

Viral hepatitis in the context of HIV in South-East Asia Region

*Report of an informal consultation
New Delhi, 7–9 June 2010*



**World Health
Organization**

Regional Office for South-East Asia

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Printed in India

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Acronyms and abbreviations

DALY	disability-adjusted life year
DPT	diphtheria, pertussis and tetanus
EMRO	Regional Office for the Eastern Mediterranean (of WHO)
EPI	Expanded Programme on Immunization
GAVI	Global Alliance on Vaccines and Immunization
HAV	hepatitis A virus
HBsAg	hepatitis B surface antigen
HBV	hepatitis B virus
HCC	hepatocellular carcinoma
HCV	hepatitis C virus
HDV	hepatitis D virus
HEV	hepatitis E virus
IDU	injecting drug user
MSM	men who have sex with men
NNRTI	non-nucleoside reverse transcriptase inhibitor
NRTI	nucleoside reverse transcriptase inhibitor
NSP	needle and syringe programme
OST	opioid substitution therapy
PLHIV	people living with HIV
WHA	World Health Assembly
WHO SEARO	World Health Organization Regional Office for South-East Asia

1. Introduction

The World Health Organization Regional Office for South-East Asia (WHO SEARO) convened an informal consultation on viral hepatitis in the context of HIV in the South-East Asia Region from 7 to 9 June 2010 in New Delhi, India. The meeting brought together a range of experts from various disciplines – virology, hepatitis, gastroenterology, medicine, blood safety, HIV, communicable diseases, immunizations and vaccines – from India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand. Representatives from various units of WHO SEARO as well as an expert from WHO HQ also participated.

2. Objectives of the meeting

- (1) To review the current situation of viral hepatitis in the Region with emphasis on hepatitis B virus (HBV) and hepatitis C virus (HCV) in relation to HIV;
- (2) To identify mechanisms for prevention and control of HBV and HCV infections, and in close coordination with HIV prevention and control; and
- (3) To suggest the way forward.

These objectives were achieved through the following thematic sessions:

Overview of viral hepatitis

Global overview

Regional overview (country presentations)

Enterically transmitted viral hepatitis

HIV and hepatitis

HIV and hepatitis B and C

Hepatitis B and C in injecting drug users

Prevention and control measures

Prevention and control of hepatitis in resource-constrained settings

Safe blood and effective interventions

Regional overview of hepatitis B immunization

3. Inaugural session

Dr Iyanthi Abeyewickreme welcomed the participants on behalf of Dr Jai P. Narain, Director, Department of Communicable Diseases. She explained the commonalities between HIV and hepatitis B and C – routes of transmission, modes of prevention and coinfections. Worldwide, one in three persons is exposed to HBV, HCV, or both. Most of these persons do not know that they are infected. In addition, many of those who are infected with HBV and HCV are also infected with HIV. Despite the fact that HBV and HCV are severalfold more easily transmissible than HIV, little attention has been paid to these diseases in comparison with HIV.

4. Overview of viral hepatitis

4.1 Global overview

Viral hepatitis and the World Health Assembly (WHA) Resolution

Dr Steven Todd Wiersma from WHO HQ commenced with an overview of the global burden of HBV and HCV and their consequences. About 2 billion people worldwide are infected with HBV, and >350 million are chronically infected, leading to ~600 000 deaths/year. Approximately 130–170 million are chronically infected with HCV, resulting in >350 000 deaths/year. The estimate of the global burden of disease is being revised at present by the Global Burden of Disease II. Phase I comprised a systematic review of the literature. In Phase II, disease modelling was done and in Phase III final validation and generation of mortality and disability-adjusted life year (DALY) estimates will be completed. In 2009, viral hepatitis was put on the WHO agenda and a policy review was done by the World Hepatitis Alliance. However, many countries failed to respond to the questions that were sent out. The review found that the majority of countries worldwide consider viral hepatitis an urgent public health issue and have a policy, goals and plan, but implementation is poor and governments need help from WHO. Surveillance for hepatitis is in place in 82% of countries but one third of countries have no prevalence data and 69% request WHO for assistance with surveillance.

Prevention interventions need to be strengthened, such as better and wider implementation of immunization policies, safety in health-care settings, reduction in the number of unsafe injections and better screening of blood. Access to testing and treatment for people also needs to be improved, as currently, most people go undiagnosed and untreated. More than 40% of people worldwide have no access to free treatment.

In January 2009, Brazil requested the WHO Board for action on viral hepatitis by the World Health Assembly (WHA). In October 2009, WHO Regional Office for the Eastern Mediterranean (EMRO) adopted a comprehensive resolution on viral hepatitis. In May 2010, the WHA Resolution 63.18 on viral hepatitis was adopted to set a direction, priorities and resources for the WHO programme of work. It recognizes that there is no comprehensive strategy for viral hepatitis, and calls for promoting education, screening and treatment. On 28 July each year, World Hepatitis Day will be celebrated. WHA 63.18 urges Member States to carry out a number of measures such as strengthening surveillance systems and laboratory capacity, ensuring blood safety, strengthening national health systems, providing vaccination strategies and infection control measures, promoting access to preventive, diagnostic and treatment technologies, among others, to reduce the prevalence of viral hepatitis. WHA 63.18 also requests the DG WHO to establish guidelines and strategies, support research, assess the global and economic impact of hepatitis, strengthen surveillance systems and enhance access to affordable treatment in developing countries.

4.2 Regional overview (country presentations)

Participants from various countries presented the status of hepatitis B and C in their countries, as well as measures implemented for their control.

India

Dr Vidya Arankalle presented the status report from India. Though hepatitis is an important cause of morbidity and mortality, no national surveillance data are available. Hepatitis A virus (HAV), HBV, HCV and hepatitis E virus (HEV) are important causes of hepatitis; hepatitis D virus (HDV) is not very common. HAV is largely a paediatric disease and a major cause of fulminant hepatic failure in children. The incidence in adults is increasing. India has had several epidemics of HAV and a national policy needs to be formulated. HEV epidemics are also common and all have been due to contaminated drinking water. Mortality among pregnant women with HEV is high, and it is a major cause of fulminant hepatic failure in adults. HBV causes acute and chronic hepatitis; 60–80% of chronic hepatitis is due to HBV. HCV causes chronic hepatitis in 10–20% of patients. The hepatitis B surface antigen (HBsAg) carrier rate varies from 36% to 74% and anti-HCV antibodies are present in ~ 5% of patients with liver cancer. One study done in 2009 notes that vertical transmission of HCV from pregnant women to their children occurs in India, as does intrafamilial transmission.

Several studies have shown higher risk of hepatitis among health-care workers, but no national immunization policy is in place. High HBV endemicity has been found among tribal populations and HCV prevalence is also higher among them. The HBV genotypes identified in India include D, C and a new genotype I in Arunachal Pradesh. Occult HBV is an emerging problem and was significantly associated with HBV D3. It poses a major problem for blood banks.

HIV/HBV coinfection may not be detectable by conventional serology. Despite the availability of HBV vaccine since 1982, an epidemic with high mortality occurred recently. Immediate inclusion of hepatitis B vaccine in the EPI is obligatory. Awareness of all those concerned is essential for effective control measures as therapies are expensive with moderate efficacy and side-effects.

Dr Yogesh Chawla spoke on the clinical, epidemiological and treatment aspects of HBV and HCV. The overall prevalence of HBV in India is 1.13%. High-risk groups such as multitransfused persons and those on haemodialysis, health-care workers, household contacts, sex workers and injecting drug users (IDUs) have much higher prevalence levels. Data on men who have sex with men (MSM) and sex workers are inadequate. About 4–60% of those who are HBsAg positive develop chronic liver disease and 60–80% develop hepatocellular carcinoma (HCC). Genotypes A and D are more common than B and C. He compared the course of hepatitis and outcomes in persons who are HBsAg and HBeAg positive. With regard to HCV, he said that despite anti-HCV testing, transmission still occurs. Prevalence is higher with increasing age. The prevalence is highest among IDUs (92% in the north-east), those on dialysis and recipients of renal transplants. Other risk groups include prisoners, and those with kala-azar and syphilis. Treatment for hepatitis C is with pegylated interferon and ribavirin for 6 months but the response in those infected with HCV genotype 3 is not good. The treatment is also very expensive.

Dr Chawla highlighted the need for creating awareness among health-care workers and the general population, and to put an effective prevention strategy in place. The most cost-effective component of such a strategy is childhood immunization. He suggested that HBV and HCV should be made notifiable and that registries should be created for measuring the

disease burden. Other strategies included universal immunization, early treatment and public awareness.

Indonesia

Dr Rino Gani updated participants on the status in Indonesia. The country has moderate-to-high endemicity for HBV (3–17% are HBsAg positive), and the common genotypes are B, C and D. HCV is much more common in IDUs, and genotype 1a is the most common followed by genotype 2b. HCV/HIV coinfection is common among IDUs (80.8% in one study). Among HIV-infected persons, occult HBV infection is seen in 10.6%.

Myanmar

Dr Than Sitt presented the HBV and HCV situation in Myanmar. The prevalence of HBsAg positivity was 2% among healthy controls in a medical unit while anti-HCV was positive in 2.5% in healthy people who had come for vaccination. A study ($N=100$, HIV positive) found that the rate of HBV and HCV infection was 19% and 14%, respectively, and 4% were coinfecting with both HBV and HCV. Most HBV infection in Myanmar is transmitted vertically, not horizontally as in India. There are no data on HCV but the carrier rate in blood donors is 2–6%. While the prevalence of HIV in Myanmar was stationary, that of HBV and HCV was increasing. Apart from prevalence in various groups by age, sex, socioeconomic conditions and location, he also discussed the availability and type of vaccines, their safety and immunogenicity. He moved on to the availability and accessibility of diagnostic and treatment methods for hepatitis in Myanmar.

Professor Khin Maung Win gave an overview of the status of hepatitis A in Myanmar, where it is an emerging problem. The seroprevalence of anti-HAV immunoglobulin is very high among both children and adults, in rural as well as urban areas. As the prevalence reduces with improvement in hygiene, prevention interventions are important. This is possible through simple means such as improvement of hygiene and sanitation, isolation during the virus-shedding period and vaccination. The most common HBV genotype in Myanmar is C, and 10% of the population are carriers. HBV vaccination has been introduced with the help of Global Alliance on Vaccines and Immunization (GAVI). Affordable antiviral agents are not available. While HDV is not seen, epidemic outbreaks of HEV occur. He highlighted the need to treat the vast carrier pool to reduce the reservoir of infection.

Nepal

Dr Jeetendra Shreshtha informed participants about the status of hepatitis in Nepal. There are no reports of vertical transmission of HBV, and vaccination against HBV is included in the immunization programme since 2003. While the overall prevalence of HBV and HCV is low in the general population, among high-risk populations such as IDUs, health-care workers, sex workers, MSM, etc. it is much higher. The seroprevalence of HCV is 0.6% in the general population but 94% in IDUs. Chronic HCV infection has increased threefold in the past two decades. The rise in injecting drug use is largely responsible for this increase. Among HIV-positive persons, coinfection with HBV ranges from 15% to 46.4%, and with HCV it is 10.8%. Other factors unique to Nepal are the large migratory population, in whom HBV prevalence is higher, and the increased incidence in tribal populations. Trafficking of women

is another factor for increased prevalence of HBV and HIV. Vaccination for such populations may help to prevent transmission.

Sri Lanka

Professor Janaka de Silva said that in Sri Lanka, the overall seroprevalence of HBV is low in the community (<2%), as is that of HCV (<1%) and increases with age. Seroprevalence of HBV is very low among pregnant women, and is low for both HBV and HCV among blood donors. Coinfection of HBV and HCV with HIV is negligible. The reasons for the low prevalence could be the high proportion of voluntary blood donors (>90%), increased use of disposables, small number of IDUs and the high literacy rate (>90% for both males and females). Vaccination for HBV is a part of the Expanded Programme on Immunization since 2003 with >98% coverage. There is limited availability of testing, especially for molecular testing, in the public sector.

Thailand

The status in Thailand was presented by **Dr Boonchai KowadisaiBurana**. HBV genotype C is the most common followed by genotypes B and D. HCV genotype 3a is the most common, though genotypes 1a, 1b, 2a, 2b, 3b and 6 are also seen. The prevalence of HBV is low and that of HCV is 2–3% in blood donors. However, in high-risk groups such as IDUs and MSM, the rates of coinfection of HIV and hepatitis C are much higher. There is limited availability of testing for HBV and HCV, and liver histopathology, and cost of treatment is very high. Vaccination for HBV is a part of the Expanded Programme on Immunization (EPI) since 1992.

4.3 Enterically transmitted viral hepatitis

Dr Madhu Ghimire from the Department of Disease Surveillance and Epidemiology, WHO SEARO discussed the epidemiology of enterically transmitted viral hepatitis and its high prevalence in SEAR. Countries with a high endemicity of HAV infection include Bangladesh, India, Nepal and Myanmar, while those with a moderate endemicity are Indonesia, Sri Lanka and Thailand. In India, HAV is responsible for more than 80% of acute viral hepatitis in children. The prevalence and incidence of HAV infection are directly related to socioeconomic conditions, and the disease is largely self-limiting, with only about 5% progressing to chronic disease. However, there has been an epidemiological shift in the pattern of the disease due to improved sanitation, from a widespread and asymptomatic illness in children to symptomatic infections among adults. He highlighted risk factors such as poor water, sanitation and hygiene, poor hygiene practices, contaminated food, anal sex and injecting drug use. Though there is a safe and effective vaccine available, poor information on age distribution and case-fatality rate makes policy decisions difficult. He moved on to a description of HEV, which is a comparatively new discovery, albeit an old disease. This virus tends to cause epidemic outbreaks, typically in hot climates, and during and after the rainy season. Contaminated food and drinking water are sources of infection. The clinical presentation is similar to that of HAV, but is milder and also self-limiting. Mortality from HEV is high among pregnant women. Dr Ghimire highlighted the need for more information on the epidemiology and use of vaccines for prevention.

5. HIV and hepatitis

5.1 HIV and hepatitis

Dr Iyanthi Abeyewickreme, Regional Adviser (HIV/AIDS/STI), WHO SEARO gave an overview of HIV, which continues to remain a serious public health problem in the Region. Five countries in SEAR bear 99% of the HIV burden in the South-East Asia Region (SEAR). While the HIV prevalence has stabilized or declined in some countries, in Indonesia it is increasing.

Unsafe sex and injecting drug use are the main drivers of the HIV epidemic in SEAR. Sexual transmission accounts for 87% of reported HIV/AIDS cases in India, 83% in Thailand, 75% in Nepal and 73% in Myanmar. In Thailand, HIV has increased among MSM and accounted for 28% of all new infections in 2008. In general, condom use in male-to-male sex is low with all partners in all countries of the Region. This increases the risk of HIV and STI transmission, and may be even HCV transmission.

In Asia, IDUs have higher rates of hepatitis. The endemicity of HBV is about 10%, and HCV <5%. The prevalence of HBV and HCV among people living with HIV (PLHIV) is usually underestimated due to lack of screening. However, 50–100% of HIV-positive IDUs are coinfecting with HCV. A comprehensive package of nine interventions for IDUs has been proposed by United Nations agencies. One of these is vaccination, diagnosis and treatment of viral hepatitis. Chronic HBV is seen in 10–20% of HIV-infected persons.

In coinfecting persons, the course of HBV disease is affected by HIV and there may be faster progression to liver cirrhosis, and higher rates of mortality. The effect of HBV disease on HIV is less clear but there may be slower improvement in CD4 counts while on ART, and increased incidence of AIDS and non-AIDS events. In persons with sexually transmitted HIV, coinfection with HCV is less likely than if transmission occurs through injecting drug use. HIV accelerates the progression of HCV disease, but the impact of HCV on HIV is not easily quantifiable. There may be lower baseline CD4 counts, accelerated progression and slower immune reconstitution. In the long term, coinfection increases the risk of disease progression.

The use of ART leads to liver toxicity, as all antiretroviral drugs have adverse effects on the liver. Nevirapine has also been implicated in accelerated liver fibrosis in HIV/HCV coinfecting individuals. ART regimens for initial therapy in resource-poor settings are commonly nucleoside reverse transcriptase inhibitors (NRTIs) in combination with non-nucleoside reverse transcriptase inhibitors (NNRTIs). Nevirapine is the most commonly used NNRTI because it is less expensive than efavirenz. The overall costs of management include laboratory capacity to diagnose the disease, monitoring for viral load, and the treatment. Evidence supports the initiation of ART, irrespective of WHO disease stage or CD4 cell count, for all those with HIV/HBV coinfection and chronic active hepatitis B. However, there is no agreed definition of chronic active hepatitis in resource-limited settings. There is an urgent need to develop diagnostic criteria to identify individuals with HIV/HBV coinfection who need treatment in situations where HBV DNA and liver biopsy are not routinely available.

WHO has updated its guidelines for ART in 2010 to guide treatment. Testing for HBsAg is recommended as part of first HIV evaluation. The new guidelines also recommend that in HIV/HBV coinfection, ART should be started for those who require treatment for hepatitis B, irrespective of the CD4 count or WHO clinical stage. Dr Abeyewickreme also stressed the need for prevention interventions and finding ways to reduce the costs of diagnosis and treatment.

5.2 Viral hepatitis in injecting drug users

Mr Gary Reid, Technical Officer, Harm Reduction, WHO SEARO explained the course of viral hepatitis in IDUs. In countries in SEAR, injecting drug use is widespread. Bangladesh, India, Indonesia, Myanmar, Nepal and Thailand also have a high prevalence of HIV infection. Among IDUs, HBV and HCV prevalence is very high in the Region, with the exception of the Maldives. Interventions to prevent high-risk behaviours include needle and syringe programmes (NSPs), behaviour modification, opioid substitution therapy (OST), vaccination for HBV, treatment of HCV (though this is very expensive and has marked undesirable side-effects). All these interventions need to be available also for prison populations and must be scaled up urgently, as responses in all countries are limited. To effectively respond to the situation, surveillance and data collection at the national level must be improved, and integrated models of treatment and care introduced, along with capacity building.

6. Prevention and control measures

6.1 Prevention and control of viral hepatitis including treatment of chronic hepatitis in resource-constrained settings

Dr Steven Wiersma, WHO HQ said that a comprehensive strategy for prevention and control of viral hepatitis should include several elements that apply across the health system. They include prevention of transmission of the virus, identifying and treating the disease, integrating proven health strategies and finding innovative solutions. Prevention of HBV comprises vaccination at birth and of all health-care workers, and safe health care such as safe blood and safe injections. Immunization, safe food and water would prevent HAV. Evidence-based screening for viral hepatitis and guidelines for treatment need to be developed, and access to treatment enhanced. Care and treatment services should be expanded to those with chronic hepatitis. Interventions are available in each of these areas but integrating these with HIV and STI services and those for IDUs would enhance their reach considerably. Prevention and control of viral hepatitis should be integrated with national cancer control programmes. Innovation is required in the area of developing vaccines for HCV and HEV, and developing technologies for screening and care.

Activities have been initiated in the area of treatment such as a consultation in 2009 on HBV treatment in resource-constrained settings, and guidelines for the initiation of ART which call for increased screening for HBV in HIV-infected persons, but guidelines for the treatment of HCV need to be developed. The goals of treatment are primarily to eradicate the virus and secondarily, prevent progression to cirrhosis, reduce the incidence of

hepatocellular carcinoma (HCC), reduce the need for transplantation and enhance survival. WHO needs to take the lead in these activities.

Recommendations have been made for diagnosis and treatment of HBV in resource-limited settings as well as in the area of research. One of the important areas for research is to find a replacement for liver biopsy to diagnose patients with HBV. Laboratory and clinical criteria for initiation of ART in coinfecting patients have also been laid down. One of the lacunae is the absence of a uniform case definition of chronic active hepatitis B; however, one has been proposed on clinical and laboratory criteria.

6.2 Safe blood and effective interventions

On behalf of **Dr Rajesh Bhatia**, Regional Adviser, BLT, Dr Iyanthi Abeyewickreme delivered the presentation on Safe blood: effective interventions to reduce the transmission of hepatitis B and C. She highlighted the efficient transmission of HIV, HBV and HCV through the medium of blood, and that there was no perfect strategy to eliminate such transmission. A multipronged strategy is needed, which includes preventing positive persons from donating blood, testing all blood collected for these viruses, rationalizing the use of donated blood, and having quality control checks at every stage. These steps should be implemented through services that are regulated, accessible to all the people and efficiently managed. She outlined the elements of the WHO strategy for safe blood and gave an overview of blood donations in SEAR countries. Voluntary donations constitute 67% of all donations. Only Bangladesh still has paid donors, which constitute 10%. Despite the increase in number of voluntary donors, the amount of blood collected does not match the need in the Region. However, collection of blood is increasing and there is near 100% screening in all the countries. Indonesia and Myanmar still do not have screening for HBV. The prevalence in donors of HIV, HBV and HCV is also decreasing. Though the situation is not optimal, it is improving.

6.3 Regional overview of hepatitis B immunization

Dr Nihal Abeysinghe from the Department of Immunization and Vaccine Development, WHO SEARO, said that the main objective of immunization for HBV is to prevent the development of chronic HBV infection and its consequences. A secondary objective is to prevent acute HBV infection. This is done primarily by administering three doses of vaccination in infants starting from birth and completing the course by six months of age. The birth dose is critical for preventing perinatal transmission. He emphasized various strategies to reduce HBV transmission and briefly discussed the vaccines available in the market.

Although all countries in SEAR have introduced HBV vaccination, only 71.5% (78–98%) are reached. Indonesia, Thailand and the Maldives give HBV vaccination with the birth dose of diphtheria, pertussis and tetanus (DPT). In India, the coverage is 50%, and only 10 states have introduced the vaccine. The aim is to increase the coverage with three doses to 90% in all SEAR countries by 2010. Key challenges include wider introduction of HBV vaccination and with the birth dose where relevant, surveillance for acute and chronic HBV disease to monitor impact, increase the coverage and ensure financial sustainability. At present, most of the countries are supported by GAVI. Though support and materials are available, more advocacy needs to be conducted.

7. Group work

Participants were divided into two groups. **Group 1**, on Interventions, was asked

- (1) To Identify the major issues/challenges in implementing interventions for prevention and control of hepatitis B & C, and propose strategies to address these issues and challenges
- (2) To propose mechanisms to mainstream (synergize) interventions for prevention and control of hepatitis B & C through:
 - (a) Existing national HIV programmes
 - (b) General health services.

Group 2, on Surveillance and Research, was asked

- (1) To identify the existing and potential sources of data for hepatitis B & C in South-East Asian countries (including the private sector)
- (2) To identify mechanisms to streamline collection, collation, analysis and reporting of hepatitis/HIV data and dissemination to key programmes/policy-makers
- (3) To identify key research topics to generate evidence-based data for prevention and control of hepatitis B & C in South-East Asian countries.

8. Conclusions and Recommendations

8.1 Conclusions

Both the groups presented the outcomes of their discussions. The meeting concluded with a consensus that there is a need to raise the profile of hepatitis as a preventable and treatable disease among all stakeholders. The following recommendations were made for countries in SEAR and WHO.

8.2 Recommendations

Recommendations for countries in the South-East Asia Region

- (1) Establish a focal person/unit for hepatitis in the Ministry of Health/national AIDS programmes.
- (2) Synergize surveillance for hepatitis B and C with HIV surveillance (i.e. establish hepatitis registries).
- (3) Generate/collate data on the disease burden of hepatitis B and C in SEAR countries (i.e. make hepatitis a notifiable disease).
- (4) Document/synthesize existing surveillance and research data and disseminate these to stakeholders to generate awareness of the problem and sensitize them.
- (5) Increase community awareness of hepatitis and prevention and control methods.

- (6) Set national goals on increasing immunization coverage for hepatitis B, particularly for hard-to-reach populations.
- (7) Synergize training for counsellors in hepatitis B and C with training for HIV.
- (8) Monitor the quality of hepatitis testing in public and private laboratories and blood banks by a regulatory body.
- (9) Identify priority research topics on prevention and control of hepatitis.

Recommendations for WHO

- (1) Establish a focal person/unit for hepatitis in WHO SEARO.
- (2) Develop guidelines for the surveillance of hepatitis.
- (3) Include hepatitis as an agenda item in the Regional Meeting of Health Ministers of the South-East Asia Region.
- (4) Evaluate regionally available diagnostic tests for hepatitis to identify those that are the most specific, sensitive and cost-effective.
- (5) Identify strategies to develop minimum standards for diagnosis and treatment of hepatitis B and C.
- (6) Identify regional laboratories for diagnosis and testing and designate them as regional reference laboratories.
- (7) Advocate for increased access to inexpensive, safe and effective drugs to treat hepatitis.

Annex 1

Programme

Day 1, 07 June 2010

0830–0900 hrs	Registration
0900–1000 hrs	Opening Session
	a) Address by Dr Jai P. Narain, Director, Department of Communicable Diseases
	b) Objectives of the meeting: Dr Iyanthi Abeyewickreme, Regional Adviser (HIV/AIDS)
	c) Introduction of participants
	d) Group photograph
1000–1030 hrs	Global Overview of Viral Hepatitis and 63 rd World Health Assembly resolution on hepatitis : Dr Steven Todd Wiersma (HQ)
1030–1230 hrs	Country Presentations and Discussions
	Bangladesh – 20 minutes
	Myanmar – 20 minutes
	Thailand – 20 minutes
	India – 20 minutes
	Nepal – 20 minutes
	Indonesia – 20 minutes
	Sri Lanka – 20 minutes
1330–1500 hrs	Country Presentations and Discussions (contd)
1515–1530 hrs	HIV and Hepatitis: Dr Iyanthi Abeyewickreme, Regional Adviser (HIV/AIDS)
1530–1600 hrs	Screening for Hepatitis B and C: Dr Rajesh Bhatia, Regional Adviser (BLT)
1600–1630 hrs	Discussion

Day 2, 08 June 2010

0900–0930 hrs	Epidemiological features of Viral Hepatitis in the context of South-East Asia: CDC
0930–1000 hrs	Discussion
1000–1030 hrs	Prevention and control and of Hepatitis in the context of HIV including treatment of chronic hepatitis: Dr Steven Todd Wiersma (HQ)
1045–1100 hrs	Introduction to Group Work
1100–1230 hrs	Group Work
1330–1500 hrs	Group Work (contd)
1515–1630 hrs	Group Work (contd)

Day 3, 09 June 2010

0900–0930 hrs	Regional Overview of Hepatitis B Immunization – Dr Nihal Abeysinghe (IVD Unit)
0930–1030 hrs	Presentation by Groups & Discussion
1045–1230 hrs	Presentation by Groups & Discussion (contd)
1330–1500 hrs	Recommendations and Next Steps
1515–1630 hrs	Closing

Annex 2

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Viral hepatitis is a serious global public health problem. About 2 billion people worldwide are infected with hepatitis B virus, leading to ~600 000 deaths/year. Approximately 130–170 million are chronically infected with hepatitis C virus, resulting in >350 000 deaths/year. In addition, 50–100% of HIV-positive injecting drug users are coinfecting with the hepatitis C virus. In coinfecting persons, the course of hepatitis is affected by HIV and there may be faster progression to liver cirrhosis, and higher rates of mortality. In Asia, injecting drug users have higher rates of hepatitis. The endemicity of hepatitis B virus is about 10%, and hepatitis C virus <5%. The prevalence of HBV and HCV among people living with HIV (PLHIV) is usually underestimated.

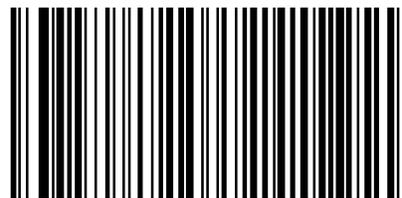
WHO SEARO convened an informal consultation on “Viral Hepatitis in the context of HIV and the way forward” from 7 to 9 June 2010 in New Delhi. The aim of the consultation was to review the current situation of viral hepatitis in the Region, identify mechanisms for the prevention and control of hepatitis, and suggest the way forward. This report documents the discussions and recommendations of the consultation.



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