

CME

Viral Hepatitis—A Silent Pandemic; Let's Get Going

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Introduction: Viral Hepatitis is not drawing the attention from all levels of stakeholders while the prevalence and incidence is silently growing. As World Health Organization has adopted a resolution to raise the profile, attention and resources towards fight against Hepatitis, this article could help sensitize readers about the need and possible way forward in their respective settings. **Aims:** To Raise the profile of Hepatitis and draw attention of Policymakers, Professional bodies and stakeholders from Public and Private sector. **Methods and Material:** This article is a review of the existing information, basis the sources mentioned and author's efforts in this regard. **Results:** The adoption of resolution WHA 63.18 by the World Health Assembly in 2010 and subsequent discussion in WHA 2014 offers immense opportunity to understand the gaps in policy and practice and collate the existing knowledge or generate new information, to excite policymakers and guide them take informed decisions. **Conclusions:** Hepatitis is a much serious issue than we all believe, only concerted efforts by public health community could lead the way forward. **Key Message:** Viral Hepatitis impacts all Health Care Professionals, being a major occupational hazard. Thus, it is our community, which should lead comprehensive approach to excite and guide policymakers take informed decisions in fight against Viral Hepatitis.

Key Words

Silent Pandemic; World Hepatitis Day; Comprehensive prevention and control of Viral Hepatitis

Where are we?

Viral hepatitis is a global public health problem affecting millions of people every year, causing disability and death. A World Health Assembly resolution in 2014 has noted with deep concern that viral hepatitis is now responsible for 1.4 million deaths every year (compared to 1.5 million deaths from HIV/AIDS and 1.2 million deaths from each of malaria and tuberculosis), that around 500 million people are currently living with viral hepatitis and some 2000 million have been infected with hepatitis B virus, and considering that most people with chronic hepatitis B or C are unaware of their infection and are at serious risk of developing cirrhosis or liver cancer, contributing to global increases in both of those chronic diseases. In the World Health Organization's (WHO) South East Asia Region (SEAR) comprising of India, Bangladesh, Srilanka, Maldives, North Korea, Myanmar, Nepal, Bhutan, Indonesia, Timor-Leste and Thailand. In addition to the loss of more than 0.5 million lives and untold suffering for millions of people, viral hepatitis causes tremendous

economic loss to the patients, and their families due to long hospitalization and expensive treatment for chronic patients.[1,2]

- An estimated 57% of cases of liver cirrhosis and 78% of cases of primary liver cancer result from Hepatitis B Virus (HBV) or Hepatitis C Virus (HCV) infection.[1]
- About 65% of those with HBV and 75% of those with HCV do not know they are infected.[1]
- Around 4.7% of the Indian population is chronically infected with Hepatitis B, thus translating into 56 million carriers.[3]

Why should we be concerned? Hepatitis C is a detonating viral time bomb.[4] In recent decades, viral hepatitis has not received the attention it deserves from the global community. In spite of the mortality burden being at par with other diseases like Malaria, HIV and TB, there has been negligible funding and global attention towards Hepatitis. Thus, Hepatitis profile needs to be raised through different means. Infection with viral hepatitis due to hepatitis B and hepatitis C is a major occupational

hazard for all health care professionals. Millions of people are living with viral hepatitis and millions more are at risk. (Table 1) Most people who were infected long ago with HBV or HCV are unaware of their chronic infection. They are at high risk of developing severe chronic liver disease and can unknowingly transmit the infection to other people. New hepatitis B and C infections are seen more often in recipients of organs, blood, and tissue, along with persons working or receiving care in health settings, and in vulnerable groups. Despite the significant public health burden posed by hepatitis group of viruses, especially Hep B and Hep C, current resources and efforts to curb this problem are inadequate for chronic viral hepatitis prevention, control, and surveillance programmes and are notably less than those targeting other infectious diseases that have a similar impact on public health. These discrepancies are particularly striking in light of the observation that there are an estimated 100 million hepatitis B carriers and nearly 30 million hepatitis C carriers, compared to 3.5 million people living with HIV/AIDS in the South-East Asia Region (Table 2). In other words, the estimated number of hepatitis B carriers is 28 times and hepatitis C carriers eight times are higher than the estimated number of people with HIV/AIDS in the SEARO.

Hepatitis and Unsafe Injections: Unsafe Injection practices transmit 33% of newer hepatitis B and 42% of newer hepatitis C infections across the globe. [5] India and other developing countries are still having huge burden of unsafe injections. In a nationwide study in India, 62.7% of injections were found to be unsafe due to multiple reasons.[6] There have been two major epidemics—one each of Hepatitis B [7] and Hepatitis C [8] has been reported from Western and Northern India in the last four years. In a study in October 2012, the Manipal Center for Virus Research found 348 cases of hepatitis B in Ooramana village of the Ernakulam district in Kerala, India.[9] Newspaper reports and anecdotal evidence also reports multiple outbreaks of viral hepatitis across the country. In countries of the Region, injecting drug use is also widespread. Bangladesh, India, Indonesia, Myanmar, Nepal and Thailand also have a high prevalence of HIV and HCV infection and 50 – 100% of HIV-positive injecting drug users (IDUs) are co-infected with HCV.[2] The prevalence of HBV and HCV co infection is up to 60% among persons living with HIV infection. The spread of hepatitis through unsafe medical practices is harmful to patients and health systems. Patients attempt to receive medical treatment for

one ailment, but unintentionally become infected with hepatitis in the process. This is a gross waste of health resources in both the short-term and long-term and results in unnecessary costs and suffering. It also reduces the public's confidence in health systems and can create barriers to access to effective and efficient care. Fortunately, transmission from unsafe medical practices can be prevented with adequate awareness and intervention supported by policy.

Why work against Viral Hepatitis: Viral hepatitis is a silent epidemic: In recent decades, viral hepatitis has not received the attention it deserves from the global community. This is being known as a silent epidemic because:

1. Decades-long delay between infection and the expression of chronic liver disease or liver cancer made it difficult to link these diseases to earlier HBV or HCV infections.
2. There are epidemics of hepatitis occurring all across India and other developing countries but there are no strategic action plans or dedicated resources to fight the malaise.
3. Hepatitis B virus is known to be 50-100 times more infectious than HIV, however, the share of voice received for Hepatitis is only a fraction of that of HIV.

Opportunity to prevent and control viral hepatitis comprehensively

In 2010, the World Health Assembly adopted resolution WHA63.18, which calls for a comprehensive approach to the prevention and control of viral hepatitis. WHO has also initiated observing World Hepatitis Day every year on 28th July in all regions.

'See no evil, hear no evil, speak no evil' was the chosen theme of WHO for 2013 - 14 as this brings out the fact that the world has been ignoring the problem of Hepatitis through the analogy of Three Wise Monkeys. Similarly, **"Hepatitis-Think Again"** is the theme for 2014. Hepatitis is eight largest killer in the world and is killing as many people as by HIV/AIDS in the globe. [14] It is understood that viral hepatitis has been left off the agendas of many global agencies as well as governments. Now is the time that it is recognized for its prevalence and dealt with accordingly.

Given this backdrop, all the researchers, clinicians, activists and community groups could align together to undertake a host of interventions which aim towards comprehensive management of hepatitis.

The challenges in Hepatitis disease continuum that needs to be addressed are shown in [figure 1](#). A comprehensive approach to the prevention of viral hepatitis could be clubbed as either Primary, Secondary or Tertiary prevention.

Primary Prevention - Medical community to be made aware of low hanging fruits:

- Advocacy and raising awareness of all types of viral hepatitis infections help reduce transmission in the community. Our medical community is not making proactive intent to raise the profile of Hepatitis among various stakeholders.
- Promotion of Safe and effective vaccines are widely available for the prevention of HAV and HBV infections. High-risk groups for Hepatitis are still not universally being covered by Hepatitis B vaccine.
- Adoption of Safe injection practices can protect against HBV and HCV transmission. In states like Punjab, Haryana and Jammu and Kashmir, HBV and HCV epidemic is being spread through this route (Personal interaction with health officials, colleagues and patient groups in these regions). The National Center for Disease Control (NCDC) have released Safe Injection Guidelines on 30 July 2014.[16] Similarly, Indian Academy of Pediatrics (IAP) had also released safe injection guidelines in 2012 and a series of dissemination workshops were held across the country.[17]
- 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.

In states like Maharashtra, poor implementation of universal screening of blood bags through more sensitive HCV RNA is leading to the spread of HBV and HCV. (Personal interaction with health officials, colleagues and patient groups).

- Infection control precautions in health care and community settings can prevent transmission of viral hepatitis as well as many other diseases. National Accreditation Board for Hospitals and Health care providers (NABH) and other accreditation agencies in India have mandated presence of active Hospital Infection Control Committees (HICCs). However, sustaining the

interest of all HICCs members in all hospitals and fulfilling the gaps observed by HICC is a challenge.

- Safer sex practices, including minimizing the number of partners and using barrier protective measures (condoms), protect against HBV and possibly against HCV transmission. The work done in HIV/AIDS have benefitted the reduction of transmission of HBV and HCV through this route.
- Education and provision of reuse prevention syringes (auto lock syringes) for injecting drug users, prevent HBV and HCV transmission. Especially among Intravenous Drug Users (IDUs), who despite many provisions, tend to share needles and syringes uninterruptedly.
- Occupational safety measures prevent transmission of viral hepatitis to Health Care Professionals (HCPs). HCPs do not report most of the cases of occupational exposure due to the lack of confidence for providing supportive Post Exposure Prophylaxis (PEP) in the system where they work in.
- Safe food and water provide protection against HAV and Hepatitis E Virus (HEV) infections. This is a challenge being addressed through different means by public health experts already.
- Updated situational analysis and the cost effectiveness of the disease burden *vis-a-vis* the newer technologies in prevention, diagnosis and treatment would help the policymakers taken rational decisions. Our research colleagues could take a note and lead proactively.

Secondary and tertiary prevention:

Early diagnosis provides the best opportunity for effective medical support and prevention of further spread.

- The notification and counseling of blood donors who have reactive results detected during screening of donated blood provide multiple opportunities to catch them early. While many institutes are informing the HBV and HCV positive donors of their status, most others are taking a shelter in the existing policy where HIV cases are not to be informed of their positive status, due to social reasons. The policy of not informing HBV and HCV carriers detected thru this route need a revisit.
- Making antiviral agents against HBV and HCV widely available would help and encourage more people to come forward for treatment, thus

preventing transmission besides improving productivity. WHO has come up with new treatment guidelines for HCV, however, the cost of the drugs is prohibitive.[15]

- Facilitating access to ensure access to and availability of reliable and low-cost diagnostics and safe and simple treatment regimens, especially in resource-constrained areas of the world. We might be missing potential carriers because of this reason.

As observed in the response to HIV, strong leadership in the clinical and patient communities is a key to raising the profile of a disease and securing government investment. Stronger and more coherent leadership from the many clinicians, public health specialists, and patient groups who are committed to tackling Viral hepatitis would go a long way in alerting the public to the risks of the virus and the importance of screening and diagnosis, and gaining an effective political response4.

All stakeholders could consider either/all steps around World Hepatitis Day 2014—Theme---“Hepatitis, Think Again”:

1. Advocate with research agencies to undertake primary/secondary research across the spectrum of viral hepatitis
2. Advocate with Government stakeholders to organize policy influencing round table meetings/discussions with stakeholders from academia, clinicians, media patient groups and industry
3. Generate public awareness through seminars, media articles and public talks by eminent experts of the field
4. Forge alliances with like-minded agencies / NGOs / organizations to spread awareness on Prevention and Control strategies among medical and general communities.

A dedicated [website](http://www.worldhepatitisalliance.org/en/) for the World Hepatitis Day resources can be accessed at <http://www.worldhepatitisalliance.org/en/>

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Tables

TABLE 1 THE ESTIMATES OF MORBIDITY AND MORTALITY DRAWN UP WHO FOR SEAR [2]

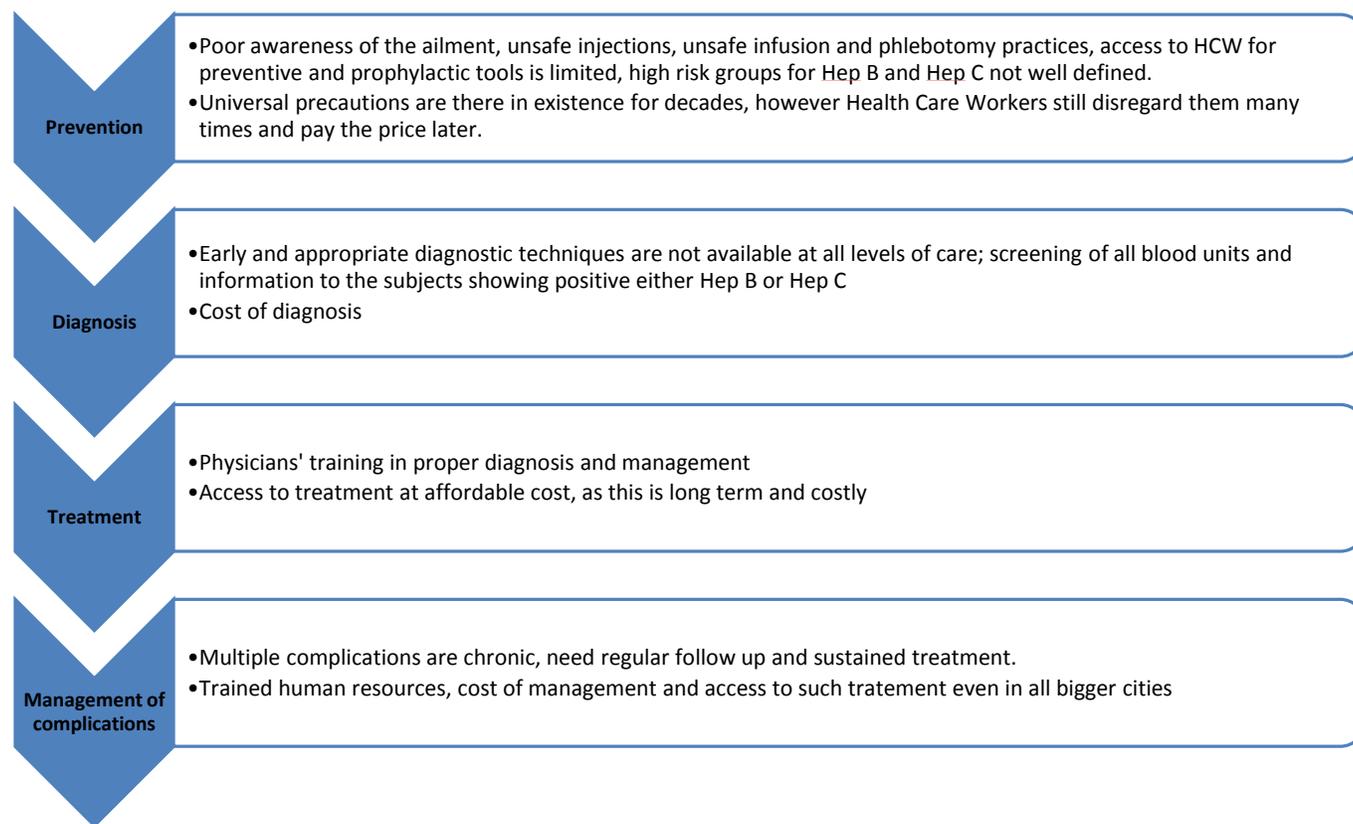
| Disease | Active Cases | Carriers | Deaths due to complications | Comment | Prevalence in general population |
|---------|--------------|----------|------------------------------|--|----------------------------------|
| Hep A | 0.4 m | None | 800 | | |
| Hep B | 1.4 m | 100 m | 0.3 m | 5.6% of the population in the region is affected | 4-6% in Indian settings |
| Hep C | 0.5 m | 30 m | 120000 | 1.6% of the population in the region is affected | 1% in Indian settings |
| Hep E | 6.5 m | None | 0.16 m plus 2700 still borns | 50% of global mortality burden in SEAR | |

TABLE 2 COMPARATIVE ESTIMATES OF HEP B, HEP C AND HIV IN SEAR [2]

| Countries of the WHO South-East Asia Region | No of Estimated HBs Ag. Carrier** (millions) | Percentage | HCV Estimated Number*** (millions) | Percentage | HIV Estimated Number*** (millions) | Percentage | |
|---|--|------------|------------------------------------|------------|------------------------------------|------------|-----|
| Population*(millions) %age | 1784 | 100 | 5.6 | 29,1 | 1.62 | 3.51 | 0.2 |

Figures

FIGURE 1 CHALLENGES IN HEPATITIS DISEASE CONTINUUM



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