



RWANDA

ON TRACK TOWARDS HEPATITIS ELIMINATION

NATIONAL HEPATITIS ELIMINATION PROFILE

UPDATED FEBRUARY 2022



Hepatitis B virus (HBV)

2030

HBV elimination goal

YES

Elimination of HBV mother to child transmission goal

¹

Hepatitis C virus (HCV)

2024

HCV elimination goal

¹

THE HEALTH BURDEN OF VIRAL HEPATITIS

2.0(1.4-2.7)%

Prevalence of HBsAg among persons 15-64 year-olds, 2019 ²

Based on national survey

3.6(2.3-4.8)%

Prevalence of HBsAg among persons living with HIV (PLHIV), 2019 ²

Based on national survey

1.6 (1.1-2.2)%

Prevalence of HBsAg among persons 10-64 years-old, 2019 ²

Based on national survey



Prevalence

AVERAGE IN THE AFRICAN REGION:
HBV: 5-8% ³
HCV: 3% ⁴

1.2 (0.8-1.6)%

Prevalence of anti-HCV among persons 15-64 year-olds, 2019 ²

Estimate declined from 4% before scale-up of mass screening campaigns ^{2,12}

Based on national survey

1.1%

Prevalence of anti-HCV among persons 10-64 years-old, 2019 ²

Based on national survey

0.8%

Prevalence of chronic HCV, 2019 ²

1.5%

Prevalence of chronic HCV among persons living with HIV (PLHIV), 2019 ²

Based on national survey

2.6 (1.3-3.9)%

Prevalence of anti-HCV, among persons living with HIV (PLHIV), 2019 ²

Based on national survey



50 per 100,000

New HBV infections among persons 10-64 years-old, 2019 ²



Incidence

134

HBV deaths, 2019 ⁴

1.03 Deaths per 100,000 ⁴

Based on national hospital records ⁴



Mortality

144

HCV deaths, 2019 ⁴

1.11 Deaths per 100,000 ⁴

Based on national hospital records ⁴

PROGRESS TOWARDS ELIMINATION IN RWANDA

PREVENTION OF NEW INFECTIONS AND MORTALITY

HCV

Percentage change in prevalence, 2018-2020 ^{2,17}



-69%



Prevalence of HBsAg in children < 5 years (%), 2019 ³

0.35% (0.26-0.47)%

SDG 2020 Target 1%

ACCESS TO RECOMMENDED VACCINATION, TESTING AND TREATMENT

Hepatitis B vaccination coverage for newborns ⁷

WHO 2020 Target 50% ³



Only provided to babies born to HBV positive mothers



96%

HepB 3 dose vaccine coverage for infants, 2020 ⁷

WHO 2020 Target 90%



85%

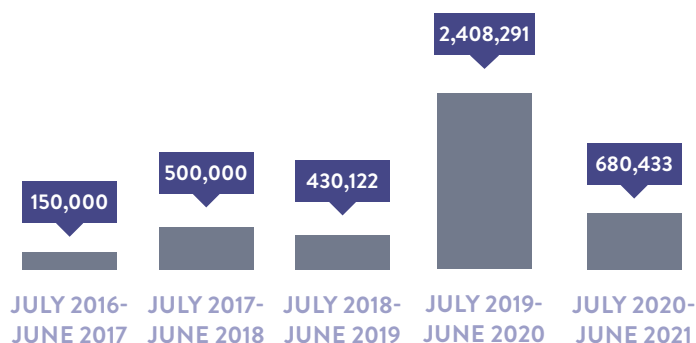
Proportion of persons living with **HBV** diagnosed, 2021 ¹⁸

WHO 2020 Target 30%



4,659,787

Cumulative persons screened for HBV, July 2015 - December 2021 ^{11,18}



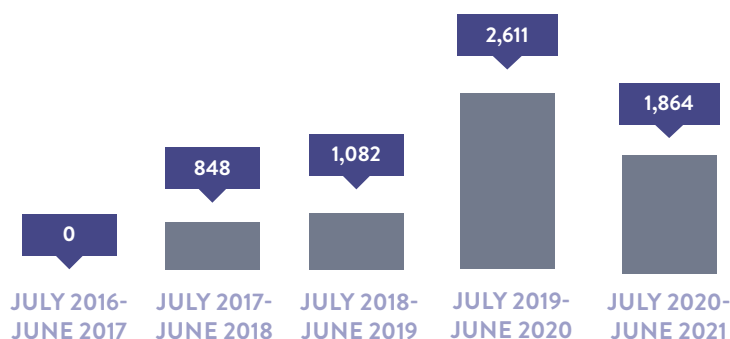
100%

Estimated proportion of diagnosed HBV persons receiving appropriate treatment ¹⁸

HBV

6,765

Cumulative persons initiated HBV treatment July 2015 - December 2021 ^{11,18}



95% Proportion of persons living with HCV diagnosed, 2021 ¹⁸

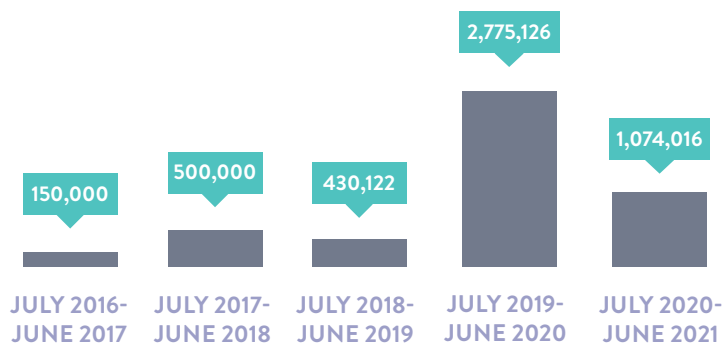
WHO 2020 Target -30%



6,028,425

Cumulative persons screened for HCV, July 2015 - December 2021 ^{10, 11, 18}

Goal: 7,000,000 persons screened by 2024



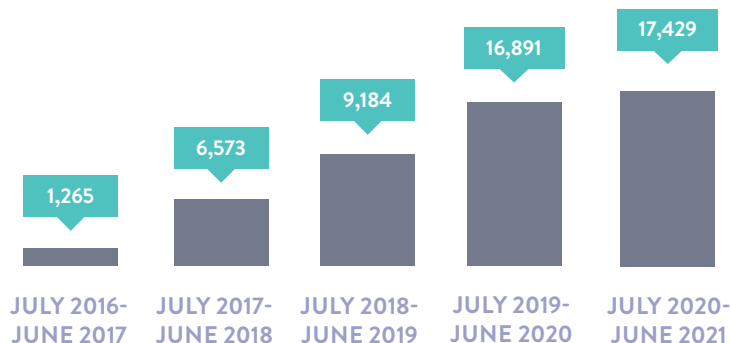
92% Proportion of people diagnosed with HCV who have been cured ^{10, 12}

HCV

54,518

Cumulative persons treated for HCV, July 2015 - December 2021 ^{10, 11, 18}

Goal: 59,584 persons treated by 2024





POLICY ENVIRONMENT FOR THE ELIMINATION OF HEPATITIS



ACHIEVEMENTS



INNOVATIONS



ROADBLOCKS

STRATEGIC INFORMATION

Routine official reports to monitor HBV and HCV ^{2,11}

Mortality

Adopted

Incidence

Partially Adopted

Monthly reports from health facilities on new cases and the care cascade, only available for HBV ¹¹

Prevalence

Adopted

Prevalence studies conducted within last 5 years ²

Estimates of HBV and/or HCV economic burden

Adopted

Published estimates for HCV available. ¹³ HBV economic modeling performed prior to development of the national plan.

Monitoring of HBV and HCV diagnosis and treatment ^{9,10,11}

Adopted



ACHIEVEMENTS

In April 2016, a patient chart for hepatitis C care and treatment was developed and implemented in paper format for hospitals receiving HCV patients.

Patient registry implemented to track the overall number of patients enrolled in clinical and laboratory services.



INNOVATION

Digital health information system in place to monitor testing and treatment trends and to communicate with patients

PREVENTION OF MOTHER TO CHILDREN TRANSMISSION

Universal policy for hepatitis B vaccination for newborns ¹⁴

Partially Adopted

Currently vaccinate babies born to HBV infected mothers. The national guidelines call for universal hepatitis B birth dose vaccination. National scale-up is awaiting Gavi financial support.

Recommendations for:

HBV testing of pregnant women ¹⁴

Adopted

HCV testing of pregnant women ¹⁴

Adopted



TESTING TO DIAGNOSE HBV AND HCV INFECTION

Testing recommendations for:

HBV: Risk-based ¹⁴

Adopted

HCV: Risk-based ¹⁴

Adopted

HBV: Universal ¹⁴

Adopted

Annual screening recommended for individuals not vaccinated

HCV: Universal ¹⁴

Adopted

Annual screening recommended for all individuals

No patient co-pays for HBsAg and anti-HCV testing ¹⁴

Adopted

No co-pays currently during elimination program



INNOVATIONS

As part of the well-established health services for HIV, 15 hospitals have the capacity to conduct HCV viral load testing. Using current systems for HIV viral load testing, blood samples for HCV testing are collected at local health centres and district hospitals and delivered to one of the testing sites via a centrally organized transport system, which also delivers results back to the health facilities.

Results are also electronically delivered through a Lab Information System



ACHIEVEMENTS

Rapid HBsAg and Anti-HCV testing available at primary healthcare level.

More than 4 million people screened for HBV and more than 6 million people screened for HCV by December 2021.

Linkage to care >80% for HCV

EXPANDING ACCESS TO HBV AND HCV TREATMENT

HBV: National treatment guidelines ¹⁴

Developed

Simplified care: Simplified treatment and monitoring algorithm for primary care physicians ¹⁴

Adopted

Simplified care: No co-payments for treatment ¹¹

Adopted

HCV: National treatment guidelines ¹⁴

Developed

Simplified care algorithm: Less than 2 clinic visits during treatment ¹⁴

Adopted

Simplified care algorithm: Non-specialists can prescribe treatment ¹⁷

Adopted

Simplified care algorithm: No patient treatment co-pays ¹⁷

Adopted

No fibrosis restrictions ¹⁷

Adopted

No genotyping ¹⁷

Adopted



ROADBLOCK

Slow-down of HCV screening, testing and treatment activities due to COVID-19 safety measures and overload of HCV viral load testing platforms used also for COVID-19 testing.



INNOVATION

Hepatitis B and C screening, diagnosis and treatment have been integrated into existing programmes and systems for HIV infection.



ACHIEVEMENTS

New clinical guidelines released in 2019.

> 1200 healthcare providers trained on HCV and HBV management with doctors and nursing treating HCV and HBV at health center level.



ACCESS AND REGISTRATION OF MEDICINES AND TESTS

Registration of originator medicines ¹⁶

Adopted

Eligible for generic medicines ¹⁵

Eligible

Registration of generic medicines ¹⁶

Adopted

Licensed point-of-care PCR testing to detect HBV and HCV

Not Yet Adopted



ROADBLOCKS

The acquisition cost for testing and treatment still remains relatively high compared to other diseases but patients don't pay for HBV and/or HCV diagnostic and treatment services.

Point of care viral load testing is not currently available.



INNOVATION

The involvement of community and hepatitis C patient networks, particularly in advocacy for approval and access to direct-acting antivirals, was essential in Rwanda's push to rapidly introduce new diagnostics and therapies.

Through the strong leadership and support of the Rwanda Government, the hepatitis elimination plans were initiated and implemented.



ACHIEVEMENT

Total acquisition cost of commodities for HCV rapid diagnostic test, viral load test, treatment, and SVR12 test is under US\$80 (US\$60 for treatment only) per patient. Patients don't pay for HBV and/or HCV diagnostic and treatment services.

HEALTH EQUITY AND ADDRESSING DISPARITIES

National strategy addresses populations most affected (that is, indigenous people, MSM, coinfectd, etc.) ¹

Adopted

National anti-discrimination laws against persons living with hepatitis B and/or C

Adopted

New national strategic plan prohibits discrimination against persons living with hepatitis B and C

National policy for adult hepatitis B vaccination ¹⁴

Adopted

Vaccination policy for high-risk groups, including FSW, MSM, genocide survivors, prisoners, healthcare workers, and military members. HBV vaccination is free for all Rwandans during the period set for HBV elimination





INNOVATION

All Rwandans can receive the HBV vaccine for free.

HBV vaccination is free for all Rwandans during the period of HBV elimination

FINANCING

Public budget line for HBV and HCV testing and treatment ¹⁷

Adopted

Funding earmarked for viral hepatitis doubled from 2013 to 2016

Funds from the Global Fund for HIV/AIDS used for PLHIV co-infected with HBV and/or HCV when relevant ¹⁷

Adopted



ROADBLOCK

Financing of program remains a challenge as there is not enough global funding for hepatitis. Domestic funding mechanisms are also used

NEXT STEPS TOWARD ELIMINATION



Monitor progress towards 2024 elimination goals with national verification process and piloting of WHO elimination validation tools.



Plan to expand viral load testing from 15 sites to all hospitals and/or health centres, likely using point-of-care machines.



Introduce HCV self tests to optimize the accessibility to HCV testing.



Continue negotiations for further testing and treatment price reductions.



Continue to strengthen monitoring and evaluation program using an electronic system for hepatitis data management.



SOURCES

1. Rwanda Biomedical Center (RBC). National Policy on Viral Hepatitis Prevention and Management in Rwanda, 2015. Kigali: RBC; June 2015. https://www.globalhep.org/sites/default/files/content/resource/files/2020-02/Rwanda%20viral_hepatitis_prevention_policy.pdf
2. Rwanda Biomedical Center (RBC). Rwanda Population-Based HIV Impact Assessment (RPHIA) 2018-2019: Final Report. Kigali: RBC; September 2020. <https://www.globalhep.org/sites/default/files/content/resource/files/2021-09/Rwanda%20Population-based%20HIV%20Impact%20Assessment%20RPHIA%202018-2019.pdf>
3. IHME. Global Burden of Disease Study. 2019 <https://www.globalhep.org/country-progress/rwanda>
4. Rwanda Biomedical Center (RBC) MCCOD Database. Shared via Communication with Rwanda Biomedical Center.
5. Schweitzer A, Horn J, Mikolajczyk RT, Krause G, Ott JJ. Estimations of worldwide prevalence of chronic hepatitis B virus infection: a systematic review of data published between 1965 and 2013. Lancet. 2015;386(10003):1546-1555. doi:10.1016/S0140-6736(15)61412-X <https://www.thelancet.com/pb/assets/raw/Lancet/pdfs/S014067361561412X.pdf>
6. Rao VB, Johari N, du Cros P, Messina J, Ford N, Cooke GS. Hepatitis C seroprevalence and HIV co-infection in sub-Saharan Africa: a systematic review and meta-analysis. Lancet Infect Dis. 2015;15(7):819-824. doi:10.1016/S1473-3099(15)00006-7 [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(15\)00006-7/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(15)00006-7/fulltext)
7. National Institute of Statistics of Rwanda (NISR) [Rwanda], Ministry of Health (MOH) [Rwanda], and ICF. 2021. Rwanda Demographic and Health Survey 2019-20 Final Report. Kigali, Rwanda, and Rockville, Maryland, USA: NISR and ICF. <https://dhsprogram.com/publications/publication-FR370-DHS-Final-Reports.cfm>
8. Republic of Rwanda and Rwanda Biomedical Center (RBC). National HIV and Viral Hepatitis Annual Report 2017-2018. <https://www.globalhep.org/sites/default/files/content/resource/files/2021-09/Annual%20Report%20for%20HIV%20and%20Viral%20Hepatitis%202017-2018.pdf>
9. Republic of Rwanda and Rwanda Biomedical Center (RBC). National HIV and Viral Hepatitis Annual Report 2019-2020. <https://www.globalhep.org/sites/default/files/content/resource/files/2021-09/Annual%20Report%20for%20HIV%20and%20Viral%20Hepatitis%202019-2020.pdf>
10. Republic of Rwanda and Rwanda Biomedical Center (RBC). National HIV and Viral Hepatitis Annual Report 2020-2021. <https://www.globalhep.org/sites/default/files/content/resource/files/2021-09/Annual%20Report%20for%20HIV%20and%20Viral%20Hepatitis%202020-2021.pdf>
11. Communication with Rwanda Biomedical Center on September 6, 2021.
12. Nsanzimana, S., Penkunas, M. J., Liu, C. Y., Sebuho, D., Ngwije, A., Remera, E., Umutesi, J., Ntirenganya, C., Mugeni, S. D., & Serumondo, J. (2020). Effectiveness of Direct-Acting Antivirals for the treatment of chronic hepatitis C in Rwanda: A retrospective study. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America, ciaa701. Advance online publication. <https://pubmed.ncbi.nlm.nih.gov/32505127/>
13. Umutesi G, Shumbusho F, Kateera F, et al. Rwanda launches a 5-year national hepatitis C elimination plan: A landmark in sub-Saharan Africa. J Hepatol. 2019;70(6):1043-1045. doi:10.1016/j.jhep.2019.03.011. [https://www.journal-of-hepatology.eu/article/S0168-8278\(19\)30179-5/fulltext](https://www.journal-of-hepatology.eu/article/S0168-8278(19)30179-5/fulltext)
14. Republic of Rwanda Ministry of Health and Rwanda Biomedical Center (RBC). National Guidelines for the Prevention and Management of Viral Hepatitis B and C. Kigali: RBC; May 2019. https://www.globalhep.org/sites/default/files/content/resource/files/2021-08/National_guidelines_for_the_prevention_and_management_of_viral_hepatitis_b_and_c_-_2019.pdf
15. Medicines Patent Pool. MedsPaL Database. 2019. [https://www.medsppal.org/?disease_area%5B%5D=Hepatitis+C+\(HCV\)&page=1](https://www.medsppal.org/?disease_area%5B%5D=Hepatitis+C+(HCV)&page=1)
16. Clinton Health Access Initiative (CHAI). HCV Market Intelligence Report 2021 and Preliminary HBV Market Insights. https://www.globalhep.org/sites/default/files/content/resource/files/2021-09/Hepatitis-C-Market-Report_2021-FINAL-1.pdf
17. Presentation by Dr. Janvier Serumondo and Dr. Jean Damascene Makuza. "Scaling-up of HCV testing to reach elimination goal in Rwanda." Hep Test Webinar Series, Hosted by the Coalition for Global Hepatitis Elimination. December 15, 2020. https://www.globalhep.org/sites/default/files/content/webinar/files/2020-12/Hep_Test_Webinar_%20Rwanda_Serumondo%20Makuza_Final_Slides.pdf
18. Communication with Rwanda Biomedical Center. Data provided by the Rwanda Biomedical Center on February 10, 2022.

WORKING TOGETHER, WE WILL ACHIEVE ELIMINATION.



COALITION
FOR GLOBAL
HEPATITIS
ELIMINATION

This National Hepatitis Elimination Profile (N-HEP) was developed by the Coalition for Global Hepatitis Elimination. Funding for this N-HEP was provided by Gilead Sciences. The Coalition for Global Hepatitis Elimination retained final control over the content.

The Coalition thanks the Rwanda Biomedical Center for their review and feedback.

FOR MORE INFORMATION:
GLOBALHEP.ORG
GLOBALHEP@TASKFORCE.ORG

TASKFORCE.ORG
330 W. PONCE DE LEON AVENUE
DECATUR GA 30030

