

II. Introduction

A. Hepatitis Background

Hepatitis is an inflammation of the liver that can lead to chronic disease, compromise quality of life or be life threatening. Hepatitis is caused by many factors including excessive alcohol consumption, some drugs including prescription or treatment related drugs, poisons and many viruses including hepatitis A, B, C, D and E. Approximately 4,000-5,000 persons die from chronic liver disease annually nationwide. This report details a needs assessment and strategic plan focused on viral hepatitis types A (HAV), B (HBV), and C (HCV), each of which has unique characteristics, risk factors and treatment.

Hepatitis A (HAV)

HAV infection occurs via fecal to oral transmission and is usually passed by close personal contact or by eating food or drinking water containing HAV. The incubation period, during which the disease is still transmissible, averages 28 days. Some people, particularly young children, experience no symptoms. If symptoms are present they usually occur abruptly in the form of fever, fatigue, anorexia, nausea, abdominal pain, dark urine and jaundice. Symptoms among older children and adults usually last less than two months, although some patients (10-15%) will experience prolonged or relapsing disease lasting up to six months. There is no chronic infection and HAV infection confers life-long immunity against HAV.

HAV has been vaccine preventable for people over age two since 1995. Two doses of the vaccine, given at least six months apart, are needed for lasting protection. Vaccination is recommended for the following persons two years of age and older:

- Travelers to countries with high rates of Hepatitis A;
- Children living in regions of the United States with consistent high rates of HAV;
- Men who have sex with men;
- Injecting or non-injecting drug users;

- Persons with chronic liver disease;
- Persons with clotting factor disorders;
- Anyone who wants to be protected from contracting HAV.

Hepatitis B (HBV)

HBV infection occurs via blood or body fluid exchange, including having sex with an infected person without a condom, sharing “works” when "shooting" drugs and through occupational injuries. HBV is vaccine preventable (since 1982) and chronic infection occurs in less than 10% of persons infected over five years of age. However, 90% of infants infected at birth suffer chronic infection. Infected persons may be asymptomatic or may experience “flu-like” symptoms and jaundice. Populations at risk include:

- Men who have sex with men;
- Sex contacts of infected persons;
- Injection drug users;
- Household contacts of chronically infected persons;
- Infants born to infected mothers;
- Infants/children of immigrants from areas with high rates of HBV infection;
- Health care and public safety workers;
- Hemo-dialysis patients.

Hepatitis C (HCV)

HCV is a blood-borne virus that can lead to cirrhosis, liver failure and liver cancer. It is considered a public health threat because seventy-five percent of infected persons have no symptoms and are unaware of their infection. When symptoms do occur, they may be mild and indistinguishable from HAV or HBV. No vaccine currently exists for HCV. Although the acute case fatality rate is low, 75-85% of infected persons suffer chronic infection. Treatment is costly, causes difficult side effects and is effective in eliminating the virus and reducing liver injury in fewer than 50% of diagnosed cases. Specific persons at risk include:

- Injection drug users (HCV is highly efficient in transmitting in this manner);
- Persons receiving or administering tattoos or another skin penetration;
- Persons who are exposed to blood in health care or emergency service;

- People who have had unprotected sex with multiple partners, repeated sex with an infected partner, or a history of sexually transmitted diseases;
- People who had a blood transfusion or invasive surgery prior to 1992;
- Hemo-dialysis patients and recipients of clotting factors made before 1987;
- Infants born to infected mothers.

B. Hepatitis Planning in Minnesota

To date, resources devoted to hepatitis in Minnesota have been limited. Viral hepatitis funding represents far less than what is dedicated to the prevention, care and treatment of HIV/AIDS, despite higher incidence and prevalence in the state and the fact that certain sub types of hepatitis are more infectious than HIV.

Of particular concern since HCV was identified in 1989 is evidence of an emerging epidemic of HIV/HCV co-infected individuals (approximately 350,000 Americans). In co-infected persons HCV infection progresses faster, leading to serious liver disease. HCV is also exacerbated by the continued use of alcohol or drugs (including injection drugs and medications used in retro-viral therapy for HIV positive persons), which cause further toxicity and damage to the liver. HCV helps account for the 50% of deaths from liver disease among those with HIV. In addition, persons with previous diagnosis and history of STDs are also at higher risk for infection with viral hepatitis. Thus, raising awareness and priority of hepatitis and coordination between HIV, STDs and all forms of viral hepatitis is essential in any infectious disease work.

In 2001, the MDH applied for funding to the CSTE in response to a request for proposals on "Hepatitis Program Building at the State Level." The MDH was awarded approximately \$20,000 to conduct a needs assessment and develop a five-year action plan for viral hepatitis in the state, modeled on an earlier planning process for STD prevention and control in the state. The Division Hepatitis Team oversaw the hepatitis planning process. The group's work plan and timeline can be found in Appendix A. This report reflects the culmination of this work with implementation as the next phase.

C. Report Purpose

This report summarizes the needs assessment data collected and outlines a five-year plan for hepatitis in Minnesota. Information in this report was generated by hepatitis surveillance, gathered via written documentation and research and by primary data collection. Many stakeholders already involved in hepatitis work were interviewed or included in the formation of this plan. A list of individuals who were interviewed or involved in planning efforts is included in Appendix B.

This report can be used by a broad array of agencies and individuals responsible for and impacted by viral hepatitis in order to plan, fund, advocate and deliver viral hepatitis prevention, testing, treatment, research, training and policy.