HEPATITIS B
Fact sheet - July 2015

Key facts
• Hepatitis B is a viral infection caused by hepatitis B virus (HBV).
• HBV affects the liver and can cause both acute and chronic disease.
• Chronic liver infection with HBV puts people at high risk of death from cirrhosis of the liver and liver cancer.
• 780,000 people die every year due to consequences of hepatitis B.
• Children less than 6 years of age infected with the hepatitis B virus are most likely to develop chronic infections.
• HBV is spread by contact with blood or body fluids of an infected person.
• HBV is 50 to 100 times more infectious than HIV.
• The hepatitis B vaccine is the mainstay of hepatitis B prevention.

Disease epidemiology
• Globally, more than 240 million people are infected with chronic liver infection caused by HBV.
• Around 780,000 people die every year due to the acute or chronic consequences of hepatitis.
• The hepatitis B prevalence is highest in sub-Saharan Africa and East Asia.
• In India, the prevalence of hepatitis B surface antigen (HBsAg) is 3-4.2% with over 40 million HBV carriers.
• Every year over 100,000 Indians die of hepatitis B related complications.
• The most common genotype in India is D, followed by A and C. The identification of genotypes is important in prognosis and treatment of patients. There are 10 known HBV genotypes, classified from A to J.

Transmission
• HBV is spread by contact with blood or body fluids of an infected person.
• HBV is 50 to 100 times more infectious than HIV.
• The main ways of getting infected with HBV are: from mother to baby at the birth (perinatal), child-to-child (especially in household settings), unsafe injections and transfusions, and unprotected sexual contact.
• Sharing items such as razors or toothbrushes with an infected person, direct contact with the blood or open sores of an infected person, unsafe tattoos/piercings and exposure to blood from needlesticks or other sharps can also lead to HBV transmission.

Symptoms
• Many are asymptomatic but some persons have acute illness with symptoms that last several weeks, including yellow color of skin and eyes (jaundice), dark-colour urine, extreme fatigue, nausea, vomiting and abdominal pain.
• In some persons, the hepatitis B virus can lead to a chronic liver infection that can later develop into cirrhosis of the liver or liver cancer.
• More than 90% of healthy adults who are infected with the hepatitis B virus will recover and be completely rid of the virus within 6 months.

Risks for chronic HBV
• Children less than 6 years of age who become infected with the hepatitis B virus are most likely to develop chronic infections.
• About 80-90% of infants and 30-50% of children infected before the age of 6 years develop chronic infections.
• Less than 5% of otherwise healthy adults who are infected develop chronic infection. About 15-25% of adults who become chronically infected during childhood die from hepatitis B related liver cancer or cirrhosis.
Diagnosis

- Laborotory diagnosis of hepatitis B infection focuses on the detection of the hepatitis B surface antigen (HBsAg).
- Acute HBV infection is characterized by the presence of HBsAg and immunoglobulin M (IgM) antibody to the core antigen (HBcAg).
- The presence of HBeAg during the initial phase of infection indicates that the blood and body fluids of the infected individual are highly contagious.
- Chronic infection is characterized by the persistence (>6 months) of HBsAg (with or without concurrent HBeAg).
- Persistence of HBsAg is the principal marker of risk for developing chronic liver disease and hepatocellular carcinoma (HCC) later in life.

Treatment

- There is no specific treatment for acute hepatitis B.
- Care is aimed at maintaining comfort and adequate nutritional balance, including replacement of fluids that are lost from vomiting and diarrhea.
- Persons with chronic hepatitis B can be treated with drugs, including interferon and antiviral agents.
- Treatment can slow the progression of cirrhosis, reduce incidence of hepato-cellular carcinoma and improve long-term survival.
- Treatment, however, is not readily accessible in many resource-constrained settings.

Prevention

Primary prevention:
- Advocacy and raising awareness of all types of viral hepatitis infections help reduce transmission in the community.
- Safe and effective vaccines are widely available for the prevention of HBV.
- Implementation of blood safety strategies, including blood supplies based on voluntary non-remunerated blood donations, effective public education on blood donation, donor selection, and quality-assured screening of all donated blood and blood components used for transfusion can prevent transmission of HBV and HCV.
- Infection control precautions in healthcare and community settings can prevent transmission of viral hepatitis as well as many other diseases.
- Safe injection practices can protect against HBV.
- Safer sex practices, including minimizing the number of partners and using barrier protective measures (condoms), protect against HBV transmission.

Secondary and tertiary prevention

- Early diagnosis and treatment with antiviral drugs provides the best opportunity for effective medical support and prevention of further spread.
- Both the introduction of confirmatory testing and the notification and counseling of blood donors who have reactive results detected during screening of donated blood provide unique opportunities for early diagnosis and medical support to asymptomatic individuals who come to donate blood.

HBV vaccination in India

- The hepatitis B vaccine is the mainstay of hepatitis B prevention. WHO recommends that all infants receive hepatitis B vaccine as soon as possible after birth, preferably within 24 hours.
- The birth dose should be followed by 3 primary series at 6, 10, 14 weeks to complete the schedule.
- The complete vaccine series induces protective antibody levels in more than 95% of infants, children and young adults.
- The protection lasts at least 20 years and can be lifelong.
- All children and adolescents younger than 18 years old and not previously vaccinated should receive the vaccine if they live in countries where there is low or intermediate endemicity.
- India introduced HBV vaccine in its Universal Immunization Programme in 2002 in 33 districts and 15 municipalities. This was scaled up nationwide in the year 2011. As per current national estimates, the hepatitis B vaccination coverage of children is 34% for the birth dose (within 24 hours after birth) and 67% for hepatitis B third dose.

WHO also organizes World Hepatitis Day on 28 July every year to increase awareness and understanding of viral hepatitis.