DECENTRALIZED SCREENING OF HEPATITIS B & C AT PRIMARY HEALTH CENTRES IN TAMIL NADU

Health Technology Assessment in India
National Institute for Research in Tuberculosis, Chennai

Summary

A Health Technology Assessment (HTA) was conducted to establish the cost-effectiveness of decentralized diagnostic program for Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) implemented in Tamil Nadu, with specific focus on a selected key population at increased risk of HBV and HCV. It was found that decentralized HBV and HCV diagnosis followed by early treatment for HBV and HCV and vaccination for HBV negatives can save lives and reduce out-of-pocket expenditures.

RECOMMENDATIONS

- Decentralized HBV and HCV diagnosis at Primary Health Care level followed by early treatment in selected key population in Tamil Nadu is an appropriate intervention to reduce HBV and HCV burden.
- Active screening of selected key population helps in early identification of persons with chronic HBV or HCV infection and enables them to receive the necessary care and treatment to prevent or delay progression of liver disease.
- Considering vaccination for HBV negatives in selected key population in Tamil Nadu is cost-saving and could reduce transmission.
- Implementation of this intervention pose practical challenges to policy makers, where there is currently very limited access to HBV and HCV diagnostic and treatment services due to lack of awareness and other barriers. Vaccination coverage and increasing access to PHC is essential

Problem Statement

Viral hepatitis is a major public health problem which accounts for 2.85% of all deaths in India (1). Hepatitis B virus (HBV) is predominant in India affecting nearly 50 million people with an average prevalence of 4% (2). Chronic HBV infection leads to liver disorder and accounts for 10-20% of cirrhosis and 40-50% hepatocellular carcinoma (HCC) in India (3) HCV remains a major public health problem in India with an estimated prevalence of 0.5-1.5%. HCV prevalence among blood donors and pregnant women was found to be 0.44% and 0.88% (4) India has initiated the National Viral Hepatitis Control Program (NVHCP) in 2018 to eliminate viral hepatitis by 2030. HCV elimination efforts in India aims to reduce new chronic infections by 90% and mortality by 65% in comparison to 2015 status (5)

Background

The prevalence of HBV was 1.63% and HCV was 0.30% in Tamil Nadu. Three-fourths of HBV and HCV infected people were males. Prevalence of HBV and HCV was higher in rural areas. Systematic review of literature identified that key population including individuals with sexual risk behaviours, individuals with STDs, people living with HIV, blood donors and men who have sex with men (MSM) have higher prevalence of HBV and HCV. The pooled estimate of HBV and HCV prevalence among selected key population was 3% and 1% respectively. Overall burden of HBV and HCV was considerably higher in Tamil Nadu. Majority of people with hepatitis are unaware of their infection due to a lack of knowledge and availability at point-of-care testing services.

Delay in the diagnosis of HBV is common due to asymptomatic nature of the disease and lack of access to timely screening. At present in India hepatitis diagnosis is provided at the tertiary health care facility level and for individuals with abnormal liver functions.

At present, under NVHCP there is a gap in providing cost-effective diagnostic services at the primary health care level.

The implementation of decentralized HBV diagnosis strategy may effectively address the HBV and HCV disease burden in the state with favorable cost saving for the NVHCP in Tamil Nadu.6,7 Similarly, individuals test positive for HCV among selected key population at primary health care level is a cost saving.

KEY MESSAGES

- To achieve the HBV & HCV elimination goals, one of the key strategy adopted is to strengthen the decentralized diagnostics services for HBV & HCV to ensure early and accurate diagnosis.
- Key population with high prevalence of HBV & HCV would be highly benefited through early and accurate diagnosis at point-of-care facility.
- The point-of-care screening strategy was economically dominant for HBV & HCV for selected key population is cost saving to health system.
- Decentralised diagnostic strategy could avert deaths, gain life years and reduce out-of-pocket expenditure to patients.

Decentralized HBC & HCV Diagnositcs

The new action plan of Government of Tamil Nadu had initiated HBV and HCV screening at PHC level will provide a major opportunity to improve identification and treatment of persons with chronic hepatitis, and help to achieve the targets outlined. Active screening and diagnosis of HBV and HCV infection among key population at PHC level is the gateway for access to both prevention as well as care and treatment services.

3/4th of HBV & HCV infected people were males

Summary of Evidence

Provision of diagnostic services for selected key population who will be identified by health care providers at primary health care level. The screened key population with or without symptoms will be diagnosed using a rapid test kit. Those who test positive with rapid test will be further referred to tertiary health care for gold standard ELISA test. Individuals test positive for ELISA will progress to HBV treatment. Individuals who test negative for rapid test and ELISA will progress to HBV vaccination. This decentralised diagnosis followed by early treatment for HBV and HCV patients and vaccination for negatives of HBV at primary health care level for selected key population in Tamil Nadu is cost saving.

Early screening and hepatitis B vaccination will provide an opportunity to link to interventions to reduce transmission and cost to the patients and their family members. HBV infection rates can be reduced by active screening of key population and increasing HBV vaccination rate and linking patients with the care cascade.

CONCLUSION

The implementation and expansion of decentralized HBV diagnosis strategy may effectively address the HBV and HCV disease burden in the state with favorable cost saving for the NVHCP in Tamil Nadu. It will likely identify HBV and HCV infection among asymptomatic cases, prevent chronic cases and would improve quality of life of HBV and HCV infected individuals and reduce out-of-pocket expenditure

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