

## Hepatitis B profile among adults: An alarming situation, should we concern?

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### Abstract

Hepatitis B virus (HBV) infection is a significant public health concern in Africa, with approximately 8% of the population affected by chronic hepatitis B (CHB). The high prevalence of HBV in Africa is attributed to various factors, including poor health infrastructure, lack of awareness, inadequate screening and diagnostic facilities, and limited access to affordable antiviral therapies. This commentary reviews the current state of HBV infection among adult and highlights the urgent need for coordinated efforts to address this alarming situation.

### Introduction

Hepatitis B is one of the most common infectious diseases globally and a potentially life-threatening liver infection caused by the hepatitis B virus (HBV) [1]. It was originally known as "serum hepatitis" it can cause both acute illness and chronic illness whereas acute illness cause liver inflammation, vomiting, and jaundice illness lasts for a few weeks and then gradually improves in most affected people. Chronic may eventually cause cirrhosis and liver cancer over a period of several years, chronic illness is so fatal compared to acute illness and sometimes put people at high risk of serious complications and prone to death [2]. However, Currently, hepatitis B it's a serious global health problem due to its mortality and morbidity rate [3]. In addition, the findings available declare that the hepatitis B virus is 50 to 100 times more infectious than HIV in the sense that viruses replicate through an RNA intermediate form by reverse transcription which is a practice related them to retroviruses [1].

### Epidemiological status of Hepatitis B among adults

Infection with HBV is significantly more common in some places than others around the world. In developing nations with sizable populations like South East Asia, China, sub-Saharan Africa, and the Amazon Basin, where at least 8% of the population is an HBV chronic carrier, hepatitis B is highly prevalent. 70 to 95 percent of the people in these regions have serological evidence of having had HBV in the past or present. There is no evidence of acute HBV-related disease in children because

the majority of infections are asymptomatic, but adult rates of chronic liver disease and liver cancer are substantial [4]. In several areas of Eastern and Southern Europe, the Middle East, Japan, and South America, hepatitis B is relatively endemic. Between 10 and 60% of people show signs of infection, and 2 to 7% are lifelong carriers. HBV-related acute illness is widespread in these regions because adolescents and adults are frequently infected; nevertheless, infections in newborns and young children primarily sustain the high rates of chronic infection [5]. Most industrialized regions, including North America, Northern, and Western Europe, and Australia, have low HBV endemicity. Only 0.5–2% of people in these areas have chronic HBV infection, while the infection affects 5-7% of the population [6].

### Factors and knowledge associated with hepatitis among adults

Hepatitis B infection is a public health issue with growing popularity. Hepatitis B infection is reported to be caused by the hepatitis B virus of the family Hepadnaviridae, a partly double-stranded DNA virus with multiple immunological markers, including HBsAg and anti-HBs, HBeAg and anti-HBe, and anti-HBc IgM and IgG [7]. It is well-recognized that blood, semen, and vaginal secretions can spread the hepatitis B virus [8].

The virus enters the body via percutaneous, sexual routes and vertically (mother to child). HBV is reported to occur worldwide with high frequency in developing countries [8]. HBV is more likely to infect those who engage in sexual promiscuity (including homosexuals and heterosexuals), use intravenous

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drugs, and have tattoos, piercings, and circumcisions. Healthcare workers are at a high risk of contracting blood-borne infections by working with contaminated body fluids [8].

### Challenges in diagnosis and treatment

The diagnosis and treatment of HBV infection in Africa face significant challenges. Most African countries lack the resources to develop and implement national HBV screening and vaccination programs. Furthermore, there is a significant shortage of diagnostic and treatment facilities in most African countries. Many infected individuals remain undiagnosed until they develop complications, such as cirrhosis or hepatocellular carcinoma (HCC). In addition, antiviral therapy is often not available or too expensive for many African patients, resulting in low rates of treatment uptake [11].

### Ways in mitigating the burden

Although Hepatitis B is a chronic infection, Vaccination is a proven method for prevention. Zanetti reported that all significant health authorities believe that primary infection prevention through widespread vaccination and disease transmission management are the most efficient ways to reduce the burden of HBV. Furthermore, several initiatives have been launched in Africa to address the problem of HBV infection. For instance, the World Health Organization (WHO) has recommended the integration of HBV screening and treatment into primary healthcare services in Africa. Additionally, various African countries have introduced hepatitis B vaccination programs for infants, and some have also implemented catch-up vaccination programs for adolescents and high-risk groups. However, these efforts need to be scaled up significantly to have a significant impact on the HBV burden in Africa. Zanetti also stated that there should be an initial concentrated control procedure towards the higher-risk population, health workers, and those in constant contact with the infected individual to reduce the infection link [10]. This method requires adequate knowledge and identification of the high-risk population. Following the implementation of mass vaccination campaigns, the prevalence of HBV significantly decreased in many countries, causing a decline in the HBsAg carrier rate and HCC incidence [10].

There have been numerous initiatives to control or eradicate HBV. Zanetti discussed the development of new vaccines with increased immunogenicity and a reduction in the length of time required to administer this vaccine [10]. The administration length might affect the likeliness of the completion of doses. The inability to ensure people finish their dosages and a lack of adequate contact tracing in developing nations can lead to incomplete dosing. Therefore, the development of a vaccine that is more immunogenic and requires fewer doses for long-term protection may increase adherence to recommended vaccination schedules [8]. The endemicity of HBV appears to vary all over the world. The high endemicity in developing countries [8]. May be due to low advances in blood

serological and molecular screening. Proper screening of blood to avoid asepsis, and improving individual education to ensure the safe practice of sexual behaviors are known ways of reducing the rate of infection [8].

### Conclusion

HBV infection is a significant public health concern in Africa, with a high prevalence of CHB and limited access to affordable antiviral therapy. Coordinated efforts are urgently needed to address this problem, including the implementation of national screening and vaccination programs, increasing awareness among the public and healthcare providers, and improving access to affordable antiviral therapy. Failure to address this problem could have significant consequences for the health and well-being of millions of Africans.

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