

Chapter 7: WHO South-East Asia Region

Eleven Member States make up the World Health Organization (WHO) South-East Asia Region, which has a total population of 1.83 billion.¹ India, with a population of 1.24 billion, accounts for approximately two thirds of the Region's population.¹ The South-East Asia Region hosts one fourth of the world's population and carries about 30% of the world's total disease burden.² In 2009, life expectancy at birth for the South-East Asia Region was 65 years.³

The greatest contributors to morbidity and mortality are noncommunicable diseases: cardiovascular diseases and cancer account for about 30% and 9% of deaths, respectively.⁴ Age-standardized mortality rates (2008) indicate that communicable diseases account for about 30% of deaths.¹ The South-East Asia Region has high child mortality, with three fourths of these deaths resulting from diarrhoeal diseases, pneumonia and neonatal conditions.⁵ The Region is home to more than two thirds of the world's malnourished children.⁵ Unsafe water and inadequate sanitation and hygiene pose major health risks to both children and adults; the Region has the highest incidence of diarrhoeal disease in the world.⁵

Responses to the WHO/Alliance survey were received from all 11 Member States in the South-East Asia Region (100%).

Box 1. Responses to the 2012 Global Hepatitis Survey: WHO South-East Asia Region

Member States that submitted surveys:

- | | | |
|---|-------------|---------------|
| • Bangladesh | • India | • Nepal |
| • Bhutan | • Indonesia | • Sri Lanka |
| • Democratic People's Republic of Korea | • Maldives | • Thailand |
| | • Myanmar | • Timor-Leste |

¹ *World population prospects: the 2010 Revision*. New York, United Nations, Department of Economic and Social Affairs, Population Division, 2011.

² *11 questions about the 11 SEAR countries*. New Delhi, Department of Health Systems Development, WHO Regional Office for South-East Asia, 2007. Available at: http://www.searo.who.int/entity/health_situation_trends/documents/11_health_questions_about_11_SEAR_countries.pdf (accessed on 13 May 2013).

³ *World health statistics 2012*. Geneva, WHO, 2012. Available at: http://www.who.int/gho/publications/world_health_statistics/2012/en/ (accessed on 13 May 2013).

⁴ *Health situation in the South-East Asia Region 2001–2007*. New Delhi, WHO Regional Office for South-East Asia, 2008. Available at: http://203.90.70.117/PDS_DOCS/B3226.pdf (accessed on 13 May 2013).

⁵ Dhillon PK et al. Status of epidemiology in the WHO South-East Asia region: burden of disease, determinants of health and epidemiological research, workforce and training capacity. *International Journal of Epidemiology*, 2012, 41(3):847–860.

Viral hepatitis in the WHO South-East Asia Region

The endemicity of hepatitis A in the Region ranges from low (<50% exposed by the age of 30 years) in the eastern areas to high (>90% exposed by the age of 10 years) in the southern areas.^a

Approximately 14 million cases of hepatitis E infection occur annually in the Region, which accounts for more than half the global burden. Indeed, the prevalence of hepatitis E is estimated to be above 25% in those >50 years of age.^b

The seroprevalence of hepatitis B in the young age groups of 0–14 years is 1.2%–1.4%. However, in adults, the seroprevalence is higher, at above 5%.^c

There are up to 50 million people with chronic hepatitis C infection in the South Asia.^d Because of the asymptomatic nature of chronic hepatitis B and hepatitis C, most people infected with these are not aware of their status until they have symptoms of cirrhosis or liver cancer many years later.^{c,d}

^a Jacobsen K. *The global prevalence of hepatitis A virus infection and susceptibility: a systematic review*. Geneva, Department of Immunization, Vaccines and Biologicals, World Health Organization, 2010 [WHO/IVB 10.01].

^b Rein DB et al. The global burden of hepatitis E virus genotypes 1 and 2 in 2005. *Hepatology*, 2012, 55:988–997.

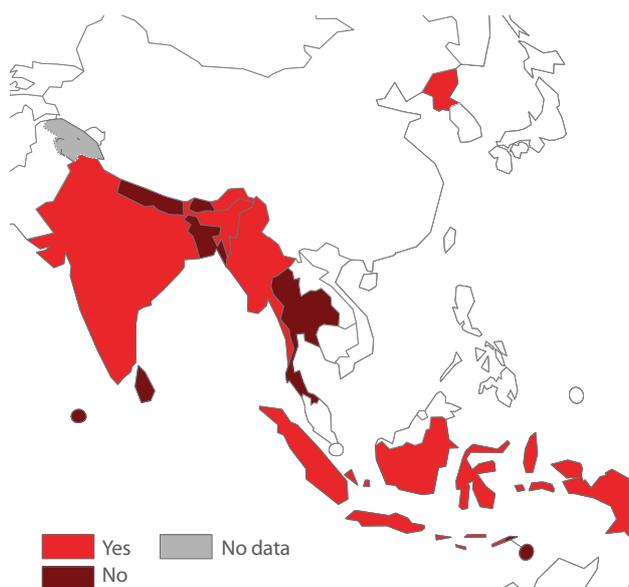
^c Ott JJ, Stevens GA, Groeger J, Wiersma ST. Global epidemiology of hepatitis B virus infection: new estimates of age-specific HBsAg seroprevalence and endemicity. *Vaccine*, 2012, 30:2212–2219.

^d Mohd Hanafiah K, Groeger J, Flaxman AD, Wiersma ST. Global epidemiology of hepatitis C virus infection: new estimates of age-specific antibody to HCV seroprevalence. *Hepatology*, 2013, 57:1333–1342.

National coordination

Four responding Member States (36.4%) reported the existence of a written national strategy or plan that focuses exclusively or primarily on the prevention and control of viral hepatitis (Figure 1). Three of the four Member States with a strategy or plan (Democratic People's Republic of Korea, India and Indonesia) reported that it focuses exclusively on viral hepatitis, and one (Myanmar) reported that it addresses other diseases as well.

Figure 1. Responses to the question, "Is there a written national strategy or plan that focuses exclusively or primarily on the prevention and control of viral hepatitis?"



The four Member States that reported the existence of a strategy or plan were asked about its specific components. All four reported the inclusion of components for raising awareness, surveillance, vaccination, general prevention, prevention of transmission in health-care settings, and treatment and care. Three reported the inclusion of a component for the prevention of transmission via injecting drug use.

Three responding Member States (27.3%) reported that they have a governmental unit or department responsible solely for viral hepatitis-related activities. Member States that did so were asked to indicate the number of staff members in the unit or department. Responses ranged from 4 to 20 (median, 4), with Myanmar reporting the largest number.

Member States were asked to report the number of people working full-time on hepatitis-related activities in all government agencies or bodies. Among the three Member

States that provided data for this question, the number ranged from 0 to 49 (median, 30.5), with Myanmar reporting the largest number.

Nine responding Member States (81.8%) reported that they have a viral hepatitis prevention and control programme that includes activities targeting specific populations. The populations most commonly targeted were health-care workers, including health-care waste handlers (77.8% of responding Member States within this subset) and people who inject drugs (44.4% of responding Member States within this subset). The following populations were each targeted by one third of responding Member States within this subset: migrants, prisoners and people living with HIV. Groups identified less frequently included indigenous populations, low-income populations, those who are uninsured and those who are homeless.

Awareness-raising and partnerships

One responding Member State (9.1%) reported that it had held events for World Hepatitis Day 2012 (28 July). Since January 2011, three responding Member States (27.3%) had funded some type of viral hepatitis public awareness campaign other than World Hepatitis Day (Table 1).

Four responding Member States (36.4%) reported that they collaborated with civil society groups within their countries to develop and implement the governmental viral hepatitis prevention and control programme. For example, Bangladesh reported collaborating with the Liver Foundation of Bangladesh, and Myanmar reported collaborating with health-care provider associations and with the Myanmar Red Cross Association. (Further examples can be found in the summaries of country findings later in this chapter.)

Table 1. Topics of public awareness campaigns on viral hepatitis held in Member States since January 2011 (N=3)

	Democratic People's Republic of Korea	Indonesia	Myanmar
General information about hepatitis and its transmission	X	X	X
Vaccination for hepatitis A and hepatitis B	X		X
Importance of knowing one's hepatitis B and hepatitis C status	X	X	
Safe water and good sanitation	X	X	
Safer sex practices			X
Harm reduction for people who inject drugs			X
Safe workplace practices	X	X	X

Evidence-based policy and data for action

Six responding Member States (54.5%) reported that they have routine surveillance for viral hepatitis; details appear in Table 2.

Seven responding Member States (63.6%) indicated that their countries have standard case definitions for hepatitis infection and seven (63.6%) indicated that their countries have a central registry for the reporting of deaths, including hepatitis deaths.

Two Member States reported on the proportion of hepatitis cases and deaths registered as “undifferentiated” or “unclassified” hepatitis. One reported this to be 25.1% and the other less than 5.0%. Additional survey findings about surveillance are presented in Table 3.

Table 2. Types of surveillance in Member States that reported the existence of routine surveillance for viral hepatitis (N=6)

	Yes (%)	No (%)	Do not know (%)	No response (%)
There is a national surveillance system for acute hepatitis infection for the following forms of hepatitis:				
hepatitis A	83.3	0	0	16.7
hepatitis B	100	0	0	0
hepatitis C	83.3	0	0	16.7
hepatitis D	33.3	33.3	0	33.3
hepatitis E	33.3	33.3	0	33.3
There is a national surveillance system for chronic hepatitis infection for the following forms of hepatitis:				
hepatitis B	33.3	66.7	0	0
hepatitis C	33.3	66.7	0	0
hepatitis D	0	83.3	0	16.7

Table 3. Data registration and surveillance (N=11)

	Yes (%)	No (%)	Do not know (%)	No response (%)
Liver cancer cases are registered nationally	63.6	36.4	0	0
Cases with HIV/hepatitis coinfection are registered nationally	45.5	36.4	18.2	0
Hepatitis outbreaks are reported	81.8	18.2	0	0
If YES – Hepatitis outbreaks are further investigated (N=115)	100	0	0	0

Member States were asked how often hepatitis disease reports are published. Of the responding Member States, 45.5% said that reports are not published. Among the six Member States with published reports, one said reports are published weekly, one weekly and annually, two monthly and annually, and one annually. The sixth said reports are published in journal articles.

Three responding Member States (27.3%, Democratic People’s Republic of Korea, Indonesia and Myanmar) reported the existence of a national public health research agenda for viral hepatitis.

Two responding Member States (18.2%, the Democratic People’s Republic of Korea and Myanmar) reported that viral hepatitis serosurveys are conducted regularly. Myanmar indicated that serosurveys take place at least once per year. The Democratic People’s Republic of Korea said that its serosurveys target children under the age of 17 years, while Myanmar said that its serosurveys target children over the age of 5 years and the general population. The most recent serosurvey in the Democratic People’s Republic of Korea was conducted in 2009, and the most recent one in Myanmar was conducted in 2010.

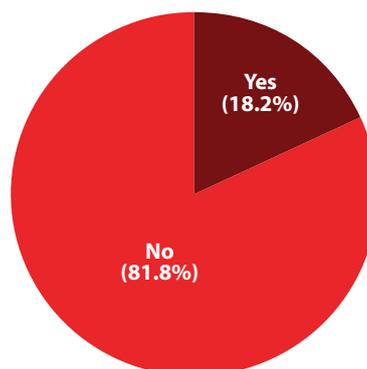
Prevention of transmission

No responding Member State reported that they have a national policy on hepatitis A vaccination.

Two responding Member States (18.2%) reported that they have established the goal of eliminating hepatitis B (Figure 2). Member States with this goal were asked to specify the timeframe in which they seek to eliminate hepatitis B. The Democratic People’s Republic of Korea said by 2016, and Sri Lanka said by 2015.

Member States were asked to report, for a given recent year, the percentage of newborn infants who had received the first dose of hepatitis B vaccine within 24 hours of birth. Among the seven governments providing this information, responses ranged from 0% to 99.9% (median, 75.4%). Governments were

Figure 2. Responses to the question, “Has your government established the goal of eliminating hepatitis B?” (N=11)



also asked to report, for a given recent year, the percentage of one-year-olds (ages 12–23 months) who had received three doses of hepatitis B vaccine. Among the eight governments providing this information, responses ranged from 38.0% to 99.0% (median, 93.9%).

Seven responding governments (63.6%) reported the existence of a national policy that specifically targets mother-to-child transmission of hepatitis B; details are presented in [Table 4](#). Five governments with such a policy indicated that one component of the policy calls for screening of all pregnant women for hepatitis B. Seven governments with such a policy indicated that one component of the policy calls for administering the second and third doses of hepatitis B vaccine to all infants within 12 months of birth.

Table 4. Activities called for in national policy targeting mother-to-child transmission of hepatitis B (N=7)

	All pregnant women are screened for hepatitis B	All pregnant women found to have hepatitis B are counselled	Health-care providers follow up with all pregnant women found to have hepatitis B during pregnancy for the purpose of encouraging them to give birth at health-care facilities	Upon delivery, all infants born to women with hepatitis B receive hepatitis B immunoglobulin	All infants receive the first dose of hepatitis B vaccine within 24 hours of birth
Bhutan	X	X	X	X	X
Democratic People's Republic of Korea	X	X	X		X
India					X
Maldives	X	X	X	X	X
Myanmar	X	X	X		
Nepal		X			X
Thailand	X	X		X	X
TOTAL	5	6	4	3	6

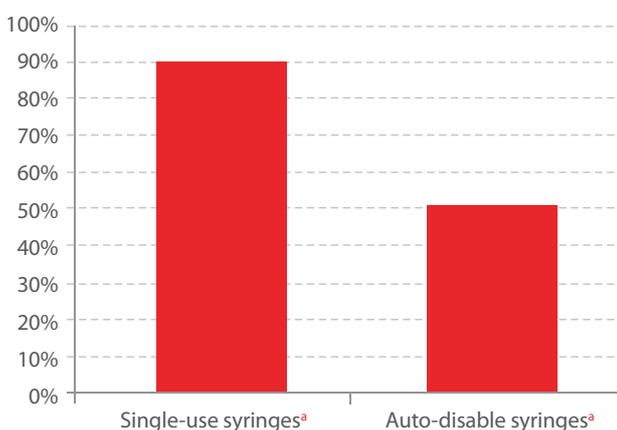
Five responding Member States (45.5%) reported the existence of a specific national strategy and/or policy for preventing hepatitis B and hepatitis C infection in health-care settings.

Five responding Member States (45.5%) reported that health-care workers are vaccinated against hepatitis B prior to starting work that might put them at risk of exposure to blood.

Ten responding Member States (90.9%) reported the existence of a national policy on injection safety in health-care settings. These ten Member States were asked which types of syringes

the policy recommends for therapeutic injections. Single-use syringes are recommended in 90.0% of policies, and auto-disable syringes in half of policies ([Figure 3](#)).

Figure 3. Proportion of responding Member States with national policies on injection safety in health-care settings which recommend single-use syringes and auto-disable syringes for therapeutic injections (N=10)



^a Respondents could select both "single-use syringes" and "auto-disable syringes".

Ten responding Member States (90.9%) reported that single-use or auto-disable syringes, needles and cannulas are always available in all health-care facilities.

Member States were asked for official estimates of the number and percentage of unnecessary injections administered annually in health-care settings (e.g. injections that are given when an equivalent oral medication is available). Ten Member States reported that the figures are not known and one did not reply.

Additional findings relating to the prevention of hepatitis transmission are presented in [Table 5](#).

Screening, care and treatment

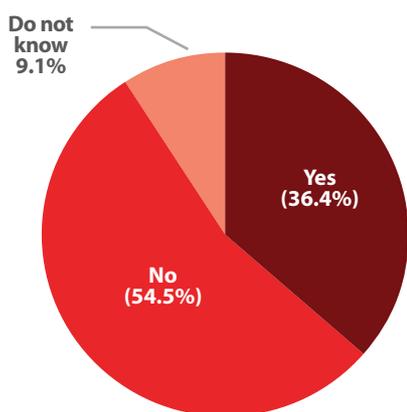
Member States were asked how health professionals in their countries obtain the skills and competencies required to effectively care for people with viral hepatitis. Eight Member States indicated that these are obtained in schools for health professionals (pre-service education) and on-the-job training.

Four responding Member States (36.4%) reported the existence of national clinical guidelines for the management of viral hepatitis ([Figure 4](#)). Two of these four responding Member States (50.0%) indicated that the guidelines include recommendations for cases with HIV coinfection.

Table 5. Hepatitis prevention: policies, practices and guidelines (N=11)

	Yes (%)	No (%)	Do not know (%)
There is a national infection control policy for blood banks	100	0	0
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis B	90.9	9.1	0
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis C	81.8	9.1	9.1
There is a national policy relating to the prevention of viral hepatitis among people who inject drugs	18.2	63.6	18.2
The government has guidelines that address how hepatitis A and hepatitis E can be prevented through food and water safety	45.5	54.5	0

Figure 4. Responses to the question, “Are there national clinical guidelines for the management of viral hepatitis?” (N=11)



Three responding Member States (27.3%) indicated that they have a national policy relating to screening and referral to care for hepatitis B. Two (18.2%) reported having such a policy for hepatitis C.

Regarding hepatitis B testing, ten responding Member States (90.9%) indicated that people register by name for testing. Eight of the ten members of that subset (80.0%) indicated that the names are kept confidential. Five responding Member States (45.5%) reported that the hepatitis B test is free of charge for all individuals. Among the six other Member States, Myanmar and Thailand reported that the hepatitis B test is free of charge for members of specific groups. Groups identified included blood donors and pregnant women. Six responding Member States (54.5%) reported that the hepatitis B test is compulsory for members of specific groups. Groups identified included blood donors and people living with HIV.

Regarding hepatitis C testing, ten responding Member States (90.9%) indicated that people register by name for testing. Eight of the ten members of that subset (80.0%) indicated that the names are kept confidential. Five responding Member States (45.5%) reported that the hepatitis C test is free of charge for all individuals. Among the six other Member States, Myanmar and Thailand reported that the hepatitis C test is free of charge for members of specific groups. Groups identified included blood donors and pregnant women. Six responding Member States (54.5%) reported that the hepatitis C test is compulsory for members of specific groups. Groups identified included blood donors and people living with HIV.

Six responding Member States (54.5%) reported that publicly funded treatment is available for hepatitis B and six (54.5%) that publicly funded treatment is available for hepatitis C. Information was not provided by any Member State regarding the amount spent on publicly funded treatment for hepatitis B and hepatitis C.

Nine responding Member States (81.8%) reported that at least one available drug for treating hepatitis B is on the national essential medicines list (Table 6). The drugs most commonly reported were lamivudine, interferon alpha, tenofovir and pegylated interferon.

Seven responding Member States (63.6%) reported that at least one available drug for treating hepatitis C is on the national essential medicines list. The drugs most commonly reported were interferon alpha, pegylated interferon and ribavirin.

World Health Organization assistance

Member States were asked to indicate areas in which they might want assistance from WHO for the prevention and control of viral hepatitis. Respondents most commonly selected the following: developing the national plan for viral hepatitis prevention and control (81.8%), estimating the national burden of viral hepatitis (81.8%) and conducting viral hepatitis surveillance (81.8%) (Table 7). Responses from individual Member States appear in Annex C.

Table 6. Proportion of Member States reporting drugs for treating hepatitis B and C on national essential medicines lists or subsidized by governments

Drugs for treating hepatitis B	% of Member States reporting its inclusion (N=12)
Lamivudine	63.6
Interferon alpha	45.5
Tenofovir	45.5
Pegylated interferon	36.4
Entecavir	36.4
Adefovir dipivoxil	36.4
Telbivudine	27.3

Drugs for treating hepatitis C	% of Member States reporting its inclusion (N=12)
Ribavirin	54.5
Pegylated interferon	45.5
Interferon alpha	45.5
Telaprevir	27.3
Boceprevir	18.2

Table 7. Viral hepatitis control and prevention: areas in which Member States indicated interest in receiving WHO assistance (N=11)

Awareness-raising, partnerships and resource mobilization (first WHO strategic axis)	
Developing the national plan for viral hepatitis prevention and control	81.8%
Integrating viral hepatitis programmes into other health services	63.6%
Awareness-raising	72.7%
Evidence-based policy and data for action (second WHO strategic axis)	
Viral hepatitis surveillance	81.8%
Estimating the national burden of viral hepatitis	81.8%
Developing tools to assess the effectiveness of interventions	63.6%
Assessing the economic impact of viral hepatitis	54.5%
Prevention of transmission (third WHO strategic axis)	
Increasing coverage of the birth dose of the hepatitis B vaccine	54.5%
Screening, care and treatment (fourth WHO strategic axis)	
Increasing access to treatment	54.5%
Increasing access to diagnostics	63.6%
Improving laboratory quality	0% ^a
Developing education/training programmes for health professionals	63.6%

^a N=26 (This response option was not included in the survey completed by Member States of the South-East Asia Region.)