impact targets for 2020 have been missed.

There has been solid progress against hepatitis B virus based on prevention and increasing immunization rates. The 2020 targets for viral hepatitis B prevention are on track, and the global target of hepatitis B surface antigen prevalence of below 1% for 2020 among children younger than five years is one of the first 2020 targets of the health-related Sustainable Development Goals to be met. However, progress in reducing the prevalence of hepatitis B infection among children younger than five years is not matched with equal progress in addressing hepatitis B and C infection among adults. Further, although mortality from hepatitis C is declining for the first time, supported by a 10-fold increase in treatment for hepatitis C virus compared with the strategy baseline, treatment coverage remains 13% (21% diagnosed and 62% treated) in relation to need. Treatment for hepatitis B is progressing much too slowly despite affordable treatments, as is hepatitis C prevention and harm reduction among people who inject drugs.

The number of people acquiring HIV has not declined sufficiently to achieve the Fast-Track commitments to end AIDS by 2030 as a public health threat. AIDS-related mortality had dropped significantly, but an unacceptably high number of people still die (42). The response to the major STIs is slowly gathering pace after years of neglect, but other than declines in rates of congenital syphilis, the rates of other infections have plateaued or, in the worst situations, certain STIs may have increased during the COVID-19 pandemic (41).

Most 2020 targets have been missed. Getting back on track will prevent 2 million people from dying each year and prevent 1 million people from becoming newly infected each day

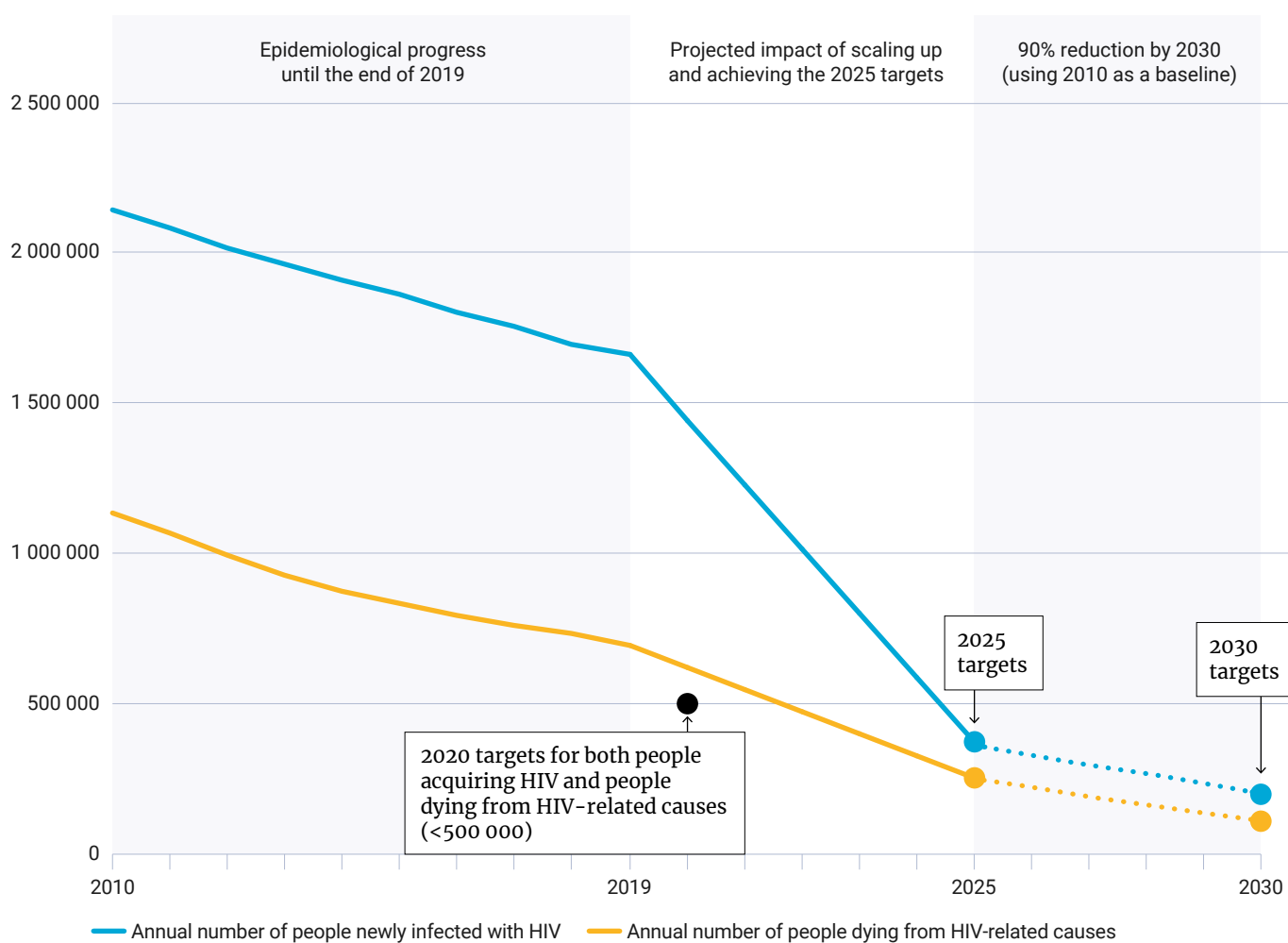
Progress was already insufficient before the COVID-19 pandemic further deterred progress in many countries, and a doubling of progress was needed to achieve the Sustainable Development Goal trajectory. The unprecedented global health crisis has been a stark reminder that disease-specific action and universal health coverage goals are mutually reinforcing and must be advanced together through a people-centred public health approach.

At the end of 2020, the responses to HIV, viral hepatitis and STIs were at very different stages of progress, and much can be learned across implementation of the strategies to optimize opportunities through primary health care as the critical platform to ensure universal access to prevention, testing, treatment and care over the next decade. Urgent and decisive action is necessary now and over the next decade to sustain progress, prevent resurgence and accelerate action to eliminate HIV, viral hepatitis and STIs by 2030 as part of broader global health goals.

HIV

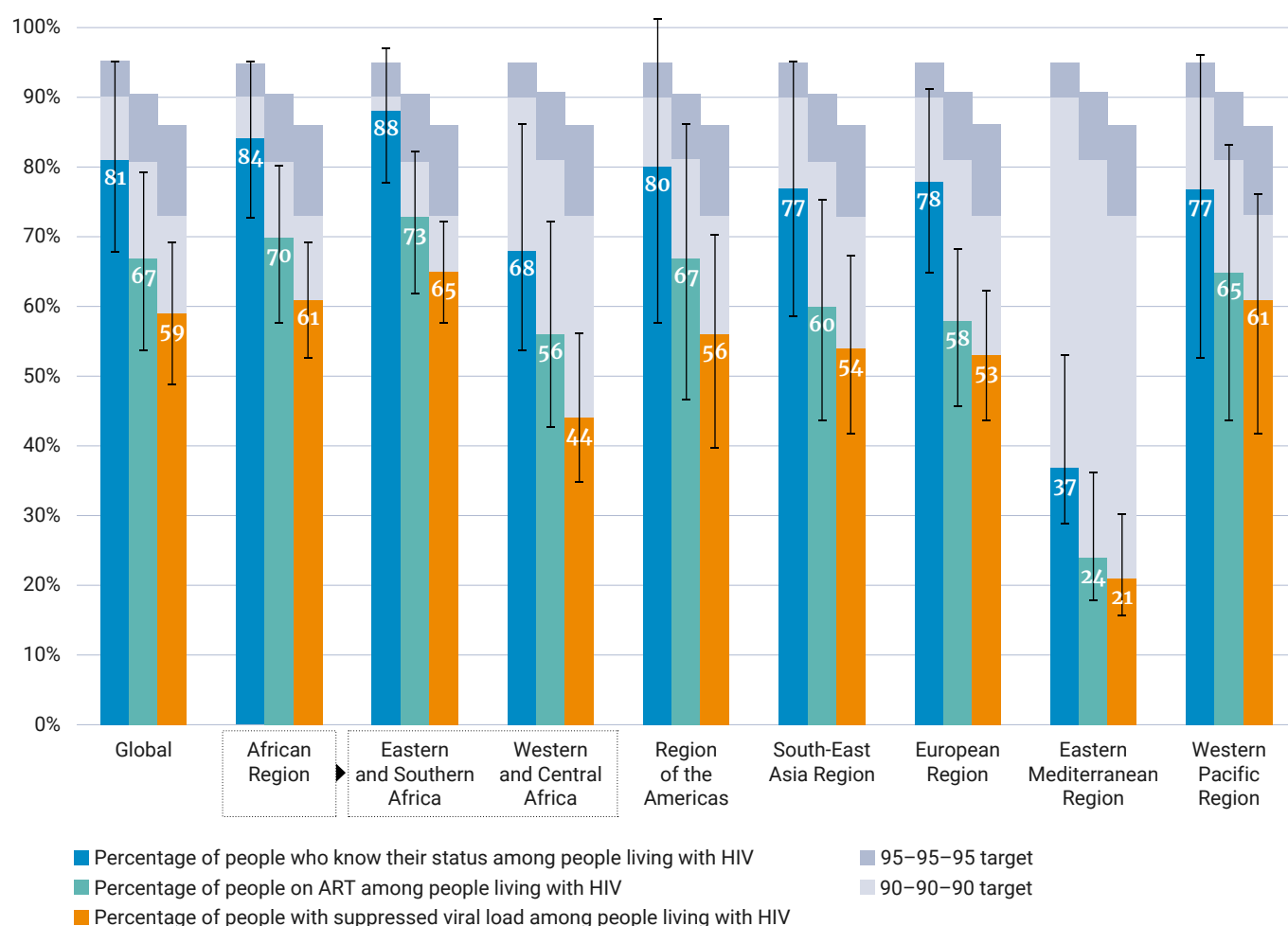
HIV	Impact	Service coverage
Rating 2020		

Fig. 16. Global trends in people acquiring HIV and people dying from HIV-related causes, 1990–2019 and projections to 2030



Source: Avenir Health using 2025 targets and UNAIDS/WHO epidemiological estimates, 2020.

Fig. 17. Progress towards 90–90–90 and 95–95–95 targets of the HIV service cascade by WHO region, 2019



Source: UNAIDS/WHO, 2021.

An estimated 1.7 million people newly acquired HIV in 2019, the lowest annual number since 1990. HIV incidence rate has declined by 30% over the past 10 years. However, progress continues to lag substantially behind the global target of less than 500 000 people acquiring HIV annually by 2020.

There has been significant progress globally towards the global Fast-Track 90–90–90 targets of the HIV testing, treatment and viral suppression cascade by 2020. At the end of 2019, 81% of people living with HIV knew their HIV status. Of the 38 million people living with HIV, 25.4 million, or nearly 67%, were receiving antiretroviral therapy; a number that has more than tripled since 2010. Close to 59% of people living with HIV globally had suppressed viral loads. Further, 85% of pregnant women are receiving antiretroviral therapy.

Nevertheless, progress has been uneven, and coverage among key populations is low. Children are also not being adequately reached, and the world has failed to diagnose and start treatment for almost half the children living with HIV. During 2019, an estimated 150 000 children acquired HIV globally, far from the global 2020 target of 20 000. Only 53% of children (0–14 years old) were receiving antiretroviral therapy, a total of 950 000 versus a target of 1.4 million by 2020.

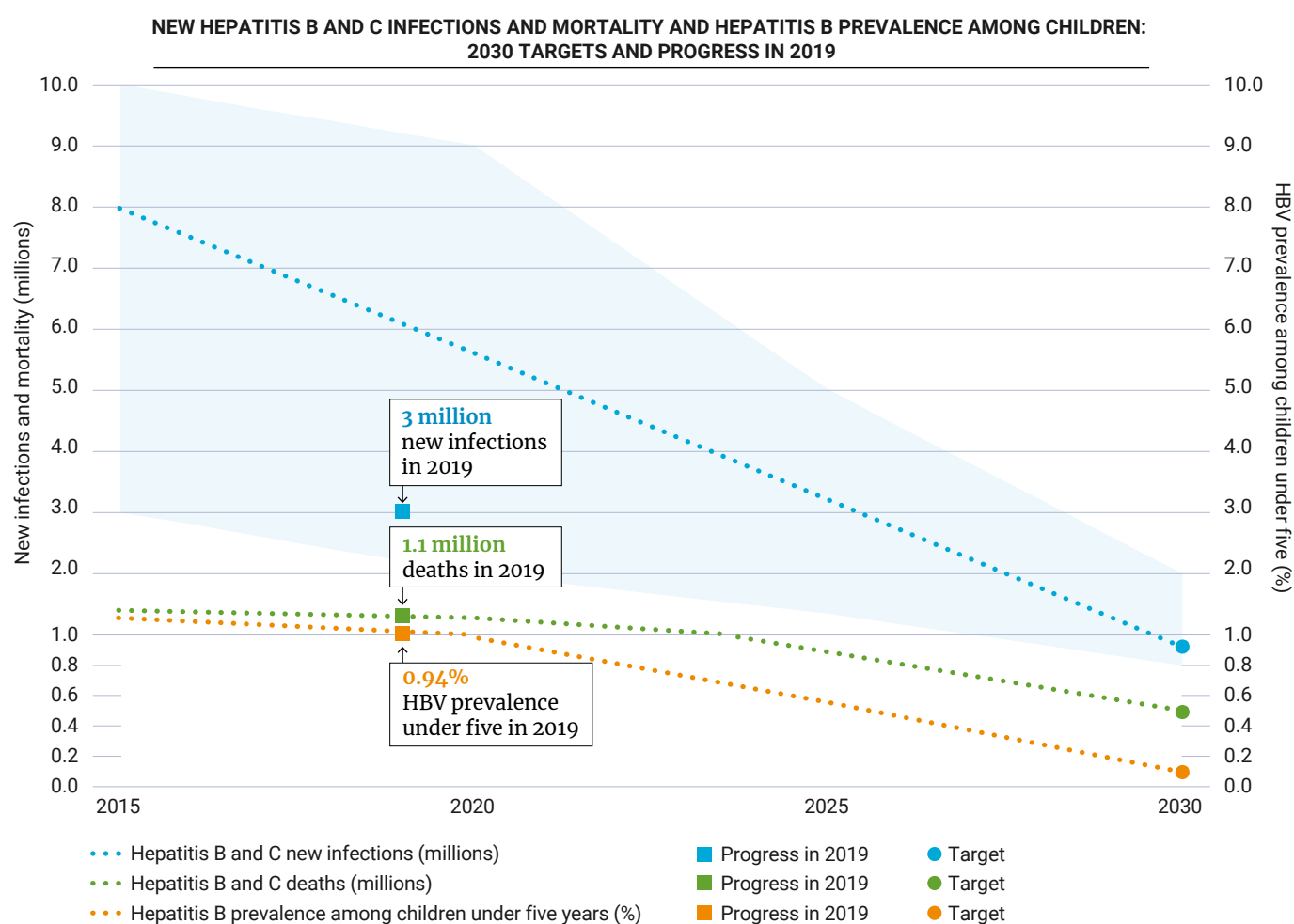
The number of adolescent girls and young women (15–24 years old) acquiring HIV declined by 19% globally from 2015 to 2019. However, with 280 000 people newly infected in this population group, this is still far higher than the target of less than 100 000 by 2020.

Ongoing expansion of HIV treatment, particularly rapid in eastern and southern Africa, has reduced global deaths related to HIV to the lowest number since 1994. An estimated 690 000 people died from HIV-related causes (one third from TB) in 2019, a 51% reduction over the past 20 years (20). Nevertheless, progress falls short of the global target to reduce these to less than 500 000 globally by 2020. Ending the global HIV epidemic will require stronger commitment to reach the global AIDS strategy 95–95–95 targets by 2030 by addressing the determinants, inequalities, stigma and discrimination that continue to drive the epidemic and prevent millions from accessing the services they need.

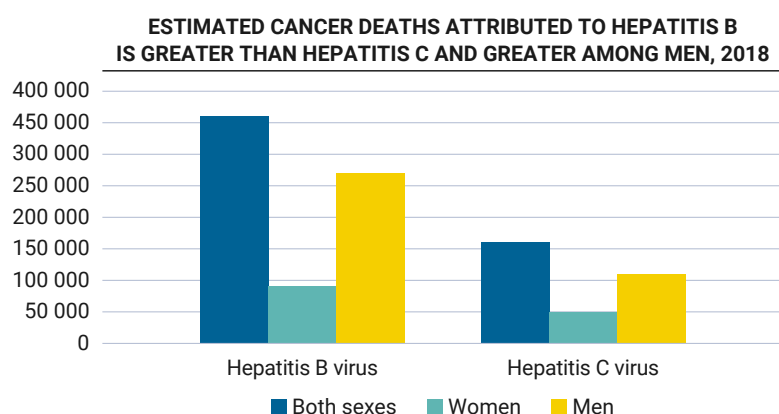
Viral hepatitis

Viral hepatitis	Impact	Service coverage
Rating 2020		

Fig. 18. New hepatitis B and C infections and mortality, hepatitis B prevalence among children and estimated cancer deaths attributable to hepatitis B



Source: WHO, 2021.



Source: International Agency for Research on Cancer and WHO, Global burden of cancer attributable to infections in 2018.

Global targets aim to reduce the number of people newly infected with hepatitis B and C virus by 30% by 2020 and 90% by 2030. New estimates for 2019 show that 1.5 million people were newly infected with chronic hepatitis B infection and 1.5 million with chronic hepatitis C infection.

The number of people developing new chronic infections from hepatitis B has declined, supported by an increase in the coverage of the highly effective hepatitis B vaccine among infants. Globally, 85% of all infants had received the recommended three doses of the hepatitis B vaccine in 2019, up from only 30% in 2000, and the global target of the Sustainable Development Goals and the global health sector strategy to reduce hepatitis B surface antigen prevalence to less than 1% among children younger than five years by 2020 has been met. However major gaps remain in some regions, including sub-Saharan Africa and South-East Asia. The 10-fold scale up of hepatitis C treatment during the strategy implementation period has led to a stabilization of mortality for the first time, although the annual number of people acquiring hepatitis C infection at 1.5 million and dying from this at 290 000 remain unacceptably high.

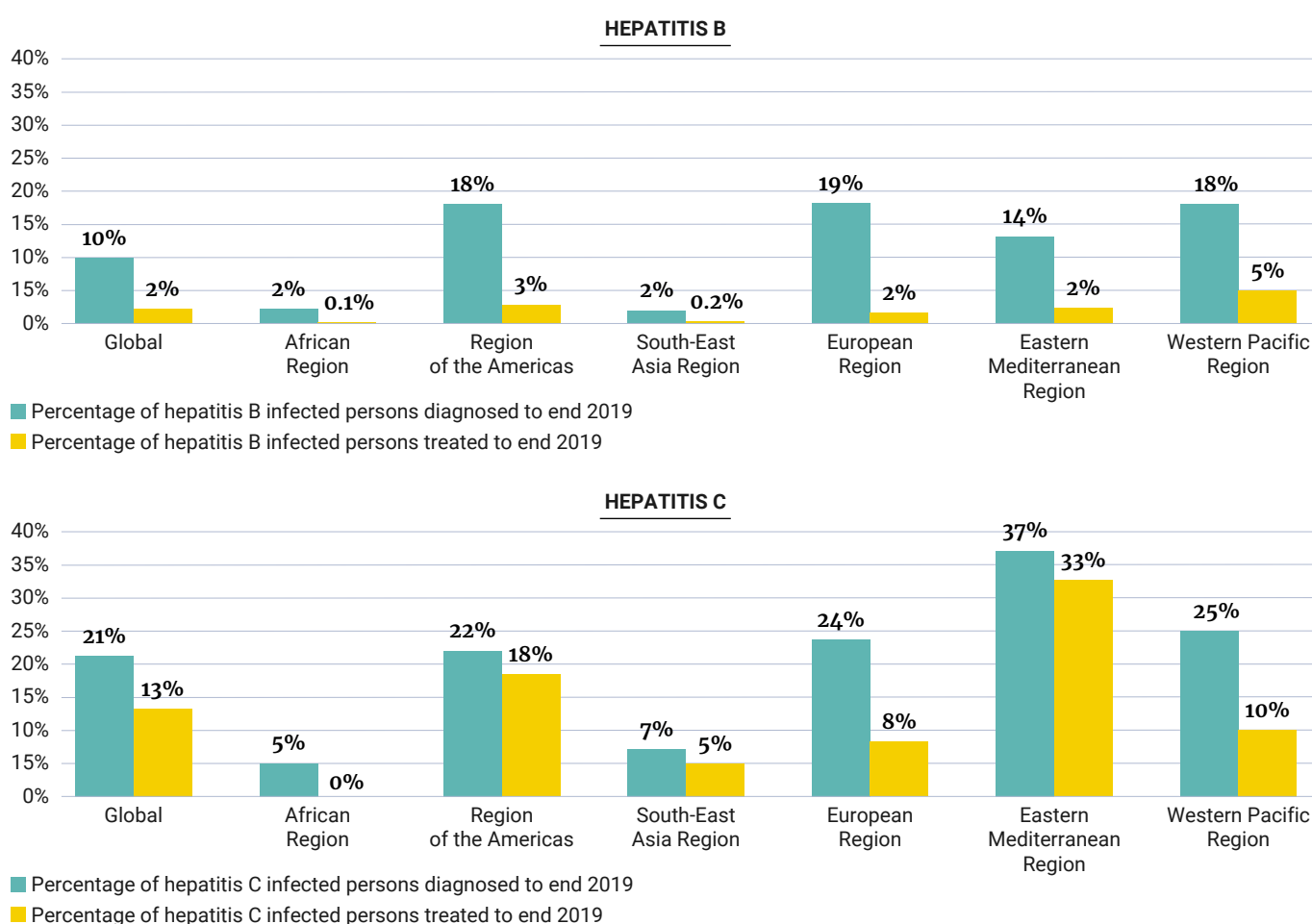
Global targets call for a 10% reduction in the numbers of people dying from viral hepatitis B and C by 2020 and a 65% reduction by 2030. New estimates show that 1.1 million people died from

viral hepatitis in 2019. A huge scale-up and simplification of hepatitis diagnosis and treatment are required to achieve the targets for reduced mortality by 2030.

The momentum to address viral hepatitis is growing. Only 17 countries had national hepatitis strategic plans in 2012, but this had increased to 124 by 2019. However, progress in service delivery has been insufficient. Only 21% of people living with chronic hepatitis C infection know their status. 9.4 million people chronically infected with hepatitis C virus were cumulatively receiving treatment at the end of 2019, a 10-fold increase from 1 million people receiving treatment at the end of 2015, yet treatment coverage is only 13% of the people in need. For hepatitis B, only 10% of people living with chronic hepatitis B infection are diagnosed, and 6.6 million (2.2% coverage) are receiving treatment.

The availability of effective hepatitis B vaccines, treatment for chronic hepatitis B infection and direct-acting antiviral treatment cure for chronic hepatitis C infection offer great potential for eliminating these diseases as public health threats by 2030. A collective effort is needed to address gaps in the coverage of testing and treatment of hepatitis B and C and in harm-reduction services for people who inject drugs to achieve global goals.

Fig. 19. Viral hepatitis service cascade by WHO region, 2019

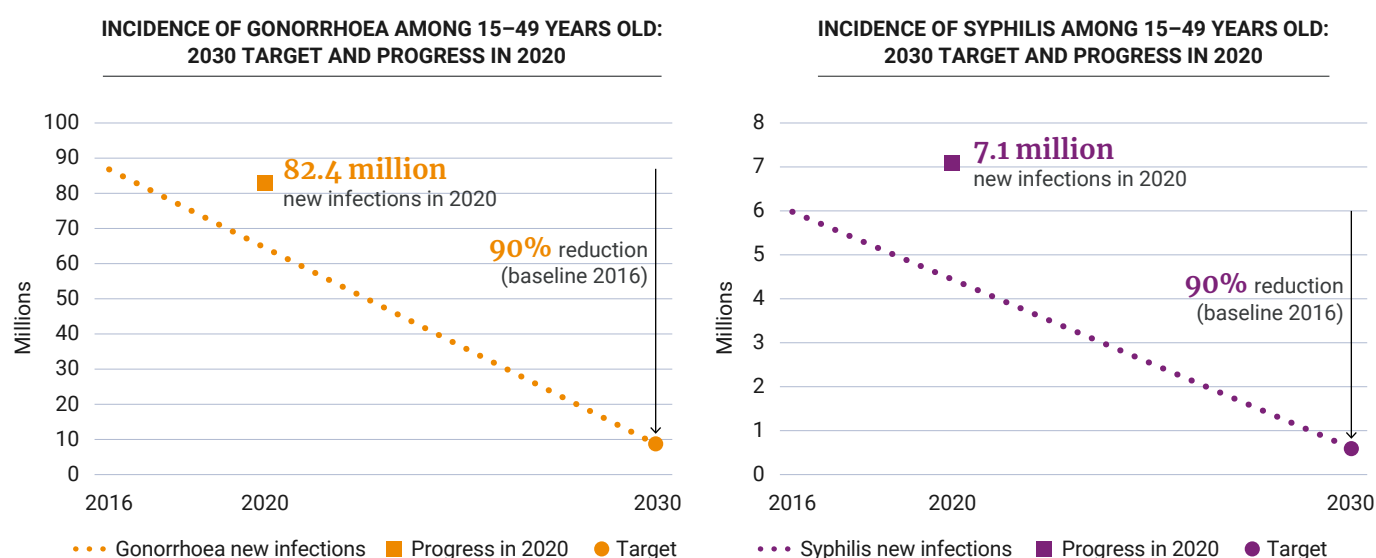


Source: WHO, 2021.

STIs

STIs	Impact	Service coverage
Rating 2020		

Fig. 20. Incidence of gonorrhoea and syphilis: progress towards 2030 targets



Source: WHO, 2021.

The global health sector strategy calls for a 90% reduction in the incidence of *N. gonorrhoeae* and *T. pallidum* (syphilis) and elimination of congenital syphilis by 2030. It also calls for sustaining 90% national coverage in countries with the HPV vaccine in their national immunization programme. This target was reinforced in 2020 with a World Health Assembly resolution, calling on all countries, by 2030, to achieve 90% HPV vaccination coverage, 70% screening coverage and 90% access to treatment for cervical pre-cancer and cancer, including access to palliative care (43).

The global response is off target. Other than slow declines in congenital syphilis, the incidence of most other STIs has plateaued (15). Congenital syphilis causes a wide range of adverse birth outcomes, including 143 000 early fetal deaths and stillbirths, 61 000 neonatal deaths and 41 000 preterm or low-birth-weight births in 2016 (15). An estimated 604 000 women were diagnosed with cervical cancer, causing an estimated 341 000 women to die in 2020. These infections cause significant morbidity, including adverse birth outcomes from vertical transmission, infertility and increased risk of transmitting and acquiring HIV.

The global response to STIs is slowly gathering pace after years of neglect. A WHO survey in 2019 found that, among 112 responding countries, 64% of countries had national STI strategies and 87% had STI surveillance systems in place – although data quality remains weak and most systems do not adequately capture the causes of syndromes beyond syphilis. About 90% of countries offer HIV and syphilis screening to all pregnant women, and 59% had included the HPV vaccine in national immunization schedules (41). As of November 2020, WHO had validated 15 countries and territories as having eliminated the mother-to-child transmission of HIV and/or syphilis. Global commitment, funding and an integrated public health approach will be essential to bend the curve for these infections. Based on improved data in this report and actions to strengthen surveillance, more granular and accurate targets for viral hepatitis and STIs will be developed as part of the new strategies, including interim targets for 2025.

3

Progress by strategic direction

This chapter accounts for progress achieved in delivering the priority interventions and policies of the global health sector strategies for HIV, viral hepatitis and STIs. It highlights key achievements and gaps and recommends priority actions to advance progress towards global goals. The analysis focuses on disease-specific actions as well as cross-cutting priorities that can be addressed through integrated efforts.

The three global health sector strategies are organized around a common synergistic framework of five strategic directions to advance progress towards universal access:



Information for focused action;



Interventions for impact;



Delivering for equity;



Financing for sustainability; and



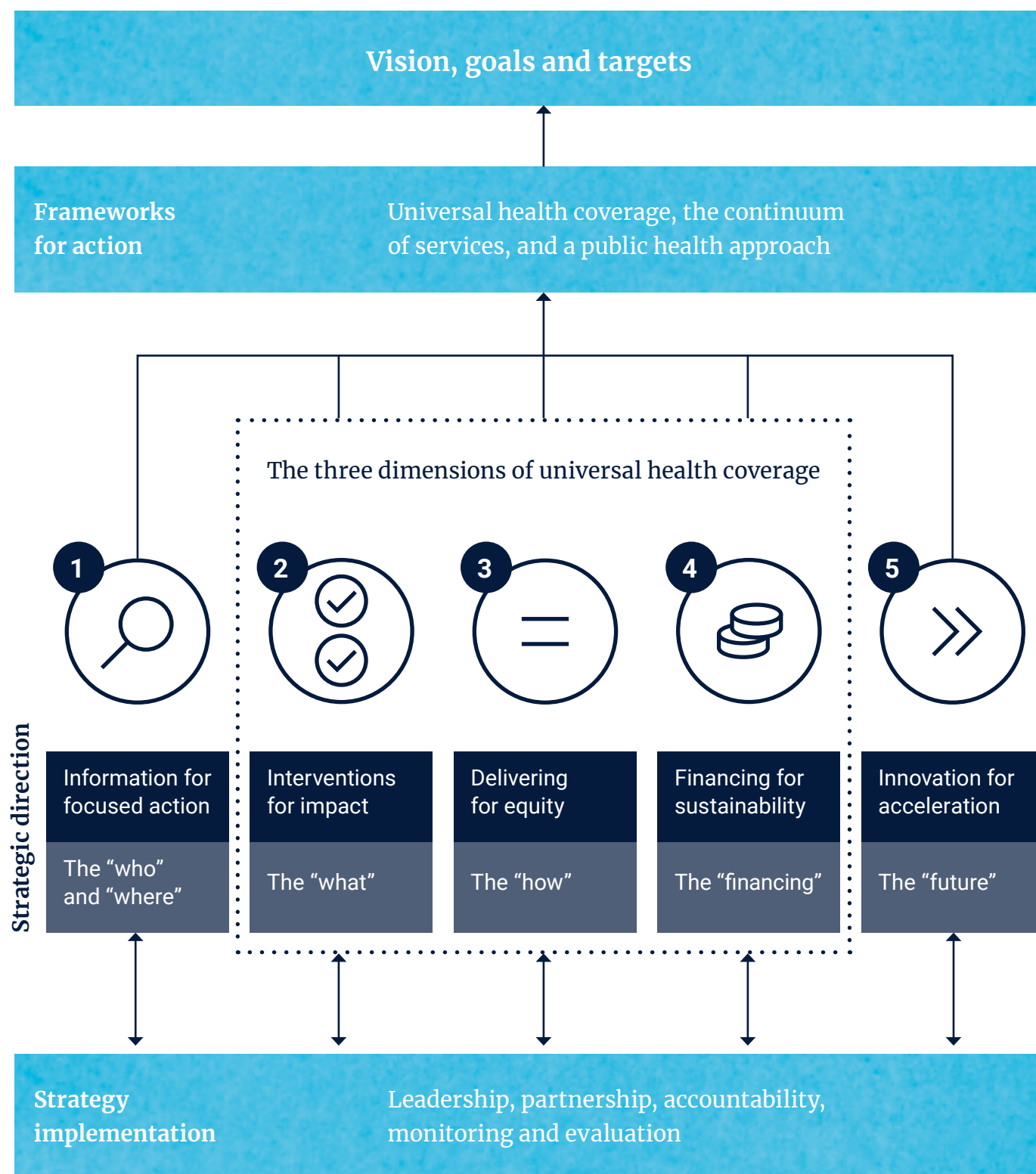
Innovation for acceleration.

The sections below describe each of these further.

Fig. 21. The global health sector strategies for HIV, viral hepatitis and STIs 2016–2021: a common universal health coverage framework

Source: *Progress report on HIV, viral hepatitis and sexually transmitted infections 2019*.

Accountability for the global health sector strategies, 2016–2021 (4).





3.1

Information for focused actions

Granular, person-centred data are a critical pillar of primary health care and essential for delivering people-centred health services. Data are necessary to understand the epidemiological context, focus efforts on the right interventions and populations, tailor services to meet people's needs and bolster programme improvement. By taking an integrated approach to strengthening health information systems, countries have a major opportunity to strengthen data availability and quality across HIV, viral hepatitis, STIs and other areas.

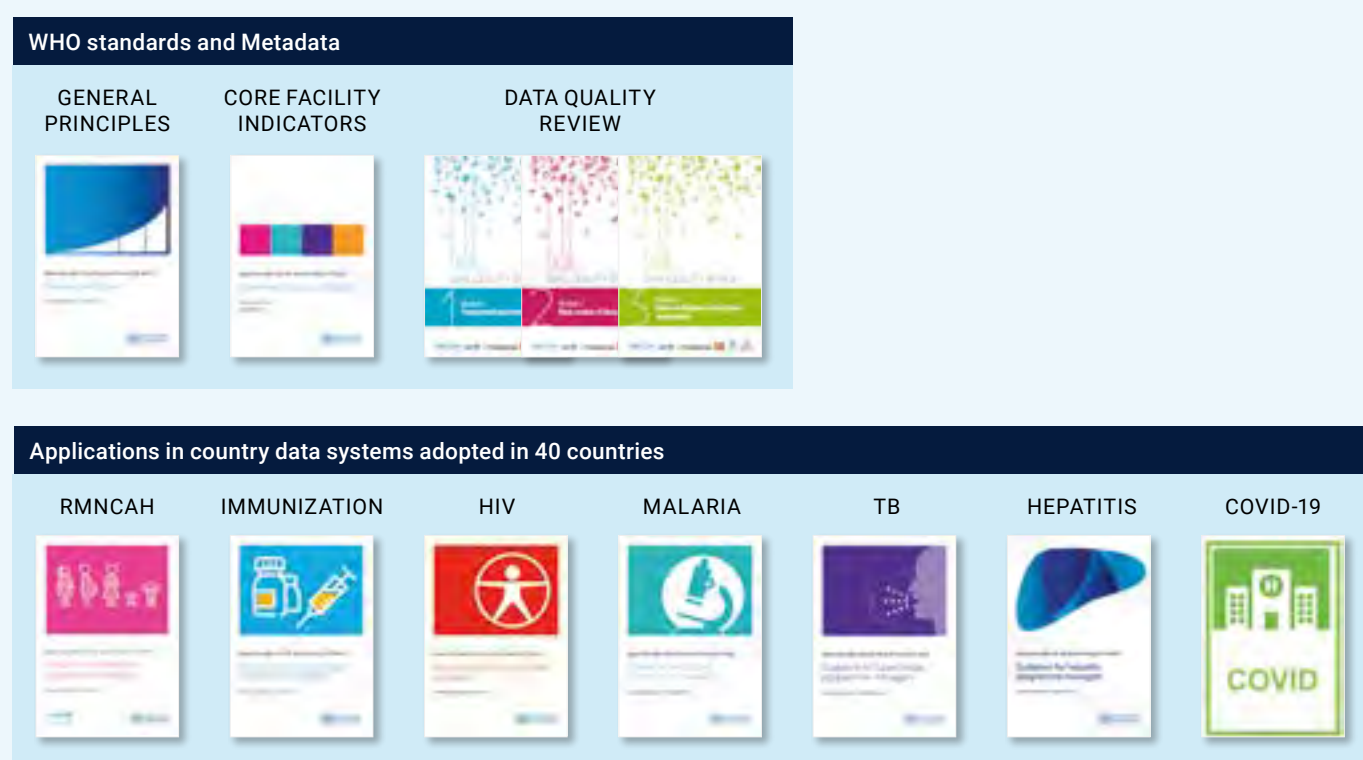
By moving beyond aggregate measures, person-centred data help to deliver people-centred health services that leave no one behind.

Data availability and use are improving. New global and regional disease burden estimates are now available for viral hepatitis and priority STIs, which will inform future investments. Nevertheless, substantial gaps remain in the quality and scope of country-level surveillance systems for these infections. WHO has also supported countries in implementing guidelines for person-centred data and electronic district-level health information systems for HIV and worked closely with the Global Fund to Fight AIDS, Tuberculosis and Malaria to promote district-level data use.

This has helped to accelerate the achievement of key performance indicators on health management information system data quality from 22% to 43% of countries between 2018 and 2019, and data disaggregation exceeds targets. The data summary work is now being extended from the aggregate to the individual level and will include data modules for STIs and viral hepatitis.

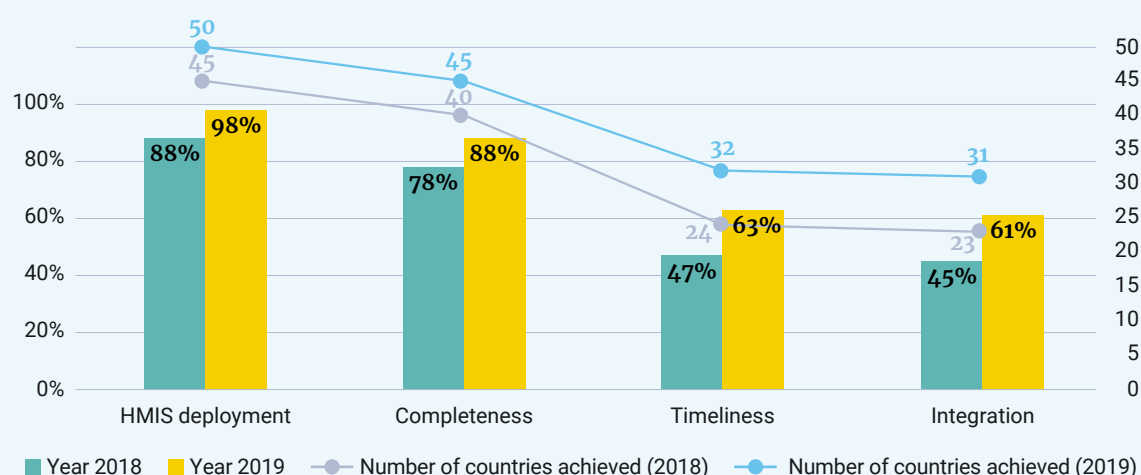
The availability of disaggregated data is also improving, especially for HIV. The challenge is to ensure that all data have sufficient granularity to explore the gaps in delivery and inequalities in reach and are used to leave no one behind.

Fig. 22. A district-level data platform of standards and country applications implemented across diseases and health



Source: WHO. Analysis and use of routine health facility data [website]. (44)

Fig. 23. The Data Initiative with the Global Fund and countries led to improvements in countries with fully functioning health management information systems (HMIS) from 22% to 43% and in areas of data timeliness and integration, 2018–2019



Source: Global Fund Strategic performance report, end-2019 (summary). (47)

Table 4. Information for focused action – global accountability 2020

HIV	Viral hepatitis	Sexually transmitted infections
There have been major advances in people-centred monitoring over the past five years, with increasing use of individual-level data to identify gaps and improve services. Patient monitoring supports more than five million people receiving treatment in South Africa and large treatment cohorts in many countries. As of June 2020, 71% of countries had updated their patient monitoring systems with WHO person-centred monitoring guidelines, and 73% of countries used a national unique identifier to link patient data. Electronic district health information systems have been strengthened through collaboration of HIV, TB, malaria and health programmes.	Global reporting for viral hepatitis has been established, and the number of reporting countries has increased from 42 in 2018 to 130 countries in 2019. Updated global and regional estimates have been developed in collaboration with partners, including CDA Foundation, Imperial College, the Institute for Health Metrics and Evaluation and the University of Bristol. The first global costing of the viral hepatitis response has been developed showing a need of US\$ 6 billion per year and included in the costing for universal health coverage.	Updated STI global and regional estimates for 2020 have been developed, and 87% of countries report having surveillance systems in place, but the scope and quality of these surveillance systems remain critically weak. Digital health specifications have been initiated for sexual and reproductive health and HIV, which support electronic reporting and are being extended to additional health areas. Data security and confidentiality need to be strengthened.
Improved granular generation, review and use of data are improving services using common health information platforms. Gaps remain in surveillance systems and facility-level reporting for viral hepatitis and STIs.		
PRIORITY ACTIONS		
- Strengthen country-level surveillance capacity for viral hepatitis and STIs, with concerted investment in line with the recommended 5–10% of programme funds invested in strategic information for action. - Invest in person-centred data and monitoring, especially for prevention, to link people at risk to services, retain them in services and support them to remain negative. - Strengthen digital health data capacity, including guidance on data interoperability and security. - Standardize analytical data reviews and build data analysis capacity, especially at decentralized levels for improving programmes. - Take an integrated approach to strengthening data availability and quality on the populations most severely affected and at risk of infection, including population size estimates and integrated biobehavioural surveys. - Joint efforts to strengthen routine data systems and use data to improve health services and inform programme priorities and design. - Use data to drive decision-making and ensure that no one is left behind, including by strengthening community-led monitoring that is owned and used by programmes working closely with the people who are most marginalized and in need to improve access and quality and holding service providers and decision-makers accountable.		

Box 5.

Spotlight: using person-centred data to measure people-centred services

Person-centred monitoring refers to monitoring that places the individual at the centre of health service delivery along the cascade of service provision. It involves a shift away from measuring services at an aggregate level towards supporting individuals as they are tested, linked to treatment and retained at various service delivery points. Such individual-level monitoring systems help to deliver differentiated services, support long-term retention in health care, optimize service delivery and improve programme outcomes.

In 2017, WHO published new consolidated guidelines on person-centred HIV patient monitoring and case surveillance (45). A total of 71% of countries have updated their patient monitoring systems using these guidelines, 73% of countries have national unique person identifiers for patient data, and 92% of countries have an HIV monitoring and evaluation plan in place. The main areas of improvement include updating patient monitoring tools to track patients as they move across HIV services and facilities; expanding existing HIV surveillance systems to adopt or strengthen HIV case surveillance; transitioning from paper-based to electronic information systems; and investing in human resource capacity to analyse and use routine patient data to inform programmes. Only 36% of countries have systematic processes to monitor antiretroviral drug toxicity and 47% to monitor HIV drug resistance.

Each country must determine the pace and pathway for developing these systems in accordance with its specific context, requirements and the availability of human resources, financing and infrastructure capacity. When planning for expanding person-centred monitoring, countries should analyse the benefits and risks of different approaches, in consultation with the affected communities. In all cases, person-centred monitoring must be based on strict protocols and procedures to ensure data security and protect patient confidentiality.

Box 6.

Extended person-centred data for treatment and prevention in Zimbabwe

In Zimbabwe, successive population-based surveys have shown declines in HIV prevalence larger than many other countries in the African Region. In 2020, the HIV prevalence among adults over 15 years old was 12.9%, down from 18% in 2005. As Zimbabwe works towards its national goal of achieving epidemic control by 2030, it is expanding data analysis and use to understand epidemic dynamics among various population subgroups and geographical areas and tailor local interventions accordingly.

Since 2017, Zimbabwe has applied WHO guidelines to roll out an HIV patient monitoring and case-based surveillance system that enables individual-level data to be collected and used for improved patient care and tracking over the patient's lifetime (46). Implementation began with a pilot phase in two districts during 2017–2018. Using a combination of electronic and paper-based systems, Zimbabwe is able to record sentinel events along the cascade, including HIV diagnosis, enrolment in care, follow-up, retention and viral load suppression.

An evaluation of the pilot in 2019 showed how weekly analysis of data along the service cascade, conducted at local levels with the support of community health workers, is helping to identify and fill gaps and support people living with HIV as they move between facilities. The evaluation highlighted several findings that have been useful for Zimbabwe as it plans a nationwide roll-out of the system.

- Most stakeholders felt that the system was cost-effective since it leveraged existing system capacity and operations at the facility level.
- The pilot enabled health facilities to conduct simple analysis of clients in their catchment areas and helped to improve forecasting of antiretroviral medicine requirements and minimize wastage.
- People living with HIV were supported as they moved between facilities, allowing improved quality and continuity of services.
- The use of unique patient identifiers based on antiretroviral therapy was helpful since national IDs were not always available, especially for adolescents and non-Zimbabweans.

These lessons are also informing the expansion of person-centred monitoring to HIV prevention services. People received in HIV services who test negative but are at risk are referred to prevention services. Person-centred monitoring helps to assess whether they are retained in these services and to follow up longitudinally to support them to remain negative. Efforts are also underway to extend the scope of the system, for example to include STI data and when possible, data on hepatitis B and C.



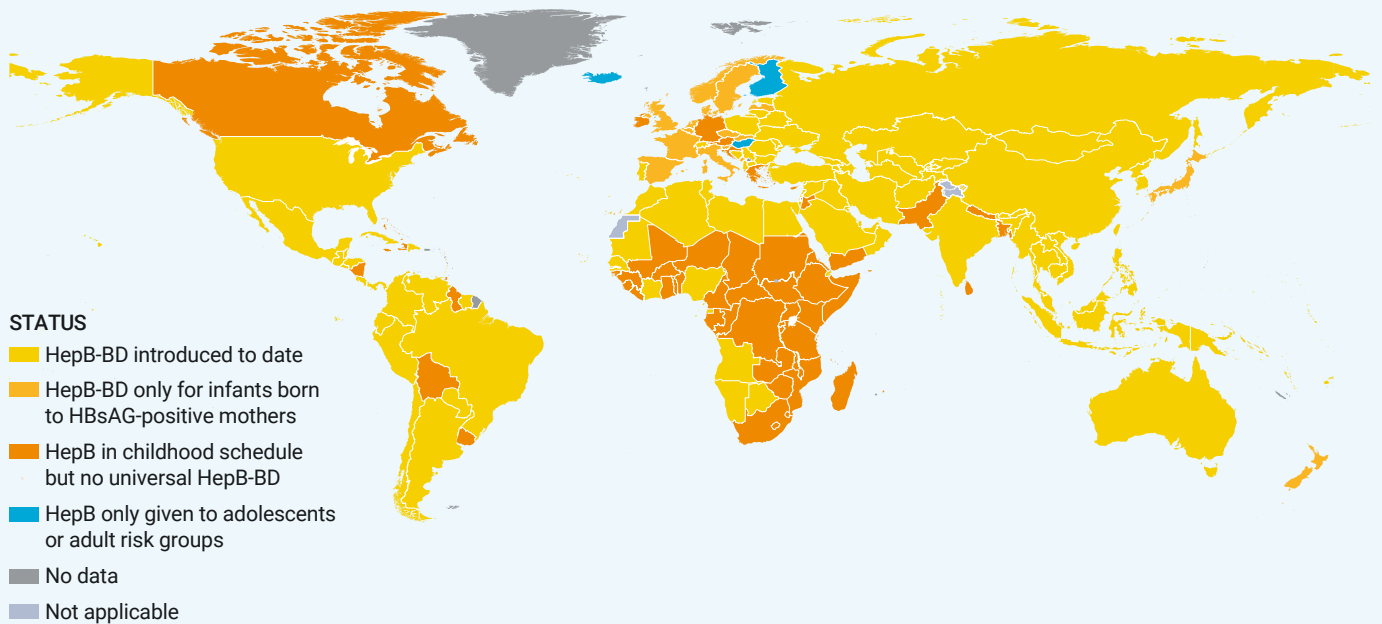
3.2 Interventions for impact

The availability and quality of the essential packages of health interventions have improved significantly for all three disease areas, but many gaps remain. Primary prevention is lagging behind, especially the prevention of HIV and STIs for populations most severely affected and at higher risk. Available diagnostics and treatment for viral hepatitis and STIs are not accessible to many people, and investment and political support for harm-reduction services are critically lacking in many regions. The response to STIs has especially lagged behind as a result of years of neglect and lack of resources.

Differentiated service delivery options need to be used optimally to expand coverage and respond to people's diverse needs and preferences.

Recent evolutions in decentralized, simplified and integrated service delivery models, further catalysed by the COVID-19 pandemic, are showing how existing health system resources can be used more effectively to respond to people's needs and preferences. Such people-centred approaches need to be used fully to accelerate progress over the next decade. A special focus will be needed to recommit to address STIs through more effective integration with HIV services and sexual and reproductive health services more broadly.

Fig. 24. Hepatitis B birth dose vaccination strategies in the national immunization programme, April 2021



Source: WHO, 2021.

Table 5. Interventions for impact – global accountability 2020

HIV	Viral hepatitis	Sexually transmitted infections
There have been strong gains towards achieving the 90–90–90 targets by 2020 in many countries with a high burden of HIV infection, but progress varies by region and population. Differentiated approaches to service delivery are improving prevention, testing and treatment service reach and quality. As of June 2020, 78% of low- and middle-income countries had carried out the transition to dolutegravir as first-line antiretroviral therapy. The number of effective options for HIV prevention, testing and treatment is increasing, including the dapivirine vaginal ring as an additional prevention choice for women; a new dispersible strawberry-flavoured formulation of dolutegravir for children; and diversified testing approaches.	Access to infant hepatitis B vaccination is high. Coverage of three doses of hepatitis B infant vaccination reached 85% worldwide, although access to a timely birth dose remains low in many African countries, especially where antenatal care coverage is low. Pangenotypic direct-acting antiviral drugs, effective against all six genotypes of hepatitis C virus, are available, providing an effective cure. Coverage of hepatitis C treatment has increased 10-fold since 2015 to 9.4 million people receiving treatment; yet overall, only 10% of people globally know their hepatitis B status, and 21% for hepatitis C and even fewer are receiving treatment. Some champion countries are expanding access to hepatitis C diagnosis and treatment through public health approaches or targeting microelimination in the most affected subpopulations or locations.	The country-level implementation of WHO guidelines has improved – 84% of surveyed countries use WHO treatment guidelines for STIs and 70% provide services or links to HIV, reproductive health, family planning, and prenatal and postnatal services (41). The HPV vaccine is being rolled out – 65 out of 110 countries have now added the HPV vaccine into their national immunization schedule; however, coverage in low-income countries is insufficient. The WHO Model List of Essential Medicines has been updated to include new treatments for STIs. There is increasing resistance to azithromycin and emerging resistance to ceftriaxone, last-line treatment for <i>N. gonorrhoeae</i>.

Mother-to-child transmission of HIV and/or syphilis has been eliminated as a public health threat in 15 countries and territories. As of June 2020, 82% of countries had a national plan for eliminating the mother-to-child transmission of HIV. A dual HIV/syphilis rapid diagnostic test has been prequalified by WHO and used as the first test in antenatal care.

PRIORITY ACTIONS

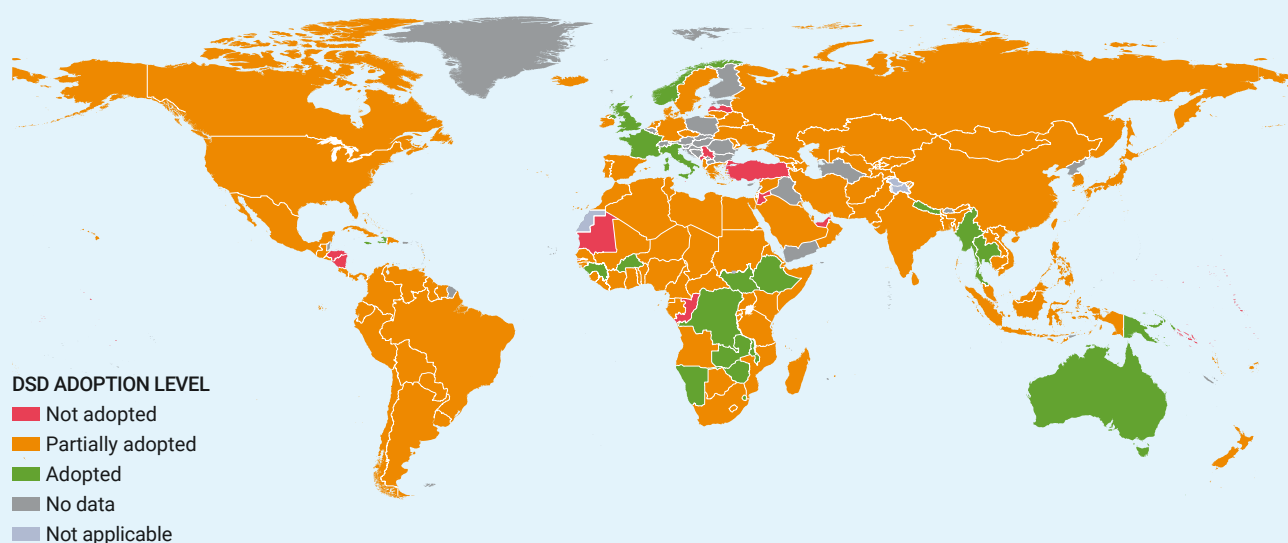
- Reinvigorate primary prevention, including condom use, to prevent the sexual transmission of HIV and STIs, with a focus on the populations most severely affected and at higher risk of infection, and integration with sexual and reproductive health services.
- Continue to differentiate and adapt service delivery by making it more people-centred to meet the needs of different population groups, bringing prevention, testing and treatment closer to home and including leveraging adaptations from the COVID-19 response.
- Expand, decentralize, integrate and simplify access to diagnostics, so that services can be delivered at the same site, with the use of affordable and quality rapid diagnostic tests, including self-tests, serological and molecular point-of-care and near-point of care tests, and promote greater task sharing.
- Expand the provision of harm reduction in an integrated and comprehensive manner.
- Make use of existing opportunities to accelerate the triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus through an integrated approach that builds on a comprehensive antenatal care platform that also incorporates eliminating cervical cancer.
- Strengthen the response to antimicrobial drug resistance, including through improved use of data to reduce loss to follow-up.
- Integrate HIV, viral hepatitis and STI services within a broader health systems approach, including with noncommunicable diseases and cancer prevention and care and primary health care initiatives.

Box 7.

Spotlight: applying differentiated service delivery to reach people better

Differentiated service delivery models apply a people-centred approach to simplify and adapt service provision to the diverse needs and preferences of beneficiary populations. Since 2016, several countries have implemented various models of differentiated service delivery as part of national policy, especially for delivering HIV treatment for adults established on antiretroviral therapy, through approaches such as multimonth dispensing of medicines, client-managed groups for drug pick-ups and peer support for adherence. Of 120 countries surveyed in 2019, 104 had adopted the WHO recommendation to reduce the frequency of clinic visits and antiretroviral medicine refills for people established on treatment (48).

Fig. 25. Policy adoption of differentiated service delivery for HIV, 2020



Source: HIV Policy Lab, 2021.

Such differentiated models have been shown to improve individual service uptake and outcomes, enhance service quality and reduce unnecessary burden on a health system. A rapid systematic review found that HIV treatment retention in differentiated service delivery models exceeded 80% and was similar to or better than conventional care (49). Another review found that differentiated service delivery of HIV treatment to people established on treatment saved substantial money on travel costs and greatly reduced the time required to receive treatment and modestly reduced the use of health system resources (50). Differentiated approaches are also being increasingly applied across the cascade of services for HIV, including prevention, testing, linkage to care, antiretroviral therapy and follow-up and addressing HIV-related coinfections and comorbidities.

During the COVID-19 pandemic, many countries accelerated and successfully applied the principles of differentiated service delivery to ensure continued provision of essential services to populations in need. For example, many countries expanded the use of multimonth dispensing of antiretroviral medicines for durations of 3–6 months to

reduce unnecessary contact with health facilities. Countries also used community-based approaches to provide take-home doses of opioid substitution therapy and PrEP, expand the use of HIV self-testing and use telehealth services for peer support and care.

Although differentiated service delivery approaches have mostly been applied to delivering long-term access to care for people living with HIV, their basic principles – simplifying and adapting services to the needs and preferences of different groups – can also be applied to people with viral hepatitis and STIs. For example, people with hepatitis C virus infection can be broadly categorized into three groups – those who are clinically well and stable, those with advanced liver disease requiring more intensive clinical support and those requiring additional psychosocial and mental health support. Differentiated care models using facility-based, community-based or mobile or outreach services can be applied to tailor services to their specific needs. Making full use of such differentiated approaches will be key to delivering universal health coverage over the next decade.

Box 8.**Differentiated service delivery during COVID-19 in Nigeria**

When Nigeria introduced lockdown measures in early 2020 in response to the COVID-19 pandemic, it was able to rapidly address disruptions in HIV treatment by leveraging existing policies related to differentiated service delivery. In 2019, Nigeria had approved a national policy that enabled multimonth dispensing of HIV medicines and using community-based approaches to tailor and deliver services to various groups of people living with HIV. The policy was already in place in the 36 states and the Federal Capital Territory; however, the benefit of such approaches became more noticeable during the pandemic.

Faced with restrictions related to COVID-19, Nigeria was able to improve communication and mobilize additional community volunteers to deliver medicines to people's homes, especially in hard-to-reach semi-urban and rural areas, and to provide adequate supplies to people that would cover their needs for months. Services were provided in partnership with community-based organizations, including the Network of People Living with HIV/AIDS in Nigeria. WHO supported the federal government through the National AIDS and STIs Control Programme to ensure the smooth functioning of differentiated service delivery during the lockdown period. WHO also helped to develop and disseminate guidance on the continuity of essential HIV services in the context of a pandemic.





3.3 Delivering for equity

The most marginalized, vulnerable and underserved populations, who face the highest rates of infection, often have the poorest access to services. Persistent stigma, inequalities, criminalization, violence and other sociostructural barriers are preventing response efforts from reaching the people and communities who need them most.

To achieve impact, the most vulnerable and marginalized people must be guaranteed their right to health.

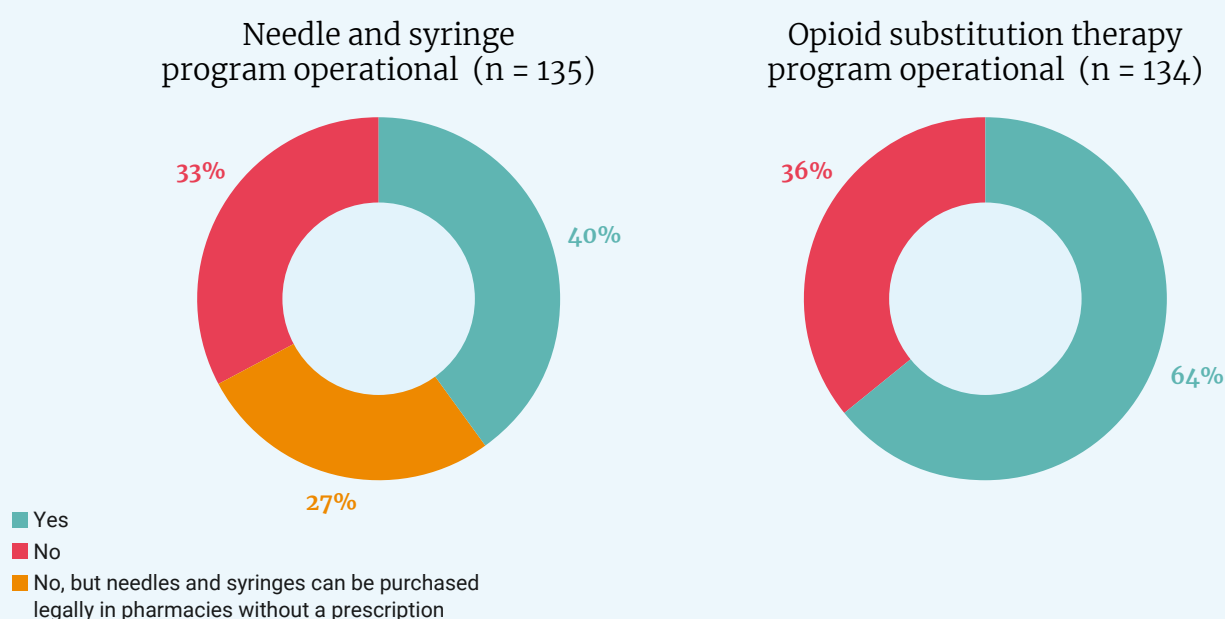
In addition, there are major gaps in reaching adolescent girls and young women (15–24 years old) and children. With 280 000 adolescent girls and young women newly infected each year, this is still far higher than the target of less than 100 000 by 2020. Only 53% of children (0–14 years old) were receiving antiretroviral therapy, a total of 950 000 versus a target of 1.4 million by 2020.

The gaps are most acute for key populations, such as men who have sex with men, people who inject drugs, sex workers, transgender people and people in prisons. Globally, these people and their partners comprise an estimated 62% of the people acquiring HIV and they have the highest risk of infection and

onward transmission in all regions. Some of these populations are also disproportionately affected by viral hepatitis. More than half the people who inject drugs have had hepatitis C virus infection at some point in their lifetime. Modelled projections suggest that eliminating the increased risk of hepatitis C transmission among people who inject drugs would prevent about 40% of new hepatitis C infections from 2018 to 2030 (51). Key populations often have coinfections with STIs and viral hepatitis.

A rights-based and people-centred response, planned and delivered with leading participation by affected populations, will be essential to achieve true universal health coverage.

Fig. 26. Percentage of countries with operating harm-reduction programmes, 2019



Source: Global AIDS Monitoring (UNAIDS/WHO/UNICEF), 2020.

Table 6. Delivering for equity – global accountability 2020

HIV	Viral hepatitis	Sexually transmitted infections
Community-led interventions have enabled major improvements in service coverage for key populations; yet gaps remain: • one third of key populations did not know their HIV status (52). • only 44% of sex workers, 30% of gay men and other men who have sex with men and 34% of people who inject drugs report having received at least two prevention services in the past three months (13). As of June 2020, 83% of countries have a national plan or strategy addressing gender-based violence or violence against women that includes HIV. However, there are gaps in access to prevention and support against gender-based violence for women, gay men and other men who have sex with men and transgender people.	There are major gaps in hepatitis B and C testing and treatment in all populations, specifically among economically disadvantaged regions, rural and displaced populations and key populations. Community awareness and advocacy related to viral hepatitis, including eliminating hepatitis C virus among people who inject drugs, is increasing; however, access to services remains low. There have been major price reductions in hepatitis diagnostics and treatment (53) and yet many middle-income countries are unable to benefit from these prices as a result of patent-related barriers.	Rates of STI screening among key populations are low compared with HIV screening and highlight missed opportunities to integrate STI services with HIV and other health services. • Less than 50% of surveyed countries provide STI testing for key populations. Further, even in countries that report having integrated STI services in other services such as family planning, data are limited on actual STI services provided in these settings (41). Services need to be adopted and scaled up to reach all partners, including through social network approaches, based on lessons learned from HIV.
More work is required across the three strategies to embed community-led and community-based efforts across key primary health care components, emphasizing integrated services, community engagement and inclusive governance and policy frameworks. Adolescent girls and young women face particular vulnerability for HIV and STIs related to gender-based violence and harmful gender norms – two thirds of adolescent girls and young women 15–24 years old in sub-Saharan Africa do not have comprehensive knowledge about HIV (52). As of June 2020, 55% of countries have a national prevention strategy to reduce the number of adolescent girls	and young women and their male partners acquiring HIV in communities with high HIV incidence. Harm reduction coverage for people who inject drugs remains low – 40% of countries report having operational needle and syringe programmes, and 64% of countries reported having operational opioid substitution therapy programmes as of mid-2020. There has been progress in decriminalizing behaviour such as drug use, sex work and same-sex relations in some countries, but several countries continue to have laws, regulations or policies that are barriers to effective service.	
PRIORITY ACTIONS		
• Design and deliver services that are people-centred and decentralized in accordance with WHO’s operational framework for primary health care (54), leveraging the experience of HIV programmes and extending them to a wider group of economically disadvantaged and vulnerable populations; and engaging communities. • Strengthen the focus on young people, including young people from key populations.	• Expand the provision of prevention, harm reduction, testing and treatment of HIV, viral hepatitis and STIs in an integrated and comprehensive manner. • Address stigma and discrimination, including within health-care settings and by focusing on the health-care workforce. • Decriminalize behaviour such as drug use, sex work, same-sex sexual relationships, sexual orientation and nonconforming gender identities.	

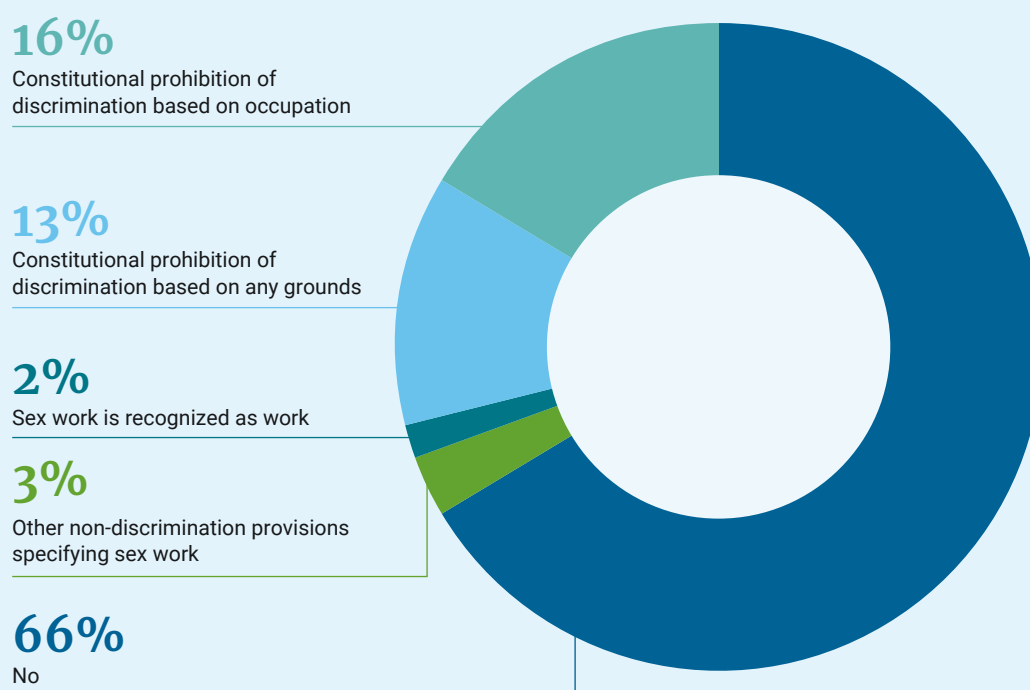
Box 9.

Spotlight: reforming policies and laws

Many of the populations who are most severely affected by HIV, viral hepatitis and STIs are also those that face the greatest challenges in accessing necessary services. Gay men and other men who have sex with men, people in prisons and other closed settings, people who inject drugs, sex workers and transgender people are confronted with social and structural barriers that affect their health, safety and access to services. Their marginalization in turn influences epidemic dynamics and diminishes the effectiveness of the response.

Repressive laws and policies are among the major threats to an effective response. More than 100 countries criminalize some or all aspects of sex work, and at least 76 countries criminalize sexual relations between people of the same sex. Some countries impose the death penalty for convictions under such laws (55). Several countries have adopted more punitive drug strategies in 2020 compared with previous years (55).

Fig. 27 Percentage of countries with legal protection for sex workers, 2020



The total number of reporting countries is 127.

Source: Global AIDS Monitoring (UNAIDS/WHO/UNICEF), 2020.

Criminalization directly affects the health and safety of these populations. A review of multiple studies found that repressive policing practices of sex workers were associated with increased risk of sexual or physical violence from clients or other partners; and sex workers who had been exposed to repressive policing practices had increased risk of infection with HIV and STIs (56). In sub-Saharan Africa, criminalization of same-sex sexual activity was consistently associated with an increased risk of acquiring HIV among gay men and other men who have sex with men. The HIV prevalence among sampled gay men and other men who have sex with men was as high as 52% in countries with severe criminalization compared with 8% in countries with no criminalization (57). Several countries have taken recent steps to review and reform punitive laws and practices, supported by advocacy and engagement by communities.

These efforts must be sustained, and all countries should work towards decriminalizing behaviour such as drug use and possession for personal use, sex work, same-sex sexual relationships and sexual orientation and nonconforming gender identities. They must strive to eliminate the unjust application of civil law and regulations against people who practice these types of behaviour to create equitable and enabling environments for an effective public health response.

These approaches are relevant across HIV, viral hepatitis and STIs, especially in relation to common determinants for sexual behaviour for HIV and STIs and the role of unsafe injection behaviour for HIV and viral hepatitis. The key and vulnerable populations may vary but the interventions are synergistic.



A photograph showing a person's head and shoulders behind vertical metal bars, likely in a prison or detention facility. The person has dark, curly hair and is looking away from the camera. The background is slightly out of focus, showing more of the bars and a glimpse of the interior.

Box 10.

A western Africa strategy for the health of key populations, free from stigma and discrimination

An estimated 5.3 million people are living with HIV in western and central Africa, and most of the people acquiring HIV are members of key populations and their partners. The HIV prevalence in some key populations is as high as 34% versus 0.3–3.5% in the general population. The syphilis prevalence among sex workers is estimated to be about 13% in the African Region versus the overall median reported prevalence of 3.2% – although data availability is limited.

Conservative cultural and gender norms, pervasive stigma and discrimination and legal barriers continue to hinder access to health services. Of 25 countries in western and central Africa, 16 have laws that criminalize sex work, 12 criminalize same-sex relations with imprisonment up to 14 years and 21 retain the death penalty in law for people convicted of drug-related offences (58). High levels of population mobility, weak health infrastructure and instability exacerbate the risks.

Recognizing the social and structural barriers faced by key populations in accessing essential services and the importance of addressing their needs through an integrated public health approach, the Economic Community of West Africa States (ECOWAS) adopted a Regional Strategy for HIV, TB, Hepatitis B and C and Sexual and Reproductive Health and Rights among Key Populations in 2020 (59).

This strategy for western Africa defines key populations as gay men and other men who have sex with men; transgender people; people who inject or use drugs; sex workers and their clients; and people in prisons and other closed settings. It aims to create an enabling legal, social and economic environment in ECOWAS for universal health coverage for these populations by strengthening national and regional leadership and coordination, investing in data systems, scaling up comprehensive service packages and ensuring the meaningful participation of key populations in design, implementation and monitoring. The strategy is guided by human rights principles, community empowerment, evidence-informed interventions and a commitment to accountability.



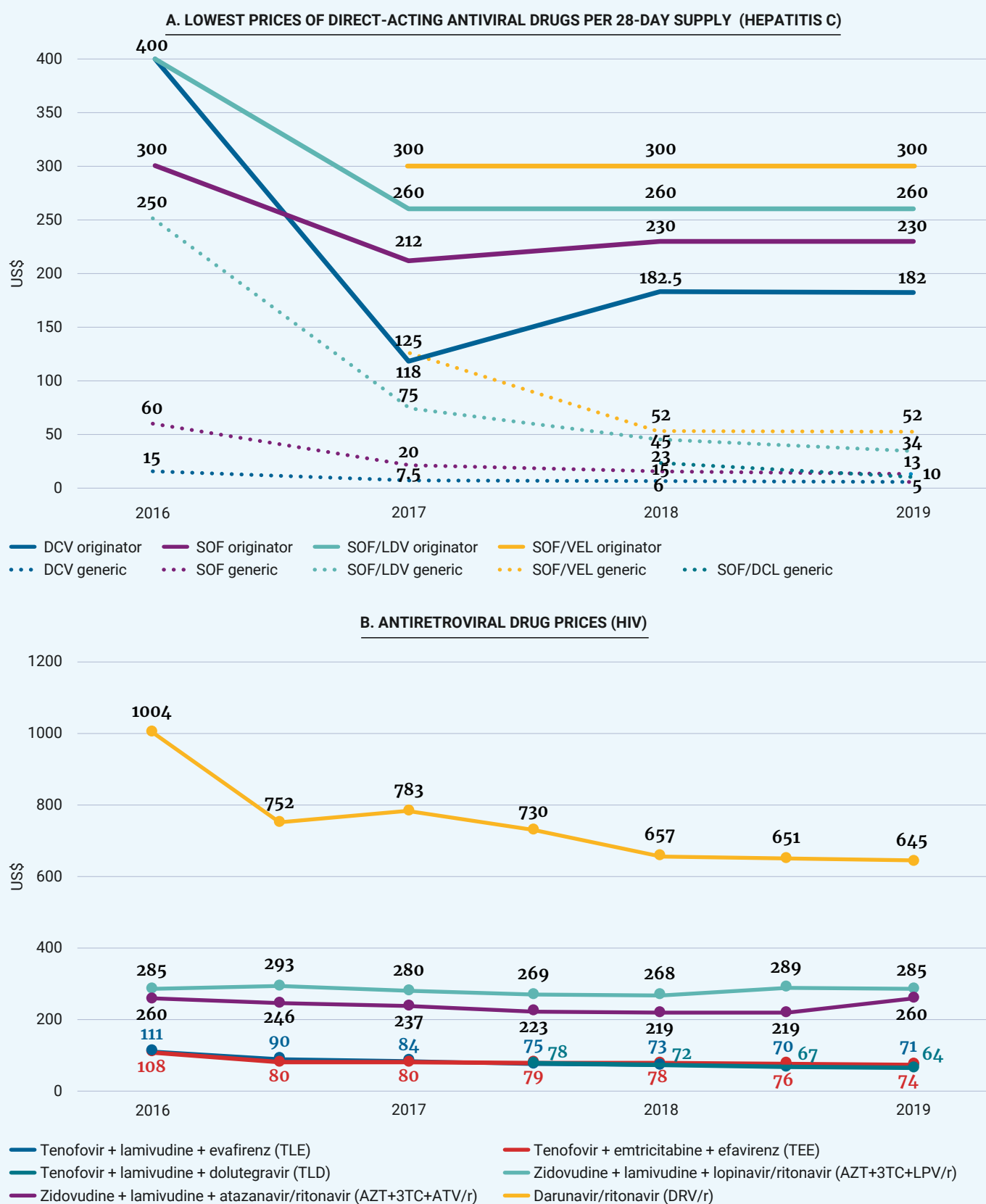
3.4

Financing for sustainability

More countries are demonstrating domestic commitments to finance HIV, viral hepatitis and STI services as part of their efforts to progress towards universal health coverage. Further, major declines in the prices of medicines and other health commodities, specifically for viral hepatitis and HIV, are making a public health scale-up of diagnostics and treatment more affordable. For a sustainable response, global efforts at disease-specific resource mobilization must continue to be complemented by more integrated approaches at country level to mobilize and allocate resources efficiently through the health system; and ensure that everyone can receive services without incurring financial hardship – thus attaining universal health coverage as delivered through a primary care framework. However, the macroeconomic and fiscal implications of COVID-19 and the response to it will affect domestic as well as donor resources in the coming years, increasing the challenge everywhere but especially in low-income countries.

Integrated resource planning and removing price and regulatory barriers will improve access and efficiency.

Fig 28. Trends in drug prices for a) Lowest prices of direct-acting antiviral drugs per 28-day supply b) ARV drug prices



Sources: a. Accelerating access to hepatitis C diagnostics and treatment: overcoming barriers in low- and middle-income countries. Global progress report 2020 (53).

b. WHO Global Price Reporting Mechanism 2021.

Table 7. Financing for sustainability – global accountability 2020

HIV	Viral hepatitis	Sexually transmitted infections
Substantial international funding, but new commitments are declining and the funding gap is increasing. The number of new HIV infections needs to be reduced rapidly to make the long-term costs of care sustainable.	Resource needs and cost-effectiveness data are available. The first global costing of the viral hepatitis response has been developed, showing a need of US\$ 6 billion per year and included in costing for universal health coverage; however domestic and international investments are lagging behind. In the absence of a donor fund for viral hepatitis, many countries that have established a national viral hepatitis programme have leveraged domestic resources in the form of either direct government budgetary allocations to national programs or via reimbursement through national health insurance schemes. There have been major declines in drug prices for hepatitis C, expanding access significantly. Reductions in the prices of diagnostics and simplification of approaches provide major opportunities for increased efficiency in expanding testing.	Large funding gaps and global neglect of STI funding for many years. Some progress in leveraging STI management as part of HIV services (such as in the case of PrEP) – but overall limited success in leveraging the increased funding for STIs as part of HIV funding. A low-cost rapid point-of-care test for STIs is needed, including tests that can diagnose multidrug-resistant gonorrhoea and other resistant STIs.

PRIORITY ACTIONS

- Maximize the use of available resources by using data to focus resources on the populations and geographies with greatest burden and lowest coverage.
- Continue to advocate for including medicines and diagnostics for HIV, viral hepatitis and STIs within the scope of publicly funded and guaranteed services as part of government's commitment to make progress towards universal health coverage.
- Leverage task sharing as a pragmatic response to address health worker shortages and expand decentralized provision of testing, care and treatment, especially for the hepatitis B and C response, to lower-level health facilities and using existing non-specialist and primary health care workforce.
- Leverage efficiency in procurement and supply chain mechanisms, including through improved joint analytics and data sharing between patient and logistics data systems.
- Leverage existing international financing opportunities through partners such as the Global Fund and continue to strengthen investment cases.

Box 11.**Spotlight: giving priority to eliminating viral hepatitis as part of universal health coverage and primary health care**

In 2019, WHO and partners developed the first comprehensive global resource needs estimates for the hepatitis response in the context of universal health coverage. The study found that investing an additional US\$ 58.7 billion over the period of 2016-2030, would avert 4.5 million premature deaths by 2030 and eliminate viral hepatitis as a public health threat in 67 low- and middle-income countries that account for the majority of hepatitis B and C virus infections (60).

The rapid declines in the prices of commodities, supported by increased competition from generic products, are making this investment feasible for more countries. Low- and middle-income countries can now aim to achieve a price as low as US\$ 60 per person for a 12-week course of hepatitis C treatment with WHO-prequalified generic sofosbuvir and daclatasvir (53). Countries have obtained similar reductions in prices for hepatitis B commodities. For example, in China, the cost for using tenofovir disoproxil fumarate to treat HIV was US\$ 240 per year through national procurement, whereas the cost of tenofovir disoproxil fumarate from the originator company to treat people with hepatitis B virus was US\$ 2950 per year, mostly out of pocket. With the expiry of the global patent for tenofovir disoproxil fumarate, central negotiations and alignment with HIV pricing led to a reduction in the price of tenofovir to US\$ 30–35 per year by 2019 (61).

An increasing number of champion countries are giving priority to financing and delivering viral hepatitis interventions as part of national universal health coverage frameworks. Supported by government commitment, updated national strategic plans and simplified guidelines, countries are making hepatitis treatment more widely available by

implementing a wide range of access strategies. Approaches include expanding generic competition, addressing patent-related barriers, conducting central price negotiations and pooled procurement and ensuring timely product registration and quality assurance processes.

However, many countries are not benefitting from these prices, and great variation in prices and patent barriers continue to persist among countries. In particular, high prices in upper-middle-income countries because of patents remain a major barrier to scale-up. For example, in 2019, the lowest generic price for sofosbuvir was US\$ 15 per 28-day supply in India for a WHO-prequalified product. In the Russian Federation, which is not included in the voluntary licensing agreement with the originator company, the price of sofosbuvir was US\$ 1099 per 28-day supply. Expanding access to simple, affordable and quality-assured hepatitis C diagnostics is also urgently needed so that countries can screen large numbers of people, identify people who need treatment and provide appropriate care.

Continuing to pursue various strategies to reduce prices will be essential to make hepatitis services more widely available to everyone in need. Further, investing in scaling up hepatitis diagnostics and treatment will also bring longer-term returns and remove an avoidable strain on the health system. A hepatitis C virus transmission modelling exercise in Pakistan projected that the health system would recover the investment in elimination through savings in health-care costs from prevented cases of cirrhosis and liver cancer in less than three years (62).



Box 12.**Domestic financing for hepatitis C treatment in the Western Pacific Region**

Of the 354 million people living with hepatitis B or hepatitis C virus globally, 35% live in the WHO Western Pacific Region. The Region also accounts for 50% of the world's new cases of liver cancer and associated deaths. Several countries in the region are now including the costs of hepatitis commodities in government financing and/or national health insurance coverage.

Table 8. Hepatitis treatment financing in the WHO Western Pacific Region, November 2020

Country	Hepatitis B	Hepatitis C, direct-acting drugs
Australia	Financed	Financed
Brunei Darussalam	Financed	Financed ^a
Cambodia	Out of pocket	Out of pocket
China	Financed	Financed ^b
China, Hong Kong SAR	Financed	Financed
China, Macao SAR	Financed	Financed
Japan	Financed	Financed
Lao People's Democratic Republic	Out of pocket	Out of pocket
Malaysia	Financed	Financed
Mongolia	Financed	Financed
New Zealand	Financed	Financed
Papua New Guinea	Out of pocket	Out of pocket ^c
Philippines	^d	Out of pocket ^d
Republic of Korea	Financed	Financed
Singapore	Financed	Financed
Viet Nam	Financed	Financed

^aBrunei: using PEG-INF. Direct-acting drugs planned to be used.

^bChina: direct-acting drugs under health reimbursements from January 2020.

^cPapua New Guinea: pilot employer private-public partnership model, Oro province.

^dPhilippines: pilots for hepatitis B and C testing and treatment started with government financing in 2018, with hepatitis B national expansion in April 2020.

Donor supported

Pacific countries: hepatitis B treatment supported by a donor with transition to government financing: Fiji, Kiribati, Solomon Islands, Tonga and Vanuatu.

	2014	2018	2020
Countries with hepatitis drugs financed	6(all high income)	13	19(including countries with pilots)

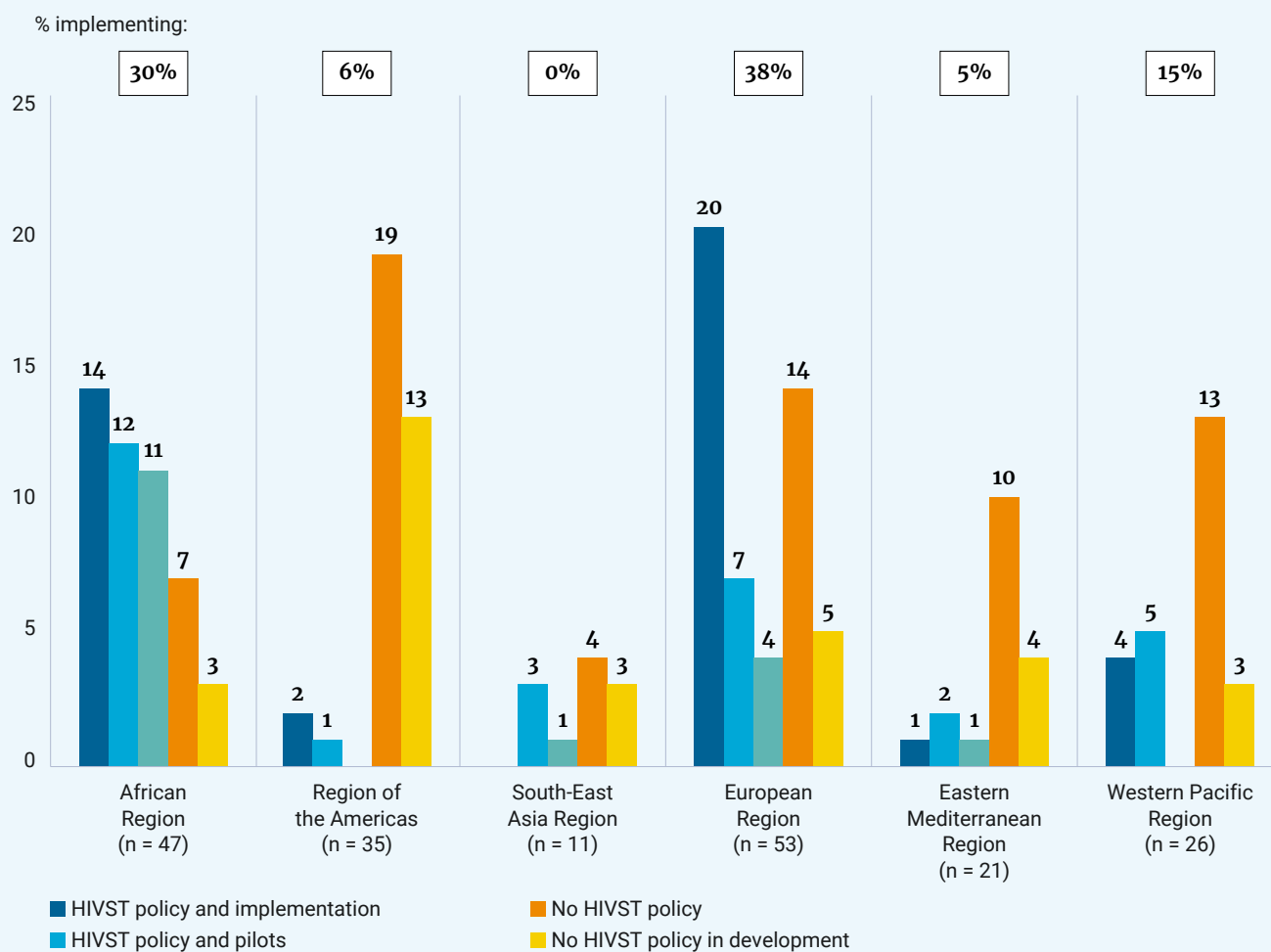


3.5

Innovation for acceleration

Innovations with cross-cutting relevance can catalyse the overcoming of barriers and move the response to HIV, viral hepatitis and STIs closer to the strategy targets. Ongoing research in basic science, new tools and technologies and service delivery approaches is critical to enhance the efficiency, quality and impact of the response. In addition, innovative methods are needed to tackle social and structural determinants related to the three disease areas to ensure that prevention efforts do not stall. Wider diffusion of innovation is necessary to bring successful approaches to scale to achieve public health impact.

The potential of innovative approaches must be fully leveraged and brought to scale to achieve wider public health impact

Fig. 29. Implementation of HIV self-testing by WHO region, 2020

Sources: Global AIDS Monitoring (UNAIDS/WHO/UNICEF) and WHO, 2020.

Table 9. Innovation for acceleration – global accountability 2020

HIV	Viral hepatitis	Sexually transmitted infections
The HIV response has strongly focused on innovation in technologies and service delivery models. Increasing options for HIV prevention and treatment, including the dapivirine vaginal ring as an additional prevention choice for women and a new dispersible strawberry-flavoured formulation of dolutegravir for children. Other innovations are in the pipeline – related to long-lasting treatment, prevention technologies and the use of person-centred data, unique identifiers to support people as they move between facilities and digital health tools to improve utilization of appointments and services. HIV mRNA vaccines are once again showing promise, in part because of extensive research to develop vaccines for COVID-19.	Progressive simplification in diagnostics and treatment algorithms and service delivery models for hepatitis C virus. Progress in obtaining a cure for hepatitis B is required to achieve the 2030 strategy targets. Implementation innovations to simplify diagnostics and their delivery and access are needed as part of primary health care approaches. Innovation needs further development and quality products including core antigen for hepatitis C virus as a rapid diagnostic test but even simply having high-quality hepatitis B surface antigen tests.	Expanded use of self-management approaches such as self-sampling for STIs. Various new products in progress: • Prequalification of diagnostic tests for <i>N. gonorrhoea</i> and rapid syphilis testing. • New treatments for gonorrhoea to address antimicrobial resistance. • Alternative treatments for maternal syphilis. • Promising vaccines against gonorrhoea. Innovation in service delivery models is needed to integrate STI testing into existing diagnostic platforms and the provision of integrated services. Innovation is needed to address social and structural determinants relevant for preventing STIs and HIV.
Strong focus on cross-cutting innovations, such as differentiated and community-led models – accelerated during COVID-19. Availability of new technologies to scale up diagnostics, such as triple HIV, syphilis and hepatitis B tests; point-of-care nucleic acid tests for hepatitis B and C virus; and self-testing for hepatitis B, hepatitis C and STIs. Greater use of virtual platforms and digital tools, especially to reach young people.		
PRIORITY ACTIONS		
• Leverage the potential of innovative service delivery approaches, including through self-management and care approaches and community-led delivery, building on lessons learned from the COVID-19 response. • Leverage the potential of digital tools, including for demand creation, service delivery and monitoring and evaluation. • Ensure continued investment in research in priority areas – such as vaccines for HIV, hepatitis C virus, gonorrhoea and HSV and a functional cure for hepatitis B. • Seek opportunities for innovative approaches to address the social determinants of health.		

Box 13.**Spotlight: advancing community engagement and community-led service delivery**

In response to the COVID-19 pandemic, community-based organizations worldwide stepped up efforts to identify and expand innovative ways to continue to reach people with essential services in contexts of lockdowns and stay-home measures, physical distancing requirements, difficulties in accessing health-care services and supply disruptions. As highlighted in section 1.2, community-based organizations delivered essential supplies such as antiretroviral therapy and harm-reduction services directly within communities and to people's homes, expanded the use of self-testing and self-management approaches and used telehealth and social media to provide information and support, often integrating COVID-19 messaging in their work.

Several of these approaches were already being successfully used before the COVID-19 pandemic. Their expanded use in the context of a public health crisis has clearly demonstrated how community engagement plays a major role in delivering people-centred services to populations that are hard to reach. Community-based and peer-led approaches bring services closer to people in need and deliver them in an environment of trust. They empower individuals with a wider choice of interventions, including greater possibilities for self-care and autonomy. They also empower communities to play a lead role in advocacy, priority-setting and designing services to meet their needs and promote accountability.

Community-led service delivery is integral to effective primary health care and an essential complement to facility-based services. The health sector is transforming rapidly with an increasing number of new diagnostics, devices, medicines and other technologies that can be self-administered and self-managed, often supported by

digital innovations. Community-based organizations and community workers support the delivery of these new technologies as a means to expand primary health care beyond traditional delivery models and enable more people to realize their right to health.

Young people in particular have emerged as critical gatekeepers in pioneering and sustaining community-led innovations and should be further supported in consolidating their leadership into the next phase of work to reset the responses to HIV, hepatitis and STIs back on track. In Manipur, India, young people are working with mental health professionals to provide psychosocial support and information for young transgender people during the pandemic. In Zimbabwe, community adolescent HIV treatment supporters provided information, referrals and support to their peers using mobile phones (63).

The innovations introduced during the COVID-19 pandemic must be sustained and leveraged to reach larger numbers of the people most severely affected and at higher risk – to achieve the goals of eliminating HIV, viral hepatitis and other STIs as public health threats by 2030. Community-led and community-based responses require greater investment with stronger links to primary health care and its focus on building people-centred, resilient and sustainable health systems that uphold the right to health, promote social justice, empower individuals and communities and address the determinants of health. Countries are encouraged to further scale up innovative community-led approaches as they strive towards elimination, in accordance with the pathways described in the WHO/UNICEF operational framework for primary health care (54).

Box 14.**Exploring the potential of digital health to reach young people in South Africa**

Young people in southern Africa have a high prevalence of STIs but poor knowledge of STIs and of available prevention and health-care services. Young people also report concerns around confidentiality, provider attitudes and feelings of stigma and shame as barriers to accessing services (64).

Faced with COVID-19, a project providing sexual and reproductive health services to adolescent girls and young women 15–24 years old in South Africa rapidly adapted its service delivery to the COVID-19 context (65). By using social media, chatbots and messaging apps, the project ensured that young people continued to have access to information and education materials in times of lockdown. The project decentralized service delivery to mobile clinics and community delivery points and expanded the use of telehealth for screening, consultations and psychosocial support. They also sent electronic prescriptions and postal self-testing or self-sampling kits for HIV, chlamydia, syphilis and gonorrhoea, with follow-up through telemedicine.

The project found that young clients responded positively to having a wider choice of service delivery options for sample collection, diagnosis, receiving results, initiating treatment and notifying partners. It also found high utilization of social media for information, screening and follow-up, demonstrating the potential to extend these adaptations in the future.

Box 15.**Self-sampling for STIs to maintain services for key populations in Thailand**

Thailand faces a high burden of STIs among gay men and other men who have sex with men and among transgender women. In the first half of 2019, the COVID-19 pandemic resulted in a decline of 50–75% in clients testing for HIV and STIs in major HIV and STI service delivery centres.

To maintain access to sexual health services while respecting physical distancing and occupational safety regulations, Thailand's key population-led health services programme introduced self-sampling for STIs at major key population-led health clinics for the first time. Uptake of self-sampling was high, and the rate of acceptance of STI self-sampling increased from 48% in May 2020 to 78% by July 2020. Thailand also adapted other services to the COVID-19 context, such as extending PrEP prescriptions from three to six months for continuing clients, delivering medication and supplies discretely and using telehealth consultations.

Such adaptations provide greater accessibility and acceptability of services for populations in need and can be sustainable over the long-term. A meta-analysis of data from 11 studies from different countries found that self-collection of samples nearly tripled the overall uptake of STI testing services compared with clinician-based collection, offering an important additional strategy to increase service uptake (66).



3.6 Cross-cutting actions

Joint action can create synergy across health and community systems to ensure the widest possible access to high-quality services for all populations in need and advance the goals of universal health coverage. This section accounts for the status of cross-cutting priorities that were identified in the mid-term review in 2018, identifies additional priorities by drawing on lessons from the COVID-19 response and provides a view forward to 2030.

The public health response to HIV, viral hepatitis and STIs offers many opportunities to join forces to accelerate towards achieving the 2030 elimination targets.

Table 10. Cross-cutting priority actions for the next decade

Priorities	Status in 2020	Catch-up actions to 2030
Actions identified in the mid-term review (2019)		
1. Leverage common disaggregated data platforms	Electronic district-level data systems have been implemented in most countries, with regular data review to improve programmes. However, gaps remain in facility-level reporting for viral hepatitis and STIs and in the security and interoperability of data systems.	• Strengthen digital health data, including guidance on data interoperability, security and unique identifiers. • Conduct standardized analytical reviews and build capacity to use data at decentralized levels to improve programmes. • Consider agile, small-scale surveys across the three disease areas that can assess trends and progress in specific populations.
2. Scale up point-of-care diagnostics and self-testing	The availability of diagnostics for HIV, viral hepatitis and STIs is improving, supported by recent innovations. However, there are many missed opportunities to leverage common platforms for service delivery and common learnings, such as in the case of self-testing across all three disease areas.	• Make self-testing available for all three disease areas, especially to reach key and vulnerable populations and men. • Strengthen joint diagnostic platforms that can be leveraged across all three disease areas and more widely across health.
3. Achieve triple elimination of mother-to-child transmission of HIV, hepatitis B virus and syphilis and explore extending the elimination focus to children	There has been major progress in aligning guidelines and processes and validating the first set of countries for dual and triple elimination. Fifteen countries have already been validated as having eliminated the mother-to-child transmission of HIV and/or syphilis as public health threats, and two additional countries are preparing to submit country data to join the path towards elimination. Stronger incentives to align countries in the full path towards elimination would strengthen the approach, together with further inclusion of hepatitis B.	• Strengthen approaches and incentives to involve countries in the full path towards elimination, including in larger countries with a higher burden of disease. • Scale up the triple elimination of mother-to-child transmission and, where feasible, expand approaches to validate adult elimination, such as for hepatitis C virus infection. • Develop strategies to expand the focus on eliminating vertical transmission to eliminating infections among children across the diseases.

Priorities	Status in 2020	Catch-up actions to 2030
4. Improve access to drugs and diagnostics	The price reductions have been remarkable for hepatitis C medicines in the past three years and HIV over the last two decades. These need to be extended and efforts made to include the costs of expanding coverage of these within national health plans, including any health insurance entities, and to provide the needed financing across all three disease areas as part of universal health coverage. In addition, developing an end-to-end process for antiretroviral medicines for children, early infant diagnosis and using multi-disease platforms can improve the effectiveness of interventions.	• Include drug and diagnostics costs increasingly in country health financing, for example as for HIV and viral hepatitis in Rwanda's health insurance program and for hepatitis B in China's insurance programs. This also enables further reductions as prices are aligned, for example between hepatitis B virus and HIV. • Promote South-to-South support, for example Egypt's support for eliminating hepatitis C more widely in Africa. • Strengthen subnational use of unique identifiers to better match patient numbers with drug and diagnostic stocks. • Facilitate drug development for new gonorrhoea treatment and options for syphilis treatment and availability of STI drugs and diagnostics at the primary health care level.
5. Protect against the threat of antimicrobial resistance	There have been strong improvements in HIV medicines with regards to antimicrobial resistance supported by a global action plan. Cross-cutting antimicrobial resistance actions across HIV, STIs and TB could be strengthened.	• Improve surveillance and monitoring of antimicrobial resistance for HIV and STIs. • Improve data use to reduce loss to follow-up on life-long HIV treatment. • Align actions to address antimicrobial resistance for HIV and STIs and coordinate with cross-cutting management of antimicrobial resistance.
6. Strengthen joint responses to HIV, viral hepatitis and STIs with TB and other key comorbidities	There has been major progress in provision of testing and treatment, but TB remains the major cause of death among people living with HIV. Programmes in many countries in sub-Saharan Africa remain separate in terms of management, supply chains and monitoring.	• Review integration of HIV and TB programmes, especially in sub-Saharan Africa, while continuing strong progress in aligning testing and treatment. • Align joint monitoring approaches in terms of use of health information system platforms such as DHIS-2, programme reviews and ongoing data use to improve services.
7. Integrate sexual and reproductive health and rights	Many countries have pioneered important approaches in relation to key and vulnerable populations, but progress has met significant barriers. Renewed efforts are required to secure sexual and reproductive rights for all.	• Extend activities across all three disease areas and mainstream key components in universal health care approaches, where the tracer is often progress in key and vulnerable populations. • Integrate STI prevention and care services into HIV, adolescent health, antenatal care and sexual and reproductive health services and primary health care. • Further integrate sexual and reproductive health rights including STIs into existing programmes, including those supported by the Global Fund and the United States President's Emergency Plan for AIDS Relief (PEPFAR).
8. Address social and structural determinants	The failure to achieve HIV incidence reduction targets and STI targets highlights the need to address social, behavioural and structural determinants more directly in the next decade to progress towards elimination.	• Support national prevention programmes with strong leadership to tackle social and structural determinants, since many countries suggest these have not been adequately supported at the highest level • Develop activities across the Triple Billion targets, leveraging the increasing WHO emphasis on social and structural determinants.
Actions identified to leverage innovations and lessons from the COVID-19 response		
9. Maximize the use of differentiated and people-centred service delivery options	Many of the policies have been developed, but they gained additional impetus in implementation in response to the COVID-19 pandemic. This momentum needs to be further leveraged to build back a stronger response to HIV, viral hepatitis and STIs.	• Extend flexibility in policies, such as multithrough dispensing of antiretroviral medicines to six months, and require differentiated care policies to be in place. • Strengthen the use of person-centred data and digital health to further implement people-centred service delivery.
10. Strengthen community engagement, community-based service delivery and community-led monitoring	Community engagement has been a critical part of the response, but communities have increasingly taken on additional responsibilities to integrate prevention, testing and treatment with innovative approaches in response to the COVID-19 pandemic.	• Integrate community-level services to bring together prevention, testing and treatment. • Develop direct, simplified service delivery that goes beyond health facilities, using community networks and workplaces to reach the most vulnerable populations, adolescent girls and young women and men.

Box 16.

Spotlight: accelerating progress within the frameworks of universal health coverage and primary health care

The responses to HIV, viral hepatitis and STIs play an important role in advancing the global goals of universal health coverage and primary health care (67,68). Similarly, increased investment in the key components of primary health care drive progress towards disease-specific goals and people-centred care as critically important elements of the push for universal health coverage. With universal health coverage as the goal, strengthening primary health care while continuing with disease-specific approaches can ensure optimal opportunities for people-centred services and greater efficiency through strengthened integration. More efforts are needed to separate ends and means; ensuring that more integrated systems are accountable to deliver disease-specific goals, mainly through primary health care, to deliver on progress towards universal health coverage. This requires greater alignment of disease-specific and overall 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. Effective control of disease is therefore integral to progress towards universal health coverage. The global health sector strategies for HIV, viral hepatitis and STIs recognize universal health coverage as an overarching guiding framework and contribute towards its progressive realization; in turn, progress towards universal health coverage enables a comprehensive response to these diseases.

People-centred and resilient health systems that deliver primary health care are essential to achieve universal health coverage. In the Declaration of Astana (2018), countries and international partners committed themselves to orienting health systems towards primary health care for accelerated progress on universal health coverage and the health-related Sustainable Development Goals (67).

Primary health care covers the range of disease prevention, health promotion, treatment, rehabilitation and palliation care that are needed throughout a person's lifespan, delivered as close as feasible to people's everyday environment. WHO's vision for primary health care seeks to achieve healthy lives and well-being for all by building people-centred, resilient and sustainable primary health care-based health systems that uphold the right to health, empower individuals and communities and address the determinants of health through multisectoral policy and action.

The global response to HIV, viral hepatitis and STIs is anchored in these principles. Joint efforts across these diseases are important steps towards advancing universal health coverage and primary health care through disease-specific action. These include strengthening cross-cutting surveillance and information systems, deploying multi-disease diagnostic technologies, strengthening self-care and self-management approaches, addressing common price and patent-related barriers, integrating disease-specific financing into universal health coverage packages, empowering communities and addressing common social determinants of health.

For many countries, integrating primary health care across a wide range of policies, strategies, activities and services is likely to require substantial transformation of how health-related policies and actions across disease areas are given priority, funded and implemented (67). Each country will progress towards universal health coverage and primary health care in accordance with local contexts and priorities. Countries will need to assess, set priorities for, optimize and sequence their actions as part of national health sector planning. These processes should occur in the context of an inclusive planning process with community participation that includes the most vulnerable, disadvantaged and marginalized people, and care must be taken to ensure that greater integration does not compromise the focus on disease-specific responses that serve these populations.

Fig. 30. Primary health care: a whole-of-society approach



Source: WHO & UNICEF (69).



3.7 WHO actions

Each of the global health sector strategies defines fast-track actions that WHO must undertake to support countries to accelerate progress in the fight against HIV, viral hepatitis and STIs. This section highlights the WHO actions for which major gaps remain and identifies suggested steps to address these gaps.

Box 17.

Spotlight: contributing to achieving the WHO Triple Billion targets

WHO's Triple Billion targets are an ambitious initiative to achieve measurable impact on the health of billions of people worldwide by 2023 such that:

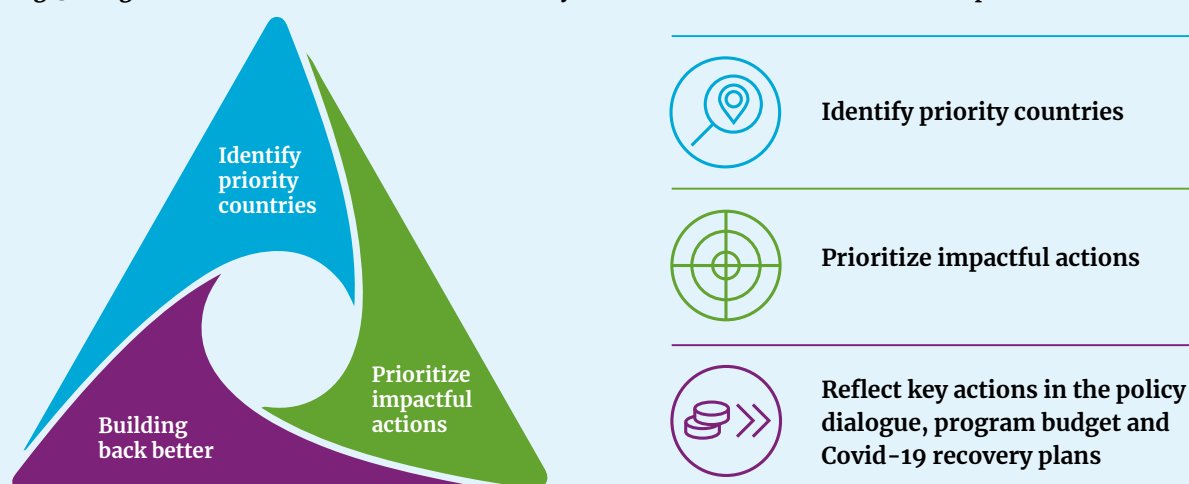
- one billion more people benefit from universal health coverage;
- one billion more people are better protected from health emergencies; and
- one billion more people enjoy better health and well-being.

These targets provide the foundation of WHO's Thirteenth General Programme of Work and are an integral part of WHO's results framework to measure and improve how WHO's affects health at the country level.

Progress towards eliminating HIV, viral hepatitis and STIs as public health threats contributes tangible results towards achieving the Triple Billion targets.

- **The first billion.** All three disease strategies share a vision to deliver the three dimensions of universal health coverage – improving the availability and quality of essential health services, ensuring equitable access to services in relation to need and reducing costs and providing financial protection for those who need the services.
- **The second billion.** With their contributions to building health system capacity and resilience, HIV, viral hepatitis and STI programmes also contribute to public health emergency preparedness, detection and response.
- **The third billion.** By addressing structural barriers and promoting gender-responsive programming, they contribute to better health and well-being for all.

Fig. 31. Regular reviews use disease data to identify actions to contribute to the WHO Triple Billion Goals



Source: WHO, 2021

Table 11. WHO action with gaps in 2020 and steps to address these by 2030

Global health sector strategy	WHO action with significant gap in 2020	Suggested steps to address the gap by 2030
HIV	Advocate for and support the expansion of new prevention technologies.	Include new approaches for prevention, including social and structural determinants, in the next phase of the global health sector strategies with reference to the UNAIDS Global AIDS Strategy 2016–2026 (70) and its three strategic priorities: maximize equitable and equal access to HIV services and solutions; break down barriers to achieving HIV outcomes; and fully resource and sustain efficient HIV responses and integrate them into systems for health, social protection, humanitarian settings and pandemic responses.
	Provide guidance on combination HIV prevention.	Provide implementation guidance on how to balance funding for various prevention priorities.
Viral hepatitis	Support countries with tools and technical assistance.	Strengthen partner technical support and support from WHO regional offices.
	Support countries in fully implementing WHO's injection safety policy and global campaign.	Highlight injection safety in the next phase of the global health sector strategies.
	Provide advocacy and technical support to countries to mobilize commitment to harm reduction.	Address barriers to harm reduction as a cross-cutting priority in the next phase of the global health sector strategies.
	Provide guidance on quality assurance and quality improvement systems.	Assess approaches to improve quality assurance and improvement in countries.
	Provide policy and technical guidance aimed at building a competent workforce.	Develop guidance on differentiated human resources support for hepatitis services.
	Provide technical support to countries to forecast the need for essential hepatitis commodities.	Initiate forecasting for hepatitis C commodities in the 2021 forecasting meeting for drug and diagnostics stakeholders and partners.
	Support regulatory authorities in pre-market assessment and registration of new hepatitis medicines and diagnostics, with post-market surveillance.	Strengthen post market surveillance to support regulatory authorities.
	Assess the quality and performance of commercially available hepatitis diagnostics.	Consider in the next phase of the global health sector strategies.
STIs	Ensure linkage of some components of STI surveillance to existing mechanisms.	Develop a new monitoring and evaluation and surveillance framework for STIs.
	Provide technical support to countries with STI programmes.	Strengthen joint STI and HIV country support.
	Update and disseminate guidance for targeted populations on STI vulnerability and risk-reduction interventions.	Include stronger focus on key populations in the next phase of the global health sector strategies and generate better data.
	Strengthen efforts to ensure that high-quality diagnostics for STIs are accessible and available.	Implement STI diagnosis, screening strategies for key population and vulnerable populations such as adolescents, pregnant women and other bridge populations, including men; and facilitate the development of low-cost point-of-care tests for STIs.
	Develop and support public–private partnerships to catalyse the development of new technologies.	Develop and support public–private partnerships to catalyse the development of new technologies.

4

Progress by WHO region

4.1 African Region

The African Region leads the way in HIV testing and treatment and has the opportunity over the next decade to extend this to addressing hepatitis B and C and syphilis transmission from mother to child

Table 12. African Region: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	970 000 [730 000–1 300 000]
	People dying from HIV-related causes	440 000 [330 000–590 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	990 000 [660 000–1 600 000]
	Incident cases of hepatitis C infection	210 000 [150 000–370 000]
	People dying from hepatitis B infection	80 000 [47 000–110 000]
	People dying from hepatitis C infection	45 000 [23 000–72 000]
STIs (2020)	Incident cases of gonorrhoea	19 200 000 [10 000 000–32 200 000]
	Incident cases of syphilis	2 200 000 [1 300 000–3 100 000]

Table 13. African Region: highlights and priority action

HIV	Viral hepatitis	Sexually transmitted infections
Data availability and quality have improved greatly – all countries are reporting on key HIV cascade indicators; HIV programme data are integrated into the health management information system; and key population size estimates are improving. Of 47 countries in the region, 44 have size estimates for sex workers, 40 for gay men and other men who have sex with men, 20 for people who inject drugs and 7 for transgender people.	Twenty-eight countries had national hepatitis strategic plans in 2018.	Countries in the Region with high HIV prevalence also face a high prevalence of HPV infection and cervical cancer incidence and mortality, but many countries have not yet introduced HPV vaccination for girls, and the integration of cervical cancer screening with HIV services needs to be strengthened.
70% [58–80%] of the people living with HIV have access to HIV treatment, and five countries (Botswana, Eswatini, Namibia, Zambia, and Zimbabwe) have achieved the 90–90–90 targets in 2019.	Access to diagnosis and treatment is still limited.	There has been progress in dual testing for HIV and syphilis and approaches for eliminating the mother-to-child transmission of the two diseases.
Differentiated service delivery is improving uptake and quality – 42 countries implementing multimonth dispensing of antiretroviral drugs for 3–6 months.	Hepatitis reporting has improved significantly in the Region since the mid-term report but major gaps remain.	Very high levels of STIs and HIV incidence among women in antenatal care have shown the need for stronger approaches to integrate prevention and treatment and to tackle similar social and sexual determinants.
Access to voluntary medical male circumcision is expanding – 27 million adolescent boys and men in 15 countries reached in eastern and southern Africa, achieving 60% of the target and preventing 340 000 people from acquiring HIV by 2019.	Egypt has initiated support for planning towards eliminating viral hepatitis in sub-Saharan African countries, a leading example of South-to-South support.	To strengthen STI and HIV prevention surveillance, joint approaches, including STI prevalence surveys, are required.
PrEP services are scaling up– of 47 countries in the Region, 22 provide PrEP to adolescent girls and young women, sex workers, gay men and other men who have sex with men, transgender people, people who inject drugs and/or prisoners.	Joint approaches to viral hepatitis and HIV coinfection provide opportunities, given the reductions in prices for hepatitis B and C treatment.	
Three countries have achieved elimination of mother-to-child transmission of HIV and/or syphilis; 11 are on the path to elimination.		
PRIORITY ACTIONS		
- Invest in integrated data systems and streamline the governance of data reviews and use. - Continue to scale up differentiated service delivery, leveraging the innovations from the COVID-19 response. - Intensify efforts to reach men at higher risk of HIV infection. - Advance integrated people-centred health services across diseases, with greater decentralization, task sharing and community engagement as part of universal health coverage. - Continue to advocate for domestic investment and innovative financing mechanisms; especially to address the chronic funding gaps for viral hepatitis and STIs.		

Box 18.**Engaging communities in voluntary medical male circumcision in Malawi and the United Republic of Tanzania**

Voluntary medical male circumcision is a critical component of a combination prevention strategy in settings with high HIV prevalence, in particular in eastern and southern Africa. Voluntary medical male circumcision is also a critical strategy to link adolescent boys and men to health services and increase service uptake. Many countries are implementing strategies to generate demand and address barriers to scaling up voluntary medical male circumcision among adolescent boys and men.

In a high-burden district of Malawi, satisfied prior clients of voluntary medical male circumcision were engaged as community mobilizers to expand demand creation. They were provided with a bicycle for transport, identification cards and branded T-shirts and equipped with training and job aids to address common myths and misconceptions regarding voluntary medical male circumcision among men in their communities. The uptake of voluntary medical male circumcision in the district increased from 32% in 2017 to 71% in 2018, the highest level in five years (71).

In the United Republic of Tanzania, after data analysis revealed that male circumcision rates among men 25–29 years old were low in priority districts, an initiative sought to integrate voluntary medical male circumcision within existing community-based mobile HIV testing. Adjacent tents offering HIV testing and voluntary medical male circumcision were set up near hotspots, and peer educators linked the clients of HIV testing to voluntary medical male circumcision. The initiative helped to reduce waiting times and travel distance and provided more privacy compared with facility-based voluntary medical male circumcision. Older men represented 38% of voluntary medical male circumcision clients reached through mobile teams versus 11% of clients reached through facility-based modalities (72).



4.2 Region of the Americas

The Region of the Americas has led the approaches to dual elimination of mother-to-child transmission of HIV and syphilis and delivering the HIV service cascade for key populations. Over the next decade, they will need to fill the gaps in the service cascade for HIV, viral hepatitis and STIs

Table 14. Region of the Americas: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	170 000 [110 000–240 000]
	People dying from HIV-related causes	52 000 [34 000–76 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	10 000 [5 100–26 000]
	Incident cases of hepatitis C infection	67 000 [63 000–73 000]
	People dying from hepatitis B infection	15 000 [8 500–23 000]
	People dying from hepatitis C infection	31 000 [19 000–84 000]
STIs (2020)	Incident cases of gonorrhoea	9 800 000 [5 300 000–17 000 000]
	Incident cases of syphilis	2 500 000 [1 500 000–3 500 000]

Table 15. Region of the Americas: highlights and priority actions

HIV	Viral hepatitis	Sexually transmitted infections
The number of people acquiring HIV declined between 2010 and 2019 in the Caribbean (29%) but grew in Latin America (21%), with the overall numbers for the Region stabilizing since 2019. Coverage of HIV treatment services is increasing (67%), and most countries have adopted “treat all” policies. Coverage of HIV prevention services is uneven. About 64% of gay men and other men who have sex with men reported using a condom at last anal sex, but the number is less than 50% in nine countries. Roll-out of PrEP has been slow. Nine countries have developed key population prevention cascades and implemented policy and programmatic changes based on their findings. HIV self-testing is expanding, with national policies adopted in five countries and being developed in 15 countries.	Previously adopted preventive interventions, including vaccination and blood safety, have enabled the regional elimination of early childhood transmission of hepatitis B (hepatitis B surface antigen <0.1% among children five years-old). A total of 23 countries had national hepatitis strategic plans in 2020 versus 10 in 2015. However, access to diagnosis and treatment is still limited, and few people living with hepatitis B and hepatitis C virus have been diagnosed. High prices of commodities and complex patent protection schemes that limit access to generics continue to pose barriers.	Key populations have a high burden of syphilis, and syphilis is increasing among pregnant women in some countries. Congenital syphilis cases are underdiagnosed and underreported.
Eight countries have achieved elimination of mother-to-child transmission of HIV and/or syphilis.		

PRIORITY ACTIONS

- Expand integrated testing and treatment services, such as the joint elimination of mother-to-child transmission of HIV and syphilis as part of maternal and child health, common platforms for HIV and STI testing and mental health.
- Facilitate access to commodities by taking a joint approach to addressing market and patent barriers.
- Expand the roll-out of differentiated approaches for HIV, including multimonth dispensing of medicines, expanded role of lay providers and use of telemedicine.
- Improve surveillance and information systems, especially on viral hepatitis and STIs.
- Strengthen surveillance of antimicrobial resistance for *N. gonorrhoeae* and align treatment guidelines with local susceptibility patterns.

Box 19.**Community-led solutions to maintain HIV and STI services during the COVID-19 pandemic in Argentina and Guatemala**

In Argentina, Fundación Huésped provides community-based services related to HIV and AIDS, viral hepatitis, STIs and other sexual and reproductive health services to populations in need, especially key populations. During the COVID-19 pandemic, Fundación Huésped adapted rapidly to the COVID-19 context by expanding the use of telehealth and providing all staff with the necessary equipment for remote work. The only required physical visit to the clinic was for sample collection for testing. The expanded use of telephone and virtual consultations enabled Fundación Huésped to reach a greater number of people from a wider geographical area. Between March and November 2019, the 15 staff members of Fundación Huésped provided services to 1500 clients per month versus 330 clients per month during the same period in the previous year.

Other community-based organizations in the Region adopted similar approaches. Community-based clinic Colectivo Amigos Contra el SIDA in Guatemala City, one of the largest HIV and STI community clinics in Central America for gay men and other men who have sex with men, introduced HIV self-testing to maintain sexual health services for gay men and other men who have sex with men. Clients could request test kits through the clinic's website and receive them by mail. The clinic also adopted multimonth dispensing of PrEP and other essential supplies. As a result, not only were services maintained within the city but men outside the city could also access services with online support.



4.3 South-East Asia Region

The South-East Asia Region has some of the world's leading programmes for key populations and community-based responses. Three countries in the Region have been validated for EMTCT of HIV and syphilis and four countries have been certified to have achieved hepatitis B control through immunization. Progress in the response to HIV and STIs has nevertheless plateaued. Financing for HIV, viral hepatitis and STIs needs to be sustained and expanded towards universal health coverage.

Table 16. South-East Asia Region: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	160 000 [110 000–210 000]
	People dying from HIV-related causes	110 000 [65 000–160 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	260 000 [180 000–590 000]
	Incident cases of hepatitis C infection	230 000 [200 000–430 000]
	People dying from hepatitis B infection	180 000 [140 000–300 000]
	People dying from hepatitis C infection	38 000 [37 000–130 000]
STIs (2020)	Incident cases of gonorrhoea	21 100 000 [7 600 000–45 000 000]
	Incident cases of syphilis	350 000 [110 000–600 000]

Table 17. Regional highlights and priority actions

HIV	Viral hepatitis	Sexually transmitted infections
The number of people acquiring HIV declined by 22% and the number of people dying from AIDS-related causes decreased by 26% between 2015 and 2019. However, progress has plateaued, and members of key populations and their partners are acquiring HIV. HIV treatment coverage increased from 39% in 2015 to 60% in 2019, but the region is off-track for achieving the 2020 targets. The uptake of HIV self-testing and PrEP has been slow; and progress in addressing comorbidities such as HIV and TB has been insufficient. In response to COVID-19, several countries applied differentiated and innovative approaches such as increased use of telemedicine and multimonth dispensing and take-home doses of HIV treatment and opioid substitution therapy and engaging communities as effective partners in service delivery.	Eight countries in the Region have national hepatitis strategic plans. There have been strong gains in coverage of hepatitis B vaccination, and four countries in the Region have achieved 2020 control targets through immunization. The prevalence of hepatitis B infection has declined significantly. There has been slow progress in scaling up access to hepatitis diagnosis and treatment, and mortality has not yet declined. Funding for viral hepatitis remains inadequate, and the prices of commodities vary across countries.	There are several best practices in STI control in the Region at subnational levels, even in countries with uneven overall implementation. Trends in curable STIs are declining overall, except syphilis in a couple of instances. STI surveillance in the Region remains weak. Eight countries in the Region have an official national STI strategy; among these, it is integrated with the national HIV strategy in five countries. However, there has been a relative lack of commitment and giving priority to STIs in the Region overall. Screening for STIs among key populations and in antenatal care settings is low, with many missed opportunities.
Three countries – Maldives, Sri Lanka and Thailand – have been validated as achieving elimination of mother-to-child transmission of HIV and syphilis. Access to harm reduction in the Region is low.		
PRIORITY ACTIONS - Enhance the coverage of prevention and testing services with linkage to treatment. - Reinvigorate programmes with increased focus on key populations and people at higher risk. - Address barriers to accessing services, including stigma and discrimination. - Give priority to hepatitis, HIV and STI within universal health coverage and with improved financing and investment cases. - Advance a triple elimination framework to end mother-to-child transmission of HIV, hepatitis B and syphilis. - Utilize price advantages fully, since the costs of health commodities vary greatly in the Region. - Strengthen surveillance and disease burden estimates with better collection and utilization of data. - Maximize the potential of decentralized approaches, including the private sector, to achieve universal health coverage.		

Box 20.**Community-led interventions for improving health outcomes across the Region**

Several community-led initiatives are demonstrating their potential to improve health outcomes for affected populations and provide valuable lessons for wider scale-up within the Region and beyond. For example, a community-based organization for female, male and transgender sex workers in southern India has demonstrated improvements in coverage, utilization and outcomes of HIV and STI services with a shift from implementation with sex workers as active partners towards programmes run by them (73). In a participatory training initiative in Thailand, people living with HIV and members of key populations were co-trainers alongside health facility staff (74). This initiative significantly reduced stigma and discrimination among health-care workers towards people living with HIV and key populations. Experiences from Indonesia among gay men and other men who have sex with men highlight the importance of social support from buddies in HIV treatment initiation and adherence (75).

Experiences across the Region have also demonstrated how interventions that place communities at the centre can achieve strong health outcomes (76). In Nepal, a community-based intervention leveraged existing sites providing opioid substitution therapy for people who inject drugs and provided hepatitis C virus screening and linkage to treatment. The role of communities has also been well recognized in other areas such as in advocacy for access to medicines for hepatitis C (77–79). During the COVID-19 pandemic, community-based organizations played critical roles in providing immediate, short-term mitigation efforts (80). Nevertheless, these experiences also underscore the need for reconsidering social protection arrangements, addressing structural barriers and providing support to communities to ensure sustained ownership and involvement (81).



4.4 European Region

Gaps in testing and treatment for HIV, viral hepatitis and STIs need to be filled rapidly in the European Region. There have been major advances in hepatitis programme planning, but the estimated number of people acquiring HIV has been increasing.

Table 18. European Region: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	190 000 [160 000–240 000]
	People dying from HIV-related causes	39 000 [28 000–54 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	19 000 [9 400–38 000]
	Incident cases of hepatitis C infection	300 000 [240 000–320 000]
	People dying from hepatitis B infection	43 000 [34 000–51 000]
	People dying from hepatitis C infection	64 000 [39 000–72 000]
STIs (2020)	Incident cases of gonorrhoea	3 800 000 [1 500 000–7 300 000]
	Incident cases of syphilis	240 000 [130 000–340 000]

Table 19. European Region: highlights and priority actions

HIV	Viral hepatitis	Sexually transmitted infections
The number of people acquiring HIV has been increasing in the Region. Service coverage is improving – 78% of people living with HIV know their HIV status, 74% of those who know their HIV-positive status receive antiretroviral therapy and 92% of those on treatment have suppressed viral loads; but the 2020 targets have not been reached. The “treat all” policy has been implemented in all countries. The transition to dolutegravir has been slow due to the high cost in some middle-income countries. The scale-up of PrEP has been slow.	A total of 33 countries in the Region have national hepatitis strategic plans. The scale up of diagnostics and treatment has been slow. There are major gaps in hepatitis data.	A total of 38 countries have policies and/or guidelines on STI diagnosis and treatment. Non-European Union countries have limited data on STIs.
• Harm reduction continues to be a low priority in some countries. • The costs of medicines and diagnostics remain high in middle-income countries that face patent-related barriers.		
PRIORITY ACTIONS • Catch-up plan for COVID-19-related slowdown in progress on key interventions. • Tailor prevention to key populations, with an integrated people-centred approach across disease areas. • Take an integrated approach to addressing harm reduction and mental health for key populations. • Use PrEP as an opportunity for better STI screening and treatment in key populations. • Strengthen civil society involvement in the regional response. • Decentralize and simplify HIV testing. • Scale up early antiretroviral therapy provision with optimized regimens and improved quality of care. • Strengthen hepatitis surveillance and monitoring and evaluation to better understand the situation and progress. • Increase the number of countries with funded national plans for hepatitis. • Simplify hepatitis testing strategies and treatment and improve access to treatment. • Strengthen STI surveillance.		

Box 21.**Expanding access to hepatitis C treatment in Belarus through state funding and local production**

An estimated 100 000 people live with chronic hepatitis C in Belarus. Most new cases occur among the working-age population, and liver cirrhosis caused by chronic hepatitis C is the most common indication for liver transplantation in Belarus.

Since 2018, the Government of Belarus has funded direct-acting antiviral drugs for people with chronic hepatitis C infection across the country. Belarus also updated its national protocol for diagnosis, treatment and care for people with chronic hepatitis C and developed a 10-year plan for expanding access to hepatitis C treatment from 2019 to 2028. In 2019, 6000 courses of the pangenotypic regimens of sofosbuvir and daclatasvir were procured through the state budget and distributed to health facilities. Among 6074 people treated in 2018–2019 with known treatment outcomes, 6062 (99.8%) had successful treatment outcomes.

With a strong commitment to ensure the sustainability of state-funded hepatitis-related activities, the Government of Belarus also established local production of generic direct-acting antiviral drugs. As of 1 September 2018, the cost of a 12-week treatment regimen was about US\$ 706, lower than some other countries in the Region. The Ministry of Health continues to work to further reduce costs in cooperation with the pharmaceutical industry, representatives of patient organizations, infectious diseases specialists and international partners. In November 2018, Belarus hosted the Eastern Europe and Central Asia Second Regional Consultation on Expanding Access to Affordable and Quality Assured Medicines and Diagnostic Technologies to make continued use of the best global and regional practices and tools to ensure the quality, safety and efficacy of essential HIV, TB and hepatitis C medicines and diagnostics and to reduce their prices.



4.5 Eastern Mediterranean Region

The Eastern Mediterranean Region leads the way in scaling up access to hepatitis C testing and treatment, and some countries have an opportunity to move towards elimination. The impact of these population-based approaches needs to be expanded and transferred to hepatitis B, STI and HIV services.

Table 20. Eastern Mediterranean Region: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	44 000 [33 000–67 000]
	People dying from HIV-related causes	15 000 [11 000–23 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	100 000 [79 000–140 000]
	Incident cases of hepatitis C infection	470 000 [240 000–520 000]
	People dying from hepatitis B infection	33 000 [26 000–60 000]
	People dying from hepatitis C infection	31 000 [31 000–74 000]
STIs (2020)	Incident cases of gonorrhoea	5 300 000 [1 900 000–11 300 000]
	Incident cases of syphilis	640 000 [240 000–1 000 000]

Table 21. Eastern Mediterranean Region: highlights and priority actions

HIV	Viral hepatitis	Sexually transmitted infections
Access to HIV testing and treatment services is improving, yet coverage remains low. Only 37% of people living with HIV know their HIV status. Some countries are expanding client-centred approaches such as HIV self-testing and PrEP, to expand outreach to key populations. Linkages to care and retention are a challenge, and a search-and-rescue initiative is being implemented in countries such as Pakistan and Sudan to identify people living with HIV who may be lost to follow-up and relink them to care. HIV services for refugees and other displaced people are expanding with support from international partners. The availability and quality of data are improving with surveys and cascade analyses in countries such as Lebanon Morocco, Pakistan and Sudan; however, data systems remain fragmented and weak.	Strategic information systems for hepatitis data are slowly improving, and two countries have conducted serological surveys. There has been strong momentum and progress with major initiatives in champion countries such as Egypt and Pakistan; however, programmes in most countries remain weak with limited funding. Coverage of hepatitis B virus vaccine has increased to exceed 80% for the third dose, but birth dose coverage is low. Diagnosis and treatment of hepatitis B and C infection is low. Many countries have achieved reductions in the price of direct-acting antiviral drugs for hepatitis C infection through price negotiations and local manufacturing.	There is a limited focus on STIs in the Region. Some countries such as Egypt and Lebanon have conducted surveys on STIs among subpopulations, but overall data are lacking to accurately describe the burden of STIs in the Region, and STI surveillance systems are weak.
There has been progress in harm reduction, with favourable policies adopted in Egypt and Pakistan, but overall coverage of harm reduction among people who inject drugs in the Region remains very low.		
PRIORITY ACTIONS - Expand the use of people-centred and differentiated service delivery models and targeted interventions for prevention, diagnosis and treatment for key populations. - Expand access to hepatitis diagnosis and treatment, including with a focus on microelimination in high-burden populations and continue to pursue price reduction strategies and public health approaches for scale-up. - Renew the focus on STIs through greater integration with HIV and other health programme areas and efforts to mobilize resources. - Promote domestic funding and mobilize catalytic cross-cutting funding. - Make joint efforts to strengthen strategic information for HIV, viral hepatitis and STIs as part of broader health management information system strengthening, including with support for electronic data collection and promoting data use through improved analytics and visualization dashboards.		

Box 22. Public health scale-up of hepatitis C diagnosis and treatment in Egypt

Egypt is one of the countries with the largest burden of hepatitis C infection in the world. It has made significant advances since 2018 towards eliminating hepatitis C, supported by strong government commitment, local generic manufacturing and price reductions obtained through negotiations with manufacturers. During 2017–2018, Egypt conducted a massive countrywide effort to screen the entire population aged 18 years and older and provide treatment free of charge to everyone with infection. Nearly 60 million people had been tested by late 2019, and 4 million had started treatment. This constitutes one of the largest public health efforts to date towards eliminating hepatitis C in low- and middle-income countries worldwide. Egypt now plans to support countries in the African Region in their scale-up efforts.

Box 23. Microelimination of viral hepatitis in a high-burden district in Pakistan

In the Punjab province in Pakistan, the Hepatitis Control Program implemented a demonstration microelimination project in the high-prevalence district of Nankana Sahib. Within this district, subarea Panwan with a total population of 29 500 people, concentrated in five villages, was selected for this initiative, with the aim of testing 95% of the population 12–80 years old. During a three-week pretest phase in 2019, health education sessions were conducted at the community level, 96% of the target population was screened for hepatitis B and C virus and people diagnosed were linked to treatment. The efforts were backed by strong political commitment and local ownership. The experience provides lessons for pursuing hepatitis microelimination efforts in other geographical areas of Pakistan and in other countries.



4.6 Western Pacific Region

The Western Pacific Region has made major progress in expanding access to services for people with hepatitis B and C virus infection, largely from domestic funding and substantial reductions of drug prices. The responses to viral hepatitis, HIV and STIs have opportunities in national financing for universal health coverage.

Table 22. Western Pacific Region: data at a glance, 2019–2020

Disease area	Indicator	Numbers
HIV (2019)	People acquiring HIV	110 000 [71 000–150 000]
	People dying from HIV-related causes	41 000 [22 000–70 000]
Viral hepatitis (2019)	Incident cases of hepatitis B infection	140 000 [96 000–210 000]
	Incident cases of hepatitis C infection	230 000 [220 000–260 000]
	People dying from hepatitis B infection	470 000 [200 000–490 000]
	People dying from hepatitis C infection	77 000 [77 000–140 000]
STIs (2020)	Incident cases of gonorrhoea	23 200 000 [11 200 000–40 700 000]
	Incident cases of syphilis	1 100 000 [620 000–1 600 000]

Table 23. Western Pacific Region: highlights and priority actions

HIV	Viral hepatitis	Sexually transmitted infections
Several innovative interventions have been introduced to expand service outreach, driven in part by the COVID-19 pandemic, including community-led interventions using online platforms to reach people with information and increase access to services. New interventions, including PrEP, HIV self-test and lay-provider testing, have been introduced in seven countries. The fixed-dose combination of tenofovir disoproxil fumarate + lamivudine + dolutegravir has been introduced in six priority countries. Needle and syringe distribution targets have been met in Australia and Cambodia.	National action plans are in place in 20 countries, strategic information action plans in seven countries and investment cases, including disease burden and economic analysis, have been developed in 13 countries. The coverage of hepatitis services is expanding through domestic funding in 19 countries. Drug prices have been reduced substantially, and hepatitis medicines have been included in national health insurance in China and Mongolia. Malaysia applied TRIPS flexibilities to expand access to hepatitis C medicines. Hepatitis services are being scaled up at primary health care level in 10 countries. Public-private partnership service delivery models are being rolled out in Papua New Guinea.	Treatment guidelines have been revised in 21 countries to include WHO recommendations for dual treatment of people with gonorrhoea. Disease burden estimates were modelled in five countries, but the overall availability and quality of STI data are weak. Countries such as Cambodia and the Philippines are implementing initiatives to combat antimicrobial resistance.
One country has achieved elimination of mother-to-child transmission of HIV and syphilis.		
PRIORITY ACTIONS - Maximize opportunities for integrating services based on local epidemiology and context, including across reproductive health services, HIV, viral hepatitis and TB services and noncommunicable diseases, and decentralize integrated services to the primary health care level. - Pursue high-level advocacy for domestic financing and multisectoral collaboration, including the private sector, and promote an integrated health financing approach. - Promote the active involvement of communities for advocacy, stigma and discrimination reduction and service delivery. - Integrate strategic information into existing systems and simplify data collection to improve quality and increase use.		

Box 24.**Unblocking the barrier of high drug prices to achieve universal coverage for hepatitis medicines in China**

In 2015, access to treatment was limited for China's estimated 96 million people living with hepatitis B and C virus. Tenofovir disoproxil fumarate to treat hepatitis B virus was under patent protection and cost US\$ 2950 per year. The price of generic entecavir was US\$ 1300–1400 per year, and the originator price was US\$ 1600–2000 per year. The price of hepatitis C medicines was US\$ 10 000 for a cure. These medicines were not universally and equitably reimbursed through health insurance throughout the country, so most people were paying out of pocket.

To address this major barrier, WHO supported the government and stakeholders in performing economic analysis and health technology assessment of new medicines and facilitated round-table discussions on intellectual property rights and sharing of drug price

information from other countries. The National Health Commission was able to use this information to successfully negotiate a price reduction for tenofovir disoproxil fumarate to US\$ 960 per year in 2016, and the prices of entecavir were reduced accordingly. The government continued its pursuit of universal coverage in successive years by including hepatitis B and C medicines in the national reimbursement drug list and centrally pooled procurement. In early 2021, hepatitis C treatment cost US\$ 1500–2000 for a cure, a reduction of 20%, and for hepatitis B virus costs US\$ 10 per year, a reduction by an astounding factor of 300. The reduction in prices enabled these medicines to be covered in the national health insurance, providing affordable care to many more people living with chronic hepatitis.



5

Looking ahead to 2030

Despite major progress over the past decade, the 2020 targets were off-track in major areas even before the COVID-19 pandemic. The ambition of the next decade to eliminate HIV, viral hepatitis and STIs as public health threats by 2030 is enormous yet feasible.

The pandemic has exposed the deep social, economic and gender inequalities that make some people more vulnerable to disease and determine their health outcomes. The population groups most severely affected by HIV, viral hepatitis and STIs also encounter the greatest stigma, discrimination and marginalization and face difficulty in accessing the services they need. In some ways, they are tracer populations for the progress of inclusive and innovative universal health coverage that reaches beyond health facilities into communities.

The massive expansion in service delivery that will be required over the next decade must be matched by efforts to tackle the structural barriers that undermine the response. To get close to elimination, all countries must continue to go beyond health service delivery to address the social and structural determinants of health and equitably serve the populations most severely affected and at higher risk. Communities must be fully resourced to play their role in reaching those who are hard to reach, delivering services, advocating for change and holding decision-makers accountable. People-centred health services means tailoring services to people but also involving them in a new partnership in their delivery.

Shifting towards elimination was always going to require a leap forward in our approaches. The lessons from the COVID-19 response provide a historical opportunity to foster greater solidarity and innovation in the response to infectious diseases over the next decade. Disease-specific responses and the goals of primary health care, universal health coverage and health security are mutually reinforcing and need to be advanced through an integrated health systems approach. Closer links between HIV, viral hepatitis and STI services with related

communicable and noncommunicable disease services can make intervention more efficient and improve their coverage and quality. Joint efforts to strengthen clinical and laboratory platforms, logistics management, information systems and human resource planning offer many opportunities to jointly strengthen health systems that will be resilient, adaptable and equitable, including to address future pandemics.

Achieving this requires learning from the fragility and solidarity of global health experienced with COVID-19 and ensuring renewed political commitment and sustainable financing to take the response to HIV, viral hepatitis and STIs to the next level. Such a response must be anchored in the principles of human rights and social justice. By acting decisively now, we can emerge stronger from the challenge of COVID-19 and use this momentum to reach the goals of the 2030 Agenda for Sustainable Development.

Eliminating HIV, viral hepatitis and STIs as public health threats will require collective efforts towards universal health coverage and global health security, leveraging the resilience and innovation seen in the global response to COVID-19.

Box 25.**Developing global health sector strategies for HIV, viral hepatitis and STIs for 2022–2030**

As the global health sector strategies 2016–2021 reach the end of their implementation period, WHO will lead a consultative process to develop the next phase of the strategies to guide action towards eliminating these infections as public health threats by 2030. Taking into account the progress achieved to date and remaining gaps in achieving 2030 goals, the process will define the way forward for country and WHO action over the next decade.

Although many of the core public health interventions and target populations of the strategies remain relevant, there have been contextual shifts that must be considered in the next phase. The COVID-19 pandemic has strongly affected public health worldwide, drawing attention to the risks of unprepared health systems, exposing the social determinants of health and spurring innovations. The new strategies will ensure that the global response to HIV, viral hepatitis and STIs responds to these shifts to deliver health for all.

The new strategies will also take into account epidemiological and technological developments since 2016, such as updated estimates of the burden of disease, the availability of new diagnostics and medicines and advances in service delivery approaches. They will also consider the evolving global landscape of shifts in domestic and

donor funding and align with political commitments such as those on primary health care (the 2018 Declaration of Astana (67)) and universal health coverage (United Nations General Assembly Resolution A/RES/74/2 (68)). They will promote synergy with other global strategy processes such as the UNAIDS post-2021 global AIDS strategy and the new strategy under development for the Global Fund. To strengthen accountability, the strategies will include interim targets for 2025 as milestones towards 2030 goals.

WHO's technical leadership, normative guidance and country support remain critical for Member States and partners to implement the next phase. The new strategies will ensure that WHO remains well positioned to provide leadership on achieving the 2030 targets for HIV, viral hepatitis and STIs as part of the broader goals of primary health care and universal health coverage.

The strategy development process will include consultations with Member States, partners, civil society, communities and other stakeholders and public online consultations in the official WHO languages. These consultations will be held during 2021, with a view to presenting the final strategies for consideration by the World Health Assembly in May 2022. The current strategies will remain active until that time.

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