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## **Title**

Improving communication about viral hepatitis in Africa

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Hepatitis B; Africa; communication; knowledge; anthropology; elimination

## **Main Text**

Viral hepatitis is the seventh leading cause of death worldwide.<sup>1</sup> By 2030, WHO's elimination strategy<sup>2</sup> seeks to reduce mortality from chronic infection with hepatitis B and C viruses by 65%. To achieve this goal, it is essential to scale up antiviral treatment programmes in low-income and middle-income countries, where most deaths due to hepatitis occur. These programmes must identify, engage and retain infected populations. Yet only with a genuine understanding of viral hepatitis can people living with these infections fully commit to a treatment program. WHO published new guidelines for testing for hepatitis B and hepatitis C viruses in February 2017;<sup>3</sup> however, the guidelines make little mention of communicating with these populations about chronic viral hepatitis. Our anthropological research investigating local understandings of hepatitis B in sub-Saharan Africa (The Gambia,<sup>4</sup> Côte d'Ivoire,<sup>5,6</sup> Burkina Faso,<sup>7,8</sup> Central African Republic<sup>7</sup> and Madagascar<sup>9</sup>) highlighted communication challenges between health-care workers and local populations.

Knowledge of hepatitis is slim to non-existent in sub-Saharan African populations, although the prevalence of chronic hepatitis B virus infection exceeds 8% in that region.<sup>4</sup> Less than 1% of The Gambia's general population has heard of hepatitis B, although most were familiar with HIV/AIDS and malaria.<sup>4</sup> Our findings in Burkina Faso, Côte d'Ivoire and Madagascar suggested a similar lack of recognition of hepatitis B in these countries.<sup>5,6,8</sup> Nevertheless, a small, knowledgeable lay public in these three countries use the illness category hepatitis, which they associate with wide-ranging causes and symptoms.<sup>7</sup>

That the African lay public is unfamiliar with hepatitis B might be related to the complex natural history of chronic infection.<sup>10</sup> Most infected people remain asymptomatic for decades, without recognising their chronic carriage unless they undergo blood donation screening or develop decompensated cirrhosis or hepatocellular carcinoma.<sup>8,11</sup>

Nevertheless, some sub-Saharan African populations appear to recognize and name symptoms associated with end-stage liver disease. In the Central African Republic, Bangui people use the terms *lé ti mafuta* (palm oil eyes) or *fièvre jaune* (yellow fever) to evoke jaundice, whereas Djula and Mooré speakers in Burkina Faso and Mandinka speakers in The Gambia use diagnostic categories that describe ascites symptoms: *founoubana* (swelling sickness), *kapouga* (mature millet panicle) and *konofa jankaroo* (full stomach sickness).<sup>7,8</sup> In Madagascar, some also speak of *angorigosy* or *tazo-vony* (big fever), suggesting acute hepatitis symptoms.

Although these local terms capture vividly the signs and symptoms of liver disease, they might have alternative biosocial causes, most notably sorcery, that shape patients' health-seeking practices.<sup>7</sup> Gambian and Burkinabé illness categories referring to abdominal swelling frequently identify sorcery as a cause, requiring traditional healers' interventions. Redressing social transgressions through incantations and other ritual practice, healers also use various herbal and animal substances with emetic and laxative effects to reduce abdominal swelling. These treatments might not only delay access to medical care but also worsen a patient's prognosis.

Finally, African health workers struggle to explain hepatitis B to those who are chronically infected and must navigate lay incomprehension, complex local illness categories, and their own, often insufficient, biomedical knowledge. African health workers frequently rely on other disease categories to explain this illness. Some evoke local terms for severe malaria – eg, *sumaya* (cold fever) in Djula language, Burkina Faso - or alternatively, describe hepatitis B as “like HIV”, suggesting erroneously that both viruses have identical transmission modes, diagnostic tests; and treatments.<sup>6,8</sup> In regions with a low prevalence of hepatitis B infection (Europe, North America), transmission of both hepatitis B virus and HIV occurs mainly through sexual intercourse or use of intravenous drugs. By contrast, in sub-Saharan Africa,

hepatitis B virus was mainly transmitted horizontally during childhood before the introduction of hepatitis B vaccine.<sup>12</sup> The message that hepatitis B is “like HIV” confuses patients and families and increases stigmatisation.

Considerable challenges hamper effective communication between health workers and people with chronic hepatitis. A first step in addressing the burden of chronic hepatitis in sub-Saharan Africa would be to improve training of health workers in understanding viral hepatitis. A second step would be to create more effective, meaningful communication strategies for health workers to use with patients. Development of these measures through anthropological research will set critical foundations for treatment scale-up in low-income and middle-income countries, which can contribute to the global elimination of viral hepatitis.

We declare no competing interests.

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