



REGIONAL COMMITTEE FOR AFRICA

ORIGINAL: ENGLISH

Sixty-fourth session

Cotonou, Republic of Benin, 3–7 November 2014

Provisional agenda item 11

**VIRAL HEPATITIS: SITUATION ANALYSIS AND PERSPECTIVES
IN THE AFRICAN REGION**

Report of the Secretariat

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BACKGROUND

1. Viral hepatitis is an inflammation of the liver, caused by five distinct hepatitis viruses (A, B, C, D, and E) whose routes of transmission, risk groups, courses of disease and control are summarized in the Annex. While hepatitis A and E viruses are spread through the oro-faecal route, B and C viruses are transmitted through exposure to blood, sexual intercourse, and from an infected pregnant mother to her unborn child. Although transmitted by blood, hepatitis D can cause infection only in individuals with active hepatitis B infection or in carriers. All the viruses can cause acute disease but the highest numbers of deaths result from liver cancer and cirrhosis which occur decades after infection with hepatitis B or C.

2. Hepatitis B is highly endemic in West Africa with a prevalence of 8%, the highest in the world. It is also estimated that 2% of the population in the Region are chronically infected with hepatitis C. Most of the chronic infections are as a result of perinatal transmission of Hepatitis B. Hepatitis A infection is estimated to be high in all Member States of the Region.¹ Although not well documented, hepatitis D is endemic in the Region especially in Central and West Africa. The hepatitis E virus exists worldwide. Annually, it causes 20 million infections and 70 000 deaths, with recent outbreaks of infection reported in Uganda, Sudan and Chad.² Viral hepatitis is also an increasing cause of morbidity and mortality among people living with HIV.³ It is estimated that chronic hepatitis B virus infection affects 5–20% of people living with HIV. Hepatitis C affects 5–15% of people living with HIV, although the figure is particularly higher among people who inject drugs.⁴

3. The World Health Assembly, through various resolutions,^{5,6,7} has urged Member States to adopt a comprehensive approach to the prevention and control of viral hepatitis, integrate hepatitis B vaccine into national immunization programmes and immunize health workers against hepatitis B. By the end of 2013, hepatitis B vaccine had been introduced into routine childhood vaccination schedules in 46 countries in the African Region. Coverage with three doses of hepatitis B vaccine was 72% at the end of 2012. Currently, there are reliable and affordable diagnostics for hepatitis B. In addition, effective and safe antiviral agents against hepatitis B and hepatitis C exist.

4. This document highlights the situation of viral hepatitis in the African Region, identifies the issues and challenges and proposes actions for its prevention and control.

ISSUES AND CHALLENGES

5. **Limited data on the burden of disease:** The precise burden of viral hepatitis and the related risk factors in the African Region have not been fully quantified due to limited research on hepatitis, inaccurate data, inadequate surveillance and lack of cancer registries.⁸ The Integrated Disease Surveillance and Response (IDSR) system used by most countries has not been able to identify the etiological agents of acute viral hepatitis and diagnostic opportunities through blood

¹ WHO: Prevention and Control of Viral Hepatitis: Interim Strategy for Global Action 2012-2014; Geneva, World Health Organization, 2013.

² David B. Rein et al. The Global Burden of Hepatitis E Virus Genotypes 1 and 2 in 2005. *Hepatology* 2012; 55: 988-997.

³ Cooper CL et al. Chronic viral hepatitis may diminish the gains of HIV antiretroviral therapy in sub-Saharan Africa. *Int J Infect Dis.* 2009 May; 13(3):302–6.

⁴ WHO: Guidance on prevention of viral hepatitis B and C among people who inject drugs. Geneva, World Health Organization, 2012.

⁵ Resolution WHA45.17: Immunization and vaccine quality. Geneva, World Health Organization, 1992 (WHA45/1992/REC/1).

⁶ Resolution WHA63.18: Viral Hepatitis. Geneva, World Health Organization, 2010 (WHA63/2010/REC/1).

⁷ Resolution WHA67.6: Hepatitis. Geneva, World Health Organization, 2014, WHA67.6.

⁸ Richard Mihigo et al. Control of viral hepatitis infection in Africa: Are we dreaming? *Vaccine* 31: 2013, 341–346.

transfusion services and HIV programmes have not been fully utilised. In addition, clinical differentiation of the types of viral hepatitis (A to E) is not possible and the capacity for serological differentiation is lacking in many settings.

6. **Lack of public awareness:** Viral hepatitis has not received the attention it deserves in the African Region. This is partly due to inadequate knowledge and awareness of the magnitude of the problem among the general population. Policy-makers, health workers, at-risk populations and the general population are not fully aware of the disease, its symptoms and how it is acquired. This makes it difficult for countries to develop appropriate control strategies and for individuals to avoid transmitting hepatitis to their families and partners.

7. **Inadequate primary prevention:** Despite the introduction of the hepatitis B vaccine by 46 Member States and its increased coverage at 6, 10 and 14 weeks after birth, countries have found it challenging to introduce vaccination of newborns to prevent perinatal infection. Only seven countries⁹ provide a birth dose. Furthermore, vaccination of health care workers against hepatitis B as recommended is almost non-existent. Implementation of standard precautionary measures for infection control, including measures against unsafe injections, still poses a challenge in health facilities in the Region. According to the most recent WHO survey, only 34 and 23 countries screen blood for hepatitis B and C respectively, and that increases the risk of transmission of hepatitis B and C through blood transfusion.¹⁰ A large proportion of the population in the Region lack access to clean drinking water and more than 50% face poor sanitation,¹¹ creating favourable environmental conditions for easy spread of hepatitis A and E.

8. **Limited access to diagnosis and treatment:** Treatment exists for chronic hepatitis B and hepatitis C. The treatment has been shown to reduce the risk of chronic liver disease, liver cancer and death. However, the African Region does not have adequate capacity for diagnosis, assessment of the eligibility for initiation, and assessment of the duration of treatment. In addition, the medicines are expensive. For example the average price for the hepatitis C treatment course ranges between US\$ 10 000 and US\$ 20 000.¹² In addition, these medicines often have toxic side-effects, which make them difficult to tolerate. It is also difficult to decentralize the management of viral hepatitis from specialized centres because primary health care workers are not adequately trained and equipped for the diagnosis and treatment of patients with chronic hepatitis B and C.

ACTIONS PROPOSED

9. The following actions proposed for the prevention and control of viral hepatitis should be integrated into existing national disease control plans. This will ensure a more comprehensive approach and leverage opportunities to improve coordination of activities across various programmes.

Member States

10. **Improving data collection to ensure accurate estimation of the disease burden:** Countries should establish strong and well-resourced surveillance to detect viral hepatitis transmission and disease, as an integral part of IDSR. This will require standardized, systematic, on-going collection and management of reliable data from all sources, including serological

⁹ Algeria, Botswana, Cape Verde, Gambia, Nigeria, Sao Tome and Principe and South Africa.

¹⁰ WHO, Blood Safety: Status of blood safety in the WHO African Region: Report of the 2006 Survey; Brazzaville, WHO Regional Office for Africa, 2009.

¹¹ WHO and UNICEF: Progress on sanitation and drinking-water, 2013 update.

¹² MSF, Diagnosis and treatment of hepatitis C: A technical landscape; April 2013.

surveys, sentinel surveillance, laboratory data and clinical data. Where necessary, countries should conduct research to supplement surveillance data to inform control policies.

11. **Raising awareness and knowledge:** Countries should increase awareness of viral hepatitis among policy-makers and the general population especially those at high risk. Information, education and communication tools such as mass media, social media, audio-visual materials, campaign posters, technical factsheets and high level statements or press releases about hepatitis should all be used increasingly. The World Hepatitis Day on 28 July of every year should be commemorated by all countries and given adequate coverage to increase awareness of viral hepatitis.

12. **Strengthening primary prevention:** All countries should increase their coverage of three doses of hepatitis B routine vaccination, in line with the targets set in the Global Vaccine Action Plan¹³ and give a dose preferably within 24 hours after birth. Countries should scale up hepatitis B vaccination for health workers and other at-risk populations. The private sector should be encouraged to support the scale up process. Furthermore, countries should increase access to safe drinking water, improve personal hygiene, ensure safe food for all populations, and promote safe sex practices and proper disposal of sanitary waste within communities.

13. **Ensuring safe blood supply and safe transfusion:** Countries should ensure safe blood transfusion through recruiting only voluntary donors; screening all donated blood for hepatitis B and C virus infection, using highly sensitive and specific assays; and training health workers in safe and rational clinical practices to minimize the need for blood transfusion. Countries should institute infection control practices in all health facilities including safe injection practices and improved management of medical waste.

14. **Strengthening access to testing, care and treatment for viral hepatitis:** National programmes should include access to hepatitis B and C testing and counselling according to standard guidelines, especially in deprived communities. National Essential Medicines lists should be revised to include WHO prequalified medicines for treating chronic Hepatitis B and C. Testing strategies used by other programmes such as HIV/AIDS should be harnessed to improve coverage. Laboratory capacity should be strengthened to support diagnosis and monitoring of patients affected by viral hepatitis. Strong linkages should be established with community-based organizations to increase uptake of testing and improve treatment literacy. In order to scale up treatment, primary health care workers will need further training in the diagnosis, management and treatment of patients with chronic hepatitis B and C.

WHO and partners

15. Partners including donors, technical agencies, civil society and the private sector should promote viral hepatitis control strategies and mobilize resources for the response. WHO will support the development of national strategies and provide technical support to Member States to strengthen hepatitis surveillance and prevention. Guidance for the treatment of chronic hepatitis B and C will be disseminated to all countries in the Region and the current recommendations for the treatment of HIV among people co-infected with hepatitis B or C will be promoted. In addition, WHO will support the development of training materials intended for primary care workers and monitor the progress of implementation of the actions proposed. All partners should negotiate with pharmaceutical companies and advocate for a reduction of the cost of medicines for the treatment of hepatitis B and C.

¹³ WHO: Global Vaccine Action Plan 2011-2020; Geneva, World Health Organization, 2013

16. The Regional Committee is requested to examine this report and adopt the proposed resolution.

Annex: Summary of characteristics of different types of viral hepatitis of public health importance in Africa

Type of Virus	Mode of Transmission	High risk groups or situations	Course of disease	Use of vaccine	Other methods of control
A	<ul style="list-style-type: none"> Water-borne Oro-faecal 	<ul style="list-style-type: none"> Lack of safe water Inadequate sanitation Poor personal hygiene 	Infections are in many cases mild, with most people making a full recovery and remaining immune from further hepatitis A virus infections. However, hepatitis A virus infections can also be severe and life-threatening.	<ul style="list-style-type: none"> In susceptibles as a result of epidemiological assessment 	<ul style="list-style-type: none"> Improving personal and food hygiene Safe water supply and safe disposal of human waste
B	<ul style="list-style-type: none"> Perinatal Mother-to-child transmission Blood-borne Sexual 	<ul style="list-style-type: none"> Infants of infected mothers Children in highly endemic regions Health care workers Unsafe sexual behaviour Injection drug users Skin piercing and tattooing customs 	Some people have acute illness with symptoms that last several weeks. Virus can also cause chronic liver infection that can later develop into cirrhosis or liver cancer.	<ul style="list-style-type: none"> Global infant immunization Birth dose Health care workers Other adult high-risk groups 	<ul style="list-style-type: none"> Safe sex practices Safe skin piercing practices and customs Safe blood products Safe injection practices Risk avoidance training for health care workers Life-long antiretroviral therapy for eligible patients
C	<ul style="list-style-type: none"> Blood-borne 	<ul style="list-style-type: none"> Unsafe therapeutic injections Unsafe blood products Injection drug users Health care workers 	Most people do not exhibit any symptoms. Up to 85% of newly infected individuals develop chronic liver infection that can later develop into cirrhosis or liver cancer.	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Safe sex practices Safe skin piercing practices and customs Safe blood products Safe injection practices Risk avoidance training for health care workers Treatment with injectable pegylated-interferon-alpha (peg-IFN-alpha) combined with ribavirin oral therapy
D	<ul style="list-style-type: none"> Needs hepatitis B virus for replication Perinatal Mother-to-child transmission Blood-borne Sexual 	<ul style="list-style-type: none"> Infants of infected mothers Children in highly endemic regions Health care workers Unsafe sexual behaviour Injection drug users Skin piercing tribal rituals 	Some people have acute illness with symptoms that last several weeks. The virus can also cause chronic liver infection that can later develop into cirrhosis or liver cancer.	<ul style="list-style-type: none"> Global infant immunization Birth dose Health care workers Other adult high-risk groups 	<ul style="list-style-type: none"> Safe sex practices Safe skin piercing practices and customs Safe blood products Safe injection practices Risk avoidance training for health care workers
E	<ul style="list-style-type: none"> Water-borne Oro-faecal 	<ul style="list-style-type: none"> Poor standards of hygiene Low socioeconomic status Pregnancy 	The virus causes acute sporadic and epidemic viral hepatitis. It is mostly asymptomatic or causes very mild illness. Fulminant hepatitis occurs more frequently during pregnancy.	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Improving personal hygiene Safe water supply and safe disposal of human waste.