

Chapter 8: WHO Western Pacific Region

Twenty-seven Member States make up the Western Pacific Region, which has a total population of 1.8 billion. The population of China accounts for approximately three fourths of this total.¹

The Western Pacific Region encompasses countries at different levels of socioeconomic development, and includes six high-income countries.² It also includes geographically isolated Pacific Island Countries with poor infrastructure.³ Health indicators for the Region vary widely. Across countries, the median life expectancy at birth is 70 years. However, it is 8–11 years lower in five countries of the Region, while Japan's life expectancy of 83 years is the highest in the world.⁴ Similarly, the median under-five mortality rate across countries is 19 per 1000 population, while the highest country rate is 83 per 1000 population (Papua New Guinea) and the lowest is 3 per 1000 (Japan and Singapore).⁴

Noncommunicable diseases caused 80% of deaths in the Western Pacific Region in 2008,⁵ with cardiovascular diseases accounting for almost half of the deaths from noncommunicable diseases.⁶ Among WHO regions, the Western Pacific Region has the highest prevalence of daily tobacco smoking among men (46%); it also has the highest rates of lung cancer among both sexes (combined).⁷ Alcohol is another major risk factor, particularly in low- and middle-income countries in the Region.⁴ Liver cancer rates in the Region are far higher than in other regions.⁷

Responses to the WHO/Alliance survey were received from 15 of the 27 Member States in the Region (55.6%).

Box 1. Responses to the 2012 Global Hepatitis Survey: WHO Western Pacific Region

Member States that submitted surveys:

- Australia
- Brunei Darussalam
- Cambodia
- China
- Japan
- Kiribati
- Lao People's Democratic Republic
- Malaysia
- Mongolia
- New Zealand
- Papua New Guinea
- Singapore
- Solomon Islands
- Tonga
- Viet Nam

Member States that did not submit surveys:

- Cook Islands
- Fiji
- Marshall Islands
- Micronesia (Federated States of)
- Nauru
- Niue
- Palau
- Philippines
- Republic of Korea
- Samoa
- Tuvalu
- Vanuatu

Viral hepatitis in the WHO Western Pacific Region

Very low prevalence rates (<5% of population exposed by the age of 30 years) for hepatitis A have been consistently reported from high-income Asia–Pacific countries and Australasia (Australia and New Zealand). Very little information is available from island nations in the Region, though they appear, on average, to have an intermediate prevalence rate.^a

Similarly, for hepatitis E, studies are scarce; however, prevalence estimates above 5% are not reported in the Region.^b

In this Region, with the exception of Australia, Japan and New Zealand where the chronic hepatitis B infection rate varies from 2% to 4%, countries have an estimated rate of 5%–7% or more.^c

The Region accounts for 48% of global liver cancer cases among men and 62% among women. Moreover, liver cancer is the third most common cause of cancer mortality among men in the Region.^d

For hepatitis C infection, prevalence estimates are 2.6% for the Region.^e Although strategies have been implemented to reduce the risk factors for hepatitis C infection, unsafe blood transfusion, unsafe injections and injecting drug use are the major routes of transmission in the Region.

^a Jacobsen KH, Wiersma ST. Hepatitis A virus seroprevalence by age and world region, 1990 and 2005. *Vaccine*, 2010, 28:6653–6657.

^b Aggarwal R. *The global prevalence of hepatitis E virus infection and susceptibility: a systematic review*. Geneva, World Health Organization, 2010.

^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 GLOBOCAN 2008 [web site]. Lyon, France, International Agency for Research on Cancer, World Health Organization, 2008. Available at: <http://globocan.iarc.fr/> (accessed on 07 June 2013).

^e 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.

¹ *International human development indicators. Population, total both sexes (thousands)*. New York, United Nations Development Programme, 2011. Available at: <http://hdrstats.undp.org/en/indicators/306.html> (accessed 29 October 2012)

² The World Bank. *Country and lending groups* [web site]. Available at: <http://data.worldbank.org/about/country-classifications/country-and-lending-groups> (accessed on 14 May 2013).

³ *Country cooperation strategy at a glance: Pacific Island Countries*. Geneva, World Health Organization, 2011. Available at: http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_pci_en.pdf (accessed on 14 May 2013).

⁴ Blakely T et al. Health status and epidemiological capacity and prospects: WHO Western Pacific Region. *International Journal of Epidemiology*, 2011, 40(4):1109–1121.

⁵ *World health statistics 2012*. Geneva, WHO, 2012. Available at: http://www.who.int/entity/healthinfo/EN_WHS2012_Full.pdf (accessed on 14 May 2013).

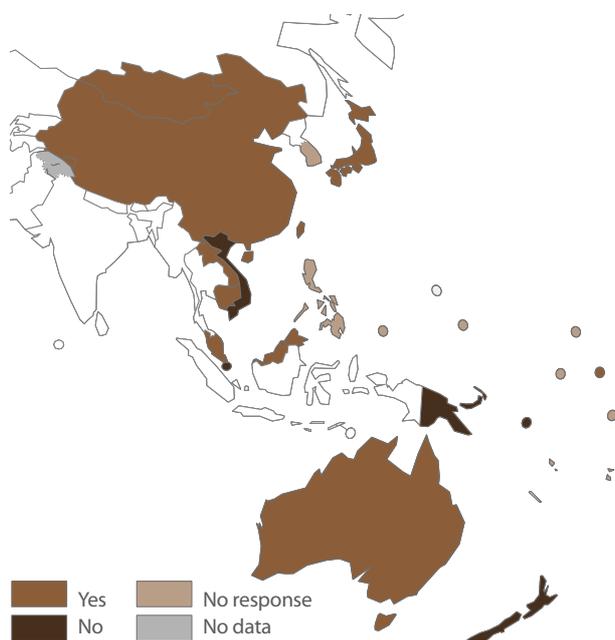
⁶ *Causes of death 2008 summary tables*. Geneva, Health Statistics and Informatics Department, World Health Organization, May 2011. Available at: http://www.who.int/entity/gho/mortality_burden_disease/global_burden_disease_DTH6_2008.xls (accessed on 14 May 2013).

⁷ *Global status report on noncommunicable diseases 2010*. Geneva, WHO, 2011. Available at: http://whqlibdoc.who.int/publications/2011/9789240686458_eng.pdf (accessed on 14 May 2013).

National coordination

Ten responding Member States (66.7%) 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). One of the ten Member States with a strategy or plan (Mongolia) reported that it focuses exclusively on viral hepatitis, and five (Brunei Darussalam, Cambodia, Lao People's Democratic Republic, Malaysia and Tonga) reported that it addresses other diseases as well. Two countries (China and Kiribati) reported that the strategy or plan addresses only hepatitis B, and two (Australia and Japan) reported that it addresses hepatitis B and hepatitis C.

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 ten Member States that reported the existence of a strategy or plan were asked about its specific components. All ten reported the inclusion of components for raising awareness, vaccination and general prevention. Nine reported the inclusion of a component for prevention of transmission in health-care settings, eight reported the inclusion of a component for surveillance and seven reported the inclusion of a component for treatment and care. Five reported the inclusion of components for coinfection with HIV and the prevention of transmission via injecting drug use.

Five responding Member States (33.3%) 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 ($N=5$) ranged from 0.1 (New Zealand) to 80 (Cambodia) (median, 7).

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 six Member States that provided data for this question, the number ranged from 0 to 84 (median, 0.5), with Mongolia reporting the largest number.

Thirteen responding Member States (86.7%) reported that they have a viral hepatitis prevention and control programme that includes activities targeting specific populations. The populations most commonly targeted are health-care workers, including health-care waste handlers (69.2% of responding Member States within this subset) and people who inject drugs (46.2% of responding Member States within this subset). Groups identified less frequently included indigenous populations, low-income populations, prisoners, migrants, people living with HIV, those who are uninsured and those who are homeless.

Awareness-raising and partnerships

Six responding Member States (40.0%) reported that they had held events for World Hepatitis Day 2012 (28 July). Since January 2011, nine responding Member States (60.0%) had funded some type of viral hepatitis public awareness campaign other than World Hepatitis Day (Table 1).

Eight responding Member States (53.3%) 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, China reported collaborating with the Wu Jieping Medical Foundation and Chinese Foundation for Hepatitis Prevention and Control, while Malaysia reported collaborating with the Malaysian Liver Foundation. (Further examples can be found in the summaries of country findings later in this chapter.)

Evidence-based policy and data for action

Twelve responding Member States (80.0%) reported that they have routine surveillance for viral hepatitis; details appear in Table 2.

Twelve responding Member States (80.0%) indicated that their countries have standard case definitions for hepatitis infection and 12 (80.0%) indicated that their countries have a central registry for the reporting of deaths, including hepatitis deaths.

Seven Member States reported on the proportion of hepatitis cases and deaths registered as "undifferentiated" or "unclassified" hepatitis. The reported proportions ranged from 0% to 30.0% (median, 1.0%). Additional survey findings about surveillance are presented in Table 3.

Member States were asked how often hepatitis disease reports are published. Of the responding Member States, 33.3% reported that they publish hepatitis disease reports annually; 13.3%, monthly; and 13.3%, weekly. No hepatitis disease report is published by 33.3% of responding Member States.

Table 1. Topics of public awareness campaigns on viral hepatitis held in Member States since January 2011 (N=9)

	Australia	Brunei Darussalam	China	Japan	Lao People's Democratic Republic	Malaysia	Mongolia	New Zealand	Tonga
General information about hepatitis and its transmission	X		X	X	X	X		X	X
Vaccination for hepatitis A and hepatitis B			X	X		X		X	X
Importance of knowing one's hepatitis B and hepatitis C status								X	X
Safe water and good sanitation									X
Safer sex practices						X		X	X
Harm reduction for people who inject drugs						X		X	X
Safe workplace practices					X	X			X
Other ^a		X					X		

^a Details can be found in the summaries of country findings later in this chapter.

Table 2. Types of surveillance in Member States that reported the existence of routine surveillance for viral hepatitis (N=12)

	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	75.0	8.3	0	16.7
hepatitis B	91.7	8.3	0	0
hepatitis C	75.0	16.7	0	8.3
hepatitis D	25.0	41.7	0	33.3
hepatitis E	50.0	25.0	0	25.0
There is a national surveillance system for chronic hepatitis infection for the following forms of hepatitis:				
hepatitis B	58.3	33.2	0	8.3
hepatitis C	41.7	50.0	0	8.3
hepatitis D	25.0	58.3	0	16.7

Table 3. Data registration and surveillance (N=15)

	Yes (%)	No (%)	Do not know (%)	No response (%)
Liver cancer cases are registered nationally	73.3	20.0	6.7	0
Cases with HIV/hepatitis coinfection are registered nationally	26.7	66.7	6.7	0
Hepatitis outbreaks are reported	93.3	0	6.7	0
<i>If YES – Hepatitis outbreaks are further investigated (N=115)</i>	100	0	0	0

Five responding Member States (33.3%, Australia, Cambodia, China, Japan, Lao People's Democratic Republic) reported the existence of a national public health research agenda for viral hepatitis.

Six responding Member States (40.0%) reported that viral hepatitis serosurveys are conducted regularly. Among this subset of responding Member States, two (Australia and Lao People's Democratic Republic) indicated that serosurveys take place every five years. Two Member States in the same subset (Lao People's Democratic Republic and Singapore) reported that the most recent viral hepatitis serosurvey was carried out in 2012.

Prevention of transmission

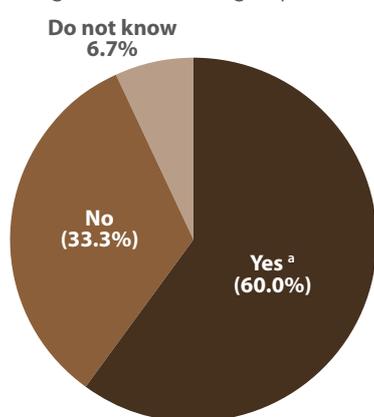
Five responding Member States (33.3%) reported that they have a national policy on hepatitis A vaccination.

Nine responding Member States (60.0%) reported that they have established the goal of eliminating or reducing hepatitis B (Figure 2). Member States with this goal were asked to specify the timeframe in which they seek to eliminate or reduce hepatitis B. Of the six Member States that answered this question, three (Brunei Darussalam, China and Mongolia) said 2012 and three (Cambodia, Lao People's Democratic Republic and Papua New Guinea) said 2017.

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 13 Member States that provided this information, responses ranged from 0% to 98.0% (median, 55.0%). Member States were 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 15 Member States that provided this information, responses ranged from 0% to 98.8% (median, 93.0%).

Fifteen responding Member States (100%) reported the existence of a national policy that specifically targets mother-to-child transmission of hepatitis B; details are presented in Table 4. One third of Member States with such a policy (33.3%) indicated that one component of the policy calls for screening of all pregnant women for hepatitis B.

Figure 2. Responses to the question, “Has your government established the goal of eliminating hepatitis B?” (N=15)



^aOne Member State that answered “yes” to this question (Australia) added a comment indicating that the goal relates to reducing rather than eliminating hepatitis B.

Fourteen responding Member States (91.3%) reported the existence of a specific national strategy and/or policy/guidelines for preventing hepatitis B and hepatitis C infection in health-care settings.

Eleven responding Member States (73.3%) reported that health-care workers are vaccinated against hepatitis B prior to starting work that might put them at risk of exposure to blood.

Twelve responding Member States (80.0%) reported the existence of a national policy on injection safety in health-care settings. These Member States were asked which types of syringes the policy recommends for therapeutic injections. Single-use syringes are recommended in 100% of policies, and auto-disable syringes in 16.7% (Figure 3).

Twelve responding Member States (80.0%) 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). Twelve Member States reported that the figures are not known and one (Tonga) reported that no unnecessary injection is administered annually in health-care settings. Cambodia reported that 50.0% of the total injections that are administered annually in health-care settings are unnecessary and Mongolia reported that 68.0% are unnecessary.

Additional findings relating to the prevention of hepatitis transmission are presented in Table 5.

Table 4. Activities called for in national policy targeting mother-to-child transmission of hepatitis B (N=15)

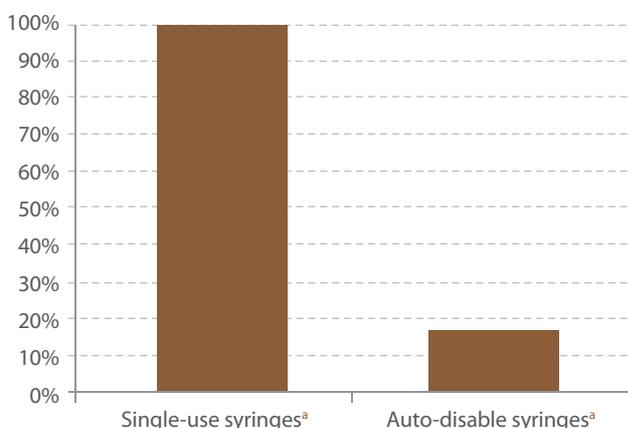
	All pregnant women are screened for hepatitis B	All pregnant women found to have hepatitis B are counselled	Health-care providers follow up with all pregnant women found to have hepatitis B during pregnancy for the purpose of encouraging them to give birth at health-care facilities	Upon delivery, all 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
Australia				X	X
Brunei Darussalam	X	X	X	X	X
Cambodia					X
China				X	X
Japan	X	X	X	X	X
Kiribati	X	X			X
Lao People's Democratic Republic					X
Malaysia		X	X	X	X
Mongolia					X
New Zealand	X	X	X	X	
Papua New Guinea					X
Singapore	X	X	X	X	X
Solomon Islands					X
Tonga				X	X
Viet Nam					X
TOTAL	5	6	5	8	15

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. Responding Member States most frequently indicated that these are obtained in schools for health professionals (pre-service education, 80.0%). Additionally, on-the-job training was identified in 66.7% of responses, and postgraduate training in 53.3%.

Nine responding Member States (60.0%) reported the existence of national clinical guidelines for the management of viral hepatitis (Figure 4). Two of these nine Member States indicated that the guidelines include recommendations for cases with HIV coinfection. Five of 11 responding Member States (45.5%) indicated that there are national clinical guidelines for the management of HIV, which include recommendations for coinfection with viral hepatitis.

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=12)

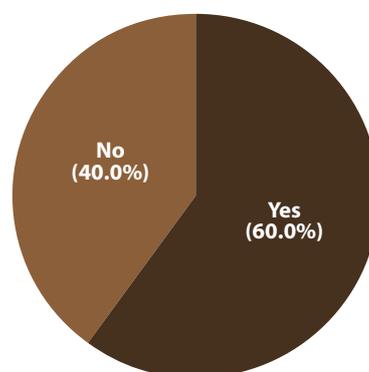


^a Respondents could select both “single-use syringes” and “auto-disable syringes”.

Table 5. Hepatitis prevention: policies, practices and guidelines (N=15)

	Yes (%)	No (%)	Do not know (%)
There is a national infection control policy for blood banks	86.7	6.7	6.7
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis B	100	0	0
All donated blood units (including family donations) and blood products nationwide are screened for hepatitis C	80.0	13.3	6.7
There is a national policy relating to the prevention of viral hepatitis among people who inject drugs	33.3	53.3	13.3
The government has guidelines that address how hepatitis A and hepatitis E can be prevented through food and water safety	46.7	40.0	13.3

Figure 4. Responses to the question, “Are there national clinical guidelines for the management of viral hepatitis?” (N=15)



Ten responding Member States (66.7%) indicated that they have a national policy relating to screening and referral to care for hepatitis B. Five (33.3%) reported having such a policy for hepatitis C.

Regarding hepatitis B testing, 13 responding Member States (86.7%) indicated that people register by name for testing. Twelve members of that subset (92.3%) indicated that the names are kept confidential. Seven responding Member States (46.7%) reported that the hepatitis B test is free of charge for all individuals. Among the eight other Member States, three (37.5%) reported that the hepatitis B test is free of charge for members of specific groups. Groups identified included blood donors and health-care workers. Seven responding Member States (46.7%) reported that the hepatitis B test is compulsory for members of specific groups. Groups identified included blood donors, health-care workers, pregnant women and imprisoned people who inject drugs.

Regarding hepatitis C testing, 10 responding Member States (66.7%) indicated that people register by name for testing. All members of that subset (100%) indicated that the names are kept confidential. Four responding Member States (26.7%) reported that the hepatitis C test is free of charge for all individuals. Among the eight other Member States that answered the question, three (37.5%) reported that the hepatitis C test is free of charge for members of specific groups. Groups identified included blood donors and health-care workers. Seven responding Member States (46.7%) reported that the hepatitis C test is compulsory for members of specific groups. Groups identified included blood donors, pregnant women and imprisoned people who inject drugs.

Eight responding Member States (53.3%) reported that publicly funded treatment is available for hepatitis B and seven (46.7%) that publicly funded treatment is available for hepatitis C. One responding Member State reported the amount spent on publicly funded treatment for hepatitis B and hepatitis C. Details can be found in the summaries of country findings later in this chapter (see New Zealand).

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	60.0
Interferon alpha	53.3
Tenofovir	40.0
Pegylated interferon	40.0
Entecavir	40.0
Adefovir dipivoxil	33.3
Telbivudine	20.0

Drugs for treating hepatitis C	% of Member States reporting its inclusion (N=12)
Ribavirin	46.7
Pegylated interferon	40.0
Interferon alpha	40.0
Telaprevir	6.7
Boceprevir	0.0

Eleven responding Member States (73.3%) reported that at least one available drug for treating hepatitis B is on the national essential medicines list or subsidized by the government (Table 6). The drugs most commonly reported were lamivudine and interferon alpha.

Eight responding governments (53.3%) reported that at least one available drug for treating hepatitis C is on the national essential medicines list or subsidized by the government. The drugs most commonly reported were ribavirin, interferon alpha and pegylated interferon.

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: increasing access to treatment (46.7%), increasing access to diagnostics (46.7%), improving laboratory capacity (46.7%) and developing education/training programmes for health professionals (46.7%) (Table 7). Responses from individual Member States appear in Annex C.

Table 7. Viral hepatitis control and prevention: areas in which Member States indicated interest in receiving WHO assistance (N=15)

Awareness-raising, partnerships and resource mobilization (first WHO strategic axis)	
Developing the national plan for viral hepatitis prevention and control	40.0%
Integrating viral hepatitis programmes into other health services	40.0%
Awareness-raising	33.3%
Evidence-based policy and data for action (second WHO strategic axis)	
Viral hepatitis surveillance	33.3%
Estimating the national burden of viral hepatitis	26.7%
Developing tools to assess the effectiveness of interventions	13.3%
Assessing the economic impact of viral hepatitis	20.0%
Prevention of transmission (third WHO strategic axis)	
Increasing coverage of the birth dose of the hepatitis B vaccine	40.0%
Screening, care and treatment (fourth WHO strategic axis)	
Increasing access to treatment	46.7%
Increasing access to diagnostics	46.7%
Improving laboratory quality	46.7%
Developing education/training programmes for health professionals	46.7%