

HTH Team



Hepatitis can't wait

Rationale

Viral hepatitis has become a significant global public health challenge. Chronic hepatitis B and C, two of the five types of hepatitis (A, B, C, D, E), cause 95% of hepatitis-related illnesses and premature deaths. An estimated 80% of people living with these viruses, which are commonly associated with HIV and sexually transmitted infections (STIs), remain undiagnosed and do not have access to affordable treatments. Although the disease is preventable, more than 91 million Africans are living with hepatitis B or C, the deadliest hepatitis viruses.

Key messages

- In Africa, chronic viral hepatitis affects more than 91 million Africans (82 million live with HBV and 9 million with HCV).
- In 2019, an estimated 990 000 new hepatitis B virus (HBV) infections and 210 000 new hepatitis C virus (HCV) infections occurred in the African Region.
- There were an estimated 80 000 HBV-related deaths and 45 000 HCV-related deaths in the African Region in 2019.
- Coverage of the HBV vaccine birth dose in the African Region in 2021 was 17%, compared to the global coverage of 42%.
- Twenty-nine countries in the African Region developed national hepatitis strategic plans in 2021.
- Hepatitis D is rare, but can accelerate the progression of chronic liver disease when it occurs alongside hepatitis B.
- Hepatitis E can be more dangerous, with a higher mortality rate in pregnant women.
- In the WHO African Region, only 2% of people with hepatitis B are diagnosed.

1. Mode of transmission

Hepatitis A and E viruses are primarily transmitted by the faecal-oral route, through food and water contaminated with the faeces of infected individuals. Outbreaks are associated with untreated or sewage-contaminated water. Human-to-human transmission occurs among family members with poor hygiene practices.

Hepatitis B, C and D are transmitted through blood and are associated with high-risk behaviours.

Unsafe practices: These include unsafe medical and personal needlestick behaviours such as tattooing, piercing, needlestick injuries, injecting drug use. Re-use of contaminated needles and syringes or sharp objects, either in health care settings, in the community or among injecting drug users, can spread the virus. Sexual transmission is more common among unvaccinated people with multiple sexual partners who expose one another to infected blood and body fluids (saliva and menstrual, vaginal and seminal fluids).

Unsafe blood transfusions: It occurs after unscreened, virus-contaminated blood is transfused to a person.

Mother-to-child transmission: It is mainly transmitted by passing the virus to the baby during birth or by exposure to infected blood.

Other: Sharing personal items such as razors, toothbrushes, nail clippers, body jewelry and other personal items with small amounts of blood on them can spread the virus.



BLOOD

DIRECT BLOOD TO BLOOD CONTACT



Mother to child during birth



Tattoos, piercings, barbers, scarification, circumcision practices



Sharing needles



Household contact

Sharing hygiene equipment (razors, toothbrushes, earrings etc.)



Unsterile healthcare practices

SEX

DIRECT CONTACT WITH SEXUAL FLUIDS



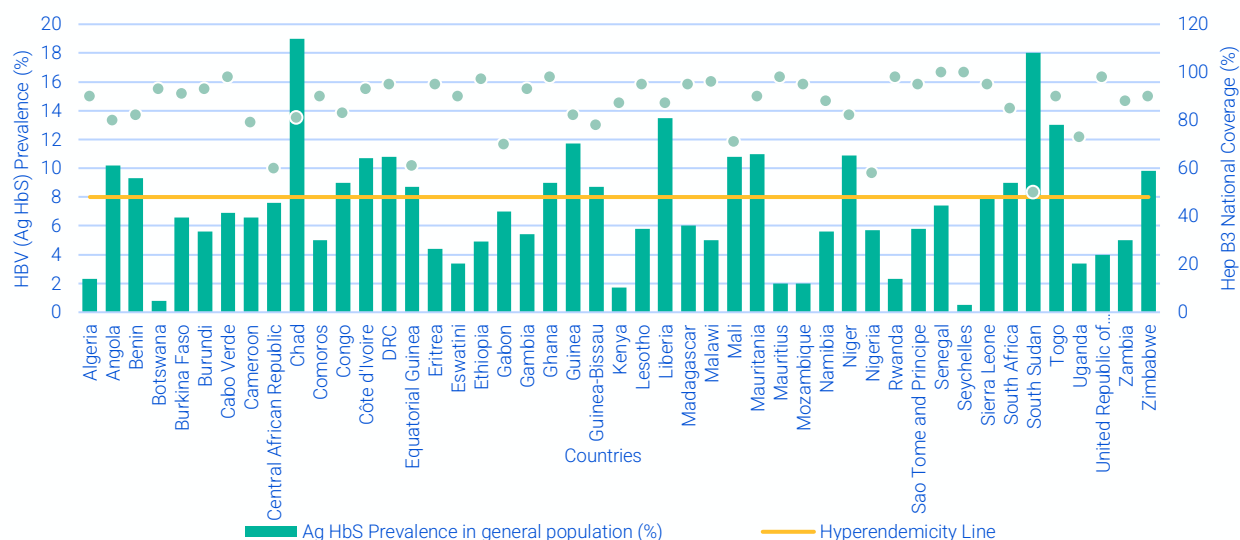
Sexual transmission

There is a risk during any type of sexual contact

2. Disease burden in Africa

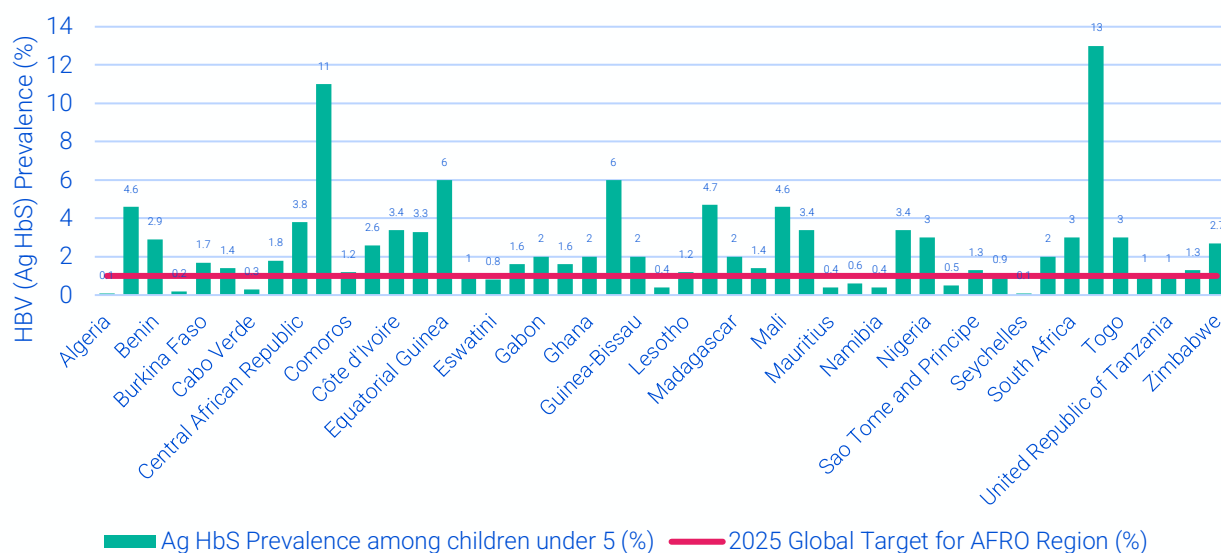
Prevalence in the general population (%): The prevalence of HBV (hepatitis surface antigen tested positive) ranged from 0.5% (lowest in Seychelles) to 19% (highest in Chad) in 2021.

Figure 1: Prevalence of HBV in the general population, coverage of hepatitis B birth dose vaccine in the African Region, 2021 (source: WHO-AFRO)



Of the 47 countries in the WHO African Region, 18 had hepatitis B prevalence rates above the high endemic threshold of 8%. Among them, Chad was the highest at 19%. The country with the lowest vaccination coverage at birth (50%) was South Sudan, which also had the second highest prevalence rate in the general population (18%).

Figure 2: Prevalence of HBV among under-five children in the African Region, 2021 (source: WHO-AFRO)



All 47 countries are off track in terms of the global HBV prevalence target for 2030 (0.1%). Fourteen countries have exceeded the global target for the African Region (1%). Low vaccine coverage at birth and high prevalence in under-five children are found together in South Sudan, Chad, Guinea and Equatorial Guinea.

Figure 3: Estimated number of chronic carriers in the general population and under-five children (in thousands), in the African Region, 2021 (source: WHO-AFRO)

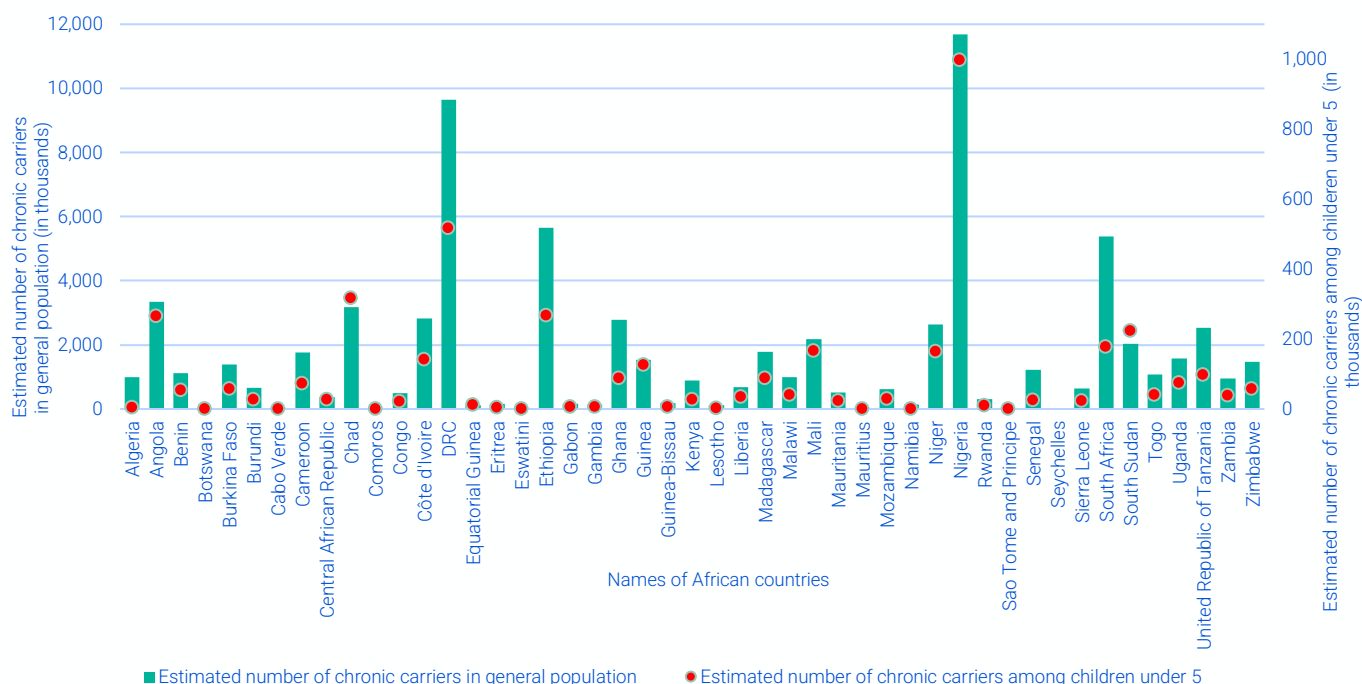
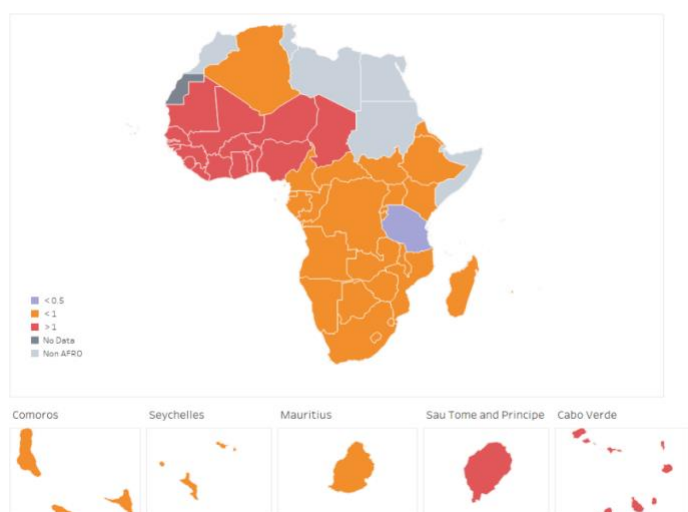


Figure 4: HCV prevalence (%) in the African Region, 2019 (source: WHO-AFRO)

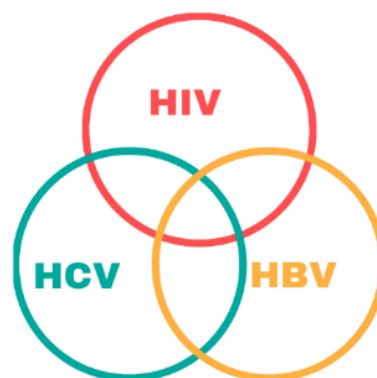


The prevalence of HCV infection in African countries ranged from 0.2% to 1.4% of the general population in 2019. United Republic of Tanzania had the lowest prevalence rate (0.2%), while Burkina Faso had the highest (1.4%) among the 47 African Region countries.

- More than 91 million people in Africa are affected by chronic viral hepatitis (82 million live with hepatitis B, 9 million with hepatitis C).
- Hepatitis B infection is preventable and treatable, and hepatitis C virus (HCV) infection is now curable.
- Despite the availability of diagnostic tools and effective treatment, more than 90% of people living with hepatitis B and C in Africa do not receive the care they need.
- As a result, 125 000 hepatitis-related deaths occur in Africa each year, mostly among the young and productive segments of the population.
- However, less than 10% of the population in Africa have access to testing and treatment, leading to progressive advanced liver disease, followed by the devastating financial burden, emotional distress and stigma.

3. Hepatitis B and C–HIV coinfection

- HBV, HCV, and HIV diseases share common modes of transmission and determinants such as risky behaviours.
- In sub-Saharan Africa, HIV and HBV transmission are largely independent.
- HBV infection usually occurs by horizontal transmission before the age of 5 years, while HIV is transmitted heterosexually in adulthood.
- HIV and HBV can share routes of acquisition in newborns through perinatal mother-to-child transmission.
- Maternal HIV infection increases mother-to-child transmission up to 2.5-fold because HIV promotes hepatitis B replication. HIV/HBV coinfecting mothers are more likely to be HBsAg-positive and thus potentially more infectious, leading to an increased risk of perinatal transmission.
- In contrast to injecting drug use (IDU), the predominant mode of HCV transmission in sub-Saharan Africa is iatrogenic, through inadequate screening of blood products or the re-use of syringes in health care settings.
- Although HIV increases the risk of vertical transmission of HCV by a factor of 2.8, studies suggest low rates of vertical HCV transmission of less than 5% in sub-Saharan Africa.
- A common public health approach is required along the continuum of prevention, diagnosis, treatment, and care for these coinfecting diseases.



4. Responses

National hepatitis treatment programmes with WHO recommendations to countries:

- Use of effective oral treatments (tenofovir or entecavir) to suppress the viral load, followed by lifelong treatment.
- Pan-genotypic direct-acting antivirals (DAAs) are recommended for all adults, adolescents, and children up to 3 years of age with chronic hepatitis C infection.
- DAAs can cure most HCV infections with a short treatment duration of usually 12 to 24 weeks, depending on the cirrhosis status of the liver.



Penta3 national coverage

- Hepatitis B vaccine is given in either 3-dose or 4-dose schedules.
- In the 3-dose schedule, the first dose (monovalent) is given at birth, and the second and third doses are given along with the first and third doses of the DTP vaccine (diphtheria, tetanus and pertussis).
- The 4-dose schedule is usually given with other routine infant vaccines.

National strategic plans for viral hepatitis

- In 2021, twenty-nine countries developed national hepatitis strategic plans,
- Countries with a high burden of the disease need to develop disease-specific plans with time-bound actions.

Hepatitis B vaccines

(Prevention of mother-to-Child transmission of hepatitis B: birth dose vaccination)

- The vaccine has been available since the early 1980s.
- It is safe, and immunogenic
- It is very effective
- It has proven efficacy in preventing HBV infection
 - ~95% if administered within 24 hours of birth
- It has demonstrated efficacy in preventing perinatal infection
 - ~90% if administered within 24 hours of birth
 - Similar efficacy of hepatitis B vaccine when given with and without HB Ig.
- Vaccines schedule in the African Region: birth, 6, 10, 14 weeks or birth, 8, 12, 16 weeks.

Testing and treatment guidelines

- In 2015, WHO launched its first "Guidelines for the prevention, care and treatment of persons living with chronic hepatitis B infection". In 2018, WHO's updated 2018 guidelines recommended treatment with pan-genotypic direct-acting antivirals.
- Other documents include guidelines on hepatitis B and C testing (2017).

World Hepatitis Day

- World Hepatitis Day is an opportunity to step up national and international efforts on hepatitis, encourage actions and engagement by individuals, partners, and the public and highlight the need for a greater global response
- Low coverage of testing and treatment is the most important gap to be addressed to achieve the global elimination goals by 2030.
- Leadership of the MoH in the observance of World Hepatitis Day is important for advocacy and government action

5. Prevention: WHO recommendations

- All newly born infants should receive the hepatitis B vaccine soon after birth, preferably within 24 hours, and complete the vaccination series with two or three additional doses given at least four weeks apart. Protection lasts for at least 20 years and is likely to be lifelong.
- Use of antiviral prophylaxis to prevent mother-to-child transmission of hepatitis B in addition to infant vaccination.
- Blood safety strategies and safer sex practices, including minimizing the number of partners, use of condoms.
- There is no effective vaccine against hepatitis C. Prevention depends on reducing exposure to the virus in health care settings and in high-risk populations such as people who inject drugs and men who have sex with men, especially those who are HIV-infected or who are taking pre-exposure prophylaxis against HIV.

Primary prevention measures recommended by WHO include:

- Safe and appropriate use of injections in health care settings.
- Safe handling and disposal of sharps and waste.
- Provision of comprehensive harm-reduction services for people who inject drugs.
- Testing of donated blood for HBV and HCV (as well as HIV and syphilis).
- Training of health workers; and
- Prevention of blood exposure during sex.

6. Policy implications

- In 2016, the threat of viral hepatitis led the 47 Member States of the WHO African Region to endorse a framework for action to implement the Global strategy to eliminate viral hepatitis as a public health threat by 2030, with intermediate targets for 2020.
- On 14 June 2019, WHO launched its first hepatitis scorecard in the African Region, measuring progress on six of the 10 regional targets. The second scorecard was produced in 2021 and launched during the 2022 World Hepatitis Day:
 - 28 countries have developed national hepatitis strategic plans, 25 more than the baseline of three countries in 2015.
 - most plans remain in draft form, and only three countries have secured significant domestic funding to eliminate the disease, which affects one in 15 people in the Region.
- The scorecard found that the highest burden of hepatitis B infection in children below 5 years of age is seen in countries without hepatitis B vaccination at birth, while this gap is further exacerbated by suboptimal coverage (below 90%) of the pentavalent childhood vaccine. It also found that testing and treatment as a public health approach remains the most neglected aspect of the response.
- Hepatitis B vaccination at birth and in early infancy is the most effective way of stopping the transmission of the virus, as 95% of the burden of chronic disease is due to infections in children acquired before their fifth birthday, including mother-to-child transmission.
- Despite the low cost of the birth dose – less than US\$ 0.20 per child – only 11 countries in the Region follow this protocol.

References

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