FEDERAL MINISTRY OF HEALTH

NATIONAL STRATEGY FOR PREVENTION AND CONTROL OF VIRAL HEPATITIS

Addis Ababa
2016 G.C.



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ACKNOWLEDGEMENT

The Federal Ministry of Health cordially acknowledges the work of the National Technical Working Group (NTWG) in preparing the strategy for the prevention and control of viral hepatitis. The NTWG has undertaken consultative meetings and reviewed national and international documents, drafted and compiled this strategic plan to suit the Ethiopian interest.

The Federal Ministry of Health also takes this opportunity to thank all those institutions who have contributed to the formulation of this important strategy, particularly the Ethiopian Gastroenterology Association, EPHA, WHO, Clinton Health Access Initiative and ICAP-Ethiopia.

ABBREVIATIONS

ANC	Antenatal Care
ART	Antiretroviral Therapy
CBO	Community Based Organization
CHAI	Clinton Health Access Initiative
CLD	Chronic Liver Disease
DAA	Direct Acting Antiviral
DHS	Demographic and Health Survey
DPCD	Disease Prevention and Control Directorate
EDHS	Ethiopian Demographic and Health Survey
EPHA	Ethiopian Public Health Association
EPHI	Ethiopian Public Health Institute
FMOH	Federal Ministry of Health
HAV	Hepatitis A Virus
HBV	Hepatitis B Virus
HCC	Hepatocellular Carcinoma
HCV	Hepatitis C Virus
HCT	HIV Counseling and Testing
HEV	Hepatitis E Virus
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSTP	Health Sector Transformation Plan
MARP	Most at Risk Population
NCD	Non-communicable Disease
NSP	National Strategic Plan
RHB	Regional Health Bureau
SOP	Standard Operating Procedure
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SVR	Sustained Virological Response
TB	Tuberculosis
TDF	Tenofovir
TOR	Terms of Reference
TOT	Training of Trainers
USD	US Dollar
VH	Viral Hepatitis
WHO	World Health Organization

FOREWORD

Ethiopia's economy is one of the fastest growing in the world in the past decade. In which case, the health sector is playing its part by contributing to this economic growth while, benefiting from it. As well, the country has registered remarkable achievements' in tackling nutritional deficiencies, infectious diseases, maternal and child health morbidities and mortalities. In this respect, Ethiopia has achieved the MDG 4 on child mortality, significantly reduced maternal mortality and reversed the HIV epidemic and mortalities due to malaria and Tuberculosis.

However, the above achievements have been challenged in recent years of a steady but progressive increase in the burden of chronic non-communicable diseases. In this regard, chronic liver disease and hepatocellular carcinoma are among the leading causes of morbidity and mortality where infection due to viral hepatitis is cited as a primary cause in most of the cases. Hepatitis infection is preventable. Availing safe food and water (h epatitis A and E), vaccines (hepatitis A, B, and E) and ensuring universal precaution and safe blood donations (hepatitis B and C) are some cited.

Functional cure of hepatitis C infection is now achievable. Besides prolonged therapeutic suppression of chronic hepatitis B infection and improved quality of life is a clinical reality. However, in low income countries most people do not have access for such treatment. As a result, the subtle infections from hepatitis B and C will develop into a more formidable and protracted form of chronic liver disease and hepatocellular carcinoma. For the obvious reasons, caring for these conditions is unbearable to the health system. As such, if not acted upon the health and economic impact of chronic hepatitis infections is immense both at the individual and national level.

Thus, the response to viral hepatitis requires a robust system. As such, get the most out of the existing platforms and lessons learned the government will build efficient service delivery models equipped with appropriate and well-trained workforce; reliable essential medicines and medical technologies access alongside responsive health-information system.

Within the auspices of the Health Sector Transformation Plan, the Federal Ministry of Health anticipates that, this strategic plan will serve in guiding the national effort for the prevention and control of viral hepatitis and associated chronic liver disease and hepatocellular carcinoma.

Where the Ministry calls for actors in the health sector for a coordinated effort, at the same time it assures its implementing partners the usual cordial support and commitment in leadership.



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EXECUTIVE SUMMARY

According to the 2014 WHO report 30% of mortality in Ethiopia was due to non-communicable diseases. NCDs encompass a large group of health and health related conditions whose risk factors are multi-factorial and complex. They range from behavioral factors, genetic composition, age, infectious conditions as well as environmental factors. Non-communicable diseases of infectious origin are predominantly highly prevalent in developing countries including in Ethiopia. To mention some cervical cancer, viral hepatitis and associated chronic liver disease have been reported being the highest in Sub-Saharan countries and East Africa.

The damage due to these conditions is worsened due to poverty, lack of affordable preventive and curative measures and poor health systems. Viral hepatitis caused by a group of viruses are principally categorized into two groups based on their route of transmission; parenteral (Hepatitis B, C and D viruses) and enteral (Hepatitis A and E viruses). Chronic hepatitis, cirrhosis and hepatocellular carcinoma are usually a result of Hepatitis B and C infection. It is estimated that one third of the world's population (about 2 billion people) have been infected with Hepatitis B at some point in their lives and of these 350 – 400 million people are chronically infected and about 780,000 people die annually. Besides, most HCV infections are in North Africa and East and Central Asia. Each year, 350,000 to 500,000 people die from hepatitis C-related liver diseases.

Epidemiologically, Ethiopia is in the region where Hepatitis B infection prevalence is labeled hyper endemic with a prevalence of between 8 – 12% and that of Hepatitis C prevalence is estimated at not less than 2.5%. Data is not sufficient regarding associated chronic liver disease or hepatocellular carcinoma. However, an earlier study conducted in Ethiopia reported that 12% of hospital admissions and 31% of the mortality in medical wards in Ethiopian hospitals were due to chronic liver disease (CLD) (all causes).

Principally with application of appropriate measures, infection from viral hepatitis and subsequent chronicity is preventable. Effective vaccines are available to prevent Hepatitis A, B and E viruses whereas, primary prevention of Hepatitis B and C are possible and cost effective by promoting safe blood and safe sexual behavior. In addition safe environmental and personal hygiene could curve the infection from enteric hepatitis viruses. Also, it is now possible to cure infection from Hepatitis C that in addition to delaying morbidity and mortality as well as improving the quality of life of patients with Hepatitis B infection using appropriate chemotherapy.

Despite the above scientific and programmatic advances,responses to viral hepatitis are fragmented or non-existent in countries like Ethiopia. To be specific; response for viral hepatitis requires intra-sectoral (with in the FMOH) and inter-sectoral cooperation. Within the sector, coordination among the HIV Unit, Health Extension Program, Maternal and Child Health Directorate and the NCD Unit is paramount, whereas among the sectors it would be a great advantage to bring on board key sector Ministries and institutions.

In 2010 the World Health Assembly adopted a resolution in recognition of viral hepatitis as a global public health problem. The Federal Ministry of Health in consideration of the different global and regional documents and in consultation with national experts has developed this five year strategic plan. The overall objective of this strategy is to reduce morbidities and mortalities attributable to viral hepatitis; tackle financial loss due to the diseases and improve quality of life of patients with viral hepatitis and reduce the burden on families.

The strategy is an important component of the Health Sector Transformation Plan (HSTP) which is the section of the Growth and Transformation plan phase two (GTP2). The strategy is organized in such a way as to promote preventive, diagnostic, care and treatment services and increase access for service utilization. Therefore this document will be a guiding document for policy makers, program managers, clinicians, government and NGO partners that are operating in the area of viral hepatitis prevention and treatment.

CHAPTER ONE
BACKGROUND AND EPIDEMIOLOGY OF VIRAL HEPATITIS

INTRODUCTION

Hepatitis is a term which refers to the inflammation of the liver. It occurs as a result of infection with various pathogens, exposure to alcohol, medications, chemicals, poisons, as well as immune disorders. Hepatitis viruses are a diverse group of medically important viruses which affect millions globally. The major hepatitis viruses of public health importance are hepatitis A, B, C, D, and E viruses. The alphabetical naming of these viruses indicates the order in which they were discovered. In the 1960s only two types were known (A and B), but by the late 1970s and beyond, new varieties were discovered. Hepatitis viruses are either RNA viruses (hepatitis A, C, D and E) or DNA viruses (hepatitis B). Infection with hepatitis viruses can be a self-limiting type, or it could lead to chronic infection (lasting for six months or more).

GLOBAL EPIDEMIOLOGY OF VIRAL HEPATITIS VIRUSES

Hepatitis A virus (HAV) mainly occurs in the form of outbreaks/epidemics, and is one of the most frequent causes of food-borne infection. Globally it affects around 1.4 million people annually. High infection rates are found in developing countries having very poor environmental sanitation. As such, in developing countries, the commonest cause of viral hepatitis in children is HAV, as high as 80-90%. In such places 90% of children become infected with HAV before the age of 10 years(1, 2, 3*). Global infections of Hepatitis E Virus (HEV) are estimated to reach around 20 million cases annually. HEV predominantly affects young adults (15-40 years). Infection with HEV may cause fulminant hepatitis in up to 25% of pregnant women, and can lead to the death of both mother and baby.

Hepatitis B Virus (HBV) causes both acute and chronic hepatitis. The prevalence of chronic HBV infection varies from 0.1 to 20% in different areas of the world (3*). It is estimated that one third of the world's population (about 2 billion people) have been infected with Hepatitis B at some point in their lives and of these 350 – 400 million people are chronically infected. Additionally, 780,000 people die annually due to consequences of hepatitis B virus infection. The prevalence of HBV is highest in sub-Saharan Africa and East Asia.

Globally,an estimated 130-150 million people have chronic hepatitis C virus (HCV) infection. Most HCV infections are in North Africa and East and Central Asia. Each year, 350,000 to 500,000 people die from hepatitis C-related liver diseases.

EPIDEMIOLOGY OF VIRAL HEPATITIS IN ETHIOPIA

Since the 1980s, over 30 studies have been conducted in Ethiopia by different groups of investigators to determine the seroprevalence of various hepatitis viruses in the country. The aim here is not to try and present an exhaustive summary of the entire medical literature but rather to highlight significant trends and observations over time. The bulk of the studies have focused on hepatitis B and hepatitis C virus infections, mainly due to the involvement of these 2 viruses in causing chronic liver disease, which is a significant public health problem nationally. It was reported that 12% of the hospital admissions and 31% of the mortality in medical wards in Ethiopian hospitals were due to chronic liver disease (CLD) (all causes) (1).

A nationwide hepatitis B study conducted in the 1980s, and involving more than 5000 young males, reported finding 10.8% prevalence of HBsAg (2). Another large sample size community-based study involving both genders and conducted a decade later in Addis Ababa, revealed an HBsAg prevalence of 7% (3). The same community-based study in Addis Ababa also reported an overall HCV prevalence of 0.9%, with a markedly higher prevalence of HCV in HIV-coinfected individuals (3).

Studies conducted in blood donors across the country have shown varying seroprevalence estimates for HBsAg, which was as high as 14.4% in the mid-1990s (5) but declining thereafter. In a study from Gondar conducted in 2004, HBsAg prevalence was 8.2% among blood donors (6), whilst another study from Jimma involving over 6,000 adult blood donors, showed a prevalence of 2.1% and 0.2% for HBsAg and HCV respectively (7).

In summary, the many different studies conducted in Ethiopia, mainly on HBV and HCV have produced varying seroprevalence estimates. However arriving to a consensus estimate for each of the hepatitis viruses for the country as a whole, remains a significant challenge. This is because the studies have been conducted in different population groups (having increased or lower risk probability), utilized different sample sizes, and most of all, used different laboratory screening methods, some with, and others without, the benefit of confirmatory testing, to arrive at seroprevalence estimations. In addition the studies have a wide geographical distribution. In light of the above limitations, further large scale seroprevalence studies are warranted to achieve more recent national seroprevalence estimates.

VIRAL HEPATITIS PREVENTION EFFORTS SO FAR

The prevention of viral hepatitis which is key target has usually been embedded in the context of existing health programs. For example, since 2007, hepatitis B vaccine has been integrated within the EPI program whereas; universal precaution and infection prevention has been implemented at all levels of the health system, using the National Infection Prevention Guideline developed by the FMOH. At the same time, the National Blood Bank Service has implemented robust initiatives in screening of blood for HBV and HCV. In addition, compelling efforts are ongoing in awareness creation and promotion of safer sex as part of the overall HIV prevention national effort, that this effort also has relevance for preventing infections due to HBV and HCV.

CHAPTER TWO
VISION, GOAL, OBJECTIVES AND TARGETS OF THE NATIONAL STRATEGY

The strategy outlines the vision, goals, objectives and target in accordance with the national health policy and the Health Sector Transformation Plan (HSTP). The strategy envisions delivery of essential quality hepatitis services to meet people's needs; ensure equitable coverage of services and maximum impact as well proposing strategies to minimize the risk of financial hardship.

VISION

To see Ethiopians free from viral hepatitis by halting transmission while those living with hepatitis have access to safe, affordable and effective diagnosis, care and treatment

GOAL

Reduce avoidable morbidity and mortality due to viral hepatitis while achieving elimination of viral hepatitis as a major public health problem in Ethiopia.

OBJECTIVES

- To create an enabling environment for tackling the problem of viral hepatitis through policy discussion, advocacy and inclusion and participatory engagement of stakeholders
- To provide effective and affordable promotive and preventive services including provision of vaccines
- To provide simple and reliable screening and diagnostic services for viral hepatitis
- To provide care and treatment services in the context of continuum of care and in accordance with universal health coverage
- To utilize national data generated from research as input for evidence-based decision making.

CHAPTER THREE
STRATEGIC OBJECTIVE 1: SET UP POLICY, STRATEGIC PLAN AND NECESSARY RESOURCE

The success of national health programs is profoundly dependent on the existence of favorable policy, soundly enlisted strategic action plan and availed needed resources. In this regard, the health policy of the Government of Ethiopia envisions provision of promotive, preventive, curative, palliative and rehabilitative services through a decentralized and democratized health system. Furthermore, the policy emphasizes the importance of empowering individuals and families to produce their own health. Taking into account the rapidly changing global public health and clinical practice, on top of the newness of viral hepatitis program in Ethiopia it would be a wise move to review existing situation in order to align and/or create favorable grounds.

Thus, the development of this document is in line with the national health policy as well as being aligned with the global public health direction particularly that of the WHO's Prevention and Control of Viral Hepatitis: Framework for Global Action.

To this end, viral hepatitis responses require strong systems that are capable of providing reliable and effective people-centered care built on the model of health system strengthening; where, universal health coverage within the primary healthcare setting remains the backbone of the health system strengthening. Thus, building on the existing ones and experience from other programs, the government will continue to ensure efficient service delivery models; a sufficient and well-trained workforce; a robust health-information system; reliable access to essential medicines and medical products and technologies; adequate health financing; and strong leadership and governance in improving access to viral hepatitis prevention, diagnosis, care and treatment.

Thus, the purpose of this strategic plan is to institute necessary implementation strategies and tools for promotive, prevention, screening, diagnosis, treatment and continuum of care. These will remain the main stay of response within the health system that gives due attention and special emphasis for clinical management of HCV and HBV infections.

1.1. Policy and planning

To improve the program for prevention and control of viral hepatitis, FMOH will:

- Develop a national hepatitis program management guidance for prevention, screening as well as diagnosis and treatment of viral hepatitis that regional health bureaus will adopt and implement
- Provide guidance and ensure the laboratory services system will provide hepatitis B and C screening and testing
- Promote research and develop feasible and cost effective immunization programs for hepatitis B and recommend implementation strategies including introduction of HBV vaccine at birth and selected high risk groups
- Integrate and/or strengthen the work with the existing programs such as Health Extension Program (HEP), HIV/STI, maternal and child health,NCD etc and coordinate responses
- Establish a technical working group that will provide the necessary support to FMOH in policy formulations and implementing programs
- Develop a clinical and program management national guideline to standardize immunization, diagnosis and treatment within the existing health delivery structure while following their level of implementation
- Develop capacity and system for national survey (DHS or other forms) and surveillance
- Build viral hepatitis programming into existing regulatory, procurement and supply chain systems to ensure adequate supply of viral hepatitis vaccines, diagnostics and drug commodities
- Guide and coordinate national, regional and Woreda level annual and quinquennial planning for viral hepatitis and monitor its implementation

1.2. High level Advocacy

In this context target audience for high level advocacy are policy/decision makers and health program managers. And the purpose is to positively influence and bring about the much needed favorable policies and resources. The fact that viral hepatitis has been under documented for many years but emerged as one of the overwhelming public health problems makes advocacy an important tool. As such, in Ethiopia earmarked advocacy is urgently needed to create awareness among policy/decision makers and program managers including but not limited to regulatory bodies, procurement agencies; laboratory agencies, clinicians and research institutes at the national and regional level regarding the importance and impact of viral hepatitis. Hence, the FMOH will bring all stakeholders onboard through a series of policy discussions and technical update platforms and workshops at the national and regional level.

1.3. Finance

Effective implementation of the viral hepatitis program is dependent on availability of adequate financial resources. The Ministry underscores the vitality of resources and will take practical steps to raise the required finances primarily from the public sector, donors and private institutions. Most importantly the national health insurance scheme would have a greater share in availing necessary financial and technological inputs.

Accordingly, the FMOH will cost the resources needed to implement its viral hepatitis program and allocate as per need. In addition, the ministry will liaise with key donors and private establishments to fund the viral hepatitis program. To that end the FMOH will:

- Raise funds to pay for the programmes, including through public and private domestic funding and external sources, such as from implementing partners or donors;
- Affirm integrated use of the national health insurance scheme viral hepatitis diagnosis and treatment services
- Optimize the use of resources by improving the efficiency and effectiveness of services and reducing the costs of medicines, diagnostics and other commodities by working with pharmaceutical companies.

CHAPTER FOUR
STRATEGIC OBJECTIVE 2: PREVENTION OF VIRAL HEPATITIS

Implementing scientifically proven, culturally acceptable and affordable prevention methods are essential in eliminating new viral hepatitis infections and containing viral hepatitis as a public health problem. Generally the prevention of viral hepatitis follows the two main categories of viral hepatitis enteric and parenteral.

HBV and HCV are parenteral viruses whose transmission is usually by contact with blood or other body fluids (i.e. semen and vaginal fluid) of an infected person. Thus, the main transmission routes are sexual contact with infected individuals, transfusion of infected blood and blood products, sharing of contaminated needles or use of other sharp instruments, vertical transmission and close muco-cutaneous contacts. Thus, prevention of these viruses ought to be focused in breaking transmission through either of these routes that included immunization. HAV and HEV are enteric viruses whose transmission is principally through the fecal-oral route. Besides, certain environmental and behavioral factors predispose people to a high risk of infection with these viruses. Thus, the most important approaches in preventing infection with these viruses will be improvement of sanitation, ensuring adequate supplies of safe drinking water and proper sewage system, combined with promotion of personal hygiene practices such as regular hand washing.

In Ethiopia we will focus on interventions that include promotive services as well as primary, secondary and tertiary prevention measures.

2.1. Promotive Services

2.1.1. Advocacy and raising awareness about all types of viral hepatitis infections

- Increasing awareness among health professionals and the general public

2.2. Primary Prevention

2.2.1. Safe and effective vaccine for the prevention of HBV

- Provision of safe and effective HBV vaccines including through universal childhood vaccination in particular delivery of hepatitis B vaccine within 24 hours (establish HBV birth-dose programs)

- Offer HBV vaccine to people who are at increased risk of acquiring or transmitting the virus especially key population such as healthcare workers

2.2.2. Implementation of blood safety strategies

- Prevent none mandatory blood transfusion by establishing policies and practices that promote rational use of blood and blood products
- Strengthen the national blood screening policies and strategies including having a reliable supply of quality assured screening assays
- Implement quality control measures for laboratory testing of HBV and HCV

2.2.3. Infection control precautions and safe injection practices in healthcare settings

- Strength and sustain routine infection control practices in healthcare and other settings
- Facilitate vaccination against HBV for health workers (public and private)

2.2.4. Safe sex practices

- Promote behavioral change to avoid unprotected and multiple sexual activities
- Make greater use of social marketing programs to increase demand and supply of male and female condoms

2.2.5. Assuring access to safe food and sanitation systems

- Promote awareness among stakeholders around HAV and HEV as their prevention could be address as a cross cutting intervention within the urban sanitation and community led and school led sanitation and hygiene programs
- Collaborate with relevant stakeholders to promote hygiene and sanitation and improving safe drinking water
- Increase awareness and promotion of personal hygiene practices such as regular hand washing, cooking food well and sanitary precautions while consuming vegetables and fruits

2.3. Secondary and tertiary prevention

2.3.1. Post exposure prophylaxis

- For healthcare workers and other high risk individuals; offer post exposure prophylaxis and HBIG if confirmed exposure and test for HBsAg, Anti-HBs Ab, and Anti-HBc Ab negative

2.3.2. Early diagnosis and management of viral hepatitis

- Refer Strategic Objective 3 Chapter Five,

CHAPTER FIVE
STRATEGIC OBJECTIVE 3: CREATING ACCESS TO TESTING, MEDICAL CARE AND TREATMENT TO VIRAL HEPATITIS

Viral hepatitis B and C testing, referral to care, initiation of treatment, and achievement of viral suppression or cure, represent a continuum of care that can be used to evaluate and improve efforts to comprehensively address these endemic health problems. Increasing the effectiveness of interventions logically begins with testing, which is needed to identify the many individuals who are unaware of their viral hepatitis infections. Further research and analyses that describe the continuum of care in various settings can illuminate health disparities among priority populations and guide resource allocation, program planning, and implementation. Earlier diagnosis and improvements along the entire continuum of care can lead to reductions in the incidence of cirrhosis, liver cancer as well as improved quality of life, survival and productivity for persons who are infected. The main goal of this strategic objective is to develop and maintain services to provide the highest quality of viral hepatitis care and treatment with the following strategic activities:

3. MAJOR OBJECTIVES

3.1 Identify persons infected with viral hepatitis early in the course of their disease.

3.2 Link and refer persons infected with viral hepatitis to care and treatment.

3.3 Improve access and quality of care and treatment for persons infected with viral hepatitis.

KEY TARGETS:

- Increase the proportion of persons, who are aware of their hepatitis B virus (HBV) infection from 0% at baseline to 35% by 2020
- Increase the proportion of persons who are aware of their hepatitis C virus (HCV) infection from 0% at baseline to 35% by 2020
- Provide acute treatment and care of HBV to 25% of eligible patients by 2020
- Provide chronic care of HBV to 60%- of eligible patients by 2020

- Provide treatment and care of HCV to 50% HCV screened and diagnosed patients by 2020

3.1. IDENTIFY PERSONS INFECTED WITH VIRAL HEPATITIS EARLY IN THE COURSE OF THEIR DISEASE

Effective treatment of viral hepatitis requires timely diagnosis. In Ethiopia the majority of individuals who are chronically infected with hepatitis B or C are unaware of their infections. Increasing the proportion of people that are aware of their viral hepatitis infection is a major goal of this strategic plan. Testing for HBV and HCV is a prerequisite for entry into a care and treatment program. However, currently, there is a limited capacity for testing in the public or private health facilities in the country.

3.1.1 Specific objectives

- Increase the proportion of persons, who are aware of their hepatitis B virus (HBV) infection status from 0% baseline to 35% by the end of 2020
- Increase the proportion of persons who are aware of their hepatitis C virus (HCV) infection status from 0% baselines to 35% by 2020

3.1.2 Strategies

- Establish a policy for a standard, consistent national system of viral hepatitis B and C testing and referral to care(put in place the necessary clear screening and testing policy/guideline as well as SOP for public and private sectors)
- Establish a mechanism for routine testing for those who sought healthcare for the established care setups
- Make all necessary testing technologies/commodities available as per the national guideline
- Build capacity at all levels to run as well as manage testing
- Establish an information management system for testing
- Establish a Quality Assurance mechanism: Develop a quality assurance system both on the testing technologies and testing implementation

- Assess options for community-based programs providing testing and linkages to care by integrating into existing systems

3.1.3 Interventions

- Sensitize all relevant policy makers, program managers , RHB personnel, facility and agency heads on testing algorithms and approaches (through workshops)
- Provide training to healthcare workers on the national testing algorithm and technologies for HBV and HCV testing
- Coordinate quantifications and forecasting of testing commodities for screening and diagnosis of HBV and HCV at the national level
- Under take procurement of all necessary testing commodities as per national quantifications
- Provide initiation mentorship in all sites during the first few months of testing initiation integrated with clinical care
- Conduct quality assurance system of the testing process and technologies
- Develop best practices for expanding viral hepatitis testing by clinical care providers in the public sector by integrating testing potentially with HIV, STD, TB, and other prevention services in high volume sites (all hospitals) during first year of implementation
- Implement routine viral hepatitis testing as part of the standard of care in the health-care system by 2020
- Add viral hepatitis testing as a preventive service and other patient-provider encounters (e.g. through ANC)
- Identify options to provide testing in hospitals and regional labs further to expand to health centers
- Develop systems for private sector to provide standardized testing and linkage to treatment

3.2. LINK AND REFER PERSONS INFECTED WITH VIRAL HEPATITIS FOR CARE AND TREATMENT

3.2.1 Specific objectives:

- Link 100% of tested positives to care and treatment
- 100% HBV infected pregnant women should be referred to treatment centers for appropriate care and treatment.

Significant attrition occurs between the time of patient testing and treatment initiation at health-care facilities and there is a need to refer infected persons to appropriate services after diagnosis. Thus, identifying the appropriate referral pathways and prompt linkage of persons testing positive for viral hepatitis in the first two years is going to be very important.

3.2.2 Strategies

- Create systems and tools to enhance referral to care all those who test positive for HBV and HCV within the health care system
- Develop guidance for linkage to treatment for HBV-infected pregnant mothers.

3.2.3 Interventions:

- Prepare optimized SOP for inter and intra-facilities service outlets referral linkage system
- Map and establish network between testing/screening sites and treatment centers
- Train/ orient health care workers to improve attitude and skill for linkage and referral
- Ensure a referral and linkage feedback mechanism among health facilities possibly integrated in to existing system

3.3. IMPROVE ACCESS AND QUALITY OF CARE AND TREATMENT FOR PERSONS INFECTED WITH VIRAL HEPATITIS

3.3.1 Specific objectives:

- Provide treatment for 25% of eligible of HCV infected patients
- Provide treatment for 25% of eligible HBV infected patients
- Provide treatment of HBV/HCV in 100% hospitals by end of 2020

3.3.2 Strategies:

- Expand treatment and care services with strengthened service integration phase by phase (E.g. setting up treatment centers at hospital level in bigger regions of the country for the first 1-2 years of implementation followed by in all hospitals by the end of 2nd year.)
- Strengthen and/or design demand generation interventions
- Make treatment for chronic Hepatitis B and C available and accessible for treatment of chronic Hepatitis B and C as per national guidelines
- Enhance treatment awareness at patient level and adherence support
- Build health work force capacities for treatment and care

3.3.3 Interventions

- Develop and disseminate clinical care training manuals and necessary job aids
- Adequately equip the hospitals with required personnel e.g. Gastroenterologists, internists and other relevant support staffs, as well as up-to-date diagnostics and monitoring equipment such as for APPRI scores and basic lab facilities.
- Provide training for health personnel on clinical care and treatment of viral hepatitis
- Strengthen intra-and inter-facility service linkages by developing standard operating procedures (SOP).
- Quantify all necessary treatment commodities as per national guideline at the national level

- Work with pharmaceutical companies and implementing partners to ensure price reduction for current Hepatitis B and C drugs
- Procure all necessary treatment commodities
- Optimize the current PFSA distribution networks and supply chains to include current HCV and HBV treatment commodities
- Increase progressively the number of health facilities providing treatment and care for HBV and HCV
- Integrate Viral hepatitis treatment in HIV, TB, STI and ANC units in the existing health facilities by the end of 2020
- Provide mentorship to all facilities providing treatment for the first six months of service initiation
- Provide strong data capturing , reporting and usage for decision making

3.4. GENERAL CONSIDERATIONS

Public and private healthcare facilities will play a significant role in expanding testing, care and treatment in the country. FMOH will work with and support Regional health bureaus as well as primary health, secondary and tertiary health care facilities to ensure the best care for infected persons. Care and treatment-associated recommendations for infected patients should reflect a multidisciplinary approach to care. The national guideline will remain open for revisions for this rapidly evolving and dynamic field. Ensuring treatment adherence and retention in care will be a key focus as well. The management of hepatitis will be based on the national guideline.

3.4.1 Management of acute HBV infection

Spontaneous recovery after acute infection with HBV occurs in 95–99% of previously healthy adults. Antiviral therapy is not therefore likely to improve the rate of recovery and is not required unless the disease is accompanied by extrahepatic complication such as polyarteritis nodosa. In such cases, and in immuno compromised individuals (e.g. those with chronic renal failure), antiviral therapy with lamivudine is recommended. In fulminant hepatitis, meticulous intensive care and antiviral treatment may improve the survival. Full recovery with development of anti-HBsAg provides long-term protection.

3.4.2 Management of acute HCV infection

In acute HCV infection, serum HCV RNA is usually detected before the appearance of anti-HCV antibodies and this is often the only diagnostic indicator of the condition. Acute HCV infection often becomes chronic, especially in asymptomatic individuals. However, the infection spontaneously resolves in up to 50% of patients who present the symptoms. Spontaneous resolution is less likely after 12 weeks of infection. Treatment of hepatitis C in the acute stage (except fulminant hepatitis) has resulted in better sustained virological response (SVR). The objective of antiviral treatment in acute hepatitis C is to prevent the development of HCC.

3.4.3 Chronic HBV

The major goals of anti-HBV therapy are to prevent the development of progressive liver disease, specifically cirrhosis and liver failure, and prevent the development of HCC and subsequent death. Treatment regimens are based on the national guidelines recently developed by FMOH.

3.4.4 Chronic HCV

Similarly to anti-HBV therapy, the goal of therapy is to eradicate HCV infection in order to prevent the complications of HCV-related liver disease, including necro-inflammation, fibrosis, cirrhosis, HCC and death. The end-point of therapy and thus the outcome is referred to as sustained virologic response (SVR); intermediate end-points are used during the standard of care treatment to assess the likelihood of an SVR and tailor treatment duration. When HCV is eradicated, necro-inflammation ceases and fibrosis progression is halted in non-cirrhotic patients. The standard of care therapy for patients with chronic HCV infection is based on national guideline which is now interferon free and focuses on DAAs.

CHAPTER SIX
STRATEGIC OBJECTIVE 4: STRENGTHEN THE STRATEGIC INFORMATION SYSTEM OF THE VIRAL HEPATITIS PROGRAM

Poor awareness and insufficient strategic information is limiting for scale-up and uptake of viral hepatitis prevention and treatment services. 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.

4.1. BUILDING 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. Inadequate capacity in generating credible and timely data, analysis and use of information for decision making at all levels are among the key challenges of HMIS. The national HMIS should be strengthened to avail reliable, timely and complete information as well as track the progress and measure the achievements. Periodic assessments are required to solve the challenges/gaps in a timely fashion and improve the overall functioning of HMIS/M&E system.

KEY STRATEGIC INTERVENTIONS:

- 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 officers, and data clerks etc.
- Provide training on quality assurance (internal and external) in all aspects (health service delivery, screening, care and treatment, data collection and analysis etc)
- Provide training on data analysis and utilization for M&E officers and others
- Ensure data analysis and utilization at different levels (health facilities, Woreda, zone, region and national level)
- Conduct regular supportive supervision and joint review meetings bi-annually

4.2. ESTABLISH NATIONAL VIRAL HEPATITIS SURVEILLANCE/SURVEY SYSTEM

More accurate and extensive data are required on viral hepatitis. Surveillance and blood bank screening test data are necessary to shape and direct effective viral hepatitis prevention and treatment response. Viral hepatitis surveillance activities should be incorporated into the existing national surveillance system and it needs to be capable of detecting both viral hepatitis outbreaks and acute hepatitis. Sero-prevalence surveys help to get more accurate estimates of the infection burden and this can be integrated into other national sero-surveys such as HIV. The burden of disease can also be monitored through cancer registers and cirrhosis surveillance. Surveillance may be greatly enhanced through the application of novel technologies and laboratory procedures, which serve to gauge the impact of vaccination.

KEY STRATEGIC INTERVENTIONS:

- Ensure viral hepatitis sentinel surveillance is established and implemented;
- Incorporate HBV and HCV indicators into EDHS
- Ensure the regular dissemination and timely utilization of surveillance/survey results at different levels to improve the performance of the viral hepatitis program in the country;

4.3. ADOPT/DEVELOP QUALITY ASSURANCE MECHANISMS FOR OPERATIONAL, CLINICAL, AND LABORATORY SERVICES

The viral hepatitis program needs to be capable of providing reliable and effective people-centered prevention and treatment services. Quality assurance entails availing an efficient integrated service delivery model, development of national guidelines and tools, sufficient and trained workforce, a well-functioning health information system and reliable access to essential medical products and technologies. Regular quality assurance monitoring is vital in improving the overall performance of viral hepatitis prevention and treatment services.

KEY STRATEGIC INTERVENTIONS:

- Develop quality assurance manuals and checklists for viral hepatitis including operational, clinical and laboratory performances;
- Conduct joint viral hepatitis quality assurance (both internal and external) monitoring on a bi-annual basis
- Conduct review meeting and provide feedbacks to improve the quality of performances

4.4. PRIORITIZE EPIDEMIOLOGICAL AND OPERATIONAL RESEARCH IN THE VIRAL HEPATITIS PROGRAM

Operational research is increasingly gaining importance in public health interventions and programs. The focus of these researches activities is to constantly guide program implementation to achieve the best results. It modulates inputs and processes involved in the program and strive to produce optimal gains in achieving targets and goals. It also identifies problems and recommends feasible solutions for them. Prioritization and carrying-out of a relevant research agenda is very important for informed policy decision and implementation design at all levels.

KEY STRATEGIC INTERVENTIONS:

- Set priority viral hepatitis epidemiological and operational researchs
- Ensure the prioritized researches are carried-out according to the roadmap;
- Ensure timely dissemination of research results to inform the policy decision and implementation design;

- Build the capacity of universities and health colleges through involving in research activities

CHAPTER SEVEN
STRATEGIC OBJECTIVE 5: PUBLIC MOBILIZATION AND INCREASING AWARENESS AROUND VIRAL HEPATITIS

In order to achieve our bigger goal of viral hepatitis (VH) prevention and control, it is mandatory to heighten the awareness of the health workforce as well as the community at large. The FMOH in collaboration with key partners will work on increasing awareness within the health professionals and the community about the disease burden, means of transmission, strategies and protocols for its control.

5.1. INCREASING AWARENESS AMONG HEALTH PROFESSIONALS

It is quite obvious that health professionals have some degree of knowledge about viral hepatitis and treatment depending on the type of their basic training. However it is difficult to assume that every health care professional has the required information and attitude about the public health importance of viral hepatitis its prevention and control and about the need to engage in an impactful intervention on a larger scale.

Filling the gaps in the prevention and treatment of viral hepatitis will require providers at all levels of the health care system to become more educated and aware of opportunities for prevention, care, and treatment. Providers must be able to recognize the diversity of patients at increased risk for viral hepatitis including pregnant women due to the high risk of perinatal transmission of VH.

Health care providers caring for people at risk for or living with viral hepatitis need to be knowledgeable about its prevalence, prevention, risk factors, and screening guidelines as well as being aware of new treatment advances, various cofactors that can hasten the progression of liver disease (e.g., obesity, alcohol use), how to monitor patients for signs of disease progression, and when to refer patients for specialty care. Providers treating patients with viral hepatitis will need guidance regarding the use of more effective but rapidly evolving regimens. Efforts will be made to help providers with tools, necessary job aids and standard treatment algorithms.

Sensitization workshops and trainings will be used as main platforms to improve the health workers attitude on the prevention and control of viral hepatitis. Training need assessment will be made and training materials which will respond to the observed gaps in the knowledge and skills of the health workforce will be developed and implemented.

5.2. INCREASING AWARENESS IN THE COMMUNITY

Awareness of the community about VH is one of the key interventions needed to be in place in order to achieve the ultimate goal of VH prevention and control in the nation. Such interventions must be complemented by active efforts designed to educate communities about the burden of viral hepatitis in the country and their respective localities. Moreover, the benefits of viral hepatitis prevention, screening, care, and treatment needs to be clearly understood by the public. As evidenced by several studies in many countries, levels of knowledge and awareness are low among populations most affected by hepatitis B and C. An education strategy that includes targeted outreach to populations at greatest risk can raise awareness of viral hepatitis as an important health concern, increase knowledge regarding the benefits of prevention and care, and encourage populations to seek and accept vaccination, testing, care, and treatment. The community awareness activities could include the following strategies:

5.2.1. Conduct public education and awareness activities:

Public education and testing campaigns and other awareness activities are key strategies for improving public understanding and influencing health behaviours among populations most impacted by viral hepatitis. In the upcoming five years, efforts will be made to use the mass media and other IEC materials in order to induce the necessary behaviour change in the community with regard to prevention care and treatment of VH. Furthermore, the FMOH will engage partners interested in the VH prevention and restructure the effort to reach the population which is hard hit by the epidemic depending on the emerging evidence. Also strategies will be devised to actively engage the health extension workers and health development army in the prevention and control of VH at a larger scale in the community. Last but not least the health extension workers and health development armies will be an integral part of the public education and awareness creation efforts around viral hepatitis

5.2.2. Support communities in the prevention, care, and treatment of viral hepatitis:

Given the scope of the silent epidemic of viral hepatitis and the relatively low levels of public awareness about, it including in many the most affected population groups, a concerted effort is needed by partners and community based organizations (CBOs) are essential for successful efforts to reduce viral-hepatitis-related gaps in the health services specially at primary level facilities. During the five year implementation of this strategy, FMOH will facilitate the ground for partners of various capacities who are

already engaged and seek to identify and engage new partners who can enhance and extend efforts to educate communities about the benefits of viral hepatitis prevention, screening, care, and treatment. This will include developing and disseminating tools and resources that can support all players in the ground.

CHAPTER EIGHT
COSTING AND FINANCING OF VIRAL HEPATITIS NATIONAL STRATEGY

Financing is a substantial component to the success of health programs and viral hepatitis is not an exception. As stated above on strategic objective one; identifying sound interventions along with meticulous costing of these interventions is the first step for practical implementation of the viral hepatitis national strategic plan in Ethiopia. Thus, in this exercise for costing of the national viral hepatitis strategy, we have considered selected best buy-tracer interventions (that are affordable, feasible and cost-effective). And items/activities such as screening and diagnostic supplies, treatment, capacity building inputs, vaccines, advocacy and awareness creation activities, monitoring and evaluation tasks and over all supply chain management have been included in the cost of the strategic plan.

A detailed costing of Ethiopia's National Strategic Plan for viral hepatitis was conducted to outline the 5-year's budget requirement. Also, costs included in this model reflect the financial costs associated with the program allocated to the year of planned expenditure, and do not include any opportunity or depreciation costs. Accordingly, an excel spread sheet has been created and we use national and regional baseline data whenever available and global assumptions in case of data shortage.

The following table presents the summary cost for implementing viral hepatitis program over the five year period of the strategy.

Table 8.1. Summary Program Costs to Implement Viral Hepatitis Program in Ethiopia in USD

	Year 1	Year 2	Year 3	Year 4	Year 5	Cumulative
Labs	2,497,308	4,401,070	5,180,559	5,961,382	6,686,671	24,726,991
Treatment	6,710,202	9,259,008	10,463,239	10,017,634	7,643,847	44,093,930
Training	419,073	419,073	502,887	603,464	724,157	2,668,654
M&E	53,771	507,542	609,051	730,861	877,033	2,978,258
Advocacy	3,191,291	3,144,297	3,143,198	-	-	9,478,786
Supply Chain	475,476	573,586	675,829	729,368	714,445	3,168,703
Vaccination	302,018	283,629	310,064	352,289	391,642	1,639,642
Total Annual	**13,547,121**	**18,304,575**	**20,574,763**	**18,042,709**	**16,646,154**	**87,115,322**

ANNEXES

ANNEX 1. KEY INPUTS AND ASSUMPTIONS FOR THE COSTING OF THE NATIONAL STRATEGIC ACTION PLAN

Testing Volumes

- HCV and HBV screening volumes logic
  - Assuming that 20% of the 4 million annual outpatient visits (800,000) are in the 245 hospitals(Source: FMOH 2007 E.C fiscal year 6 month HMIS report)
  - Of the 800,000 visits, 90% of patients assumed to be screened
  - Approximately 3000 HCV and HBV tests run per year in each hospital
  - Assuming that program rolls out to half of all hospitals (122.5) in year 1 and then all 245 by the end of year 2
  - Screening volumes then grow year over year by 20%
- Lab costs
  - Pricing from other countries used (Nigeria, Mymar) as there was no national level pricing data
  - Natural decline built into viral load pricing
  - Assuming only pan-genotypic regimens used (no genotype testing will be done)

Treatment Targets

- HCV
  - Co-infection and mono-infection modeled separately
  - Co-infection logic
    - 340,000 patients on ART
    - Diagnostic access for co-infected scales up from 40% to 60% (access to CD4 used as a rough proxy)

- New drug uptake rate applied to those diagnosed

- Mono-infection logic (3 different modeling options)
  - Hospital screening (preferred option – less theoretical than others)
    - Screening based on hospital scale-up
    - Assuming 40% of patients captured at hospital are stage F3 or F4 (advanced cirrhosis) and require treatment
      - Treatment of F2 patients is justified but not considered due to budgetary constraints
  - MARPs strategy
    - Only sex workers considered in the costing under MARPs
  - General Population
    - Apply a pre-donor HIV uptake rate to the chronic HCV population
- Assuming that only pan-genotypic regimens are used
  - Can choose between 24 weeks of sofosbuvir or 12 weeks of sofosbuvir+daclatasvir
    - Assuming Daclatasvir not available until 2017 so 24 weeks of sofosbuvir used in Y1
    - Shift to 12 weeks of sofosbuvir + daclatasvir in Y2 when daclatasvir becomes available

- HBV
  - 3 potential models for treatment uptake (similar to HCV)
  - Majority of HIV/HBV co-infected patients on TDF based regimens so not considered in model
  - General population

- Uptake rate applied to total cirrhotic population

- MARPs strategy
  - Similar to HCV, not completely modeled due to lack of epi inputs

- Hospital strategy
  - 25% of patients captured through hospital screening require treatment with uptake scaling up from 70% to 90% over 5 years

- Commodity costs
  - Decline in sofosbuvir and daclatasvir drug costs are based on CHAI assumptions
  - TDF singles (for HBV) price of $54 per year is the 2013 negotiated ceiling price

M&E

- NCD M&E budget used as a proxy(Source: National Strategic Action Plan (NSAP) for the Prevention and Control of Non-Communicable diseases in Ethiopia)
- Assuming that the hepatitis budget is only a percentage of the total NCD M&E budget year over year. Based on the # of facilities targeted
  - Y1 only 3% (122.5 out of 3,766facilities targeted)
  - Y2 7% (245 out of 3,766
  - Assuming 20% year over year growth from Y3 to Y5

Advocacy

- Proxies used from NCD costing
- Assuming that this budget includes Birth Dose awareness
- Includes national level workshop and national campaign to raise awareness

Training

- Training of trainers
  - Assuming 2 TOTs per 15 trainees (assumption from Myanmar costing)
  - Cost of TOTs pulled from inputs used in clinical mentoring costing
- HCW assumptions
  - Doctors trained for 3 days (5 per hospital)
  - Nurses and lab staff trained for 2 days (5 nurses and 3 lab staff per hospital)
  - Pharmacists trained for 1 day (2 per hospital)
  - Staff for 245 hospitals trained over first 2 years
  - Staff training then increases by 20% each year Y3 through Y5

Vaccination/Prevention

- Birth Dose
  - Birth cohort data pulled from UNICEF
  - Assuming coverage increases from 25% to 45% (which is the % of children born in facility)
    - A child born in a facility is the maximum capacity restraint. The vaccine is not indicated for use out of cold chain and must be administered within 24 hours of birth
- MARPs
  - Only sex workers considered
- Vaccination of HCWs
  - Staff information provided (Source: Data from FMOH HRH directorate)

- Need to decide if non-health professionals in the health sector should be vaccinated
- Assuming a 5 year coverage rate of 90%

Supply Chain

- 5% of annual commodity costs applied to supply chain

Taking into account the above assumptions below is the summary cost for implementation of viral hepatitis program in Ethiopia.

ANNEX 2. IMPLEMENTATION PLAN OF THE VIRAL HEPATITIS NATIONAL STRATEGY

Overall goal	**To reduce incidence of Viral hepatitis transmission as well as chronic liver disease**							
Strategic Area	**Intervention**	**Indicator**	**Time frame**					**Remark**
			2015/16	2017	2018	2019	2020	
Strategic Objective-1: Set Up Necessary Policy, Planning, Advocacy and Resource								
1.1 Policy and planning	Develop national guideline to standardize immunization, diagnosis and treatment within the existing health delivery structure while determining their level of implementation	National guideline developed	X					
	Reinforce integration of effective immunization programs for hepatitis B, A and E viruses including initiation of HBV vaccine at birth within the national EPI program	Immunization programs integrated	X	X				

	Ensure incorporation of viral hepatitis in national, regional, and Woreda health planning process	viral hepatitis plan incorporated	X	X	X	X	X	
	Reinforce the implementation of national strategic plan and guideline to be integrated within the annual and five year plan by concerned agencies (laboratory agencies, PFSA, FMHACA).	National strategic plan integrated the mentioned agencies	X	X	X	X	X	
	Reinforce the implementation of the national strategic plan and guideline in selected health facilities	number of HFs implementing NSP	X	X	X	X	X	
	Establish a technical working group that will provide necessary support to FMOH in policy formulations and implementing programs	TWG established	X					
	Establish system for health information management (national survey, such as DHS, and surveillance and HMIS)	Information management system established	X	X	X	X	X	

1.2. Advocacy	Bring all stakeholders onboard through series of policy discussions and technical update platforms and workshops at national and regional level	number of advocacy sessions and workshops conducted	X	X				
	Develop culturally and linguistically appropriate educational messages and materials so as to make appropriate viral hepatitis (focused on HBV and HCV) information available to diverse population	Number of IEC/BCC material developed and distributed	X	X	X	X	X	
1.3 Financing	Raise funds to pay for the programmes, including through public and private domestic funding and external sources, such as from implanting partners or donors;	Budget availed and allocated	X	X	X	X	X	Budget allocated throughout the 5 year period

	Ensure national health insurance schemes incorporate and support viral hepatitis vaccination, diagnosis and treatment programs	viral hepatitis incorporated in the insurance scheme	X	X	X	X	X	
	Optimize the use of resources by improving the efficiency and effectiveness of services for the reducing the costs of medicines, diagnostics and other commodities by working with respective pharmaceutical companies							
Strategic Objective -2: Prevention of Viral Hepatitis								
2.1. Safe and effective vaccine for the prevention of HAV, HBV and HEV	Provision of hepatitis B vaccine within 24 hours of birth (establish HBV birth-dose programs)	Number of babies vaccinated within 24hrs of birth		X	X	X	X	FMOH will decide to deliver birth dose

	Offer HBV vaccine to healthcare workers	# Healthcare worker vaccinated		X	X	X	X	
	Offer HBV vaccine to Pregnant women	# pregnant women vaccinated		X	X	X	X	
	Offer HBV vaccine to sex workers	# sex workers vaccinated		X	X	X	X	
	Assess pre vaccine strategies for introduction of HAV and HEV vaccines		X	X				
2.2. Implementation of blood safety strategies	Prevent unnecessary blood transfusion by establishing or reinforcing policies and practices that promote rational use of blood and blood products	Policies and practices in place	X	X				
	Implement quality control measures for laboratory testing of HBV and HCV	Quality control mechanisms in place	X	X	X	X	X	

2.3. Infection control precautions and safe injection practices in healthcare settings	Strength and sustain routine infection control practices in healthcare and other settings	Infection control practice in place	X	X	X	X	X	
2.4. Safe sex practices	In collaboration with the HIV team increase demand and supply of male and female condoms	Safe sex practiced	X	X	X	X	X	
	Safe sex practice education to adolescent and sex workers	IEC/BCC material and training/workshop						

2.5. Assuring access to safe food and sanitation systems	Work with HEP and Water and irrigation ministry to assure access for safe drinking water and sanitation system particularly high risk setting	safe water and sanitation program available	X	X	X	X	X	
	Increase awareness and promotion of personal hygiene practices such as regular hand washing, cooking food well and sanitary precautions while consuming vegetables and fruits	Awareness raised	X	X	X	X	X	
2.6 Post exposure prophylaxis	For healthcare workers and other high risk individuals (sex workers) offer post exposure prophylaxis and HBIG	PEP provided		X	X	X	X	

Objective-3: Creating access to testing, medical care and treatment to viral hepatitis								
3.1 Identify persons infected with viral hepatitis early in the course of their disease.	Sensitize all relevant decision makers, program managers ,facility and agency heads on testing algorithms and approaches (workshops)	Sensitization sessions	X	X	X			
	Provide trainings to laboratory and other relevant personnel on the national testing algorithm and technologies on HCV and HBV	Training provided	X	X	X	X	X	
	Coordinate quantifications and forecasting of testing commodities for screening and diagnosis of HCV and HBV at national level	annual quantification of commodities	X	X	X	X	X	
	Procurement of all necessary testing commodities as per national quantifications	Commodities procured						

	Provide initiation mentorship in all sites during the first few months of testing initiation integrated with clinical care							
	Conduct screening tests for viral hepatitis especially for HCV, HBV	# of persons screening; # of facilities providing screening	X	X	X	X	X	
	Develop systems for private sector for standardized testing and linkage to treatment	# private facilities providing testing	X	X	X	X	X	
3.2 Link and refer persons infected with viral hepatitis to care and treatment.	Prepare optimized SOP for inter and intra- facilities service outlets referral linkage system	SOP developed	X	X				
	Map and establish network between testing/screening sites and treatment centers	networking established	X	X	X	X	X	
	Train/ orient health care workers to improve attitude and skill for linkage and referral	training on referral/ networking	X	X	X	X	X	

	Ensure a referral and linkage feedback mechanism among health facilities possibly integrated in to existing system	feedback mechanism in place	X	X	X	X	X	
3.3 Improve access and quality of care and treatment for persons infected with viral hepatitis.	Develop and disseminate clinical care/ service package and training manuals	Training material developed	X	X				
	Adequately equip the treatment centers with diagnostics and monitoring equipments such as Viral load testing equipment, ultrasonography equipment, fibro scan, etc…	Treatment sites equipped						
	Provide training of health personnel on clinical care and treatment of viral hepatitis	# healthcare worker trained	X	X	X	X	X	
	Quantification of viral hepatitis drugs	annual quantification	X	X	X	X	X	
	Procure all necessary drugs	drugs procured	X	X	X	X	X	
	Optimize the current PFSA distribution networks and supply chains to include current HCV and HBV treatment commodities	distribution system in place	X	X	X	X	X	

	Increase progressively number of health facilities providing treatment and care for HBV and HCV	# of facilities providing services	X	X	X	X	X	
	Provide mentorship to all facilities providing treatment for first six month of service initiations	mentorship provided	X	X	X	X	X	
Objective-4: Strengthen the Monitoring and Evaluation System (Surveillance, HMIS, Quality Assurance and Research) for the Viral Hepatitis Program								
4.1 Building the capacity of the health sector to monitor viral hepatitis transmission and burden	Adapt/develop standard global and national indicators to monitor the viral hepatitis program the country;	program indicators identified and adapted	X	X	X	X	X	
	Develop viral hepatitis monitoring and evaluation tools/instruments for data collection, recording and reporting (paper based and electronic);	tools developed and used	X					
	Avail monitoring tools at service delivery points;	service delivery points received tools	X	X	X	X	X	

	Provide training on viral hepatitis monitoring and evaluation tools/instruments at different levels (public and private) for health care providers, HMIS and M&E officers, and data clerks etc.	# healthcare worker trained	X	X	X	X	X	
4.2 Performance monitoring	Ensure data analysis and utilization at different level (health facilities, Woreda, zone, region and national level);	information used for performance monitoring	X	X	X	X	X	
	Conduct regular supportive supervision and joint review meetings bi-annually	# supportive and review meetings	X	X	X	X	X	
4.3 Establish national viral hepatitis surveillance/ survey system:	Advocate and ensure the inclusion of viral hepatitis sentinel surveillance in the EPHI five-years national surveillance, EDHS and other survey roadmap;	viral hepatitis indicators incorporated	X	X	X	X	X	

4.4 Incorporate viral hepatitis indicators into the existing HMIS	Include relevant viral hepatitis screening, care & treatment and programmatic/operational indicators into the routine HMIS recording and reporting system;	viral hepatitis indicators incorporated in HMIS	X	X	X	X	X	
4.5 Adopt/ develop quality assurance mechanism for operational, clinical, and laboratory services	Conduct joint viral hepatitis quality assurance monitoring on bi-annual basis		X	X	X	X	X	
4.6 Prioritize operational and policy relevant researches on viral hepatitis program	Include priority viral hepatitis operational research agenda in the EPHI national five years roadmap (both biomedical and programmatic/operational) as well as timely dissemination		X	X	X	X	X	

Objective-5: Advocacy and Increasing Awareness around Viral Hepatitis								
5.1. Advocacy among politicians, policy/decision makers and other stakeholders	Advocacy workshops		X	X	X	X	X	
5.2 Increasing awareness among health professionals	Develop job aids		X	X				
	IEC/BCC through various media		X	X	X	X	X	
	Sensitization workshops		X	X	X	X	X	
5.3 Increasing awareness in the community	IEC/BCC through various media		X	X	X	X	X	
	Awareness creation through HEW		X	X	X	X	X	

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