



# **Viral Hepatitis National Strategic Plan 2018-20**

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## LIST OF ACRONYMS AND ABBREVIATIONS

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AJS	Acute Jaundice Syndrome
ARVs	Anti retroviral Drugs
ART	Anti retroviral therapy
CDC	Center for Diseases Control and prevention
CHAM	Christian Health Association of Malawi
EHP	Essential Health Package
ELISA	Enzyme-Linked Immuno-Sorbent Assay
EPI	Expanded Programme on Immunisation
HAV	Hepatitis A Virus
HBs Ag	Hepatitis B surface antigen
HBV	Hepatitis B Virus
HCC	Hepatocellular carcinoma
HCV	Hepatitis C Virus
HEV	Hepatitis E Virus
HRH	Human Resources for Health
CHWs	Community Health Workers
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HTWG	Hepatitis Technical Working Group
IDSR	Integrated Disease Surveillance & Response
ICT	Information and Communications Technology
IEC	Information Education Communication
IMCI	Integrated Management of Childhood Illness
KCH	Kamuzu Central Hospital
MBTS	Malawi Blood Transfusion Service
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
MoH	Ministry of Health
MSM	Men who have Sex with Men

NCDs	Non Communicable Diseases
NGOs	Non- Government Organizations
NTDs	Neglected Tropical Diseases
PFP	Private for Profit
PNFP	Private not for Profit
PLHIV	People living with HIV
PWID	People Who Inject Drugs
RDTs	Rapid Diagnostic Tests
RMNCH	Reproductive, maternal, newborn and child health
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
SRH	Sexual Reproductive Health
STIs	Sexually Transmitted Infections
TTIs	Transfusion Transmissible Infections
UHC	Universal Health Coverage
UN	United Nations (UN) agencies

## FOREWORD

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Viral hepatitis is an international public health challenge, comparable to other major communicable diseases including HIV, tuberculosis and malaria. Despite the significant burden it places on communities, viral hepatitis has been largely ignored as a health and development priority until recently.

In 2010 and 2014, the World Health Assembly adopted 2 resolutions on viral hepatitis, urging Member States to recognize and address the burden of viral hepatitis through improved prevention and control efforts. In 2012, the World Health Organization (WHO) issued a framework for global action to prevent and control viral hepatitis infection, which aligned action along four strategic themes of raising awareness, promoting partnerships and mobilizing resources; evidence-based policy and data for action; prevention of transmission; and screening, care and treatment. The Ministry of Health in Malawi has taken this bold step to implement these recommendations in line with the current Health Sector Strategic Plan 2017-22.

The strategy describes the contribution of the health sector in Malawi to combating viral hepatitis, towards its elimination as a public health threat. It promotes synergies between viral hepatitis and other health issues, and aligns the hepatitis response with other global health and development strategies, plans and targets.

The Ministry anticipates that this strategic plan will serve as a guiding document to national efforts for the prevention and control of viral hepatitis and associated chronic liver disease and hepatocellular carcinoma. It is against this background that the Ministry calls for coordinated and concerted efforts from the Government and Development partners in addressing the viral hepatitis burden in Malawi.

**Honourable Mr. Atupele Muluzi**

**Minister of Health**

**December 2017**

## ACKNOWLEDGEMENTS

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The Ministry cordially acknowledges the work of the Viral Hepatitis Technical Working Group in guiding the development of this strategy and for all the consultative meetings to review the document to suit the Malawi context. We are grateful to our colleagues at WHO and in particular, Dr. Fabian Ndenzako from the WHO Regional Office, for technical assistance through out the process. Special gratitude goes to the local consultant, Dr. Edwin Libamba for his commitment and hard work in leading this work.

**Dr. Dan Namarika**  
**Secretary for Health**  
**December 2017**

## EXECUTIVE SUMMARY

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Viral hepatitis is an inflammation of the liver caused by one of the five hepatitis viruses, referred to as types A, B, C, D and E. While all these viruses cause liver disease, they vary significantly in terms of epidemiology, natural history, prevention, diagnosis and treatment.

Hepatitis A virus (HAV) is usually transmitted by the faecal-oral route, either through person-to-person contact or ingestion of contaminated food or water. Hepatitis B virus (HBV) and hepatitis C virus (HCV) are infections that can be spread through contamination by blood and other body fluids. Hepatitis D virus (HDV) infections occur exclusively in persons infected with HBV. Like HAV, Hepatitis E virus (HEV) is transmitted through consumption of contaminated water or food.

Immunization is the most effective strategy for prevention of hepatitis B virus infection. Comprehensive prevention strategies for both hepatitis B and hepatitis C viruses include provision of safe blood products, safe injection practices, harm reduction services for people who inject drugs and promotion of safe sex. For viral hepatitis A and E, prevention is through improved sanitation, food safety and vaccination.

According to the WHO Global Hepatitis Report 2017, viral hepatitis caused 1.34 million deaths in 2015, a number comparable to deaths caused by tuberculosis and higher than those caused by HIV. However, the number of deaths due to viral hepatitis is increasing over time, while mortality caused by tuberculosis and HIV is declining. Most viral hepatitis deaths in 2015 were due to chronic liver disease (720 000 deaths due to cirrhosis) and primary liver cancer (470 000 deaths due to hepatocellular carcinoma). Globally, in 2015, an estimated 257 million people were living with chronic HBV infection, and 71 million people with chronic HCV infection. Approximately 47% of viral hepatitis deaths are attributable to HBV while 48% is attributable to HCV and the remainder attributable to hepatitis A and E viruses.

Prevention and control of hepatitis can therefore make a significant contribution to saving lives by preventing liver cirrhosis, cancer and thereby reducing the mortality attributed to hepatitis B and hepatitis C.



In Malawi, the prevalence of HBV and HCV in the general population is not well known and the mortality related to these infections is not accurately established owing to limited data available to the Ministry of Health through routine health information systems, surveillance and research.

However, a study on seroprevalence and trends in transfusion transmissible infections among voluntary non-remunerated blood donors at the Malawi Blood Transfusion Service (MBTS), indicated HBsAg prevalence at 3.6% and that of HCV at 1.0% for the year 2015. In the same study, comparative data for the year 2011 showed HBV prevalence of 4.7% while that of HCV was 2.4%. However, data from the Kamuzu Central Hospital's Serology Department in Lilongwe indicate higher prevalence rates of 15% HBV and 1.5% HCV in 2015. Anecdotal information from some district hospital laboratories indicates HBV prevalence of about 7-8%, and 0.01% for HCV.

The health sector in Malawi has registered significant achievements in the control of infectious diseases in the previous years. However, there are challenges that need to be addressed in order to improve the quality of service delivery for viral hepatitis prevention and control. There is lack of trained health care providers and lack of accessibility of viral hepatitis services at all levels of the health care system. Additionally, there are insufficient fund mobilization frameworks at the state and national levels, deficiency of essential drugs and advanced treatment as well as a lack of viral hepatitis data management.

The strategy describes the contribution of the health sector to combating viral hepatitis, towards its elimination as a public health threat. It promotes synergies between viral hepatitis and other health issues, and aligns the hepatitis response with other health and development strategies, plans and targets. It positions the response to viral hepatitis within the context of universal health coverage - an overarching health target of the 2030 Agenda for Sustainable Development. The strategy outlines a way ahead, and provides:

- A vision where viral hepatitis transmission is halted and everyone living with viral hepatitis<sup>[[SEP]]</sup> has access to safe, affordable and effective care<sup>[[SEP]]</sup> and treatment;
- A goal of reducing morbidity and mortality due to viral hepatitis towards eliminating viral hepatitis as a major public health threat in Malawi;

The strategy outlines the following specific objectives:

- Creating an enabling environment for managing viral hepatitis through policy development, advocacy and inclusion and stakeholder participation
- Providing effective and affordable preventive services including provision of vaccines
- Providing simple and reliable screening and diagnostic services for viral hepatitis
- Providing care and treatment services in the context of continuum of care and in accordance with universal health coverage
- Utilizing national data generated from research as input for evidence-based decision making

Achieving these objectives will require a radical change in the hepatitis response and will mean that hepatitis is elevated to a higher priority in the public health responses in Malawi.

# 1 BACKGROUND AND EPIDEMIOLOGY

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Viral hepatitis is an inflammation of the liver caused by one of the five hepatitis viruses, referred to as types A, B, C, D and E. While all these viruses cause liver disease, they vary significantly in terms of epidemiology, natural history, prevention, diagnosis and treatment.

Hepatitis A virus (HAV) is usually transmitted by the faecal-oral route, either through person-to-person contact or ingestion of contaminated food or water. Hepatitis B virus (HBV) and hepatitis C virus (HCV) are infections that can be spread through contamination by blood and other body fluids. Hepatitis D virus (HDV) infections occur exclusively in persons infected with HBV. Like HAV, Hepatitis E virus (HEV) is transmitted through consumption of contaminated water or food.

The most common hepatitis diseases are due to the hepatitis B virus (HBV), the hepatitis C virus (HCV) and the hepatitis D virus (HDV)<sup>1</sup>. There are effective tools and strategies for the prevention and treatment of hepatitis, however low awareness of hepatitis among the general population and key populations, has limited their impact. Since knowledge about the various risks and transmission routes is central to preventing the spread of hepatitis, increasing awareness is an important component of the global public health response<sup>2</sup>. Due to its often long asymptomatic, preclinical phase, viral hepatitis is a silent epidemic as most people are unaware of their infection<sup>3</sup>.

## 1.1. Global Burden of Viral Hepatitis

According to the WHO Global Hepatitis Report 2017, viral hepatitis caused 1.34 million deaths in 2015, a number comparable to deaths caused by tuberculosis and higher than those caused by HIV. However, the number of deaths due to viral hepatitis is increasing over time, while mortality

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<sup>1</sup> World Health Organization. Prevention and Control of Viral Hepatitis Infection: Framework for Global Action. 1–28 (2012). at <[http://www.who.int/csr/disease/hepatitis/GHP\\_framework.pdf](http://www.who.int/csr/disease/hepatitis/GHP_framework.pdf)>

<sup>2</sup> World Health Organization (WHO). *Global policy report on the prevention and control of viral hepatitis IN WHO MEMBER STATES*. (2013).6.

<sup>3</sup> Lazarus, J. V, Safreed-Harmon, K. & Sperle, I. Global policy report on the prevention and control of viral hepatitis: In WHO Member States. *Glob. Alert Response* i–208 (2013). at <[http://apps.who.int/iris/bitstream/10665/85397/1/9789241564632\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/85397/1/9789241564632_eng.pdf)>

caused by tuberculosis and HIV is declining. Most viral hepatitis deaths in 2015 were due to chronic liver disease (720 000 deaths due to cirrhosis) and primary liver cancer (470 000 deaths due to hepatocellular carcinoma). Globally, in 2015, an estimated 257 million people were living with chronic HBV infection, and 71 million people with chronic HCV infection<sup>4</sup>. Approximately 47% of viral hepatitis deaths are attributable to HBV while 48% is attributable to HCV and the remainder attributable to hepatitis A and E viruses.<sup>5</sup>

Prevention and control of hepatitis can therefore make a significant contribution to saving lives by preventing cancer and thereby reducing the mortality attributed to hepatitis B and hepatitis C viruses. Viral hepatitis is also a growing cause of mortality among people living with HIV. About 5-15% of all people living with HIV are co-infected with HCV and 5-20% with HBV. About 2.9 million people living with HIV are co-infected with HCV while 2.6 million people are co-infected with HBV<sup>6</sup>.

## **1.2. The Malawi Health Care System**

Health services in Malawi are provided by public, private for profit (PFP) and private not for profit (PNFP) sectors. The public sector includes all health facilities under the Ministry of Health (MOH), district, town and city councils, Ministry of Defense, Ministry of Internal Affairs and Public Security (Police and Prisons) and the Ministry of Natural Resources, Energy and Mining.

Health services in the public sector are free-of-charge at the point of use. The PFP sector consists of private hospitals, clinics, laboratories and pharmacies. Traditional healers are also prominent and would be classified as PFP. The PNFP sector comprises of religious institutions, non-governmental organisations (NGOs), statutory corporations and companies. The major religious provider is the Christian Health Association of Malawi (CHAM), which provides approximately 29% of all health services in Malawi. Most private and private-not-for-profit providers charge user fees for their services<sup>7</sup>.

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<sup>4</sup> World Health Organization (WHO). *Global Hepatitis Report, 2017*

<sup>5</sup> World Health Organization (WHO). *Manual for the Development and Assessment of National Viral Hepatitis Plans, A Provisional Document*. September 2015

<sup>6</sup> World Health Organization (WHO). *Global health sector strategy on viral hepatitis 2016-2021*. June 2016

<sup>7</sup> Ministry of Health, *Health Sector Strategic Plan II 2017-22*

Malawi's health system is organized at four levels namely: community, primary, secondary and tertiary. These different levels are linked to each other through an established referral system. Community, Primary and Secondary level care falls under district councils. The District Health Officer (DHO) is the head of the district health care system and reports to the District Commissioner (DC) who is the Controlling Officer of public institutions at district level.

### 1.3. Human Resources for Health

Persistent gaps in human resource capacity exist across all cadres, districts and health care levels within Malawi's public sector. The MOH has an estimated 23,188 personnel out of a total of 42,309 positions that exist in the MOH staff establishment working in the public health sector representing a 45% vacancy rate. For selected eight frontline categories of technical staff, only 17,298 positions are filled of 25,755 for both CHAM and MOH representing a 33% vacancy rate (See Table 1 below)<sup>8</sup>.

**Table 1: Vacancy rate of technical staff against established position for MOH and CHAM<sup>9</sup>**

Cadre	Establishment	Filled	Vacant	% Vacant
Medical Officer	398	284	114	29%
Clinical Officer	3,135	1,159	1,976	63%
Nursing Officer	3,275	1,098	2,177	66%
Nurse Midwife Technician	8,626	3,475	5,151	60%
Medical Assistant	1,506	1,199	307	20%
Pharmacy Technician	1,063	218	845	79%
Lab Technician	1,053	397	656	62%
Health Surveillance Assistant	6,699	9,468	(2,769)	-41%
<b>Total</b>	<b>25,755</b>	<b>17,298</b>	<b>8,457</b>	<b>33%</b>

### 1.4. Viral Hepatitis Burden in Malawi

In Malawi, the prevalence of HBV and HCV in the general population is not well known and the mortality related to these infections is not accurately established owing to limited data available to the Ministry of Health through routine health information systems, surveillance and research. A study on seroprevalence and trends in transfusion transmissible infections among voluntary non-remunerated blood donors at the Malawi Blood Transfusion Service (MBTS) indicated HBsAg

<sup>8</sup> Ministry of Health, *Health Sector Strategic Plan II 2017-22*

<sup>9</sup> Ministry of Health, *HRH Assessment Report, June 2016*

prevalence at 3.6% and that of HCV at 1.0% for the year 2015. In the same study, comparative data for the year 2011 showed HBV prevalence of 4.7% while that of HCV was 2.4%<sup>10</sup>. Data from the Kamuzu Central Hospital's Serology Department in Lilongwe indicate higher prevalence rates of 15% HBV and 1.5% HCV in 2015. Anecdotal information from some district hospital laboratories indicates HBV prevalence of about 7-8%, and 0.01% for HCV<sup>11</sup>.

In a publication by Nyirenda M et al., of 226 adults, there was HBsAg in 17.5% and HCV prevalence of 4.5%, with HIV/HBV coinfection rate of 20.4% and HIV/HCV coinfection rate of 5% in those with HIV<sup>12</sup>. However, these data are not representative of the general population owing to the small sample size and the fact that these data were derived from patients admitted on the wards of a large teaching hospital.

One year data for the period July 2016 to June 2017 from 34,858 replacement donors tested for HBV showed HBV prevalence of 5% while similar data from 24,535 people tested for HCV showed HCV prevalence of 2%<sup>13</sup>. However, this should be interpreted with caution as the data are not representative of the general population.

### **1.5. Current viral hepatitis preventive strategies in Malawi**

Significant effort is being made to reduce viral hepatitis transmission in Malawi. The EPI policy on vaccination in children developed in 2012 stipulates administration of the vaccine at 6, 10 and 14 weeks after birth but the policy is silent on the birth dose.

Malawi Blood Transfusion Services (MBTS) recruits donors and provide safe blood to all hospitals (public and private). There are guidelines for safe blood transfusion in Malawi, which prescribe which infections to screen for. All donated blood at MBTS is screened for the four blood transmissible conditions: HBV, HCV, HIV and Syphilis. The Ministry of Health has a National Blood Policy and associated SOPs, which govern collection and screening of blood from donors. Systems are also in place for notification, counselling and onward referral of donors if

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<sup>10</sup> B. M'baya, V. Jumbe, V. Samuel, R. M'bwana, C. Mangani, *seroprevalence and trends in transfusion transmissible infections among voluntary non-remunerated blood donors at the Malawi Blood Transfusion Service (MBTS)*, NAC Research and Dissemination Conference, 2017

<sup>11</sup> Ministry of Health, *Malawi viral hepatitis rapid assessment report*, 9-13 May 2016

<sup>12</sup> Nyirenda M et al, *J Infect.* 2008 Jul;57(1):72-7. doi:10.1016/j.jinf.2008.05.004. Epub 2008 Jun 13

<sup>13</sup> Ministry of Health, HIV Department, *Integrated HIV Programme Report April – June 2017*

abnormalities are found. There are National Clinical Guidelines for Appropriate Use of Blood and Blood Products which facilitate reduction on unnecessary transfusions.

The Environmental Health Department in MoH is responsible for some aspects of Infection Prevention and Control (IPC) such as Health Care Waste Management, Food hygiene, Water and Sanitation. Policies are available for both health care waste management and sanitation. Malawi uses disposable single use syringes to enhance injection safety and disposal of infectious waste in the country is through incineration or use of secure pits in communities where incineration is not feasible. The Department also ensures appropriate use of personal protective equipment (PPE) within health facilities.

Since the advent of HIV there has been extensive social mobilization on safe sex practices through different communication channels. Food hygiene is regulated by the Public Health Act, which relates to food handlers (personal hygiene) and premises (inspections, good housekeeping, state of repair to safeguard food and people working there). The Ministry of Agriculture, Irrigation and Water Development and the Malawi Bureau of Standards (MBS) are jointly responsible for water standards on safety and quality. There are also drinking water guidelines adapted from the generic WHO guidance.

#### **1.6. Challenges with implementation of viral hepatitis preventive strategies in Malawi**

Malawi currently has no policy in place to vaccinate newborns with hepatitis B vaccine within 24 hours of birth and there is no policy to vaccinate health care workers with hepatitis B vaccine prior to starting work. Hepatitis B vaccine is currently not an EPI stock item and as such EPI is not involved in HBV vaccination for HCWs and other high-risk groups.

Currently, MBTS is unable to meet the national demand of the required 120,000 units per year to reach out to all facilities<sup>14</sup>. As a result, some districts still do their own recruitment of donors on case-by-case basis and do not always test for HBV and HCV<sup>15</sup>.

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<sup>14</sup> MBTS, *post-baseline situational analysis of blood safety in Malawi*

<sup>15</sup> MOH, *HIV integrated quarterly programme report 2016-17*

No population size estimate for injecting drug users has been conducted in Malawi but it is perceived to be marginal and no specific interventions on harm reduction have been put in place.

### **1.7. Opportunities to enhance viral hepatitis response in Malawi**

Opportunities exist for enhancing and expanding the response through investments in key intervention areas such as vaccination of pregnant women and giving a birth dose in addition to scaling up Pentavalent vaccination; Access to screening and vaccination for at risk groups including health workers, pregnant women, military and commercial sex workers; MoH should build on the experience of EPI and consider integrating Hepatitis B vaccine within the EPI supply chain; There is need to build the necessary capacity (infrastructure and staff competencies) to increase access to screening, diagnosis and treatment of people with chronic hepatitis infection. The MoH should develop clear screening guidelines/SOPs for HBV and HCV including developing algorithms.

### **1.8. Focused response to at risk populations**

In Malawi, populations most affected and at risk include people who have been exposed to viral hepatitis through close personal contact<sup>16</sup>, unsafe blood supplies and unsafe medical injections and procedures, those exposed through mother to child transmission and those exposed through sexual transmission including young people and adolescents and commercial sex workers.

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<sup>16</sup> McMahon BJ. *Epidemiology and natural history of hepatitis B*. In *Seminars in liver disease* 2005 Feb (Vol. 25, No. 5), pp. 3-8). Published in 2005



# 2

## VISION, GOAL, OBJECTIVES AND TARGETS

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### VISION

A country where people living with viral hepatitis have access to safe and affordable care and treatment services and where new transmission is eliminated.

### GOAL

Reduce morbidity and mortality due to viral hepatitis by 10% by 2020 towards a 65% reduction by 2030.

### OBJECTIVES

- Create an enabling environment for managing viral hepatitis through policy development, advocacy and stakeholder participation
- Provide effective and affordable preventive services including provision of vaccines
- Provide simple and reliable screening and diagnostic services for viral hepatitis
- Provide care and treatment services in the context of continuum of care and in accordance with universal health coverage
- Utilize viral hepatitis data as evidence for decision making

# 3 DEVELOPMENT OF POLICY GUIDELINES AND STRATEGIC PLANS

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## 3.1 Health sector strategic plan 2017-22

Since 2004, Malawi has implemented an Essential Health Package (EHP), containing cost effective interventions delivered free of charge at the point of delivery to Malawians. The aim of the EHP has been to address the burden of disease by delivering cost-effective interventions that target the top diseases and conditions in terms of burden of disease. Diseases and conditions were clustered under the categories of Reproductive, Maternal, Neonatal and Child Health conditions; Communicable Diseases and Non-Communicable Diseases.

The Health Sector Strategic Plan II (HSSP II) 2017-2022 is the health sector's medium term strategic plan outlining objectives, strategies and activities and guiding resources over the period 2017-2022. It succeeds the HSSP I (2011-2016). HSSP II builds on the successes achieved under the previous plan while addressing areas where targets were not met and progress was slow.

The goal of the HSSP II is to move towards Universal Health Coverage (UHC) of quality, equitable and affordable quality health care with the aim of improving health status, financial risk protection and client satisfaction. The HSSP II aims to further improve health outcomes through the provision of a revised essential health package (EHP) and health systems strengthening for efficient delivery of the EHP. Specifically, the HSSP II sets eight strategic objectives for Malawi's health sector – each with strategies and targets to implement by 2022 in the following areas such as health service delivery; socio-economic determinants; infrastructure & medical equipment, human resources, medicines & medical supplies, health information systems, governance and health financing.

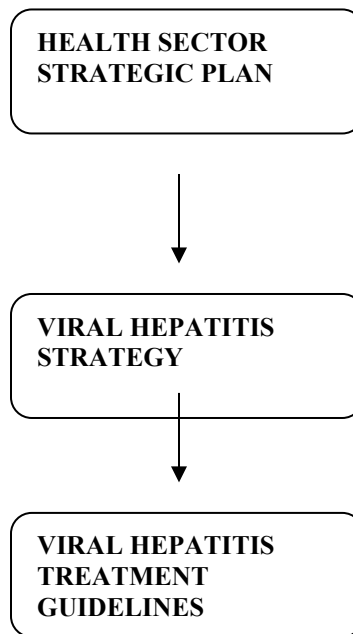
The HSSP II outlines 11 priority EHP interventions in the following areas:

- Reproductive, maternal, newborn and child health (RMNCH)
- Vaccine preventable diseases
- Malaria
- Integrated management of childhood illnesses (IMCI)
- Community health
- Neglected tropical diseases (NTDs)
- HIV/AIDS
- Nutrition
- Tuberculosis
- Non-communicable diseases and
- Oral health

### **3.2 Development of viral hepatitis strategy and treatment guidelines**

The development of the national viral hepatitis strategy is in line with the current health sector strategic plan 2017-22 described above. The viral hepatitis strategy provides a platform to reduce morbidity and mortality due to viral hepatitis towards elimination of viral hepatitis as a major public health threat in Malawi by 2030. It is envisioned that hepatitis management guidelines will be developed to complement the strategy and to provide the necessary tools to health care workers to effectively manage acute and chronic forms of hepatitis.

**Fig.1: Malawi Framework for national health policy, strategy and treatment guidelines**



### **3.3 The viral hepatitis program in Ministry of Health**

Viral hepatitis has been established as a programme in the Ministry of Health, under the Directorate of HIV and AIDS. There is a designated section coordinating the viral hepatitis response. The viral hepatitis program in the Ministry of Health has a Technical Working Group (TWG) consisting of members from departments within the Ministry of Health and other stakeholders involved in service delivery of Viral Hepatitis. Being a vaccine preventable disease, Viral Hepatitis is therefore covered as a priority EHP intervention in the HSSP II.

### **3.4 Contribution to the 2030 Agenda for Sustainable Development**

The Viral Hepatitis Strategy will contribute to the attainment of the 2030 Agenda for Sustainable Development and specifically to the health related Goal 3, target 3.3. The strategy describes priority actions required to achieve the global hepatitis targets and how the hepatitis response can contribute to the achievement of universal health coverage, other health targets and the broader 2030 Agenda. It is aligned with other relevant health strategies and plans, including those for HIV, sexually transmitted infections, safe injections, blood safety, vaccines, tuberculosis and non-communicable diseases, and responds to the requirements of World Health Assembly resolutions on viral hepatitis that were adopted in 2010 and 2014.



# 4

## PREVENTING TRANSMISION OF VIRAL HEPATITIS

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Implementing scientifically proven, culturally acceptable and affordable preventive methods are essential in eliminating new viral hepatitis infections and containing viral hepatitis as a public health problem. Priority interventions for preventing viral hepatitis in Malawi include advocacy and awareness, use of safe and effective vaccines, improving blood safety, enhancing infection prevention and control in health care settings, preventing mother-to-child transmission of viral hepatitis, promoting safer sex and ensuring access to safe food and water, advocacy and awareness.

### **4.1 Partnerships, Advocacy and community action**

The objectives for high-level advocacy include:

- To improve public knowledge of hepatitis virus infection
- To improve access to hepatitis testing and treatment services
- To increase engagement of government and partners
- To improve knowledge of their hepatitis epidemics based on improved surveillance efforts resulting in stronger national plans
- To scale up hepatitis testing, prevention, treatment and care services, and move faster towards achieving the targets to eliminate hepatitis by 2030.

The proposed advocacy is achieved through holding high profile national events (such commemoration of world hepatitis day), engagement of national stakeholders and health professionals, engaging the media and dissemination of hepatitis information products.

### **4.2 Providing safe and effective vaccines**

Effective vaccines exist for preventing viral hepatitis A, B and E infections. Hepatitis B virus immunization is a critical intervention for the elimination of hepatitis B virus epidemics.

**Key Activities:**

- Strengthen provision of hepatitis B virus vaccine in national childhood immunization schedules
- Vaccinate all newborn babies with hepatitis B vaccine within 24 hours of birth
- Conduct catch-up hepatitis B virus vaccination for children, adolescents and HBV negative blood donors.
- Offer hepatitis B virus vaccination to people who are at increased risk of acquiring and transmitting the virus such as health care workers, military, commercial sex workers and prisoners.

**4.3 Improving blood safety**

The risk of transmission of viral hepatitis B and C through the transfusion of contaminated blood and blood products may occur as a result of the absence or poor quality of screening in blood transfusion services. The target for Malawi is to have all of blood donations screened in a quality assured manner by 2020. Published studies in Malawi suggest low confirmed cases of hepatitis C such that the burden of hepatitis C is thought to be very low.<sup>17, 18</sup>

**Key Activities:**

- Estimate the prevalence of hepatitis B and C in Malawi
- Promote the rational use of blood and blood products to prevent unnecessary blood transfusions and ensure reliable screening of blood for viral hepatitis B and C
- Implement quality control measures for laboratory testing of viral hepatitis B and C to ensure a reliable supply of quality assured assays
- Establish systems of surveillance, haemovigilance and monitoring of the incidence and prevalence of viral hepatitis infection in blood donors and on post-transfusion hepatitis risk

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<sup>17</sup> Candotti D, Mundy C, Kadeweile G, Nkhoma W, Bates I, Allain JP. *Serological and molecular screening for viruses in blood donors from Ntcheu, Malawi: high prevalence of HIV-1 subtype C and of markers of hepatitis B and C viruses*. Journal of medical virology. 2001 Sep 1;65 (1):1-5.

<sup>18</sup> Chasela CS, Wall P, Drobeniuc J, King CC, Teshale E, Hosseinipour MC et al. *Prevalence of hepatitis C virus infection among human immunodeficiency virus-1-infected pregnant women in Malawi: the BAN study*. Journal of Clinical Virology. 2012 Aug 31;54(4):318-20.

#### **4.4 Enhancing infection prevention and control in health care settings and communities**

The Ministry of health in Malawi has developed guidelines for infection prevention and control that address hand hygiene, handling and disposal of used sharps, management of clinical waste and safe cleaning of equipment. The guidelines also have management of occupational exposure for HBV and HCV among health workers and safe disposal of clinical waste. Consistent implementation of infection control practices including safe injection measures in health care and community settings will reduce transmission of viral hepatitis to both users of health care services as well as health care workers.

##### **Key Activities:**

- Strengthen and sustain routine infection prevention and control practices in health care settings, both public and private including laboratories.
- Implement the safe injection policy with the aim of reducing unnecessary injections and promote use of safety-engineered injection devices
- Provide health workers with free immunization against hepatitis B
- Provide post exposure prophylaxis to health workers and other high risk individuals
- Promote safe practices when conducting traditional scarification, traditional circumcisions, hair shaving and other local rituals involving contact with blood.

#### **4.5 Preventing mother-to-child transmission of viral hepatitis**

Transmission of hepatitis B virus in highly endemic areas often occurs from infected mothers to their infants during the perinatal period. Elimination of mother to child transmission of hepatitis B virus will require a comprehensive approach that includes prevention of hepatitis B virus infection in young women, hepatitis B virus testing, care of pregnant women with chronic hepatitis B virus infection, delivery of hepatitis B virus vaccine to the infant within 24 hours of birth and safety delivery practices.

##### **Key Activities:**

- Provide timely administration of hepatitis B virus birth-dose vaccine with specific attention given to births occurring outside health care settings



- Update national policies and guidelines on MNH based on evolving WHO guidance on elimination of mother-to-child transmission of viral hepatitis

#### **4.6 Promoting safer sex**

Safer sex practices including minimizing the number of sexual partners and consistent and correct use of male and female condoms offer powerful protection against viral hepatitis B and C and a range of other sexually transmitted infections.

##### **Key Activities:**

- Promote behavior change to avoid unprotected and multiple sexual activity
- Increase the demand and supply of male and female condoms especially to populations most at risk of hepatitis B and/ or C virus infection through social marketing programmes.
- Ensure that the national hepatitis B virus vaccination policy includes persons at increased risk of acquiring hepatitis B virus infection through sexual contact

#### **4.7 Ensuring access to safe food and water**

Assuring access to safe food, drinking water and sanitation systems can dramatically reduce the transmission of viral hepatitis A and E.

##### **Key Activities:**

- Achieve universal and equitable access to safe and affordable drinking water to all
- Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women, girls and those in vulnerable situations
- Support and strengthen the participation of local communities in improving water and sanitation management

# 5

## DIAGNOSING HEPATITIS INFECTION

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Early diagnosis of hepatitis infection is critical for effective treatment and care. Yet in Malawi, the number of persons with chronic viral hepatitis aware of their status remains unknown. Awareness is lacking, reliable diagnostics that are appropriate for the setting of intended use and testing services are not sufficiently available, and laboratory capacity is weak.

Increasing early diagnosis requires overcoming those shortcomings, using effective testing approaches, quality-assured diagnostics and linking the results of testing to treatment and care services. This strategy calls for a major increase in diagnosis of viral hepatitis infections with 30% of people infected knowing their status by 2020.

As a way of complementing this strategy, it is envisioned that The Ministry of Health in Malawi will develop comprehensive guidelines for the screening and confirmation of persons with viral hepatitis infection.

### **Key Activities:**

- Develop national algorithm for testing viral hepatitis infection (HBV and HCV)
- Strengthen the national laboratory system for quality diagnosis of viral hepatitis which include training of laboratory staff, supervision as well as application of quality control in testing procedures and proficiency testing
- Strengthen the capacity of CHSU Public Health Laboratory to act as a confirmatory centre and also locally validate WHO prequalified reagents
- Ensure a sustainable provision of validated reagents and supplies
- Establish key linkages between testing and other services to improve referral and access to quality assured treatment and other supportive services

*A detailed account of screening and diagnosing hepatitis including testing algorithms will be presented in the guidelines described above.*

# 6

## TREATING HEPATITIS AND PROVIDING SUPPORTIVE CARE

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### 6.1 Expanding treatment for viral hepatitis

Effective clinical management of viral hepatitis reduces the individual, social and health burden related to the infection. As indicated above, it is proposed that the Ministry of Health in Malawi develop comprehensive guidelines for the care and treatment of persons with viral hepatitis infection. For HBV and HCV infections, these national guidelines will address the following key activities:

#### Key Activities:

- Initial clinical assessment including:
  - Assessment of liver disease stage based on clinical criteria or non-invasive tests
  - Assessment to reduce individual risk of disease progression including screening for alcohol use and counseling to reduce alcohol intake
- Assessment for starting antiviral treatment including:
  - Screening and testing for co-morbidities and other risk factors in order to inform treatment plans
  - Prioritization for treatment of individuals according to clinical criteria
  - Monitoring of patients for whom treatment has been deferred
- Provision of antiviral treatment including:
  - Optimal first line therapeutic regimen

- Monitoring response to treatment
- Monitoring for and managing adverse effects

## **6.2 Providing supportive care**

In addition to antiviral treatment, supportive care is required for many, including the management of decompensated liver disease and hepatocellular carcinoma. Treatment of advanced liver cirrhosis and hepatocellular carcinoma, including liver transplantation and chemotherapy, is very limited in Malawi, highlighting the need to provide access to good quality palliative and end-of-life care including access to adequate analgesia.

*A detailed account of treating hepatitis and providing chronic care will be available in the treatment guidelines described above.*

# 7

## MONITORING HEALTH SECTOR RESPONSE TO HEPATITIS

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A robust strategic information system is essential for advocating, decision making, funding, planning and implementing more effective viral hepatitis interventions. Relevant data may be derived from a wide variety of sources including national HMIS, program reviews, surveys, surveillance and case studies. These data should be analyzed holistically and strategically to improve the overall functioning of the program.

### 7.1 Estimate the national burden due to chronic hepatitis

#### Key Activities:

- Conduct sero-surveys for hepatitis B and C every 5-10 years.
- Conduct sentinel surveillance for liver cirrhosis in the 4 Central Hospitals (i.e. Queen Elizabeth, Kamuzu, Zomba and Mzuzu).
- Conduct surveillance for hepatocellular carcinoma due to chronic hepatitis.
- Conduct sero-surveys in high risk groups e.g. commercial sex workers.

### 7.2 Monitor trends in chronic hepatitis over time

#### Key activity:

- Analyse and report annual national surveillance and research data

### 7.3. Strengthen the capacity of the health sector to monitor the viral hepatitis prevention and treatment program

Building the capacity of the national monitoring and evaluation system is crucial in monitoring the viral hepatitis prevention and treatment program. Setting national targets and indicators for the national program will enable the country to monitor and report the status of the response. The viral

hepatitis indicators need to be built into the routine HMIS operations that generate data and information on a periodic and on-going basis to provide evidence for program decisions.

**Key Activities:**

- Adapt/develop standard global and national indicators to monitor the viral hepatitis program in the country;
- Include relevant viral hepatitis screening, care & treatment and programmatic/ operational indicators into the national HMIS recording and reporting system;
- Develop comprehensive viral hepatitis M&E framework;
- Develop viral hepatitis monitoring and evaluation tools/instruments for data collection, recording and reporting (paper based and electronic formats);
- Avail monitoring tools at service delivery points;
- Provide training on viral hepatitis monitoring and evaluation tools/instruments at different levels (public and private) for health care providers, HMIS and M&E
- Provide training on quality assurance (internal and external) in all aspects (health service delivery, screening, care and treatment, data collection and analysis)
- Ensure data analysis and utilization at different levels (health facility, <sup>[1]</sup>district and national level)
- Conduct regular supportive supervision and joint review meetings bi-annually

#### **7.4 Conduct epidemiological and operations research on viral hepatitis**

Prioritization and conducting of hepatitis research agenda is important to inform policy decisions and implementation. Investment in information systems involving research and routine data collection and reporting is key to opening opportunity for funding hepatitis interventions in Malawi.

**Key Activities:**

- Develop viral hepatitis research agenda
- Conduct operations research in line with the research agenda
- Provide timely dissemination of research results to inform policy and best practice



## ANNEX 1: IMPLEMENTATION PLAN OF THE VIRAL HEPATITIS NATIONAL STRATEGY 2018-20

Strategy 1: Reduce the impact of viral hepatitis on people and society								
Goal	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
Raise awareness of viral hepatitis	1.1 Increase the knowledge of the general population and key populations on risks and protection from viral hepatitis	Commemorate world hepatitis day on 28 July	% Of students who know risk factors and preventive measures		25%	50%	75%	MoH
		Print IEC materials on hepatitis for schools and universities						
	1.2 Increase awareness of health care providers in screening high risk populations	Prepare IEC materials for primary level health care workers	% Primary level HCW received information on hepatitis		25%	50%	75%	MoH
		Prepare information material on hepatitis serology for primary level HCW	% Primary level HCW who can interpret serology for referral		50%	70%	90%	MoH
	1.3 Reduce stigma and discrimination associated with hepatitis in the community	Remove barriers that may result in stigma and discrimination such as mandatory tests for employment	Reduced level of stigma and discrimination in the community		□	□	□	MoH

Strategy 2: Preventing transmission of viral hepatitis								
Goal	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
Reduce new viral hepatitis infections	2.1 Provide safe and effective vaccines	Strengthen routine provision of hepatitis B virus vaccine in national childhood immunization schedules	Pentavalent 3 coverage	91%	93%	94%	95%	MoH
		Provide hepatitis B virus vaccine to newborns within 24 hours of birth	% Newborns vaccinated with HBV vaccine	No policy in place	20%	40%	80%	MoH
		Conduct catch-up hepatitis B virus vaccination for children or adolescents with low coverage	# Catch up campaigns conducted	No data				MoH
		Offer hepatitis B virus vaccination to people who are at increased risk of acquiring and transmitting the virus such as health care workers, military, commercial sex workers and prisoners	% High risk vaccinated	Policy exists but no data			15%	MoH
	2.2 Improve blood safety	Promote the rational use of blood and blood products to prevent unnecessary blood transfusions and ensure reliable screening of blood for viral hepatitis B and C	% Blood screened for HBV and HCV	100%	100%	100%	100%	MoH
		Implement quality control measures for laboratory testing of viral hepatitis B and C to ensure a reliable supply of quality assured assays	Stock out of validated reagents for HCV and HBV	0%	0%	0%	0%	MoH
		Establish systems of surveillance, haemovigilance and monitoring of the incidence and prevalence of viral hepatitis infection in blood donors and on post-transfusion hepatitis risk	Prevalence detected in blood donors	□	□	□	□	MoH

Strategy 2: Preventing transmission of viral hepatitis								
Goal	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
		Strengthen the capacity of reference lab to confirm HBV and HCV infections and to validate WHO prequalified reagents	List of validated reagents Prevalence based on confirmed cases					
	2.3 Enhance infection prevention and control in health care settings.	Strengthen and sustain routine infection prevention and control practices in health care settings, both public and private including laboratories.	% Facilities adhering to IP standards		50%	60%	70%	MoH
		Implement the safe injection policy with the aim of reducing unnecessary injections and promote use of safety-engineered injection devices	% Facilities with safety injection devices		50%	60%	75%	MoH
		Provide post exposure prophylaxis to health workers and other high risk individuals	% Facilities providing PEP		30%	40%	50%	MoH
		Promote safe practices in traditional rituals involving blood contact e.g scarification, traditional circumcision, barbershops etc	Proportion of traditional rituals promoting safe practice					
	2.4 Prevent mother-to-child transmission of viral hepatitis	Test all pregnant women for hepatitis B	% Pregnant women tested	No policy in place	30%	60%	90%	MoH
		Provide timely administration of hepatitis B virus vaccine to newborns within 24 hours of birth	% Newborns vaccinated with HBV vaccine	No policy in place	20%	40%	80%	MoH
		Update national policies and guidelines on MNH based on evolving WHO guidance on	# Policy guidelines updated					MoH

Strategy 2: Preventing transmission of viral hepatitis								
Goal	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
	2.5 Promote safer sex	elimination of mother-to-child transmission of viral hepatitis						
		Promote behavior change to avoid unprotected and multiple sexual activity.	Reduced prevalence of STIs		□	□	□	MoH
		Increase the demand and supply of male and female condoms especially to populations most at risk of hepatitis B and/ or C virus infection through social marketing programmes	# Male and female condoms distributed		□	□	□	MoH
		Ensure that the national hepatitis B virus vaccination policy includes persons at increased risk of acquiring hepatitis B virus infection through sexual contact	Vaccination policy updated		□	□	□	MoH
	2.6 Ensure access to safe food and water	Achieve universal and equitable access to safe and affordable drinking water to all	% Households with safe water		40%	50%	60%	Ministry of Water, others
		Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women, girls and those in vulnerable situations	% Households with toilets		40%	50%	60%	Ministry of Water, others
		Support and strengthen the participation of local communities in improving water and sanitation management			40%	60%	80%	Ministry of Water, others

Strategy 3: Diagnosis viral hepatitis infection								
Goals	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
Reduce morbidity and mortality due to viral hepatitis	Increase proportion of people diagnosed with viral hepatitis	Develop viral hepatitis testing and treatment guidelines	Treatment guidelines with testing protocol developed		□	□	□	MoH
		Strengthen the national laboratory system to provide quality diagnosis of acute and chronic hepatitis	% Quality diagnostic tests performed		80%	90%	100%	MoH
		Ensure a reliable supply of quality-assured diagnostics	Zero Stock out of diagnostic supplies	0%	0%	0%	0%	MoH
		Establish key linkages between testing and other services to improve referral	% Patients tested and referred		70%	80%	90%	MoH

<b>Strategy 4: Treating hepatitis and providing chronic care</b>								
<b>Goals</b>	<b>Objectives</b>	<b>Activities</b>	<b>Indicator</b>	<b>Baseline (2016)</b>	<b>Target</b>			<b>Leading Agent</b>
					<b>2018</b>	<b>2019</b>	<b>2020</b>	
Reduce morbidity and mortality due to viral hepatitis	Ensure adequate follow up and effective management of diagnosed patients	Develop national treatment and care guidelines for viral hepatitis	National guidelines developed	Guidelines not yet developed	□	□	□	MoH
		Train clinicians, nurses, lab technicians, counselors on new treatment guidelines	% Clinicians and nurses trained		20%	30%	50%	MoH
		Conduct initial screening of viral hepatitis in health facilities	% Of facilities conducting initial screening of viral hepatitis	0%	50%	60%	70%	MoH
		Assess eligibility for viral hepatitis treatment	% Of eligible people assessed for treatment		50%	60%	70%	MoH
		Provide viral hepatitis treatment	% Of eligible people started on treatment		20%	30%	40%	MoH
		Provide supportive care to patients with advanced disease	% Of patients receiving supportive care	0%	20%	40%	80%	MoH

<b>Strategy 5: Monitoring health sector response to hepatitis</b>								
<b>Goals</b>	<b>Objectives</b>	<b>Activities</b>	<b>Indicator</b>	<b>Baseline (2016)</b>	<b>Target</b>			<b>Leading Agent</b>
					<b>2018</b>	<b>2019</b>	<b>2020</b>	
Monitor health sector response to hepatitis	5.1. Estimate the national burden due to chronic hepatitis	Conduct serosurveys for hepatitis B and C every 5-10 years	Prevalence of hepatitis B and C ascertained			□		MoH
		Conduct sentinel surveillance for liver cirrhosis in the 4 Central Hospitals	Prevalence of chronic hepatitis		□	□	□	MoH
		Conduct surveillance for hepatocellular carcinoma due to chronic hepatitis	Prevalence of hepatocellular carcinoma		□	□	□	MoH
		Conduct sero-surveys in high risk groups e.g. commercial sex workers	Incidence of hepatitis infections per year		□	□	□	MoH
	5.2 Monitor trends in chronic hepatitis over time	Analyse and report annual national surveillance and research data	% Reduction in hepatitis B and C prevalence		30%	40%	50%	MoH
	5.3 Strengthen the capacity of the health sector to monitor viral hepatitis	Adapt/develop standard global and national indicators to monitor the viral hepatitis program in the country	National indicators developed		□	□	□	MoH
		Include relevant viral hepatitis screening, care & treatment and programmatic/operational indicators into the national HMIS recording and reporting system;	Programme indicators integrated in national HMIS		□	□	□	MoH
		Develop comprehensive viral hepatitis M&E framework	M&E framework developed		□	□	□	MoH
		Develop viral hepatitis monitoring and evaluation tools/instruments for data collection, recording and reporting (paper based and electronic formats)	Tools/instruments developed		□	□	□	MoH
		Avail monitoring tools at service delivery points	% Of health facilities with monitoring tools		50%	60%	70%	MoH
		Provide training on viral hepatitis monitoring and evaluation tools/instruments at different levels (public and private) for health care providers, HMIS and M&E	% Providers trained on M&E tools		50%	60%	70%	MoH

Strategy 5: Monitoring health sector response to hepatitis								
Goals	Objectives	Activities	Indicator	Baseline (2016)	Target			Leading Agent
					2018	2019	2020	
		Provide training on quality assurance (internal and external) in all aspects (health service delivery, screening, care and treatment, data collection and analysis)	# Of trainings conducted		□	□	□	MoH
		Ensure data analysis and utilization at different levels (health facility, district and national level)	Data analysis and utilization reports		□	□	□	MoH
		Conduct regular supportive supervision and joint review meetings bi-annually	Supervision and review meeting reports		□	□	□	MoH
	5.4 Conduct epidemiological and operations research on viral hepatitis	Develop viral hepatitis research agenda	Research agenda developed		□	□	□	MoH
		Conduct operations research in line with research agenda	Operations research conducted		□	□	□	MoH
		Conduct timely dissemination of research results to inform policy and best practice	Meeting reports		□	□	□	MoH



**ANNEX 2: LIST OF PARTICIPANTS AT FIRST STAKEHOLDERS MEETING  
ON 26<sup>TH</sup> OCTOBER 2017 AT HIV DEPARTMENT CONFERENCE ROOM**

<b>NAME</b>	<b>DESIGNATION</b>	<b>INSTITUTION</b>	<b>PHONE</b>	<b>EMAIL</b>
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Edwin Libamba	Consultant	WHO	0992267000	libambae@gmail.com

**ANNEX 3: LIST OF PARTICIPANTS AT SECOND STAKEHOLDERS  
MEETING ON 14<sup>TH</sup> NOVEMBER 2017 AT CROSSROADS HOTEL**

NAME	DESIGNATION	INSTITUTION	PHONE	EMAIL
Bridon Mbaya	Medical Director	MBTS	0888224684	mbayab@gmail.com
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Edwin Libamba	Consultant	WHO	0992267000	libambae@gmail.com

## ANNEX 4: WORKPLAN FOR VIRAL HEPATITIS DEVELOPMENT PROCESS

Activity Component	Action Point	Responsible Person	Deadline
Preparatory activities including consultant recruitment, logistics, planning and oversight	<b>Recruitment</b>		
	Finalize TOR for National Consultant	WHO (Ishmael)	13 <sup>th</sup> October
	Finalize recruitment process for National Consultant	WHO (Ishmael)	13 <sup>th</sup> October
	Communicate with Hepatitis TWG	MOH (Collins)	13 <sup>th</sup> October
	Plan briefing meeting with stakeholders	Ishmael/Collins	13 <sup>th</sup> October
	Desk review	Consultant (Edwin)	20 <sup>th</sup> October
	<b>Logistics and Administrative Activities for briefing meeting with stakeholders</b>		
	Confirm list of participants for Half-day meeting	MOH (Collins)	20 <sup>th</sup> October
	Book venue for meeting (Lunch and coffee)	MOH (Collins)	20 <sup>th</sup> October
	Conduct stakeholder meeting	Collins/Edwin	26 <sup>th</sup> October
Conduct Stakeholder Consultations with relevant Ministries, Departments and Agencies (Gather evidence)	MOH Departments: <ul style="list-style-type: none"> <li>• HIV</li> <li>• Planning</li> <li>• Preventive (EPI, Environmental, HEU)</li> <li>• Reproductive Health</li> <li>• Clinical</li> <li>• Health Technical Support Service</li> <li>• Central Hospital</li> </ul>	Collins/Edwin	3 <sup>rd</sup> November
	Malawi Blood Transfusion Service	Collins/Edwin	3 <sup>rd</sup> November
	College of Medicine	Collins/Edwin	3 <sup>rd</sup> November
	Private Sector (Mwaiwathu, BAH)	Collins/Edwin	3 <sup>rd</sup> November
	Ministry of Water and Irrigation	Collins/Edwin	3 <sup>rd</sup> November
Develop Chapter Drafts	Background and epidemiology	Edwin	10 <sup>th</sup> November
	Vision, Goal, Objective and targets	Edwin	10 <sup>th</sup> November
	Policy guidelines and strategic plans	Edwin	10 <sup>th</sup> November
	Prevention of transmission of viral hepatitis	Edwin	10 <sup>th</sup> November
	Providing treatment and chronic care	Edwin	10 <sup>th</sup> November
	Monitoring health sector response	Edwin	10 <sup>th</sup> November

Activity Component	Action Point	Responsible Person	Deadline
	Costing and financing of the strategy	Edwin	10 <sup>th</sup> November
	<b>Logistics and Administrative Activities for briefing meeting with stakeholders to review chapter drafts and targets</b>		
	Confirm list of participants for Half-day meeting	MOH (Collins)	10 <sup>th</sup> November
	Book venue for meeting (Lunch and coffee)	MOH (Collins)	10 <sup>th</sup> November
	Conduct stakeholder meeting	Collins/Edwin	14 <sup>th</sup> November
Finalise First draft of strategy	Circulate first draft to TWG	Edwin	20 <sup>th</sup> November
	Get Input from TWG	Edwin	20 <sup>th</sup> November
	Incorporate comments from TWG	Edwin	24 <sup>th</sup> November
Submit Second Draft of strategy	Submit second draft to MOH and WHO	Edwin	27 <sup>th</sup> November