

Webinar Training – A Panel Discussion on ‘Hepatitis Free Future’ with Elimination of Hepatitis by 2030

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Abstract

Background : Poornima University, in collaboration with Jodhpur School of Public Health, hosted an insightful and interactive live global webinar on “Hepatitis Free Future” on 1st August 2020. Four speakers and six panellists addressed the current situation, preventive measures, and future directions for achieving the target of hepatitis elimination by 2030

Findings: Globally, Hepatitis B and C (HBV & HCV) accounts for 96% of all hepatitis mortality and more than 300 million people are living with viral hepatitis. The World Health Organization (WHO) estimates that 1 in 3 people worldwide has been infected with either HBV or HCV. Global uptake in childhood vaccination is significant for HBV, but the birth dose for all infants is too low (nearly 39% percent). Despite vaccination, 1.8 billion 5-year-old get infected every year with HBV. Various programs and projects are contributing to the elimination of the Hepatitis to reach the international goal. Due to COVID-19 there would be setbacks however we have all the tools within our reach and we must use them to get elimination, most importantly deliver it to the people who need it the most, if we plan to succeed by 2030.

Conclusion: Hepatitis claims the lives of millions of people globally each year. With prevention, treatment, diagnostics, and vaccination hepatitis elimination is attainable. Greater investment in eliminating hepatitis will generate higher long-term returns. We have the tools, treatments, and strategies to combat this infectious disease. We need the support of various sectors to execute the plan, proper implementation of the idea, training, and awareness to the public domain. With leadership, resources, and multi-stakeholder collaboration, elimination of viral hepatitis is achievable

Key words: Hepatitis, COVID 19, PMTCT

Introduction

An engaging and live global webinar on “Hepatitis Free Future” was hosted by Poornima University and Jodhpur School of Public Health (JSPH) on August 1st, 2020. The webinar aims to highlight on a 10-year set goal for Viral Hepatitis Elimination. Unlike covid-19, hepatitis has all the critical tools that are needed to combat the infectious disease. Global elimination of hepatitis is within reach with all the prevention measures, appropriate treatment facilities, and with a sense of awareness, we can pass on a world free of hepatitis to our next generation¹. Therefore, four speakers and six panellists got together to discuss the current

global situation of hepatitis, challenges and preventive measures, and future directions for long term victory to eliminate hepatitis by 2030.

Overview and Findings:

Celebrated on 28 July, World Hepatitis Day enhances awareness of viral hepatitis. There are five strains of viral hepatitis (A, B, C, D & E), a blood-borne infection of the liver that can cause several health issues and may be fatal. Unlike COVID-19, hepatitis has all the necessary treatment, preventive measures, oral care diagnostics, curative medicines, and vaccines. However, over 80% of people with hepatitis lack awareness and resources

for testing, prevention, and treatment². Hepatitis affects the life of 325 million people, causing 1.34 million deaths in a year. Cirrhosis and hepatocellular carcinoma accounts for 96% of the total death due to viral hepatitis globally. In the Asia-Pacific region, more people die from viral hepatitis than from HIV, tuberculosis, and malaria together each year. In India, estimated hepatitis C virus infection cases are between 6 to 12 million³. All these highlights the need for awareness generation, mass immunization, and promotion of preventive strategies.

There's good evidence that eliminating HCV and HBV is technically feasible. Many countries have achieved outstanding coverage with the hepatitis B vaccine. Also, the recent development of highly effective antivirals has cure rates exceeding 95%⁴. Preventive measures and safety have considerably reduced the threat of both hepatitis B and C virus infections. However, 325 million people globally are carriers of hepatitis B or C virus, which can remain asymptomatic for decades. Each year, 1.75 million people acquire hepatitis C virus infection. These people are at risk of severe liver disease and death unless they receive timely testing and treatment. Unfortunately, access to affordable care is disturbingly low.

Global uptake in childhood vaccination is high for hepatitis B but, the birth dose for all the infants is too low (nearly 39%). Despite all the availability of treatment, vaccination, and prevention, 1.8 billion 5-year-old age gets infected every year with Hepatitis B virus (HBV), with a 31% death rate⁵. Routine infant hepatitis B vaccination, with 90% coverage and the first dose administered at birth, would prevent 84% of global HBV-related deaths. A concerted effort to screen, treat, and vaccinate at-risk individuals has the potential to eliminate Hepatitis as a public health threat by 2030.

Preventive Measures and Strategies:

World Health Assembly adopted the Global Health Sector Strategy to eliminate cases of hepatitis by 2030. The five strategic directions are Information for focused action, Interventions for impact, Delivering for equity, Financing for sustainability, and Innovation for acceleration. Preventive measures and strategic planning

can help us draw a roadmap to elimination⁶. There is a need for a 65% decrease in death from chronic HBV and HCV and a 90% reduction in new cases in coming years. Low and middle-income countries account for the largest proportion of persons living with HBV (96%) and HCV (72%), yet access to testing and treatment is more limited in these countries. In order to increase access and reduce health inequities, the delivery of hepatitis and harm reduction services can be tailored to different populations and settings through integration, decentralization and task-shifting. The five-core intervention should be scaled up to reach elimination. The five key indicators consider the diagnosis, treatment, and viral suppression or the effectiveness of treatment which includes Hepatitis B vaccinations, HBV prevention of mother-to-child transmission (PMTCT), blood & injection safety, harm reduction and diagnoses and treatment services

Why is Prevention of Mother-to-Child Hepatitis B Transmission important?

One of the major causes of infants becoming infected with such a large number is the transmission of HBV from mother to child. Over 180,000 new-born babies in the western Pacific region are newly infected by hepatitis B through mother-to-child transmission. It is imperative to prevent mother to child transmission of the virus since the risk of chronic hepatitis infection varies inversely with the age at which it occurs. 90% of affected infants develop chronic infection in the first six months of age⁷. They carry a 25% risk for the development of chronic liver disease, cirrhosis, or hepatocellular carcinoma. The statistical data for the universal immunization program mentions that the prevalence of HBV in children less than five years was reduced from 4.7% in 2000 (pre-vaccine era) to 0.8% in 2017, the major reason was the inclusion of hepatitis vaccine. Antiviral Therapy (tenofovir) plays a significant role in preventing mother to child transmission of HBV. As per WHO's new guidelines on prevention from mother to child hepatitis B transmission, all infants receive a first dose of the hepatitis B vaccine preferably within 24 hours of birth, followed by minimum two additional doses. In countries that have already achieved high coverage of hepatitis B immunization, including timely birth dose,

routine screening for HBV infection among pregnant women and antiviral prophylaxis for those in need is an additional opportunity to prevent transmission from mother to child.

Programs and Projects Contributing to elimination of Viral Hepatitis:

1. National Viral Hepatitis Control Program (NVHCP): The National Viral Hepatitis Control Program, launched by the honorable Union Minister of Health and Family Welfare, aims to reduce morbidity and mortality due to all types of viral hepatitis and to eliminate Hepatitis C by 2030. The program's key strategies include awareness-raising, prevention, diagnostic promotion, treatment delivery, safe blood and blood products, free drugs and serological screening, and safe socio-cultural practices. This program has a close-knit with all other Indian programs like Swachh Bharath Abhiyan, MCH program, Immunization Programs, National AIDS Control Program, National Tuberculosis Elimination Program, and Viral hepatitis Surveillance Program.

2. Project ECHO – Extension for Community Healthcare Outcome: It is a non-profit mechanism that uses technology in disease management. At ECHO, the mission is to democratize the implementation of best practices for healthcare to underserved people in the world. The goal of this project is to touch the lives of one billion people by 2025. The project has a model to bring access to care everywhere. The model has four ideas A, B, C & D. Amplification, Share Best practices, Case Based Learning, Web-based Database. ECHO uses a force multiplier, a technique of assisting and training the existing community clinicians to reach the desired goal of elimination. ECHO can help to eliminate HCV by educating, vaccinating, treating, diagnosing, and ultimate care.

3. Sustainability -Making Elimination Affordable: The prices of medicines and diagnostics are the key drivers that influence the economic analysis of viral hepatitis elimination plans. Though the pricing of screening tests is 1\$ US, no manufacturer would like to invest in FDA registrations for such a low cost because

of the lack of profit. So, the status quo laboratory-based serology testing is at higher costs. Shockingly, tenofovir disoproxil fumarate (TDF) became generic in 2018. Patients paid up to \$125 a month, while its median prices on the international market are \$32 for a year supply. The system created today is a barrier for our hepatitis patients. By 2030, barely less than ten countries around the world will be able to eliminate hepatitis at current rates of diagnosis and treatment. The cost of pre-qualified serological testing varies from US\$ 0.5 to US\$ 3, while the cost of nucleic acid testing is higher (US\$ 25-200). There is a need to be made these significant tests available at a lower expense. There are opportunities for the public sector to optimize procurement of generic medicines at the country level and quality assured diagnostics on the international market at low cost. The private sector can also support the national goals through provision and services and training the healthcare force. The government has done its job by giving us a platform now it is also the job of private sectors to not only identify the missing million but also to link with the care government has provided.

Furthermore, other sectors, such as corporate, education, financial services, and infrastructure, will play a pivotal role in increasing awareness and highlighting the importance of investment in an area with high socio-economic returns. With visionary leadership, multi-stakeholder collaboration, and full integration of existing solutions, elimination of viral hepatitis by 2030 is achievable.

Challenges:

We appear close to the finish line, yet we still have miles to run in the race against Hepatitis B. There are many barriers to overcome to reach our goal of elimination. Unfortunately, those most likely to be infected with HBV are also those with the most difficulties to health care access, including limited English proficiency, lack of health insurance, and difficulty navigating the complicated health care system. These are intensified by financial, labor, transportation, and time-related barriers.

The following are some of the challenges facing the prevention of mother-to-child transmission of

hepatitis. Availability of immunoglobulin because of cost, poor penetration of the first birth dose of Hepatitis B, maintaining cold chain, awareness and acceptance by the society of a Hepatitis B mother. Although the WHO has provided guidelines for the use of antivirals in pregnancy with a high viral load, the problem is how not to stigmatize and avoid discrimination on the part of society⁸.

Some challenges in scaling up HCV testing also exist. Effective testing policies and national guidelines are there still are not implemented strictly. There is a need to establish a strong hepatitis awareness and surveillance program. Inadequate quality testing is a big challenge. It is necessary to expand the quality assured testing for hepatitis⁹. Further, a powerful system is needed to maintain the confidentiality to overcome the stigma and discrimination associated with Hepatitis. For rational testing and reporting the most important thing for an institute is to adhere to the guidelines.

Also, lack of awareness and lack of perceived risk is a crucial challenge in adult vaccination. To overcome this, corporate hospitals and medical schools should use the SOPs and aim to vaccinate health care providers, doctors, nurses, housekeeping staff, and all those working in the hospital. People must receive a complete schedule of vaccines, followed by serology testing post-vaccination to know about the non-responders or delayed responders.

Conclusion

Researchers have made great strides towards addressing this serious liver disease. There is now a safe vaccine that has saved millions of lives. We have effective prevention-to-vaccination strategies that could help us dramatically reduce new cases of acute hepatitis B and C infections. We are at an exciting time in the world of Hepatitis, where researchers speak of a cure within a decade, and the World Health Organization has set a goal for the elimination of this deadly disease by 2030. Yet, there is more work to be done. There is a need to increase market transparency to mitigate market barriers and accelerate progress towards HBV and HCV elimination. Major innovations in the field of testing,

technology, and medicines have made the commitment to elimination possible. The need for awareness, affordability, and training is of utmost importance to reach the set goal.

Ethical Clearance: Taken from institutional Ethics Committee of Poornima University

Source of Funding: Self-Funded

Conflict of Interest: Nil

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