World Health Organization
South Sudan
Knowledge Management Series for Health

Tackling Hepatitis B and C in South Sudan: A Public Health Perspective

Viral hepatitis remains a growing public health challenge. In 2022, viral hepatitis led to an estimated 1.3 million deaths globally comparable to tuberculosis. Hepatitis B (HBV) accounted for 1.1 million of these deaths, and Hepatitis C (HCV) for 242,000. Hepatitis B and C may lead to cirrhosis and hepatocellular cancer, accounting for 96% of all viral hepatitis deaths. Hepatitis D co-infection or superinfection accelerates the progression of chronic liver disease but only among people living with hepatitis B.

National Burden

South Sudan carries a high burden of chronic HBV and HCV. In 2023:

- **Estimated new infections: 11,000**
- **Estimated deaths: 1,000**
- **Chronic infection: ~1 million people**
- **Prevalence:**
  - ◊ HBsAg: **9.9%**
  - ◊ Anti-HCV: **9.1%**

(MOH/WHO: World Hepatitis Report 2024)

Data from GLOBOCAN 2022 shows liver cancer among the top five most common cancers in South Sudan, with a strong epidemiological link to chronic hepatitis B and C infections. According to recent estimates:

- **New liver cancer cases:** 354 annually (ranked 5th overall), accounting for **5.2%** of all new cancer diagnoses.
- **Cancer deaths due to liver cancer:** 344 deaths (ranked 4th), contributing to **6.8%** of all cancer-related mortality.
- **Five-year prevalence:** 540 people living with liver cancer, with a prevalence of **4.7 per 100,000** population.

Complementing this, **DHIS2 facility data** indicate that liver cancer accounts for **27.3%** of all reported cancer-related deaths, making it the leading institutional cause of cancer mortality. This pattern reinforces the high burden and late presentation of hepatitis-related complications.

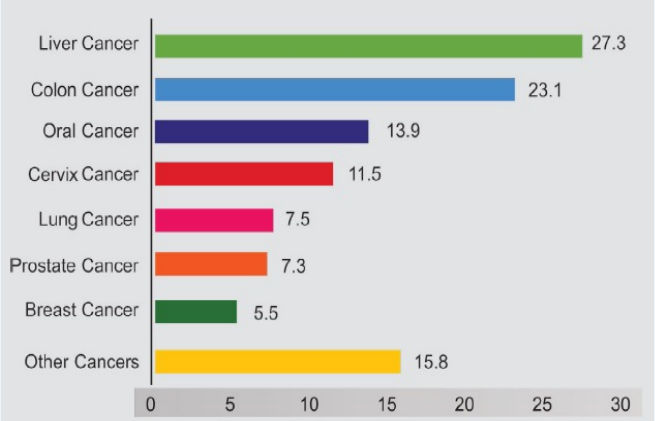

Figure 1: The number of deaths per 100 discharges (source DHIS2)

Vertical Transmission and Early Childhood Infection

The prevalence of HBsAg among children under five stands at 6.99%, among the highest in Africa and significantly above the 2025 WHO interim target of <0.5%. This indicates substantial ongoing vertical transmission and early childhood infection.

- **Risk of chronic infection:**
  - ◊ 80–90% if infected in the first year of life
  - ◊ 30–50% if infected before age six

Vaccination with a hepatitis B birth dose within 24 hours, followed by two to three infant doses, provides 95–100% protection and is the key strategy to prevent mother-to-child transmission and establish community-level immunity.

Transmission Risk

Hepatitis B is primarily transmitted from mother to child at birth or through close contact with infected caregivers in early childhood. Other transmission modes include:

- Bloodborne exposure from unsafe injections or transfusions
- Unprotected sexual contact
- Occupational exposure (e.g. needle-stick injuries)
- Contact with infected body fluids

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Hepatitis C virus is mostly transmitted through exposure to infective blood. This may happen through transfusions of Hepatitis C Virus-contaminated blood and blood products, contaminated injections during medical procedures, tattoos and through injection drug use. Sexual transmission is also possible but is much less common.

Gaps

Persistent implementation and service delivery gaps continue to affect hepatitis prevention and care in South Sudan:

- Hepatitis B birth dose is not included in the national immunization schedule, despite WHO recommendations for high-prevalence countries. This contributes to continued vertical transmission, as evidenced by the 6.99% HBsAg prevalence among children under five.
- Routine infant immunization coverage remains below 80%, with fluctuations observed in Penta 1 coverage, falling below 60% between November 2024 and January 2025.

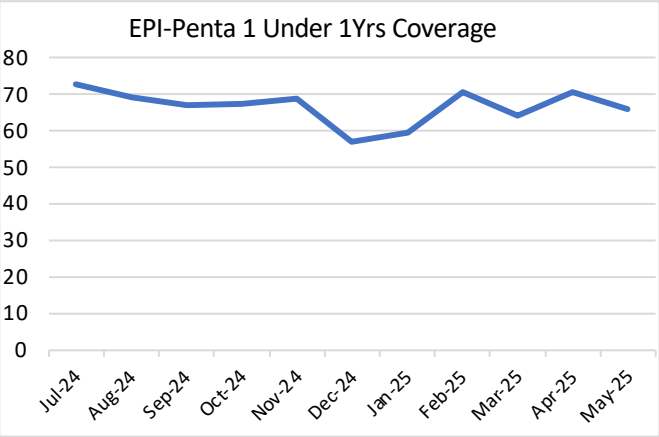

Figure 1 EPI-Penta 1 under 1yrs coverage (DHIS2)

- National vaccine stock levels are stable, but last-mile delivery bottlenecks persist, with facility-level stockouts not aligned with national availability.

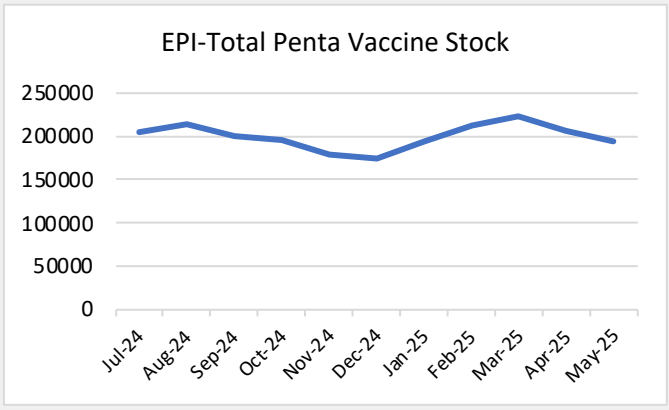

Figure 2 EPI-Total Penta vaccine stock

- Antenatal interventions for hepatitis B prevention are absent, including maternal screening, antiviral prophylaxis, and provision of hepatitis B immunoglobulin for newborns.
- Routine hepatitis screening is not integrated into primary health care, and chronic care services are limited to a few private or referral-level sites.
- Over 90% of people living with hepatitis B and C in South Sudan remain undiagnosed. Among those diagnosed, affordable treatment has reached only a small fraction

Analysis

Access

Distance to Health Facility:

Hepatitis screening and chronic care services are limited to referral hospitals and a few urban private facilities. In rural areas, where most of the population lives, access remains low due to the absence of community-level testing and lack of mobile outreach services.

While hepatitis B vaccination is provided through the pentavalent vaccine, coverage remains below 70%, with fluctuations observed over the past year. The hepatitis B birth dose is not yet part of the national immunization schedule. Although vaccine stocks are available at national level, inconsistent distribution to health facilities contributes to service gaps. There is currently no vaccine for hepatitis C.

Traditional birth practices outside health facilities reduce the likelihood of newborns receiving the hepatitis B birth dose. Cultural stigma around chronic illnesses also affects demand, particularly among pregnant women. Although the hepatitis B vaccine is free, households often face financial barriers related to transport and indirect costs when accessing services.

Quality of sevices

Hepatitis services are not integrated into routine care pathways, resulting in fragmented patient experiences. Many individuals are diagnosed incidentally, often during blood donation or antenatal care, and are not linked to follow-up or chronic care services. The absence of structured counselling, treatment literacy, and tracking systems contributes to low retention and poor treatment adherence.

Infection prevention and control (IPC) remains a challenge. Although national IPC guidelines are in place, their implementation is inconsistent. Health workers continue to face occupational risks due to limited access to protective equipment, inconsistent sharps disposal practices, and gaps in post-exposure prophylaxis protocols. In some facilities, unsafe injection practices and unregulated blood transfusions increase the risk of nosocomial transmission.

While the hepatitis B vaccine is recommended for health workers, implementation is limited. Broader patient safety initiatives such as safe injection practices, blood screening, and health worker vaccination need to be strengthened as part of routine quality improvement.

Community demand

Awareness of hepatitis remains low. Fewer than 10% of people living with HBV or HCV know their status. Testing is rarely requested by patients and is not routinely offered outside antenatal care and blood safety programs. Most infections are diagnosed only when symptoms of advanced liver disease appear.

Public messaging and outreach on hepatitis prevention are limited. Civil society organizations have made efforts to raise awareness, but their reach remains narrow due to insufficient and short-term funding. In many counties, health-seeking behaviors such as early ANC attendance, delivering in health facilities, and completing infant immunizations are still suboptimal.

The lack of community demand for hepatitis services is reflected in late diagnosis and high mortality. DHIS2 data show that liver cancer accounts for 27.3% of all reported cancer deaths in health facilities, the highest of any cancer type. This pattern suggests that many hepatitis-related complications go undetected and untreated until fatal stages. Strengthening community awareness and early health-seeking is critical to reduce preventable hepatitis-related mortality.

Resilience

Although national guidelines for hepatitis prevention and treatment exist, their implementation across the health system remains limited. Hepatitis programming has not been fully integrated into routine planning, service delivery, or reporting structures. Responsibility for hepatitis prevention has largely been left to the immunization program, with minimal coordination across other service areas such as maternal health, outpatient care, or chronic disease management.

The absence of a dedicated hepatitis focal person within the Ministry of Health limits planning, program oversight, supervision, and accountability.

Lack of a robust strategic information system based on surveillance and program data, significantly hinders effective prevention, control, and treatment efforts. Data from population-based surveys and integrated bio-behavioural surveys is yet to be planned. Surveillance systems are not routinely collecting hepatitis B & C specific indicators (e.g. incidence, prevalence, treatment outcomes). Health facilities have limited access to standardized tools for recording and reporting on chronic viral hepatitis cases. Data from testing campaigns, antenatal clinics, or blood banks are rarely compiled into national databases. This disconnect prevents analysis of intervention impact and evidence-based planning and resource allocation.

Supply chain disruptions during shocks continue to affect availability of vaccines and diagnostics. There are currently no contingency mechanisms to ensure continuity of care for individuals with chronic hepatitis during emergencies, and hepatitis has not yet been institutionalized within health system recovery or resilience frameworks.

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Call to Action

To address the persistent burden of hepatitis B and C in South Sudan and close critical implementation gaps, the following priority areas require action:

- **Testing and Treatment Access:** Substantially increase access to hepatitis B and C testing in primary care and antenatal settings to reach people living with chronic virus infection, of whom more than 90% are currently undiagnosed. Rapidly expand access to hepatitis care and treatment, including antiviral therapy, counselling, and follow-up by building on existing health facilities offering primary health care services

- **Routine Immunization Coverage:** Enhance uptake of the infant pentavalent vaccination series by reinforcing EPI strategies and linking to broader immunization and maternal-child health efforts. Introduce Hepatitis B birth-dose vaccine as part of the national immunization schedule and screening of pregnant women to prevent vertical (mother-to-child) transmission of hepatitis B. This aligns with South Sudan's commitment to the triple elimination of mother-to-child transmission of HIV, syphilis, and hepatitis B, and supports progress toward WHO elimination targets.

- **Community and Political Engagement:** Promote high level political awareness and strengthen community-based engagements and demand generation. Drawing lessons from civil society efforts in similar settings may inform more sustainable models for outreach, stigma reduction, and linkage to services.

- **Strengthen strategic information** system based on surveillance and programme data to direct policy change and implementation.

- **Policy and Governance Integration:** Strengthen the institutional positioning of the hepatitis programme within the Ministry of Health. Reinforce the role of the existing focal point with defined authority, dedicated resources, and coordination across maternal health, immunization, surveillance, and chronic care platforms.

References:

1. International Agency for Research on Cancer. (2022). GLOBOCAN 2022: Cancer today. World Health Organization, IARC. *https://gco.iarc.fr/today*
2. Ministry of Health, Republic of South Sudan. (2024). DHIS2 routine health facility data, 2020–2024. Health Management Information System Unit.

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