HIV and viral hepatitis diagnostic tests in low- and middle-income countries: forecasts of global and regional demand for 2022-2026
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Abbreviations

A1 First-line assay
A2 Second-line assay
A3 Third-line assay
ART Antiretroviral therapy
CHAI Clinton Health Access Initiative
DAA Direct-acting antiviral medicine
GHSS Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030
PrEP Pre-exposure prophylaxis
RDT Rapid diagnostic test
Executive summary

For the global community to be able to achieve ambitious targets relating to the prevention and treatment of HIV and viral hepatitis B and C, multiple types of diagnostic tests must be widely accessible to all affected populations in all countries.

The purpose of this report is to provide forecasts of future demand for diagnostic tests used in the fields of HIV and viral hepatitis B and C. This report jointly presents forecasts across multiple disease areas in recognition of the benefits of addressing HIV and viral hepatitis B and C in a coordinated manner.

Regarding HIV diagnostic tests, this report presents findings about demand for CD4 tests, viral load tests, infant diagnostic tests and rapid diagnostic tests in low- and middle-income countries. Key findings include the following:

- CD4 testing volume in low- and middle-income countries is projected to decline slightly from 12.4 million in 2022 to 12.1 million in 2026.
- Demand for viral load tests is expected to steadily increase in the coming years, reaching 33.7 million units in 2026.
- A gradual increase in demand for early infant diagnosis tests is anticipated, with volume reaching 2.7 million units in 2026.
- The volume of HIV rapid diagnostic tests used in 104 low- and middle-income countries is projected to be 170 million in 2022 and to increase to between 194 million and 206 million by 2027.
- The extent of future growth in the use of HIV self-tests and dual HIV/syphilis first-line assays will have major implications for the overall composition of the future HIV rapid diagnostic test market.

This report presents the following key findings about forecasted demand for viral hepatitis B and C diagnostics.

- Global demand for viral hepatitis B screening tests is projected to peak in 2026, with somewhat more than 690 million tests required. Global demand for viral hepatitis C screening tests is projected to peak two years later, with about 630 million tests required.
- Global demand for laboratory tests for the management of viral hepatitis B is projected to steadily increase to about 170 million tests in 2030.
- The costs for global viral hepatitis B and C elimination are expected to peak at about US$ 7.4 billion in 2028, with viral hepatitis B accounting for about 80% of total expenditure.
- The WHO regions accounting for the largest share of forecasted costs are the African Region and the South-East Asia Region.

HIV and viral hepatitis B and C share modes of transmission, and some of the same key interventions can be used to address multiple disease areas. Further, people affected by these diseases face similar barriers to accessing prevention, screening and treatment commodities. Aligned and integrated responses to HIV and viral hepatitis B and C may present opportunities for shared diagnostic platforms to meet service delivery needs more efficiently and effectively.
For the global community to be able to achieve ambitious targets relating to the prevention and treatment of HIV and viral hepatitis, multiple types of diagnostic tests must be widely accessible to all affected populations in all countries.

The purpose of this report is to provide forecasts of future demand for diagnostic tests used in the fields of HIV and viral hepatitis. These forecasts have multiple potential uses. First, they may inform advocacy efforts to increase access to diagnostics. Second, they may guide health systems and procurement organizations in planning how to obtain adequate supplies of diagnostics to fulfill service delivery needs. Third, they may aid manufacturers in identifying opportunities to contribute to meeting anticipated market demands.

This report jointly presents diagnostic test forecasts across disease areas in recognition of the benefits of addressing HIV and viral hepatitis B and C in a coordinated manner. These diseases share modes of transmission, and some of the same key interventions can be used to address multiple disease areas. Further, epidemics of these diseases are shaped in similar ways by social and structural determinants of health, and the people affected by these diseases face similar barriers to accessing prevention, screening and treatment commodities. Aligned and integrated responses to HIV and viral hepatitis B and C may present opportunities for shared diagnostic platforms to meet service delivery needs more efficiently and effectively.

1.1 The global burden of HIV and viral hepatitis B and C

An estimated 38.4 million people were living with HIV at the end of 2021, two thirds of whom (25.6 million) are in the WHO African Region. In 2021, 1.5 million people acquired HIV and 650,000 people died from HIV-related causes. Since 2016, WHO has recommended that all people living with HIV be provided with lifelong antiretroviral therapy (ART), regardless of their clinical status or CD4 cell count. Globally, 28.7 million people living with HIV were receiving ART in 2021, representing an ART coverage level of 75%.

An estimated 296 million people were living with chronic hepatitis B infection in 2019, with 1.5 million new infections occurring each year. Hepatitis B resulted in an estimated 820,000 deaths in 2019. The burden of hepatitis B infection is highest in the WHO Western Pacific Region, with 116 million people chronically infected, and African Region, with 81 million people chronically infected. As of 2019, only 10% of all people estimated to be living with hepatitis B were aware that they were infected, and 6.6 million (22%) of the people diagnosed were receiving treatment. An estimated 12–25% of people with chronic hepatitis B infection will require treatment, depending on the setting and eligibility criteria. Most people who start hepatitis B treatment must continue it for life.

An estimated 58 million people were living with chronic hepatitis C infection in 2019, with 1.5 million new infections occurring each year. Hepatitis C resulted in an estimated 290,000 deaths in 2019. Direct-acting antiviral medicines can cure more than 95% of the people with hepatitis C infection, but access to diagnosis and treatment is low. In 2019, an estimated 21% of people living with viral hepatitis C (15.2 million) knew their diagnosis, and of those diagnosed with chronic hepatitis C infection, about 62% (9.4 million) people had been treated with direct-acting antiviral medicines by the end of 2019.
1.2 The global health sector strategies for HIV, viral hepatitis and sexually transmitted infections

In 2022, the Seventy-Fifth World Health Assembly approved the implementation of WHO’s global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030 (GHSS)\(^2\). These strategies propose a common vision to end epidemics and advance universal health coverage, primary health care and health security in a world in which everyone has access to high-quality, evidence-informed and people-centred health services.

The GHSS promote the disease-specific goals of ending AIDS and the epidemics of viral hepatitis and sexually transmitted infections by 2030, with cross-cutting and disease-specific targets and milestones defined to drive progress toward these goals. Future demand for diagnostics for HIV and viral hepatitis B and C will be particularly influenced by the efforts of national health systems and other stakeholders to achieve the following GHSS targets.

- HIV. The GHSS adopt the 95–95–95 targets set forth in the UNAIDS Global AIDS Strategy 2021–2026: End Inequalities, End AIDS\(^3\). These targets call for the following to be achieved by 2025: 95% of the people living with HIV know their HIV status, 95% of the people who know their HIV-positive status are accessing treatment and 95% of the people receiving treatment have suppressed viral loads. The GHSS call for the 95–95–95 targets to be achieved in both 2025 and 2030.

- Viral hepatitis B and C. The GHSS call for 60% of people living with viral hepatitis B and C to be diagnosed by 2025, and for 90% of this population to be diagnosed by 2030. The GHSS call for 50% of people living with viral hepatitis B and C to be treated by 2025, and for 80% of this population to be treated by 2030.

1.3 How this report is organized

The remainder of this report presents forecasting information for diagnostic commodities in two chapters.

- Chapter 2: diagnostics for HIV. This chapter forecasts demand for CD4, viral load and infant diagnostic tests in low- and middle-income countries through 2026. It also forecasts demand for HIV rapid diagnostic tests (RDTs) in low- and middle-income countries through 2027, including dual HIV/syphilis RDTs performed in antenatal care.

- Chapter 3: diagnostics for viral hepatitis B and C. This chapter forecasts demand for viral hepatitis B and C diagnostic commodities, including screening tests and treatment-associated laboratory tests.
CHAPTER 2

Diagnostics for HIV

This chapter reports on two forecasting exercises. One forecasting exercise was conducted to project demand for CD4, viral load and infant diagnostic tests in low- and middle-income countries through 2026. The other was conducted to project demand for HIV RDTs in low- and middle-income countries through 2027.

2.1 CD4, viral load and infant diagnosis tests

2.1.1 Methods

Two sets of information were used to develop consolidated forecasts of demand for CD4, viral load and infant diagnostic tests in low- and middle-income countries.

The first set of information was obtained from the Clinton Health Access Initiative (CHAI), which provides annual forecasts of HIV diagnostic demand in countries with a high HIV burden. Forecasts are developed using service delivery statistics and programme plans from CHAI country teams, along with publicly available sources. All forecasts take into account historical numbers of people receiving ART, using data reported in the UNAIDS AIDSinfo database (http://aidsinfo.unaids.org). The forecasts assume that the number of people receiving treatment will increase in a linear manner at the same rate as the trend observed in the previous four years and will plateau as countries draw closer to achieving the UNAIDS 95–95–95 targets.

The second set of information was obtained from two sources. The first is the WHO antiretroviral medicine and diagnostic use survey. The second is Global AIDS Monitoring data acquired through country reporting. Future trends in demand for CD4 tests, viral load tests and infant diagnostic tests were estimated using data from 2014 to 2021.

The consolidated forecasts in the next three sections of this report incorporate both sets of information to provide comprehensive projections of demand for CD4, viral load and infant diagnostic tests in low- and middle-income countries. For countries included in the CHAI forecasting activity, the consolidated forecasts draw on CHAI information. For all other countries, the consolidated forecasts draw on the WHO and Global AIDS Monitoring information.

Key insights

- CD4 testing volume in low- and middle-income countries is projected to decline slightly from 12.4 million in 2022 to 12.1 million in 2026.
- Demand for viral load tests is expected to steadily increase in the coming years, reaching 33.7 million units in 2026.
- A gradual increase in demand for early infant diagnosis tests is anticipated, with volume reaching 2.7 million units in 2026.
- The volume of HIV RDTs used in 104 low- and middle-income countries is projected to be 170 million in 2022 and to increase to between 194 million and 206 million by 2027.
- The extent of future growth in the use of HIV self-tests and dual HIV/syphilis first-line assays will have major implications for the overall composition of the future HIV RDT market.
The CD4 test forecast by CHAI accounts for 67% of people receiving ART in low- and middle-income countries, and the viral load test forecast by CHAI accounts for 77% of this population. The infant diagnostic forecast by CHAI accounts for 96% of pregnant women receiving ART in low- and middle-income countries.

This method for forecasting demand has multiple limitations. It does not account for unanticipated shocks such as dramatic changes in funding, future guideline changes or global threats such as future pandemics. Some countries use procurement records as a proxy for the number of tests run, which may overestimate demand. The exact number of point-of-care HIV tests run annually can be challenging to reconcile between supplier data and country-reported data when country data are not disaggregated between point-of-care and conventional tests.

2.1.2 Forecasted demand for CD4 tests

As Fig. 2.1 reflects, the estimated number of CD4 tests performed increased from 11.7 million in 2020 to 12.5 million in 2021. This reverses a trend of annual declines in the use of CD4 tests in recent years (data not shown). Although it is not possible to predict whether the trend of increased use will continue, this trend is thought to reflect a greater focus on diagnosing advanced HIV disease using CD4 tests. The forecast predicts slight declines in CD4 testing volumes from 2022 through 2026. Substantial numbers of CD4 tests will still be used, with demand driven partly by efforts to identify people with advanced HIV disease. CD4 tests will also continue to be needed for routine monitoring of people who are receiving HIV treatment in settings with limited access to viral load testing.

Fig. 2.1. Historical and forecasted demand for CD4 tests in low- and middle-income countries, 2020–2026
2.1.3 Forecasted demand for viral load tests

Demand for viral load tests is expected to steadily increase in the coming years (Fig. 2.2). This trend reflects anticipated increases in the number of countries adopting routine viral load testing for patient monitoring as well as increases in the number of people receiving ART.

Fig. 2.2. Historical and forecasted demand for viral load tests in low- and middle-income countries, 2020–2026

2.1.4 Forecasted demand for early infant diagnosis tests

The trend of increased demand for infant diagnostic tests is expected to continue, with smaller increases seen over time (Fig. 2.3). This finding reflects the anticipated expansion in the use of infant diagnostic tests in accordance with WHO guidelines.

Fig. 2.3. Historical and forecasted demand for early infant diagnosis tests in low- and middle-income countries, 2020–2026
2.2 Rapid diagnostic tests

2.2.1. Methods

Demand for HIV RDTs was forecasted using the following method.

HIV-only professional-use RDTs, dual HIV/syphilis RDTs, and HIV self-tests were all included in the forecasting exercise. Enzyme immunoassay tests and other laboratory-based tests were excluded, as were recency tests, syphilis-only RDTs and molecular diagnostics for infants younger than 18 months. Forecasting was performed for six categories of RDTs, defined as follows.

- HIV self-tests. It was assumed that HIV self-test users who test positive then undergo professional HIV testing, beginning with an initial test with a first-line assay (A1).
- PrEP A1 – HIV A1 test for pre-exposure prophylaxis (PrEP) users. It was assumed that people taking PrEP remain HIV-negative, so no confirmatory tests were anticipated for PrEP users.
- Non-antenatal care A1 – HIV A1 test performed outside of antenatal care settings, excluding testing for PrEP users. It was assumed that a portion of these tests are for HIV self-tests users who have tested positive and then present for professional testing. It was also assumed that all test users who receive positive results on A1 will proceed to second-line and third-line HIV assay testing (A2/A3).
- Antenatal care A1 (HIV only) – HIV A1 test performed in antenatal care settings, with retesting in the third trimester in select countries in eastern and southern Africa. It was assumed that all test users who receive positive results on A1 will proceed to HIV A2/A3 testing.
- Dual HIV/syphilis A1 – dual HIV/syphilis A1 test performed in antenatal care settings. It was assumed that all test users who receive positive results on dual HIV/syphilis A1 will proceed to HIV A2/A3 testing.
- A2/A3 – confirmatory HIV A2 and A3 tests for people who received positive results from HIV A1 tests (non-antenatal care A1, antenatal care A1 [HIV-only], and dual HIV/syphilis A1).

The geographical scope of the forecast included 104 low- and middle-income countries. The definitions for geographical regions were based on UNAIDS regional definitions. Brazil, China and India were excluded because of data limitations.
Box 2.1. Four scenarios modelled to forecast demand for rapid diagnostic tests

**Scenario 1:** current approaches. This scenario assumes that current programmatic and volume trends will continue. It is anticipated that as increasingly more countries reach the UNAIDS first 95% target (95% of the people living with HIV know their HIV status), the volume of RDT use will not drop greatly but will plateau as index testing and prevention-focused testing continue. For HIV self-tests, the scenario only includes countries with a documented history of HIV self-test procurement, basing projections on procurement records and information about anticipated funding. The scenario assumes that dual HIV/syphilis tests will comprise 95% of antenatal care test volume in 27 countries by the end of the forecast period. This assumption reflects the current status of policies addressing dual HIV/syphilis test use, procurement records for dual HIV/syphilis tests, funding information and documented implementation plans.

**Scenario 2:** dual HIV/syphilis optimistic. This scenario differs from the “current approaches” scenario by anticipating a considerable increase in the use of dual HIV/syphilis RDTs in antenatal care. These tests would replace HIV-only tests in antenatal care, and thus the total volume of tests would not increase. An additional 17 countries are assumed to achieve 95% coverage of antenatal care testing with dual HIV/syphilis tests, resulting in a total of 44 countries that meet this benchmark.

**Scenario 3:** HIV self-tests predominant. This scenario differs from the “current approaches” scenario by assuming that HIV self-tests become the favoured programmatic approach outside antenatal care settings, replacing a large proportion of professional-use RDTs. This scenario also assumes that PrEP monitoring is conducted primarily with HIV self-tests. In this scenario, HIV self-tests procurement would expand to constitute 50% of non-antenatal care HIV testing budgets, while overall testing budgets remain constant. Since HIV self-tests are more expensive than professional-use RDTs, total testing volume would be lower than in the “current approaches” scenario.

**Scenario 4:** HIV self-tests predominant and dual HIV/syphilis optimistic. This scenario combines assumptions from the “dual HIV/syphilis optimistic” scenario and the “HIV self-tests predominant” scenario.
2.2.2. Forecasted demand for RDTs

Forecasted demand for RDTs is reported through 2027 for the four modelled scenarios.

**Current approaches scenario.** In this scenario, the total volume of RDTs is projected to increase from 170 million in 2022 to 206 million in 2027 (Fig. 2.4), with 82% of growth expected to be in Africa (countries in eastern and southern Africa and western and central Africa) and 12% expected to be in Asia (the countries in Asia and the Pacific and eastern Europe and central Asia) (data not shown). The categories of RDTs that are projected to have the largest increases in testing volume are HIV self-tests, HIV A1 test for PrEP users and dual HIV/syphilis A1 test. Projected growth in the overall HIV-only A1 market is driven entirely by the expansion of PrEP. The projected increase in dual HIV/syphilis A1 testing volume primarily reflects increases in two regions: eastern and southern Africa and western and central Africa (data not shown).

**Fig. 2.4. Historical and forecasted demand for HIV RDTs, 2019–2027, in the “current approaches” scenario**

![Graph showing historical and forecasted demand for HIV RDTs](image)


**Dual HIV/syphilis optimistic scenario.** In this scenario, with 17 additional countries assumed to achieve widespread coverage of dual HIV/syphilis A1 testing in antenatal care, the dual test volume is projected to reach 42 million units in 2027, a 43% higher volume than that projected in the current approaches scenario (Fig. 2.5). The increase results from replacing HIV-only tests with dual tests, and thus there is no increase in overall testing volume. As in the current approaches scenario, the total volume of RDTs is projected to reach 206 million in 2027.
**HIV self-tests predominant scenario.** In this scenario, HIV self-test volume is projected to increase from 17 million units in 2022 to 77 million units in 2027 (Fig. 2.6). Since HIV self-tests cost more than professional-use RDTs and testing budgets are assumed to remain the same, total RDT volume in 2027 is projected to be somewhat less than in the current approaches scenario (194 million units versus 206 million units). A projected dip in total RDT volume in 2024 and 2025 in the HIV self-tests predominant scenario reflects the higher cost of HIV self-tests. In 2026 and 2027, the upward trend in total RDT volume is projected to resume due to anticipated reductions in the price of HIV self-tests.
HIV self-tests predominant and dual HIV/syphilis optimistic scenario. In this scenario, a major shift in the product market is projected, with the use of HIV self-tests and dual HIV/syphilis A1 tests both increasing to jointly account for 61% of the RDT market by 2027. As in the dual HIV/syphilis optimistic scenario, increased use of dual HIV/syphilis A1 tests would not contribute to greater total RDT volume because these tests would replace HIV-only antenatal care A1 tests. Likewise, as in the HIV self-tests predominant scenario, increased use of HIV self-tests would not contribute to greater total RDT volume because these tests would replace a portion of non-antenatal care A1 tests. In the HIV self-tests predominant and dual HIV/syphilis optimistic scenario, the use of non-antenatal care A1 tests would decline from 84 million in 2022 to 45 million in 2027.

Fig. 2.7. Historical and forecasted demand for HIV RDTs, 2019–2027, in the “HIV self-tests predominant and dual HIV/syphilis optimistic” scenario

Forecasting scenarios compared. The RDT market shows growth in all scenarios, increasing to between 194 million and 206 million total tests by 2027 (Fig. 2.8). The extent of growth in the use of HIV self-tests and dual HIV/syphilis A1 tests will have major implications for the overall composition of the future RDT market.

Fig. 2.8. Forecasted demand for HIV RDTs, comparative changes across four scenarios, 2023 and 2027
This chapter reports on a forecasting exercise that projects demand for viral hepatitis B and C diagnostic commodities. The forecast addresses viral hepatitis B and C screening tests as well as laboratory tests associated with the clinical management of both diseases.

### 3.1 Method

The following method was used to forecast demand for viral hepatitis B and C diagnostics.

A model was created to project the annual numbers of screening tests performed for viral hepatitis B and C as well as the annual numbers of laboratory tests performed in association with the clinical management of both diseases from 2021 to 2030. The same model was also used to project annual numbers of people treated for both diseases, as reported in a separate publication (6), and to project total programme costs for eliminating viral hepatitis B and C as a public health threat.a

The model drew on a target-setting exercise that was developed to chart the anticipated course of progress toward 2030 viral hepatitis B and C impact and coverage targets. The findings from this exercise, presented in Table 3.1, reflect current guidelines and prices as well as the anticipated effects of diffusion trends and innovations from 2025 onward. WHO’s 2019 viral hepatitis B and C data were used as target-setting inputs. The method for obtaining the 2019 data is described in the *Global progress report on HIV, viral hepatitis and sexually transmitted infections, 2021*.

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### Key insights

- Global demand for viral hepatitis B screening tests is projected to peak in 2026, with somewhat more than 690 million tests required. Global demand for viral hepatitis C screening tests is projected to peak two years later, with about 630 million tests required.

- Global demand for laboratory tests for managing viral hepatitis B is projected to steadily increase to about 170 million tests in 2030.

- The costs for global viral hepatitis B and C elimination are expected to peak at about US$ 7.4 billion in 2028, with viral hepatitis B accounting for about 80% of total expenditure.

- The WHO regions accounting for the largest share of the forecasted costs are the African Region and the South-East Asia Region.

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a. WHO has defined the elimination of viral hepatitis as a public health threat as achieving a 90% reduction in new chronic infections and a 65% reduction in mortality.
Table 3.1. Viral hepatitis B and C target-setting exercise based on 2019 data and 2030 targets

<table>
<thead>
<tr>
<th>Product adoption curves</th>
<th>Indicator</th>
<th>Baseline – 2020</th>
<th>Targets – 2025</th>
<th>Targets – 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact</td>
<td>Hepatitis B incidence</td>
<td>−10%</td>
<td>−45%</td>
<td>−90%</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C incidence</td>
<td>−14%</td>
<td>−43%</td>
<td>−90%</td>
</tr>
<tr>
<td></td>
<td>Hepatitis B mortality</td>
<td>−7%</td>
<td>−32%</td>
<td>−65%</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C mortality</td>
<td>−33%</td>
<td>−45%</td>
<td>−65%</td>
</tr>
<tr>
<td>Coverage</td>
<td>Hepatitis B cascade (testing/eligible/treatment)</td>
<td>5%/30%/40%</td>
<td>42%/43%/57%</td>
<td>90%/60%/80%</td>
</tr>
<tr>
<td></td>
<td>Hepatitis C cascade (testing/treatment)</td>
<td>18%/12%</td>
<td>46%/38%</td>
<td>90%/80%</td>
</tr>
</tbody>
</table>

A modelling scenario was then developed to forecast demand for viral hepatitis commodities and associated costs in the adult population (Table 3.2), with the impact and coverage assumptions in the scenario guided by findings from the target-setting exercise. The cost assumptions were guided by evidence from countries with large-scale viral hepatitis elimination programmes and other sources of information about the public market for viral hepatitis commodities. The private market was not considered in the model.

The modelling scenario was used to forecast the following annual outcomes for 2021–2030 for viral hepatitis B and viral hepatitis C: 1 the number of screening tests performed, assuming that one person has one test per year; 2 the number of laboratory tests required for treatment initiation and treatment monitoring; 3 the number of people receiving treatment; and 4 the total programme costs, assuming that 2030 targets are achieved. The outcomes were stratified by WHO region (African Region, Region of the Americas, South-East Asia Region, European Region, Eastern Mediterranean Region and Western Pacific Region). The diagnostic findings are reported below and the treatment findings are reported in a separate publication.

This method has multiple limitations. Countries may encounter barriers to obtaining the price reductions specified in the model, with the consequence that achieving specified targets would be more costly. Reductions in viral hepatitis B and C incidence and mortality were modelled using diffusion curves rather than being directly associated with changes in prevalence or treatment. This may underestimate costs if more interventions are needed to achieve the targets.
Table 3.2. Modelling scenario for forecasting demand for viral hepatitis B and C commodities and associated costs, 2020–2030

<table>
<thead>
<tr>
<th>Viral hepatitis B</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target diagnosed proportion</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
<td>21%</td>
<td>30%</td>
<td>42%</td>
<td>56%</td>
<td>69%</td>
<td>79%</td>
<td>86%</td>
<td>90%</td>
</tr>
<tr>
<td>Target treatment-eligible proportion</td>
<td>30%</td>
<td>32%</td>
<td>33%</td>
<td>35%</td>
<td>39%</td>
<td>43%</td>
<td>48%</td>
<td>53%</td>
<td>56%</td>
<td>59%</td>
<td>60%</td>
</tr>
<tr>
<td>Target treatment proportion</td>
<td>40%</td>
<td>42%</td>
<td>44%</td>
<td>47%</td>
<td>52%</td>
<td>57%</td>
<td>64%</td>
<td>70%</td>
<td>75%</td>
<td>78%</td>
<td>80%</td>
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<td>Mortality change</td>
<td>93%</td>
<td>90%</td>
<td>87%</td>
<td>83%</td>
<td>76%</td>
<td>68%</td>
<td>59%</td>
<td>49%</td>
<td>42%</td>
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<tr>
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<td>0.86%</td>
<td>0.84%</td>
<td>0.86%</td>
<td>0.88%</td>
<td>0.91%</td>
<td>0.94%</td>
<td>0.91%</td>
<td>0.94%</td>
<td>0.96%</td>
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<tr>
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<td>90%</td>
<td>86%</td>
<td>81%</td>
<td>75%</td>
<td>67%</td>
<td>55%</td>
<td>42%</td>
<td>30%</td>
<td>20%</td>
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<tr>
<td>Screening cost (US$)</td>
<td>3.00</td>
<td>3.00</td>
<td>1.99</td>
<td>0.87</td>
<td>0.86</td>
<td>0.79</td>
<td>0.78</td>
<td>0.75</td>
<td>0.73</td>
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<td>Laboratory costs – treatment eligible (US$)</td>
<td>21.5</td>
<td>21.5</td>
<td>18.5</td>
<td>15.2</td>
<td>15.1</td>
<td>14.9</td>
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<td>21.5</td>
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<td>Treatment cost (annual) (US$)</td>
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<td>600</td>
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<td>33%</td>
<td>39%</td>
<td>46%</td>
<td>55%</td>
<td>64%</td>
<td>74%</td>
<td>83%</td>
<td>90%</td>
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<tr>
<td>Target treated proportion</td>
<td>12%</td>
<td>16%</td>
<td>21%</td>
<td>26%</td>
<td>31%</td>
<td>38%</td>
<td>46%</td>
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<tr>
<td>Average sustained virological response</td>
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<td>95%</td>
<td>95%</td>
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<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
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<tr>
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<td>65%</td>
<td>63%</td>
<td>61%</td>
<td>58%</td>
<td>55%</td>
<td>51%</td>
<td>46%</td>
<td>42%</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Mortality rate (all cause)</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
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<td>1.5%</td>
<td>1.5%</td>
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</tr>
<tr>
<td>Incidence change</td>
<td>86%</td>
<td>82%</td>
<td>77%</td>
<td>71%</td>
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<td>57%</td>
<td>48%</td>
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<td>2.00</td>
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<td>0.77</td>
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<td>150</td>
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<td>3,000</td>
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<td>721</td>
<td>721</td>
<td>653</td>
<td>634</td>
<td>611</td>
<td>582</td>
<td>545</td>
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a Treatment cost reflects full three-month course of therapy.

“Access countries” are countries that have been granted access to generic pricing for medications; “non-access countries” are countries that cannot obtain generic pricing.
3.2 Forecasted demand for viral hepatitis B and C diagnostics

3.2.1 Screening tests

Fig. 3.1 and Fig. 3.2 show forecasted global and regional demand for viral hepatitis B and C screening tests, respectively. Global demand for viral hepatitis B screening tests is projected to peak in 2026, with somewhat more than 690 million tests required. Global demand for viral hepatitis C screening tests is projected to peak two years later, with approximately 630 million tests required.

Fig. 3.1. Projected annual number of viral hepatitis B and C screening tests performed globally, 2021–2030

Fig. 3.2. Projected annual number of viral hepatitis B and C screening tests performed, by WHO region, 2021–2030
3.2.2 Laboratory tests for initiating treatment and for treatment monitoring

Fig. 3.3 and Fig. 3.4 show the forecasted global and regional demand for viral hepatitis B and C laboratory tests, respectively. The majority of tests are expected to be used in managing viral hepatitis B, with the projected volume of these tests reaching about 170 million in 2030.

Fig. 3.3. Projected annual number of viral hepatitis B and C laboratory tests performed globally, 2021–2030
3.3 Forecasted total costs for eliminating viral hepatitis B and C

Fig. 3.5 presents the forecasted total costs for viral hepatitis B and C elimination globally. The costs are expected to peak at about US$ 7.4 billion in 2028, with viral hepatitis B accounting for about 80% of total expenditure. The WHO regions accounting for the largest share of the forecasted costs are the African Region and the South-East Asia Region (Fig. 3.6).

Fig. 3.5. Projected programme costs for eliminating viral hepatitis B and C globally, 2021–2030

Fig. 3.6. Projected programme costs for eliminating viral hepatitis B and C, by WHO region, 2021–2030
References


